



# Understanding Disability and Assistive Equipment in Aotearoa New Zealand

Published 8 August 2025

## Purpose of this report

This report is driven by proving the value of early intervention and a holistic understanding of New Zealanders being key to empowering a non-disabling Aotearoa. Enable New Zealand's stated purpose is delivering services that support a New Zealand where everyone can live their best life without barriers.

Together with Nicholson Consulting, we are leveraging our knowledge in data analysis and research to gain a broad and clear understanding of disability, injury and assistive technology in New Zealand.

This report details the results of research carried out by Nicholson Consulting in the Stats NZ Integrated Data Infrastructure (IDI) comparing several key groups to each other and to the overall population.

The report is organised into five sections to provide a comprehensive overview of the project, methodologies, and findings

We aim to use these findings to improve Enable New Zealand's service delivery, ensuring it is responsive to the different needs of New Zealanders. This research will support a wider understanding of disability and injury impacts in Aotearoa.

## About Enable New Zealand



Enable New Zealand (Enable NZ) is a wholly owned Crown entity subsidiary of Te Whatu Ora Health New Zealand. They provide disability equipment, information, services in New Zealand. They are the leading supplier of disability equipment, information, advice, and modification services in Aotearoa. Enable NZ is united behind a shared vision, to work towards a non-disabling Aotearoa where there are no barriers to living your best life.

*Our thanks to Nicholson Consulting and Stats New Zealand*

## About Nicholson Consulting



**nicholson**  
CONSULTING

As Nicholson Consulting, we are committed to promoting inclusivity and improving the quality of life for individuals with disabilities through data-driven insights and analysis. Although we are not disabled ourselves, we recognise the importance of understanding and addressing the unique needs and challenges faced by people with disabilities. Our work with Enable New Zealand is rooted in our commitment to creating a more equitable and supportive environment for all individuals, regardless of their abilities.

## About the IDI

Access to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers. These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) which is carefully managed by Stats NZ. For more information about the IDI please visit [stats.govt.nz/integrated-data](https://stats.govt.nz/integrated-data).

*IDI Research into Enable New Zealand customers completed 6 August 2024*

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# Introduction

## Our approach

The Integrated Data Infrastructure (IDI) is a large research database managed by Statistics New Zealand. It holds de-identified microdata about people and households. This includes health data, education and training, benefits and social services, justice data, people and communities, populations, income and work, and housing data. This report combines the dispersed IDI data with that of Enable New Zealand, a wholly-owned subsidiary of Health New Zealand with over 50 years supporting disabled and injured New Zealanders.

Enable NZ is New Zealand's largest provider of disability and rehabilitation equipment, issuing equipment on behalf of the Accident Compensation Corporation (ACC) and Disability Support Services (DSS) (under the Ministry of Social Development). Enable provides assistive technology equipment and modification services for all for New Zealand for ACC. Enable NZ provides these same services for DSS but only for the areas of New Zealand south of the Bombay Hills. The data collected in this research relating to this service therefore only includes those receiving Enable NZ services in this area. Northland and Auckland data and insights are not included for DSS but are for ACC.

The anonymised customer data from Enable NZ combined with the IDI, was refined to understand demographics and needs. This enables the translation of data into insights.

An in-depth analysis of equipment received by clients was conducted and an equity analysis to identify differences and areas for improvement.

The initial findings were supplemented with information on other ACC services, Disability Support Services, and any identifiable comorbidities, providing a general view of the support landscape.

# Methodology

This section outlines the data sources and methodology used to identify Enable NZ's customers and their attributes from data within the IDI. For the ad hoc load data submitted by Enable NZ, Nicholson also assessed the quality of the data to ensure clarity.

Please note that when the research was undertaken, disability services were provided under Whaikaha Ministry of Disabled People. These services are now provided under Disability Support Services (DSS), part of Ministry of Social Development (MSD). The term Whaikaha will be used throughout to denote the timeliness of the research.

## Customers from ad hoc load

There were some discrepancies to be tidied up between the ad hoc ACC data ACC claim identifiers and the ACC data in the IDI. To increase the number of matching ACC claim identifiers we also matched the ad hoc ACC data to the ACC payments data.

Nearly all client identifiers matched the IDI spine in the ad hoc Whaikaha EMS and Whaikaha spectacles and hearing data, so no further matching was required.

*Table 1: Ad hoc data linkage rate to IDI spine*

Whaikaha EMS (now Disability Support Services)	Whaikaha (now DSS) spectacles and hearing	ACC
Service data from 2013 to 2023	Service data from 2016 to 2023	Service data from 2021 to 2024 (partial)
Number of customers per year: between 22,400 and 32,400	Number of customers per year: between 35,800 and 56,000	Linkage rate to ACC claim (total): 92%
Linkage rate to spine per year: 98.8% to 99.2%	Linkage rate to spine per year: 98.8% to 99.2%	For linked ACC claims, the linkage rate to the spine per year: 98.4% to 99.1%

## ACC cost codes approach for identifying customers

As the ad hoc ACC data is missing some ACC claim identifiers, this analysis also uses ACC data within the IDI to identify Enable NZ's customers.

ACC's claim, client and payment information are available in the IDI. Enable NZ's clients are identified by looking for payments for services under:

- Aids and appliances
- Vehicle modifications, and
- Housing modifications.

Use of this population for specific analysis also allows a longer history (the ad hoc load only goes back to July 2021).

## Data sources for customer attributes

### Census 2018

For this project, information on deprivation and the Washington Short Set Group (WSSG) questions comes from Census 2018 data. There are some key points to consider when interpreting statistics for these characteristics. They include:

- It contains more imputation than previous censuses where administrative data has been used to impute missing variables.
- Entire records (people) were also imputed using administrative data because of the low response rate for Census 2018.
- Some imputed census records do not have an address attached. Where possible addresses were assigned to individuals and modelling was undertaken to determine the likelihood that the assignment was correct.

### Administrative Population Census

The Administrative Population Census (APC) is an experimental output produced by Stats NZ that uses administrative data to replicate census-type information. The APC is compiled annually and so allows for trend over time information to be used. For this project, information on income and highest qualification comes from the APC data.

### Chronic health conditions

A health dataset in the IDI was used to identify customers with chronic conditions. These include diabetes, gout and stroke. This information is included in the equity section.

## Definition of customer groups

We explore multiple customer groups in this report.

### ACC Serious and non-Serious Injury

ACC covers injuries that cause short- and long-term effects, and disabilities. Injuries that cause long-term effects and disabilities include spinal cord injuries and traumatic brain injuries. People with these injuries are profiled as **Serious Injury** clients and their claims are managed by a specialised ACC team. For the analysis, we identify serious injury clients, and they are grouped as follows:

- Spinal cord injuries – including tetraplegic, paraplegic, and other spinal cord injuries
- Traumatic Brain Injury – including severe brain injury, and moderate to severe brain injury
- Comparable diagnosis and undefined injuries

Every year there are approximately 200 new clients with Serious Injuries. These clients rarely stop needing ACC assistance, so the pool of serious injury clients builds up over time.

**Non-serious injury** clients can have short- or long-term injuries however, the injury is not severe enough to be profiled as a serious injury client. For the analysis, we identify non-serious injury clients, and they are grouped as follows:

- Soft tissue injury
- Fracture/Dislocation
- Other

Every year there are approximately 2,000,000 non-serious injury claims. The vast majority of these clients recover quickly and have no long-lasting effects.

Note the term of Serious and non-Serious injury used in this report is an ACC classification. This is different to the Serious and non-Serious classification defined by Stats NZ.

### Autism Spectrum Disorder

New Zealand has no national registry or dataset to identify and track Autistic Spectrum Disorder (ASD) cases (Bowden, et al., 2020). The New Zealand Health Survey suggest the prevalence of ASD in children (aged 2 to 14 year) in New Zealand is 2.5% in 2022/23. This equates to an estimated 21,000 children (Ministry of Health, 2023).

Two health datasets in the IDI were used to identify ASD clients. They are:



- The National Minimum Dataset (NMD), which is a national collection of publicly funded New Zealand hospital discharges, and
- Socrates, which is a national database of Whaikaha, the Ministry for Disabled Peoples, disability support services.

Individuals were classified as having ASD if they had one of the diagnosis codes listed in Table 2.

Table 2. Diagnostic codes for ASD (Bowden, et al., 2020)

Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)	Diagnosis codes in Socrates	International Classification of Diseases version 9, 10 and 11
299.00 (autistic disorder)	1211 (ASD)	F84.0 (autistic disorder)
299.10 (childhood disintegrative disorder)	1206 (Asperger's syndrome)	F84.1 (atypical autism)
299.80 (Asperger's disorder / pervasive development disorder NOS)	1207 (other ASD)	F84.3 (other childhood disintegrative disorder)
		F84.5 (Asperger's syndrome)
		F84.8 (other pervasive development disorders)
		F84.9 (pervasive development disorder, unspecified)

## Wheelchair

Customers provided a wheelchair from Enable New Zealand are identified through the list equipment service codes supplied from Enable NZ. Non-list wheelchairs are not included.

Service codes for wheelchairs supplied from Whaikaha funding is extracted from the 2010, 2012 and 2015 list catalogue. Recent service codes are extracted from here: <https://www.enable.co.nz/tools/equipment-lists-databases/whaikaha-list-equipment>.

Service codes for wheelchairs supplied from ACC funding is extracted from here: <https://www.enable.co.nz/tools/equipment-lists-databases/acc-equipment-list>.

# Enable NZ's customer base

This section presents analysis of Enable New Zealand's customer base. Firstly, there is an overview of the total customer base with a comparison to the New Zealand population. The analysis explores sex, age, ethnicity and deprivation.

This is followed by analysis of Whaikaha EMS customers, Whaikaha spectacles and hearing customers, and ACC customers. The analysis explores the demographic characteristics of each customer group. Further analysis can be found in Appendices 1, 2, 3 and 4.

*Note percentages exclude missing data.*

## Overview of customers

In 2022/23, equipment, vehicle modifications, housing modifications, and spectacles and hearing services were provided to 110,070 customers. This is an increase of 12.5% compared to the previous year. This increase is mainly due to the increase in ACC customers.

Table 3 details the demographic information of the customers Enable NZ serves including a comparison to the overall population. Overall, Enable NZ's customers match up with the NZ population with the following exceptions. When compared to the NZ population, Enable NZ serves:

- Significantly more women
- Less than half as many working age people
- More than twice as many older people
- Significantly more European people
- Fewer Asian and Pacific people
- More people who live in higher deprivation areas

In the next section we breakdown Enable's customer base further to isolate the differences and also to identify variations between services.

*Table 3: Analysis of Enable's customer base (2022/23) with a comparison to the New Zealand population (2023)*

Topic areas	Enable	New Zealand population
Sex	57% are female and this has remained constant over time.	50% of the New Zealand population are female.

Age	24% are aged between 0 and 19 years.	25% are aged between 0 and 19 years.
	23% of customers are aged between 20 and 59 years.	52% are aged between 20 and 59 years.
	52% are aged 60 years and over.	23% are aged 60 years and over.
Ethnicity (total response)	79% of customers identify as being part of the European ethnic group (81% including Other ethnic group).	70% of the population identify as being part of the European or Other ethnicity groups.  Excluding Auckland and Northland regions, 79% of the population identify as being part of the European or Other ethnicity groups.
	19% of customers identify as being part of the Māori ethnic group.	18% of the population identify as being part of the Māori ethnic group.  Excluding Auckland and Northland regions, 19% of the population identify as being part of the Māori ethnic group.
	6% of customers identify as being part of the Pacific ethnic group.	9% of the population identify as being part of the Pacific ethnic group.  Excluding Auckland and Northland regions, 5% of the population identify as being part of the Pacific ethnic group.
	8% of customers identify as being part of the Asian ethnic group.	17% of the population identify as being part of the Asian ethnic group.  Excluding Auckland and Northland regions, 10% of the population identify as being part of the Asian ethnic group.
Deprivation	14% of customers live in areas with deprivation index 1 to 2 (least deprived).	19% of the population live in areas with deprivation index 1 to 2 (least deprived).

