

National report on doctors five years after graduating from New Zealand medical schools in 2012–2016

September 2022

Prepared by:

The New Zealand MSOD Steering Group.

University of Otago:

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msod
medical schools outcomes database



Otago Medical School
Te Kura Hauora o Ōtākou



**MEDICAL AND
HEALTH SCIENCES**

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OTAGO MEDICAL SCHOOL
Te Kura Hauora o Ōtākou



**MEDICAL AND
HEALTH SCIENCES**

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EXECUTIVE SUMMARY

This report provides the findings from New Zealand Medical Schools Outcomes Database (NZMSOD) questionnaires administered between 2017 and 2021 to doctors five years after graduating from a New Zealand medical school between 2012 to 2016). It extends upon a previously published report covering questionnaire responses from 2016–2018.

A total of 1,095 from a possible 2,208 doctors (50%) responded.

Over this time the respondents comprised 56% women and 44% men, which is similar to the complete cohort over this period (54% and 46% respectively).

The median age at the time of the survey across all cohorts is 29.4 years, with little to no variation in each cohort year. Approximately 62% of respondents are under 30 years of age compared with 58% of the complete cohort. The self-reported ethnic identity of respondents shows 9% of respondents identified as Māori and 3% of respondents identified as Pacific people. These proportions underrepresent the proportion of Māori and Pacific people in the New Zealand population (17% Māori, 8% Pacific people)¹, and slightly underrepresent the proportions of the graduating classes (10%, Māori, 5% Pacific people). Over 91% of respondents are New Zealand citizens.

Approximately 21% have children under the age of 16, and 12% report being responsible for one or more dependants other than children under the age of 16.

Five years after graduating, 91% of respondents agree or strongly agree that their internship prepared them for work as a doctor, while 76% of respondents agree or strongly agree that their basic medical degree prepared them for their work as a doctor. Over 87% of respondents are working as a registrar and/or are in training under supervision, and 78% are enrolled in a College training programme. Of those not currently enrolled in a vocational training programme, 45% intend to enter one in their PGY6 year, 29% in their PGY7 year, and 6% in their PGY8 year.

Over 97% of respondents intend to work in New Zealand in the future: 61% in a major city; 29% in a regional centre or large town, and the remainder in smaller towns.

About 92% of respondents are decided on a future medical specialty. The consistent top preference across all cohorts is General Practice (28%). The next top three choices are Internal medicine (14%), Surgery (11%), and Anaesthesia (8%), although the order of preference is not consistent across each cohort. Over 60% of respondents picked one of these four specialties as their first-choice preference. Over 87% of respondents report being moderately or absolutely certain of practising in their most preferred specialty.

An interest in medical teaching was indicated by 73% of respondents, while an interest in medical research was indicated by 40% of respondents.

Five years after graduation, respondents indicate both external and internal factors influence their specialty preference, with the highest ranked factors being *atmosphere/work culture typical of the discipline, self-appraisal of own skills / aptitudes, influence of training experiences as a doctor (e.g. consultants/mentors), and work experiences since graduation* in addition to *interest in helping people*, with over 70% of respondents indicating these factors were significant influences to them. By comparison, the least influential factors influencing specialty preference include *financial costs of vocational training, risk of litigation and associated insurance costs, financial costs of medical school education and/or debt, and influence of parents/relatives*, with fewer than 10% of respondents reporting these to be significant influences to them.

¹ Statistics New Zealand. 2018 Census ethnic group summaries.

<https://www.stats.govt.nz/tools/2018-census-ethnic-group-summaries/>, Retrieved 22/08/2022

INTRODUCTION

The Medical Schools Outcomes Database and Longitudinal Tracking Project (MSOD) is an on-going collaborative longitudinal prospective cohort study instigated by Medical Deans Australia and New Zealand (MDANZ)². The project has been operating in New Zealand since 2005 and has approvals from the University of Auckland Human Participants Ethics Committee (#022388; #018456) and the University of Otago Ethics Committee (#07-155). The purpose of the MSOD is to gain a better understanding of the factors that influence career choices from selection to medical school, and throughout the continuum of training, to inform policy decisions of the various stakeholders in medical education and training.

In New Zealand, students are invited to complete surveys at entry to their medical school/ programme (Year 2) through the Commencing Medical Students Questionnaire (CMSQ); at the end of their final year of medical school through the Exit Questionnaire (EQ); and one, three, five, and eight year(s) after graduation (PGY1, PGY3, PGY5, PGY8).

This report presents summary and trend data for five cohorts of PGY5 doctors who graduated 2012–2016 from the University of Auckland and the University of Otago. For more details on response rates and methods, see Appendices A and B.

² Poole P, Wilkinson TJ, Bagg W, Freegard J, Hyland F, Jo E, Kool B, Roberts E, Rudland J, Smith B, Verstappen A. Developing New Zealand's medical workforce: realising the potential of longitudinal career tracking. *NZ Med J* 2019;132:1495

RESULTS

Some table cells in this report represent small numbers of respondents. Cells reporting on fewer than three respondents have been suppressed (indicated by a “..C” entry, see Figure 1). To protect respondents’ privacy, frequencies in all tables have been randomly rounded to a multiple of three. The total frequency and percentage columns for each table do not include suppressed cells. Where a row only contains suppressed cells, the total cell will also be suppressed. Care has been taken to ensure the proportions presented here are a reasonable reproduction of the original data. The methods used are detailed in Appendix B.

Figure 1. Example table with low frequency cells that have been suppressed.

Table 2. Gender of respondents

Gender	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Female	105	53.0%	135	60.0%	111	54.4%	132	57.1%	126	55.3%	609	56.1%
Gender diverse	--		--		..C	..C	--		..C	..C	..C	..C
Male	93	47.0%	90	40.0%	93	45.6%	99	42.9%	102	44.7%	477	43.9%

Not all respondents answered each question, so the numbers in each table vary. Where respondents can provide multiple responses to a question, an additional header line indicating the number of respondents that answered the question (n) is included.

Figure 2. Example table where multiple responses are allowed per respondent.

Table 5. Self-identified ethnicity of respondents

Ethnicity	Survey year											
	2017		2018		2019		2020		2021		Total	
	n=195		n=222		n=210		n=231		n=228		n=1089	
	n	%	n	%	n	%	n	%	n	%	n	%
Māori	15	7.7%	15	6.8%	21	10.0%	21	9.1%	30	13.2%	102	9.4%
Pacific people	6	3.1%	3	1.4%	6	2.9%	6	2.6%	12	5.3%	33	3.0%
New Zealand European	132	67.7%	144	64.9%	144	68.6%	159	68.8%	156	68.4%	735	67.5%
Other	66	33.8%	81	36.5%	63	30.0%	72	31.2%	69	30.3%	351	32.2%

Percentages total more than 100% as respondents may identify with more than one ethnicity.

Column headings refer to the year in which the questionnaires were completed, except for tables with low total frequencies, where only total columns are presented.

Response rate

The number of students graduating from New Zealand medical schools between 2012 and 2016 was 2,208. This is the total cohort who were eligible to respond to the PGY5 Questionnaires. Every effort was made to contact all those in the cohort.

The number of respondents across the survey time period (2017 to 2021) was 1095 giving an overall response rate of 49.6%. The response rates for each graduating year are presented in Table 1.

Table 1. Response rate by university of students completing study (cohort) and questionnaires

Medical School/ Programme		Survey year										Total	
		2017		2018		2019		2020		2021		n	%
		n	%	n	%	n	%	n	%	n	%	n	%
University of Auckland	Responses	66		72		72		99		87		396	
	Cohort	162	40.7%	189	38.1%	189	38.1%	192	51.6%	216	40.3%	948	41.8%
University of Otago	Responses	132		153		138		132		144		699	
	Cohort	243	54.3%	246	62.2%	240	57.5%	246	53.7%	285	50.5%	1260	55.5%
Total	Responses	198		225		210		231		231		1095	
	Cohort	405	48.9%	435	51.7%	429	49.0%	438	52.7%	501	46.1%	2208	49.6%

Further details on response rates are available in Appendix A.

Demographics

Table 2. Gender of respondents

Gender	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Female	105	53.0%	135	60.0%	111	54.4%	132	57.1%	126	55.3%	609	56.1%
Gender diverse	–	–	–	–	..C	..C	–	–	..C	..C	..C	..C
Male	93	47.0%	90	40.0%	93	45.6%	99	42.9%	102	44.7%	477	43.9%

Table 3. Age range of respondents

Age group	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
25–29 years	129	66.2%	144	64.0%	126	61.8%	138	60.5%	120	58.8%	657	62.2%
30–34 years	60	30.8%	63	28.0%	69	33.8%	72	31.6%	69	33.8%	333	31.5%
35–39 years	6	3.1%	9	4.0%	3	1.5%	9	3.9%	12	5.9%	39	3.7%
40 years and over	..C	..C	9	4.0%	6	2.9%	9	3.9%	3	1.5%	27	2.6%

†Age calculated at 30 November in the year surveyed, grouped into five-year age ranges.

Table 4. Median age and range of respondents

Age in years†	Survey year					
	2017	2018	2019	2020	2021	Total
Median	29.4	29.4	29.5	29.4	29.6	29.4
Minimum	27.7	27.6	27.6	27.5	27.7	27.5
Maximum	40.3	52.7	52.4	45.9	47.9	52.7

†Age calculated at 30 November in the year surveyed.

Table 5. Self-identified ethnicity of respondents

Ethnicity	Survey year											
	2017		2018		2019		2020		2021		Total	
	n=195		n=222		n=210		n=231		n=228		n=1089	
	n	%	n	%	n	%	n	%	n	%	n	%
Māori	15	7.7%	15	6.8%	21	10.0%	21	9.1%	30	13.2%	102	9.4%
Pacific people	6	3.1%	3	1.4%	6	2.9%	6	2.6%	12	5.3%	33	3.0%
New Zealand European	132	67.7%	144	64.9%	144	68.6%	159	68.8%	156	68.4%	735	67.5%
Other	66	33.8%	81	36.5%	63	30.0%	72	31.2%	69	30.3%	351	32.2%

Percentages total more than 100% as respondents may identify with more than one ethnicity.

