

# GP workforce demographics in 2007: Gender, age, ethnicity, and work arrangements

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## ABSTRACT

### Background

New Zealand's health system is facing numerous challenges including an ageing medical workforce, an ageing patient population, feminisation, increasing reliance on international medical graduates (IMGs), general practitioners (GPs) choosing other work arrangements, and reduced GP working hours.

### Methods

In 2007, The Royal New Zealand College of General Practitioners conducted a census of its membership to ascertain their work arrangements.

### Results

The response rate was 59% (1995 members). The mean and median age of female GPs was 45 years and 51 years for male GPs. Most GPs were aged 46 years and over.

Female GPs were more likely to be aged 45 years and under, and male GPs were more likely to be aged 51 years and over. New Zealand Europeans constitute the majority of the GP workforce. Maori GPs continue to be under-represented in the GP workforce compared to their representation in the NZ population. Only 39% of GPs were self-employed in 2007, compared to 56% in 2005. There was an increase in GPs engaging in other work arrangements.

### Conclusion

There is increasing urgency for national-level actions, such as ensuring an adequate number of GP training places and developing an environment that is capable of recruiting and retaining GPs.

(NZFP 2008; 35: 191–196)

## Introduction

Imbalance in the health workforce is a major challenge for health policymakers.<sup>1</sup> There is increased concern in many OECD member countries that the current and future medical workforce may not be able to deliver the medical services that patients require.<sup>2</sup> In New Zealand the Medical Association has drawn attention to 'a crisis situation' in the medical workforce generally, and in some areas of the workforce, the crisis al-

ready exists.<sup>3,4</sup> One such area is the general practitioner (GP) workforce.<sup>5</sup> The GP workforce is approximately 33% of the medical workforce in New Zealand.<sup>6</sup>

The Health Workforce Advisory Committee (HWAC), implied that New Zealand should respond to a rising local (health) workforce demand and to increasing competition in the international labour market by taking a more holistic look at workforce issues, rather than simply increasing the

number of medical trainees and training places.<sup>5</sup> Most OECD countries use a variety of training, recruitment and retention policies to sustain their national stock of practising physicians.<sup>2</sup> In New Zealand, there are restrictions on the number of students that medical schools can enrol. The number of enrollees was increased to 365 in 2008\* from 285 in 2003.<sup>5</sup> While this increase in training places was needed, it will be some years before the effect of this increase will be realised.

\* The 365 medical training places for universities was announced in August 2007 (<http://www.beehive.govt.nz/node/30395>). The last increase was in 2004; 325 places.

A report commissioned by Clinical Training Agency (CTA) and prepared by the New Zealand Institute for Economic Research (NZIER) forecast that 354 GP registrar training places will be needed by 2016 to fill the shortfall in the GP workforce.<sup>7</sup> In 2008, there were 104 GP registrar training places: this number is expected to increase by 50 places every year up to 2016, based on the recommended forecast model. The dilemma is that the increased numbers of medical students enrolled in 2004 will graduate in 2010, by which time 63% of them will be needed to fill the forecast GP training places. In 2014 (based on the 2008 medical intake graduating), the number of GP registrar training places will constitute 97% of the total number of medical graduates.<sup>7</sup> Other medical specialities will also be competing with general practice for medical graduates.

If the current restrictions on medical training places remain, then GPs and medical graduates will need to be found from other sources. Although OECD member countries generally favour long-term policies of national self-sufficiency to sustain their medical workforce, such policies usually co-exist with short-term or medium-term policies to attract physicians from abroad.<sup>2</sup> Medical training positions in developed nations, as well as opportunities for medical employment, have been a strong attractor of physicians from developing nations.<sup>8</sup> New Zealand has the highest percentage of international medical graduates (IMGs) or overseas-trained doctors (OTDs) of all OECD countries.<sup>8</sup> In 2005, 37.5% of the medical workforce and 39% of the GP workforce were IMGs.<sup>6</sup> While being very dependent on IMGs for the delivery of primary health care (especially in rural areas), New Zealand 'perceived that physician emigration negatively affected the stock of physicians in the country'.<sup>2,9</sup> There has been anecdotal evidence that some IMGs do not get work once they immigrate due to requirements for further training to meet New Zealand

standards of practice. New Zealand also loses some of its graduates to other countries, especially countries with better working conditions.<sup>10</sup> The net effect of emigration and immigration in the medical workforce is in favour of New Zealand; of all the registrations of new doctors in New Zealand in 2005, only 311 of the 1745 registrations (18%) were of New Zealand-trained doctors.<sup>6</sup>