	16% of customers live in areas with deprivation index 3 to 4.	20% of the population live in areas with deprivation index 3 to 4.
	18% of customers live in areas with deprivation index 5 to 6.	20% of the population live in areas with deprivation index 5 to 6.
	21% of customers live in areas with deprivation index 7 to 8.	21% of the population live in areas with deprivation index 7 to 8.
	23% of customers live in areas with deprivation index 9 to 10 (most deprived).	21% of the population live in areas with deprivation index 9 to 10 (most deprived).

## Demographic characteristics of customer groups

The demographic characteristics of Enable's customers differ between the three high-level funder and service types. Table 4 shows the detailed demographic information.

### Key points to note include:

- The gender breakdown is consistent across the service types (although in Table 13 we will see big difference between serious injury and non-serious injury customers)
- Whaikaha EMS customers are predominantly over 60 years old, whereas customers for the Whaikaha spectacles and hearing services are equally likely to be under 20 or over 60 years old.
- Younger people are under-represented in the ACC customer population.
- Asian and Pacific customers are very strongly underrepresented in the Whaikaha EMS service compared to the NZ population
- There are some minor differences in terms of gender and ethnicity combined. Asian, Māori and Pacific males are more common in certain services as are European females.
- Breakdowns of age, gender and ethnicity of customers are not consistent across the services:
  - The Whaikaha EMS service has double the proportion of Māori, Pacific and Asian males who are under 20 compared to females under 20 and a greater proportion of Māori, Pacific and Asian females over 60 compared to males over 60.
  - The Whaikaha spectacles and hearing service has a greater proportion of young males than females and almost double the proportion of young Māori, Pacific and Asian males and females than young Europeans. The over 60s are strongly represented for European customers.
  - Younger people are under-represented in the ACC customer population for males and females of all ethnicities.

- Service offerings vary by region. This explains most of the variation by region.
- A higher proportion of all customers have a rural address than the general population.
- There is a significantly stronger skew towards higher deprivation areas in the Whaikaha EMS service. Note that this measures the deprivation index of their current address, not of the address where they were first diagnosed.
- The proportion of customers employed are different across the services. The proportion of ACC customers in employment is nearly four times the proportion for Whaikaha EMS customers in employment.
- Over half of all Whaikaha EMS customers receive an income of between \$15,000 and \$30,000. Note that this the range many people receiving NZ Superannuation or the Supported Living Payment will fall into.

Table 4: Analysis of customers comparing Whaikaha EMS, Whaikaha spectacles and hearing and ACC to the NZ population (2022/23). Characteristics for the NZ population are taken from the Estimated Resident Population 2023 (Stats NZ, 2024c), the experimental administrative population census (Stats NZ, 2023), NZDep2018 analysis (Atkinson, Crampton, & Salmond, 2021) and employment rate (Stats NZ, 2024a; Stats NZ, 2024b).

Note that responses are only available for Washington Group Short Set questions for those who answered them in the Census. Some NZ population breakdowns are not publicly published. These have been labelled as 'unavailable' in the table.

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
Sex, age and ethnicity characteristics				
Sex	43% customers are male	43% customers are male	41% customers are male	50% population are male
	57% customers are female	57% customers are female	59% customers are female	50% population are female
Age	3% customers are under 10 years old	16% customers are under 10 years old	1% customers are under 10 years old	12% population is under 10 years old
	6% customers are under 20 years old	44% customers are under 20 years old	4% customers are under 20 years old	25% population is under 20 years old
	82% customers are over 60 years old	46% customers are over 60 years old	39% customers are over 60 years old	23% population is over 60 years old
	12% customers are over 90 years old	4% customers are over 90 years old	3% customers are over 90 years old	1% population is over 90 years old
	3% customers are Asian ethnicity	10% customers are Asian ethnicity	9% customers are Asian ethnicity	17% population is Asian ethnicity

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
Ethnicity (total response)				Excluding Auckland and Northland region, 10% population is Asian ethnicity
	17% customers are Māori ethnicity	21% customers are Māori ethnicity	17% customers are Māori ethnicity	18% population is Māori ethnicity Excluding Auckland and Northland region, 19% population is Māori ethnicity
	4% customers are Pacific ethnicity	8% customers are Pacific ethnicity	6% customers are Pacific ethnicity	9% population is Pacific ethnicity Excluding Auckland and Northland region, 5% population is Pacific ethnicity
	84% customer are European ethnicity	77% customer are European ethnicity	79% customer are European ethnicity	70% population is European or Other ethnicity Excluding Auckland and Northland region, 79%



Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
				population is European or Other ethnicity
Ethnicity and sex	Across all ethnicities, 55–57% are female.	For European, Māori and Pacific ethnicities, there are more females (55–58%).  For Asian ethnicity, it is roughly equal between females and males.	The high proportion of female customers is driven by a high proportion of European and Asian female customers.  The proportion of female and male customers for Māori and Pacific are roughly equal.	European and Asian ethnicities are 51% female.  Māori and Pacific ethnicities are 50% female
Geographical factors				
Urban/ rural (2022/23)	87% customers have an urban address	86% customers have an urban address	82% customers have an urban address	84% population lives in an urban area (ehinz, 2018)
Region (2022/23)	0% customers live in the Auckland region	26% customers live in the Auckland region	29% customers live in the Auckland region	34% population lives in Auckland region
	18% customers live in the Waikato region	11% customers live in the Waikato region	12% customers live in the Waikato region	10% population lives in Waikato region

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
	13% customers live in the Wellington region	11% customers live in the Wellington region	9% customers live in the Wellington region	11% population lives in Wellington region
	20% customers live in the Canterbury region	14% customers live in the Canterbury region	13% customers live in the Canterbury region	13% population lives in Canterbury region
Socio-economic factors				
Deprivation	12% live in areas with deprivation index 1 and 2 (least deprived)	16% live in areas with deprivation index 1 and 2 (least deprived)	17% live in areas with deprivation index 1 and 2 (least deprived)	19% live in areas with deprivation index 1 and 2 (least deprived)
	15% live in areas with deprivation index 3 and 4	18% live in areas with deprivation index 3 and 4	19% live in areas with deprivation index 3 and 4	19% live in areas with deprivation index 3 and 4
	18% live in areas with deprivation index 5 and 6	19% live in areas with deprivation index 5 and 6	20% live in areas with deprivation index 5 and 6	20% live in areas with deprivation index 5 and 6
	26% live in areas with deprivation index 7 and 8	22% live in areas with deprivation index 7 and 8	22% live in areas with deprivation index 7 and 8	20% live in areas with deprivation index 7 and 8
	29% live in areas with deprivation index 9 and 10 (most deprived)	25% live in areas with deprivation index 9 and 10 (most deprived)	22% live in areas with deprivation index 9 and 10 (most deprived)	21% live in areas with deprivation index 9 and 10 (most deprived)

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
Employed, aged 15 years and over (2021/22)	14% are in employment.	40% are in employment	53% are in employment	69% are in employment (June quarter 2022)
Employed by sex, aged 15 years and over (2021/22)	14% of female customers are in employment	36% of female customers are in employment	54% of female customers are in employment	64% of females are in employment (June quarter 2022)
	12% of male customers are in employment	47% of male customers are in employment	52% of male customers are in employment	73% of males are in employment (June quarter 2022)
Employed by ethnicity, aged 15 years and over (2021/22)	11% of Māori customers are in employment	36% of Māori customers are in employment	46% of Māori customers are in employment	65% of Māori are in employment (2022)
	8% of Pacific customers are in employment	30% of Pacific customers are in employment	55% of Pacific customers are in employment	64% of Pacific are in employment (2022)
	12% of Asian customers are in employment	35% of Asian customers are in employment	63% of Asian customers are in employment	77% of Asian are in employment (2022)
	15% of European customers are in employment	41% of European customers are in employment	53% of European customers are in employment	69% of European are in employment (2022)

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
Income (2021/22)	4% earned less than \$15,000	14% earned less than \$15,000	7% earned less than \$15,000	25% earned less than \$15,000 (2018)
	71% earned \$15-30,000	46% earned \$15-30,000	27% earned \$15-30,000	24% earned \$15-30,000 (2018)
	21% earned \$30-70,000	25% earned \$30-70,000	42% earned \$30-70,000	35% earned \$30-70,000 (2018)
	3% earned more than \$70,000	15% earned more than \$70,000	25% earned more than \$70,000	17% earned more than \$70,000 (2018)
Income by age (2021/22) – 25 to 64 years old	12% earned less than \$15,000	10% earned less than \$15,000	6% earned less than \$15,000	Unavailable
	61% earned \$15-30,000	19% earned \$15-30,000	13% earned \$15-30,000	
	22% earned \$30-70,000	35% earned \$30-70,000	47% earned \$30-70,000	
	5% earned more than \$70,000	36% earned more than \$70,000	33% earned more than \$70,000	
Income by age (2021/22) –	2% earned less than \$15,000	2% earned less than \$15,000	2% earned less than \$15,000	Unavailable
	74% earned \$15-30,000	62% earned \$15-30,000	60% earned \$15-30,000	

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
65 years and over	22% earned \$30–70,000	25% earned \$30–70,000	28% earned \$30–70,000	
	3% earned more than \$70,000	11% earned more than \$70,000	10% earned more than \$70,000	
Highest qualification (% of all ages) (2021/22)	39% had no qualifications	29% had no qualifications	16% had no qualifications	29% had no qualifications (% of total population, aged 0+)
	52% had a level 1 to 4 certificate or level 5 to 6 diploma	53% had a level 1 to 4 certificate or level 5 to 6 diploma	62% had a level 1 to 4 certificate or level 5 to 6 diploma	43% had a level 1 to 4 certificate or level 5 to 6 diploma
	9% had at least a university degree or equivalent	18% had at least a university degree or equivalent	22% had at least a university degree or equivalent	18% had at least a university degree or equivalent (Stats NZ, 2023)
Highest qualification (% of people aged 20 years and over) (2021/22)	38% had no qualifications	23% had no qualifications	15% had no qualifications	Unavailable
	53% had a level 1 to 4 certificate or level 5 to 6 diploma	57% had a level 1 to 4 certificate or level 5 to 6 diploma	62% had a level 1 to 4 certificate or level 5 to 6 diploma	
	9% had at least a university degree or equivalent	20% had at least a university degree or equivalent	23% had at least a university degree or equivalent	

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
Disability (Washington Short Set Groups)				
Communicate (2017/18)	70% customers have no difficulty in communicating	86% customers have no difficulty in communicating	93% of customers have no difficulty in communicating	95% of the population have no difficulty in communicating (2018)
	19% customers have some difficulty in communicating	11% customers have some difficulty in communicating	5% customers have some difficulty in communicating	4% of the population have some difficulty in communicating (2018)
	10% customers have a lot of difficulty/ can't communicate	3% customers have a lot of difficulty/ can't communicate	2% customers have a lot of difficulty/ can't communicate	1% of the population have a lot of difficulty/ can't communicate (2018)
Hearing (2017/18)	51% customers have no difficulty in hearing	60% customers have no difficulty in hearing	80% customers have no difficulty in hearing	86% of the population have no difficulty in hearing (2018)
	36% customers have some difficulty in hearing	32% customers have some difficulty in hearing	17% customers have some difficulty in hearing	12% of the population have some difficulty in hearing (2018)
	12% customers have a lot of difficulty/ can't hear	8% customers have a lot of difficulty/ can't hear	3% customers have a lot of difficulty/ can't hear (2022/23)	2% of the population have a lot of difficulty/ can't hear (2018)