Symbol ..C indicates suppression of frequencies less than three

Table 6. Citizenship of respondents

Citizenship	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
New Zealand citizen	180	89.6%	207	92.0%	189	88.7%	219	94.8%	219	93.6%	1014	91.8%
New Zealand Permanent Resident	15	7.5%	12	5.3%	15	7.0%	6	2.6%	9	3.8%	57	5.2%
Australian citizen	3	1.5%	3	1.3%	3	1.4%	3	1.3%	3	1.3%	15	1.4%
Visa holder	–	–	..C	..C	–	–	–	–	–	–	..C	..C
Other	3	1.5%	3	1.3%	6	2.8%	3	1.3%	3	1.3%	18	1.6%

[Relationships and dependents](#)

Table 7. Relationship status of respondents

Relationship status	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Single	30	15.2%	57	25.3%	36	16.9%	45	19.7%	42	18.2%	210	19.2%
In a relationship but not living with partner	27	13.6%	21	9.3%	21	9.9%	21	9.2%	24	10.4%	114	10.4%
Living with partner	51	25.8%	63	28.0%	66	31.0%	60	26.3%	81	35.1%	321	29.3%
Married	90	45.5%	81	36.0%	87	40.8%	102	44.7%	84	36.4%	444	40.5%
Separated, divorced, widowed	..C	..C	3	1.3%	3	1.4%	..C	..C	–	–	6	0.5%

Table 8. Respondents' number of children and other dependants

Children	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
0	141	70.1%	189	84.0%	165	78.6%	183	79.2%	189	80.8%	867	78.7%
1	33	16.4%	24	10.7%	27	12.9%	27	11.7%	24	10.3%	135	12.3%
2 or more	27	13.4%	12	5.3%	18	8.6%	21	9.1%	21	9.0%	99	9.0%
Other dependants	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
0	174	87.9%	198	88.0%	180	87.0%	198	88.0%	204	89.5%	954	88.1%
1	21	10.6%	21	9.3%	24	11.6%	24	10.7%	21	9.2%	111	10.2%
2 or more	3	1.5%	6	2.7%	3	1.4%	3	1.3%	3	1.3%	18	1.7%

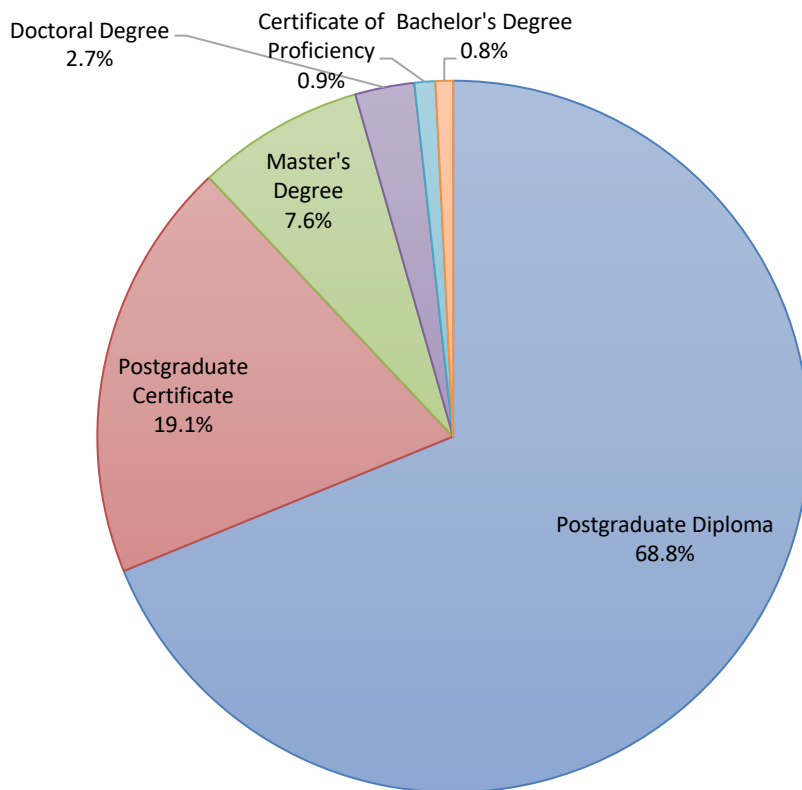
Symbol ..C indicates suppression of frequencies less than three

Additional tertiary qualifications

Table 9. Respondents undertaking or completing additional tertiary qualifications since graduating from medical school

Additional tertiary qualifications	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
0	102	51.5%	102	45.9%	105	49.3%	123	53.2%	138	59.7%	570	52.1%
1	78	39.4%	96	43.2%	84	39.4%	81	35.1%	69	29.9%	408	37.3%
2	15	7.6%	21	9.5%	21	9.9%	21	9.1%	21	9.1%	99	9.0%
3	3	1.5%	3	1.4%	3	1.4%	6	2.6%	3	1.3%	18	1.6%

Figure 3. Additional tertiary qualifications undertaken or completed by respondents since graduating from medical school (n = 633 qualifications, from 525 respondents).



Symbol ..C indicates suppression of frequencies less than three

Table 10. “My basic medical degree prepared me for my work as a doctor.”

Response	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Strongly agree	15	7.7%	15	6.8%	27	13.0%	33	14.5%	24	10.5%	114	10.6%
Agree	123	63.1%	168	75.7%	126	60.9%	147	64.5%	147	64.5%	711	65.8%
Neutral	45	23.1%	24	10.8%	42	20.3%	27	11.8%	36	15.8%	174	16.1%
Disagree or Strongly disagree	12	6.2%	15	6.8%	12	5.8%	21	9.2%	21	9.2%	81	7.5%

Table 11. “Working as a house surgeon / intern prepared me for my work as a doctor.”

Response	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Strongly agree	60	30.8%	63	28.4%	78	38.2%	93	40.8%	72	32.0%	366	34.1%
Agree	111	56.9%	141	63.5%	108	52.9%	114	50.0%	135	60.0%	609	56.7%
Neutral	15	7.7%	12	5.4%	15	7.4%	12	5.3%	15	6.7%	69	6.4%
Disagree or Strongly disagree	9	4.6%	6	2.7%	3	1.5%	9	3.9%	3	1.3%	30	2.8%

Situation four years after graduation (the PGY4 year)

Table 12. Main activity four years after graduation

Main activity during the PGY4 year	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
A Registrar and / or training under supervision	153	77.3%	186	82.7%	165	83.3%	186	79.5%	183	79.2%	873	80.4%
House officer	18	9.1%	18	8.0%	12	6.1%	24	10.3%	27	11.7%	99	9.1%
Vocationally registered	–	–	3	1.3%	3	1.5%	3	1.3%	3	1.3%	12	1.1%
Other clinical work	9	4.5%	6	2.7%	9	4.5%	6	2.6%	6	2.6%	36	3.3%
Not working clinically as a doctor	18	9.1%	12	5.3%	9	4.5%	15	6.4%	12	5.2%	66	6.1%

Table 13. Current situation of those not working clinically as a doctor in PGY4†

Situation of those not working clinically as a doctor	Total	
	n=27	
	n	%
Doing medically-related work that is non-clinical (e.g., medico-legal, teaching, research, committee work)	6	22.2%
Working in a non-medical role	3	11.1%
Parental leave	9	33.3%
Home duties / childcare / family responsibilities	6	22.2%
Enrolled as a student	12	44.4%
Other extended leave (e.g., sick leave, long service leave, travel, sabbatical)	3	11.1%
Permanently left the medical profession	6	22.2%

†Note that these data are from 2020 and 2021 only.

Percentages total to more than 100% as multiple options could be selected.

Table 14. Region of hospital / clinic based at when working as a Registrar / House officer / Intern in PGY4

Region of workplace	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Auckland	54	34.0%	69	35.9%	51	28.8%	60	28.2%	51	24.3%	285	30.0%
Bay of Plenty	12	7.5%	9	4.7%	12	6.8%	12	5.6%	18	8.6%	63	6.6%
Canterbury	21	13.2%	24	12.5%	30	16.9%	27	12.7%	30	14.3%	132	13.9%
Gisborne	3	1.9%	3	1.6%	..C	..C	–	–	..C	..C	6	0.6%
Hawke's Bay	6	3.8%	15	7.8%	9	5.1%	12	5.6%	9	4.3%	51	5.4%
Manawatu–Whanganui	12	7.5%	9	4.7%	6	3.4%	12	5.6%	9	4.3%	48	5.0%
Marlborough	–	–	–	–	..C	..C	–	–	3	1.4%	3	0.3%
Nelson	3	1.9%	3	1.6%	3	1.7%	3	1.4%	6	2.9%	18	1.9%
Northland	6	3.8%	6	3.1%	6	3.4%	9	4.2%	9	4.3%	36	3.8%
Otago	9	5.7%	6	3.1%	9	5.1%	15	7.0%	9	4.3%	48	5.0%
Southland	..C	..C	6	3.1%	6	3.4%	9	4.2%	6	2.9%	27	2.8%
Taranaki	6	3.8%	3	1.6%	9	5.1%	9	4.2%	6	2.9%	33	3.5%
Tasman	..C	..C	–	–	–	–	–	–	3	1.4%	3	0.3%
Taupo	–	–	–	–	–	–	..C	..C	..C	..C	..C	..C
Waikato	6	3.8%	12	6.3%	15	8.5%	24	11.3%	9	4.3%	66	6.9%
Wellington Region	21	13.2%	27	14.1%	21	11.9%	12	5.6%	30	14.3%	111	11.7%
Westland	–	–	–	–	–	–	..C	..C	–	–	..C	..C
Country other than New Zealand	–	–	–	–	–	–	9	4.2%	12	5.7%	21	2.2%

Table 15. Working full-time or part-time in PGY4

Work hours	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Full-time	156	89.7%	192	92.8%	174	96.7%	201	93.1%	207	95.8%	930	93.7%
Part-time	18	10.3%	15	7.2%	6	3.3%	15	6.9%	9	4.2%	63	6.3%

Table 16. Medical work / placements by geographical location in PGY4

Location	Survey year											
	2017		2018		2019		2020		2021		Total	
	n=192		n=219		n=198		n=228		n=225		n=1062	
	n	%	n	%	n	%	n	%	n	%	n	%
Major city	120	62.5%	141	64.4%	126	63.6%	144	63.2%	147	65.3%	678	63.8%
Regional centre	48	25.0%	60	27.4%	51	25.8%	60	26.3%	69	30.7%	288	27.1%
Small town / community	18	9.4%	12	5.5%	18	9.1%	27	11.8%	21	9.3%	96	9.0%

Percentages may total more than 100% as respondents can indicate multiple placement locations.