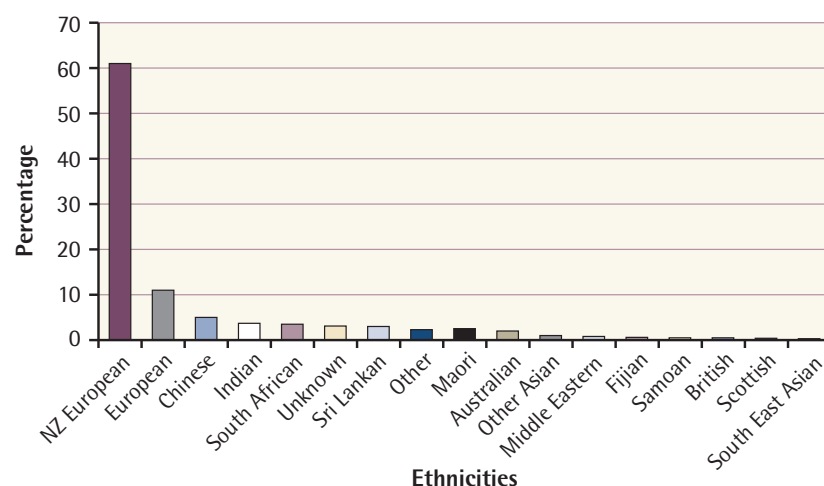
While the supply and demand of GPs continues to be a major issue, there are other equally important issues affecting the workforce. Internationally, and in New Zealand, these include an ageing GP workforce<sup>2,11, 12</sup> and an ageing population,<sup>1,13</sup> feminisation of the GP workforce,<sup>1,2, 3,5,6,9,11,12</sup> reduction in the hours GPs work,<sup>3,5,9,11,12,13</sup> increasing number of IMGs,<sup>1,2,3,8,9,14</sup> decreasing number of self-employed GPs,<sup>9,11</sup> GPs choosing other work arrangements,<sup>9,11</sup> declining working conditions and morale in the GP workforce,<sup>2,3,5,11,12,14</sup> expansion of new technology and increasing physician productivity by using information technology,<sup>2,5,14</sup> using non-medical clinicians and interdisciplinary teams to deliver health care,<sup>5,12,14</sup> incentives to practice in under-served areas,<sup>2,3,9,12,14,15</sup> and an increasing disease burden of the population.<sup>1,4,5,12,14,15</sup>

The Royal New Zealand College of General Practitioners (RNZCGP) seeks to improve the health of all New Zealanders through the promotion of high quality general practice care. It delivers postgraduate education; professional development and quality programmes aimed at supporting and strengthening general practice as well as providing support and advocacy for GPs. In this paper we report the results of the RNZCGP's 2007 annual membership survey and consider the contribution it makes to the discussion on workforce development in New Zealand. The aims were to gather data about College members' current working patterns and help construct a longitudinal view of work preferences and hours worked per week.

## Method

In 2007, the RNZCGP sent a survey form to all its financial members as part of the annual subscriptions mail-out.<sup>11</sup> The 2007 survey was similar to the surveys carried out in 2003 and 2005 with some modification to the wording of questions (for clarification) and the inclusion of some new questions. Demographic data were extracted from information provided on College subscription forms and linked to demographic data on all the

Figure 1. Ethnicity



'Other' refers to ethnicities with five or fewer members represented in this survey, and includes GPs who are African, Bangladeshi, Burmese, Canadian, Ceylonese Tamil, Cook Island Maori, Filipino, German, Irish, Jewish, Latin Americans, Malaysian, Nepali, Other Pacific Islanders, Welsh, Tongan, and Zimbabwean.

