
Australasian College of
Paramedicine
Australasian Paramedicine
Workforce Survey
REPORT 2023-2024
AUT
NEW ZEALAND
WESTERN SYDNEY
UNIVERSITY
ECU
EDITH COWAN

Authorship:

Associate Professor Liz Thyer (Project Chief Investigator), Western Sydney University
Ms Sascha Baldry, Western Sydney University
Dr Aglae Hernandez Grande, Edith Cowan University
Dr Fleur Sharafizad, Edith Cowan University
Mr Stephen Aiello, Auckland University of Technology
Dr Graham Howie, Auckland University of Technology
Ms Alecka Miles, Edith Cowan University
Professor Ben Farr-Wharton, Edith Cowan University
Research Team (Appendix 1)

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Correspondence to:

Associate Professor (Paramedicine) Liz Thyer
Western Sydney University
E: E.Thyer@westernsydney.edu.au

Acknowledgement

The College is the peak professional body representing and supporting paramedics and student paramedics across Australia and Aotearoa New Zealand since 1973.

The College acknowledges Aboriginal and Torres Strait Islander peoples as the traditional custodians of the land and sea in which we live and work. We recognise their continuing connection to land, sea and culture, and pay our respects to Elders past, present and future.

The College acknowledges Māori as tangata whenua and Treaty of Waitangi partners in Aotearoa New Zealand.

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Executive Summary

This is the first report of a three-year study identifying and exploring trends that affect the Australasian (specifically, Aotearoa New Zealand and Australian) paramedicine workforce. The research focuses on collecting and analysing data pertaining to the demographic, career trajectory, and work motivations and conditions for those working in clinical, management and educational capacities within the paramedicine workforce of Aotearoa New Zealand and Australia. It also provides a snapshot of student paramedics' demographic and career aspirations.

Data was collected via an online survey from September 2023 to January 2024. During this time, 1236 valid responses were collected.

A summary of the key findings includes:

- The demographic findings are largely reflective of the paramedicine population data that is available through the Paramedicine Board of Australia and Te Kaunihera Manapou | Paramedic Council.
- Nine percent of paramedics in Aotearoa New Zealand identify as Māori, and 3% as Aboriginal and Torres Strait Islander in Australia. While Māori workforce participation is higher in Aotearoa New Zealand, it lags behind overall population data.
- Survey participants were well educated and well paid, exceeding population averages for both education and salary.
- Students and those paramedics under the age of 40 are predominately female, leaving those over 40, and particularly those in management positions, predominantly male.
- More than two in every five paramedics have carer responsibilities for children under the age of 16, and one in every five have caring responsibilities for an adult family member.
- More than 20% of paramedics are currently working for two or more employers. This was investigated in light of age, gender, income and hours worked.
- The majority of paramedics work overtime or on-call, with similar percentages recorded in both Aotearoa New Zealand and Australia. More than one-quarter of paramedics wanted to decrease the hours they worked with their primary paramedicine role.

Key considerations for the paramedicine workforce

- Initiatives that seek to increase workforce participation for females over the age of 40, coupled with increasing the proportion of females in management roles. For example, identifying and removing barriers to ongoing workforce participation for females aged over 40.
- Student/cadet recruitment campaigns that specifically target Māori and Aboriginal and Torres Strait Islander peoples and people from culturally and linguistically diverse backgrounds would enhance workforce representation that reflects the broader community.
- Resourcing and staffing levels remain a significant concern for paramedics in both countries. Ongoing research and research-informed advocacy to enhance the provision and availability of financial support for staffing and resources to paramedicine organisations across Australasia is a key priority for the future.

Contents

Figures

NB: Numbers in figures, tables and charts have been rounded to the nearest whole number

Tables

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Introduction

Comprehensive data exploring the Australasian paramedicine workforce is limited, especially when compared to other health professions. This is particularly true of paramedics who do not work in 'traditional' jurisdictional ambulance services, but instead are employed by the increasingly varied number of private, public, and non-governmental organisations.

Previous Australasian research into the paramedicine workforce can be largely categorised as high-level workforce statistics gathered by bodies such as the Paramedicine Board of Australia and the Australian Government Productivity Commission[1, 2] or detailed reports on specific groups. These specific groups include remote industrial and mining sectors[3], characteristics of the jurisdictional ambulance workforce participating in the Australian and New Zealand Cardiac Arrest Registry[4], Māori participation in the paramedic profession[5], paramedic academics in both Australia and Aotearoa New Zealand[6] and jurisdictional ambulance services paramedic role types[7].

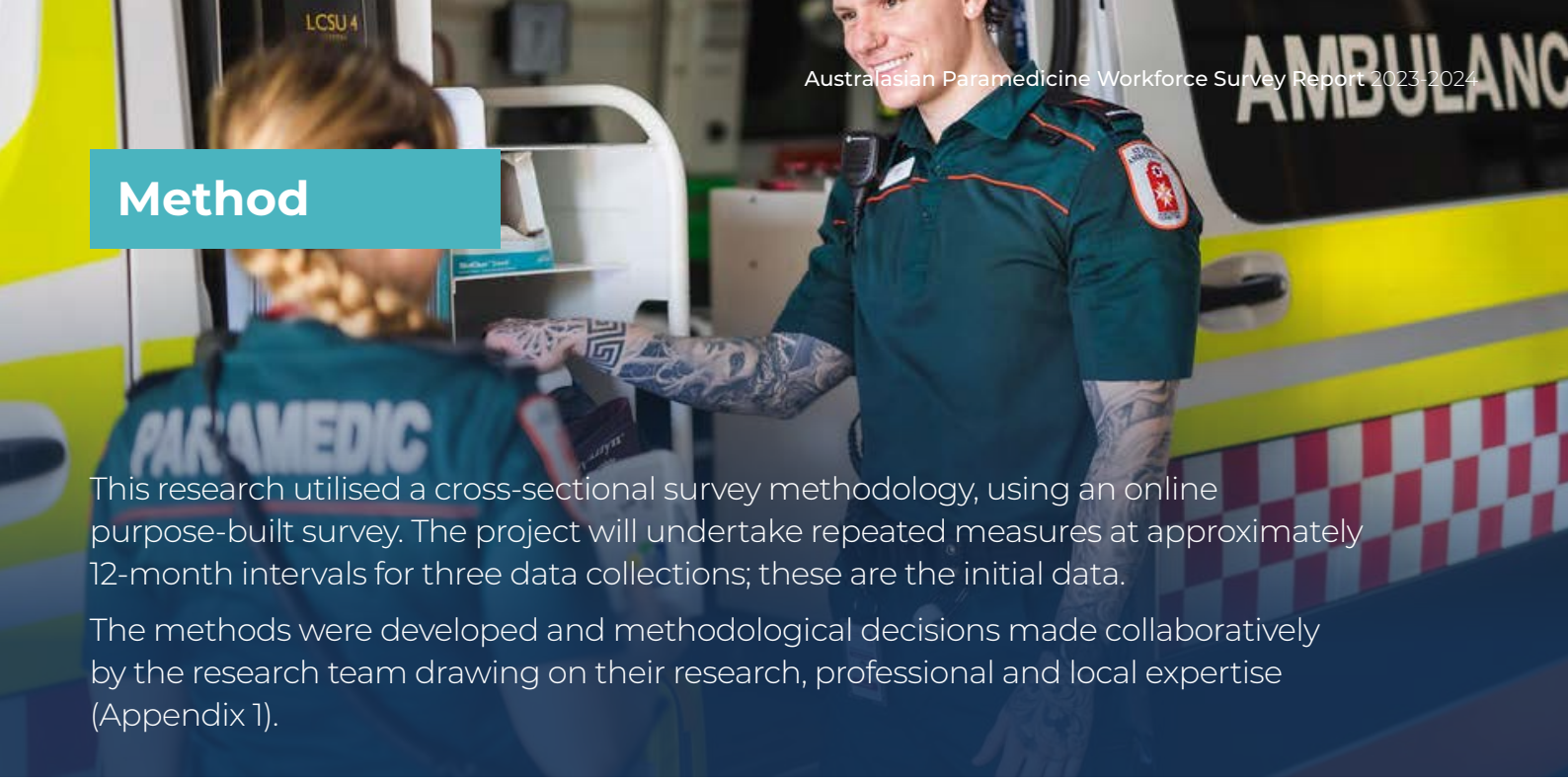
Data collected via government agencies focuses largely on workforce demographics, providing broad coverage but limited detail. The Paramedicine Board of Australia collects annual data covering the number of registrants (both practising and non-practising), age and gender[2]. Some information is collected by the Australian Bureau of Statistics (ABS), but a lack of inclusive Australian and Aotearoa New Zealand Standard Classification of Occupations (ANZSCO) codes that comprehensively apply to paramedicine constrains that data set[1]. The Aotearoa New Zealand paramedic workforce information is also limited, as registration only commenced in 2020[8]. The Council of Ambulance Authorities provides an annual workforce and gender report, but this is restricted to jurisdictional paramedics and provides limited in-depth data.

The primary aim of this survey was to record the current and future Australasian paramedicine workforce to identify trends across demographics, fields of employment, intention to upskill, intention to leave the workforce and other key variables. It has achieved that aim and has captured a representative sample of the paramedicine workforce across Australia and Aotearoa New Zealand. It includes valuable information examining demographics, role types, work satisfaction and wellbeing, reasons for attrition rates and choices about place of work, along with other data that explores the Australasian paramedicine workforce in new and informative ways.

The workforce data contained in the report aims to assist the Australasian College of Paramedicine (the College) and broader paramedicine healthcare sector in workforce planning to support all employers of paramedics to better understand the needs of their workforce.

1. Australian Government Productivity Commission. Report on Government Services. 2022.
2. Paramedicine Board of Australia. Statistics. Australian Health Practitioner Regulation Agency., https://www.paramedicineboard.gov.au/News/Statistics.aspx (2022).
3. Acker JJ and Johnson T. The Demographic and Clinical Practice Profile of Australian Remote and Industrial Paramedics: Findings from a Workforce Survey. Australasian Journal of Paramedicine 2021; 18: 1-9.
4. Beck B, Bray JE, Smith K, et al. Description of the ambulance services participating in the Aus-ROC Australian and New Zealand out-of-hospital cardiac arrest Epistry. Emerg Med Australas 2016; 28: 673-683. 20161011. DOI: 10.1111/1742-6723.12690.
5. Morrison TA and Tunnage B. Reporting Māori participation in paramedic education and the EMS workforce in New Zealand. Australasian Journal of Paramedicine 2014; 11: 1-5.
6. Munro G, O'Meara P and Kenny A. Paramedic transition into an academic role in universities: A demographic and qualification survey of paramedic academics in Australia and New Zealand. Irish Journal of Paramedicine 2016; 1.
7. Wilkinson-Stokes M. A taxonomy of Australian and New Zealand paramedic clinical roles. Australasian Journal of Paramedicine 2021; 18: 1-20.
8. Kaunihera Manapou Paramedic Council. n.d. Ngā tauanga manapou paramedic registration statistics [Online]. , https://paramediccouncil.org.nz/PCNZ/PCNZ/Paramedic-Statistics.aspx [Accessed 30 April 2024] (2024).

Method



This research utilised a cross-sectional survey methodology, using an online purpose-built survey. The project will undertake repeated measures at approximately 12-month intervals for three data collections; these are the initial data.

The methods were developed and methodological decisions made collaboratively by the research team drawing on their research, professional and local expertise (Appendix 1).

Participants, setting and recruitment

Participants were drawn from both the Australian and Aotearoa New Zealand paramedic populations. Eligible participants were required to meet one of the following criteria: paramedics registered with the Australian Health Practitioner Regulation Agency (Ahpra), paramedics registered with Te Kaunihera Manapou | Paramedic Council, individuals working in Australia or Aotearoa New Zealand with a jurisdictional ambulance service in a clinical role but NOT a registered paramedic (e.g. emergency medical technician), individuals working in Australia or Aotearoa New Zealand with a health service provider in a clinical role or with an education provider but NOT a registered paramedic (e.g. military medic or mine site medic), or students currently enrolled in a paramedicine degree at an Australasian university. Those who were retired, volunteers or not currently working in a paramedic role were excluded.

Recruitment was undertaken electronically via email and through social media. Additionally, the College, the Paramedicine Board of Australia, Te Kaunihera Manapou | Paramedic Council, and the Australasian Council of Paramedicine Deans all agreed to disseminate the survey through their networks. Posts were made to relevant social media sites/groups that are frequented by paramedics and paramedicine students and a targeted (paid) campaign was utilised on Facebook. All recruitment directed prospective participants to a link to the online survey.

Survey instrument

The survey was designed by the research team as there was no previous validated tool that suited the research aims. Small, validated question sets were included in relation to workforce intentions and wellbeing, and guidance for sensitive questions was sought from government and university surveys and resources. Throughout the design process, consultation relating to important areas of focus occurred with paramedic industry (private and government) leaders, paramedic unions, and other health professions who had designed and run workforce surveys.

The survey used logic to direct respondents to appropriate questions dependent on past responses but was designed to gather the greatest amount of data with the least impost. Broadly, question areas included demographics, current role(s) and future aspirations. Students received a slightly amended survey that focused more on aspirations rather than current employment. A full copy of the list of data points from the survey is provided in Appendix 2.

Data analysis

The research team includes a biostatistician and team of three workforce data analysts. Data was collected via the online secure survey platform Qualtrics, downloaded in Microsoft Excel, and cleaned, analysed, and presented in SPSS.

The type of analysis adopted in the Australasian Paramedicine Workforce Report, consistent with quantitative analysis of survey data, utilises two primary kinds of analysis: 1) Frequency or 'proportion of sample' analysis, and 2) box and whisker plots. These technical terms are explained below. In addition to these analyses, the survey utilised several open-ended questions where respondents could add extended text. For the most part, this text was coded into categories and account of the number of responses per category was included (quantitative content analysis). There is one question (pertaining to continuing professional development) that also had an open-ended question, for which thematic (qualitative) analysis was used to identify key sentiments that permeated across respondents.

Method

Frequency or 'proportion of the sample' analysis

For the most part, the analysis tallied the number of responses to a particular question and tallied these against the total sample. This kind of analysis is used to show how one, or several factors or conditions, might distribute across a sample.

	Age	Clinical (165)
Aotearoa New Zealand	<20	0%
	20-29	28%
	30-39	27%
	40-49	15%
	50-59	24%
	>60	5%
	Age	**Clinical (588)**
Australia	<20	0%
	20-29	20%
	30-39	27%
	40-49	22%
	50-59	24%
	>60	8%

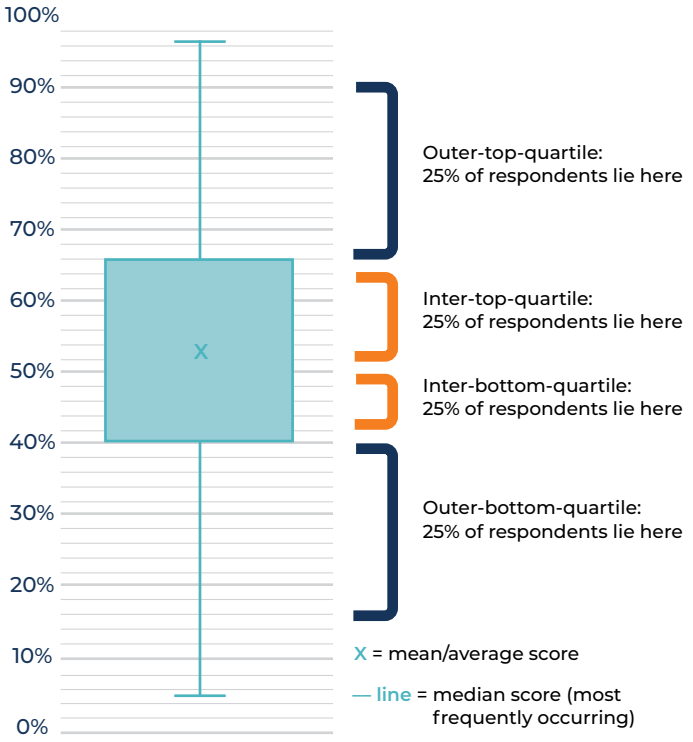
In the adjacent example, the proportion of clinical paramedics for Aotearoa New Zealand and Australia is displayed. While the percentage of respondents is indicated against each of the age groups, the total number of respondents is identified in the title for this column; for example, 165 Aotearoa New Zealand respondents and 588 Australian respondents.

Importantly, for some of the questions in this report, not all respondents answered every question (people who didn't answer more than 10% of the questions asked of them were not included in analysis - consistent with norms for survey analysis). As such, the number of respondents may vary from item to item.

Analysis for responses to several questions from the survey utilise 'box and whisker' plots/graphs. Per the adjacent example, the box and whisker graphs are useful for understanding how the sampled respondents scored on each question relative to others. The percentage on the Y axis highlights average level of agreement. If a person scored 100%, it would mean that they answered 'strongly agree' to all questions that comprise a set of questions, representing a construct (for example, 'intention to leave'). Equally, if a person scored 0%, it would mean that they answered 'strongly disagree' to all questions. 50% is indicative of the 'neither agree nor disagree'/'neutral' scaling point.

The box and whisker plot highlights the distribution of responses across the sample. The 'x' identifies the mean score (the average or sum of all scores divided by the number of respondents). This is a good indication of 'what happens most of the time'. The line represents the median value - this is the middle number in a sorted list of scores. The filled-in box encompassing the mean and median represents the inter-quartile range, where 50% of the sample has answered. The 'whiskers' (the stems protruding from the interquartile filled box) represent the outer values (roughly, where 25% of the lowest and highest responses fell). Any dots appearing outside of the box and whiskers represent outliers, who had substantially different values to the rest of the sample.

Box and whisker plots/graphs



Role classification

Some responses are presented with a breakdown of role type: clinical, research, education, or management. One of the early questions in the survey asked respondents which of the four roles best described their position with their primary employer. It is this response that is used to classify respondents in relation to later data where appropriate.

Terminology

Aotearoa New Zealand - both Māori and English terms are used throughout the text.

LGBTQIA+ - lesbian, gay, bisexual, transgender, queer/questioning, intersex, asexual, plus is an evolving acronym according to the Australian Institute of Family Studies and may change depending on the audience.

Results

Results

Total survey responses

The total survey responses are summarised in Table 1. After agreeing to participate in the survey, respondents were asked which the following categories best described their current position with their primary paramedicine employer. The response to this question determined the subsequent set of questions each participant received.

Not all respondents completed the entire survey once they had begun. Unless specified, the data presented relates to the complete survey responses, or those who answered more than 90% of the questions asked of them, consistent with norms for survey analysis. The response rate met the *a priori* sample size for statistical power for paramedics (confidence level of 99% with 5% margin of error), but not for student paramedics; student paramedic data is presented as a snapshot toward the end of the report.

Table 1: Survey responses according to category

Group	Complete	Incomplete
Australian registered paramedic working in paramedicine (includes clinical, education, research and management roles)	693	319
Registered to practise with the Te Kaunihera Manapou | Paramedic Council and working in paramedicine (includes clinical, education, research and management roles)	165	50
Student completing a pre-registration paramedicine degree	223	21
Student completing a pre-registration paramedicine degree as part of their concurrent employment with an ambulance service	40	1
Working with a jurisdictional ambulance service in Australia in a clinical role, but NOT a registered paramedic (e.g. emergency medical technician)	12	6
Working with a health service provider in a clinical role, or with an education provider, in Australia but NOT a registered paramedic (e.g. military medic, mine site medic, tutor/lecturer)	12	9
Registered to practise in Australia but not currently working in a paramedicine role	50	10
Registered to practise with Te Kaunihera Manapou | Paramedic Council but not currently working in a paramedicine role	12	0
Working with a jurisdictional ambulance service in Aotearoa New Zealand in a clinical role but NOT a registered paramedic (e.g. emergency medical technician)	26	9
Working with a health service provider in a clinical role, or with an education provider, in Aotearoa New Zealand but NOT a registered paramedic (e.g. military medic, mine site medic, tutor/lecturer)	3	7
Total	1236	432

Demographics

Gender representation

The graph below displays the gender breakdown for the paramedicine workforce (including students) across Aotearoa New Zealand and Australia.