Symbol ..C indicates suppression of frequencies less than three

Table 17. Enrolment in a college training programme in PGY4

Enrolled	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Yes	129	67.2%	138	63.0%	138	70.8%	144	63.2%	132	59.5%	681	64.5%
No	63	32.8%	81	37.0%	57	29.2%	84	36.8%	90	40.5%	375	35.5%

Table 18. College training programme enrolments in PGY4

Specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Adult Medicine / Internal Medicine / Physician	36	28.6%	36	28.6%	33	23.9%	36	25.0%	39	28.9%	180	26.9%
Anaesthesia	9	7.1%	12	9.5%	9	6.5%	15	10.4%	12	8.9%	57	8.5%
Dual Vocational Training Programme	–	–	–	–	3	2.2%	–	–	–	–	3	0.4%
Emergency Medicine	6	4.8%	6	4.8%	12	8.7%	9	6.3%	12	8.9%	45	6.7%
General Practice	36	28.6%	39	31.0%	48	34.8%	45	31.3%	33	24.4%	201	30.0%
Intensive Care Medicine	3	2.4%	..C	..C	–	–	..C	..C	..C	..C	3	0.4%
Obstetrics and Gynaecology	..C	..C	6	4.8%	3	2.2%	3	2.1%	3	2.2%	15	2.2%
Ophthalmology	–	–	–	–	..C	..C	–	–	–	–	..C	..C
Paediatrics and Child Health	15	11.9%	15	11.9%	12	8.7%	12	8.3%	12	8.9%	66	9.9%
Pathology	3	2.4%	6	4.8%	3	2.2%	3	2.1%	3	2.2%	18	2.7%
Psychiatry	3	2.4%	3	2.4%	12	8.7%	9	6.3%	12	8.9%	39	5.8%
Public Health Medicine	6	4.8%	..C	..C	–	–	..C	..C	–	–	6	0.9%
Radiation Oncology	–	–	..C	..C	–	–	..C	..C	–	–	..C	..C
Radiology	3	2.4%	..C	..C	..C	..C	6	4.2%	3	2.2%	12	1.8%
Rehabilitation Medicine	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Rural and Remote Medicine	3	2.4%	3	2.4%	3	2.2%	3	2.1%	3	2.2%	15	2.2%
Sport and Exercise Medicine	–	–	..C	..C	–	–	–	–	3	2.2%	3	0.4%
Surgery	..C	..C	–	–	..C	..C	–	–	–	–	..C	..C
Other	3	2.4%	..C	..C	..C	..C	3	2.1%	–	–	6	0.9%

Symbol ..C indicates suppression of frequencies less than three

Situation five years after graduation (the PGY5 year)

Table 19. Main activity five years after graduation

Main activity during the PGY5 year	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
A Registrar and / or training under supervision	165	83.3%	195	86.7%	183	89.7%	201	87.0%	204	88.3%	948	87.1%
House officer	6	3.0%	6	2.7%	6	2.9%	3	1.3%	9	3.9%	30	2.8%
Vocationally registered	–	–	3	1.3%	3	1.5%	3	1.3%	..C	..C	9	0.8%
Other clinical work	12	6.1%	6	2.7%	3	1.5%	9	3.9%	3	1.3%	33	3.0%
Not working clinically as a doctor	15	7.6%	15	6.7%	9	4.4%	15	6.5%	15	6.5%	69	6.3%

Table 20. Current situation of those not working clinically as a doctor in PGY5†

Situation of those not working clinically as a doctor	Total	
	n=30	
	n	%
Doing medically-related work that is non-clinical (e.g., medico-legal, teaching, research, committee work)	9	30.0%
Working in a non-medical role	3	10.0%
Parental leave	6	20.0%
Home duties / childcare / family responsibilities	6	20.0%
Enrolled as a student	3	10.0%
Other extended leave (e.g., sick leave, long service leave, travel, sabbatical)	..C	..C
Permanently left the medical profession	3	10.0%

†Note that these data are from 2020 and 2021 only. Percentages total to more than 100% as multiple options could be selected.

Symbol ..C indicates suppression of frequencies less than three

Table 21. Region of hospital / clinic based at when working as a Registrar / House officer / Intern in PGY5

Region of workplace	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Auckland	60	33.3%	69	35.4%	60	32.3%	63	30.4%	60	28.2%	312	31.8%
Bay of Plenty	9	5.0%	6	3.1%	9	4.8%	12	5.8%	21	9.9%	57	5.8%
Canterbury	30	16.7%	27	13.8%	33	17.7%	36	17.4%	27	12.7%	153	15.6%
Gisborne	3	1.7%	..C	..C	3	1.6%	3	1.4%	3	1.4%	12	1.2%
Hawke's Bay	6	3.3%	15	7.7%	6	3.2%	9	4.3%	6	2.8%	42	4.3%
Manawatu–Whanganui	12	6.7%	12	6.2%	9	4.8%	12	5.8%	9	4.2%	54	5.5%
Marlborough	–	–	–	–	3	1.6%	–	–	–	–	3	0.3%
Nelson	6	3.3%	3	1.5%	3	1.6%	..C	..C	3	1.4%	15	1.5%
Northland	6	3.3%	3	1.5%	9	4.8%	6	2.9%	9	4.2%	33	3.4%
Otago	9	5.0%	15	7.7%	9	4.8%	9	4.3%	12	5.6%	54	5.5%
Southland	3	1.7%	3	1.5%	..C	..C	3	1.4%	6	2.8%	15	1.5%
Taranaki	3	1.7%	..C	..C	6	3.2%	6	2.9%	6	2.8%	21	2.1%
Tasman	3	1.7%	–	–	–	–	..C	..C	..C	..C	3	0.3%
Waikato	9	5.0%	9	4.6%	12	6.5%	21	10.1%	12	5.6%	63	6.4%
Wellington Region	21	11.7%	33	16.9%	24	12.9%	21	10.1%	33	15.5%	132	13.5%
Westland	–	–	–	–	–	–	..C	..C	–	–	..C	..C
Country other than New Zealand	–	–	–	–	–	–	6	2.9%	6	2.8%	12	1.2%

Table 22. Working full-time or part-time in PGY5

Work hours	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Full-time	153	86.4%	198	91.7%	177	92.2%	192	88.9%	189	86.3%	909	89.1%
Part-time	24	13.6%	18	8.3%	15	7.8%	24	11.1%	30	13.7%	111	10.9%

Table 23. Medical work / placements by geographical location in PGY5

Location	Survey year											
	2017		2018		2019		2020		2021		Total	
	n=195		n=222		n=201		n=228		n=228		n=1074	
	n	%	n	%	n	%	n	%	n	%	n	%
Major city	126	64.6%	153	68.9%	138	68.7%	156	68.4%	165	72.4%	738	68.7%
Regional centre	48	24.6%	51	23.0%	48	23.9%	45	19.7%	57	25.0%	249	23.2%
Small town / community	18	9.2%	18	8.1%	18	9.0%	24	10.5%	27	11.8%	105	9.8%

Percentages may total more than 100% as respondents can indicate multiple placement locations.

Symbol ..C indicates suppression of frequencies less than three

Table 24. Enrolment in a college training programme in PGY5

Enrolled	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Yes	156	81.3%	159	72.6%	171	85.1%	180	78.9%	171	75.0%	837	78.4%
No	36	18.8%	60	27.4%	30	14.9%	48	21.1%	57	25.0%	231	21.6%

Table 25. College training programme enrolments in PGY5

Specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Adult Medicine / Internal Medicine / Physician	30	19.6%	33	20.8%	33	19.0%	33	17.5%	36	21.1%	165	19.5%
Anaesthesia	15	9.8%	15	9.4%	15	8.6%	18	9.5%	12	7.0%	75	8.9%
Dermatology	..C	..C	..C	..C	–	–	..C	..C	–	–	..C	..C
Dual Vocational Training Programme	..C	..C	–	–	3	1.7%	3	1.6%	3	1.8%	9	1.1%
Emergency Medicine	6	3.9%	6	3.8%	12	6.9%	12	6.3%	15	8.8%	51	6.0%
General Practice	48	31.4%	48	30.2%	63	36.2%	54	28.6%	51	29.8%	264	31.2%
Intensive Care Medicine	–	–	..C	..C	–	–	3	1.6%	3	1.8%	6	0.7%
Obstetrics and Gynaecology	9	5.9%	9	5.7%	6	3.4%	6	3.2%	3	1.8%	33	3.9%
Ophthalmology	3	2.0%	3	1.9%	3	1.7%	3	1.6%	–	–	12	1.4%
Paediatrics and Child Health	12	7.8%	15	9.4%	9	5.2%	12	6.3%	18	10.5%	66	7.8%
Pathology	3	2.0%	6	3.8%	3	1.7%	3	1.6%	6	3.5%	21	2.5%
Psychiatry	6	3.9%	3	1.9%	15	8.6%	9	4.8%	12	7.0%	45	5.3%
Public Health Medicine	6	3.9%	..C	..C	–	–	3	1.6%	..C	..C	9	1.1%
Radiation Oncology	–	–	..C	..C	3	1.7%	3	1.6%	–	–	6	0.7%
Radiology	6	3.9%	3	1.9%	..C	..C	6	3.2%	3	1.8%	18	2.1%
Rehabilitation Medicine	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Rural and Remote Medicine	3	2.0%	3	1.9%	3	1.7%	9	4.8%	3	1.8%	21	2.5%
Sport and Exercise Medicine	–	–	3	1.9%	–	–	–	–	3	1.8%	6	0.7%
Surgery	3	2.0%	9	5.7%	3	1.7%	6	3.2%	..C	..C	21	2.5%
Urgent Care†	–	–	–	–	–	–	–	–	3	1.8%	3	0.4%
Other	3	2.0%	3	1.9%	3	1.7%	6	3.2%	–	–	15	1.8%

