



The New Zealand Medical Workforce in 2005

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Introduction

This report presents a summary of the most relevant results of the 2005 survey by the Medical Council of New Zealand. This report follows on from the report *Medical Workforce in 2004* and because it is the five-yearly report it has a more extensive analysis of the survey than is undertaken in the intervening years including the addition of statistics which are based on registration data.

For three decades the Medical Council has collected medical workforce data annually. Summaries have been published by the Council and also by the Ministry of Health (2000, including time series data) and the Clinical Training Agency (1995).

Additional detailed analysis of this survey is provided by the Medical Council to the Ministry of Health and individual information requirements can be discussed with the Analytical Unit of the New Zealand Health Information Service.

Summary Size of the workforce

Based on survey results, the size of the active workforce is 8,746 doctors or 9,944 full time equivalents (FTE). "Active" is defined as doctors working more than four hours per week and "FTE" as 40 hours per week.

This provides one doctor per 469 people, down by five percent from one doctor per 445 people in March 2000. However it is up 12 percent from one doctor per 533 people in 1990, and by 17 percent from one doctor per 642 people in 1980.

These estimates are limited by the lower than usual response rate this year (84.7 percent down from 92 percent in 2004 and 95 percent in 2003). This decrease in response rate may be due to the phasing out of temporary registration with the introduction of new legislation, the Health Practitioners Competence Assurance Act 2003 (HPCAA).

Historically, survey forms were not sent to doctors holding temporary registration. The changes in the HPCAA mean that more doctors who are only in New Zealand for limited periods of time are now given the opportunity to complete the workforce survey.

No allowance has been made in figures for response rate. Where the response rate is likely to affect comparison between the 2000 and 2005 results, the 2000 result has also been compared with the 2004 result. In 2004, the response rate was 92 percent.

Registration data are used to estimate the annual growth in the number of active doctors at 2.5 percent (Table 1.1). This growth rate will be more reliable than comparisons of survey responses for 2004 and 2005 due to the falling response rate.

Age

The average age of all doctors remained at 44 years and the median age rose to 44 years from 43 in 2004.

Gender

The proportion of women doctors increased from 35 percent of the workforce in 2004 to 36 percent in 2005. In 2000, women made up 32.6 percent.

Women made up 53 percent of house officers up from 51 percent in 2004; 41 percent of general practitioners (GPs) up from 39 percent in 2004; 43 percent of registrars up from 42 percent in 2004; and remained steady at 31 percent of specialists.

New Zealand graduates

Retention rates at each year after graduation for successive classes of graduates from 2005 to 2006 show that on average 97 percent of graduates are retained one year after graduation dropping to 81.9 percent in the second year and 74.2 percent in the third year.

International medical graduates

The proportion of international medical graduates rose just under two percent from 35.6 percent in 2004 to 37.5 percent; rose six percent to 23.7 percent of house officers; rose two percent to 39 percent of general practitioners; and rose one percent to 39.4 percent of specialists.

An analysis of registration data showed that less than 50 percent of international medical graduates are retained one year after they are initially registered. After this initial loss, the percentage of international medical graduates retained continues to reduce more gradually dropping to just under 33 percent in the third year after initial registration.

Ethnicity

The proportion of Māori doctors remained at 2.6 percent in 2005 after dropping from 2.7 percent in 2003 while Pacific Island doctors increased from 1.3 percent in 2004 to 1.5 percent in 2005. In 2000, the proportion of Māori doctors was 2.3 percent and the proportion of Pacific Island doctors was 1.1 percent.

Both Māori and Pacific Island doctors continue to be under-represented when compared to the percentage of the population (it is estimated that in 2005, Māori made up 15.5 percent of the population and Pacific Islanders made up 6.3 percent).

The proportion of Chinese doctors dropped slightly to 5.4 percent from 5.8 percent in 2004 with the proportion of Indian doctors also dropping slightly to 5.1 percent from 5.4 percent.

The proportion of New Zealand European doctors continued to drop decreasing to 57.5 percent from 58.9 percent in 2004 and 76.5 percent in 2000. This decrease is largely due to the inclusion of Other European as a separate category since 2002. Prior to 2002, these categories were combined. If the results of these two categories are combined then there has only been a 3.6 percent decrease since 2000.

The proportion of Other non-European continued to increase and is up to 10.8 percent from 8.7 percent in 2004 and 7.6 percent in 2000.

1. Short term changes

International medical graduates

The proportion of doctors who received their primary medical training overseas is a simple but useful indicator of changes in the workforce (Table 1.1). Because the overseas supply is larger and more flexible, significant shifts in supply or demand will normally be reflected in changes to this ratio.

The proportion of international medical graduates has continued to increase in 2005 to 37.5 percent. This has steadily increased since 1985 with a slight drop in the numbers of overseas doctors in 2001 and 2002, possibly due to reduced travel as a result of world events (Figure 1.1).

Short-term registrants

Temporary registration is being phased out with the implementation of the HPCAA which replaced the previous legislation the Medical Practitioners Act 1995 (MPA) and no new applications for temporary registration were accepted after 18 September 2004. There are still a few doctors on the register holding temporary registration who were registered prior to 18 September 2004.

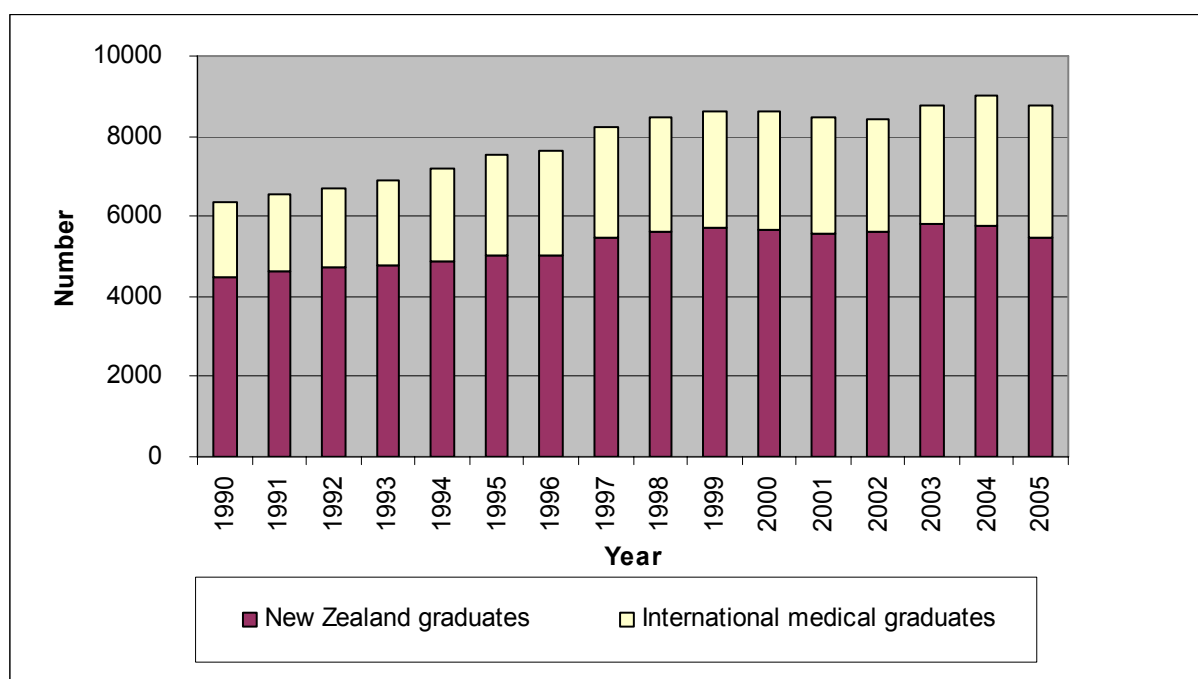
Doctors who would have held temporary registration are now registered in either a provisional general, provisional vocational or special purpose scope of practice. Those holding provisional general or provisional vocational scopes are now asked to complete the workforce questionnaire.

Table 1.1. Estimates of annual workforce growth and changes in composition

	1980	1985	1990	1995	2000	2001	2002	2003	2004	2005
Growth per year:										
1) Measured by survey responses	-	-	-	4.9	0.0	-1.4	-1	4.6	2.2	-2.8
2) Measured by registration data	-	-	-	6.3	2.6	-2.5	7.6	2.9	4.2	0.3
Graduated from:										
New Zealand	3,266	4,095	4,480	5,024	5,645	5,567	5,608	5,796	5,788	5,459
Overseas	1,615	1,461	1,859	2,506	2,970	2,924	2,795	2,994	3,203	3,287
Total workforce (survey response)	4,881	5,556	6,339	7,530	8,615	8,491	8,403	8,790	8,991	8,746
Percent trained overseas	33.1	26.3	29.3	33.3	34.5	34.4	33.3	34.1	35.6	37.5
Total workforce (registration data)	-	-	-	-	9,779	9,770	10,605	10,857	11,253	11,578
Short-term registrants	-	-	165	129	421	646	789	758	731	207
Percent of workforce	-	-	2.5	1.7	4.3	6.6	7.4	7.0	6.5	2.5
Average age of workforce	-	-	42	41	43	43	43	43	44	44

- 1 Growth per year is the percentage change in total workforce year to year
- 2 Data are five-yearly up to 2000 then annually. Some earlier data not available.
- 3 Short-term registrants are not asked to complete the workforce survey. In the years 2003 and prior, this number represents doctors holding temporary registration under the MPA. In the years 2004 and after, it represents a combination of doctors holding temporary registration under the MPA and doctors with a special purpose scope of practice under the HPCAA. Data from the Medical Register.
- 4 The total workforce according to registration data is calculated by combining the number of survey forms sent out to doctors with New Zealand addresses during the workforce survey and the number of temporary registrants on the register as at 31 March of the survey period.

Figure 1.1. New Zealand and international medical graduates



Roles in the medical workforce

Recent changes in the roles of the active doctor are shown in Table 1.2.

Table 1.2: Changes in the medical workforce

Workforce Role	Active doctors ¹ 2000	Active doctors ¹ 2001	Active doctors ¹ 2002	Active doctors ¹ 2003	Active doctors ¹ 2004	Active doctors ¹ 2005	Percentage Change 2004 - 2005
General practice	3,166	3,037	2,917	3,006	3,009	2,924	-2.8
House officer	894	760	774	842	815	811	-0.5
MOSS	277	289	277	303	315	307	-2.5
Primary care other than GP	190	171	166	138	138	157	13.8
Registrar	1,227	1,242	1,238	1,319	1,335	1,365	2.2
Specialist	2,653	2,725	2,723	2,873	2,945	2,940	-0.2
Other	206	233	252	244	314	207	-34.1
No Answer	2	34	56	65	111	35	-68.5
Total	8,615	8,491	8,403	8,790	8,982	8,746	-2.6

¹ Headcount

GP numbers decreased by 2.8 percent to 2,924 after increasing in 2003 and 2004 and are now only just above the 2002 level.