Gender by Country

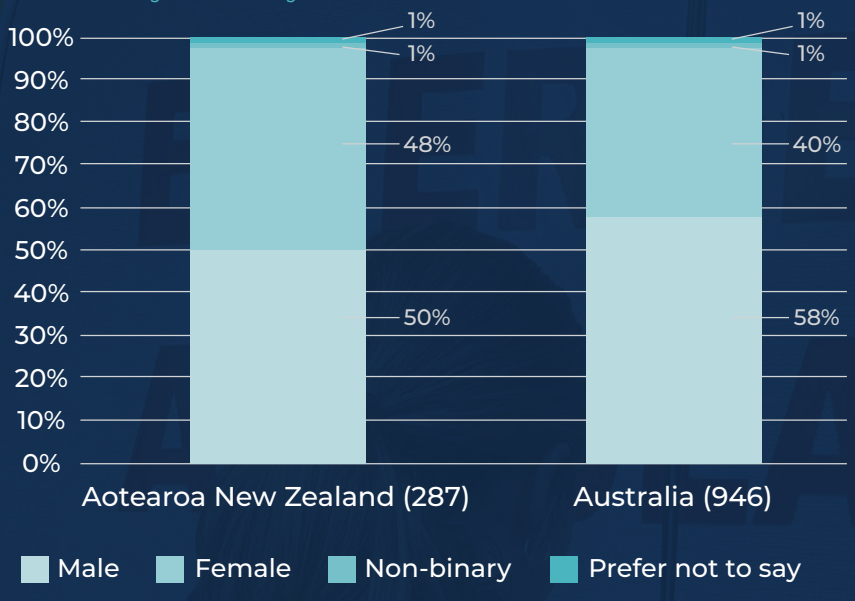


Figure 1: Gender by country

Per Table 2, the data collected presents the Aotearoa New Zealand and Australian paramedicine workforce as being somewhat male dominant overall, and particularly male dominant in the management category. However, females are more prevalent as students in both countries.

Aotearoa New Zealand	Clinical (165)	Research (1)	Education (17)	Management (11)	Student (81)	Not working (12)	Total (287)
Male	55%	0%	53%	82%	37%	50%	50%
Female	44%	100%	41%	18%	59%	50%	48%
Non-binary	0%	0%	0%	0%	2%	0%	1%
Prefer not to say	1%	0%	6%	0%	1%	0%	1%
Australia	**Clinical (588)**	**Research (4)**	**Education (51)**	**Management (74)**	**Student (179)**	**Not working (50)**	**Total (946)**
Male	59%	75%	73%	76%	46%	50%	58%
Female	39%	25%	25%	24%	54%	46%	40%
Non-binary	1%	0%	2%	0%	0%	2%	1%
Prefer not to say	1%	0%	0%	0%	0%	2%	1%

Table 2: Gender by role type

Age distribution

Australian Bureau of Statistics demographic data indicates that Australia's median employment age for full-time employees is 42. [1] In Aotearoa New Zealand, it is slightly older at age 44. [2]

The paramedicine workforce sample here indicates a similar median age (30-39 years) for paramedic respondents for both Aotearoa New Zealand and Australia. In this survey, Australian respondents had a slightly older workforce, with 32% of clinicians over 50 years of age, versus 29% for Aotearoa New Zealand. In management roles, the difference between countries was even greater with the percentage of Australian respondents in management over the age of 50 being 40% compared to only 18% in Aotearoa New Zealand.

Table 3: Age category by role type

	Age (Years)	Clinical (165)	Research (1)	Education (17)	Management (11)	Student (81)	Not working (12)	Total (287)
Aotearoa New Zealand	<20	0%	0%	0%	0%	12%	0%	3%
	20-29	28%	0%	6%	27%	64%	25%	37%
	30-39	27%	100%	19%	27%	11%	8%	22%
	40-49	15%	0%	44%	27%	6%	33%	15%
	50-59	24%	0%	25%	18%	5%	25%	19%
	>60	5%	0%	6%	0%	1%	8%	4%
	Age (Years)	**Clinical (588)**	**Research (4)**	**Education (51)**	**Management (74)**	**Student (179)**	**Not working (50)**	**Total (946)**
Australia	<20	0%	0%	0%	0%	15%	2%	3%
	20-29	20%	0%	8%	7%	47%	36%	24%
	30-39	27%	0%	25%	28%	23%	18%	25%
	40-49	22%	0%	10%	24%	10%	14%	19%
	50-59	24%	75%	45%	31%	4%	22%	22%
	>60	8%	25%	12%	9%	0%	8%	7%

Age, gender and sexuality

Figure 2 presents the distribution of females-to-males (total across all roles) across the different age groups. It can be noted that this distribution inverts, from females to males, across the different age ranges, and this trend does not correct. In essence, there are more female paramedics or paramedics in training aged between 20-39 than males. However, from 40 years of age, males disproportionately occupy the workforce.

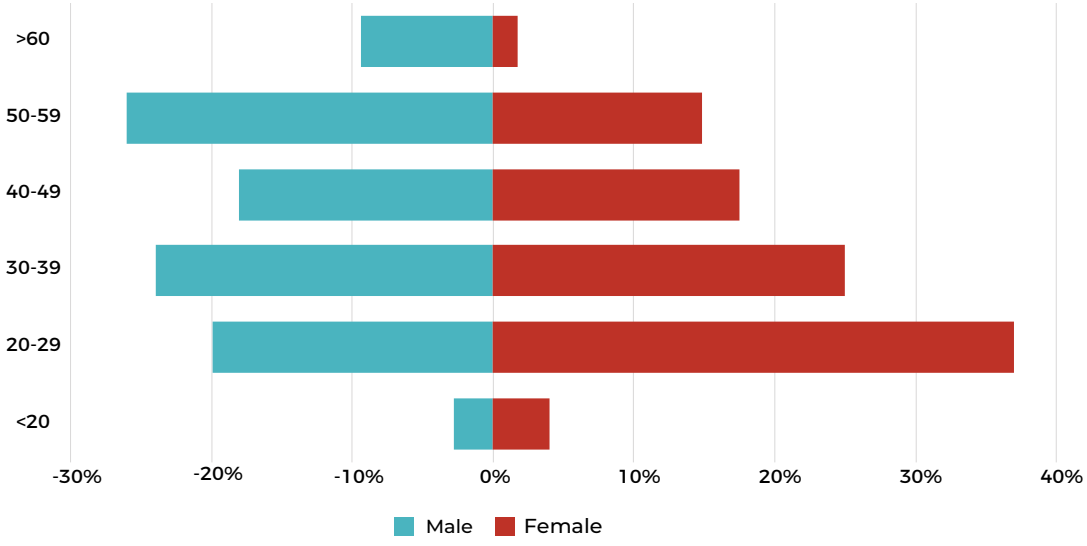


Figure 2: Age and gender distribution (combined sample)

1. Australian Bureau of Statistics (30 November 2022), Employment in the 2021 Census, ABS Website, accessed 2024.
2. Te Kawa Mataaho Public Service Commission (2021). Website, accessed 2024.

LGBTQIA+ representation

Table 4 presents the LGBTQIA+ and heterosexual orientation of the total paramedicine workforce across Aotearoa New Zealand and Australia. Workforce diversity is increasingly in the spotlight, with sexual orientation of the workforce being a key inclusion indicator (KPMG Price in Diversity, 2010).

	Aotearoa New Zealand (283)	Australia (925)
Heterosexual	74%	81%
Gay or homosexual	3%	5%
Lesbian	3%	2%
Bi-sexual	10%	5%
Pansexual	1%	2%
Queer	3%	1%
I use a different term	1%	1%
Prefer not to say	5%	3%

Table 4: Sexual orientation and gender diversity by location

Of the total sample, 12 respondents indicated that their sexual orientation was not represented in the provided options. They selected 'other' and manually entered their sexual orientation. Of the 12, five identified as grey/asexual, two found the question irrelevant, and one respectively wrote Xi-Xen, Human, and the final respondent identified as a combination of several options.

The diverse response to this question is greater than previously reported through other Australia-wide paramedic workforce surveys. This may be representative of a changing workforce but could also indicate a greater willingness of respondents to answer this question in a survey which is not linked to either an employer or registering body.

Māori and Pasifika (Aotearoa New Zealand) and Aboriginal and Torres Strait Islander (Australia) representation

A paramedicine workforce that is representative of the community creates benefits and can enhance the quality of care received by patients[5,9] Aboriginal and Torres Strait Islanders represent roughly 3% of Australia's population. In Aotearoa New Zealand, Māori represent 16.5% of the country's population. Per Figure 3 below, 3% of those in clinical roles in the Australian paramedicine workforce identify as Aboriginal and Torres Strait Islanders, which is in line with national statistics. The total number of those identifying as Māori in Aotearoa New Zealand, working in clinical roles, is proportionally less relative to the population, sitting at 8%.

Student numbers in both Australia and Aotearoa New Zealand indicate slightly higher numbers (4% and 9% for Australia and Aotearoa New Zealand respectively), particularly in the case of Aotearoa New Zealand. Notwithstanding, targeted recruitment activities to increase the representation of Māori paramedics (in line with national statistics) would be beneficial.

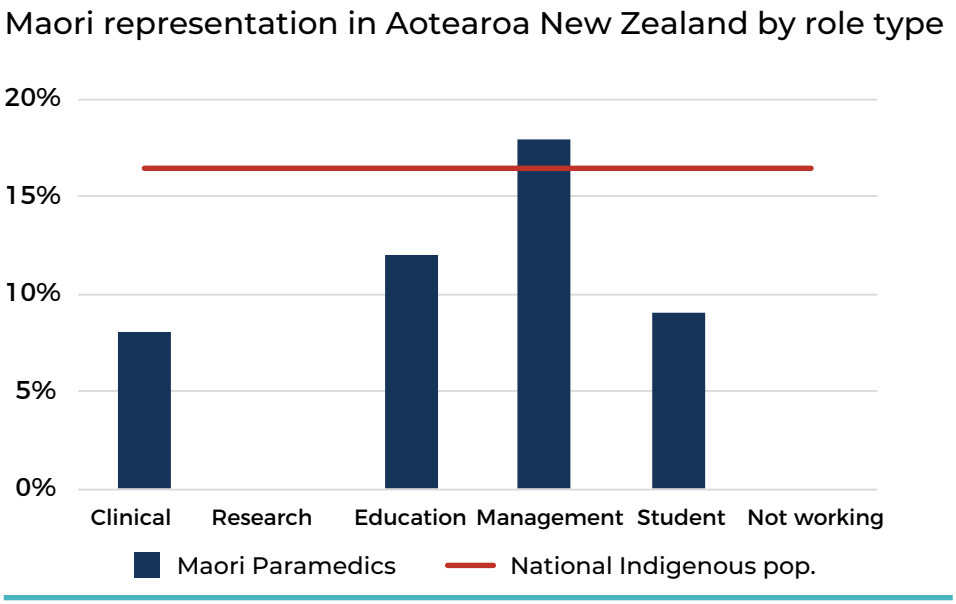


Figure 3: Proportion of Maori paramedics in Aotearoa New Zealand by role

5. Morrison TA, Tunnage B. Reporting Māori Participation in Paramedic Education and the EMS Workforce in New Zealand. Australasian journal of paramedicine. 2014;11(5).
9. Wilbur K, Snyder C, Essary AC, Reddy S, Will KK, Mary S. Developing Workforce Diversity in the Health Professions: A Social Justice Perspective. Health Professions Education. 2020;6(2):222-9.

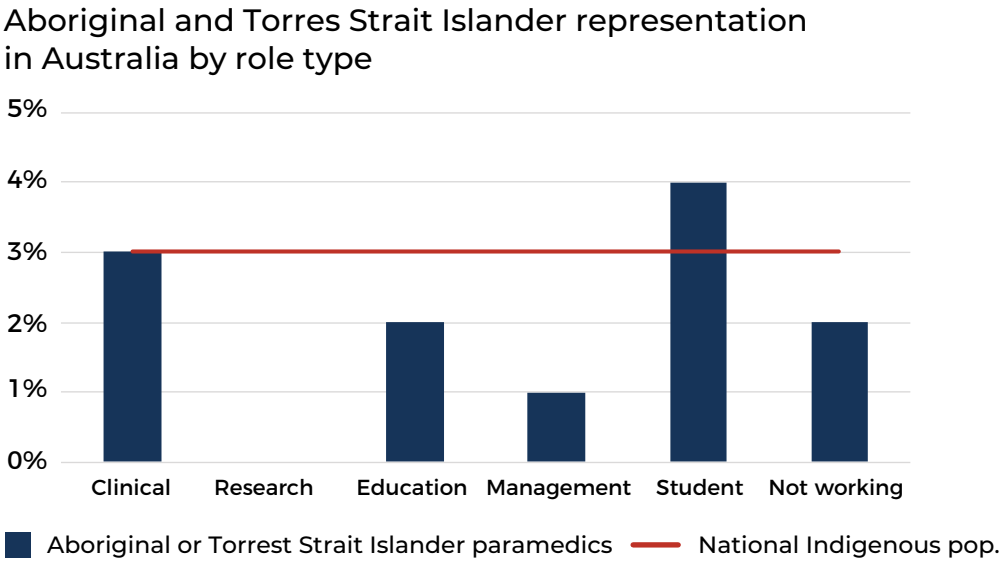


Figure 4: Proportion of Aboriginal and Torres Strait Islanders by role

Born in country of operation

Australia and Aotearoa New Zealand have experienced significant migration in the past three decades. Notwithstanding, the paramedicine workforce for both countries remains largely populated by those born in their country of operation. While Aotearoa New Zealand has a larger proportion of those born overseas in their workforce, Australia's workforce appears significantly below the national average of people born overseas (which is 29.5% of the population).

Ethnicity

Table 5 outlines the most common ethnicities identified by the paramedicine respondents for Aotearoa New Zealand and Australia. This compares to the 2018 New Zealand census that recorded 70% European, 17% Māori, and 15% Asian. The 2021 Australian Census recorded the most common ethnicities, other than Australian, as English, Irish, Scottish, and Chinese. The ethnicity of the paramedicine workforce is not broadly representative of national populations for either Australia or Aotearoa New Zealand.

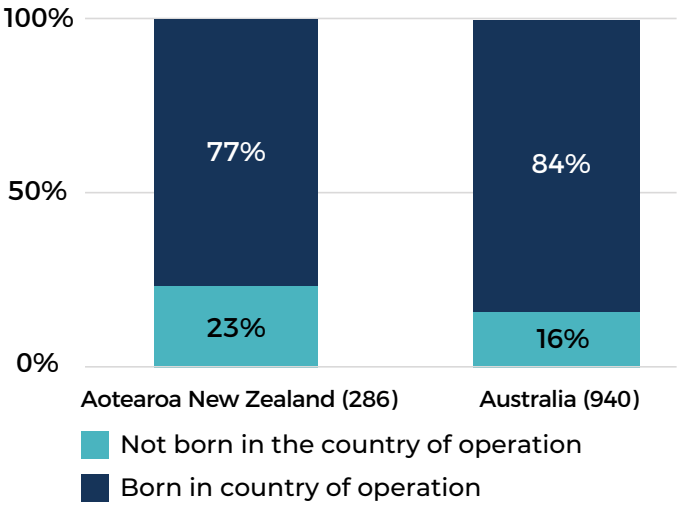


Figure 5: Proportion of sample born in country of operation, by country

Table 5: Respondent ethnicity

Aotearoa New Zealand		Australia	
New Zealand European/Pakeha	68%	Australian	71%
Māori	9%	English	8%
Indian	9%	Irish	3%
Chinese	1%	Scottish	3%
Other	12%	Australian Aboriginal and Torres Strait Islander	3%
		Chinese	1%
		Indian	1%
		Italian	1%
		Other	7%

Respondents were offered the option of selecting 'other' if they did not identify with any of the ethnicities offered in the survey. Of the 113 written responses, 25 identified as European, 13 as Aotearoa New Zealanders, 10 as South Africans, seven as Filipino, and six as Australians. Other ethnicities included were, for example, Vietnamese, Ukrainian, Polish, and Sri Lankan.

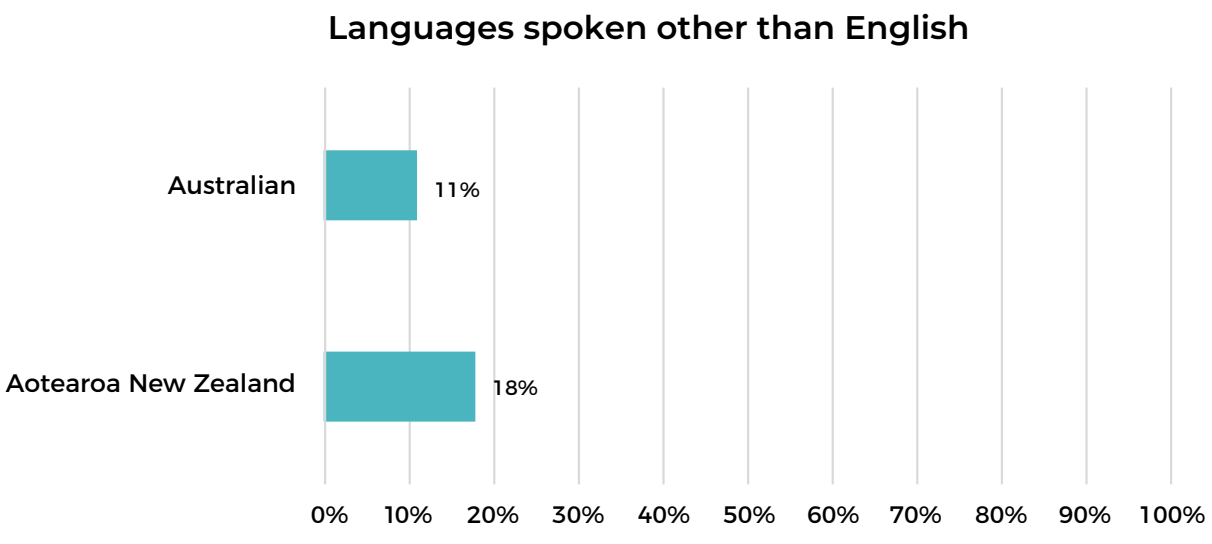


Figure 6: Proportion of workforce that speaks a language other than English

Language(s) spoken

18% of the Aotearoa New Zealand sample and 11% of the Australian sample spoke a language other than English. Of those people who spoke a language other than English, the range of languages that they spoke was very diverse. The most common languages were Arabic, Mandarin, Te Reo Māori, and Vietnamese. Other languages included Italian, Greek, Malay, Spanish, Portuguese, German, French, Dutch and Afrikaans.

Respondents had the option to specify any other language they spoke in addition to the ones listed in the survey. An additional 23 languages were entered by 80 respondents in this qualitative question. The most prominent additional languages spoken were Spanish (14), French (12), German (11), Afrikaans (6) and AUSLAN (5).

Experience living in peri-urban, rural, regional, or remote areas

By country

Aotearoa New Zealand and Australia include vast rural areas beyond the urban centres which are regularly cited as having difficulties in sourcing and maintaining a health workforce. One common redress plan is to train individuals from these rural areas.[10] Figure 7 shows that roughly half of the respondents from Australia and Aotearoa New Zealand have lived in peri-urban, rural, regional, or remote areas at some stage up until the age they left school. This is higher than the percentage of the Australian population (28%) who live in rural and remote areas and the Aotearoa New Zealand population (16%) who live in rural areas.