College members from the College database. To assist with non-identification of participants, ethnicities with <5 member participants were included in the 'other' category.

The completion of the 2007 survey was voluntary and was sent to all 3384 College members, except life members and Primex special candidates. The survey asked participants about their current work status and hours worked, their future work intentions, their satisfaction with the College's activities, advocacy and communications, and their remuneration.

This paper addresses the workforce related data only – gender, age, ethnicity, and work arrangements. Where appropriate, data from previous surveys are used for comparison.

## Results

### *Gender and age*

The response rate was 59% (1995 members/participants: 1098 males (55%) and 897 females (45%)) – (Table 1). The gender distribution from the College membership database was 59% for males and 41% for females.

Most respondents (62.5%) were aged 46 years and over. The median age for the current GP workforce was 48 years and the mean age was 49 years. The mean and median age for female GPs was 45 years and for males it was 51 years. Female GPs were more likely to be aged 45 years and under (49% of all female GPs were in this age cohort vs 27% of all male GPs) and male GPs were more likely to be aged 51 years and over (51% of all male GPs were in this age cohort vs 27% of all female GPs).

GPs in the age cohort of 25–45 years contributed approximately 37% of the total GP workforce. The age cohorts of 46–60 years comprised 57% of all male GPs and 46% of all female GPs. GPs in this cohort made up 52% of the total workforce. The age cohorts above 61 years comprised 15% of all male GPs and 5% of all female GPs. GPs in this cohort made up approximately 11% of the total GP workforce.

Table 1. Gender and age

	Males	Females	Total
Age–Gender	N (%)	N (%)	N (%)
2007 survey sent out to:	1997 (59%)	1387 (41%)	3384 (100%)
2007 surveys completed from:	1098 (55%)	897 (45%)	1995 (100%)
25–30	8 (0.8)	25 (2.8)	33 (1.7)
31–35	44 (4.0)	79 (8.8)	123 (6.2)
36–40	73 (6.6)	147 (16.4)	220 (11.0)
41–45	174 (15.8)	192 (21.4)	366 (18.3)
46–50	237 (21.6)	212 (23.6)	449 (22.5)
51–55	215 (19.6)	150 (16.7)	365 (18.3)
56–60	176 (16.0)	47 (5.3)	223 (11.2)
61–65	99 (9.0)	31 (3.5)	130 (6.5)
66–70	42 (3.8)	9 (1.0)	51 (2.6)
71+	26 (2.4)	2 (0.2)	28 (1.4)
Unspecified	4 (0.4)	3 (0.3)	7 (0.3)
<b>TOTAL</b>	<b>1098 (100)</b>	<b>897 (100)</b>	<b>1995 (100)</b>

Seventy-three per cent of female GPs were younger than 50, compared to 49% of male GPs. Fifteen per cent of male GPs and 4.7% of female GPs were aged 60 years and over. In absolute terms, 33% of the total GP workforce comprised females aged 50 years and under and 28% of the total GP workforce was made up of males aged 50 years and over.

Male GPs joining and leaving general practice were approximately 3% each, compared to female GPs who are joining and leaving general practice being 5.5% and 0.6% respectively.

### *Ethnicity*

The survey collected data on ethnicity (Figure 1). New Zealand Europeans were slightly over-represented in this survey (60.6%) relative to their representation within the College (57%), and within New Zealand's total population (59.1%). Maori GPs were under-represented (2.2%) relative to their representation within the College (3.8%) and substantially under-represented compared to their representation within New Zealand's total population (14%). Europeans, Chinese, Indian, South African, Sri Lankan,

Australian, and Fijian GPs were all over-represented in the survey compared to their representation within New Zealand's total population.

### *Work arrangements*

Thirty-nine per cent of respondents were currently self-employed, 15.1% were salaried and 14% were locums (Figure 2). In general these categories of locum, part-time and full-time salaried, and part-time and full-time self-employed GPs were mutually exclusive; a very small percentage (3.8%) of respondents chose two of the five categories mentioned.