House officer numbers have decreased again in 2005 to 811 after decreasing to 815 in 2004.

Medical officer numbers have decreased slightly after increasing in 2003 and 2004. Twenty-two percent of medical officers listed themselves as being in vocational training up five percent from 2004. Eighty-three percent listed public hospital as their main work place, and 40 percent of medical officer FTE hours were spent on work type emergency medicine or psychiatry.

Primary care other than GP numbers increased by 13.8 percent in 2005.

2. Retention of New Zealand doctors

The workforce survey report in 2000 reported that “Hospitals had identified an increased move overseas by recent New Zealand graduates from late 1999”. Table 2.1 compares the retention rates at each year after graduation for successive classes of graduates from 1995 to 2006.

Table 2.1. Graduate retention of class years 1995 to 2006

Final Class Year ¹	Size of Class ²	Number registered	Percent of registered ³ graduates retained by postgraduate year ⁴											
			0	1	2	3	4	5	6	7	8	9	10	11
1995	275	258		96	84	74	76	80	74	72	68	65	65	64
1996	275	264		97	88	78	80	78	77	75	67	63	60	
1997	284	266		97	86	73	68	72	72	65	68	57		
1998	288	251		96	80	69	77	77	71	70	62			
1999	305	270		99	79	75	77	76	72	67				
2000	323	286		94	82	74	79	78	74					
2001	297	271		95	79	75	81	76						
2002	308	285		94	79	75	75							
2003	329	302		93	80	75								
2004	342	284		101 ⁵	82									
2005	318	297	99	99										
2006	322	287	99											

- 1 Final class year is used as Auckland and Otago identify graduate year differently.
- 2 Size of class is list of those in final class years as given by medical schools. Not all will necessarily be eligible for graduation.
- 3 Registered is defined as those from the class year who have been registered at some time.
- 4 Years give those who held one or more APC in the year April to March as a percent of the graduates from the class year who have registered in New Zealand.
- 5 The result of 101% indicates that more graduates from the class year of 2004 were registered in postgraduate year one than were registered in the year immediately subsequent to graduation. The 2004 class was larger than other years and almost 20 percent of the graduating class did not register in New Zealand in the year immediately after graduation. Therefore the figure of 101% may be caused by the return to the workforce of doctors who completed their internship overseas or took a year off following graduation.

Table 2.2. Average percentage of graduates retained by postgraduate year

	Postgraduate year										
	1	2	3	4	5	6	7	8	9	10	11
Average percent of registered graduates retained	96.5	81.9	74.2	76.6	76.7	73.3	69.8	65.0	65.0	62.5	64.0
Standard deviation	2.5	3.2	2.4	4.0	2.5	2.2	4.0	2.9	3.4	3.5	-

Tables 2.1 and 2.2 show that by the second year after graduation on average 81.9 percent of graduates are retained dropping to 74.2 percent by the third year.

After the initial drop in retention immediately after graduation, the average percent retained increases slightly in years four and five and then slowly decreases through year six to eleven.

The figures also suggest that there has been little change in retention in the last ten years with Table 2.2 showing that there is little variance in the percentage of registered graduates retained in any given postgraduate year across the class years analysed.

There are no firm statistics about what medical graduates do if they do not register to do their intern year in New Zealand. Figures do include fee paying students and the initial drop in retention may possibly be attributed to these graduates returning to their sponsoring countries. Others do their internship overseas and some have the year off.

Neither is there firm information on where New Zealand graduates go when they leave the medical workforce. Some do go overseas but some remain in New Zealand and do not work. It is known that some graduates move overseas to gain further qualifications and experience before returning to New Zealand in later years.

Table 2.3. Certificates of good standing (CGS) issued per year

Financial year	Certificates issued
1995/96	479
1996/97	383
1997/98	378
1998/99	379
1999/00	450
2000/01	550
2001/02	662
2002/03	717
2003/04	857
2004/05	1,868
2005/06	1,101

Source: Medical Council registration data. Certificates of good standing are issued on payment of a fee, for doctors usually seeking registration overseas.

Table 2.3 shows that since the 2000 report was published, the number of CGS issued each year has risen dramatically peaking in the 2004/2005 financial year when 1,868 CGS were issued before dropping back in the 2005/2006 financial year to 1,101.

These have previously been considered an indicator of departures from the workforce although it needs to be taken into account that not all doctors seeking registration in another country will ultimately leave New Zealand, some may be only seeking short-term registration in that country and then return to New Zealand. Furthermore, there are other reasons for requesting a CGS unrelated to workforce departures. One example is doctors who request a CGS to provide to their College as part of the requirements they need to fulfil in order to gain Fellowship.

3. Retention of international medical graduates

The retention of international medical graduates is also important as they make up a large proportion of the medical workforce and New Zealand only trains a limited number of doctors each year. International medical graduates as measured by survey responses made up 37 percent of the medical workforce in 2005.

According to the Medical Council's annual report for 2004/2005, of the 1745 registrations approved during this year, only 311 were doctors trained in New Zealand. Despite more than 80 percent of registrations approved being international medical graduates, the proportion of international medical graduates in the medical workforce only increased by just under two percent.

Even allowing for the fact that doctors on short-term registration were not asked to complete the workforce survey, this suggests that while we register a large number of international medical graduates each year, most of these doctors do not remain in New Zealand long term, and almost as many leave as arrive.

Table 3.1 compares the retention rate at each year after initial registration for successive years of overseas trained registrants from 2000 to 2006. The data used could not be reliably obtained for years prior to 2000 so were not analysed.

Table 3.1 shows that less than 50 percent of international medical graduates are retained in the year immediately after initial registration and Table 3.2 shows that this trend has been consistent across the time period analysed with little variance in the percentage retained.

After this initial drop, the percentage of overseas trained continues to reduce gradually dropping to just under 33 percent in the third year after initial registration.

Table 3.1. Cohort remainder rate for international medical graduates 2000 - 2005

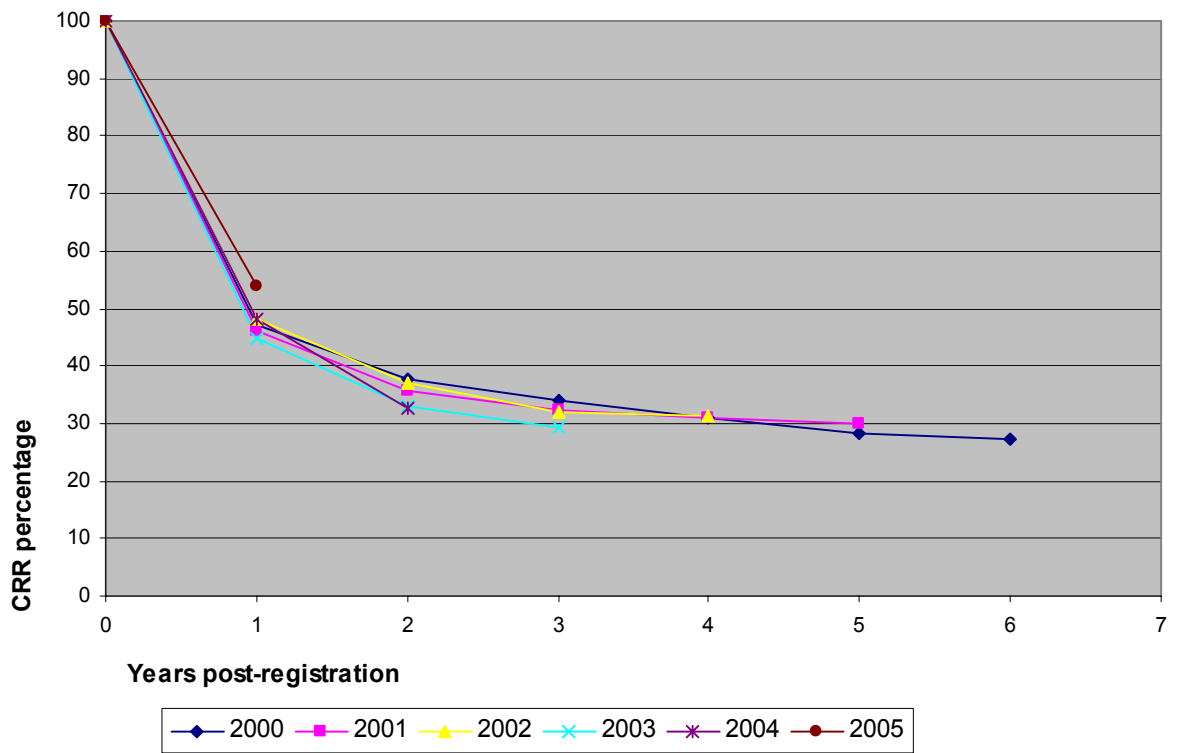
First year registered ¹	Percentage of cohort retained by post-registration year ²					
	1	2	3	4	5	6
2000	47.0	37.8	34.1	30.9	28.4	27.4
2001	46.1	35.8	32.4	30.9	29.9	
2002	48.2	36.9	32.1	31.3		
2003	44.9	32.8	29.4			
2004	48.2	32.5				
2005	54.0					

- 1 International medical graduates are included in a cohort if they held a practising certificate in that year but did not hold a practising certificate in the previous year. For example, for an international medical graduate to be included in the 2000 cohort, they must have held a practising certificate in 2000 and not held a practising certificate in 1999.
- 2 The cohort remainder rate is expressed as a percentage and equals the number of doctors from the cohort who held a practising certificate at some point in that year compared with the number of doctors originally in that cohort.

Table 3.2. Average percentage of international medical graduates retained by post-registration year

	Postgraduate year					
	1	2	3	4	5	6
Average percentage of international medical graduates retained	48.1	35.2	32.0	31.0	29.1	27.4
Standard deviation	3.2	2.4	1.9	0.2	1.1	-
Percent Standard deviation	6.6	6.8	6.0	0.7	3.7	-

Figure 3.1. Cohort remainder rate for international medical graduates 2000 - 2005



4. Postgraduate training and the vocational workforce

Looking at changes in the overall workforce shown in Table 4.1, the only area of significant growth in 2005 has been Primary care other than GP although this has decreased over the combined five years between 2000 and 2005.