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
Remembering (2017/18)	39% of customers have no difficulty in remembering	69% of customers have no difficulty in remembering	74% of customers have no difficulty in remembering (2022/23)	83% of the population have no difficulty in remembering (2018)
	44% of customers have some difficulty in remembering	26% of customers have some difficulty in remembering	22% of customers have some difficulty in remembering (2022/23)	14% of the population have some difficulty in remembering (2018)
	17% of customers have a lot of difficulty/ can't remember	5% of customers have a lot of difficulty/ can't remember	4% of customers have a lot of difficulty/ can't remember (2022/23)	2% of the population have a lot of difficulty/ can't remember (2018)
Seeing (2017/18)	47% of customers have no difficulty in seeing	66% of customers have no difficulty in seeing	73% of customers have no difficulty in seeing (2022/23)	82% of the population have no difficulty in seeing (2018)
	40% of customers have some difficulty in seeing	29% of customers have some difficulty in seeing	24% of customers have some difficulty in seeing (2022/23)	16% of the population have some difficulty in seeing (2018)
	13% of customer have a lot of difficulty/ can't see	5% of customers have a lot of difficulty/ can't see	3% customers have a lot of difficulty/ can't see (2022/23)	2% of the population have a lot of difficulty/ can't see (2018)

Topic area	Whaikaha EMS	Whaikaha spectacles and hearing	ACC	NZ population
Walking (2017/18)	9% customers have no difficulty in walking	75% customers have no difficulty in walking	68% customers have no difficulty in walking (2022/23)	87% of the population have no difficulty in walking (2018)
	37% customers have some difficulty in walking	19% customers have some difficulty in walking	21% customers have some difficulty in walking (2022/23)	10% of the population have some difficulty in walking (2018)
	54% customers have a lot of difficulty/ can't walk	6% customers have a lot of difficulty/ can't walk	11% customers have a lot of difficulty/ can't walk (2022/23)	3% of the population have a lot of difficulty/ can't walk
Self-Care (i.e washing or dressing) (2017/18)	37% of customers have no difficulty in looking after themselves	89% of customers have no difficulty in looking after themselves	87% of customers have no difficulty in looking after themselves (2022/23)	95% of the population have no difficulty in looking after themselves (2018)
	36% of customers have some difficulty in looking after themselves	8% of customers have some difficulty in looking after themselves	9% of customers have some difficulty in looking after themselves (2022/23)	4% of the population have some difficulty in looking after themselves
	27% of customers have a lot of difficulty/ can't look after themselves	3% of customers have a lot of difficulty/ look after themselves	4% of customers have a lot of difficulty/ can't look after themselves (2022/23)	1% of the population have a lot of difficulty/ can't look after themselves



## Customer groups spend by demographic characteristics

Although there are some similar patterns, the average spend on Enable's customers by demographic characteristics are quite different between the four funder and service types. Table 5 shows the detailed demographic information. Key points to note include:

- Majority of spending is on older customers for Whaikaha EMS and Whaikaha hearing. Whereas majority of spend for ACC is for customers aged 25 to 64 years.
- Nearly 80% of spending is on European customers for Whaikaha EMS and Whaikaha hearing.
- There is significant variation in average spend by age group with tamariki having significantly higher spending (excluding Whaikaha spectacles). Average spend for young customers (0 to 24 years old) is higher than older customers (25 years and over).
- Total spending is slightly higher for female customers across all the Whaikaha service types, but average spend is slightly lower or similar for female customers.
- Both total and average ACC spend is a lot higher for males.
- Average spend for Pacific and Māori customers is higher than for European and Asian customers for both Whaikaha EMS and ACC
- For Whaikaha EMS and ACC funders, the average spend for customers who live in rural areas is higher than for customers who live in urban areas.
- For Whaikaha spectacles and Whaikaha hearing funders, the average spend for customers who live in urban areas is slightly higher than for customers who live in rural areas.

Trend over time visualisations can be found in Appendix 3, 4 and 5.

Table 5: Customer spend by demographic characteristics in 2022/23. Note that total response ethnicity has been used.

Topic areas	Whaikaha EMS	Whaikaha spectacles	Whaikaha hearing	ACC
Total spend (nearest \$10,000)				
Age	<p>Tamariki (aged 0 to 11 years): \$7,100,000 (13%)</p> <p>Rangatahi (aged 12 to 24 years): \$5,530,000 (10%)</p> <p>Pakeke (aged 25 to 64 years): \$17,310,000 (31%)</p> <p>Kaumatua (aged 65 years and over): \$25,620,000 (46%)</p>	<p>Tamariki (aged 0 to 11 years): \$3,030,000 (52%)</p> <p>Rangatahi (aged 12 to 24 years): \$2,840,000 (48%)</p>	<p>Tamariki (aged 0 to 11 years): \$3,830,000 (11%)</p> <p>Rangatahi (aged 12 to 24 years): \$2,380,000 (7%)</p> <p>Pakeke (aged 25 to 64 years): \$8,030,000 (23%)</p> <p>Kaumatua (aged 65 years and over): \$20,140,000 (59%)</p>	<p>Tamariki (aged 0 to 11 years): \$3,350,000 (7%)</p> <p>Rangatahi (aged 12 to 24 years): \$5,360,000 (11%)</p> <p>Pakeke (aged 25 to 64 years): \$28,650,000 (58%)</p> <p>Kaumatua (aged 65 years and over): \$12,290,000 (25%)</p>
Sex	<p>Female: \$28,510,000 (51%)</p> <p>Male: \$27,040,000 (46%)</p>	<p>Female: \$3,160,000 (54%)</p> <p>Male: \$2,720,000 (46%)</p>	<p>Female: \$20,020,000 (58%)</p> <p>Male: \$14,360,000 (42%)</p>	<p>Female: \$18,960,000 (38%)</p> <p>Male: \$30,690,000 (62%)</p>
Ethnicity	<p>European: \$43,140,000 (78%)</p> <p>Māori: \$13,380,000 (24%)</p> <p>Pacific: \$3,590,000 (6%)</p> <p>Asian: \$2,550,000 (5%)</p>	<p>European: \$3,990,000 (68%)</p> <p>Māori: \$1,850,000 (31%)</p> <p>Pacific: \$720,000 (12%)</p> <p>Asian: \$960,000 (16%)</p>	<p>European: \$27,340,000 (80%)</p> <p>Māori: \$6,110,000 (18%)</p> <p>Pacific: \$2,280,000 (7%)</p> <p>Asian: \$2,210,000 (6%)</p>	<p>European: \$35,840,000 (72%)</p> <p>Māori: \$13,980,000 (28%)</p> <p>Pacific: \$4,570,000 (9%)</p> <p>Asian: \$2,830,000 (6%)</p>

Urban / rural	Urban: \$44,470,000 (86%) Rural: \$7,300,000 (14%)	Urban: \$4,900,000 (88%) Rural: \$660,000 (12%)	Urban: \$26,520,000 (85%) Rural: \$4,730,000 (15%)	Urban: \$35,820,000 (79%) Rural: \$9,580,000 (21%)
Average spend per customer				
Age	<p>Tamariki (aged 0 to 11 years): on average, \$6,132 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$7,091 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$3,477 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$1,194 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$285 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$292 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$1,657 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$1,502 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$1,060 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$909 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$7,752 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$2,746 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$1,456 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$1,322 is spent per customer.</p>
Sex	<p>On average, \$1,775 is spent per female customer.</p> <p>On average, \$2,196 is spent per male customer.</p>	<p>On average, \$289 is spent per female customer.</p> <p>On average, \$287 is spent per male customer.</p>	<p>On average, \$1,013 is spent per female customer.</p> <p>On average, \$1,036 is spent per male customer.</p>	<p>On average, \$1,026 is spent per female customer.</p> <p>On average, \$2,382 is spent per male customer.</p>

Ethnicity	<p>On average, \$1,811 is spent per European customer.</p> <p>On average, \$2,845 is spent per Māori customer.</p> <p>On average, \$3,576 is spent per Pacific customer.</p> <p>On average, \$2,655 is spent per Asian customer.</p>	<p>On average, \$288 is spent per European customer.</p> <p>On average, \$287 is spent per Māori customer.</p> <p>On average, \$288 is spent per Pacific customer.</p> <p>On average, \$292 is spent per Asian customer.</p>	<p>On average, \$985 is spent per European customer.</p> <p>On average, \$1,293 is spent per Māori customer.</p> <p>On average, \$1,387 is spent per Pacific customer.</p> <p>On average, \$1,057 is spent per Asian customer.</p>	<p>On average, \$1,450 is spent per European customer.</p> <p>On average, \$2,572 is spent per Māori customer.</p> <p>On average, \$2,530 is spent per Pacific customer.</p> <p>On average, \$1,016 is spent per Asian customer.</p>
Urban / rural	<p>On average, \$1,986 is spent per customer living in an urban area.</p> <p>On average, \$2,249 is spent per customer living in a rural area.</p>	<p>On average, \$290 is spent per customer living in an urban area.</p> <p>On average, \$276 is spent per customer living in a rural area.</p>	<p>On average, \$1,033 is spent per customer living in an urban area.</p> <p>On average, \$1,004 is spent per customer living in a rural area.</p>	<p>On average, \$1,521 is spent per customer living in an urban area.</p> <p>On average, \$1,863 is spent per customer living in a rural area.</p>
Urban / rural areas	<p>On average, \$2,117 is spent per customer living in a major urban area.</p> <p>On average, \$2,076 is spent per customer living in a large urban area.</p>	<p>On average, \$296 is spent per customer living in a major urban area.</p> <p>On average, \$284 is spent per customer</p>	<p>On average, \$1,029 is spent per customer living in a major urban area.</p> <p>On average, \$1,055 is spent per customer living in a large urban area.</p>	<p>On average, \$1,447 is spent per customer living in a major urban area.</p> <p>On average, \$1,598 is spent per customer living in a large urban area.</p>

	<p>On average, \$1,788 is spent per customer living in a medium urban area.</p> <p>On average, \$1,827 is spent per customer living in a small urban area.</p> <p>On average, \$1,695 is spent per customer living in a rural settlement area.</p> <p>On average, \$2,485 is spent per customer living in a rural other area.</p>	<p>living in a large urban area.</p> <p>On average, \$287 is spent per customer living in a medium urban area.</p> <p>On average, \$277 is spent per customer living in a small urban area.</p> <p>On average, \$280 is spent per customer living in a rural settlement area.</p> <p>On average, \$275 is spent per customer living in a rural other area.</p>	<p>On average, \$996 is spent per customer living in a medium urban area.</p> <p>On average, \$1,051 is spent per customer living in a small urban area.</p> <p>On average, \$1,023 is spent per customer living in a rural settlement area.</p> <p>On average, \$998 is spent per customer living in a rural other area.</p>	<p>On average, \$1,688 is spent per customer living in a medium urban area.</p> <p>On average, \$1,563 is spent per customer living in a small urban area.</p> <p>On average, \$1,693 is spent per customer living in a rural settlement area.</p> <p>On average, \$1,912 is spent per customer living in a rural other area.</p>
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# Customer journey

This section explores different population groups and their journey with Enable. It also describes the demographic characteristics of these population groups

The population groups explored are:

- Customers with Autism Spectrum Disorder (ASD),
- Customers who require wheelchair services (Whaikaha (DSS) and ACC),
- ACC Serious Injury customers, and
- ACC non-Serious Injury customers.

Descriptions of what each population group is made up of is detailed in the Methodology section.

## Customers with Autism Spectrum Disorder

### Whaikaha (DSS) EMS customers

The proportion of customers identified with ASD is between 1.2% and 2.4%, with an increasing trend over time (2014 to 2023). 2.4% identified with ASD in 2023 is similar to results from the New Zealand Health Survey where the prevalence of ASD is 2.5% (Ministry of Health, 2023).

Since 2014, the average cost per ASD customer is \$1,340 to \$2,600 higher than a non-ASD customer. The average cost per customer (ASD and non-ASD) can be seen in Figure 2.