†Urgent Care option added in 2021

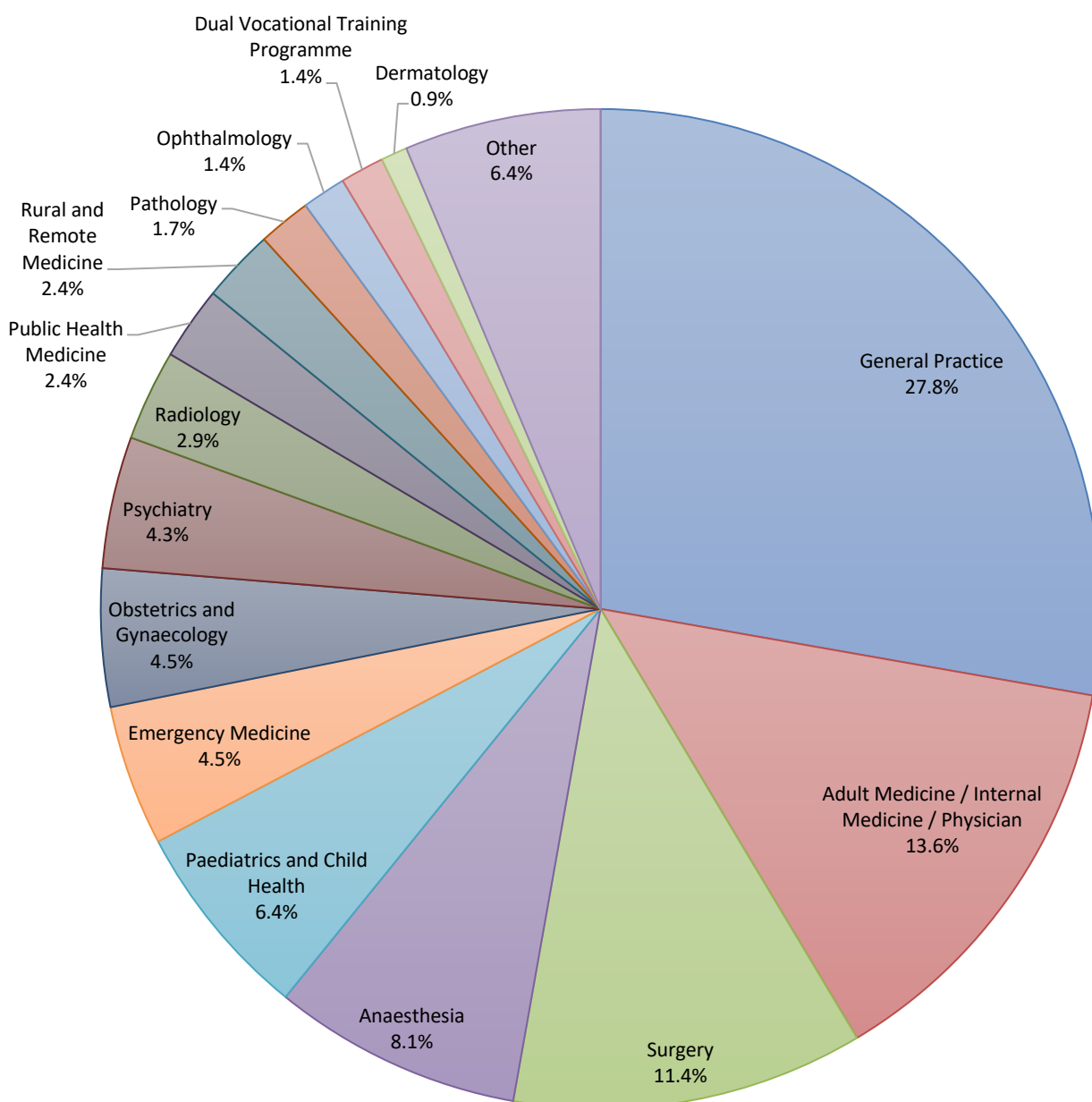
Symbol ..C indicates suppression of frequencies less than three

Future medical specialty intentions five years after graduation

Table 26. Number of respondents who have decided on their future medical specialty at PGY5

Decided on future medical specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Yes	183	92.4%	201	93.1%	183	92.4%	213	92.2%	204	89.5%	984	91.9%
No	15	7.6%	15	6.9%	15	7.6%	18	7.8%	24	10.5%	87	8.1%

Figure 4. First preference of medical specialty irrespective of whether a future medical specialty had been decided (n=1056). This figure is based on the total column of Table 27.



Symbol ..C indicates suppression of frequencies less than three

Table 27. First preference of medical specialty irrespective of whether a future medical specialty had been decided (ranked by Total column)

Medical specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n=192		n=213		n=198		n=228		n=225		n=1056	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
General Practice	29.7%	1	26.3%	1	33.5%	1	26.8%	1	23.6%	1	27.8%	1
Adult Medicine / Internal Medicine / Physician	14.6%	2	14.1%	3	13.7%	2	12.3%	3	13.8%	2	13.6%	2
Surgery	8.3%	4	18.3%	2	7.6%	4	12.7%	2	9.3%	3	11.4%	3
Anaesthesia	9.4%	3	6.6%	4	8.1%	3	8.3%	4	8.0%	4	8.1%	4
Paediatrics and Child Health	6.3%	5	6.1%	5	5.6%	7	6.6%	5	7.6%	5	6.4%	5
Emergency Medicine	2.1%		3.3%	7	6.1%	6	4.8%	6	6.2%	6=	4.5%	6=
Obstetrics and Gynaecology	5.7%	6	5.6%	6	3.0%	8=	3.9%	8	4.0%	8	4.5%	6=
Psychiatry	3.1%	8=	1.9%	10	7.1%	5	3.1%	9	6.2%	6=	4.3%	8
Radiology	3.6%	7	2.8%	8	3.0%	8=	2.6%	10=	2.7%	9=	2.9%	9
Public Health Medicine	3.1%	8=	1.4%		1.0%		4.4%	7	1.8%		2.4%	10=
Rural and Remote Medicine	2.6%	10	1.9%		2.0%	10	2.6%	10=	2.7%	9=	2.4%	10=
Pathology	1.0%		2.3%	9	1.0%		1.8%		2.2%		1.7%	
Ophthalmology	2.1%		0.9%		1.5%		1.8%		0.9%		1.4%	
Dual Vocational Training Programme	1.6%		0.9%		1.0%		2.2%		1.3%		1.4%	
Dermatology	1.6%		0.5%		0.5%		0.9%		0.9%		0.9%	
Intensive Care Medicine	0.5%		0.9%		0.0%		0.9%		1.3%		0.8%	
Sport and Exercise Medicine	0.0%		1.4%		0.5%		0.4%		1.3%		0.8%	
Palliative Medicine	0.0%		0.9%		0.0%		0.4%		2.2%		0.8%	
Radiation Oncology	1.0%		0.9%		1.0%		0.4%		0.0%		0.7%	
Medical Administration (e.g., managing a hospital)	0.5%		0.5%		0.5%		0.0%		0.4%		0.4%	
Sexual Health Medicine	0.5%		0.0%		0.5%		0.0%		0.0%		0.2%	
Urgent Care‡	0.0%		0.0%		0.0%		0.0%		0.9%		0.2%	
Rehabilitation Medicine	0.0%		0.0%		0.0%		0.0%		0.4%		0.1%	
Non-Specialist Hospital Practice (e.g., career as a medical officer in a hospital)	0.0%		0.0%		0.0%		0.0%		0.4%		0.1%	
Other	2.6%		2.3%		2.5%		3.1%		1.8%		2.5%	

†Only top 10 ranks given due to small numbers thereafter.

‡Urgent Care added as an option in 2021.

Symbol ..C indicates suppression of frequencies less than three

Table 28. First preference of medical specialty for those who *have decided* on a future medical specialty (ranked by Total column)

Medical specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n=180		n=198		n=183		n=213		n=201		n=981	
	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
General Practice	30.9%	1	27.1%	1	35.0%	1	27.2%	1	23.6%	1	28.6%	1
Adult Medicine / Internal Medicine / Physician	14.9%	2	12.6%	3	13.7%	2	11.3%	3	11.8%	2	12.8%	2
Surgery	7.7%	4	19.1%	2	8.2%	3	13.1%	2	9.4%	3	11.6%	3
Anaesthesia	9.9%	3	7.0%	4	7.1%	4=	8.5%	4	8.9%	4	8.3%	4
Paediatrics and Child Health	6.6%	5	6.0%	5=	5.5%	7	6.6%	5	7.9%	5	6.5%	5
Obstetrics and Gynaecology	6.1%	6	6.0%	5=	3.3%	8=	4.2%	7	3.9%	8	4.7%	6
Emergency Medicine	2.2%		3.0%	7=	6.0%	6	5.2%	6	6.4%	7	4.6%	7
Psychiatry	3.3%	7=	1.5%	10=	7.1%	4=	3.3%	9	6.9%	6	4.4%	8
Radiology	3.3%	7=	3.0%	7=	3.3%	8=	2.8%	10	3.0%	9=	3.1%	9
Rural and Remote Medicine	2.8%	9=	1.5%	10=	2.2%	10	2.3%		3.0%	9=	2.3%	10
Public Health Medicine	2.8%	9=	1.5%	10=	0.5%		3.8%	8	2.0%		2.1%	
Pathology	1.1%		2.5%	9	1.1%		1.9%		2.5%		1.8%	
Ophthalmology	2.2%		1.0%		1.1%		1.9%		1.0%		1.4%	
Dual Vocational Training Programme	0.6%		1.0%		1.1%		1.9%		1.5%		1.2%	
Dermatology	1.7%		0.5%		0.5%		0.9%		1.0%		0.9%	
Palliative Medicine	0.0%		1.0%		0.0%		0.5%		2.0%		0.7%	
Radiation Oncology	0.6%		1.0%		1.1%		0.5%		0.0%		0.6%	
Intensive Care Medicine	0.0%		1.0%		0.0%		0.9%		1.0%		0.6%	
Sport and Exercise Medicine	0.0%		1.0%		0.0%		0.5%		1.0%		0.5%	
Medical Administration (e.g., managing a hospital)	0.0%		0.5%		0.5%		0.0%		0.5%		0.3%	
Sexual Health Medicine	0.6%		0.0%		0.5%		0.0%		0.0%		0.2%	
Urgent Care‡	0.0%		0.0%		0.0%		0.0%		1.0%		0.2%	
Non-Specialist Hospital Practice (e.g., career as a medical officer in a hospital)	0.0%		0.0%		0.0%		0.0%		0.5%		0.1%	
Rehabilitation Medicine	0.0%		0.0%		0.0%		0.0%		0.5%		0.1%	
Other	2.8%		2.0%		2.2%		2.8%		1.0%		2.1%	

†Only top 10 ranks given due to small numbers thereafter.