General practitioners, house officers, and primary care doctors also decreased between eight percent and 17 percent during this period although Registrars, medical officers (MOSS) and specialists all showed steady growth increasing by 11 percent between 2000 and 2005.

Note that allowance should be made when considering this Table for the fall of eight percent in this year's response rate.

Trends in primary care are not adequately picked up when measured by capacity, as many doctors working in primary care give their capacity as general practitioners. To show these changes, numbers by type of work at main work site are also included in Table 4.1 for these two groups.

Table 4.1 Changes in the medical workforce 2000 to 2005

Workforce Role	Active doctors 2000	Active doctors 2005	Percent change 2000 - 01	Percent change 2001 - 02	Percent change 2002 - 03	Percent change 2003 - 04	Percent change 2004 - 05	Cumulative percent change 2000 - 05
General practice	3,166	2,924	-4	-4	3	0	-3	-8
House officer	894	811	-15	2	9	-3	0	-9
Medical officer	277	307	4	-4	9	4	-3	11
Primary care other than GP	190	157	-10	-3	-17	0	14	-17
Registrar	1,227	1,365	1	0	7	1	2	11
Specialist	2,653	2,940	3	0	6	3	0	11
Other	206	207	13	8	-3	29	-34	0
No Answer	2	35	1600	65	16	71	-68	1,650
Total	8,615	8,746	-1	-1	5	2	-3	2
Work at main site	Active doctors 2000	Active doctors 2001	Active doctors 2002	Active doctors 2003	Active doctors 2004	Active doctors 2005	Cumulative increase 2000-05	
General practice	2,701	2,553	2,597	2,715	2,745	2,737	-5	
Primary care other than GP	695	704	480	387	374	261	1	
Total	3,396	3,257	3,077	3,102	3,119	2,998	-4	

Table 4.2. Vocational groups at main work site (house officers excluded)¹

Work type at main work site²	No. of doctors in main work site 2005	No. of doctors in main work site 2000	Percent change 2000 to 2005	Average hours worked (all sites)	No. in vocational training³	Average age 2005	Vocational scope current APC NZ address
Accident and medical practice	106	0	100	38	37	44	98
Anaesthesia	572	512	10	49	160	44	535
Basic Medical Science	37	38	-3	49	7	48	34
Breast medicine	5	4	20	29	2	43	3
Clinical Genetics ⁴	4	0	100	32	1	55	4
Dermatology	43	47	-9	44	13	47	41
Diagnostic and interventional radiology	267	261	2	46	73	44	256
Emergency medicine	212	169	20	43	103	39	198
Family planning and reproductive health ⁵	28	0	100	23	0	48	26
General practice	2,737	2,701	1	40	617	47	2,639
Intensive care medicine	55	18	67	54	21	41	52
Internal medicine	806	870	-8	50	187	44	752
Medical administration ⁶	40	0	100	46	4	51	38
Musculoskeletal medicine	8	13	-63	41	2	55	8
Obstetrics and gynaecology	234	233	0	50	53	46	227
Occupational medicine	50	56	-12	42	12	50	48
Ophthalmology	114	103	10	46	21	46	107
Paediatrics	304	239	21	49	110	42	283
Palliative medicine ⁷	38	0	100	36	7	49	36
Pathology	192	173	10	42	49	46	178
Primary Care	261	695	-166	38	40	50	250
Psychiatry	530	499	6	43	157	46	496
Public health medicine	176	197	-12	41	48	45	168
Radiation oncology	41	35	15	52	15	41	38
Rehabilitation medicine	14	17	-21	45	5	44	13
Sexual health medicine	26	20	23	31	5	45	26
Sports medicine	14	13	7	47	4	47	14
Surgery: Cardiothoracic	25	27	-8	57	4	46	24
Surgery: General	233	244	-5	56	74	44	223
Surgery: Neurosurgery	14	21	-50	53	3	48	12
Surgery: Oral and maxillofacial ⁸	8	0	100	54	1	45	222
Surgery: Orthopaedic	234	221	6	50	60	49	26
Surgery: Other	21	43	-105	50	4	46	82
Surgery: Otolaryngology	85	79	7	61	18	44	19
Surgery: Paediatric	22	15	32	53	6	44	51
Surgery: Plastic	54	46	15	56	16	46	24
Surgery: Vascular	20	14	30	58	5	47	19
Urology	25	40	-60	53	7	47	24
Not Answered	189	54	71	46	52	41	173
Other	65	4	94	41	10	47	55
Grand Total	7,655	7,721	-1	45	2,100	46	7,522

¹ Includes registrars, medical officers and others not on the vocational register.

² Based on vocational groups except for categories “basic medical science”, “primary care other than GP” and “other surgical specialties”.

³ Self-reported participation in training towards registration within a vocational scope of practice. The vocational training area may be different from the work type at the main work site.

⁴ Clinical genetics was a new vocational scope in 2003 so comparison with the 2000 results is not possible.

⁵ Family Planning and Reproductive Health was a new vocational scope in 2001 so comparison with the 2000 results is not possible.

⁶ Medical Administration was a new vocational scope in 2003 so comparison with the 2000 results is not possible.

⁷ Palliative medicine was a new vocational scope in 2001 so comparison with the 2000 results is not possible.

⁸ Oral and maxillofacial surgery was a new vocational scope in 2004 so direct comparison with the 2000 results is not possible. In 2000, these doctors would have been counted in the "other surgical specialties" category.

Table 4.3. Retention of new vocational registrations 1995 - 99 and 2000 - 04

Vocational Scope	New vocational registrations in 1995-99	Percent female	Percent overseas trained	Percent retained in NZ 2005	New vocational registrations in 2000-04	Percent female	Percent overseas trained	Percent change 1995-99 to 2000-04
Anaesthesia	134	22	48	84	152	28	55	13
Dermatology	8	25	13	100	5	20	40	-38
Diagnostic radiology	79	35	34	70	84	38	37	6
Emergency Medicine	24	21	71	71	65	23	31	171
General practice	571	38	38	94	916	49	39	60
Internal medicine	186	18	32	83	207	27	48	11
Obstetrics and Gynaecology	56	41	64	75	65	51	68	16
Occupational medicine	30	17	20	80	14	21	57	-53
Ophthalmology	21	10	14	81	31	26	26	48
Paediatrics	59	49	34	85	66	42	62	12
Pathology	59	32	53	64	90	47	59	53
Psychiatry	132	33	70	67	177	34	67	34
Public health medicine	33	18	30	82	56	55	29	70
Radiation oncology	12	50	83	58	20	30	50	67
Rehabilitation medicine	6	17	50	83	5	0	40	-17
Surgery: cardiothoracic	8	13	50	88	5	0	80	-38
Surgery: general	47	6	34	87	51	12	53	9
Surgery: neurosurgery	4	25	0	100	3	0	67	-25
Surgery: orthopaedic	43	7	9	91	44	2	30	2
Surgery: otolaryngology	17	6	35	88	19	0	47	12
Surgery: paediatric	9	22	33	89	3	0	67	-67
Surgery: plastic and recon	7	0	43	100	14	0	14	100
Surgery: urology	7	14	14	86	13	0	38	86
Total	1,552	30	41	84	2,105	39	45	36

Source: Medical Council registration data. Retention measured by 2004/05 APC.

Table 4.3 compares two five year groups of recent vocational registrations. Registrations of both New Zealand and international medical graduates are included.

Considering only larger branches (branches with more than 20 registrations), those which have below average retention rates are pathology, psychiatry, diagnostic radiology, emergency medicine, obstetrics and gynaecology, occupational medicine and ophthalmology. Larger branches which have above average retention rates are general practice, and orthopaedic surgery.

The Table also shows a continuation in the trend of women shifting into general practice and obstetrics and gynaecology. Other areas showing significant increases in the proportion of women are ophthalmology, pathology and public health medicine. The proportion of women training in public health medicine has increased from 18 percent in 1995-99 to 55 percent in 2000-04.

5. Characteristics of the workforce

The proportion of women in the workforce continues to rise. After increasing from 24 percent in 1990 to 32.6 percent in 2000, it is now 36.4 percent. Table 5.1 shows the pattern of change by age group. In 2000 it was proposed that if trends at that time continued, the workforce would be close to overall gender equality within 30 years. Table 5.1 shows that those trends have continued, and it is notable that women now outnumber men in the age groups <25 and 25 - 29 and there is close to gender equality in the age group 30 - 34.

Although women make up the majority of doctors aged 34 or younger and the proportion of women across all age groups between 34 and 59 has increased on average by five percent, Table 4.1 still shows a steady decrease in the ratio of women to men after the age of 34 consistent with that observed in 2000.

Table 5.1. Proportion of female doctors by age group (2005)

Age group	<25	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70+	Total
Number female	82	430	465	528	605	552	276	150	57	31	8	3184
Number male	69	405	471	673	887	993	782	567	343	202	170	5562
Percent female 2005	54.3	51.5	49.7	44.0	40.5	35.7	26.1	20.9	14.3	13.3	4.5	36.4
Percent female 2000	47.8	45.7	47.0	39.6	34.9	25.4	20.6	14.5	15.1	8.6	9.0	32.6

A lot of media attention has been given to the hours of work and on-call requirements demanded on the medical profession. Table 5.2 shows that the average hours worked across all capacities has remained the same or decreased only slightly since 2000 despite there being an increased proportion of women in all age groups except those doctors aged 60-64 and doctors 70 and older.

Table 5.2 also shows that women work on average fewer hours per week in all roles except for house officer where women and men work the same average hours per week. However comparison with the 2000 results shows this gap is closing.

Table 5.2. Employment capacity by average hours

Site1 Employment Capacity	Total hours per week all sites (average) 2005	Total hours per week all sites (average) 2000	Percent women	Average hours per week 2005		Average hours per week 2000	
				Male	Female	Male	Female
Other	43	45	42	47	37	46	42
General practice	40	42	40	45	32	48	33
House Officer	55	56	53	55	55	56	56
Medical Officer	39	40	42	42	34	44	34
Primary Care not GP	34	34	39	38	28	39	26
Registrar	53	55	43	55	50	56	53
Specialist	47	48	24	48	41	50	42

Since 1997, practitioners have been asked how many weeks they worked during the year. In 2005 45 percent (3,970) reported working fewer than 48 weeks per year with an average of 35 weeks.