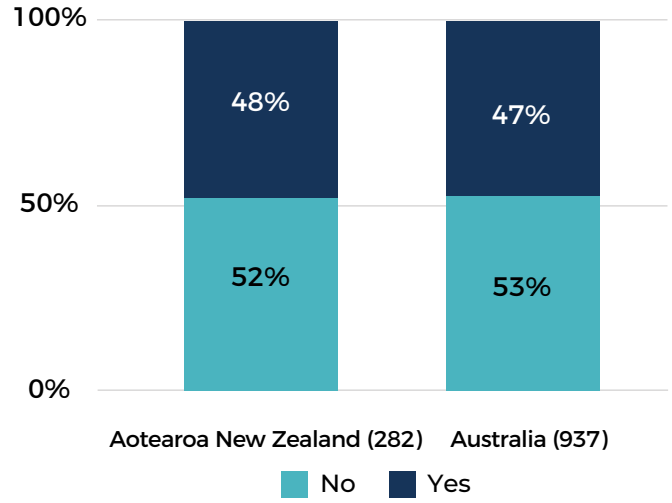


Figure 7: Previous experience living in peri-urban, rural, regional or remote areas

Current workplace location

Current paramedicine workplace is predetermined by employer operational demand in relation to jurisdictional ambulance services; however, with the diversity of paramedicine employers this is increasingly becoming an issue.

Figures 8 and 9 show the current workplace location for primary employers of Australian and Aotearoa New Zealand respondents respectively.

The Modified Monash Model (MMM) categories are recognised classifications of remoteness utilised by the ABS, with categories ranging from MMM1 (major city) to MMM7 (very remote). Aotearoa New Zealand does not have a comparable system, instead classifying locations as urban, peri-urban, rural, or remote.

10. Wakerman J, Humphreys J, Russell D, Guthridge S, Bourke L, Dunbar T, et al. Remote health workforce turnover and retention: what are the policy and practice priorities? Human Resources for Health. 2019;17(1):99.

Australian workplace location by Modified Monash Model (MMM) category

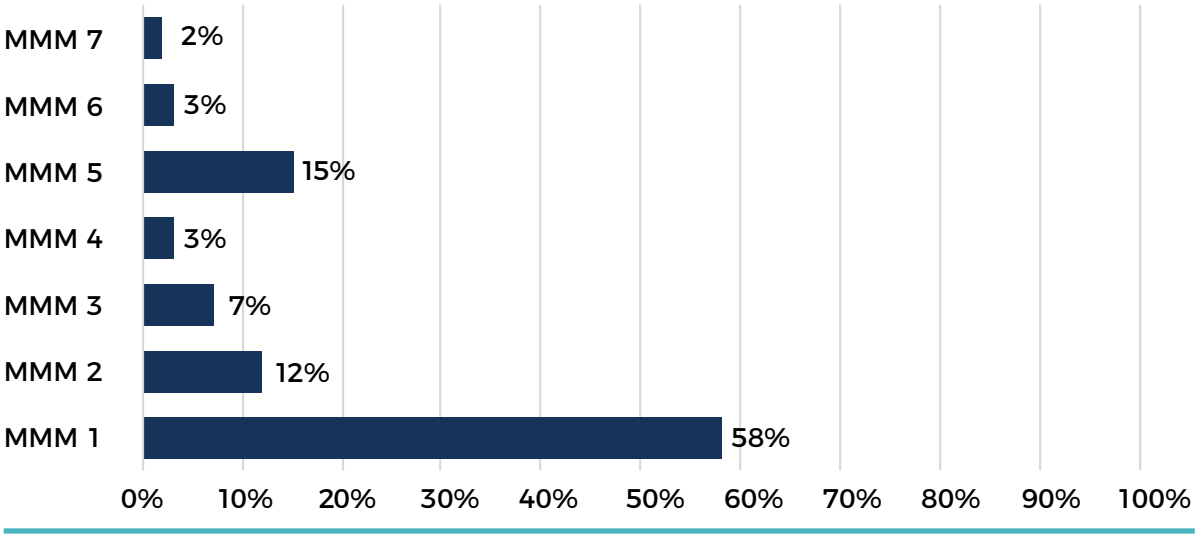


Figure 8: Australian workplace locations

Demographics

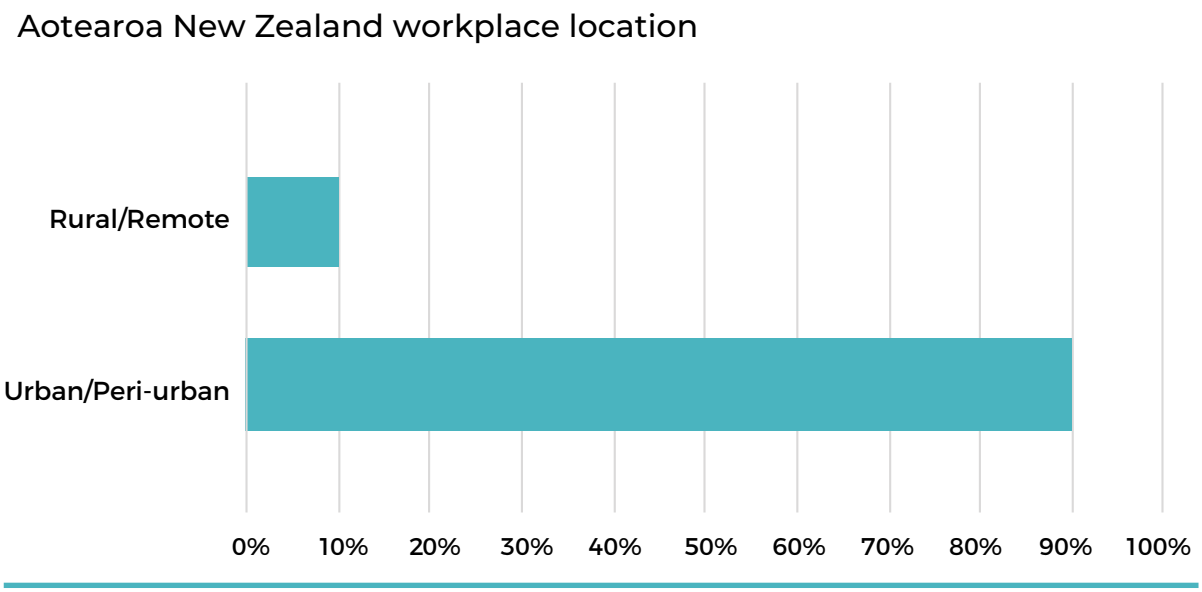


Figure 9: Aotearoa New Zealand workplace locations

Registration and tenure

Registered as a paramedic

The vast majority of the survey respondents were registered paramedics. A proportion of Aotearoa New Zealand and Australian paramedics held dual registration, most commonly paramedic and nursing registration. A small proportion, most commonly students, indicated they held paramedic and another health profession registration. For those who chose 'other' on the survey, they indicated they were retired from their second professional health role (two people), had triple registration (two people), or were an anaesthetic technician in addition to their paramedicine registration.

Tenure in paramedicine

In Australia and Aotearoa New Zealand, approximately 25% of the workforce have more than 20 years of experience. Conversely, slightly more than 20% of the clinical workforce in each country has fewer than four years' experience. With such a high proportion of the workforce holding substantial tenure and so many inexperienced staff, planned workforce renewal that enables knowledge-sharing across the generations remains a pressing concern. Maintaining a supply of new paramedics to replace experienced staff not only requires numbers of new workforce entrants, but also access to ongoing experienced staff to enable training and mentorship.

Table 6: Registration type by role

		Clinical (165)	Research (1)	Education (17)	Management (11)	Student (81)
Aotearoa New Zealand	Registered paramedic	96%	100%	88%	100%	67%
	Non-practising registration	0%	0%	0%	0%	17%
	Dual registered paramedic and nurse	3%	0%	6%	0%	8%
	Dual registered paramedic and other health discipline	0%	0%	0%	0%	8%
	Other	1%	0%	6%	0%	0%
		Clinical (588)	Research (4)	Education (51)	Management (74)	Student (179)
Australia	Registered paramedic	92%	100%	86%	89%	88%
	Non-practising registration	0%	0%	2%	1%	2%
	Dual registered paramedic and nurse	7%	0%	12%	8%	4%
	Dual registered paramedic and other health discipline	1%	0%	0%	1%	4%
	Other	1%	0%	0%	0%	2%

Table 7: Tenure - Aotearoa New Zealand and Australia

Aotearoa New Zealand					Australia				
Tenure (Years)	Clinical (162)	Research (1)	Education (16)	Management (11)	Tenure (Years)	Clinical (581)	Research (4)	Education (50)	Management (73)
0-4	23%	0%	0%	0%	0-4	22%	0%	4%	1%
5-9	18%	0%	19%	18%	5-9	21%	25%	12%	15%
10-19	32%	100%	38%	55%	10-19	26%	0%	26%	38%
20-29	14%	0%	25%	9%	20-29	18%	0%	32%	27%
30-39	10%	0%	13%	18%	30-39	11%	50%	16%	11%
40-49	0%	0%	0%	0%	40-49	2%	0%	10%	5%
50+	0%	0%	0%	0%	50+	0%	25%	0%	1%

Care responsibilities and leave

Image credit: Darren Warby caring for MercyCare residents

Caring responsibilities

The following graph outlines the proportion of the paramedicine workforce (excluding students) who, during the course of their employment with their primary paramedicine employer, have undertaken caring responsibilities for a child under the age of 16 or an adult family member.

More than 40% of all respondents advised that they have been, or currently are, a carer to a child or children under the age of 16. For both Australia and Aotearoa New Zealand paramedics, one in every five noted that they had undertaken formal caring responsibilities for an adult family member during their employment with their primary employer.

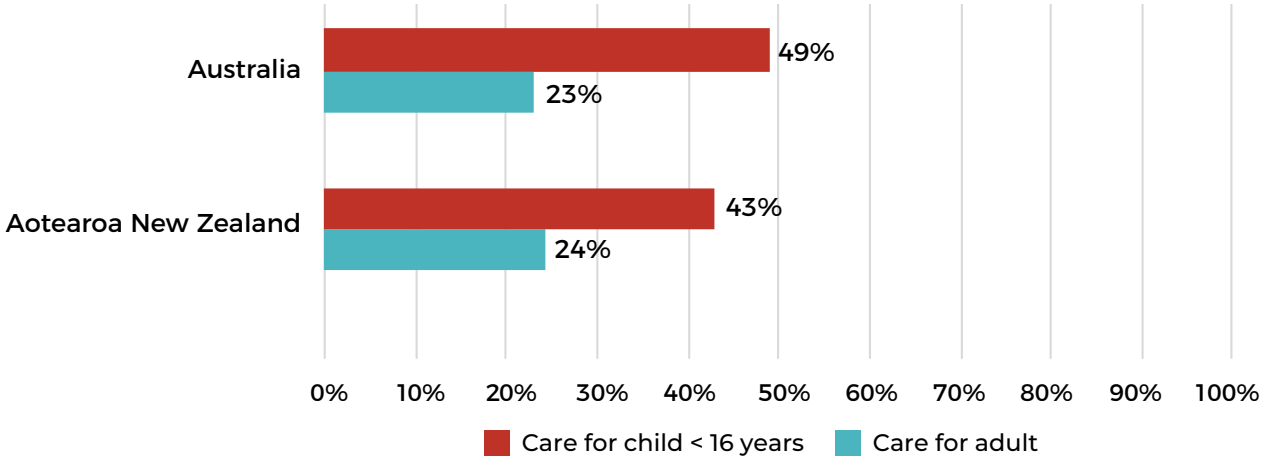


Figure 10: Proportion of sample with caring responsibilities

Parental leave

The following two box and whisker graphs outline respondents' level of agreement to the questions:

- I was able to take time off for appointments I wanted to attend during my/my partner's pregnancy or child-related appointments in general
- I was able to take short-term (two weeks) parental leave around the time of the birth or adoption of a child
- I was able to take extended leave to be the carer of a child if I wanted to.

The respondents are Aotearoa New Zealand and Australian paramedics undertaking clinical roles who indicated in a previous question that they have caring duties.

The agreement levels for the first and second questions were similar for both Aotearoa New Zealand and Australia. Responses to the first question indicate a 'neutral' level of agreement, with the median score (horizontal line) being 50%. The third question identifies significant variation between Aotearoa New Zealand and Australian respondents. In response to the question, "I was able to take extended leave to be the carer of a child if I wanted to", nearly all Aotearoa New Zealand respondents answered that they were able to take the leave. This contrasts with the Australian data which included a lot more negative responses, indicating paramedics who were unable to take extended leave in this situation.

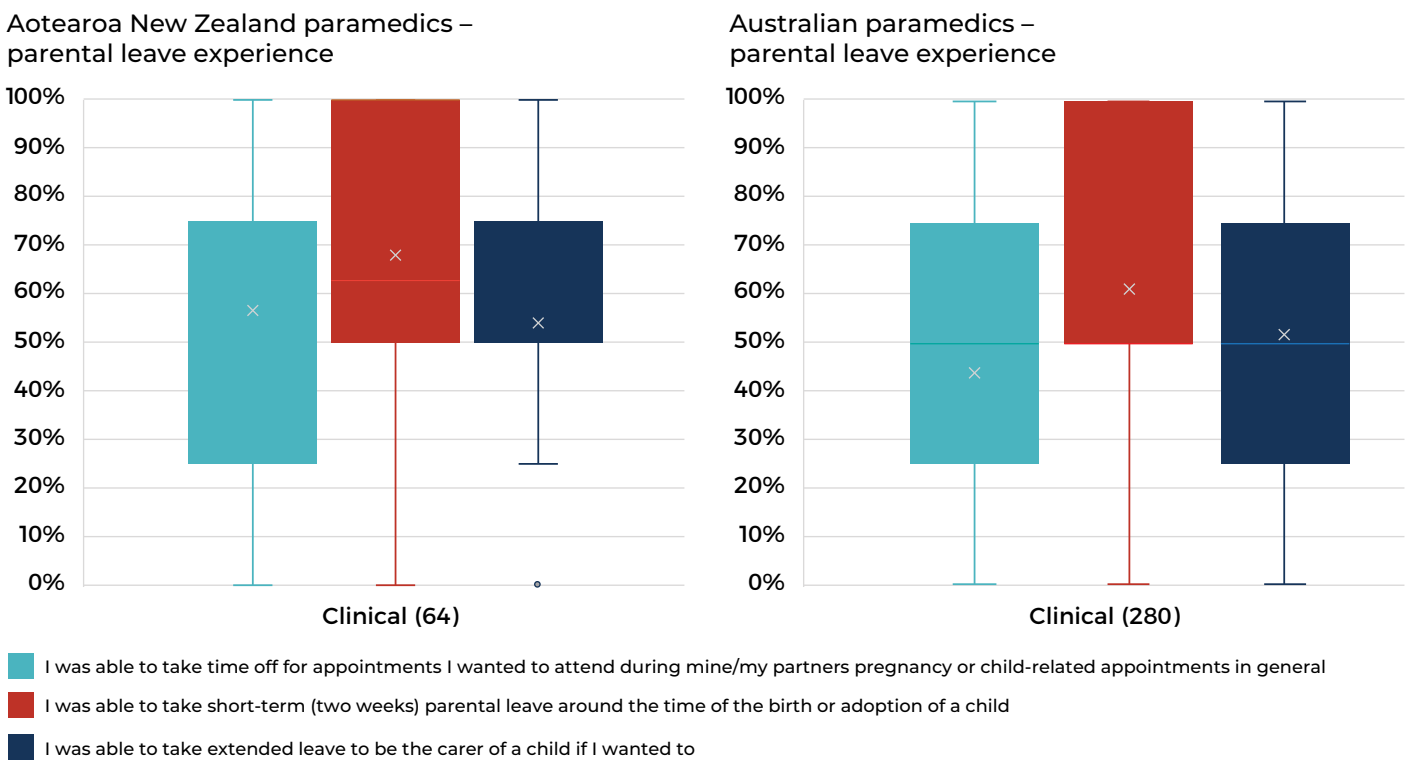


Figure 11: Aotearoa New Zealand and Australian paramedic parental leave experiences

Responsibilities on return from extended leave

Asked if they were able to return to the same role upon return from parental leave, Aotearoa New Zealand and Australian respondents mainly responded in the affirmative. Only 7% and 6% of respondents respectively answered in the negative. Those respondents who reported that they were not able to return to the same role upon return from parental leave were asked why this was the case.

Thirteen written responses were submitted. Three reported that, upon return from parental leave, they either chose, or were forced, to work part-time. One entry specifically wrote, "Same role … part-time. Unable to figure out full-time childcare on shift work". Similarly, another entry noted that shift work was not compatible with childcare, leading them to change roles. One respondent reported they had to give up their full-time roster for approximately two years and had now taken a casual role as extended parental leave was not offered by the employer.

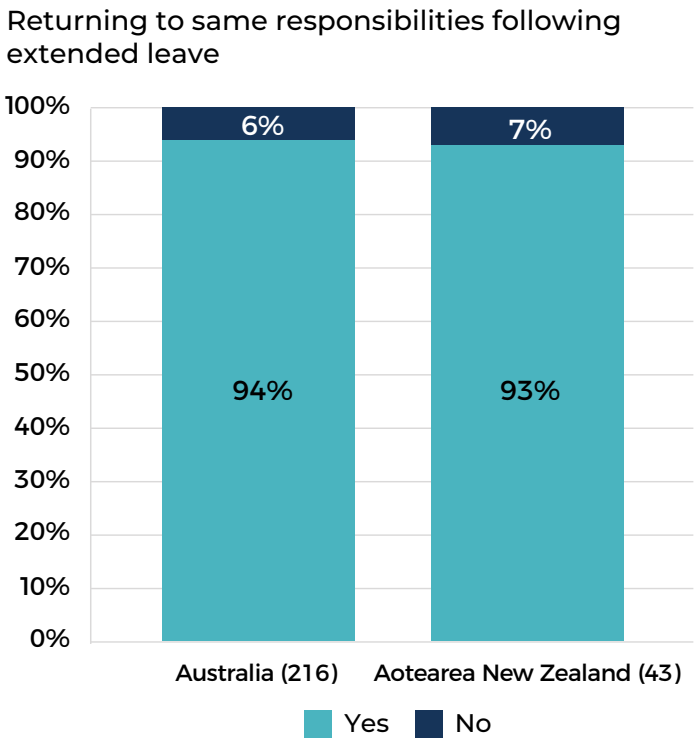


Figure 12: Return from leave – responsibilities change

Accommodating family care

The graph below highlights the level of agreement to a series of four questions by those paramedics who responded to items pertaining to carer duties and leave.