‡Urgent Care added as an option in 2021.

Symbol ..C indicates suppression of frequencies less than three

Table 29. First, second, and third preferences of specialty for those who *have not decided* on a future medical specialty (in order of first preference).
Due to the low frequencies in many categories, only the totals across all survey years are presented.

Medical specialty	Total†		
	n=75	n=66	n=51
	1 st Pref	2 nd Pref	3 rd Pref
Adult Medicine / Internal Medicine / Physician	25.3%	13.6%	6.1%
General Practice	17.3%	22.7%	22.4%
Surgery	8.0%	6.1%	2.0%
Public Health Medicine	5.3%	6.1%	10.2%
Paediatrics and Child Health	5.3%	1.5%	6.1%
Anaesthesia	5.3%	–	6.1%
Emergency Medicine	4.0%	9.1%	6.1%
Dual Vocational Training Programme	4.0%	3.0%	–
Sport and Exercise Medicine	4.0%	1.5%	–
Intensive Care Medicine	2.7%	3.0%	6.1%
Psychiatry	2.7%	3.0%	–
Rural and Remote Medicine	2.7%	–	8.2%
Palliative Medicine	1.3%	7.6%	4.1%
Medical Administration (e.g., managing a hospital)	1.3%	1.5%	6.1%
Radiology	1.3%	1.5%	–
Radiation Oncology	1.3%	1.5%	–
Obstetrics and Gynaecology	1.3%	1.5%	–
Ophthalmology	1.3%	–	–
Rehabilitation Medicine	–	3.0%	–
Dermatology	–	3.0%	–
Non-Specialist Hospital Practice (e.g., career as a medical officer in a hospital)	–	1.5%	4.1%
Sexual Health Medicine	–	1.5%	2.0%
Urgent Care‡	–	1.5%	–
Pathology	–	–	2.0%
Pain Medicine	–	–	2.0%
Other	6.7%	6.1%	6.1%

†Background shading increases with increasing percentage of column total.

‡Urgent Care option added in 2021.

Intentions for year six after graduation (the PGY6 year)

Table 30. Intentions for PGY6 (ranked by Total column)

Intention for PGY6	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Continue a vocational training programme	132	67.7%	141	63.5%	135	67.2%	156	66.7%	147	65.3%	711	66.0%
Enter a vocational training programme	21	10.8%	36	16.2%	15	7.5%	24	10.3%	33	14.7%	129	12.0%
Undertake an additional year as a medical officer, not in a vocational training programme	6	3.1%	12	5.4%	9	4.5%	21	9.0%	15	6.7%	63	5.8%
Primary carer leave (maternity / partner's leave) / home duties / childcare	9	4.6%	6	2.7%	15	7.5%	6	2.6%	9	4.0%	45	4.2%
Change role within the medical profession	6	3.1%	3	1.4%	9	4.5%	3	1.3%	3	1.3%	24	2.2%
Go on a vacation / leave / taking a break	6	3.1%	6	2.7%	..C	..C	3	1.3%	6	2.7%	21	1.9%
Do non-clinical / non-medical work	3	1.5%	3	1.4%	3	1.5%	6	2.6%	3	1.3%	18	1.7%
Undertake research	3	1.5%	6	2.7%	3	1.5%	3	1.3%	..C	..C	15	1.4%
Work outside New Zealand in a clinical role	3	1.5%	3	1.4%	3	1.5%	3	1.3%	..C	..C	12	1.1%
Leave medicine as a career	3	1.5%	3	1.4%	3	1.5%	3	1.3%	..C	..C	12	1.1%
Enrol as a student in another course	–	–	3	1.4%	3	1.5%	3	1.3%	3	1.3%	12	1.1%
Undertake work as a specialist†	–	–	–	–	–	–	–	–	3	1.3%	3	0.3%
Other	3	1.5%	..C	..C	3	1.5%	3	1.3%	3	1.3%	12	1.1%

†Undertake work as a specialist option added in 2021

Symbol ..C indicates suppression of frequencies less than three

Table 31. Medical specialty of those intending to *continue* a vocational training programme in PGY6 (ranked by Total column)

Specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
General Practice	42	34.1%	48	32.7%	48	34.8%	48	29.6%	42	29.2%	228	31.9%
Adult Medicine / Internal Medicine / Physician	27	22.0%	24	16.3%	18	13.0%	27	16.7%	27	18.8%	123	17.2%
Anaesthesia	12	9.8%	12	8.2%	15	10.9%	18	11.1%	12	8.3%	69	9.7%
Paediatrics and Child Health	9	7.3%	12	8.2%	9	6.5%	15	9.3%	15	10.4%	60	8.4%
Psychiatry	6	4.9%	3	2.0%	12	8.7%	6	3.7%	12	8.3%	39	5.5%
Emergency Medicine	..C	..C	3	2.0%	12	8.7%	9	5.6%	12	8.3%	36	5.0%
Obstetrics and Gynaecology	6	4.9%	9	6.1%	6	4.3%	6	3.7%	3	2.1%	30	4.2%
Radiology	6	4.9%	6	4.1%	3	2.2%	3	1.9%	3	2.1%	21	2.9%
Rural and Remote Medicine	3	2.4%	3	2.0%	..C	..C	6	3.7%	6	4.2%	18	2.5%
Surgery	..C	..C	6	4.1%	3	2.2%	3	1.9%	3	2.1%	15	2.1%
Pathology	3	2.4%	3	2.0%	..C	..C	3	1.9%	6	4.2%	15	2.1%
Public Health Medicine	6	4.9%	3	2.0%	–	–	6	3.7%	..C	..C	15	2.1%
Ophthalmology	3	2.4%	3	2.0%	3	2.2%	3	1.9%	–	–	12	1.7%
Intensive Care Medicine	–	–	..C	..C	–	–	3	1.9%	3	2.1%	6	0.8%
Radiation Oncology	–	–	3	2.0%	3	2.2%	..C	..C	–	–	6	0.8%
Dual Vocational Training Programme	..C	..C	–	–	3	2.2%	–	–	–	–	3	0.4%
Sport and Exercise Medicine	–	–	3	2.0%	–	–	–	–	..C	..C	3	0.4%
Dermatology	..C	..C	3	2.0%	–	–	..C	..C	–	–	3	0.4%
Urgent Care†	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Palliative Medicine	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Rehabilitation Medicine	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Other	..C	..C	3	2.0%	3	2.2%	6	3.7%	–	–	12	1.7%

†Urgent Care option added in 2021

Symbol ..C indicates suppression of frequencies less than three

Table 32. Medical specialty of those intending to *enter* a vocational training programme in PGY6. Due to the low frequencies in most categories, only the totals across all survey years are presented.

Specialty	Total (all years)	
	n	%
Surgery	51	36.2%
General Practice	27	19.1%
Adult Medicine / Internal Medicine / Physician	12	8.5%
Anaesthesia	9	6.4%
Radiology	6	4.3%
Emergency Medicine	6	4.3%
Obstetrics and Gynaecology	6	4.3%
Ophthalmology	3	2.1%
Psychiatry	3	2.1%
Public Health Medicine	3	2.1%
Medical Administration (e.g., managing a hospital)	3	2.1%
Pathology	3	2.1%
Radiation Oncology	3	2.1%
Other	6	4.3%

Symbol ..C indicates suppression of frequencies less than three

Intentions for year seven after graduation (the PGY7 year)

Table 33. Intentions for PGY7 (ranked by Total column)

Intention for PGY7	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Continue a vocational training programme	129	67.2%	141	64.4%	138	68.7%	153	68.9%	144	64.0%	705	66.6%
Enter a vocational training programme	15	7.8%	21	9.6%	21	10.4%	27	12.2%	30	13.3%	114	10.8%
Primary carer leave (maternity / partner's leave) / home duties / childcare	12	6.3%	15	6.8%	12	6.0%	6	2.7%	15	6.7%	60	5.7%
Change role within the medical profession	9	4.7%	6	2.7%	3	1.5%	6	2.7%	3	1.3%	27	2.5%
Work outside New Zealand in a clinical role	3	1.6%	9	4.1%	6	3.0%	6	2.7%	—	—	24	2.3%
Go on a vacation / leave / taking a break	3	1.6%	6	2.7%	3	1.5%	3	1.4%	6	2.7%	21	2.0%
Do non-clinical / non-medical work	3	1.6%	3	1.4%	3	1.5%	3	1.4%	6	2.7%	18	1.7%
Undertake an additional year as a medical officer, not in a vocational training programme	..C	..C	3	1.4%	3	1.5%	3	1.4%	3	1.3%	12	1.1%
Undertake work as a specialist†	—	—	—	—	—	—	—	—	15	6.7%	15	1.4%
Undertake research	6	3.1%	3	1.4%	3	1.5%	3	1.4%	..C	..C	15	1.4%
Enrol as a student in another course	3	1.6%	—	—	3	1.5%	..C	..C	3	1.3%	9	0.8%
Leave medicine as a career	..C	..C	3	1.4%	—	—	..C	..C	..C	..C	3	0.3%
Other	9	4.7%	9	4.1%	6	3.0%	12	5.4%	..C	..C	36	3.4%

