



The New Zealand Medical Workforce 1998



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The New Zealand Medical Workforce in 1998

Summary

97% of practising doctors responded to the Medical Council's 1998 survey. The major findings were:

The size of the workforce: 8491 doctors were in active employment, an increase of 3.2% from 1997.

Demographics: Women were 31.3% of the workforce, up 1.1% from 1997. The proportion of overseas-trained doctors remained at 33.7%. Maori doctors at 2.3% and Pacific Islands doctors at 1.0% continue to be markedly under-representative of the general population.

Work by vocational group: The fastest growing areas since 1990 have been anaesthetics, diagnostic radiology, emergency medicine, general practice, internal medicine, paediatrics, psychiatry and general surgery.

Geographical distribution: In local authority regions, full-time equivalent general practitioners ranged from 27 to 189 per 100,000 population. The rate was highest in secondary urban areas (104), followed by main urban areas (95) and areas with less than 10,000 people (70).

Introduction

For nearly three decades the Medical Council of New Zealand has collected medical workforce data annually. Summaries have been published by the Council¹ and also by the Ministry of Health (1990² 1994³ and 1997⁴, including time series data) and the Clinical Training Agency (1995)⁵. This report describes the key results of the 1998 medical workforce survey.

Method

The sampling frame for the workforce survey is doctors with general or probationary registration, a current annual practising certificate (APC), and a New Zealand address at 31 March 1998. The questionnaire was posted out in February 1998 with APC applications, and those not responding were sent two reminder letters. All data were collected by 30 June 1998.

The questions for the 1998 questionnaire survey are essentially the same as 1997. This report also includes statistical information drawn from the Council's database, to avoid duplicating questions in the APC application (age, sex, registration date, graduation country and graduation year).

Geographical analysis uses territorial authorities and Health Funding Authority localities. Addresses of work sites were coded using census area unit data previously

supplied by Statistics New Zealand. HFA populations were determined by amalgamating territorial authority population estimates for June 1998⁶. Full time equivalents (FTEs) are calculated proportionately, so that 44 hours per week equals 1.1 FTE. Urban/rural comparisons use census urban area categories (as defined in Table 4) to classify the location of main work sites⁷. Results were generated using Access software.

Results

Response: At 31 March 1998 the medical register recorded a total of 8851 doctors practising medicine in New Zealand. 8604 doctors completed the questionnaire giving a response rate of 97.2%. Of the respondents, 8491 worked for four or more hours per week in New Zealand. The results in this supplement include only this group, who are described as "in active employment".

Size of the medical workforce: The workforce grew to 8491 active doctors, up 3.2% on 1997. This provides one doctor per 447 people in March 1998, compared to one per 386 people in Australia at December 1996⁸. This ratio has increased by 19% since 1990 and 44% since 1980. The largest contributors to recent growth are shown in *Table 1* and *Table 3*.

Table 1: Changes in the medical workforce 1990 to 1998

Capacity	Active doctors 1998	Percent increase 1990-98	Percent increase 1997-98
General practitioner	3,159	30.1	1.3
Primary care other than general practice	175	6.1	-1.7
House officer	910	34.0	8.6
Registrar	1,147	43.6	2.9
M.O.S.S.	261	50.9	-5.1
Specialist	2,536	29.9	3.1
Other	285	99.3	21.8
No answer	18		
Total	8,491	33.9	3.2

Medical Work by Vocational Group: The rate of growth for each vocational group is shown in Table 3, with the fastest growing areas since 1990 being anaesthetics, diagnostic radiology, emergency medicine, general practice, internal medicine, paediatrics, psychiatry and general surgery. The proportion of the total workforce undertaking training towards inclusion on the vocational register continued to rise, from 29% in 1997 to 34%. Over half of these were GPs. Groups where more than one third of the doctors described themselves as being in vocational training were general practice, emergency medicine, psychiatry, radiotherapy, occupational medicine and general surgery.

Hours worked: The median hours per week for all active doctors was 48 hours, for women 40 hours and for men 50 hours. Median hours declined with increasing age, from 55 hours per week for those aged 20-29 years to

46 hours per week for those aged 50-59. Doctors aged 65-69 had a median figure of 32 hours per week. House officers (55) and registrars (57) had the highest median hours per week. For specialists the median was 48 hours and for GPs 40 hours.