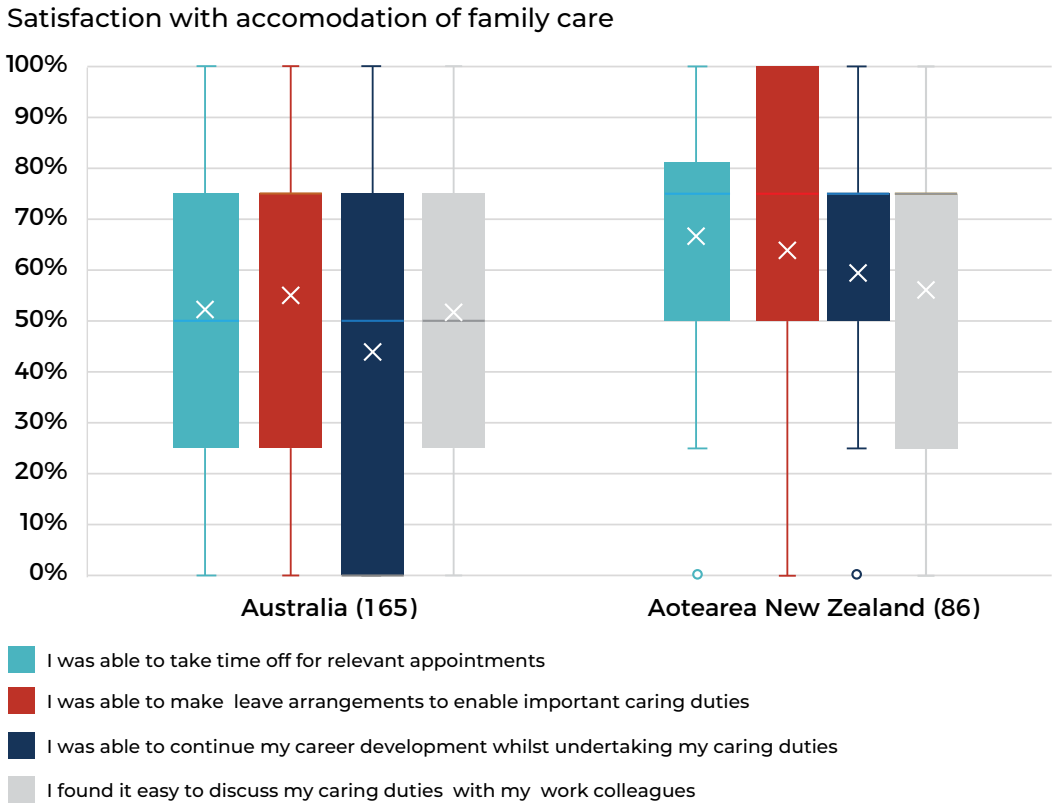


Figure 13: Satisfaction with accomodation of family care

For the Australian sample, the first, second and fourth questions are normally distributed, with the majority indicating a 'neutral' level of agreement to the question. Responses to the third question (dealing with continuing career development while on leave) were, in the main, negative.

In contrast, for the Aotearoa New Zealand sample, the responses were predominately positive, with average results indicating an 'agree' score to each of the items.

The results, particularly for the Australian sample, prompt a focus on the parental leave and caring duty arrangements.

Change of contract requests

The following section details whether respondents had requested a change of contracted work, the motivation for the request, and its success.

Table 8: Proportion of sample requesting a change to contracted work arrangements

	Aotearoa New Zealand (194)	Australia (717)
Requested a change to contracted work arrangements in the past 12 months	30%	32%

30% and 32% respectively of Aotearoa New Zealand and Australian paramedics requested a change to their contracted work arrangement in the past 12 months. The primary reason was to request ' another arrangement' other than those listed (35%). When asked to specify what the reasons were, 101 written responses were entered. Of these, 37 listed what arrangement they had requested rather than the reason why. As such, these were omitted from analysis. Subsequently, 64 written responses were thematically analysed.

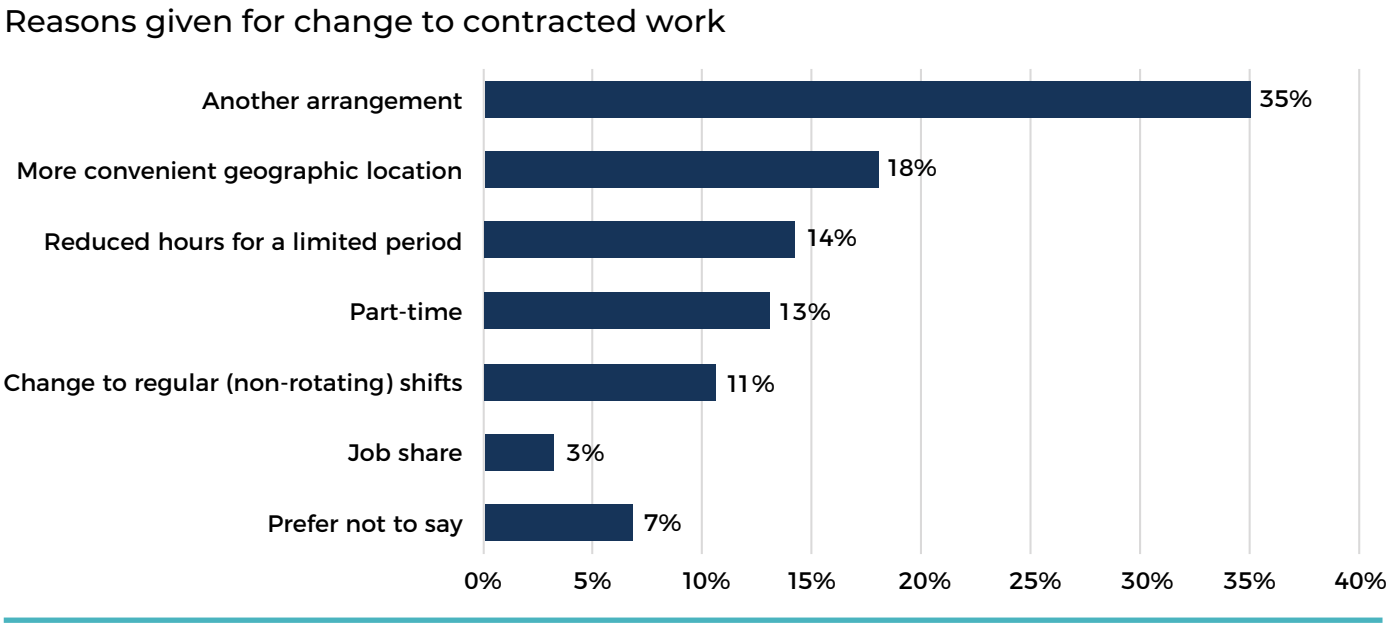


Figure 14: Reasons for requesting a change to contracted work

Free-text reasons for the request were both positively and negatively categorised and included developmental reasons (moving to a new role, secondment or undertaking education or research), a desire for less pressure (time, workload, etc.), work-life-family balance considerations, physical and mental health considerations, and pay. The themes and their frequency are presented in the figure below.

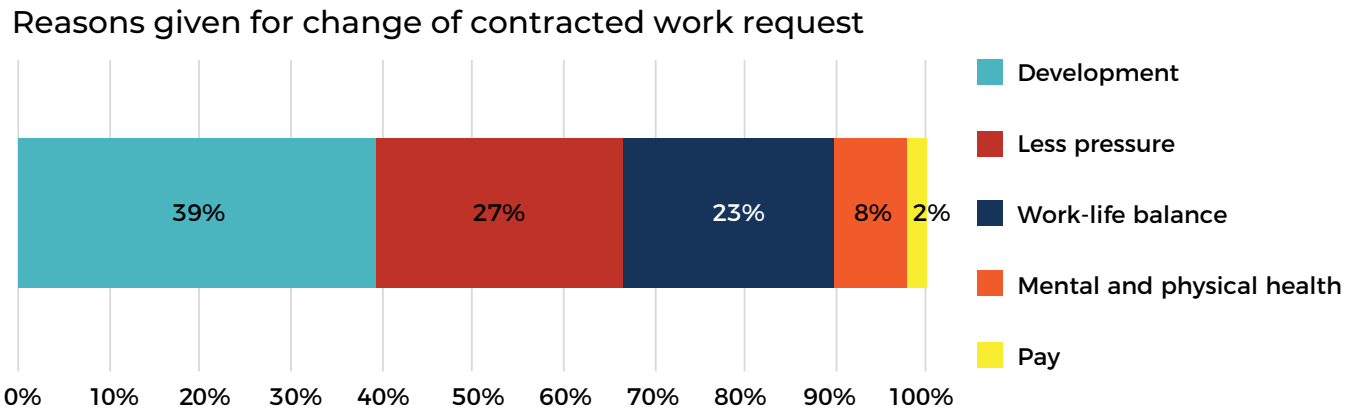


Figure 15: Qualitative content analysis of reasons given for change of contracted work request

Of these requests to change from their previously contracted work arrangements, 48% of requests were fully granted, 22% were declined, 20% were partially granted, 8% had not received a response at the time of completing the survey, and 2% preferred not to disclose.

Non-standard leave provision

The following section details the utilisation of non-standard leave by the Aotearoa New Zealand and Australian paramedicine workforce (excluding students) taken in the past 12 months.

Non-standard leave is defined as leave, other than annual leave or short-term sick leave (fewer than 10 consecutive days). The Australian sample showed 49% had taken some form of non-standard leave in the past 12 months. In Aotearoa New Zealand, only 32% had taken such leave (Table 9).

Table 9: Types of leave taken in the past 12 months

	Aotearoa New Zealand (194)	Australia (716)
Carers leave	4%	19%
Parental/adoption leave	5%	3%
Long service	10%	11%
Worker's compensation leave*	3%	9%
Other leave	12%	5%
Prefer not to say	0%	1%

*Workers compensation covers Workcover/WorkSafe Insurance in Australia and Accident Compensation Commission (ACC) in New Zealand.

For those who indicated 'other leave', 57 provided an additional free-text response. Overall, 22 additional types of leave had been taken among the sample in the 12 months preceding the survey. Most utilised was sick leave (7), bereavement leave (6), leave without pay (5), and annual leave and research/study leave (4 each respectively). The least utilised were domestic violence leave, emergency services deployment leave, NAIDOC leave (National Aborigines and Islanders Day Observance Committee), and parental sick leave (1 respectively).

Leave beyond 10 days

Data shows 16% of Australian and Aotearoa New Zealand paramedics took extended sick leave (more than 10 consecutive days) in the previous 12 months. This was similar across all role types, with only a slight increase to 17% for those in clinical roles. The most common reason was physical illness, followed by COVID-19, mental illness, and 'other'. Qualitative entries for 'other' varied and frequently overlapped the specified categories of mental or physical illness. The main reasons provided in the free text were surgery (14), injury (9), illness (6) and burnout (4). Other reasons mentioned were family responsibilities, trauma, miscarriage, or a break from work while considering alternative options.

Career as a paramedic

Career intentions

Table 10 details responses to questions relating to how long respondents wanted to remain in the paramedicine workforce overall, and how many years they intended to remain with their current primary employer. Differences of greater than 10% between the two responses are presented in bold, with those in education providing the greatest variability between the overall and their primary employer intentions. For example, 53% of current education paramedics indicated that they would stay in paramedicine between 5-10 years, yet only 29% of this cohort indicated a willingness to stay with their primary employer for the same length of time.

Table 10: Career intentions overall and for primary employer

	Years	Clinical Overall (163)	Clinical Primary (163)	Research Overall (1)	Research Primary (1)	Edu Overall (17)	Edu Primary (11)	Mgx Overall (11)	Mgx Primary (11)
Aotearoa New Zealand	<1	2%	6%	0%	0%	6%	6%	0%	9%
	1-4	**19%**	**34%**	0%	0%	**6%**	**47%**	18%	27%
	5-10	45%	44%	0%	0%	**53%**	**29%**	45%	55%
	11-19	15%	9%	0%	0%	12%	12%	18%	9%
	20 +	18%	7%	100%	100%	**24%**	**6%**	18%	0%
	Years	**Clinical Overall (588)**	**Clinical Primary (163)**	**Research Overall (1)**	**Research Primary (1)**	**Edu Overall (17)**	**Edu Primary (11)**	**Mgx Overall (11)**	**Mgx Primary (11)**
Australia	<1	3%	9%	0%	0%	2%	8%	4%	8%
	1-4	**19%**	**30%**	0%	0%	**10%**	**29%**	**9%**	**21%**
	5-10	40%	38%	50%	50%	42%	41%	46%	44%
	11-19	11%	9%	50%	50%	**21%**	**10%**	19%	15%
	20+	**27%**	**15%**	0%	0%	**25%**	**12%**	22%	12%

More than 30% of clinical respondents (those most likely to be undertaking shift work) indicated their intention to remain in paramedicine for more than 11 years. This is a good sign with respect to the age profile of the cohorts. However, this percentage reduced when considering their primary employer and may indicate a desire to move to a non-shift working role. With working ages rising over recent decades, this data and responses to the previous section, 'Care Responsibilities and Leave', provide an opportunity to explore opportunities to increase career longevity.

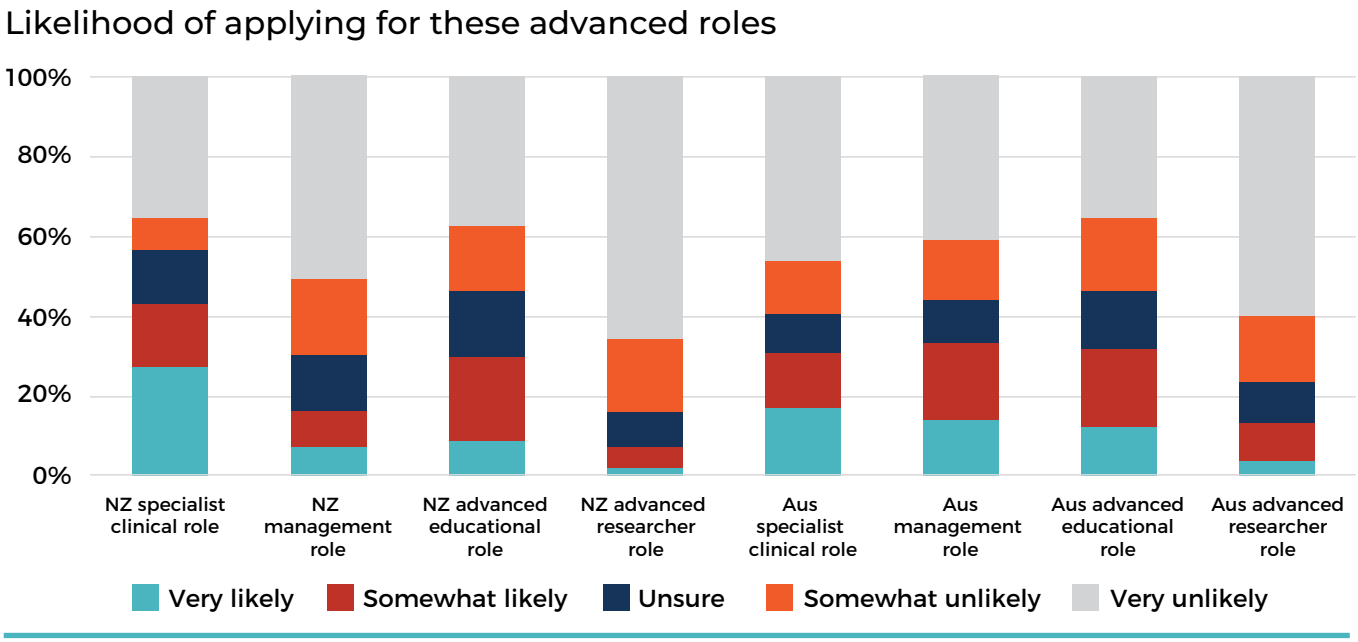


Figure 16: Likelihood of applying for an advanced role

Career planning

Paramedics who were currently working were asked the likelihood of them leaving clinical work and, conversely, those who were not clinical were asked the likelihood of them returning. In both cases, respondents in Aotearoa New Zealand and Australia indicated the chance of change was very unlikely.

Career planning – an advanced role

To investigate career aspirations and planning, paramedics were asked the likelihood that they would apply for an advanced role during the next 12 months; these roles covered the four areas of clinical, management, education and research and could be with their current employer or with another organisation.

Figures 16 and 17 shows the likelihood for all respondents to this question (n=199 Aotearoa New Zealand and n=726 Australia). In both Aotearoa New Zealand and Australia, the role most likely to be applied for was clinical and the least likely was research. This may reflect perceptions of the availability of these roles or the qualifications to undertake them. Considering the responses to career intentions, it provides another opportunity for exploration to provide respondents with feasible career pathways.

Career planning – further education

A similar question was posed to respondents in relation to the likelihood of their engagement with further education, beyond the mandatory 30 hours of Continued Professional Development (Figure 17).

Paramedics in both Aotearoa New Zealand and Australia were most likely to engage in informal education that might include optional in-house training or external study; 62% of Aotearoa New Zealand and 25% of Australian paramedics rated this as very likely. Aotearoa New Zealand also had a higher likelihood of respondents undertaking formal coursework education provided by a Recognised Training Organisation or university in paramedicine (42%) compared to Australia (27%).

Although undertaking formal education provided by a Recognised Training Organisation or university in a discipline other than paramedicine was much less likely than paramedic study, 16% of Aotearoa New Zealand and 17% of Australian respondents still indicated it was very likely they would engage in this in the next 12 months. This study may be to complement the paramedic role or for personal interest, but it may also signal a desire to retrain to move to another profession.

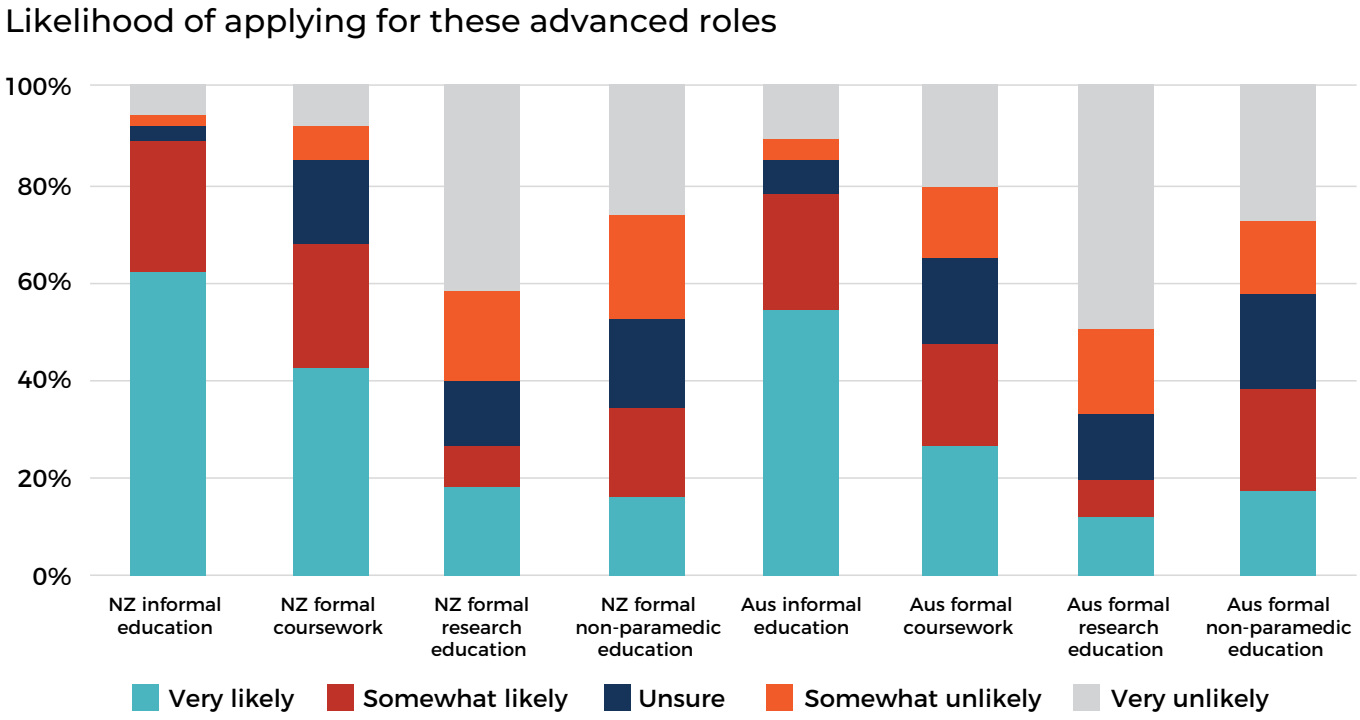


Figure 17: Likelihood of engaging in further education

Location

Finally, respondents were asked the likelihood of them choosing to work in a rural or remote location. This was generally met with a negative response. For rural work, 55% of Aotearoa New Zealand paramedics indicated this was very or somewhat unlikely, while 53% of Australian paramedics had the same response. The likelihood further decreased for choosing to work in a remote location. Aotearoa New Zealand and Australian paramedics indicated they were very or somewhat unlikely to make this decision at 62% and 66% respectively.