Ninety-five per cent (1887) of all respondents stated their work arrangements, giving a total of 2744 responses. Of these, 33.5% (630) gave more than one response such as answering that they worked part-time in salaried general practice and also did non-medical work. Approximately 10% (186 GPs) reported having more than three different work arrangements such as part-time self-employed general practice, sub-speciality work and non-clinical work (e.g. management work with District Health Boards (DHBs)).

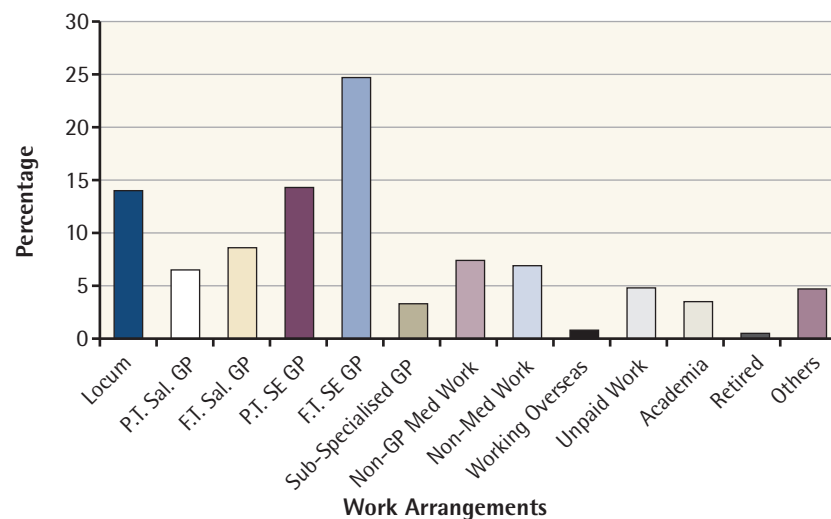
or Primary Health Organisations (PHOs)). Approximately 32% of GPs were involved in other types of work (subspecialty general practice and non-general practice medical work), non-medical work, unpaid work, or in other related roles such as academia and health services management.

More female GPs worked as part-time self-employed, locums, part-time salaried, and in other types of employment (Figure 3). More male GPs were in full-time self-employed general practice (33.8%), full-time salaried general practice (10.6%), and non-medical work (8.1%) than female GPs (13.2%, 6.0%, and 5.5% respectively).

From the age cohort perspective, the top choices (up to three) for each cohort were as follows (in order of preference):

- The age group of 25–30 years preferred locum work;
- The age group of 31–35 years preferred locum work, part-time and full-time self-employment;
- The age group of 36–40 years preferred locum work, part-time and full-time self-employment;
- The age group of 41–45 years preferred full-time and part-time self-employment, and locum work;

Figure 2. Work arrangements

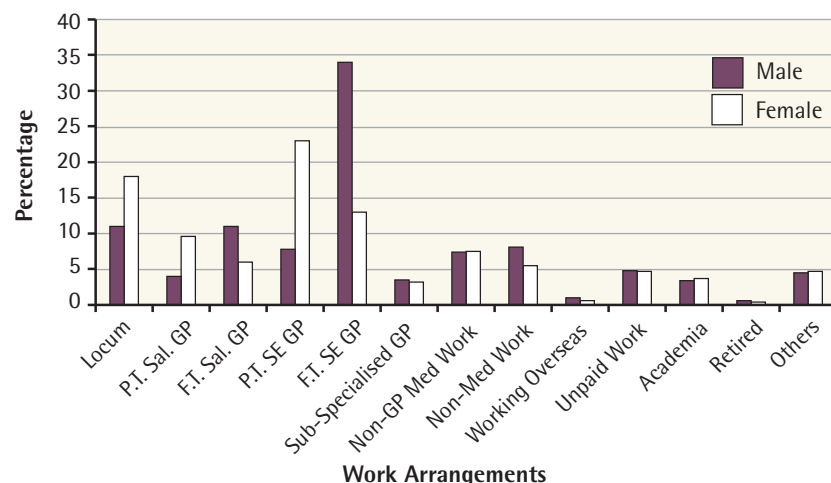


'Other' work statuses noted are: GPs doing studies, medico-legal work, afterhours care, police work (DSAC), sport team work, insurance consultancy, school clinics, various public health clinics, radio preparations, rest home work, prison MO, working for organisations caring for disabled and handicapped people, surgery, College work, research, farm work, GP liaison, ACC work, health advisory, and private business.