Table 2: GP workforce by HFA locality of main work site

HFA locality	Number of GPs	FTEs for GPs at all work sites	HFA locality population	FTEs for GPs per 100 000 population
Northland	117	128	143,350	89
Auckland	985	981	1,173,400	84
Waikato [†]	294	320	364,270	88
Bay of Plenty	206	208	241,500	86
Tairāwhiti-Hawkes Bay	144	160	193,650	83
Taranaki	82	87	106,920	81
Manawatu-Wanganui [†]	152	170	214,600	79
Wellington	357	351	428,680	82
Nelson-Marlborough	103	107	120,700	88
Canterbury-West Coast	467	462	518,520	89
Otago-Southland	252	268	285,900	94
Total	3,159	3,241	3,791,490	85

[†] Ruapehu TLA was included as part of Waikato HFA locality, though a smaller part of the population is in Manawatu-Wanganui.

Geographical distribution: The rate of full time equivalent GPs ranged from 79 per 100,000 population for the Manawatu-Wanganui HFA locality to 94 per 100,000 for Otago-Southland (Table 2). The disparity between the smaller territorial authority regions was more apparent, with FTEs for general practice ranging from 27 per 100,000 population (Carterton District) up to 189 per 100,000 for the Kaikoura district (*Appendix – Table 7 and Figure 1*). Only one of the fifteen city-based territorial authorities had a majority of overseas qualified doctors (Invercargill). In contrast 27 out of the remaining 59 authorities had a majority of doctors with primary medical training from overseas.

The territorial authorities in the lowest 20% for GP FTEs were Carterton, Manawatu, Waimakariri, Southland, Kaipara, Waikato, Taranua, Waimate, Franklin, Central Hawkes Bay, Selwyn, Western Bay of Plenty districts, Porirua and Waitakere cities (less than 66 FTEs per 100,000 population). The range for the highest 20% was 99-189 FTEs per 100,000. Previous work on the distribution of GPs in New Zealand has also identified uneven geographical distribution^{9,10}.

The 1996 workforce report by the Australian Medical Workforce Advisory Committee identifies reducing the