Professional development, education, supervision and training

Image credit: Cygnet Family Practice. Multidisciplinary primary care, community paramedic and nurse practitioner treating anonymous patient.

Highest paramedicine qualification

The table below highlights the highest level of qualification achieved by paramedics working in the Aotearoa New Zealand and Australian paramedic workforce.

Table 11: Highest degree award

	Aotearoa New Zealand (194)	Australia (715)
No formal qualification	2%	1%
Certificate II/III	1%	0%
Certificate IV	2%	1%
Diploma	13%	22%
Bachelor's Degree	42%	45%
Graduate Certificate	12%	8%
Graduate Diploma	18%	10%
Master's (coursework/research)	9%	10%
PhD	1%	3%

The data indicates that the paramedicine workforce is highly trained with more than 60% possessing a bachelor's degree or higher, and more than 30% possessing a postgraduate degree. This places the workforce well above the national population in terms of qualifications achieved.

Most Australians obtained their degree in Australia, with a tiny proportion from the UK. In Aotearoa New Zealand, 92% received their degree locally, with the remainder having studied in Australia (5%), the UK (2%) or South Africa (1%).

Country where degree was obtained

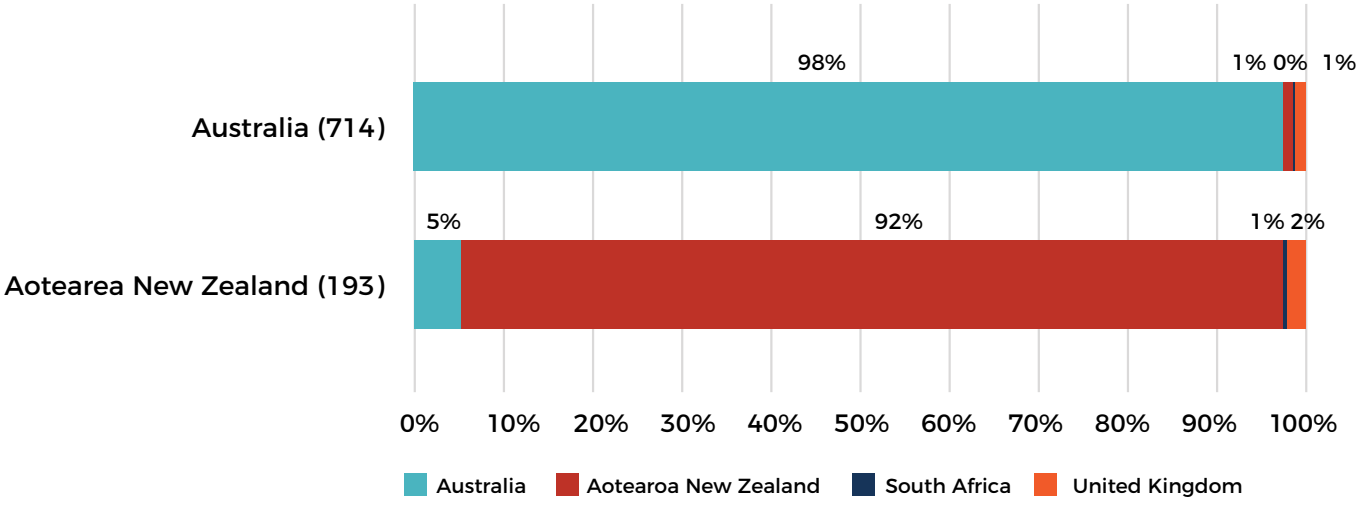


Figure 18: Country where degree was obtained

Continuing Professional Development (CPD) activities

Participants were asked a series of questions regarding their engagement with CPD activities. The first line of questioning asked which activities they would normally participate in to complete the 30 hours of mandatory CPD.

Table 12: CPD activities normally undertaken as part of mandatory annual commitment

CPD activities normally undertaken	Rank preference
Participation in face-to-face or online conferences, seminars, or workshops	Equal 1st preference
Work-based learning or in-service education	Equal 1st preference
Reading and reflecting on scientific journal articles or participation in a journal club	2nd preference
Degree, short course or online courses	3rd preference
Involvement in a research study as a participant	Least preferred

Several respondents selected 'other' for this question and provided a free-text response; 47 responses were collected. Podcasts were most frequently listed (17), while other respondents noted postgraduate studies and discussions with their peers to develop professionally.

Barriers to Continuing Professional Development

Paramedics were asked what, if any, barriers they experienced when completing their CPD. The following responses account for the common barriers the respondents perceived.

Table 13: Barriers to CPD activities

	Aotearoa New Zealand (186)				Australia (710)			
	Strongly Disagree	Disagree	Agree	Strongly Agree	Strongly Disagree	Disagree	Agree	Strongly Agree
Lack of time	21%	34%	25%	20%	13%	31%	26%	29%
Few CPD opportunities	23%	42%	30%	4%	17%	43%	29%	11%
Too expensive	11%	42%	39%	8%	9%	30%	42%	19%

There was also the option to select 'other' and provide a free-text response. This delivered 154 expanded responses.

A qualitative content analysis was undertaken, and the most noted barrier related to a lack of access for respondents who lived away from big cities where face-to-face CPD activities were offered.

Respondents also referred to a lack of employer support and a lack of leave opportunities to attend longer CPD events. Many of those surveyed reported being tired and overworked, specifically mentioning 'fatigue'. Family commitments were also identified as a barrier.

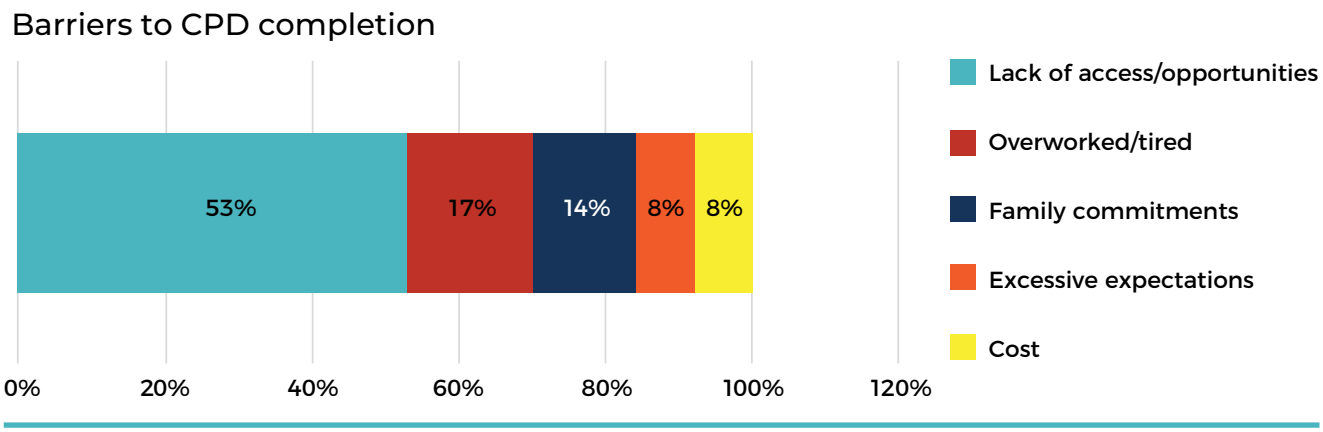


Figure 19: Qualitative content analysis of free text responses to barriers to CPD

Enablers of Continuing Professional Development

Paramedics were asked what, if any, enablers they experienced when completing their CPD. The following responses account for common enablers respondents perceived.

Table 14: Enablers to CPD activities

	Aotearoa New Zealand (186)				Australia (710)			
	Strongly Disagree	Disagree	Agree	Strongly Agree	Strongly Disagree	Disagree	Agree	Strongly Agree
Supportive colleagues or manager	4%	17%	57%	22%	10%	23%	50%	18%
Supportive employer	5%	17%	55%	22%	12%	28%	43%	17%
Professional memberships	10%	31%	38%	21%	5%	17%	45%	33%

There was also the option to select 'other' and provide a free-text response. Of the total sample, 46% selected 'other' when answering this question and 36 provided expanded responses. Of these, many noted no enablers or reiterated barriers. Only 10 responses referred to enablers, referencing family and peer supports.

Employment and work demands

Paramedics were able to provide information about up to five employers. More than 20% of paramedics in Australia and Aotearoa New Zealand advised that they had multiple employers; details of this group are detailed in Chapter "Snapshot: Paramedics with multiple employers". This section relates to the information that all respondents provided on their primary, and in some cases only, employer (unless otherwise stated).

Annual income from primary employer

Paramedics were asked what their annual gross (pre-tax) income was from their primary employer. More than 86% of the sampled Aotearoa New Zealand paramedics earned more than $61,000 (pre-tax). This places their earning on or above the national average for Aotearoa New Zealand ($61,000[1]). All responses were provided in local currency (NZD and AUD).

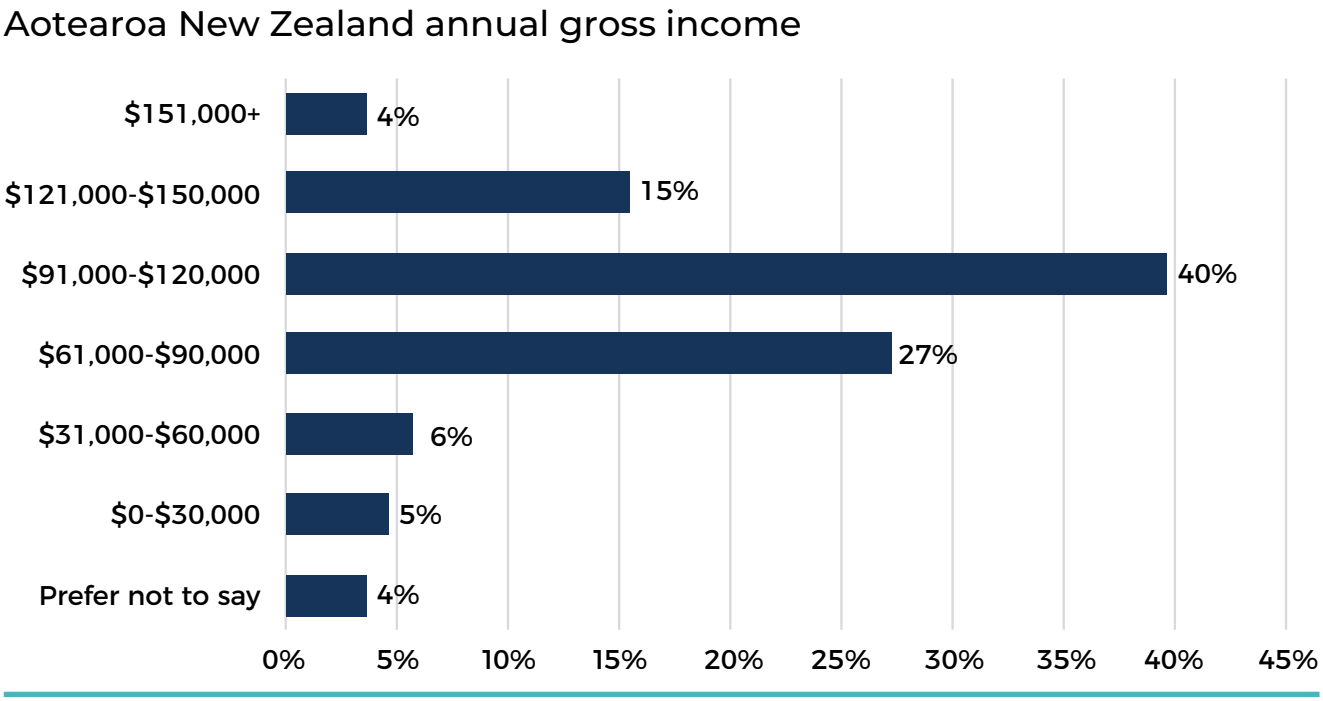


Figure 20: Annual gross income (NZD) from primary employer for Aotearoa New Zealand paramedics

More than 70% of the sampled Australian paramedics earned more than $90,000 (pre-tax). This places their earning well above the national average for Australia ($65,000[2]).

1. New Zealand Shores, as seen 25 June 2024. Salaries in New Zealand. Salaries in New Zealand - How do they compare for your industry? Move to NZ (newzealandshores.com)
2. Seek Content Team, as seen 25 June 2024. A guide to the average salary in Australia. https://www.seek.com.au/career-advice/article/a-guide-to-the-average-salary-in-australia

Australian annual gross income

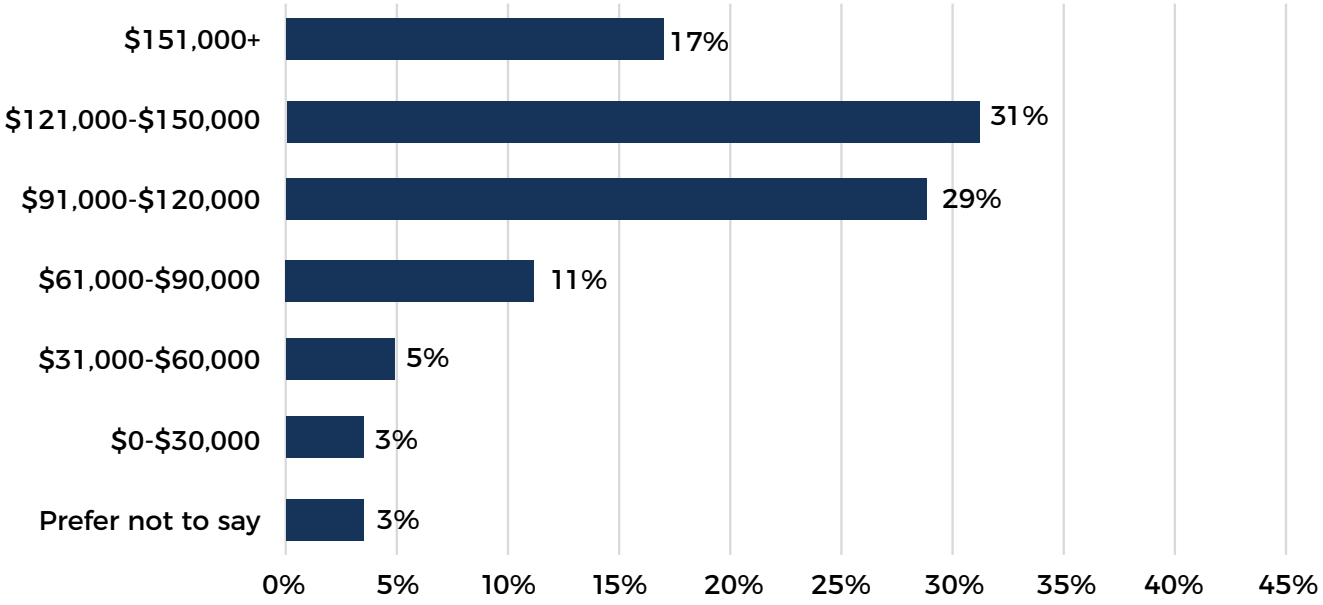


Figure 21: Annual gross income (AUD) from primary employer for Australian paramedics

Percentage of income from primary paramedicine employer

As a number of respondents worked for multiple employers, all respondents were then asked what proportion of their total income was made up by their primary employer's salary. If a paramedic only had one employer, then they selected 100%.

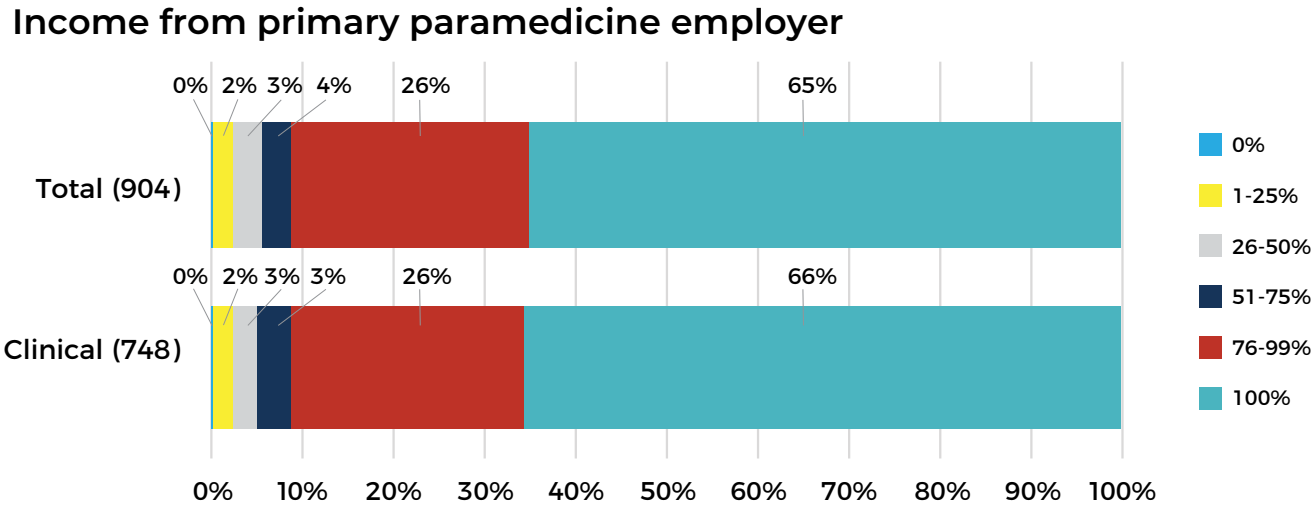


Figure 22: Percentage of income derived from respondent's primary paramedicine employer

Primary work setting

A list of primary work settings was derived from previous Australian Bureau of Statistics, paramedicine, and health surveys. Respondents were asked to select from this list but were also given the opportunity to select 'other' and provide a free-text response.

1. New Zealand Shores, as seen 25 June 2024. Salaries in New Zealand. Salaries in New Zealand - How do they compare for your industry? Move to NZ (newzealandshores.com)
2. Seek Content Team, as seen 25 June 2024. A guide to the average salary in Australia. https://www.seek.com.au/career-advice/article/a-guide-to-the-average-salary-in-australia

Table 15: Work settings for primary employer by country

	Aotearoa New Zealand	Australia
Jurisdictional (state/territory) ambulance service	69%	66%
Tertiary educational facility/research institute	6%	10%
Events	4%	7%
Mining/industrial/offshore	2%	6%
Primary healthcare, not in an ambulance service	6%	2%
Non-emergency patient transport	0%	1%
Defence force	2%	1%
Rescue service	6%	1%
Other government agency	0%	1%
Hospital	1%	0%
Other	4%	5%

Jurisdictional ambulance services were still the most common employer, but an increasing diversity of employers is starting to emerge. Overall, 42 respondents indicated that they worked in 'other' settings. Of these, approximately a quarter (10), reported that they worked in private companies, while the remainder were variations of the work settings that had been listed.

Type of work

Due to the variability of type and format of work, irrespective of employer, a suite of questions was asked to further explore these areas. This included whether the paramedics were employed as fly-in fly-out (FIFO) full-time, part-time, casual, or self-employed, shift patterns, and the number of hours worked in a typical fortnight.