Both of these figures have increased since 2000 when 21 percent (1,819) reported working fewer than 48 weeks and the average number of weeks worked was 32. This means that although fewer doctors are working more than 48 weeks per year, doctors on average are working more hours per year.

Table 5.3 shows that while the proportion of doctors working more than 50 weeks a year have decreased by 12 percent, the proportion of doctors working between 46 and 50 weeks has almost doubled.

Table 5.3. Proportion (percent) of workforce by weeks worked per year

	<=20	21-25	26-30	31-35	36-40	41-45	46-50	>50	Total
2005	10	1	2	1	4	7	59	16	100
2000	14	2	4	2	7	8	36	28	100

Doctors are asked to provide a reason if they work fewer than 40 hours per week.

Overall, 1,884 doctors or 22 percent of the workforce work fewer than 40 hours per week, with the average being 25 hours. The use of a general “personal preference” category masked the total numbers, but of the 1884 doctors working fewer than 40 hours per week, 389 cited family care or parental leave as a reason, 96 percent of whom were women.

Aside from “personal preference”, the other reasons cited by a significant number of doctors (>30) for working fewer than 40 hours per week were “part time work” and “retired/semi-retired”.

The majority of doctors who quoted “part time work” as their reason for working fewer than 40 hours were women (285 out of 368) whereas the majority of those who quoted “retired/semi-retired” were men (139 out of 151).

Only ten doctors cited “difficulty obtaining work” as a reason for working fewer than 40 hours per week compared with 55 doctors in 2000.

Finally in this section, changing delivery of services across the private and public sectors is another feature of the workforce that has seen considerable change in recent decades.

Table 5.4 combines hours worked at all sites, analysed by employer and capacity. Grouped employer categories are used to illustrate recent changes.

The biggest change is the increase in the proportion of specialists working in public hospitals which went from 48.9 percent in 2000 to 73.5 percent in 2005. This reversed the trend which saw fewer doctors working in public hospitals witnessed in 2000.

There were also smaller increases in the proportions of house officers, registrars and medical officers working at public hospitals.

Table 5.4. Proportion (percent) of total hours worked by employer and capacity

Capacity	2000				2005			
	Public hospitals	Private medical	Non-medical	Other	Public hospitals	Private medical	Non-medical	Other
General practice	1.2	89.8	3.9	5.2	0.8	93.7	2.7	2.8
Primary care other than GP	5.3	57.3	15.8	21.6	3.0	68.9	9.3	18.8
House officer	97.8	1.4	0.4	0.3	99.0	0.4	0.5	0.1
Registrar	91.4	3.9	3.9	0.8	96.3	1.3	2.0	0.5
Medical officer	81	8.2	5.7	5.1	86.3	4.5	4.9	4.4
Specialist	48.9	39.8	9.3	1.9	73.5	20.5	4.8	1.2
Other	12.4	20.3	52.4	14.9	15.8	16.3	57.1	10.8

Notes: Private includes sole and group private practice, commercial companies and private hospitals.
 Non-medical includes universities, government and professional bodies.
 Hours by capacity and employer at each site are combined and converted to a percentage for comparison.
 Percentages may not add to 100 due to rounding.

6. Geographical analysis of general practice

The general practice workforce has been the subject of a lot of media attention with concerns there is a shortage of GPs, especially in rural areas as a persistent theme. Table 6.1 compares data on FTE GPs per 100,000 population. The results for 2004 are also included as they are likely to provide a more accurate comparison with 2000 given the low response in 2005.

There is no agreed ratio of GPs to patients in New Zealand although Brabyn and Barnett in their 2004 study quote 1:1400 patients per fulltime GP, the ratio used by the Ministry of Health for a full-time workload¹. This equates to 71.4 doctors per 100,000 population.

The current ratio of GPs is 70 GPs per 100,000 population (headcount) and 72 FTE general practitioners per 100,000 population, although these figures should be considered in the light of a much lower response in 2005.

Table 6.1 GP workforce by DHB locality of main work site

HFA Locality ¹	FTE GPs per 100,000 in 2000	Number of GPs in 2005	Total FTEs all sites GPs	Population of locality 2005 ²	FTE GPs per 100,000 in 2005	FTE GPs per 100,000 in 2004
Northland	88	105	113	148,650	76	81
Waitemata	70	300	281	493,200	57	60
Auckland	103	391	351	425,400	83	91
Counties-Manukau	69	261	251	434,000	58	61
Waikato ³	82	238	246	344,770	71	74
Bay of Plenty	89	142	137	196,050	70	70
Lakes	83	72	68	101,500	67	70
Tairāwhiti	85	31	35	44,700	78	73
Hawkes Bay	81	100	101	150,110	67	68
Taranaki	77	71	70	105,110	67	65
Midcentral	76	78	89	154,800	58	69
Wanganui	80	44	47	57,900	82	66
Wairarapa	67	24	25	39,260	64	65
Hutt	76	80	74	138,400	54	67
Capital & Coast ⁴	93	243	223	282,600	79	77
Nelson-Marlborough	89	101	97	135,000	72	75
West Coast	54	15	16	30,540	52	61
Canterbury	96	407	367	471,090	78	82
Otago	96	138	141	174,550	81	91
South Canterbury	80	34	44	53,750	81	76
Southland ⁵	86	83	76	116,450	66	71
Total	84	2,958	2,851	4,097,830	70	73
Standard deviation	11.0				9.6	8.6

1 The current DHB boundaries were not in place at the time the 2000 workforce survey was published so the 2000 figures have been recalculated using these boundaries to allow comparison with the 2005 data.

2 Estimated Resident Population as at 30 June 2005, Statistics New Zealand

3 Includes all TLA Ruapehu

4 Includes all TLA Kapiti

5 Includes all TLA Queenstown-Lakes

Note: The calculation of GP FTE includes all hours recorded at site1, site2 and site3 where the work role was GP for that work site. In the 2003 and earlier reports, this was calculated as including all hours recorded at site1, site2 and site3 where the work role at site1 was GP. The calculation used in this report better reflects the number of FTE GPs. The 2000 column has been recalculated using the new calculation and may differ from the figures listed in the 2000 report.

¹ Brabyn, L and Barnett, R. Population need and geographical access to general practitioners in rural New Zealand.

The level of regional variation is higher in 2005 than in 2000 measured by the standard deviation of service levels.

Because the accuracy of comparison between 2000 and 2005 is limited by the difference in response rates between the surveys, the equivalent column from 2004 has been included. In 2004 the response rate was 92 percent, only 0.6 percent less than in 2000.

Comparison between 2000 and 2004 confirms that the number of FTE GPs has not increased in line with population growth over this period.

District Health Boards (DHBs)

The number of FTE GPs ranged from 54 per 100,000 population for Hutt to 83 per 100,000 population for Auckland.

Again, comparison between 2000 and 2005 is difficult given the difference in response rates. Comparing 2000 with 2004, of the district health boards only West Coast has an increased number of FTE GPs per 100,000 population going from 54 in 2000 to 61 in 2004.

All other DHBs show fewer FTE GPs per 100,000 population in 2004 than in 2000. These decreases ranged from two for Wairarapa (67 to 65) to 19 for Bay of Plenty (89 to 70).

Other significant decreases were Southland (86 to 71), Capital and Coast (93 to 79), Wanganui (80 to 66) and Nelson-Marlborough (89 to 75).

Territorial Local Authorities (TLA)

The number of FTE GPs ranged from five per 100,000 population for Opotiki District to 241 per 100,000 population for MacKenzie District although it should be noted that these very low and very high results are due to the small numbers of FTE GPs and low TLA populations of these TLAs (Table 6.4).

Territorial authorities with FTEs for general practice below 50 per 100,000 population were Waitakere City, Franklin District, South Waikato District, Western Bay of Plenty District, Opotiki District, Wairoa District, Rangitikei District, Manawatu District, Tararua District, Horowhenua District, Carterton District, Tasman District, Grey District, Banks Peninsula District, Selwyn District and Southland District.

Territorial authorities with more than 100 GP FTEs per 100,000 population were Stratford and MacKenzie Districts.

All doctors working in Opotiki and Wairoa Districts were trained overseas. There were no TLAs where all doctors were New Zealand trained although Otorohanga, Manawatu and Waimakariri Districts all had more than 75 percent New Zealand trained doctors.

The proportion of international medical graduates nationally was 38 percent.

Table 6.2. Medical workforce by Territorial Authority of main work site

Site ¹ Territorial Authority	No. of GPs	FTEs GPs ¹	FTEs per 100 000	Ave hours GPs ²	No. of all doctors	No. of doctors per 100 000	O'seas doctors % of all	Territorial authority population ³
Cities								
North Shore City	157	143	67	37	503	237	33	212,200
Waitakere City	99	93	48	38	168	88	38	191,900
Auckland City	386	351	83	37	1811	426	32	425,400
Manukau City	197	190	57	39	609	183	40	332,900
Hamilton City	100	97	74	39	529	403	43	131,400
Napier City	44	44	79	42	65	115	51	56,400
Palmerston North City	54	60	76	45	242	309	45	78,400
Porirua City	27	26	52	40	55	109	49	50,500
Upper Hutt City	22	19	50	35	25	66	48	37,900
Lower Hutt City	57	55	55	39	190	189	39	100,500
Wellington City	171	157	85	37	714	386	28	185,100
Nelson City	46	43	94	39	118	258	31	45,700
Christchurch City	338	303	87	37	1058	304	31	347,600
Dunedin City	100	102	83	41	441	360	31	122,400
Invercargill City	44	43	83	40	151	294	48	51,300
Districts								
Far North District	35	42	72	48	48	83	58	57,800
Whangarei District	60	61	84	43	177	243	46	72,800
Kaipara District	10	10	53	40	11	61	55	18,050
Rodney District	43	45	50	43	52	58	48	89,100
Papakura District	37	37	84	41	46	105	30	43,700
Franklin District	25	24	42	39	27	47	52	57,400
Thames Coromandel District	24	26	97	44	38	142	63	26,700
Hauraki District	10	12	70	45	12	72	58	16,750
Waikato District	21	24	57	46	26	61	54	42,500
Matamata-Piako District	23	23	75	40	23	76	48	30,300
Waipa District	32	32	77	41	32	76	59	42,100
Otorohanga District	5	6	60	45	5	53	20	9,460
South Waikato District	10	11	47	40	14	61	64	22,800
Waitomo District	6	7	77	50	8	83	63	9,610
Taupo District	23	22	65	39	30	88	40	33,900
Western BOP District	17	20	48	48	19	45	32	42,200
Tauranga District	93	84	81	37	249	240	39	103,800
Rotorua District	49	46	69	39	151	223	41	67,600
Whakatane District	25	27	78	44	54	159	74	33,900
Kawerau District	6	5	73	38	6	91	100	6,620
Opotiki District	*	*	5	20	*	10	100	9,530
Gisborne District	31	35	78	45	75	168	55	44,700
New Plymouth District	48	46	67	40	167	241	48	69,200