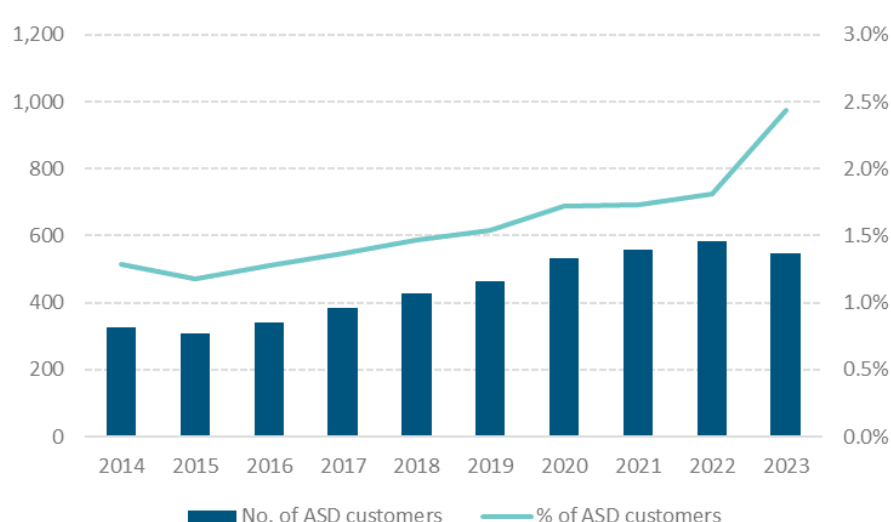
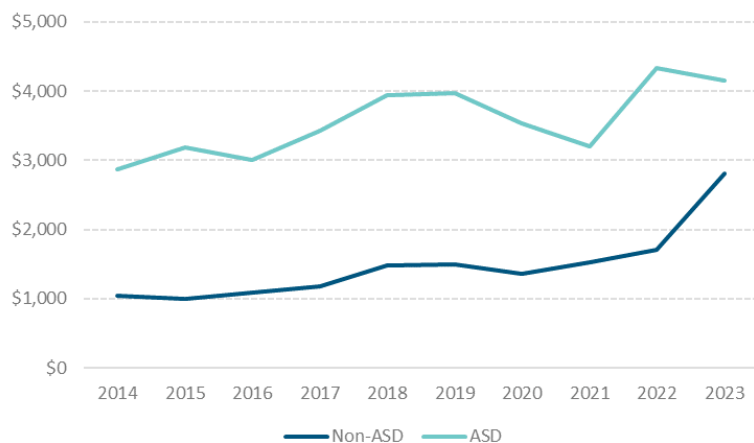


Figure 1: Number and proportion of Whaikaha EMS customers with ASD over time (calendar year)

Figure 2: Average cost per Whaikaha EMS customer broken down by ASD and non-ASD customers over time (calendar year)

61-75% of ASD customers received Band 1 and Band 2 equipment services (excluding 2014 and 2023 calendar year).

A much lower proportion of ASD customers receive Band 3 equipment and Complex housing services (8-12% of ASD customers received Band 3 equipment services and 8-22% received Complex housing services).



For customers that received Band 1 equipment services, the average cost per ASD customer is between \$275 and \$594 higher than the average cost per non-ASD customer (excluding 2023).

## Whaikaha (DSS) spectacles and hearing customers

The proportion of Whaikaha spectacles and hearing customers identified with ASD ranges between 1.8% and 2.5% over time (2017 to 2023). There appears to be a decreasing trend of customers with ASD which is different to that seen for Whaikaha EMS customers. This can be seen in Figure 3.

Since 2014, the average cost per ASD customer is about \$230 to \$325 lower than a non-ASD customer. This gap appears to be increasing slightly over time. The average cost per customer (ASD and non-ASD) can be seen Figure 4.

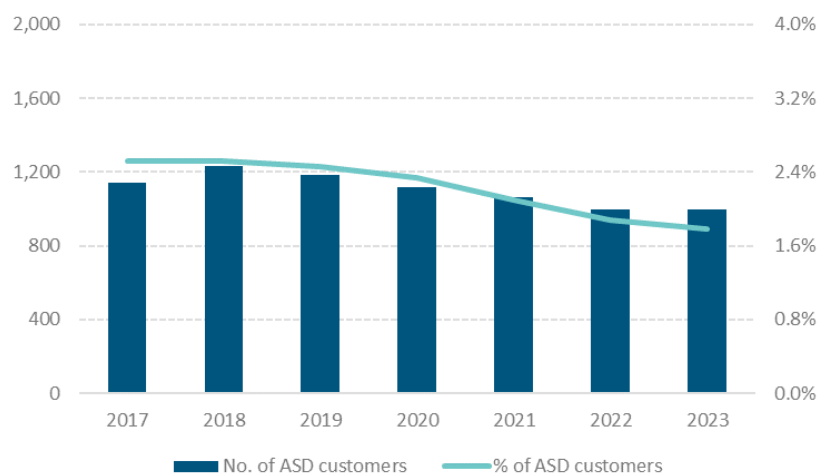
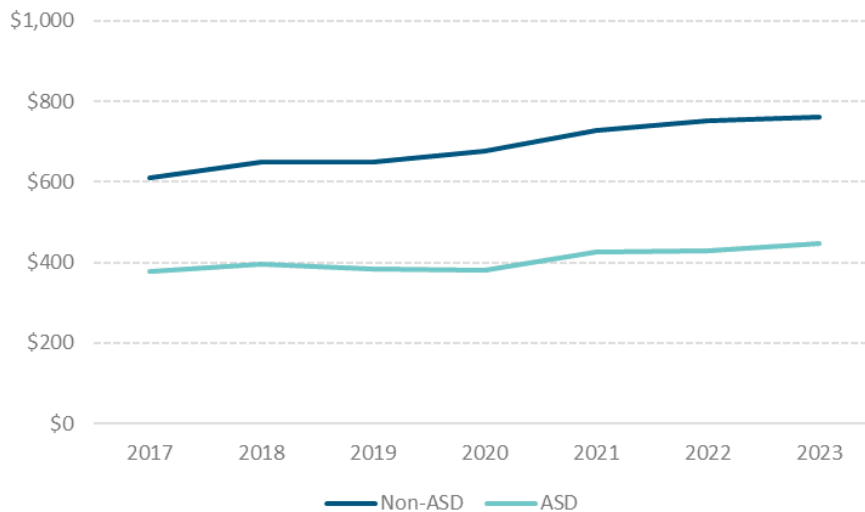


Figure 3: Number and proportion of Whaikaha spectacles and hearing service customers with ASD over time (calendar year)

Figure 4: Average cost per Whaikaha spectacles and hearing customer broken down by ASD and non-ASD customers over time (calendar year)



## Demographic characteristics

Table 6: Demographic characteristics for the ASD customer group (2022/23). Note that total response ethnicity has been used.

Topic areas	ASD customers
Sex	Most customers (73%) are male.
Age	Most customers are under the age of 19 years (86%).
Ethnicity	Customers of European ethnicity make up most of this group however, this has decreased over time. In 2016/17, 87% of customer were of European ethnicity. This decreased to 76% of customers in 2022/23.
	In 2022/23, Māori customers make up the second highest group (27%), followed by Asian (14%) and Pacific (8%).
	The proportion of customers with Asian ethnicity has increased the most between 2016/17 and 2022/23 (7 percentage points).
	Māori and Pacific customers have increased 3 and 2 percentage points respectively between 2016/17 and 2022/23.
Urban/rural	Most customers (86-88%) live in urban areas and this has remained constant over time.



Region	In 2022/23, most customers live in Canterbury region (21%), followed by Auckland region (19%) and, Waikato and Wellington region (both at 13%).
Deprivation (2017/18)	More customers live in areas with greatest deprivation. 26% lived in areas with deprivation index 9-10 (most deprived).
	23% lived in areas with deprivation index 7 to 8.
	20% lived in areas with deprivation index 5 to 6.
	16% lived in areas with deprivation index 3 to 4.
	14% of customers lived in areas with deprivation index 1 to 2 (least deprived).

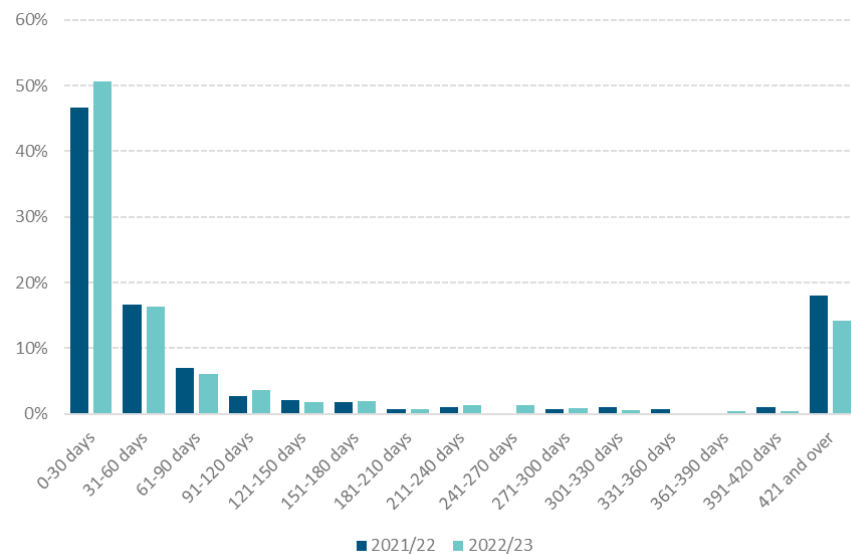
More details and visualisations can be found in Appendix 6.

## Customers requiring a wheelchair

In this section we compare the equipment spent for customers requiring a wheelchair in Whaikaha and ACC.

**The time until they first receive a wheelchair doesn't appear excessive.** For claims that received a wheelchair from Enable, majority of these claims (63% and 67% for claims lodged in 2021/22 and 2022/23) received their first wheelchair within 60 days of their claim being lodged.

Figure 5: Distribution of ACC claimants by the number of days from lodgement of the claim to first wheelchair service broken down by year of lodgement



## Demographic characteristics

Table 7: Demographic characteristics for Whaikaha and ACC customers that received a wheelchair service (2022/23)

Topic areas	Whaikaha customers	ACC customers
Total number of customers	1,182 customers (this is a 39% decrease compared to 2020/21 and 2021/22)	1,701 customers
Sex	52% of customers are male.	37% of customers are male.
	48% of customers are female.	63% of customers are female.
Age	40% of customers are aged between 20 and 69 years.	60% of customers are aged between 20 and 69 years (majority working-age).
	11% of customers are under the age of 20 years.	9% of customers are under the age of 20 years.

	49% of customers are aged 70 years and over.	31% of customers are aged 70 years and over.
Sex and age	Both female and male customers follow a similar pattern as above in the age topic.	The number and proportion of female customers increase as age increases, peaking across 50 to 79 years, after that it decreases as age increases.
		The number and proportion of male customers are consistent across age groups.
Ethnicity (total response)	80% of customers are of European ethnicity.	78% of customers are of European ethnicity.
	21% of customers are of Māori ethnicity.	18% of customers are of Māori ethnicity.
	5% of customers are of Pacific ethnicity.	6% of customers are of Pacific ethnicity.
	4% of customers are of Asian ethnicity	10% of customers are of Asian ethnicity
Urban/rural	86% of customers live in urban areas.	82% of customers live in urban areas.
Deprivation	15% lived in areas with deprivation index 1 to 2 (least deprived).	17% lived in areas with deprivation index 1 to 2 (least deprived).
	15% lived in areas with deprivation index 3 to 4.	21% lived in areas with deprivation index 3 to 4.
	19% lived in areas with deprivation index 5 to 6.	20% lived in areas with deprivation index 5 to 6.
	24% lived in areas with deprivation index 7 to 8.	21% lived in areas with deprivation index 7 to 8.
	27% lived in areas with deprivation index 9 to 10 (most deprived).	22% lived in areas with deprivation index 9 to 10 (most deprived).