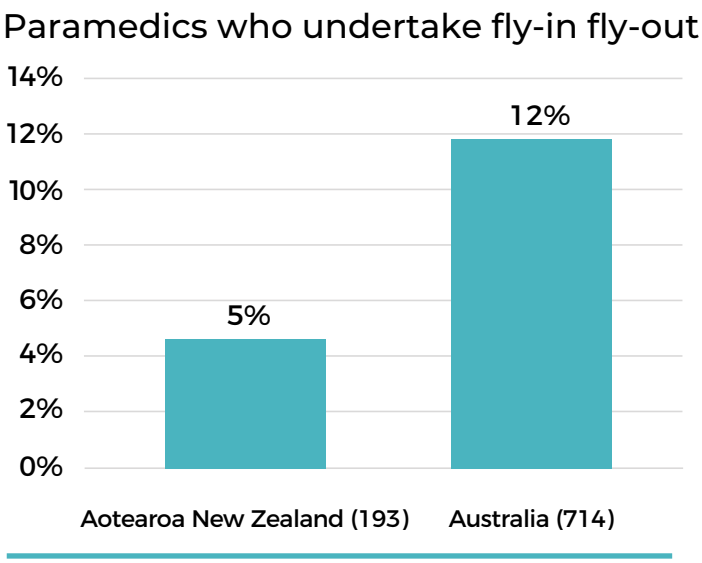


Figure 23: Percentage of FIFO work by country

Contract type

This data represents the contract types of all employers, not just the primary employer. The 25% of casual or contract employment is of concern but may also represent secondary employers.

Contract type by country

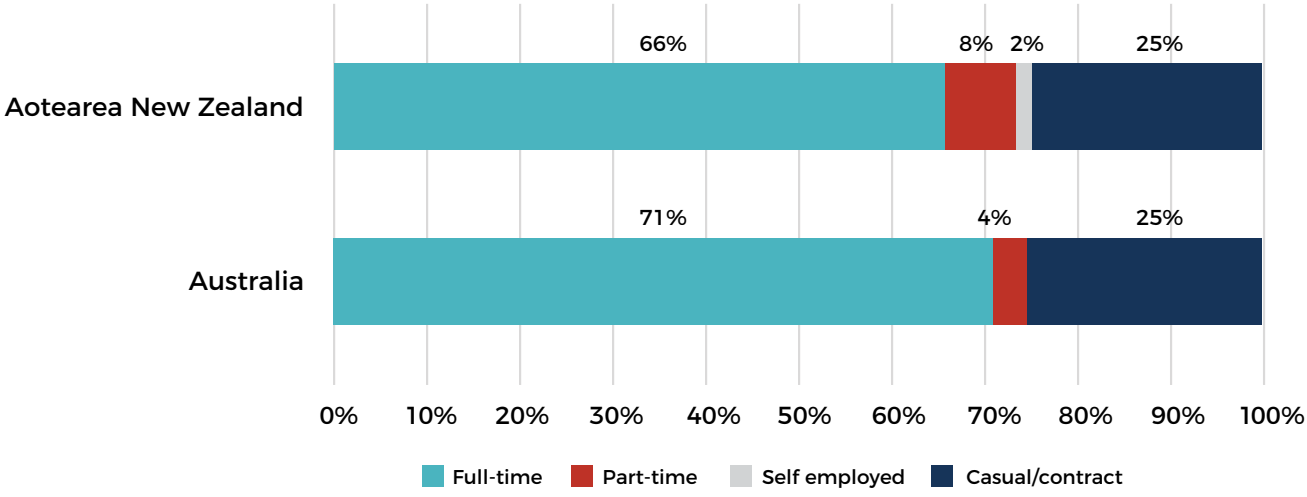


Figure 24: Contract type by country

Hours worked per fortnight

Paramedics were asked to estimate the number of hours they worked per fortnight, excluding over-time and on-call hours. The presented data is an aggregate for all employers as the impact of working for one organisation will flow to others. A significant difference is noted where Aotearoa New Zealand paramedics are twice as likely to work 'more than 80 hours'.

Hours worked per fortnight

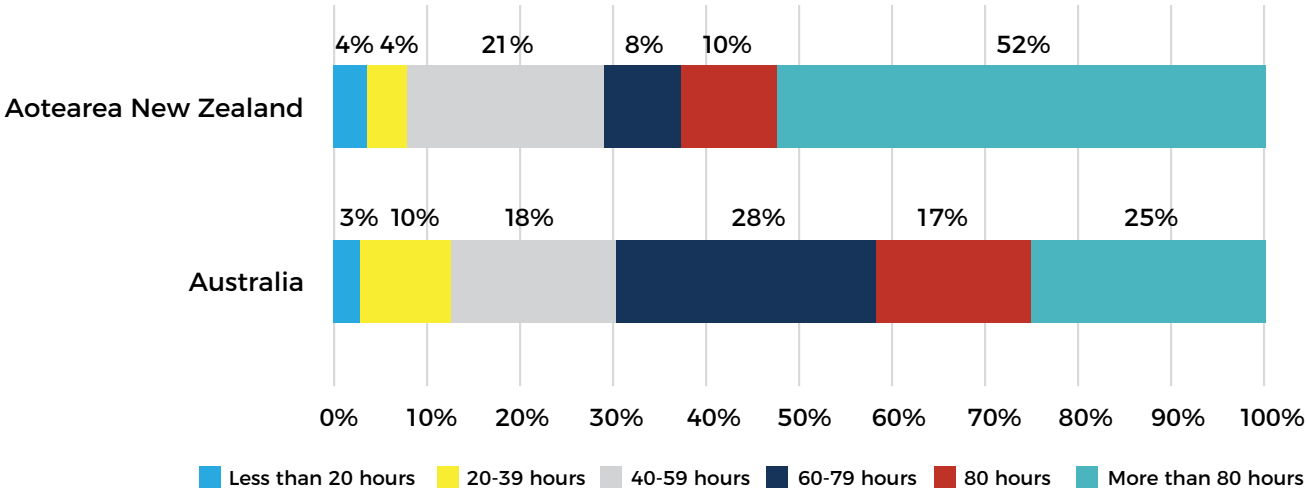


Figure 25: Hours worked per fortnight for any employer, excluding overtime and on-call

Hours per fortnight of overtime and on-call work

Most paramedics were working overtime or on-call, with similar percentages in Australia and Aotearoa New Zealand. The proportion of incidental overtime compared to additional shifts is not available.

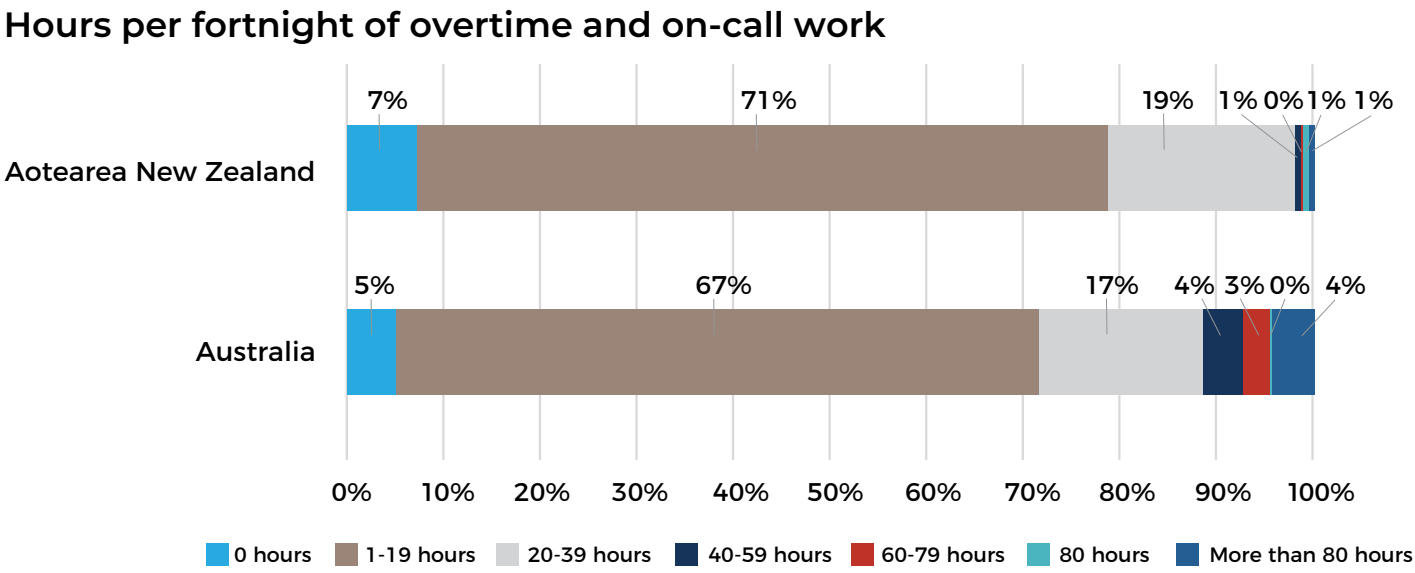


Figure 26: Hours worked per fortnight for any employer of overtime and on-call

Work schedule/shift pattern

Most paramedics are still working a rotating shift pattern of days and nights. Those respondents who selected 'other' provided a free-text response that was a variation of one of the options provided, e.g. two days on, and two days off.

Table 16: Shift patterns

	Aotearoa New Zealand (193)	Australia (717)
Rotating days and nights (weekdays and weekends)	62%	62%
Rotating days and nights (weekdays only)	0%	0%
Rotating days and nights (weekends only)	0%	0%
Days only (weekdays and weekends)	11%	11%
Days only (weekdays only)	16%	11%
Days only (weekends only)	0%	0%
Nights only (weekdays and weekends)	1%	1%
Nights only (weekdays only)	0%	0%
Nights only (weekends only)	0%	0%
Split shifts	0%	0%
Ad hoc or variable shifts	6%	7%
Other	4%	8%

Change to work hours

Paramedics were asked whether they were satisfied with the number of hours they worked for their primary employer or if there was a desire to increase or decrease these hours. More than a quarter of paramedics in Australia and Aotearoa New Zealand wanted to decrease their hours.

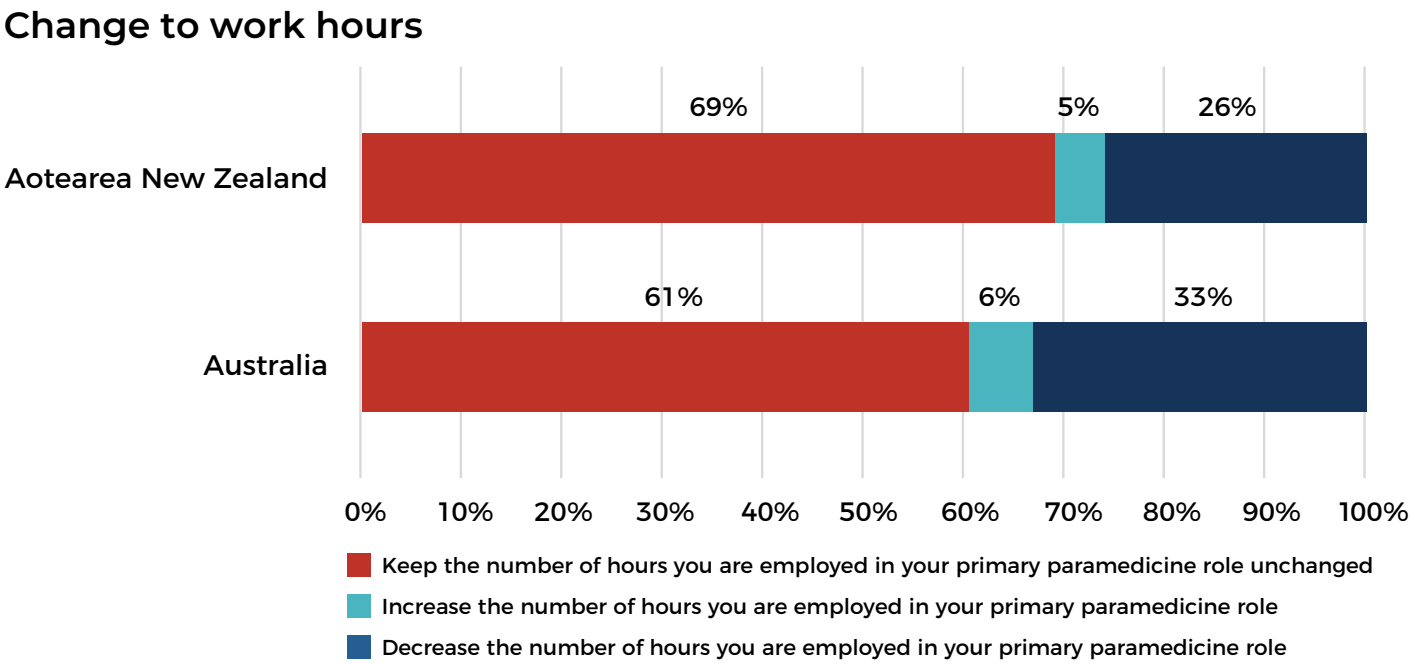


Figure 27: Desire to change or maintain hours with primary paramedicine role

Job demands

Participants were asked to estimate the proportion of their time spent undertaking different tasks during a typical fortnight for the primary employer.

Table 17 provides a comparison of Aotearoa New Zealand and Australian clinical paramedics and the breakdown of their time. For example, both groups indicated difficulty in having meals or downtime during their shift, with 19% and 35% respectively indicating 0% of their shift time was spent on this task in a typical fortnight.

Most responses indicated that the time spent undertaking various tasks was similar in both countries. The most obvious difference between Aotearoa New Zealand and Australian paramedics was in relation to the task of 'direct patient care while waiting to transfer to another health professional', which includes times such as bed block. 11% of Aotearoa New Zealand paramedics indicated that more than 25% of their time was spent on this task compared to 31% of Australians.

Table 17: Job demands for clinical respondents working for their primary employer

	Percentage of shift time allocated to task											
	Aotearoa New Zealand	Australia	Aotearoa New Zealand	Australia	Aotearoa New Zealand	Australia	Aotearoa New Zealand	Australia	Aotearoa New Zealand	Australia	Aotearoa New Zealand	Australia
	0%	0%	1-24%	1-24%	25-49%	25-49%	50-74%	50-74%	75-99%	75-99%	100%	100%
Direct patient care, not including waiting to transfer	2%	4%	18%	21%	39%	34%	27%	29%	9%	7%	4%	5%
Direct patient care while waiting to transfer	23%	21%	65%	48%	8%	24%	2%	5%	1%	2%	0%	0%
Indirect patient care (travel, paperwork, etc)	13%	20%	51%	58%	34%	21%	1%	1%	1%	0%	0%	0%
Management/ administration	47%	45%	46%	45%	4%	5%	3%	4%	1%	1%	0%	0%
Educational activities	39%	44%	57%	53%	3%	2%	1%	1%	0%	0%	0%	0%
Research activities	78%	86%	22%	13%	0%	0%	0%	0%	0%	0%	0%	0%
Meals/ downtime	19%	35%	73%	59%	7%	5%	1%	1%	0%	1%	0%	0%
Other	92%	94%	6%	5%	1%	0%	0%	1%	0%	0%	1%	1%

NOTE: Blue columns represent Aotearoa New Zealand data (n=165) and the teal green columns are Australian data (n=588)

Of those respondents who selected 'other' and provided a free-text response, the most common other job demands were clinical oversight and support (5), peer support (3), light duties (3), logistics (3), and development and training (3).

Role in clinical supervision

The following figures examine responses to a line of questioning pertaining to clinical supervision of paramedic students and interns. The graph below indicates that most paramedics in Australia (84%) and Aotearoa New Zealand (88%) are providing clinical supervision, and this role is formalised in most instances. Aotearoa New Zealand has a larger percentage of clinical supervisors who are undertaking this role in a paid capacity (35%) compared to Australia (20%).

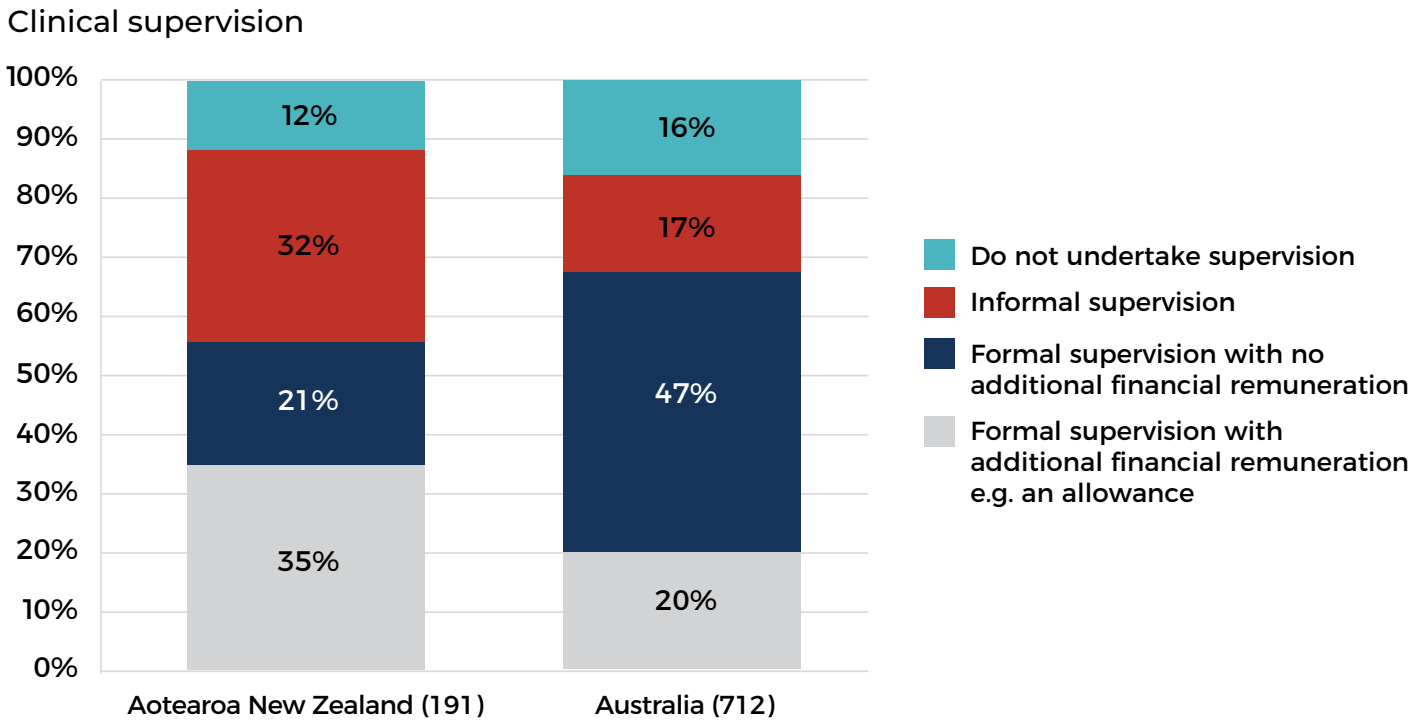


Figure 28: Role in clinical supervision

Of those providing clinical supervision, more than 60% indicated that they were at least 'moderately well' prepared for their role. Concerningly, there were still 9% and 13% of Aotearoa New Zealand and Australian paramedics, respectively, who perceived they were not well prepared.