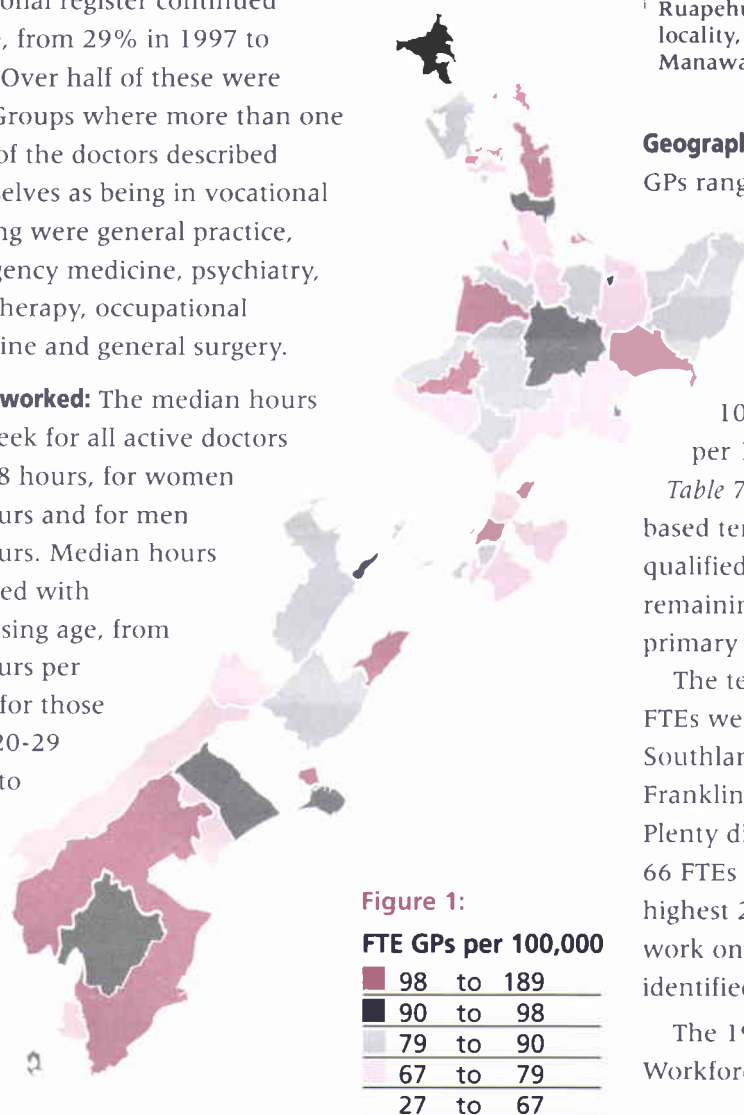


Figure 1:
FTE GPs per 100,000
 ■ 98 to 189
 ■ 90 to 98
 ■ 79 to 90
 ■ 67 to 79
 ■ 27 to 67

Table 3: Vocational groups at main work site (house officers excluded)ⁱ

Vocational group ⁱⁱ	Number of doctors in main work site	Percent of total doctors	Percent change 1990 to 1998 ⁱⁱⁱ	Average hours worked (all sites)	Number in vocational training	Trainees as percent of vocational groups	Vocational registration, current APC, NZ address ^{iv}
Anaesthetics	498	6.6	38.1	50	160	32	332
Basic medical science	45	0.6	-47.4	51	-	-	-
Dermatology	42	0.6	11.4	44	3	7	43
Diagnostic radiology	255	3.4	37.4	44	65	25	188
Emergency medicine	103	1.4	550.0	46	96	93	8
General practice	3,007	39.7	30.1	41	1384	46	1478
Internal medicine	816	10.8	32.6	50	205	25	500
Obstetrics & gynaecology	197	2.6	14.3	48	53	27	185
Occupational medicine	46	0.6	-9.1	40	36	78	25
Ophthalmology	106	1.4	19.2	44	21	20	94
Paediatrics	236	3.1	43.6	51	73	31	158
Pathology	176	2.3	-2.7	45	37	21	166
Primary care	419	5.5	-	37	-	-	-
Psychiatry	447	5.9	32.6	44	167	37	265
Public health medicine & mgmt.	197	2.6	20.3	46	46	23	108
Radiotherapy	32	0.4	15.0	49	13	41	25
Rehabilitation medicine	15	0.2	-	42	4	27	3
Surgery: cardiothoracic	27	0.4	-69.1	57	5	19	19
Surgery: general	239	3.2	30.8	56	102	43	191
Surgery: neurosurgery	23	0.3	-	56	5	22	12
Surgery: orthopaedic	206	2.7	-	55	30	15	153
Surgery: other subspecialties	47	0.6	-	49	12	26	-
Surgery: otolaryngology	79	1.0	-	49	12	15	68
Surgery: paediatric	19	0.3	-	53	2	11	10
Surgery: plastic	43	0.6	-	53	10	23	31
Surgery: urology	50	0.7	-	52	9	18	38
Venereology	21	0.3	0.0	36	5	24	8
Invalid response	63	0.8			10		
Not completed	127	1.7					
Total	7,581	100.0	28.2	45	2,565	34	4,108

ⁱ Includes registrars, MOSSs and others not on the vocational register.

ⁱⁱ Based on vocational register branches, except for the categories "basic medical science", "primary care other than general practice" and "other surgical sub-specialties". Doctors working in health services administration and management are included in the "public health medicine and management" category.

ⁱⁱⁱ Percentage change 1990-98 is calculated for specialists and GPs only, since data covering the wider vocational group (including Registrars, MOSSs) is not available for 1990.

^{iv} Doctors on the vocational register at 31 March 1998 with a current APC and New Zealand address; includes multiple branches for individual doctors (96 second and 2 third registrations).

rural/urban gap as a major health goal. Analysis by urban area categories confirms a similar gap in New Zealand (Table 4). Rural and minor urban classifications have been amalgamated, as areas with populations of 999 and less would generally be serviced from a larger centre. This simple calculation does not substitute for careful analysis of local access issues, but does confirm a level of urban/rural inequality.