Figure 6: Population pyramid for Whaikaha funded customers that received a wheelchair service

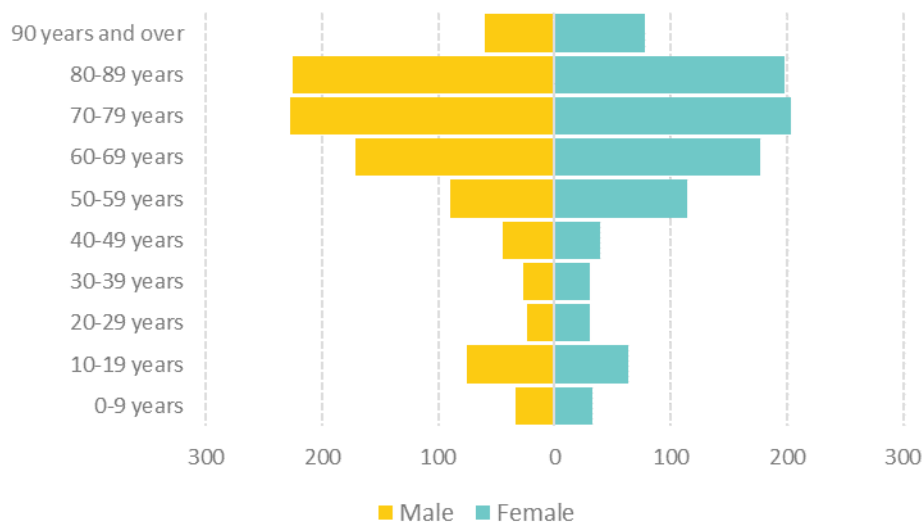
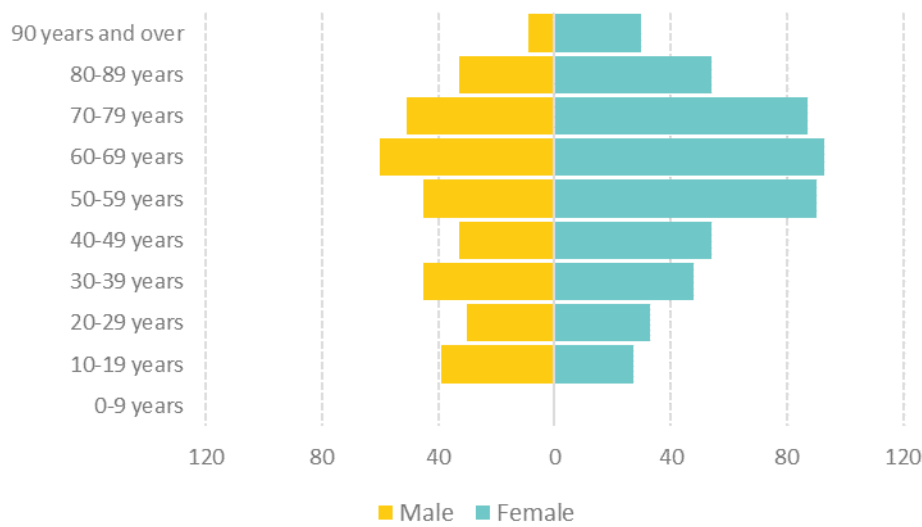


Figure 7: Population pyramid for ACC funded customers that received a wheelchair service



## ACC customers

### Serious Injury customers

Enable New Zealand provided services to 2,169 serious injury customers in 2022/23. Most of these customers (56%) have spinal cord injuries, followed by 36% with traumatic brain injuries, and 7% with comparable diagnosis injuries.

### Spinal cord injuries

#### *From Enable's point of view*

To understand how the group of people with spinal cord injuries will appear to Enable at any given point in time, we look at the services Enable provided in 2022/23. We'll then look back to see when these claims were lodged and whether there are any variations in the amount spent per claim.

**These claims tend to be old** – the majority of claims (79%) that received services from Enable in 2022/23 were lodged prior to 2020. This is due to the nature of the serious injury claims pool – it has built up over time so many of the claims are quite old.

Table 8 shows a breakdown of the time since lodgement for claims that received services from Enable in 2022/23. Just under half (46%) had their injury more than 10 years ago.

*Table 8: Serious injury claimants profiled with spinal cord injuries that received services in 2022/23 broken down by the number of years since lodgement.*

Time since lodgement	Percentage of the group of people with spinal cord injuries receiving Enable services
21 years or more	22%
16 – 20 years	11%
11 – 15 years	13%
6 – 10 years	16%
3 – 5 years	24%
2 years or less	14%

These people are most likely to receive services in the second year after the injury and there is only a slow drop off over time after that. Also, it can be expected that four years from when a claim is lodged with ACC, about 73% still require equipment, housing modification or vehicle modification services.

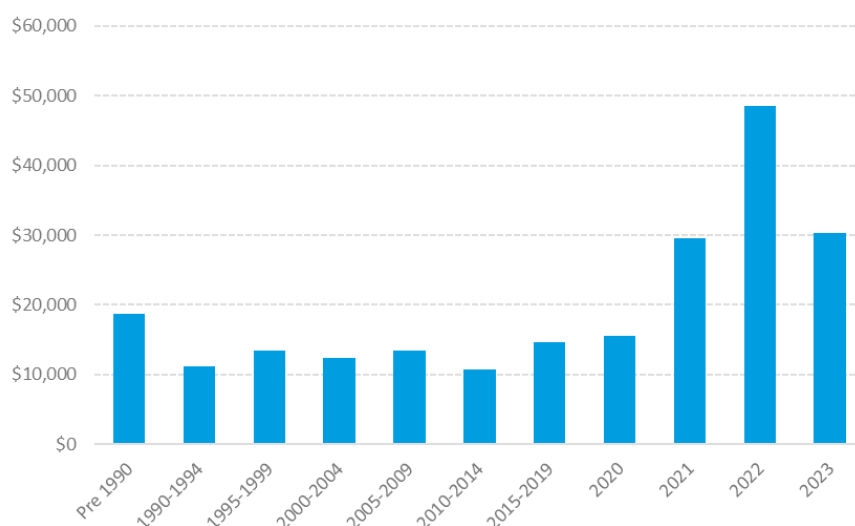
*Table 9: Proportion of Serious Injury claimants profiled with spinal cord injuries with equipment, vehicle modification or housing modification services one to five years from lodgement.*

Lodgement year	First year	Second year	Third year	Fourth year	Fifth year
2018	72%	92%	72%	69%	58%
2019	73%	95%	84%	76%	–
2020	70%	91%	76%	–	–
2021	71%	89%	–	–	–
2022	71%	–	–	–	–
Average	71%	92%	77%	73%	58%

– Time from lodgement hasn't occurred yet

**The average cost per claim is highest for recent claims. It is lower for older claims, but it is still a significant spend.** The average ongoing cost per year for older claims (\$10,000–\$20,000 per claim) is lower than for claims recently lodged with ACC (\$30,000–\$50,000 per claim).

*Figure 8: For serious injury claimants profiled with spinal cord injury that received services in 2022/23, the average cost per claim by lodgement period*



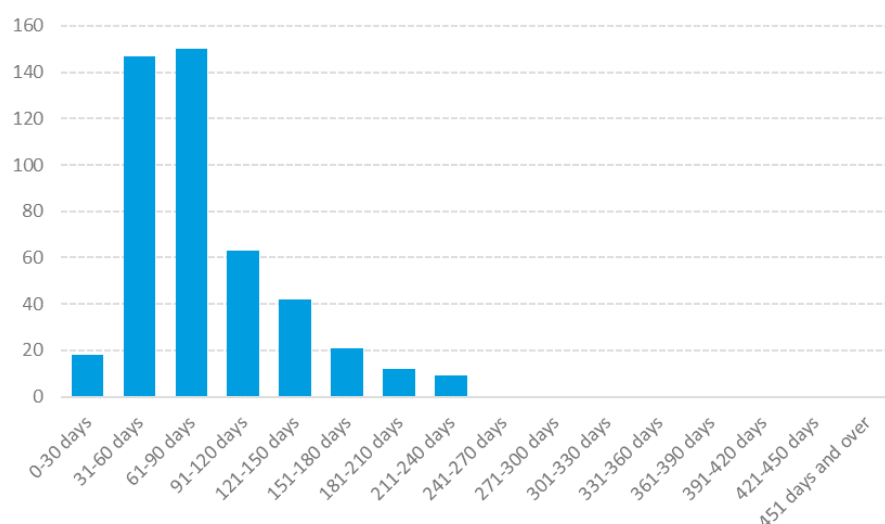
### *From the Client's point of view*

**Nearly all clients will receive aids and appliances at some point.** 97–100% of claims lodged between 2018 and 2021 received aids and appliances, vehicle modification or housing modification services.

### **The time until they first receive an aid or appliance doesn't appear excessive.**

For claims that received aids and appliances, the majority of these claims (68%) received their first aids and appliance service within 90 days of their claim being lodged. However, from the client's point of view, this could still mean that they are waiting for several weeks for ACC to authorize a payment and for Enable to deliver the service.

*Figure 9: Distribution of Serious Injury claimants profiled with spinal cord injuries by the number of days from lodgement of the claim to first service of 'Aids and Appliances' (for claims lodged between 2018 and 2022)*



**The time until they receive services is quite a bit longer for more significant purchases.** For both vehicle modification and housing modification services, the time taken for claimants to receive their first service is generally larger than for aids and appliances. Of those who received housing modifications:

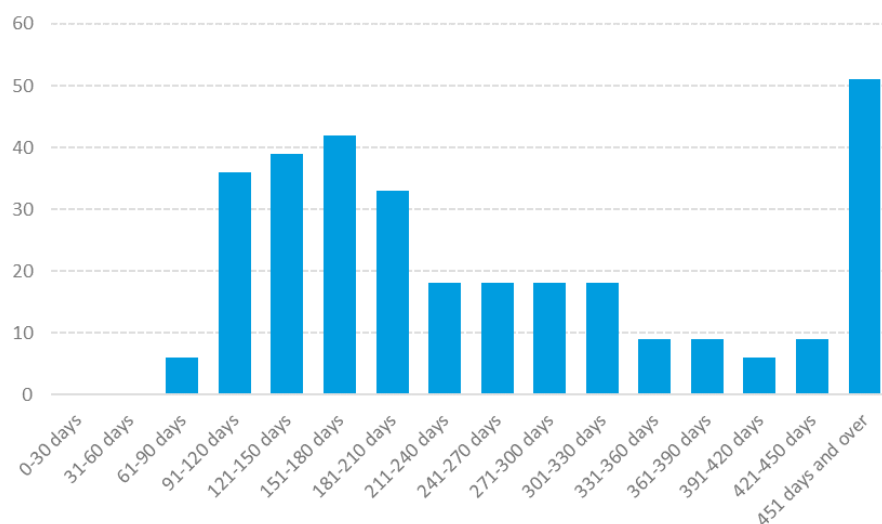
- 50% received their first housing modification within 210 days
- 16% received their first modification after more than 450 days

Of those who received motor vehicle purchases or modifications:

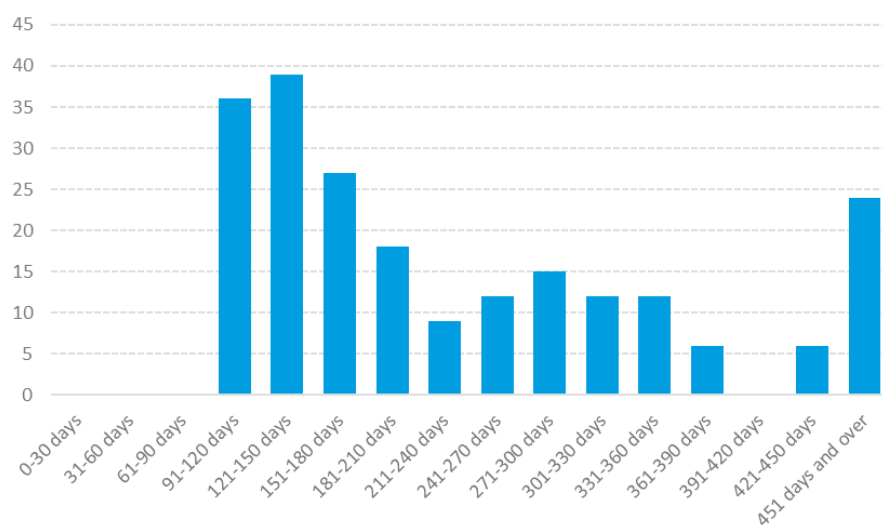
- 56% received their first one within 210 days
- 11% received their first one after more than 450 days

The distribution of days from claim lodgement to first aids and appliance, housing modification and vehicle modification services can be seen in Figure 9, Figure 10 and Figure 11.