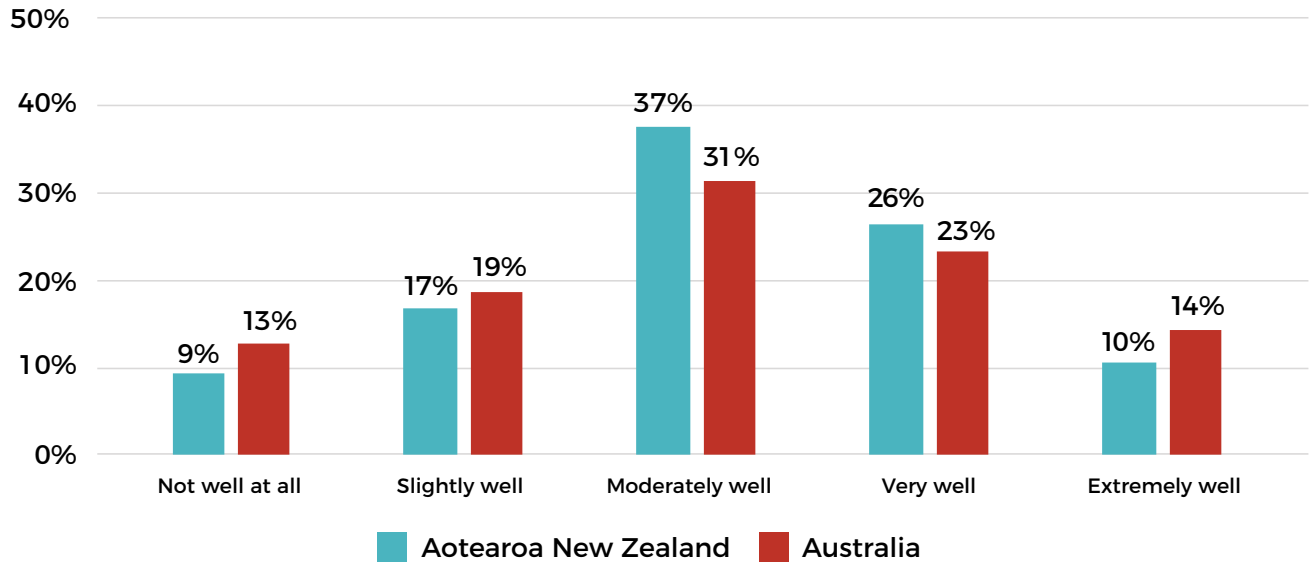


Figure 29: Preparedness for clinical supervision

Wellbeing, resource adequacy and turnover intention

Wellbeing, resourcing and turnover

A range of prevalidated workforce psychometric question sets was used to investigate employee wellbeing, perceptions of resourcing, and intentions to leave, and are presented in box and whisker plots below; all responses relate to the respondent's primary paramedicine employer.

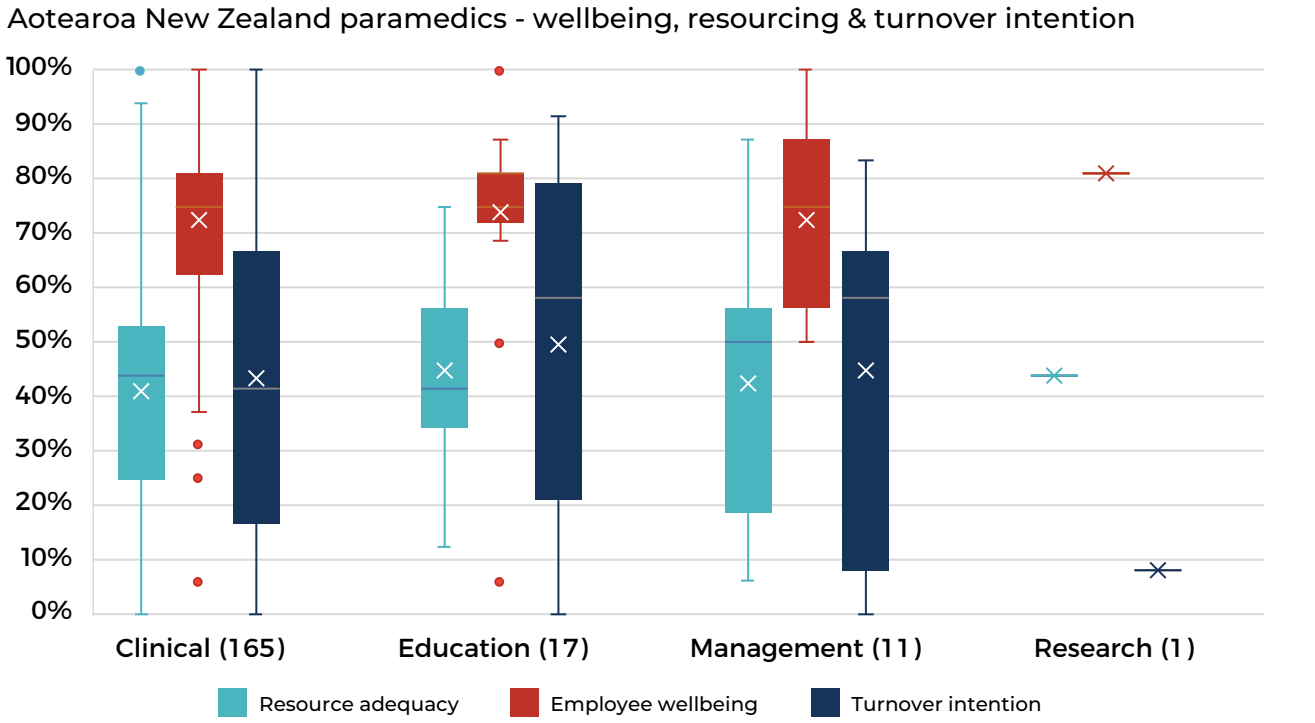


Figure 30: Aotearoa New Zealand - employee welbeing psychometrics by role for the primary paramedicine employer

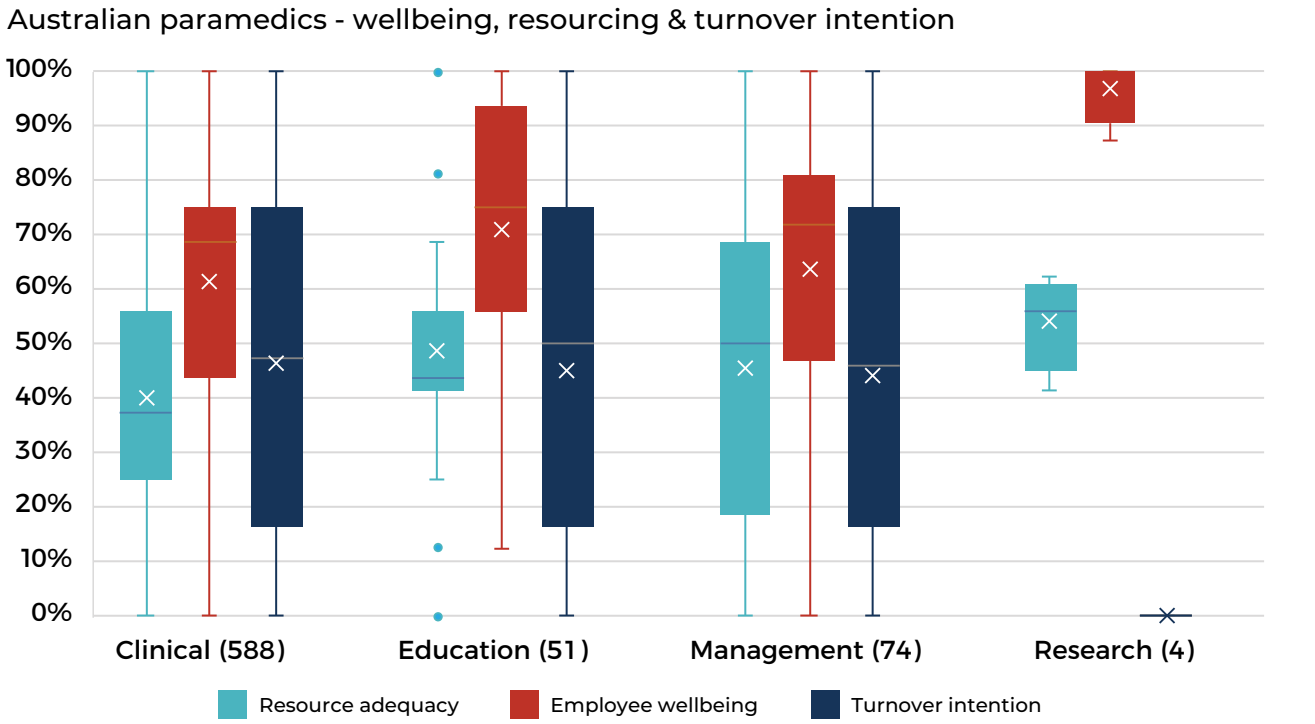


Figure 31: Australia - employee welbeing psychometrics by role for the primary paramedicine employer

While resource adequacy (light blue) was ranked low for both Australian and Aotearoa New Zealand paramedics in clinical roles, those in management roles presented a slightly higher average. While Australian clinicians had a slightly higher average turnover intention score than their Aotearoa New Zealand counterparts, turnover intention was rated much more highly for both education and management staff in Aotearoa New Zealand. Should this trend be indicative of the broader workforce, this presents a concern for workforce management and workforce renewal.

100% represents strong agreement; 75% represents agreement; 50% represents a neutral stance; 25% represents disagreement; 0% represents strong disagreement.

Table 18: Average agreement with wellbeing, resource and turnover statements – Aotearoa New Zealand

Aotearoa New Zealand	Clinical (165)	Research (1)	Education (17)	Management (11)
Resource adequacy				
There are enough staff at my organisation to get the work done	27%	25%	40%	32%
There are enough trained staff to ensure quality of care	31%	0%	42%	43%
There is enough support to allow me to spend sufficient time with patients	52%	75%	48%	41%
I have enough time and opportunity to discuss care problems with other medical/emergency staff	53%	75%	55%	66%
Employee wellbeing				
Overall, I am reasonably happy with my work life	70%	100%	80%	71%
Most days I feel a sense of accomplishment in what I do at work	70%	75%	72%	77%
I feel content with my work	72%	75%	74%	73%
I get a sense of joy from my work	78%	75%	71%	71%
Turnover intention				
I frequently think about leaving this organisation	54%	25%	53%	43%
It is likely that I will search for a job in another organisation within the next year	43%	0%	57%	55%
It is likely that I will leave my current organisation within the next year	33%	0%	38%	36%

Table 19: Average agreement with wellbeing, resource and turnover statements – Australia

Australia	Clinical (588)	Research (4)	Education (51)	Management (74)
Resource adequacy				
There are enough staff at my organisation to get the work done	32%	44%	44%	34%
There are enough trained staff to ensure quality of care	33%	58%	48%	45%
There is enough support to allow me to spend sufficient time with patients	49%	58%	54%	53%
I have enough time and opportunity to discuss care problems with other medical/emergency staff	48%	75%	60%	51%
Employee wellbeing				
Overall, I am reasonably happy with my work life	60%	94%	71%	64%
Most days I feel a sense of accomplishment in what I do at work	60%	100%	73%	66%
I feel content with my work	62%	94%	68%	63%
I get a sense of joy from my work	65%	100%	75%	63%
Turnover intention				
I frequently think about leaving this organisation	59%	0%	51%	52%
It is likely that I will search for a job in another organisation within the next year	46%	0%	49%	37%
It is likely that I will leave my current organisation within the next year	36%	0%	45%	37%

While there was 54% and 59% agreement from Aotearoa New Zealand and Australian clinical paramedics respectively for the item "I frequently think about leaving this organisation", the corresponding scores for "it is likely that I will leave my current organisation within the next year" were substantially lower (33% and 36% respectively). Furthermore, and as noted above, employee wellbeing metrics were very positive across the board, for all paramedic role types.

Resource adequacy, particularly around staffing in both jurisdictions, was low, with average agreement levels to the question "There are enough staff at my organisation to get the work done" being 27% for Aotearoa New Zealand and 32% for Australia. While 'time' and 'support' items in this scale fared better, perceptions of significant under-resourcing and understaffing are apparent across the paramedicine workforce.

Motivations to be a paramedic

Similar to the wellbeing questions, a prevalidated question set was used to determine motivation toward undertaking the paramedic role. Respondents were asked to rate their level of importance (very important to not at all important) for each category.

The strongest motivators for Aotearoa New Zealand paramedics were saving lives, job security and a fair salary, while Australian paramedics were motivated by job security (first) followed by a fair salary. The same question was asked of students and is presented in the chapter 'Snapshot: Student Respondents'.

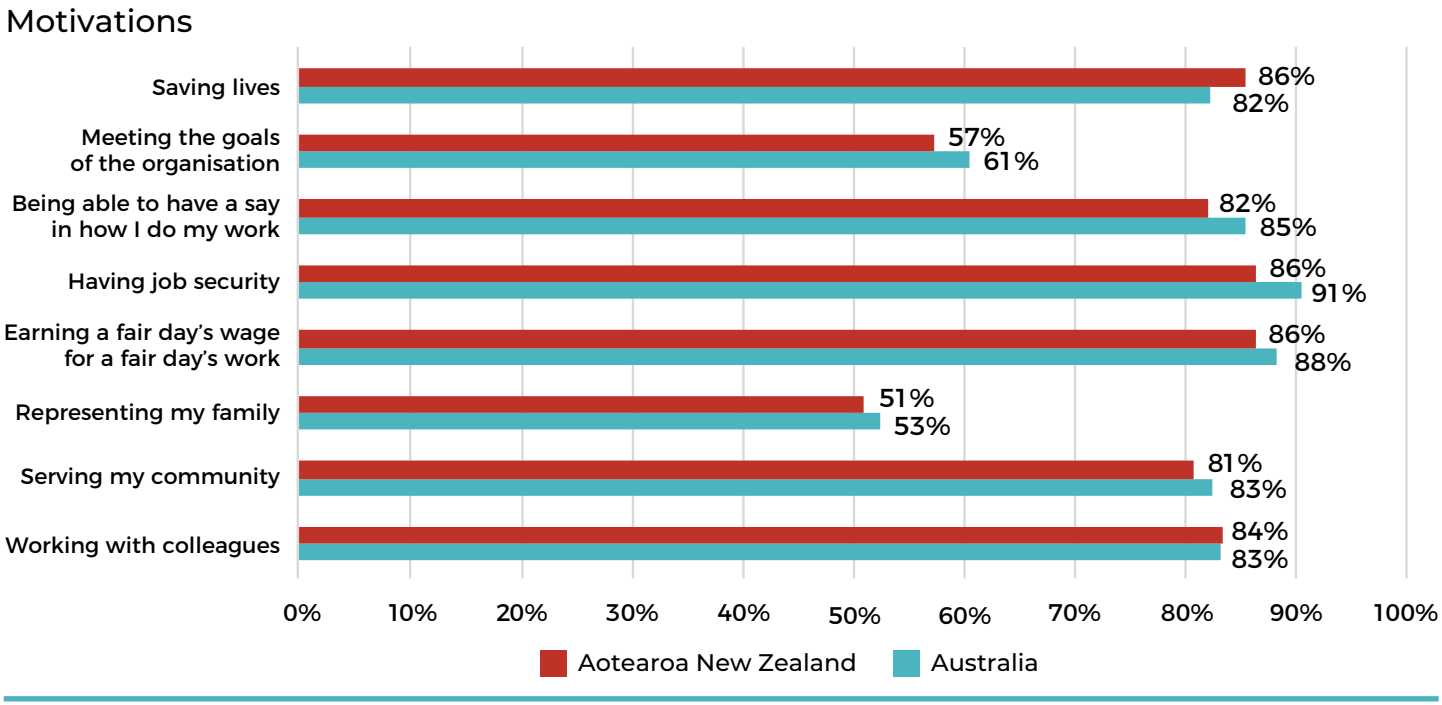


Figure 32: Motivations of respondents to undertake the paramedic role

Snapshot: Paramedics with multiple employers

Number of current employers

As noted earlier, there were many respondents who were employed by more than one organisation.

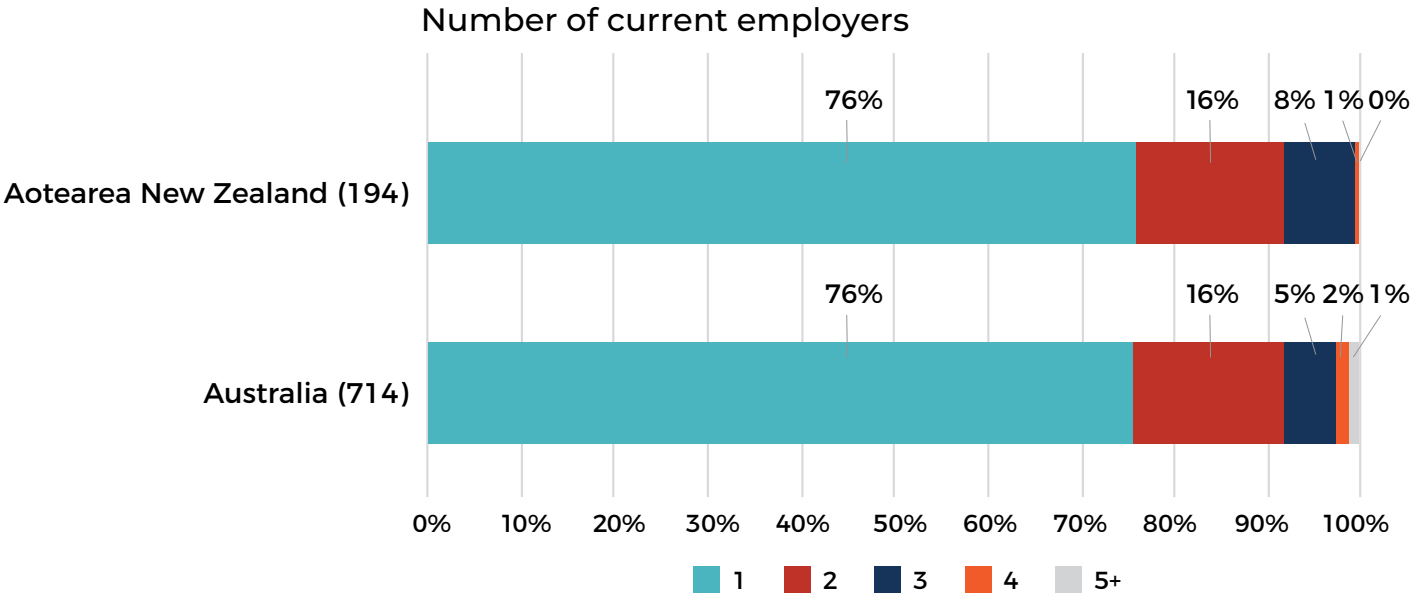


Figure 33: Number of employers for all respondents

Tables 20 (Aotearoa New Zealand) and 21 (Australia) provide a breakdown of the proportion of those with multiple employers according to the primary role type they indicated at the beginning of the survey: Clinical, research, education, and management.

Table 20: Aotearoa New Zealand - proportion of multiple job holding

Number of paramedicine employers	Clinical (165)	Research (1)	Education (17)	Management (11)
One	77%	100%	59%	82%
Two	16%	0%	24%	9%
Three	7%	0%	18%	9%
Four	1%	0%	0%	0%
Five or more	0%	0%	0%	0%

Table 21: Australia - proportion of multiple job holding

Number of paramedicine employers	Clinical (586)	Research (4)	Education (51)	Management (73)
One	78%	75%	49%	77%
Two	16%	0%	33%	11%
Three	4%	25%	12%	7%
Four	1%	0%	4%	3%
Five or more	1%	0%	2%	3%

Slightly more than 20% of clinical paramedics in Aotearoa New Zealand and Australia have two or more employers. Similarly, at least 40% of those working in education roles and at least 18% of those in management roles have more than two employers.

For those in management positions roles, second, third, fourth and fifth employers were recorded as jurisdictional ambulance service, tertiary educational/research institute employment, or employment in events activities. For those in educational roles, additional employment usually took the form of work in a jurisdictional ambulance service or additional work in (another) educational or research facility. For those in clinical roles, additional employment ranged from additional 'jurisdictional ambulance service', rescue services, defence, mining/industrial/offshore employment, tertiary educational and/or research facilities and events.