- The age group of 46–50 years preferred full-time and part-time self-employment, and full-time salaried positions;
- The age group of 51–55 years preferred full-time and part-time self-employment, and non-general practice medical work;
- The age group of 56–60 years preferred full-time self-employment,

- full-time salaried, and non-general practice medical work;
- The age group of 61–65 years preferred full-time self-employment, and locum work;
- The age group of 66–70 years preferred locum work and full-time self-employment;
- The age group of 71+ years preferred locum work, part-time salaried and non-medical work.

Figure 3. Work arrangements by gender



'Other' work statuses noted are: GPs doing studies, medico-legal work, afterhours care, police work (DSAC), sport team work, insurance consultancy, school clinics, various public health clinics, radio preparations, rest home work, prison MO, working for organisations caring for disabled and handicapped people, surgery, College work, research, farm work, GP liaison, ACC work, health advisory, and private business.

## Discussion

This research shows that the main workforce issues facing New Zealand general practice currently are an ageing workforce, feminisation of the workforce, decreasing numbers of self-employed general practitioners, and GPs choosing other work arrangements than the traditional model of full-time self-employment in the medical care of patients in clinics.

## Ageing workforce

Approximately 22% of the 2007 GP workforce was aged 56 years and over. Since 2005, the College's membership survey reports have shown increases in the number of GPs aged 56 years and over. In 2005, most GPs in this age group indicated a desire to retire within the next five years.<sup>16</sup> Another



indicator of an ageing GP workforce is the increased mean and median age; in 1998 the mean and median age of GPs was 42 years each while in 2007 it had increased to 49 years and 48 years respectively.<sup>11</sup> Since 2005, the mean and median age increased by one year every year. This trend is likely to continue as most GPs are now aged 46 years and over. Male GPs comprise the majority who are likely to retire in the next decade.

An ageing medical workforce is a global phenomenon<sup>11,12</sup> and attributed to the baby boomer cohort.<sup>17</sup> While there are benefits to the public of having experienced GPs, there are also challenges in finding replacements for them.<sup>17</sup> In New Zealand the workforce is likely to lose more GPs through retirement (4%), than it is likely to recruit (2%) in the next few years<sup>11</sup> (also refer Table 1). To date, there has been very little discussion in New Zealand on incentivising working conditions for older GPs to remain in the workforce for longer. Older GPs also tend to work fewer hours.<sup>2,11,17</sup> There is an urgent need for policies and plans to minimise the effects of an ageing GP workforce on the population. Ignoring this issue could exacerbate other workforce issues such as increased reliance on IMGs, decline in working conditions and morale of the existing workforce, and also impact on populations in under-serviced and rural areas that are reliant on GPs in the older cohort.

### ***Feminisation of the GP workforce***

The feminisation of the medical workforce (including general practice) is seen as a 'Generation X' phenomenon.<sup>17</sup> Female GPs in New Zealand are more likely to be aged 40 years and under, with most being less than 50 years. Having an increased number of female GPs poses certain additional challenges as they have traditionally worked fewer hours than male GPs.<sup>3,17,18</sup> In the 2007 survey, female GPs spent an average of 34hr/wk in general practice, approximately 14 hours less than the aver-

age hours worked by male GPs. The main reason for this difference is that many female GPs prioritise raising a family early on in their career, and later choose to work part-time or reduced hours as their children grow.

While investigating the impact of feminisation on the Scottish GP workforce, McKinstry<sup>19</sup> implies that women currently in their 30s will choose to work longer hours in their 40s and 50s than women of that age currently do. The 2007 survey results clearly show female GPs are more often to be found in part-time and locum work than their male peers. However, it is possible, as McKinstry<sup>19</sup> suggests, that as younger female GPs get older and have fewer family responsibilities, they may work longer hours.