*Figure 10: Distribution of Serious Injury claimants profiled with spinal cord injuries by the number of days from lodgement of the claim to first service of 'Housing Modification' (for claims lodged between 2018 and 2022)*



*Figure 11: Distribution of Serious Injury claimants profiled with spinal cord injuries by the number of days from lodgement of the claim to first service of 'Vehicle Modification' (for claims lodged between 2018 and 2022)*





## Traumatic brain injury

*From Enable's point of view*

**Like for spinal injuries, these claims are old.** The distribution of time since lodgement is basically exactly the same as seen above for spinal injuries.

*Table 10: Serious injury claimants profiled with spinal cord injuries that received services in 2022/23 broken down by the number of years since lodgement.*

Time since lodgement	Percentage of the group of people with spinal cord injuries receiving Enable services
21 years or more	20%
16 – 20 years	10%
11 – 15 years	16%
6 – 10 years	16%
3 – 5 years	24%
2 years or less	14%

Like for spinal injuries, these people are most likely to receive services in the second year after the injury. However, fewer claims receive Enable services and there is more of a drop off over time. By the fifth year someone with a brain injury is only half as likely to receive Enable services as someone with a spinal injury.

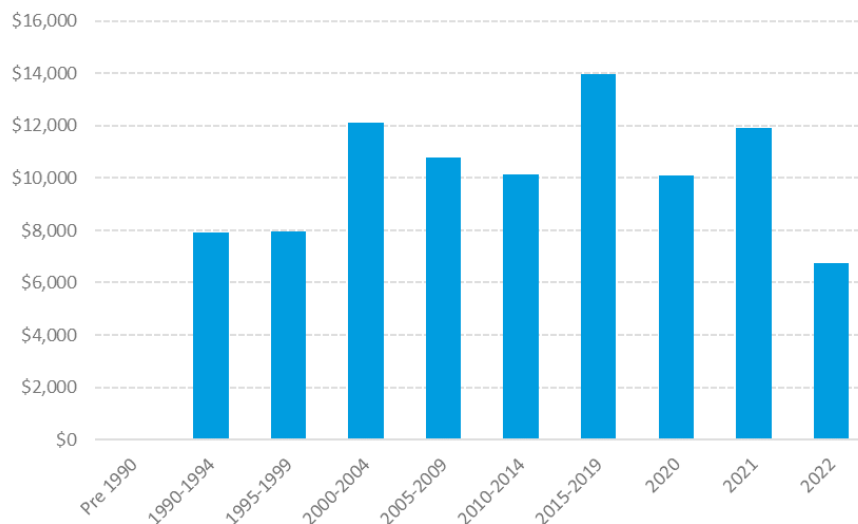
*Table 11: Proportion of Serious Injury claimants profiled with traumatic brain injury with equipment, vehicle modification or housing modification services one to five years from lodgement*

Lodgement year	First year	Second year	Third year	Fourth year	Fifth year
2018	37%	61%	43%	39%	31%
2019	46%	54%	40%	31%	–
2020	45%	52%	39%	–	–
2021	45%	55%	–	–	–
2022	45%	–	–	–	–
Average	44%	55%	41%	35%	31%

– Time from lodgement hasn't occurred yet

Unlike for spinal injuries, the average cost per claim (for those clients who received payments) is the same for newer claims as it is for older claims. The average spend is lower for head injuries (at approximately \$10,000 per year per claim) than for spinal injuries (which peaked at \$50,000 in the second year and dropped down to around \$13,000).

*Figure 12: For serious injury claimants profiled with traumatic brain injury that received services in 2022/23, the average cost per claim by lodgement period (pre-1990 average cost is suppressed)*



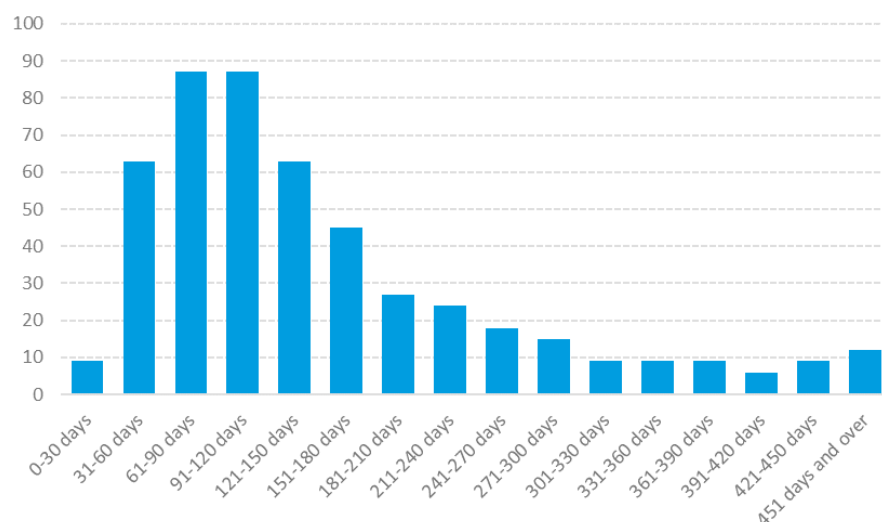
### *From the Client's point of view*

**Three quarters of these clients will receive Enable services at some point.** 73-78% of claims lodged between 2018 and 2021 received aids and appliances, vehicle modification or housing modification services.

66% of claims lodged between 2018 and 2022 received aids and appliance services. **The time until they receive their first aid or appliance is slightly longer than for spinal injury customers.** Of those that received aids and appliances, 50% received their first aids and appliance service within 120 days of their claim being lodged. The distribution of days from claim lodgement to first aids and appliance service can be seen in Figure 13.

**Much fewer customers with head injuries received housing modifications or vehicle modifications (15% and 3% respectively).** The distribution of days from claim lodgement to first service for housing and vehicle modifications can be found in Appendix 5.

Figure 13: Distribution of Serious Injury claimants profiled with traumatic brain injury by the number of days from lodgement of the claim to first service of aids and appliances (for claims lodged between 2018 and 2022)



## Comparable diagnosis or undefined

*From Enable's point of view*

**Again, these claims tend to be old.** 67% of claims that received services from Enable in 2022/23 are for claims lodged prior to 2020. It can be expected that four years from when a claim is lodged with ACC, about 55% still require equipment, housing modification or vehicle modification services (this is much lower than for spinal cord injuries and higher than for traumatic brain injuries). These results can be seen in Table 12.

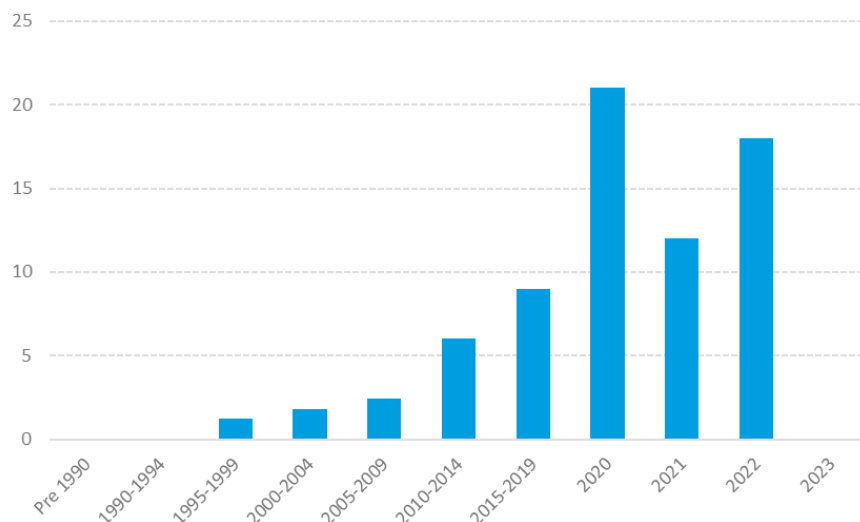
Table 12: Proportion of Serious Injury claimants profiled with comparable diagnosis or undefined injuries with equipment, vehicle modification or housing modification services one to five years from lodgement

Lodgement year	First year	Second year	Third year	Fourth year	Fifth year
2018	20%	50%	40%	60%	50%
2019	25%	50%	58%	50%	-
2020	31%	54%	54%	-	-
2021	25%	58%	-	-	-
2022	45%	-	-	-	-
Average	29%	53%	51%	55%	50%

- Time from lodgement hasn't occurred yet

Historically, the number of claims with this Serious Injury profile is small, but it is growing (see Figure 14).

*Figure 14: For serious injury claimants profiled with comparable diagnosis and undefined injuries that received services in 2022/23, the average yearly number of claims per lodgement period*



#### *From the client's point of view*

48% of claims lodged between 2018 and 2022 received aids and appliance services. 82% of claims that did, received their first aids and appliance service within 240 days of their claim being lodged.

Only 9% of claims lodged between 2018 and 2022 received housing modification services.

## Non-Serious Injury customers

**Enable New Zealand provided services to 29,175 non-serious injury claims in 2022/23. This equates to 28,437 customers.**

Most of these claimants (46%) have soft tissue injuries, followed by 38% with fracture or dislocation injuries, 16% with all other types of injuries.

### Soft tissue injury

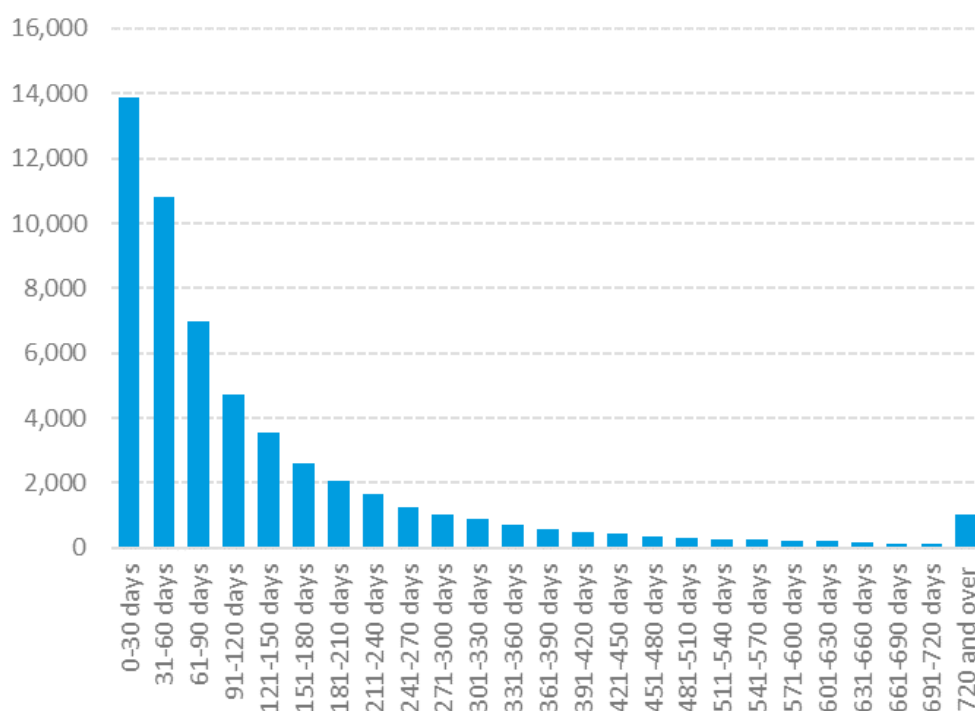
*From the Client's point of view*

**1.2-1.3 million soft tissue injury claims** are lodged with ACC every year. 1% of these claims lodged between 2018 and 2021 received aids and appliances, vehicle modification or housing modification services.

Of the claims that received services from Enable, **97% received aids** and appliance services, 17% received vocational equipment, 1% received housing modifications, and 1% received vehicle modifications.

Of those that received aids and appliances, **58% received their first aids and appliance service within 90 days** of their claim being lodged. The distribution of days from claim lodgement to first aids and appliance service can be seen in Figure 15.