Exploration of multiple employer respondents

A series of statistical tests was applied to the data, exploring possible trends for those respondents undertaking multiple employment.

Gender

Male clinical paramedics were more likely to undertake more than one job. However, a chi square test of statistical significance did not find this to be significantly different against the other genders accounted for (p=.123). The trend was similar for those in education and management roles (research roles are not reported because of the number of respondents).

Table 22: Comparison of gender to multiple employers

Number of paramedicine employers	Male	Female	Non-binary	Prefer not to say
One	73%	84%	57%	89%
Two	18%	12%	29%	11%
Three	6%	3%	14%	0%
Four	2%	0%	0%	0%
Five	1%	0%	0%	0%

Age

While those aged between 30-49 years were more likely to have a second, third, fourth or fifth employer, the difference wasn't statistically significant (p=.297).

Table 23: Comparison of age to multiple employers

Number of paramedicine employers	20-29 years	30-39 years	40-49 years	50-59 years	>60 years
One	84%	73%	73%	79%	85%
Two	12%	20%	16%	15%	13%
Three	3%	5%	8%	4%	2%
Four	1%	0%	3%	1%	0%
Five	0%	1%	1%	1%	0%

Income

To test whether increasing income was a motivation for undertaking multiple employment, those participants with two or more employers were reclassified into one category, with the results compared against those with only one employer. This was done to ensure sufficiency in group sizes statistical difference testing analysis. As the currencies for Australia and Aotearoa New Zealand are different, the analysis is split by country.

Table 24: Comparison of income to multiple employers - Aotearoa New Zealand

Aotearea New Zealand	Prefer not to say	$0-$30,000	$31,000-$60,000	$61,000-$90,000	$91,000-$120,000	$121,000-$150,000	$151,000+
One employer (147)	3%	4%	7%	29%	42%	14%	1%
Two+ employers (47)	4%	6%	2%	21%	32%	21%	13%

Chi square difference test: F = 19.397; p = .004

Table 25: Comparison of income to multiple employers - Australia

Australia	Prefer not to say	$0-$30,000	$31,000-$60,000	$61,000-$90,000	$91,000-$120,000	$121,000-$150,000	$151,000+
One employer (539)	3%	3%	4%	11%	30%	33%	15%
Two+ employers (179)	3%	3%	6%	12%	25%	27%	23%

Chi square difference test: F = 8.038; p = .235

The chi square tests of statistical significance indicate that for the Aotearoa New Zealand sample, those with two or more jobs did earn more, on average, than those with one job. However, for the Australian context, the difference was not significant.

Hours of work per fortnight (not including overtime)

The data indicated that those with one employer worked (on average) more hours per fortnight, i.e. more commonly worked more than 41 hours per fortnight. A quarter of those with two or more jobs worked less than 40 hours per fortnight. The difference was statistically significant.

Table 26: Comparison of hours worked per fortnight to multiple employers

	40 hours or less per fortnight	41-80 hours per fortnight	81 hours or more per fortnight
One employer (687)	16%	52%	32%
Two+ employers (221)	25%	49%	26%

Chi square difference test: F = 10.729; p = .005

Snapshot: Student respondents

The following section details key trends identified in those survey respondents who classified themselves as a "student completing a pre-registration paramedicine degree". This was a total of 260 respondents. Data from this group is important to understand the future paramedicine workforce.

Gender and age profile of student respondents

Table 27: Gender profile of paramedicine students

	Aotearoa New Zealand (n=81)	Australia (n=179)
Male	37%	46%
Female	59%	54%
Non-binary	2%	0%
Prefer not to say	1%	0%

Table 28: Age profile of paramedicine students

	Aotearoa New Zealand (n=81)	Australia (n=179)
<20 years	12%	15%
20-29 years	64%	47%
30-39 years	11%	23%
40-49 years	6%	10%
50-59 years	5%	4%
>60 years	1%	0%

The tables above highlight that the student cohort is, in the majority, female in both countries.

Accordingly, and as per inherent societal structure in both Aotearoa New Zealand and Australia, gender plays a role in career attrition, affecting women disproportionately[11]. Australia also has a more mature student cohort, with more than 35% of the sample over the age of 30 in contrast to Aotearoa New Zealand's 23%. While retirement ages have trended up in both countries in recent decades, workforce longevity may be a consideration for future recruitment initiatives at the sector level[12,13].

11. Prenzler T, Fleming J, King AL. Gender equity in Australian and New Zealand policing: a five-year review. International journal of police science & management. 2010;12(4):584-95.
12. Australian Bureau of Statistics. Retirement and Retirement Intentions, Australia [Internet]. Canberra: ABS; 2022-23 [cited 2024 June 19]. Available from: https://www.abs.gov.au/statistics/labour/employment-and-unemployment/retirement-and-retirement-intentions-australia/latest-release.
13. Infometrics. More people working later in life Online: Infometrics; 2023 [cited 2024 June]. Available from: https://www.infometrics.co.nz/article/2023-07-more-people-working-later-in-life.

Place of study

Of the 260 respondents, 179 (68.8%) were studying their undergraduate degree in Australia, with 81 (31.2%) undertaking study in Aotearoa New Zealand.

Year of expected graduation

Table 29: Expected year of graduation from undergraduate paramedicine degree

	Aotearoa New Zealand (n=81)	Australia (n=179)
2023	19%	20%
2024	54%	39%
2025	22%	34%
2026	5%	8%
2027	0%	1%

Desired workplace setting post-graduation

Table 30: Desired workplace setting post-graduation

	Aotearoa New Zealand (n=81)	Australia (n=179)
Defence force	0%	1%
Events	0%	1%
Hospital	0%	2%
Mining/industrial/offshore	2%	2%
Jurisdictional ambulance service	69%	79%
Rescue service	11%	2%
Primary healthcare, not in an ambulance service	2%	1%
Overseas	5%	6%
Unknown	4%	2%
Other	6%	3%

Most graduates envisage working in jurisdictional ambulance services following graduation, although the proportion is lower for Aotearoa New Zealand students (69% to Australia's 79%). Additionally, there is a higher proportion in Aotearoa New Zealand who indicated a desire to work for 'rescue services' (11% to Australia's 2%).

For those who indicated 'other' and provided a free-text response, their answers related to location and work type rather than employer. They indicated wanting more flexible employment, an opportunity to incorporate international travel or work overseas, and the opportunity to work rurally.

Future career ambitions and aspirations in paramedicine

Students were asked, given their ideal future career, what they considered the likelihood was of their staying in a paramedicine career until retirement. This career could include aspects of clinical, education research and management in paramedicine.

Additionally, they were asked, ideally, how long they expected to undertake a patient-facing role.

Table 31: Likeihood of career-until-retirement in paramedicine

	Aotearoa New Zealand (n=81)	Australia (n=179)
Very likely	36%	47%
Somewhat likely	19%	30%
Unsure	22%	16%
Somewhat unlikely	20%	4%
Very unlikely	4%	2%

Although more than half of both the Aotearoa New Zealand and Australian students indicated that they were likely to remain in paramedicine until retirement, 33% of Australian and 44% of Aotearoa New Zealand students plan to be in patient-facing roles for less than 10 years.

Table 32: Expected years in clinical, patient-facing paramedicine role

Years	Aotearoa New Zealand (n=80)	Australia (n=179)
< 1	0%	1%
2 to 5	18%	11%
6 to 10	26%	21%
11 to 15	11%	15%
16 to 20	19%	21%
21 to 30	16%	20%
31 or more	10%	11%

Table 33: Motivations of respondents to undertake the paramedic role (average agreement level)

	Aotearoa New Zealand (n=80)	Australia (n=179)
Saving lives	95%	92%
Serving my community	88%	91%
Having job security	84%	87%
Being able to have a say in how I do my work	81%	83%
Working with colleagues	80%	86%
Earning a fair wage for a fair day's work	80%	84%
Meeting the goals of the organisation	69%	76%
Representing my family	63%	69%

Table 33 highlights the average agreement level for each item in the prevalidated question set used to determine motivation toward undertaking the paramedic role. This can be compared to Figure 32 where the same question was asked to current paramedics.

Student respondents held "saving lives" as having the highest level of agreement for this action. Although this was toward the top responses for paramedics, the paramedic respondents focused more on job security and pay.

Appendix 1: Research Team

Associate Professor Liz Thyer	Chief Investigator – Western Sydney University
Dr Navin Naidoo	Associate Investigator – Western Sydney University
Associate Professor Paul Simpson	Associate Investigator – Western Sydney University
Ms Sascha Baldry	Research Assistant – Western Sydney University
Associate Professor Kingsley Agho	Statistician – Western Sydney University
Dr Graham Howie	Associate Investigator and Site co-lead – Auckland University of Technology
Mr Stephen Aiello	Associate Investigator and Site co-lead – Auckland University of Technology
Mr Norm Wilkinson	Associate Investigator – Auckland University of Technology
Dr Verity Todd	Associate Investigator – Auckland University of Technology
Ms Alecka Miles	Associate Investigator and Site lead – Edith Cowan University
Dr Brennen Mills	Associate Investigator – Edith Cowan University
Professor Moira Sim	Associate Investigator – Edith Cowan University
Professor Ben Farr-Wharton	Workforce strategy – Edith Cowan University
Dr Fleur Sharafizad	Workforce strategy – Edith Cowan University
Dr Aglae Hernandez Grande	Workforce strategy – Edith Cowan University
Dr Amelia Brennan	Associate Investigator – Australasian College of Paramedicine

Appendix 2: List of data points

Demographic

- Gender (man, woman, non-binary, prefer not to say, other)
- Age
- Ethnicity
- Language(s) spoken
- Experience living in peri-urban, rural, or remote areas
- Aotearoa New Zealand or Australian-based
- Born in Aotearoa New Zealand, if NZ-based / Born in Australia, if Australia-based
- Parent or guardian to a child < 16 years
- Caring responsibilities for an adult
- Identify as: LGBTQIA+, heterosexual, other

Education and Training

- Highest paramedicine qualification
- Country of education
- Role in clinical supervision of students or trainees
- Level of preparedness
- Normal Continuing Profession Development (CPD) activities in a year:
    - o Conferences, seminars or workshops
    - o Reading and reflecting on scientific journal articles or participation in a journal club
    - o Work-based learning or in-service education
    - o Degree, short course or online courses
    - o Involvement in a research study as a participant
    - o Other [Please specify]
- Barriers to CPD:
    - o There is a lack of time to complete CPD
    - o I have few CPD opportunities available to me

Appendix 2: List of data points continued

- o The CPD opportunities are too expensive
- o There are no barriers
- o Other barriers [Please specify]

· Enablers of CPD:

· Colleagues or manager are supportive of me completing the CPD

· My employer is supportive of me completing the CPD

· I have professional memberships which support my completion of CPD

There are no enablers of professional membership:

- o Yes - Australasian College of Paramedicine
- o Yes - Australian College of Nursing
- o Yes - New Zealand Nurses Organisation
- o Other [Please specify]

Knowledge of the Australasian College of Paramedicine

· Are you aware of the role of the College and the services it provides?

· How likely are you to join the College in the coming 12 months?

· Rank the functions you would want a health professional association to undertake:

- o Advocacy and leadership for the profession
- o Education and professional development
- o Access to the latest research
- o Career and professional services
- o Health and wellbeing services
- o Publications, industry information and resources
- o Clinical and professional standards
- o Conferences, events and networking

Employment

· Annual gross (pre-tax) income from your primary employer

· Percentage of income from primary paramedicine role

· Current position in paramedicine [employment type and jurisdiction]

· Registration type

· Role [clinical, research, education, management]*

· Title

· Principal work setting

· Principal work setting postcode

· Rural or remote work

· Fly-in-fly-out work

· Tenure in industry

· Tenure of current employer

· Contract type (full-time, part-time, casual/contract, self-employed)

· Hours per fortnight, excluding overtime and on-call, worked

· Hours per fortnight of overtime and on-call work

· Work schedule/shift pattern

· Number of current employers

· Desire for more or less work

· Desire for single or multiple employment

Change of contract

- o In the previous 12 months, have you asked for a change to your contracted work arrangements? Yes/no · Reasons:
- o Requested part-time

Appendix 2: List of data points continued

- Requested job share
- Requested change to regular (non-rotating) shifts
- Requested reduced hours for a limited period
- Requested more convenient geographic location
- Prefer not to say
- Other

- Was this requested granted:
  - Fully granted
  - Partly granted
  - Declined
  - Not yet received a reply
  - Prefer not to say

Job demands

- In a typical fortnight in your work with your primary employer, what proportion (as a percentage %) of your work includes:
  - Direct patients care not including waiting to transfer patient care to another health professional
  - Direct patient care while waiting to transfer patient care to another health professional
  - Indirect patient care (travel to and from patient, paperwork, etc.)
  - Management and administration
  - Educational activities
  - Research activities
  - Meals/downtime
  - Other

Resource adequacy

- There are enough staff at my organisation to get the work done
- There are enough trained staff to ensure quality of care
- There is enough support to allow me to spend sufficient time with patients
- I have enough time and opportunity to discuss care problems with other medical/emergency staff
- [Not applicable]

Motivations

- What drives your motivation in your paramedicine work:
  - Working with colleagues
  - Serving my community
  - Representing my family
  - Earning a fair day's wage for a fair day's work
  - Having job security
  - Being able to have a say in how I do my work
  - Meeting the goals of the organisation
  - Saving lives

Wellbeing

- Overall, I am reasonably happy with my work life
- Most days I feel a sense of accomplishment in what I do at work
- I feel content with my work
- I get a sense of joy from my work

Intention to quit

- I frequently think about leaving this organisation
- It is likely that I will search for a job in another organisation within the next year
- It is likely that I will leave my current organisation within the next year
- Career intentions

Appendix 2: List of data points continued

- How many years do you intend to remain in the paramedicine workforce in Australia
- How many years do you intend to remain with your current, primary paramedicine employer

Career planning (Australia and Aotearoa New Zealand)

- In the next 12 months, what is the likelihood that you will apply for the following roles?
  - Specialist/advanced clinical paramedicine role
  - Management role (with any employer)
  - Advanced educational role (within an ambulance/health service or education provider)
  - Advanced research role
  - Engage in formal education provided by a Recognised Training Organisation or university and a discipline other than paramedicine
- Future study ambitions (Australia and Aotearoa New Zealand)
  - Engage in informal education in addition to your mandatory Continuing Professional Development. This might include optional in-house training or external study
  - Engage in formal coursework education provided by a Recognised Training Organisation or university in paramedicine (not including research)
  - Engage in formal research education in paramedicine. This would include honours, masters, PhD studies

Leave provisions Leave

- In the past 12 months, what leave options have you taken (not including annual leave or short-term sick leave less than 10 consecutive days)
- Type of leave beyond 10 days:
  - Parental/adoption leave
  - Long service
  - Workers' compensation leave
  - Prefer not to say
  - Other
  - No
- Reason for leave beyond 10 days:
  - Covid-19
  - Physical illness
  - Mental illness
  - Prefer not to say
  - Other

Parental Leave (those who indicated they had caring responsibilities of children under 16)

- I was able to take time off for appointments I wanted to attend during my/my partner's pregnancy or child-related appointments in general
- I was able to take short-term (two weeks) parental leave around the time of the birth or adoption of a child
- I was able to take extended leave to be the carer of a child if I wanted to

Paid parental leave

- Yes/no

Able to return to the same or similar role, responsibilities and pay following leave

- Yes/no (why)

Family care duties

- Yes/no

Accommodation of family care duties

- I was able to take time off for relevant appointments
- I was able to make leave arrangements to enable important caring duties
- I was able to continue my career development while undertaking my caring duties
- I found it easy to discuss my caring duties with my work colleagues

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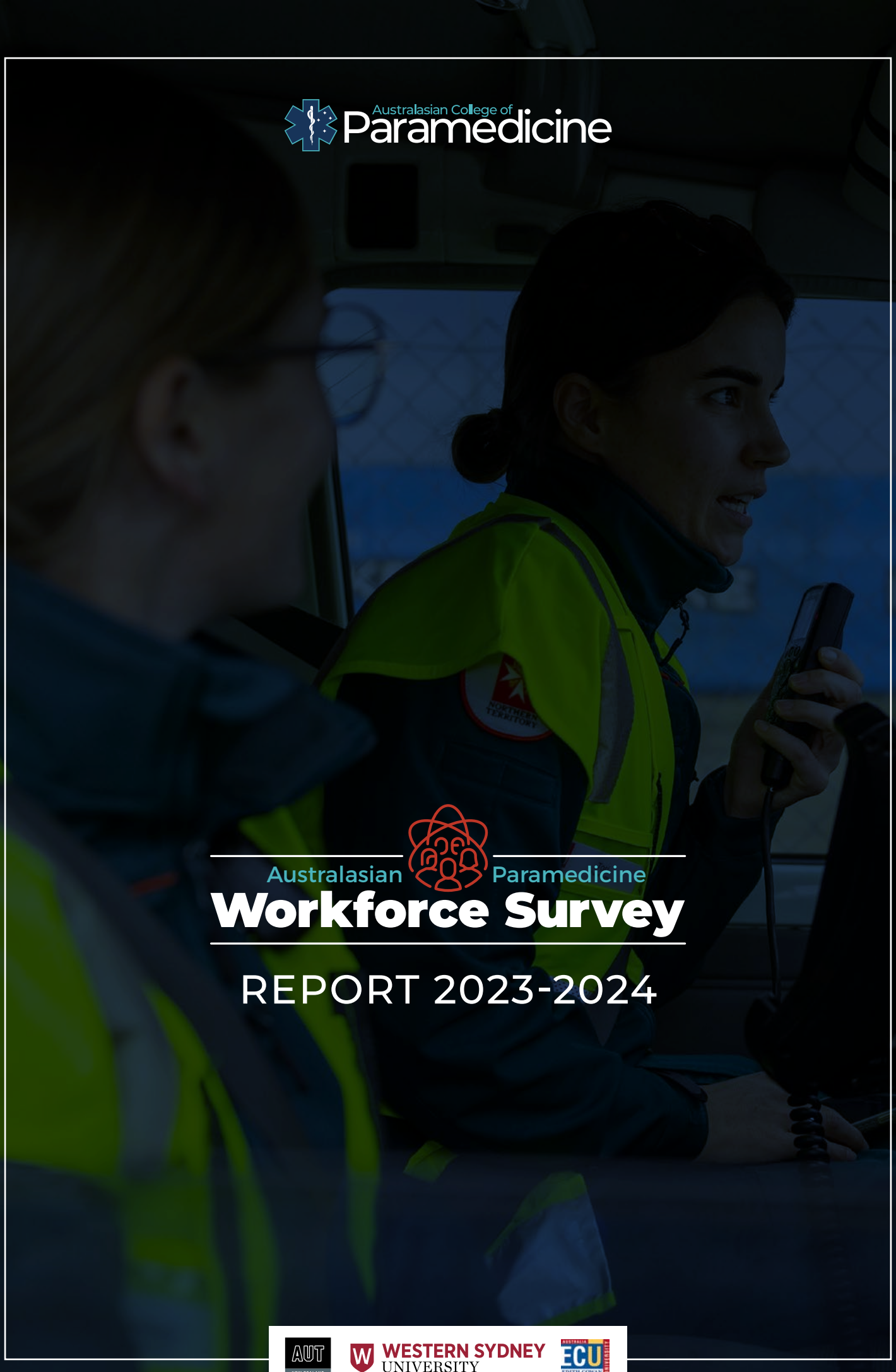

Australasian Paramedicine

Workforce Survey

REPORT 2023-2024

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