Table 4: GP urban/rural service levels

Census urban area categories, main work site	Population range	Population 1998	GP FTEs per 100,000	Median hours by GPs
Main urban areas	30,000+	2,510,400	94.7	40
Secondary urban areas	10,000-29,999	266,916	104.4	42
Minor urban areas, combined with rural and coastal areas	1,000-9,999 0-999	840,984	69.5	44

Table 5: Employment as percent of total hours worked, by capacity

Capacity	Solo private practice	Group private practice	Private hospital, commercial company	Health & Hospital Service	Government Department or Agency	University	Professional body	Other	Total
General practice	29.4	62.1	1.8	0.6	0.6	1.0	0.2	4.2	100
Primary care other than GP	14.8	19.6	25.2	2.9	4.2	8.7	3.8	20.7	100
House officer	0.0	0.0	0.8	98.8	0.0	0.0	0.0	0.3	100
Registrar	0.2	1.3	0.4	95.4	0.4	1.5	0.3	0.5	100
M.O.S.S.	0.2	0.0	4.7	87.2	3.2	0.5	0.1	3.8	100
Specialist	14.8	9.1	4.8	64.2	1.9	4.3	0.1	0.5	100
Other	2.5	2.0	10.0	11.0	9.0	41.2	2.4	21.8	100

Work environment: 87.3% of medical hours worked were performed at the main work site, 10.5% at the next main site, and 2.2% at all other sites. Employment patterns are complex as 44% of doctors worked at multiple work sites, typically with different employers. *Table 5* shows the proportion of total hours worked for each category of employer.

Sixty-four percent of work performed by specialists was for public hospitals, and 29% for the combined private sector (private hospitals, commercial companies, group and sole private practice). Sixty-two percent of all GP hours were worked in group private practice, with 29% in solo practices.

Distribution by sex and ethnicity: The overall proportion of women continued to increase to 31.3%, up from 23.9% in 1990 and 16.4% in 1980. Because of the increasing numbers of women training as doctors, their median age in the workforce (37 years) was significantly younger than men (43 years). The proportion of women varied widely among occupational groups (0% to 49%), with ophthalmology, rehabilitation medicine and all branches of surgery except paediatrics being less than 10% (*Appendix – Table 6*).

The increasing numbers of female GPs working shorter hours in urban practices has been highlighted in Australia recently¹¹. This trend also exists in New Zealand. Women make up 37% of all GPs in major urban areas, 31% in secondary urban areas and 28% in areas under 10,000 population (see *Table 4* for categories). The median hours per week is 32 for female GPs and 45 for male GPs.

The proportions of doctors identifying as Maori and Pacific Peoples were 2.3% and 1.0% respectively. These are markedly under-representative of the New Zealand population, at 14.5% and 4.8% respectively in the 1996 census. Projections by Statistics New Zealand forecast these proportions to rise to 17% and 8% by 2016 (based

on medium assumptions)¹². New admission initiatives have significantly boosted the combined number of Maori and Pacific students entering medical schools in 1999, to 22% of the intake at Auckland and 8% at Otago. The proportion of Maori among house officers was 4.3%, registrars 2.5%, GPs 2.2%, and specialists 1.4%.

Overseas trained doctors: The proportion of doctors who obtained their primary medical qualification in another country was 33.7% (*Table 6*), the same as in 1997 but up from 29.3% in 1990. This proportion is much lower in Australia at 18%. Overseas trained doctors provided 51% of GPs in the combined rural and minor urban areas (under 1,000 population), 37.5% in secondary urban areas and 30.2% in main urban areas. The proportion across occupational groups ranged from 14% to 61% (*Appendix – Table 6*)

Countries in which qualifications were obtained by overseas trained doctors were the United Kingdom 38.8%, South Africa 20.6%, Australia 7.6%, India 7.3%, Sri Lanka 6.5%, Iraq 2.1%, Canada 1.7%, Pacific Island countries 1.6%, Eire 1.5%, Germany 1.5%, Hong Kong 1.4%, United States 1.4%. Forty-nine other countries with less than 30 doctors each made up the remaining 7.9%.

Doctors with temporary registration

Doctors visiting New Zealand and not seeking permanent residence may apply for temporary registration for 2-3 years. These doctors were surveyed for the first time in March 1998 and were analysed separately. The estimated number of temporary registrants was 283 or 3.2% of the total active workforce, compared to 1.1% of the 1996 workforce in Australia. The New Zealand figure includes an adjustment for the lower response rate of 76%.