*Figure 15: Distribution of Non-Serious Injury claimants with soft tissue injury by the number of days from lodgement of the claim to first service of aids and appliances (for claims lodged between 2018 and 2022)*

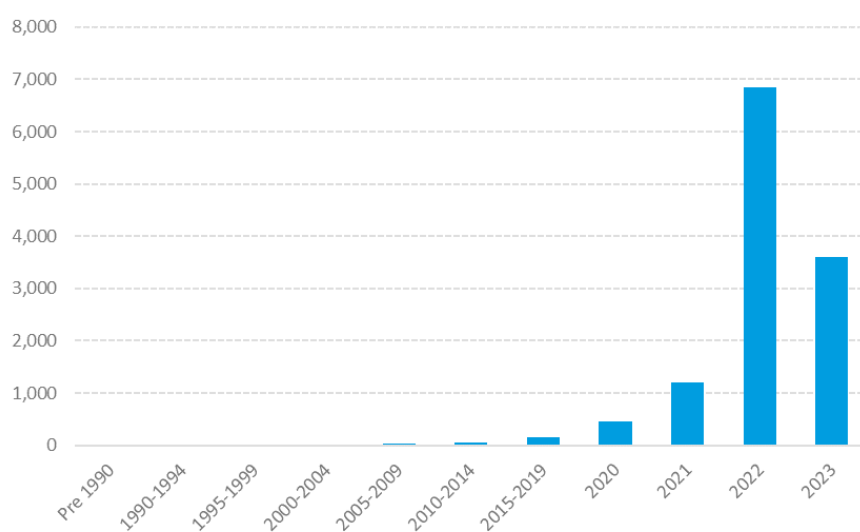


*From Enable's point of view*

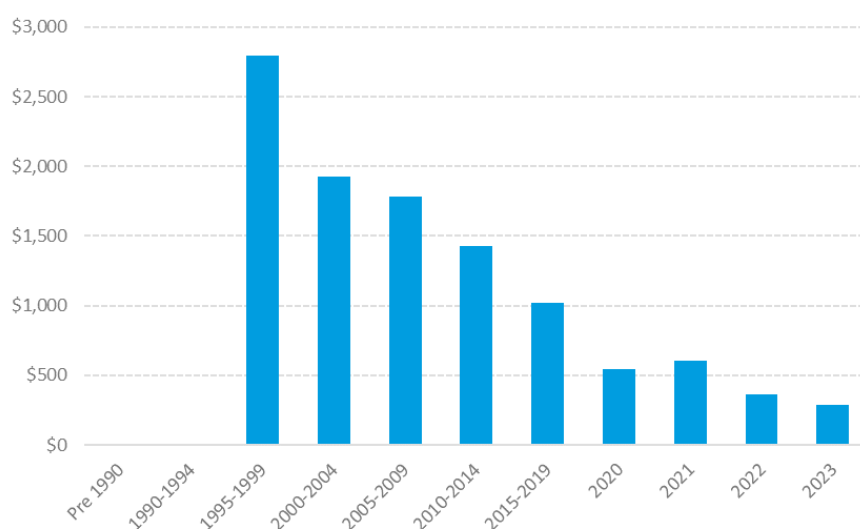
**As expected, Enable supplies services to this group for a much shorter time than for serious injury customers.** The majority of claims (78%) that received services from Enable in 2022/23 are for claims lodged in recent years (2022 and 2023).

**For those that receive Enable services, the older the claim, the higher the average cost.** The average cost for claims lodged in 2022 or 2023 (\$335 per claim) is lower than for older claims lodged with ACC (\$1,370 per claim for claims lodged between 1995 and 2019).

*Figure 16: For non-serious injury claimants with soft tissue injuries that received services in 2022/23, the average yearly number of claims per lodgement period*



*Figure 17: For non-serious injury claimants with soft tissue injury that received services in 2022/23, the average cost per claim by lodgement period (pre-1990 and 1990-1994 cost is suppressed)*



## Fracture or dislocation injury

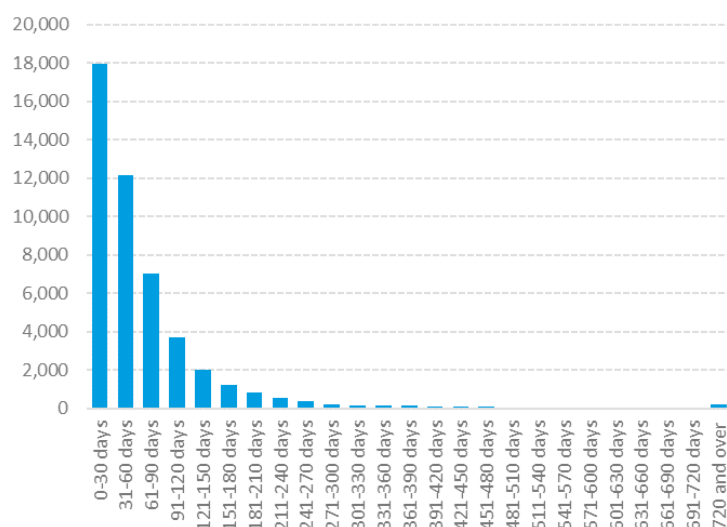
### *From the Client's point of view*

**133,000–142,000 fracture or dislocation injury claims are** lodged with ACC every year. 7.2–7.5% of these claims lodged between 2018 and 2021 received aids and appliances, vehicle modification or housing modification services.

Similar to soft tissue injury, of the claims that received services from Enable, **98% received aids and appliance services**. This is followed by 13% received vocational equipment, 2% received housing modifications, and 1% received vehicle modifications.

Of those that received aids and appliances, **78% received their first aids and appliance service within 90 days of their claim being lodged**. The distribution of days from claim lodgement to first aids and appliance service can be seen in Figure 18.

*Figure 18: Distribution of Non-Serious Injury claimants with fracture or dislocation injury by the number of days from lodgement of the claim to first service of aids and appliances (for claims lodged between 2018 and 2022)*



### *From Enable's point of view*

**The same patterns are seen for customers with fractures or dislocations.** The majority of claims (89%) that received services from Enable New Zealand in 2022/23 are for claims lodged in recent years (2022 and 2023).

The average cost for these claims (\$432 per claim) is lower than for older claims lodged with ACC (\$1,665 per claim for claims lodged between 1995 and 2019).

## Other injury

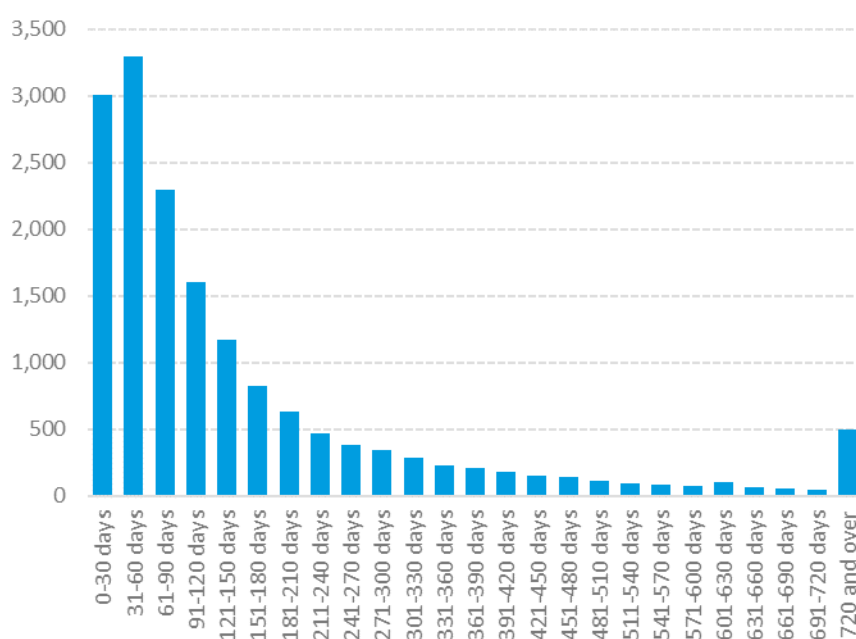
### *From the Client's point of view*

**524,500–608,300 other injury claims are lodged** with ACC every year. 0.5–0.7% of these claims lodged between 2018 and 2021 received aids and appliances, vehicle modification or housing modification services.

Similar to soft tissue injury and fracture or dislocation injury, of the claims that received services from Enable, **96% received aids and appliance services**. This is followed by 17% received vocational equipment, 3% received housing modifications, and 1% received vehicle modifications.

Of those that received aids and appliances, **52% received their first aids and appliance service within 90 days** of their claim being lodged. The distribution of days from claim lodgement to first aids and appliance service can be seen in Figure 19.

*Figure 19: Distribution of Non-Serious Injury claimants with other injury by the number of days from lodgement of the claim to first service of aids and appliances (for claims lodged between 2018 and 2022)*



### *From Enable's point of view*

For other injuries, the claims Enable provides services tend to be older (than for soft-tissue injuries or fractures). If the customer does receive services, they also tend to be more expensive. 62% of claims that received services from Enable in 2022/23 are for claims lodged in recent years (2022 and 2023). The average cost for these claims (\$906 per claim) is lower than for older claims lodged with ACC (\$2,636 per claim for claims lodged between 1995 and 2019).



## Demographic characteristics of ACC customers

There are differences when comparing the 2022 –2023 demographic characteristics of serious injury customers and non-serious injury customers.

They include:

- **Most serious injury customers are male.**  
Whereas it is the opposite for non-serious injury customers where the majority are female.
- There is a higher proportion of customers **aged 70 years and over for non-serious injury** customers than there is for serious injury customers.
- There is a higher proportion of customers **under the age of 20 years for serious injury** customers than there is for non-serious injury customers.
- A higher proportion of customers in the **serious injury customer group identify as being part of the Māori and Pacific** ethnic group than in the non-serious injury customer group.
- **Serious injury customers generally live in areas with a higher deprivation score** than non-serious injury customers.

*Table 13: Demographic characteristics of ACC customers comparing serious injury and non-serious injury customers (2022/23)*

Topic areas	Serious Injury customers	Non-Serious Injury customers
Total number of customers	2,169 customers (7%)	28,437 customers (93%)
Sex	69% of customers are male.	39% of customers are male.
	31% of customers are female.	61% of customers are female.
Age	73% of customers are aged between 20 and 69 years (majority working-age).	73% of customers are aged between 20 and 69 years (majority working-age).
	13% of customers are under the age of 20 years.	4% of customers are under the age of 20 years.
	14% of customers are aged 70 years and over.	23% of customers are aged 70 years and over.

Sex and age	The number and proportion of female customers are consistent across age groups.	The proportion of female and male customers have a similar pattern across age groups. The proportion of customers increase as age increases, peaking at 50 to 59 years, where it then decreases as age increases.
	The number and proportion of male customers increase as age increases, peaking at 50 to 59 years, where it then decreases as age increases	
Ethnicity (total response)	71% of customers are of European ethnicity.	79% of customers are of European ethnicity.
	31% of customers are of Māori ethnicity.	16% of customers are of Māori ethnicity.
	10% of customers are of Pacific ethnicity.	5% of customers are of Pacific ethnicity.
	6% of customers are of Asian ethnicity	9% of customers are of Asian ethnicity
Urban/rural	80% of customers live in urban areas.	82% of customers live in urban areas.
Deprivation	15% lived in areas with deprivation index 1 to 2 (least deprived).	17% lived in areas with deprivation index 1 to 2 (least deprived).
	15% lived in areas with deprivation index 3 to 4.	19% lived in areas with deprivation index 3 to 4.
	19% lived in areas with deprivation index 5 to 6.	20% lived in areas with deprivation index 5 to 6.
	21% lived in areas with deprivation index 7 to 8.	22% lived in areas with deprivation index 7 to 8.
	31% lived in areas with deprivation index 9 to 10 (most deprived).	21% lived in areas with deprivation index 9 to 10 (most deprived).