Site1 Territorial Authority	No. of GPs	FTEs GPs ¹	FTEs per 100 000	Ave hours GPs ²	No. of all doctors	No. of doctors per 100 000	O'seas doctors % of all	Territorial authority population ³
Districts								
Stratford District	7	9	107	53	7	81	57	8,610
South Taranaki District	14	15	55	46	16	59	81	27,300
Ruapehu District	5	8	60	64	10	76	50	13,150
Wairoa District	*	*	39	53	*	36	100	8,410
Hastings District	44	46	64	42	154	216	29	71,400
Cent. HB District	7	7	54	42	14	106	50	13,150
Wanganui District	38	40	94	45	96	222	64	43,300
Rangitikei District	6	7	48	45	9	62	44	14,600
Manawatu District	11	13	45	49	22	78	23	28,300
Tararua District	7	8	48	44	8	45	63	17,600
Horowhenua District	6	8	28	57	12	39	75	30,500
Kapiti Coast District	42	39	83	38	46	98	37	47,000
Masterton District	14	14	62	43	38	163	55	23,300
Carterton District	*	*	48	46	*	42	33	7,160
South Wairarapa District	7	7	82	42	7	80	71	8,800
Tasman District	22	21	45	39	23	49	57	46,600
Marlborough District	32	33	76	43	52	122	38	42,700
Kaikoura District	*	*	85	43	4	111	50	3,610
Buller District	5	5	53	44	6	63	67	9,570
Grey District	5	6	45	45	27	206	37	13,100
Westland District	4	5	62	49	4	51	50	7,870
Hurunui District	5	6	51	50	8	74	63	10,850
Waimakariri District	18	21	50	47	19	45	21	42,100
Banks Peninsula District	4	4	45	44	4	47	75	8,430
Selwyn District	18	16	50	35	21	66	43	31,600
Ashburton District	13	14	51	46	20	74	35	26,900
Timaru District	24	28	66	48	67	156	43	43,000
Mackenzie District	4	9	241	81	4	107	75	3,730
Waimate District	6	7	99	47	6	85	67	7,020
Waitaki District	10	12	61	45	14	71	50	19,850
Cent. Otago District	12	14	89	49	18	119	39	15,100
Queenstown-Lakes District	22	19	82	35	25	106	44	23,500
Clutha District	12	13	75	47	13	76	46	17,200
Southland District	7	6	22	38	8	27	75	29,300
Gore District	8	9	69	44	8	65	63	12,350
Total	2,924	2,850	70	37	8,746	213	38	4,097,080

1 The calculation of GP FTE includes all hours recorded in at site1, site2 and site3 where GP is the role at that work site.

2 The calculation of Average hours GP uses the total hours worked by each doctor where their site1 work role is GP. This may include hours worked at other work sites where the work role was not GP.

3 Statistics New Zealand, Estimated Residential Population as at 30 June 2005.

* To prevent identification of individuals, categories which contain fewer than 4 doctors are omitted. The data has been replaced with in the table with an asterisk (*).

GP Service levels across urban and rural areas

Analysis of main workplace by Census area code categories allows calculation of a simplified indicator of service levels across urban and rural areas (Table 6.3).

The level of GPs per 100,000 population has fallen in all areas although the accuracy of this comparison is limited by the difference in the response rates. Rural GPs continue to work longer hours than those in main urban areas and women remain underrepresented, especially outside the main urban areas.

Table 6.3. Rural/urban FTE GPs per 100,000

Category	Population range	Population estimate June 2005	GP FTEs per category	GP FTEs per 100,000	Median hours by GPs	Percent female GPs
Main urban areas	30,000+	3,522,800	2,548	72	40	41
Secondary urban areas	10,000-29,999	376,700	229	61	46	29
Minor urban areas	1000-9,999	108,430	74	68	48	28
Combined with rural and costal areas	0-999					

Mobility of the workforce

Table 6.4 shows the movement of doctors over the last year by work role, measuring change between any TLA, and between city and district TLAs as measures of general and urban-rural mobility.

Women are slightly more mobile than men but there is little difference between the mobility of international medical graduates and New Zealand trained doctors. House officers and registrars are the most mobile work role although in both cases the proportion of doctors changing TLA has decreased significantly since 2000. This is especially true of house officers where the proportion changing TLA has almost halved.

The only change in urban-rural mobility is a decrease in the mobility of house officers from 14.7 percent in 2000 to 7.4 percent in 2005.

Table 6.4. Indicators of mobility by work role

	Number responding 2004 & 2005	Number changing TLA	Percent changing TLA	Number changing city-district	Percent changing city district
Total male	4,789	571	11.9	189	3.9
Total female	2,603	357	13.7	114	4.4
Total overseas trained	2,660	333	12.5	115	4.3
Total NZ trained	4,732	595	12.6	188	4.0
Work role					
GP	2,643	265	10.0	115	4.4
House Officer	404	90	22.3	30	7.4
Registrar	1,104	346	31.3	84	7.6
Medical Officer	265	36	13.6	14	5.3
Specialist	2,641	156	5.9	54	2.0

Note: Only larger groups are included in analysis by work role. Excludes Primary care and other.

7. Women doctors in the New Zealand workforce

Women are a major component of the medical workforce comprising 41 percent of the active workforce (32.5 percent of FTE workforce) and 53.4 percent of house officers.

In this section we will examine the retention of women in the workforce, the hours they work, geographical distribution and participation in public or private sectors.

Four cohorts of practitioners (including both New Zealand graduates and international medical graduates) active in 2005 are studied at the completion of four, eight, 12 and 16 years experience. These points were chosen as representative of the stages of a medical career. The cohorts comprise graduates from 2000, 1996, 1992 and 1988 who are entering their next year of practice in New Zealand. The year doctors completed their training is used as the base year rather than the year of graduation. The analysis includes:

- composition of cohorts by gender
- work capacity, eg house officer, registrar
- distribution of doctors identifying as GPs
- average hours spent by doctors in each work capacity, and
- employment.

Table 7.1 Summary of compositions of cohorts by gender and country of qualification

	Cohort			
	2000	1996	1992	1988
Number in cohort	203	240	260	278
Number of years post-graduation	5	9	13	17
Percent women	43.3	45.8	41.2	41.4
Percent of women in vocational training	63	69	33.6	26.1
Percent international medical graduates	24	20	49	50
Percent international medical graduates in vocational training	33	53	38	25

Composition of cohort by gender

2000 cohort – 5th year

This cohort includes 203 doctors who graduated in 2000 and are active in the New Zealand workforce in 2005. International medical graduates comprise 23.7 percent.

Seventy-five percent of New Zealand graduates and a third of the international medical graduates reported that they were undertaking training. Fewer women reported that they were in vocational training (63 percent) compared with men (66 percent). An equal number of women and men work as house officers.

Of those women in vocational training, 16 percent are training in general practice and internal medicine with 14 percent training in anaesthesia. Nine percent are training in surgical specialties. In comparison, of those men in vocational training, 14.5 percent are training in general practice, 11.9 percent in anaesthesia and 10.5 percent in diagnostic and interventional radiology and internal medicine.

1996 cohort – 9th year

This cohort includes 240 doctors who graduated in 1996 and are active in the New Zealand workforce in 2005. International medical graduates comprise 20 percent.

Sixty-seven percent of New Zealand trained doctors and 53 percent of international medical graduates reported they were undertaking training. Sixty-nine percent of women are in vocational training compared with 61 percent of men.

Of those women in vocational training, 30.3 percent are training in general practice, 13.2 percent in internal medicine and paediatrics and 9.2 percent in emergency medicine and psychiatry. In comparison, 17.7 percent of men are training in general practice, 11.4 percent in anaesthesia and 10.1 percent in emergency medicine (Figure 6.1 and 6.2).

1992 cohort – 13th year

This cohort includes 260 doctors who graduated in 1992 and who are active in the New Zealand workforce in 2005. International medical graduates comprise 49 percent.

By thirteen years post-graduation approximately 47 percent of women are working in general practice compared with 28 percent of men. Only 3.1 percent of women are working in surgical specialties compared with 12.3 percent of men.

Only 33.6 percent of women reported they were undertaking vocational training compared with 36.2 percent of men. Of those women in vocational training, almost 60 percent (58.3 percent) were training in general practice with 8.3 percent in psychiatry and 5.6 percent in public health medicine, internal medicine and anaesthesia. In comparison, of those men in vocational training, 14.5 percent were training in emergency medicine and general practice, 10.9 percent in psychiatry and 9.1 percent in internal medicine.

Only 32 percent of New Zealand trained doctors reported they were undertaking vocational training compared with 38 percent of international medical graduates. Of those international medical graduates in vocational training, 25 percent are training in general practice, 14.6 percent in psychiatry and 18.8 percent in emergency medicine.

1988 cohort – 17th year

This cohort includes 278 doctors who graduated in 1988 and who are active in the workforce in 2005. International medical graduates comprise 49.6 percent.

Forty-six percent of women are working in general practice compared with 25 percent of men. The remaining women are distributed evenly across the other specialties with the only other groups of note being anaesthesia (7.0 percent) and internal medicine (6.1 percent). Other groups of note amongst the men are anaesthesia (9.2 percent) and internal medicine (11.6 percent). Three point five percent of women are working in surgical specialties compared with 10.4 percent of men.

Only 23.3 percent of men reported they were undertaking vocational training compared with 26.1 percent of women. Of those women in vocational training, nearly two thirds (63.3 percent) are training in general practice. No other training area exceeded seven percent with 6.7 percent of women training in each of obstetrics and gynaecology, paediatrics and psychiatry. In comparison, of those men in vocational training, 21.1 percent were training in general practice, 18.4 percent in emergency medicine and 10.5 percent in accident and medical practice.

Only 21.2 percent of New Zealand trained doctors and 25.0 percent of international medical graduates report they were undertaking vocational training. Of the New Zealand graduates in vocational training, 67.8 percent were training in general practice with no other specialty making up more than eight percent. In comparison, of the international medical graduates in vocational training, 25 percent were training in general practice, 15.6 percent were training in emergency medicine and 9.3 percent were training in accident and medical practice.