†Undertake work as a specialist option added in 2021

Symbol ..C indicates suppression of frequencies less than three

Table 34. Medical specialty of those intending to *continue* a vocational training programme in PGY7 (ranked by Total column)

Specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
General Practice	33	25.6%	30	20.4%	48	38.1%	39	25.5%	33	23.4%	183	26.3%
Adult Medicine / Internal Medicine / Physician	27	20.9%	21	14.3%	18	14.3%	18	11.8%	18	12.8%	102	14.7%
Anaesthesia	15	11.6%	12	8.2%	12	9.5%	18	11.8%	18	12.8%	75	10.8%
Surgery	6	4.7%	21	14.3%	3	2.4%	15	9.8%	9	6.4%	54	7.8%
Paediatrics and Child Health	6	4.7%	12	8.2%	6	4.8%	12	7.8%	15	10.6%	51	7.3%
Emergency Medicine	3	2.3%	6	4.1%	9	7.1%	12	7.8%	9	6.4%	39	5.6%
Obstetrics and Gynaecology	9	7.0%	12	8.2%	6	4.8%	6	3.9%	6	4.3%	39	5.6%
Psychiatry	3	2.3%	3	2.0%	9	7.1%	6	3.9%	12	8.5%	33	4.7%
Radiology	6	4.7%	6	4.1%	6	4.8%	3	2.0%	6	4.3%	27	3.9%
Rural and Remote Medicine	3	2.3%	3	2.0%	..C	..C	3	2.0%	3	2.1%	12	1.7%
Pathology	..C	..C	3	2.0%	..C	..C	6	3.9%	3	2.1%	12	1.7%
Ophthalmology	6	4.7%	3	2.0%	..C	..C	3	2.0%	..C	..C	12	1.7%
Public Health Medicine	3	2.3%	3	2.0%	–	–	3	2.0%	..C	..C	9	1.3%
Dual Vocational Training Programme	3	2.3%	–	–	3	2.4%	3	2.0%	–	–	9	1.3%
Radiation Oncology	–	–	3	2.0%	3	2.4%	..C	..C	–	–	6	0.9%
Sport and Exercise Medicine	–	–	3	2.0%	–	–	–	–	3	2.1%	6	0.9%
Dermatology	3	2.3%	3	2.0%	–	–	–	–	–	–	6	0.9%
Intensive Care Medicine	–	–	..C	..C	–	–	3	2.0%	..C	..C	3	0.4%
Urgent Care†	–	–	–	–	–	–	–	–	3	2.1%	3	0.4%
Medical Administration (e.g., managing a hospital)	–	–	3	2.0%	–	–	–	–	–	–	3	0.4%
Rehabilitation Medicine	–	–	–	–	–	–	–	–	3	2.1%	3	0.4%
Palliative Medicine	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Other	3	2.3%	..C	..C	3	2.4%	3	2.0%	–	–	9	1.3%

†Urgent Care option added in 2021

Symbol ..C indicates suppression of frequencies less than three

Table 35. Medical specialty of those intending to *enter* a vocational training programme in PGY7. Due to the low frequencies in most categories, only the totals across all survey years are presented.

Specialty	Total (all years)	
	n	%
Surgery	51	42.5%
General Practice	18	15.0%
Adult Medicine / Internal Medicine / Physician	18	15.0%
Anaesthesia	6	5.0%
Public Health Medicine	6	5.0%
Obstetrics and Gynaecology	6	5.0%
Radiology	3	2.5%
Palliative Medicine	3	2.5%
Dermatology	3	2.5%
Ophthalmology	3	2.5%
Emergency Medicine	..C	..C
Radiation Oncology	..C	..C
Rural and Remote Medicine	..C	..C
Sport and Exercise Medicine	..C	..C
Paediatrics and Child Health	..C	..C
Other	3	2.5%

Symbol ..C indicates suppression of frequencies less than three

Intentions for year eight after graduation (the PGY8 year)

Table 36. Intentions for PGY8 (ranked by Total column)

Intention for PGY8	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Continue a vocational training programme	135	68.2%	150	70.4%	138	67.6%	150	66.7%	138	63.0%	711	67.1%
Enter a vocational training programme	6	3.0%	12	5.6%	9	4.4%	15	6.7%	12	5.5%	54	5.1%
Primary carer leave (maternity / partner's leave) / home duties / childcare	6	3.0%	6	2.8%	9	4.4%	9	4.0%	9	4.1%	39	3.7%
Undertake work as a specialist†	–	–	–	–	–	–	–	–	36	16.4%	36	3.4%
Change role within the medical profession	9	4.5%	3	1.4%	9	4.4%	9	4.0%	6	2.7%	36	3.4%
Work outside New Zealand in a clinical role	9	4.5%	6	2.8%	9	4.4%	9	4.0%	3	1.4%	36	3.4%
Go on a vacation / leave / taking a break	6	3.0%	6	2.8%	3	1.5%	..C	..C	6	2.7%	21	2.0%
Do non-clinical / non-medical work	3	1.5%	3	1.4%	3	1.5%	3	1.3%	3	1.4%	15	1.4%
Undertake research	3	1.5%	6	2.8%	3	1.5%	6	2.7%	..C	..C	18	1.7%
Undertake an additional year as a medical officer, not in a vocational training programme	–	–	3	1.4%	3	1.5%	3	1.3%	–	–	9	0.8%
Enrol as a student in another course	..C	..C	–	–	–	–	3	1.3%	–	–	3	0.3%
Leave medicine as a career	3	1.5%	..C	..C	–	–	–	–	–	–	3	0.3%
Other	18	9.1%	18	8.5%	18	8.8%	18	8.0%	6	2.7%	78	7.4%

†Undertake work as a specialist option added in 2021

Symbol ..C indicates suppression of frequencies less than three

Table 37. Medical specialty of those intending to *continue* a vocational training programme in PGY8 (ranked by Total column)

Specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
General Practice	36	27.9%	30	20.0%	42	32.6%	33	22.9%	27	18.8%	168	24.1%
Adult Medicine / Internal Medicine / Physician	24	18.6%	21	14.0%	15	11.6%	18	12.5%	24	16.7%	102	14.7%
Surgery	12	9.3%	30	20.0%	9	7.0%	21	14.6%	18	12.5%	90	12.9%
Anaesthesia	12	9.3%	15	10.0%	12	9.3%	12	8.3%	15	10.4%	66	9.5%
Paediatrics and Child Health	9	7.0%	9	6.0%	9	7.0%	12	8.3%	12	8.3%	51	7.3%
Emergency Medicine	3	2.3%	6	4.0%	12	9.3%	9	6.3%	9	6.3%	39	5.6%
Obstetrics and Gynaecology	9	7.0%	9	6.0%	3	2.3%	9	6.3%	6	4.2%	36	5.2%
Psychiatry	3	2.3%	3	2.0%	12	9.3%	3	2.1%	9	6.3%	30	4.3%
Radiology	6	4.7%	6	4.0%	6	4.7%	3	2.1%	3	2.1%	24	3.4%
Rural and Remote Medicine	3	2.3%	3	2.0%	..C	..C	6	4.2%	3	2.1%	15	2.2%
Ophthalmology	3	2.3%	3	2.0%	..C	..C	3	2.1%	3	2.1%	12	1.7%
Public Health Medicine	..C	..C	..C	..C	3	2.3%	3	2.1%	6	4.2%	12	1.7%
Pathology	3	2.3%	..C	..C	–	–	3	2.1%	3	2.1%	9	1.3%
Dermatology	3	2.3%	3	2.0%	..C	..C	3	2.1%	–	–	9	1.3%
Intensive Care Medicine	–	–	3	2.0%	–	–	..C	..C	3	2.1%	6	0.9%
Radiation Oncology	..C	..C	3	2.0%	..C	..C	3	2.1%	–	–	6	0.9%
Dual Vocational Training Programme	..C	..C	3	2.0%	..C	..C	–	–	–	–	3	0.4%
Urgent Care†	–	–	–	–	–	–	–	–	3	2.1%	3	0.4%
Medical Administration (e.g., managing a hospital)	–	–	3	2.0%	–	–	–	–	–	–	3	0.4%
Sport and Exercise Medicine	–	–	..C	..C	..C	..C	–	–	–	–	..C	..C
Palliative Medicine	–	–	–	–	–	–	..C	..C	..C	..C	..C	..C
Rehabilitation Medicine	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Addiction Medicine	–	–	–	–	–	–	..C	..C	–	–	..C	..C
Other	3	2.3%	..C	..C	6	4.7%	3	2.1%	–	–	12	1.7%

†Urgent Care option added in 2021

Symbol ..C indicates suppression of frequencies less than three

Table 38. Medical specialty of those intending to *enter* a vocational training programme in PGY8. Due to the low frequencies in most categories, only the totals across all survey years are presented.