One of the greatest challenges will be faced when most older male GPs, who spend the most hours in clinical general practice work, retire in the next decade. The increasing number of female GPs working part-time may be putting pressure on other GPs to increase their hours and it also implies a need to increase the number of GPs to maintain the same level of service.<sup>18,19</sup> However more longitudinal data are required to explore such phenomena.<sup>19</sup>

The 2007 survey data also shows an equal or better proportional representation of female GPs in non-general practice work such as sub-speciality work, non-general practice medical work, unpaid work, academia, and other types of work in and outside of the health sector. Fewer female GPs do non-medical work such as management roles with DHBs and PHOs than male GPs.

### ***Decreasing number of self-employed GPs***

Self-employment has in the past been the mainstay of GPs in New Zealand.<sup>9,11</sup> The 2007 survey shows that self-employed GPs now constitute only 39% of the GP workforce compared to 56% in 2005. This decrease is substantial, and can be attributed to the changing environ-

ment in the primary health care sector. The introduction of PHOs to deliver primary health care has been accompanied by more GPs opting for salaried positions instead of self-employment.

Previous College surveys (2003–2006) showed that many GPs were dissatisfied with the level of bureaucracy and compliance costs associated with self-employment. The NZMA<sup>3,18</sup> reported that many GPs expressed frustration at a high administration burden and high compliance costs imposed on general practice by new and existing regulations. In the PHO environment, many practices with three or more GPs have a practice manager and other staff to assist with some of the administration.<sup>20</sup> Arguably, GPs who wanted to concentrate on patient care may have found attractive the opportunity for salaried employment that is offered by some PHOs.

Another possible reason for a decline in self-employed GPs is that many who are self-employed have to work longer hours than GPs in other work arrangements. In 2005, GPs worked 48 hrs/wk on average, whereas full-time self-employed GPs worked 59 hrs/wk, and part-time self-employed GPs worked 37 hrs/wk. In 2007, the hours worked per week changed substantially: the average hrs/wk was 42 hours. Full-time, self-employed GPs averaged 45 hrs/wk and part-time self-employed GPs averaged 25 hrs/wk. While the number of hours worked per week decreased, a greater percentage of working time was spent on patient consultations than previously.<sup>11</sup>

It is unclear what portion of the GP workforce will remain self-employed, and what will be their models of delivery of care. It is also unclear what government and stakeholder expectations are with regards to the composition of the workforce from the viewpoint of employment options. However it is clear that a major shift is occurring where other employment options such as locum, salaried, sub-speci-

alities, non-general practice and non-clinical work, unpaid work, academia and other types of work within and outside of health sector are gaining favour. While GPs are of course able to choose the type of work they do, there is some concern about GPs who do no general practice clinical work but are counted as GPs in many surveys and on the New Zealand Medical Council (MCNZ) register. This could lead to an overestimation of the number of GPs engaged in traditional general practice clinical work. While the MCNZ does report data on doctors' main worksite, its utility and relevance to workforce planning is unclear. From the College's perspective, quality and continuity of care are integral to the provision of primary health care. All the changes occurring in the workforce and delivery of care need to attend to these core expectations.

## Implications

There is little doubt that both the wider medical workforce and the GP workforce is undergoing extreme transitional effects that have not previously been experienced.<sup>3,4</sup> The RNZCGP membership surveys are census-based, which is associated with scientific interpretation cautions, but they do provide reasonable evidence in support of the workforce issues expressed by commentators nationally and internationally. An ageing workforce, workforce feminisation, reliance on IMGs, and reduced hours worked by GPs are the main pressing issues facing the GP workforce in New Zealand. Some issues could be resolved with a simple solution such as increasing medical training places while others such as workforce feminisation, attracting more male medical graduates into general practice, attracting more Maori stu-

dents into medical schools and improving the working environment of doctors needs more development and innovation. There is, however, a need for prompt decisions and actions. To assist this, the sector needs to develop a national strategy for collecting and managing workforce planning data that is timely, universally comparable and comprehensive. Recently, the Ministry of Health established the Medical Training Board to examine workforce issues and the training of medical professionals. The College looks forward to contributing to their discussions on emerging issues.

## Competing interests

Mel Pande and Andrew Stenson are currently employees of the Royal New Zealand College of General Practitioners. They are also responsible for analysing and reporting data collected through the College's membership surveys.

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