Work role

House officer

The proportion of doctors still working as house officers five years after graduating is just over 10 percent for men and just under 14 percent for women. Small numbers of both men and women up to 17 years post-graduation are still employed as house officers (Figures 7.1 and 7.2). Some of these doctors may be international medical graduates working as house officers to fulfil registration requirements after completing Council's NZREX examination.

GP/primary care training

The proportion of women and men from the five-year post-graduation cohort training in general practice is fairly even (10.2 percent of women and 9.6 percent of men). In the other cohorts the proportion of women is higher, particularly in the 13 year post-graduation cohort where the proportion of women is almost four times as high as men (19.6 percent compared with 5.2 percent).

In 2000 there was a high proportion of both women and men training in general practice in the 17 years post-graduation cohort (17 percent of women and 15 percent of men).

In 2005, there is a similar proportion of women training in general practice (16.5 percent) although the proportion of men has dropped from 15 percent in 2000 to 4.9 percent in 2005 (Figures 7.1 and 7.2).

Specialty training

At five years post-graduation, 53.4 percent of women and 56.5 percent of men have entered specialty training other than general practice or primary care. This represents a significant shift from 2000 when only 40 percent of women had entered specialty training other than general practice or primary care.

At nine years post-graduation, a small number of women and men start entering the specialist workforce (4.5 percent of women and 11.5 percent of men). By 13 years post-graduation, 29

Figure 7.1. Percentage of women working in each work role at 5, 9, 13 and 17 years post-graduation

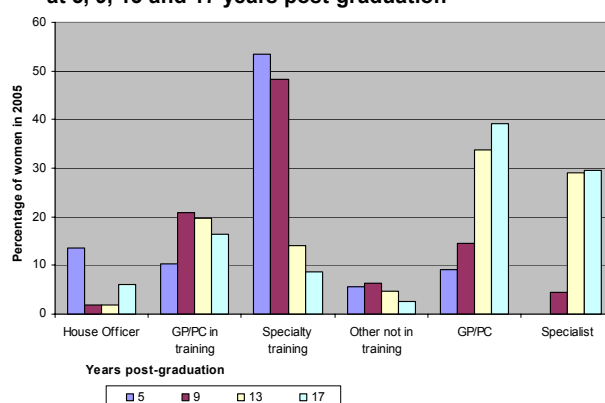
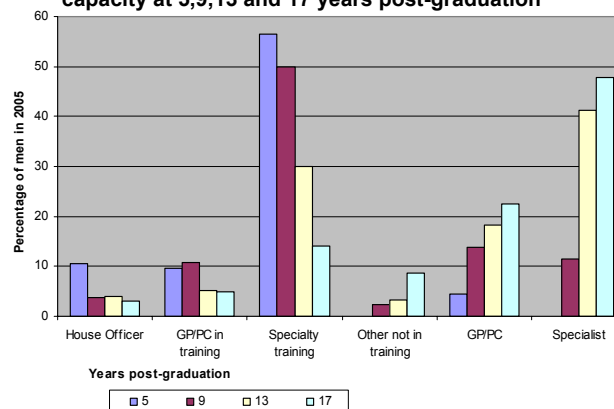


Figure 7.2. Percentage of men working in each work capacity at 5,9,13 and 17 years post-graduation



percent of women and 41.2 percent of men are in the specialist workforce. These proportions are increased from 2000 when only 19 percent of women and 35 percent of men were in the specialist workforce nine years post-graduation (Figures 7.1 and 7.2).

Other not in training

Of the 2000 cohort, no men and only 5.7 percent of women reported that they were employed as medical officers or registrars but the positions were not training positions (Figures 7.1 and 7.2).

GPs

Almost ten percent of women and just over four percent of men, in the five-year post-graduation cohort, reported working in general practice or primary care but were not involved in training programmes.

The proportion of women and men working in general practice or primary care is similar nine years post-graduation (14.5 percent of men and 13.8 percent of women) but the proportion of women is higher at both 13 and 17 years post-graduation with women peaking at 39.1 percent and men at only 22.6 percent 17 years post-graduation (Figures 7.1 and 7.2).

This represents a much smaller proportion of men working as general practitioners or in primary care than was observed in 2000 when the proportion of men was 37 percent.

Specialists

Women are slower than men in moving into the specialist workforce with only 4.5 percent of women from the nine-year post-graduation cohort working as specialists compared to 11.5 percent of men.

At 13 years post-graduation, 29 percent of women are working as specialists compared with 41.2 percent of men.

In 2000, the proportion of women working as specialists 13 years post-graduation was only 19 percent which confirms the trend of more women specialising observed in the 2000 report.

Geographical distribution of GPs

Women doctors in the cohorts analysed are working mainly in main urban areas with low percentages working in secondary areas. No women were working in rural areas.

The proportion of women working in secondary and rural areas has decreased from 2000 and may indicate a trend for women working as general practitioners to work in larger centres.

A higher percentage of men are working in the secondary and rural areas.

In 2000, men working in secondary and rural areas were predominantly from the 13 and 17 year post-graduation cohorts whereas in 2005, the cohort with the highest proportion of men was nine years post-graduation for both New Zealand and international medical graduates.

Table 7.2. Distribution of GPs' main workplace at 5, 9, 13 and 17 years post-graduation by country of graduation and gender

Women: percent by cohort and geographical distribution

Years post-graduation	5		9		13		17	
	NZ	OS	NZ	OS	NZ	OS	NZ	OS
Country of graduation								
Main urban areas ^(a)	100.0	100.0	96.6	100.0	93.1	100.0	94.1	92.0
Secondary urban areas ^(b)	0.0	0.0	3.4	0.0	6.9	0.0	5.9	8.0
Minor urban areas, rural and coastal areas ^(c)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Men: percent by cohort and geographical distribution

Years post-graduation	5		9		13		17	
	NZ	OS	NZ	OS	NZ	OS	NZ	OS
Country of graduation								
Main urban areas	100.0	100.0	78.3	33.3	90.5	85.0	94.4	88.0
Secondary urban areas	0.0	0.0	17.4	66.7	9.5	15.0	5.6	4.0
Minor urban areas, rural and coastal areas	0.0	0.0	4.3	0.0	0.0	0.0	0.0	8.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

- ^(a) 30,000 + population
- ^(b) 10,000 – 29,999 population
- ^(c) 0 – 9,999 population

Hours of work

House Officers

Generally, both men and women house officers work around 50 hours per week. The variation in both women and men nine years post-graduation may be due to the small numbers involved (Figures 7.3 and 7.4).

General practice

In the cohorts analysed, women GPs tend to work approximately 30 hours per week compared with 40-50 hours per week for men.

Both men and women GPs in the five-year post-graduation cohort worked on average more hours than men and women GPs in the other cohorts. However, this may be due to the small numbers involved in that cohort (Figures 7.3 and 7.4).

Figure 7.3. Hours worked by women in 2005 in each work role at 5, 9, 13 and 17 years post-graduation

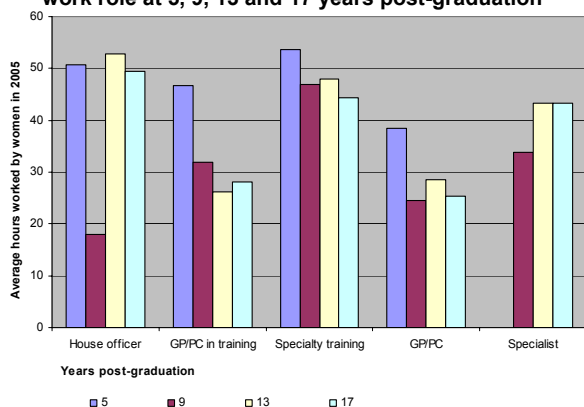
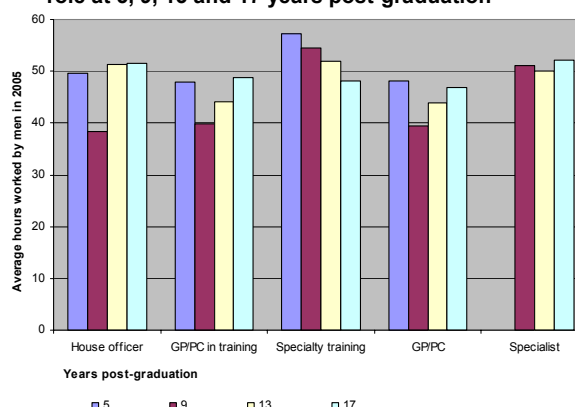


Figure 7.4. Hours worked by men in 2005 in each work role at 5, 9, 13 and 17 years post-graduation



Specialists

Both men and women completing specialty training, other than general practice and primary care, tend to work around 50 hours per week with men working on average across all four cohorts 53 hours per week and women working 48 hours per week. For both men and women the average hours worked per week is highest at five years post-graduation and lowest 17 years post-graduation.

Once qualified, women specialists in the cohorts studied tended to work around 40 hours per week compared with men who tended to work around 50 hours per week. Women specialists worked fewer hours on average per week at nine years post-graduation than at 13 and 17 years post-graduation whereas the average hours worked by men was fairly constant across all cohorts (Figures 7.3 and 7.4).

Employment situation

The 2000 report was observed that more women work in private practice and non-medical employment than men. It was also observed that “women also appear to move out of the hospital setting into private employment and non-medical employment earlier than men”.

This remains true in 2005. At five years post-graduation, 79.5 percent of women are working in a hospital setting compared with 90.4 percent of men. By 17 years post-graduation only 36.5 percent of women work in a hospital setting compared with 54.6 percent of men.

The proportion of women working in private employment is higher in all cohorts when compared with men. At five years post-graduation, 13.6 percent of women are working in private employment compared with only 5.2 percent of men. By 17 years post-graduation, more than half of all women work in private employment (53.9 percent) compared with only 39.9 percent of men.

At five years post-graduation, 3.4 percent of women do non-medical work compared with 0.9 percent of men. The proportion of women in non-medical work peaks at 9.3 percent 13 years post-graduation and men peaks at 4.3 percent 17 years post-graduation where the proportion of men and women is the same. (Figures 7.5 and 7.6).