Location	Total (all years)	
	n	%
Surgery	18	31.6%
Adult Medicine / Internal Medicine / Physician	12	21.1%
General Practice	9	15.8%
Public Health Medicine	3	5.3%
Emergency Medicine	3	5.3%
Rural and Remote Medicine	3	5.3%
Obstetrics and Gynaecology	3	5.3%
Dermatology	3	5.3%
Palliative Medicine	..C	..C
Sport and Exercise Medicine	..C	..C
Intensive Care Medicine	..C	..C
Anaesthesia	..C	..C
Ophthalmology	..C	..C
Other	3	5.3%

Symbol ..C indicates suppression of frequencies less than three

Table 39. First preference of country of future practice

First preference of country of future practice	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
New Zealand	183	96.8%	201	97.1%	189	98.4%	222	100.0%	210	94.6%	1005	97.4%
Country other than New Zealand	6	3.2%	6	2.9%	3	1.6%	–	–	12	5.4%	27	2.6%

Table 40. Preferred population centre size of future practice

First preference of population centre size of future practice	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Major city (pop. 100,000 or greater)	108	57.1%	123	58.6%	126	65.6%	138	62.2%	135	61.6%	630	61.0%
Regional centre or large town (pop. 25,000 – 100,000)	63	33.3%	66	31.4%	42	21.9%	60	27.0%	66	30.1%	297	28.8%
Town (pop. 10,000 – 24,999)	9	4.8%	6	2.9%	9	4.7%	15	6.8%	9	4.1%	48	4.7%
Small town (pop. 10,000 or fewer)	6	3.2%	6	2.9%	9	4.7%	6	2.7%	3	1.4%	30	2.9%
Not applicable, not intending to work in New Zealand	3	1.6%	9	4.3%	6	3.1%	3	1.4%	6	2.7%	27	2.6%

Symbol ..C indicates suppression of frequencies less than three

Table 41. First preference for region of future practice

First preference of region of future practice	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Auckland	57	31.1%	57	26.8%	51	26.2%	69	30.3%	57	27.1%	291	28.3%
Bay of Plenty	18	9.8%	18	8.5%	21	10.8%	24	10.5%	18	8.6%	99	9.6%
Canterbury	24	13.1%	30	14.1%	39	20.0%	36	15.8%	33	15.7%	162	15.7%
Gisborne	3	1.6%	3	1.4%	–	–	..C	..C	..C	..C	6	0.6%
Hawke's Bay	6	3.3%	15	7.0%	6	3.1%	6	2.6%	9	4.3%	42	4.1%
Manawatu–Whanganui	9	4.9%	6	2.8%	6	3.1%	6	2.6%	..C	..C	27	2.6%
Marlborough	..C	..C	–	–	3	1.5%	–	–	..C	..C	3	0.3%
Nelson	9	4.9%	9	4.2%	3	1.5%	9	3.9%	12	5.7%	42	4.1%
Northland	9	4.9%	6	2.8%	9	4.6%	12	5.3%	9	4.3%	45	4.4%
Otago	9	4.9%	12	5.6%	9	4.6%	18	7.9%	15	7.1%	63	6.1%
Southland	..C	..C	3	1.4%	3	1.5%	3	1.3%	6	2.9%	15	1.5%
Taranaki	3	1.6%	6	2.8%	6	3.1%	6	2.6%	6	2.9%	27	2.6%
Tasman	3	1.6%	–	–	..C	..C	..C	..C	..C	..C	3	0.3%
Taupo	–	–	–	–	–	–	–	–	..C	..C	..C	..C
Waikato	6	3.3%	6	2.8%	12	6.2%	15	6.6%	3	1.4%	42	4.1%
Wellington Region	24	13.1%	36	16.9%	21	10.8%	21	9.2%	30	14.3%	132	12.8%
Westland	–	–	–	–	3	1.5%	3	1.3%	–	–	6	0.6%
Country other than New Zealand	3	1.6%	6	2.8%	3	1.5%	–	–	12	5.7%	24	2.3%

Symbol ..C indicates suppression of frequencies less than three

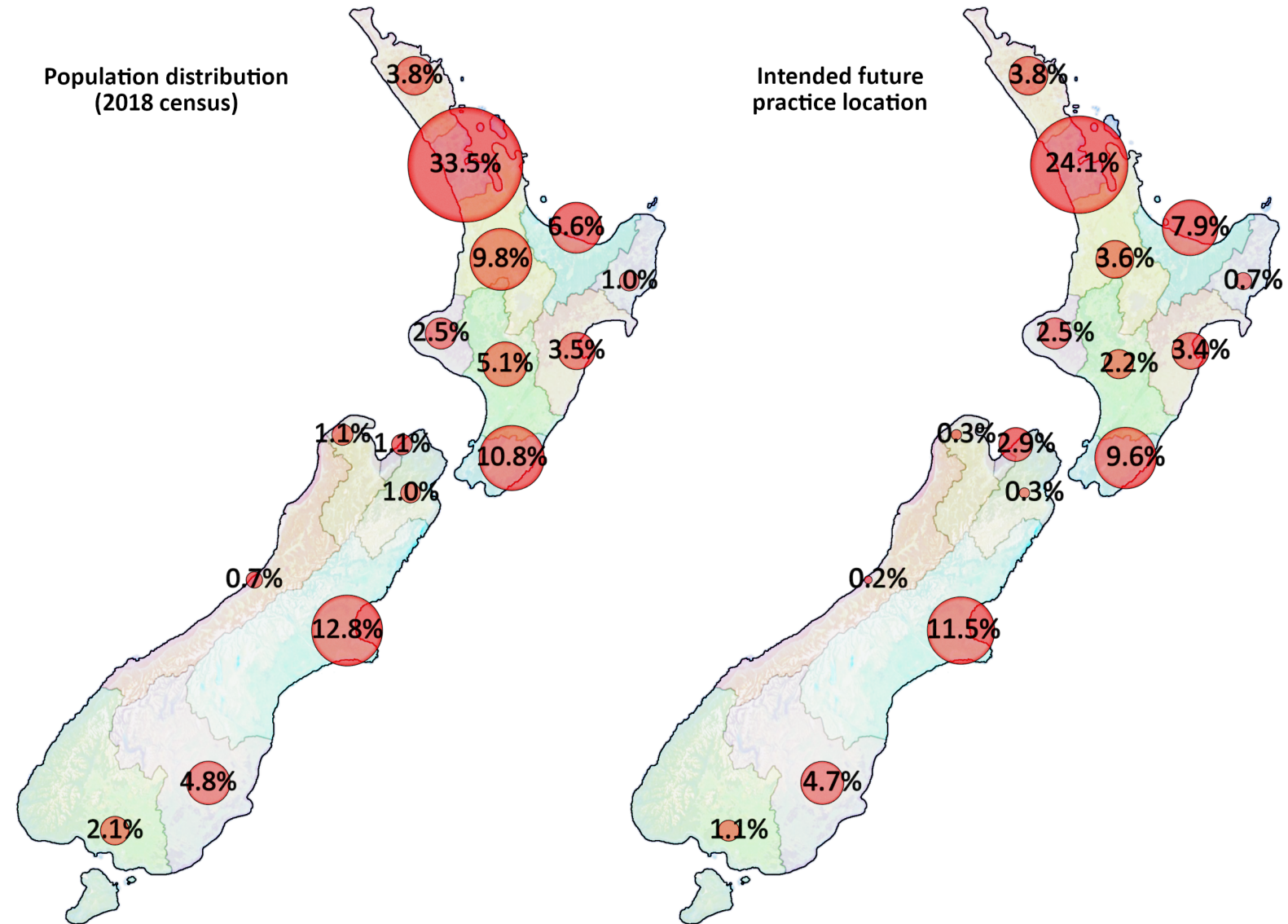


Figure 5. Geographical distributions of population (2018 census), and of first preference of intended future practice location. These values have been corrected for response rate.

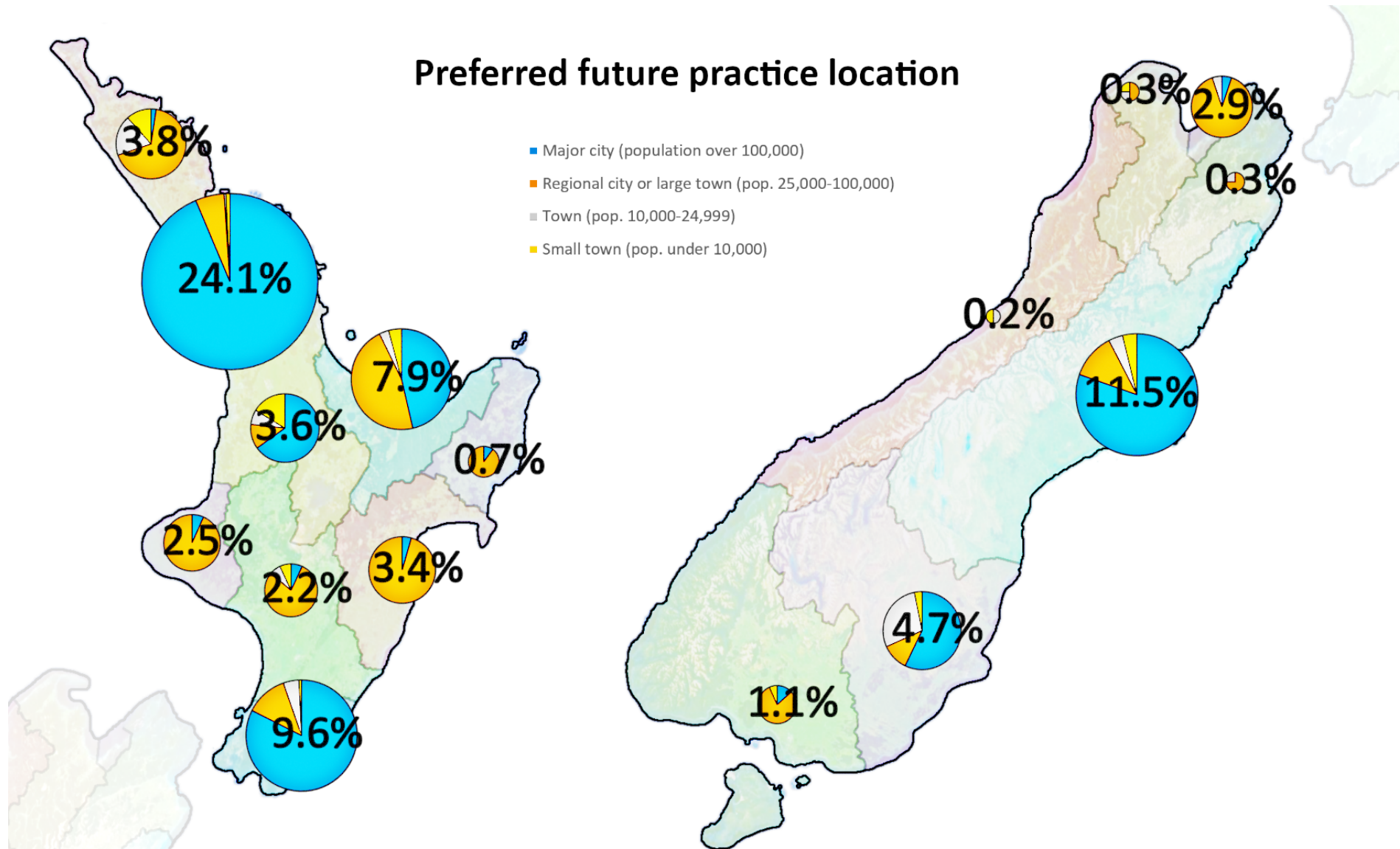


Figure 6. First preference of intended future practice location, and preferred population of geographical location. These values have been corrected for response rate.

Future medical specialty

Table 42. Interest in medical teaching during medical career

Interest in teaching	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Yes	144	73.8%	159	73.6%	141	70.1%	180	78.9%	150	65.8%	774	72.5%
No	9	4.6%	15	6.9%	21	10.4%	12	5.3%	24	10.5%	81	7.6%
Undecided	42	21.5%	42	19.4%	39	19.4%	36	15.8%	54	23.7%	213	19.9%

Table 43. Interest in research during medical career

Interest in research	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Yes	78	40.0%	87	40.8%	75	38.5%	90	39.5%	84	36.8%	414	39.1%
No	51	26.2%	54	25.4%	66	33.8%	66	28.9%	81	35.5%	318	30.0%
Undecided	66	33.8%	72	33.8%	54	27.7%	72	31.6%	63	27.6%	327	30.9%

Table 44. Certainty of practising in most preferred medical specialty

Certainty	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Absolutely certain	90	46.2%	93	43.7%	90	45.5%	99	43.4%	84	36.8%	456	42.9%
Moderately certain	87	44.6%	102	47.9%	87	43.9%	93	40.8%	105	46.1%	474	44.6%
Not at all certain	18	9.2%	18	8.5%	21	10.6%	36	15.8%	39	17.1%	132	12.4%

Factors influencing specialty choice

Respondents were asked to rate on a scale from 1 (=not at all) to 5 (=a great deal) how a certain factor would influence their most preferred type of medical practice. Each factor was then ranked by the percentage of those responding with a '4' or '5' to that factor (% Sig.).

Table 45. Factors influencing choice of specialty (ranked by Total column)

Factor influencing choice of specialty	Survey year											
	2017		2018		2019		2020		2021		Total	
	% Sig.	Rank	% Sig.	Rank	% Sig.	Rank	% Sig.	Rank	% Sig.	Rank	% Sig.	Rank
Atmosphere / work culture typical of the discipline	77.6%	1	76.5%	3	80.4%	1	78.9%	1	81.8%	1	79.1%	1
Interest in helping people	68.1%	6	77.5%	1	78.7%	2	78.9%	2	72.4%	3	75.2%	2
Self-appraisal of own skills / aptitudes	73.4%	2	76.6%	2	73.6%	3	75.4%	3	73.8%	2	74.6%	3
Influence of training experiences as a doctor	68.6%	5	75.2%	4	71.6%	4	72.8%	4	71.6%	4	72.0%	4
Work experience since graduation	70.3%	3	71.5%	6	70.1%	5	71.9%	5	69.9%	5	70.8%	5
Intellectual content of the specialty	66.7%	7	73.8%	5	68.0%	7	68.9%	7	69.0%	7	69.3%	6
Perceived opportunity to work flexible hours	69.8%	4	64.5%	7	69.0%	6	70.6%	6	69.5%	6	68.7%	7
Perceived amount of working hours	64.6%	8	57.0%	9	64.0%	8	61.4%	8	63.7%	8	62.1%	8
Type of patients typical of the discipline	52.4%	10	63.7%	8	52.8%	9	61.0%	9	56.9%	9	57.5%	9
Opportunity for procedural work	48.2%	11	54.2%	10	48.2%	11	53.7%	10	48.9%	11	50.8%	10
Self-appraisal of own domestic circumstances	53.6%	9	44.9%	11	52.3%	10	49.1%	11	49.1%	10	49.7%	11
Perceived job security	41.7%	12	43.7%	12	43.7%	12	47.1%	12	48.0%	12	45.0%	12
Experience of specialty as a medical student	38.5%	13	43.2%	13	37.1%	14	42.5%	13	33.2%	16	38.9%	13
Availability of a vocational training placement	33.5%	16	39.4%	14	37.6%	13	32.7%	16	42.0%	13	37.1%	14
Geographical location of most preferred specialty	37.0%	14	35.5%	15	35.5%	15	41.4%	14	35.7%	14	37.1%	15
Perceived career advancement prospects	34.9%	15	35.0%	16	34.0%	16	38.2%	15	33.3%	15	35.1%	16
General medical school experiences	33.5%	17	31.3%	17	30.5%	17	32.2%	17	27.4%	17	30.9%	17
Number of years required to complete training	26.6%	18	23.5%	18	23.9%	19	24.6%	19	25.8%	18	24.8%	18
Opportunity for research and / or teaching	24.0%	19	23.0%	19	22.3%	20	29.4%	18	18.1%	20	23.4%	19
Perceived financial prospects	20.8%	20	16.8%	20	24.4%	18	21.9%	20	19.9%	19	20.7%	20
Perceived prestige of the discipline	10.4%	21	11.7%	21	12.2%	21	15.8%	21	9.3%	21	11.9%	21
Influence of parents/relatives	9.4%	22	9.3%	22	9.1%	22	8.3%	22	9.3%	22	9.1%	22
Financial costs of medical school education and / or debt	3.6%	23	3.3%	23	6.1%	23	3.1%	24	5.8%	23	4.4%	23
Risk of litigation and associated insurance costs	2.6%	25	1.9%	25	4.6%	24	4.8%	23	4.9%	24	3.8%	24
Financial costs of vocational training	3.1%	24	2.8%	24	4.1%	25	2.6%	25	3.1%	25	3.1%	25

Appendix A: Response rate

Additional analyses were undertaken to assess the whether the respondents were representative of the total cohort.

Response rates by institution

As shown in Table 1, the response rates are substantially different between the two universities. As the two universities have different cohort sizes, this further skews the imbalance of responses.

Table 46. Number of respondents by university

Medical School/ Programme	Survey year											
	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
University of Auckland	66	33.3%	72	32.0%	72	32.0%	99	42.9%	87	37.7%	396	36.4%
University of Otago	132	66.7%	153	68.0%	138	68.0%	132	57.1%	144	62.3%	699	63.6%
Total responses	198	100.0%	225	100.0%	210	100.0%	231	100.0%	231	100.0%	1095	100.0%

Responder/non-responder analysis

Responder/non-responder analysis was undertaken to determine whether responders were representative of the cohort. The gender composition of both groups (responders and non-responders) was slightly different to that of the 2012 to 2016 cohort, with a greater proportion of male non-responders. The ethnic identity composition of the two groups also varied significantly.

Table 47. Respondents/non-respondents by gender

Gender	Responders†		Non-responders		Total	
	n	%	n	%	n	%
Female	624	57.0%	567	50.9%	1191	53.9%
Male	471	43.0%	546	49.1%	1017	46.1%

†Numbers differ from those of Table 2, which only includes respondents who answered the gender question in this survey. Table 47 is compiled from medical school data.

Table 48. Respondents/non-respondents by ethnic identity

Ethnicity	Responders†		Non-responders		Total	
	n=1095		n=1113		n=2208	
	n	%	n	%	n	%
Māori	102	9.3%	126	11.3%	228	10.3%
Pacific people	33	3.0%	81	7.3%	114	5.2%
New Zealand European	690	63.0%	474	42.6%	1164	52.7%
Other	390	35.6%	531	47.7%	921	41.7%

†Numbers differ from those of Table 5, which only includes respondents who answered the ethnic identity question in this survey. Table 48 is compiled from medical school data, and as such may not match respondents' current ethnic identity at the time of the survey.

Percentages total more than 100% as cohort members may identify with more than one ethnicity.

Appendix B: Method

In 2016 the University of Otago conducted the first survey of doctors five years after graduation. From 2017, participation has been sought from both University of Auckland and University of Otago graduates. The questionnaire has remained relatively stable throughout, and gathers respondent information about basic demographics, intentions and influences on future medical practice, and college training programmes. In 2017, *Waikato* and *Taupo* were separated as regional choices, and *Gender diverse* was added as a gender option. The majority of the questions are quantitative. The career choice options that students can select were determined when the study was first commenced in Australia. While they have been adapted, there is still not yet complete alignment with vocational scopes of practice as determined by MCNZ. In 2021, the Urgent Care vocational training programme was added, and Indigenous Health was removed, to bring this further into alignment.

University of Otago study data were collected and managed using the Research Electronic Data Capture (REDCap) tool hosted at the University of Otago³. REDCap is a secure, web-based application designed to support data capture for research studies, providing 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for importing data from external sources.

The University of Auckland administered a paper version of the questionnaire to their graduates in 2017, with non-responders invited to complete a REDCap questionnaire. From 2018, the University of Auckland survey was collected and managed via REDCap.

The two sets of data from each year were combined to form national data sets.

To protect respondents' data, Statistics New Zealand's guidelines have been adopted⁴ in the presentation of frequencies for individual years: frequencies less than three have been suppressed, as indicated by "...C" within table cells; other frequencies in these tables have been randomly rounded to a multiple of three. Unless otherwise indicated, columns total to 100%.

³ Paul A. Harris, Robert Taylor, Robert Thielke, Jonathon Payne, Nathaniel Gonzalez, Jose G. Conde, Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, *J Biomed Inform.* 2009 Apr;42(2):377–81

⁴ Statistics New Zealand, 2013 Census confidentiality rules and how they are applied, <http://archive.stats.govt.nz/Census/2013-census/methodology/confidentiality-how-applied.aspx>, published 3/09/2013. Retrieved 30/07/2020