Figure 7.5. Primary employment category for women in 2005 at 5, 9, 13 and 17 years post-graduation

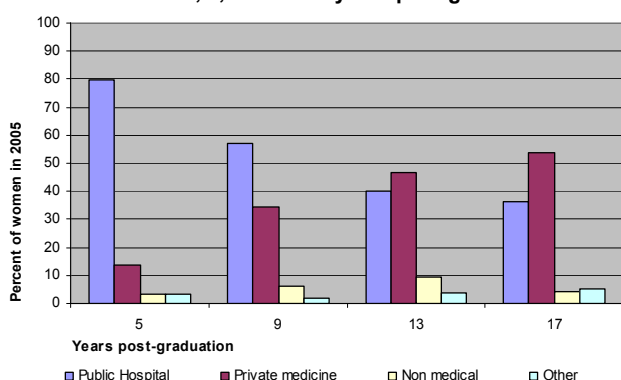
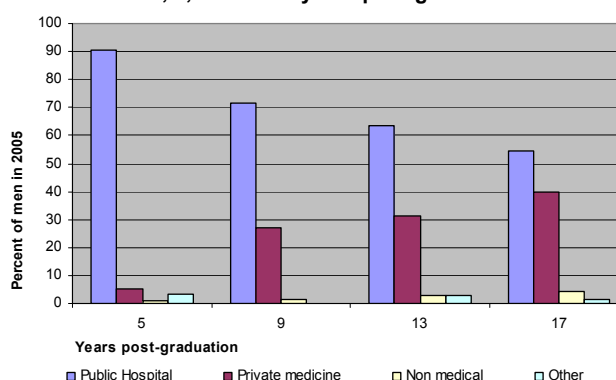


Figure 7.6. Primary employment category for men in 2005 at 5, 9, 13 and 17 years post-graduation



Secondary employment

More women hold secondary employment positions than men five and nine years post-graduation although this situation reverses dramatically at 13 and 17 years post-graduation (Figure 7.7).

The main area for secondary employment for both men and women is private employment, especially in the later cohorts, followed by public hospitals. The proportion of women working in non-medical areas is higher at five and nine years post-graduation although at 13 years post-graduation the proportion of men is higher and by 17 years post-graduation they are fairly even (Figures 7.8 and 7.9).

Figure 7.7. Doctors with two or more jobs in 2005 at five, nine, 13 and 17 years post-graduation

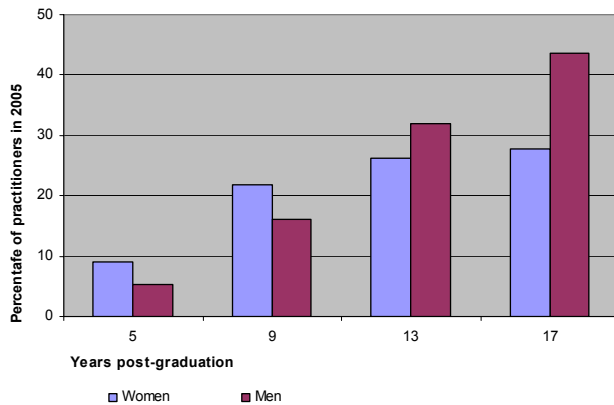


Figure 7.8 Secondary employment categories for women in 2005 at five, nine, 13 and 17 years post-graduation

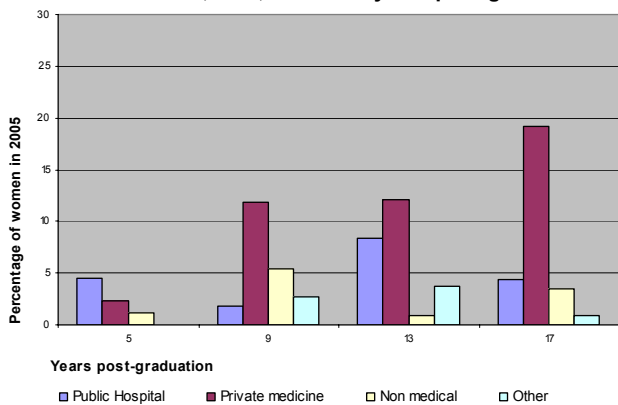
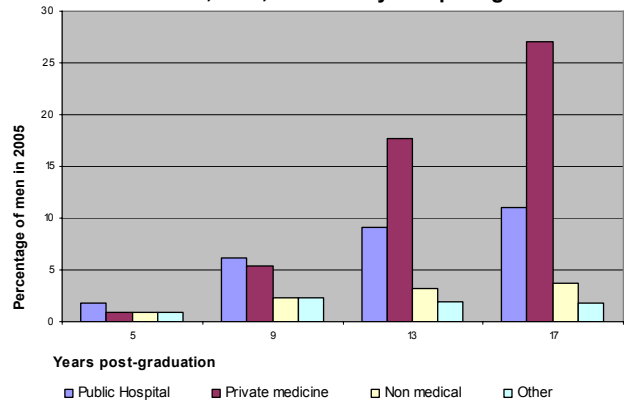


Figure 7.9. Secondary employment categories for men in 2005 at five, nine, 13 and 17 years post-graduation



Tertiary employment

Overall the proportion of women holding three or more positions is higher than that of men although at 17 years post-graduation it is the same (Figure 7.10). As it was for secondary employment positions, the main area for tertiary employment is again private employment (Figures 7.11 and 7.12).

Figure 7.10. Doctors with three or more jobs in 2005 at 5, 9, 13 and 17 years post-graduation

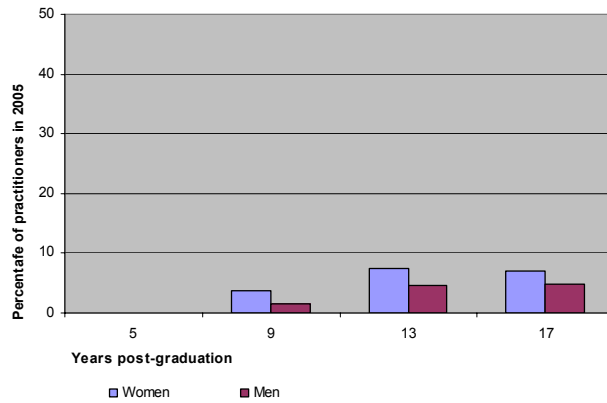


Figure 7.11. Tertiary employment categories for women in 2005 at 5, 9, 13 and 17 years post-graduation

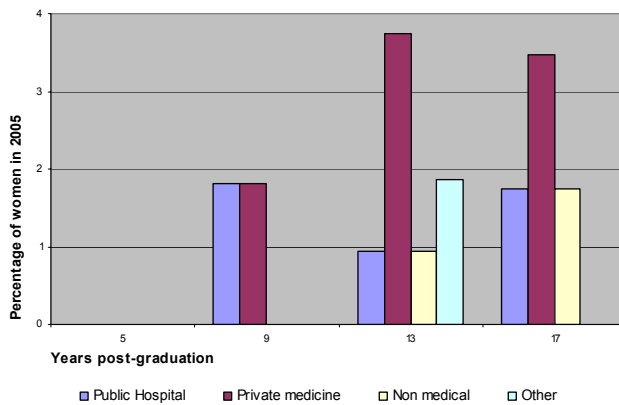
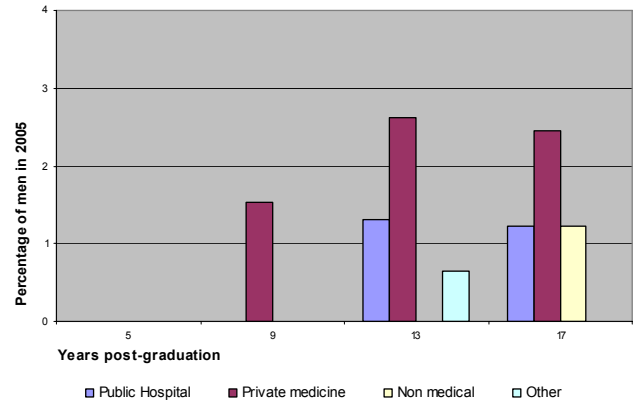


Figure 7.12. Tertiary employment categories for men in 2005 at 5, 9, 13 and 17 years post-graduation



8. Māori workforce

In 2005, 230 doctors self-identified as Māori ethnicity, comprising 2.6 percent. This is up 0.3 percent from 2000 when 198 doctors self-identified as Māori ethnicity although the increase is less than the 0.6 percent predicted in 2000 even allowing for the lower response rate in 2005.

Furthermore, analysis of the number of doctors self-identifying as Māori ethnicity at each year since 2000 shows that the number of doctors peaked in 2003 and has in fact dropped in 2004 and 2005. Comparison with the proportion of the population identifying as Māori shows that Māori are underrepresented in the medical workforce consistently over the period analysed (Table 8.1).

The proportion of Māori women has increased from 38 percent in 2000 and 1997 to 43 percent in 2005 (Table 8.2).

The number of doctors who self-identify as Māori ethnicity has increased in all work capacities except for house officers between 2000 and 2005 although the number of GPs is still below the level recorded in 1997. In particular, the number of specialists has increased from 36 to 49 after previously dropping from 38 to 36 between 1997 and 2000 (Table 8.3).

Table 8.1. Māori workforce headcount, proportion of workforce 1997-2005, with Māori population as a proportion of the New Zealand population

	2005	2004	2003	2002	2001	2000	1997
Number of doctors (headcount)	230	234	241	230	220	198	201
Proportion of workforce (percent)	2.6	2.6	2.7	2.7	2.6	2.3	2.4
Māori population as a proportion of NZ population (percent) ¹	15.5	15.3	15.2	15.2	13.8	15.0	14.4

¹ New Zealand population and Māori population are the Statistics New Zealand Estimated Residential Population figures for these years as at 30 June except for 2001 where the figures are from the Census.

Table 8.2. Māori workforce by gender 1997-2005

Gender	2005	2000	1997
Female	100	75	77
Male	130	123	124
Total	230	198	201
Percent female	43.5	37.9	38.3

Source: Medical Council of New Zealand annual workforce surveys.

Table 8.3. Māori workforce by work capacity 1997-2005

Work Capacity	2005	2000	1997
House officer	37	41	40
Registrar	42	40	32
Medical officer	5	5	5
General practitioner	74	63	78
Specialist	49	36	38
Other/not stated	23	13	8
Total	230	198	201

Source: Medical Council of New Zealand annual workforce surveys.

Analysis of the Māori workforce by DHB locality of main work site shows that over 80 percent work in the North Island and that over 40 percent work in the greater Auckland region. This trend has been consistent since the introduction of the current DHB boundaries in 2001.

Other areas with a significant proportion of the Māori workforce are Canterbury, Capital and Coast and to a lesser extent, Waikato and Bay of Plenty (Table 7.4).

Table 8.4. Proportion of Māori workforce by DHB locality of main work site

DHB Locality	2005	2004	2003	2002	2001
Northland	2.6	2.1	2.1	2.6	4.1
Waitemata	8.3	6.8	7.9	6.1	5.9
Auckland	25.2	26.5	22.8	23.0	19.5
Counties-Manukau	9.6	9.4	9.5	10.0	10.9
Waikato	6.5	6.4	6.6	6.1	9.1
Bay of Plenty	4.3	4.3	7.5	9.1	9.5
Lakes	2.6	4.3	2.5	2.6	2.7
Tairāwhiti	2.6	3.0	2.5	2.2	1.8
Hawkes Bay	2.6	3.4	3.3	1.7	2.7
Taranaki	1.3	1.3	2.1	1.7	0.9
Midcentral	4.3	2.6	3.3	3.0	2.7
Wanganui	-	0.4	0.4	0.9	0.5
Wairarapa	0.4	0.9	0.8	0.4	0.9
Hutt	3.0	4.3	2.5	3.0	3.2
Capital & Coast	8.7	8.5	7.5	7.8	8.6
Nelson-Marlborough	2.6	2.1	2.1	1.7	1.8
West Coast	0.4	0.4	0.4	-	-
Canterbury	9.1	7.3	10.4	11.7	6.4
Otago	3.0	4.3	3.3	3.9	5.0
South Canterbury	0.4	0.4	0.8	0.4	0.9
Southland	2.2	1.3	1.7	1.7	2.7
Total (headcount)	230	234	241	230	220

9. Pacific peoples workforce

In 2005, 133 doctors self-identified their ethnicity as Pacific peoples, an increase from 95 in 2000 and 67 in 1997. They now comprise 1.5 percent of the active workforce. It should be noted that the method used to count ethnicity gives priority to Māori ethnicity and doctors who identify their ethnicity as Māori and Pacific peoples will be counted as Māori.

Analysis of the number of doctors self-identifying their ethnicity as Pacific peoples each year since 2000 shows an overall increase in both headcount and as a proportion of the workforce although there were slight decreases in 2001 and 2002 when compared with the previous year (Table 9.1).

The proportion of women in the Pacific peoples workforce has increased gradually since 1997 and is now 31.6 percent (Table 9.2).

After dropping in 2000 from 19 to 15, the number of house officers has increased to 24 in 2005. The number of GPs and specialists also increased, although the number of registrars dropped to just above the level in 1997 (Table 8.3).

Table 9.1. Pacific peoples workforce headcount and proportion of workforce 1997-2005

	2005	2004	2003	2002	2001	2000	1997
Number of doctors (headcount)	133	121	100	86	91	95	67
Proportion of workforce (percent)	1.5	1.3	1.1	1.0	1.1	1.1	0.8
Pacific peoples population as a proportion of NZ population (percent)¹	6.3	6.2	6.1	6.1	6.1	5.9	5.4

¹ New Zealand population used was taken from the Statistics New Zealand Estimated Residential Population figures at 30 June each year except for 2001 which was taken from the Census figures for that year. The Pacific peoples population for 2001 was taken from the census figures for that year and the other years were estimated by taking the 2006 and 2001 Census figures and distributing the growth between 2001 and 2006 evenly across the intervening years.

Table 9.2. Pacific peoples workforce by gender 1997-2005

Gender	2005	2000	1997
Female	42	29	19
Male	91	66	48
Total	133	95	67
Percent female	31.6	30.5	28.4

Source: Medical Council of New Zealand annual workforce survey. Under prioritised ethnicity, Māori ethnicity takes precedence over Pacific peoples ethnicity if a doctor self-identifies in both ethnicities.

Table 9.3. Pacific peoples workforce by work capacity 1997-2005

Work Capacity	2005	2000	1997
House officer	24	15	19
Registrar	18	27	16
Medical officer	4	*	6
General practitioner	42	27	13
Specialist	35	18	13
Other/not stated	10	8	0
Total	133	95	67

Source: Medical Council of New Zealand annual workforce survey.

* To prevent identification of individuals, cell values with fewer than four doctors are omitted.

Analysis of the Pacific peoples workforce by DHB locality of main work site shows almost 90 percent work in the North Island and over 54 percent work in the greater Auckland region.

This trend has been consistent since the introduction of the current DHB boundaries in 2001 and expected given the most recent Census figures indicate 93.4 percent of Pacific peoples live in the North Island and two-thirds (66.9 percent) live in the Auckland Region².

Other areas with a significant proportion of the Pacific peoples workforce are Canterbury, Capital & Coast and Waikato (Table 9.4).

Table 9.4. Distribution of Pacific peoples workforce by DHB locality of main work site

DHB Locality	2005	2004	2003	2002	2001
Northland	0.8	0.8	2	1.2	2.2
Waitemata	8.3	5.0	7	7.0	9.9
Auckland	19.5	21.5	24	20.9	27.5
Counties-Manukau	26.3	25.6	22	22.1	18.7
Waikato	9.8	5.8	3	3.5	7.7
Bay of Plenty	2.3	4.1	4	3.5	1.1
Lakes	1.5	1.7	1	1.2	-
Tairāwhiti	-	0.8	1	-	-
Hawkes Bay	2.3	0.8	1	-	-
Taranaki	0.8	0.8	1	1.2	1.1
Midcentral	5.3	5.8	3	4.7	2.2
Wanganui	1.5	1.7	3	1.2	1.1
Hutt	1.5	-	3	2.3	1.1
Capital & Coast	9.0	12.4	12	14.0	11.0
Nelson-Marlborough	-	0.8	1	-	-
West Coast	0.8	0.8	-	-	-
Canterbury	6.0	7.4	6	7.0	5.5
Otago	3.0	2.5	5	5.8	4.4
South Canterbury	-	0.8	0	1.2	1.1
Southland	1.5	0.8	1	3.5	5.5
Total (headcount)	133	121	100	86	91

² QuickStats About Culture and Identity. Statistics New Zealand – 19 April 2007 - <http://www.stats.govt.nz/census/2006-census-data/quickstats-about-culture-identity/quickstats-about-culture-and-identity.htm?page=para016Master>

10. Method

Annual survey

Workforce data is collected as part of the renewal of annual practising certificates. In 2000, this process was changed from one period in the year to four periods depending on the birth date of the doctor.

The four periods of data in this report ended November 2004, February 2005, May 2005 and August 2005.

The sampling frame for the workforce questionnaire includes doctors with a general, provisional general, vocational or provisional vocational scope of practice, a current annual practising certificate (APC), and a New Zealand address at the date of collection.

The questionnaire was posted out a month before the end of the period and those not responding were sent up to two reminder letters. All data was collected within three months of the end of a period.

Data for this report were collected in the categories “employer”, “work role” and “work type” at a main work site; and second and third work sites where appropriate. Work role options were GP, primary care other than GP, house officer, registrar, medical officer, specialist/consultant, and other.

The same categories are used in this report to identify the role and type of work, and do not indicate level of expertise.

This report also includes statistical information drawn from the Council’s registration database, to avoid duplicating questions in the APC application (age, sex, registration date, graduation country and graduation year, short-term registrants).

Geographical analysis used territorial authority and DHB regions based on the employment information for the main work site. DHB populations were determined by amalgamating territorial authority population counts from the Estimated Resident Population as at 30 June 2005³.

Multiple responses of ethnicity are reported as a single category, according to a simplified version of Statistics New Zealand’s prioritisation standard. Thus a single ethnic category was selected from multiple responses in the following priority order:

1. New Zealand Māori
2. Pacific Island
3. Chinese
4. Indian
5. Other non-European
6. European
7. New Zealand European.

Where the Council’s registration database is cited as a source for additional analysis, issue of an APC is used as the measure of workforce participation. Results were generated using Microsoft Access software.

³ Statistics New Zealand: Estimated Residential Population as at 30 June 2005

New Zealand graduates

Retention of New Zealand graduates is calculated by comparing the list of graduates provided by the universities for a particular year with the lists of doctors who purchased APCs in subsequent years.

International medical graduates

The cohort remainder rate is calculated by comparing the number of international medical graduates active at some point during a year to the number originally in that cohort. The cohort remainder rate is expressed as a percentage.

International medical graduates are included in a cohort if they held a practising certificate in that year but did not hold a practising certificate in the previous year. For example, for an overseas trained doctor to be included in the 2000 cohort, they must have held a practising certificate in 2000 and not held a practising certificate in 1999.

Inclusion in a cohort does not relate in any way to the date an international medical graduate graduated in their home country.

Definitions

Active workforce

Doctors who stated they worked a total of at least four hours in medical (including non-clinical) work during a typical working week are included in workforce survey results.

Full time equivalent (FTE)

Proportional calculation is based on 40 hours per week as one FTE and 60 hours calculated as 1.5 FTE.

Hours worked

Unless otherwise stated, the combined total hours worked per week across all work sites are as self-reported by the respondent and are based on a typical working week during the previous year, or the most recent week if the respondent cannot identify a typical week.

Only on-call time which is actually worked is included.

Hours on-call

Additional hours doctors are on-call but not actually working.

Main work site

The work and location in which a practitioner spends the largest portion of their working hours.

Work role

Work role options were GP; primary care other than GP; house officer; registrar; medical officer; specialist/consultant; and other.

House officer

House officer is selected by the practitioner from the above work roles. It encompasses doctors in their first few years out of medical school. Doctors in their first year out of medical school are also known as interns.

Specialist

Specialist is selected by the practitioner from the above work roles listed on page 33. It is generally understood to require membership of the relevant specialist college but self-reporting leads to broader usage in survey reports. This does not include general practitioners or doctors working in accident and medical practice or other primary care disciplines although GPs, specialists, and doctors working in accident and medical practice or other primary care disciplines are all eligible for registration within a vocational scope.

Work type

As used in Table 4.2 on page 10 which shows work type at main work site.

Registration within a vocational scope of practice

A community-based doctor or specialist who has met the criteria for a vocational scope of practice with the Medical Council of New Zealand, including completion of the requirements of the relevant college or branch advisory body. Previously known as vocational registration.

International medical graduate

A doctor who obtained their primary medical qualification in a country other than New Zealand. Previously known as overseas-trained doctors.

11. Further Information and Acknowledgements

Workforce information

For further information about the workforce survey contact:

Analytical Unit
New Zealand Health Information Service
P O Box 5013
Wellington

Email: inquiries@nzhis.govt.nz
Website: www.nzhis.govt.nz/stats.medpracstats
Phone: (04) 922 1800

To speak to the Council's Information Systems Analyst about this report phone 04 381 6813 or 0800 286 801 extension 813.

Acknowledgements

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