Figure 20: Population pyramid for Serious Injury customers in 2022/23

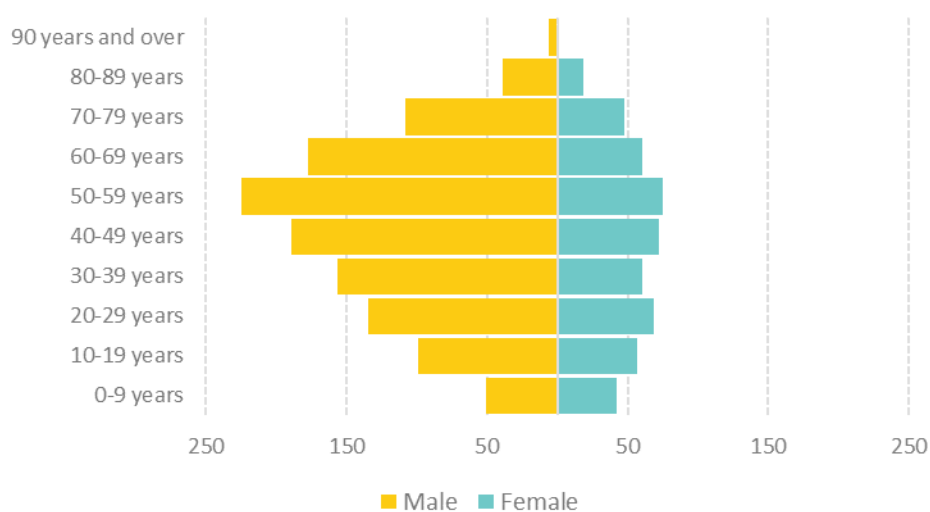
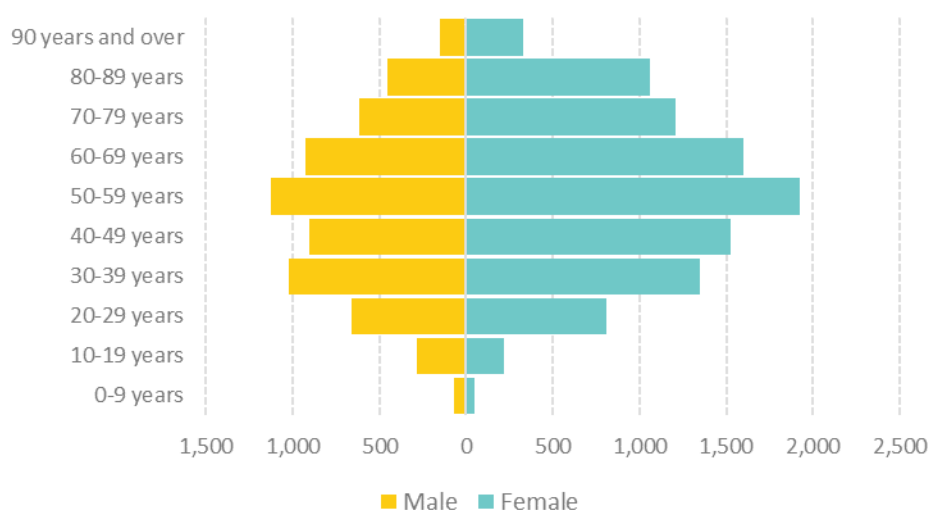


Figure 21: Population pyramid for Non-Serious Injury customers in 2022/23



## ACC customers spend by demographic characteristics

There are differences when comparing the average spend by demographic characteristics for serious injury customers and non-serious injury customers. They include (in 2022/23):

- The total spending on males for serious injuries is more than double that of females.
- The average spend for males is higher than females for serious injury and non-serious injury customers.

- The average spend for customers aged 0 to 11 years is higher than other age groups for serious injury and non-serious injury customers.
- For serious injury customers, average spend for Pacific customers is the highest, followed by Māori, Asian and European.
- For non-serious injury customers, average spend for Māori customers is the highest, followed by European, Pacific and Asian.
- The average spend for customers who live in rural areas is higher than for customers who live in urban areas for serious injury and non-serious injury customers.

Table 14: ACC customer spend (serious injury and non-serious injury) by demographic characteristics in 2022/23

Topic areas	Serious Injury customers	Non-Serious Injury customers
Total spend (to nearest \$10,000)		
Sex	Female: \$9,060,000 (29%) Male: \$21,990,000 (71%)	Female: \$9,900,000 (53%) Male: \$8,700,000 (47%)
Age	Tamariki (aged 0 to 11 years): \$2,650,000 (9%) Rangatahi (aged 12 to 24 years): \$4,500,000 (15%) Pakeke (aged 25 to 64 years): \$18,060,000 (58%) Kaumatua (aged 65 years and over): \$5,830,000 (19%)	Tamariki (aged 0 to 11 years): \$700,000 (4%) Rangatahi (aged 12 to 24 years): \$850,000 (5%) Pakeke (aged 25 to 64 years): \$10,600,000 (57%) Kaumatua (aged 65 years and over): \$6,460,000 (35%)
Ethnicity (total response)	European: \$20,840,000 (67%) Māori: \$10,420,000 (34%) Pacific: \$3,550,000 (11%) Asian: \$1,780,000 (6%)	European: \$15,000,000 (81%) Māori: \$3,560,000 (19%) Pacific: \$1,020,000 (5%) Asian: \$1,060,000 (6%)
Urban / rural	Urban: \$22,380,000 (78%) Rural: \$6,210,000 (22%)	Urban: \$13,440,000 (80%) Rural: \$3,380,000 (20%)
Average spend per customer		
Sex	On average, \$13,545 is spent per female customer.	On average, \$556 is spent per female customer.

	On average, \$14,659 is spent per male customer.	On average, \$764 is spent per male customer.
Age	<p>Tamariki (aged 0 to 11 years): on average, \$19,231 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$17,254 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$13,935 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$12,306 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$2,365 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$505 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$577 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$732 is spent per customer.</p>
Ethnicity (total response)	<p>On average, \$13,618 is spent per European customer.</p> <p>On average, \$15,439 is spent per Māori customer.</p> <p>On average, \$16,661 is spent per Pacific customer.</p> <p>On average, \$14,797 is spent per Asian customer.</p>	<p>On average, \$647 is spent per European customer.</p> <p>On average, \$748 is spent per Māori customer.</p> <p>On average, \$641 is spent per Pacific customer.</p> <p>On average, \$396 is spent per Asian customer.</p>
Urban / rural	<p>On average, \$13,969 is spent per customer living in an urban area.</p> <p>On average, \$15,922 is spent per customer living in a rural area.</p>	<p>On average, \$612 is spent per customer living in an urban area.</p> <p>On average, \$710 is spent per customer living in a rural area.</p>
Urban / rural areas	<p>On average, \$14,572 is spent per customer living in a major urban area.</p> <p>On average, \$13,480 is spent per customer living in a large urban area.</p> <p>On average, \$13,307 is spent per customer living in a medium urban area.</p>	<p>On average, \$550 is spent per customer living in a major urban area.</p> <p>On average, \$677 is spent per customer living in a large urban area.</p> <p>On average, \$712 is spent per customer living in a medium urban area.</p>

	<p>On average, \$13,158 is spent per customer living in a small urban area.</p> <p>On average, \$12,574 is spent per customer living in a rural settlement area.</p> <p>On average, \$16,841 is spent per customer living in a rural other area.</p>	<p>On average, \$684 is spent per customer living in a small urban area.</p> <p>On average, \$830 is spent per customer living in a rural settlement area.</p> <p>On average, \$676 is spent per customer living in a rural other area.</p>
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Further details on spend and demographic characteristics can be found in the table below and in Appendix 5.

# Equity analysis

## The purpose, and chosen approaches to, equity analysis

The purpose of equity analysis is to better understand the outcomes experienced by different population groups. This section is focused on outcomes for the following priority populations:

- Māori ethnicity
- Pacific peoples

European ethnicity is also included as a comparison group.

For each priority population, the following characteristics are explored:

- Age stages
- Migrant status
- Gender
- Urbanity/Rurality
- Deprivation index
- Chronic conditions

## Equity analysis by customer group

This section explores each of Enable's customer groups (Whaikaha EMS, Whaikaha spectacles and ACC) by:

**1. Describing the make-up of the base population** in terms of priority populations so we can see whether some groups are over- or under-represented.

**2. Comparing spend and preconditions for different population groups** to identify where different groups receive different amounts of equipment support, as well as differences in underlying pre-existing conditions.

## Whaikaha (DSS) Equipment and Modification Services (EMS)

This section describes the representation of Whaikaha EMS services in the base population of New Zealanders south of the Bombay Hills (not including Northland or Auckland areas).

The characteristics of Whaikaha EMS customers show some differences across the three ethnicities. Table 15 details Whaikaha EMS customer characteristics by sex, age, urban/rural areas, deprivation, migrant status and chronic condition.

There are some large differences in the breakdown of customers by ethnicity which, on the surface, might imply equity issues in the allocation of Whaikaha EMS equipment. However, there are broader societal and demographic patterns – namely the higher life expectancy of Europeans, and of women – which have implications for the observed differences in customer demographics for Whaikaha EMS, which predominantly serves older people. Further to this, Māori and Pacific people are more likely to live in relatively deprived neighbourhoods, and to have chronic health conditions.

The drivers for these differences are complex, and beyond the scope of this analysis (see for example the Waitangi Tribunal claim on Health Services and Outcomes

[https://forms.justice.govt.nz/search/Documents/WT/wt\\_DOC\\_195476216/Hauora%202023%20W.pdf](https://forms.justice.govt.nz/search/Documents/WT/wt_DOC_195476216/Hauora%202023%20W.pdf)). Nevertheless, Enable needs to be cognisant of the different pre-conditions and social determinants of health experienced by different groups, particularly Māori and Pacific Peoples.

For example:

- a larger proportion of customers are female. This is likely to be due to the higher life expectancy of women (53% of the NZ 65+ population is female, with greater differences as age increases).
- Many more European older people are customers than for other ethnicities. This is likely due to higher life expectancy for European than other ethnicities.
- Many more Māori and Pacific customers live in deprivation index 10 regions. This reflects the overall pattern for Māori and Pacific Peoples, resulting from the impacts of colonisation, immigration settings, and systemic discrimination.



A more detailed analysis of the likelihood to receive services is required to account for both societal and age differences before we can definitively state if there are any equity issues regarding access. This may be the subject of future investigation.

Keeping that in mind, the key surface level differences in Table 15 are:

- Females are represented more than males in all three ethnicities.
- There is a clear skew towards the elderly for number of customers in all three ethnicity groups. However, there are some differences by age for all three ethnicity groups. For European customers, older people tend to make up a significantly larger proportion of the customers than for other ethnicities.
- All three ethnicities have a skew towards large and major urban areas. The skew is a lot more significant for Pacific ethnicity than the other two ethnicity groups.
- There is a significantly stronger skew towards higher deprivation areas for both Māori and Pacific ethnicities when compared to European customers of Whaikaha EMS services. The vast majority of Whaikaha EMS Māori and Pacific customers are living in deprivation levels 10, 9, 8, and 7, reflecting the societal difference that more Māori and Pacific people reside in high deprivation index areas.
- The majority of customers across both European and Māori ethnic groups are born in New Zealand. On the other hand, customers with Pacific ethnicity are more towards half and half, with just under 50% of Pacific customers being born overseas.
- With chronic conditions, Diabetes and Gout are the two most common chronic conditions across Māori and Pacific customers for Whaikaha EMS services.
- Pacific customers have higher rates of Diabetes and Gout in all the customer groups (Whaikaha and ACC)

Table 15: Whaikaha EMS customers demographic characteristics comparing European, Māori and Pacific ethnicity groups (2022/23)

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Sex	57% of customers are female	56% of customers are female	56% of customers are female
Age	<p>3% of customers are Tamariki (0–11 years)</p> <p>3% of customers are Rangatahi (12–24 years)</p> <p>16% of customers are Pakeke (25–64 years)</p> <p>78% of customers are Kaumatua (65+ years)</p>	<p>9% of customers are Tamariki (0–11 years)</p> <p>5% of customers are Rangatahi (12–24 years)</p> <p>31% of customers are Pakeke (25–64 years)</p> <p>55% of customers are Kaumatua (65+ years)</p>	<p>12% of customers are Tamariki (0–11 years)</p> <p>6% of customers are Rangatahi (12–24 years)</p> <p>30% of customers are Pakeke (25–64 years)</p> <p>52% of customers are Kaumatua (65+ years)</p>
Urban/Rural areas	<p>28% of customers live in major urban areas</p> <p>18% of customers live in large urban areas</p> <p>17% of customers live in medium urban areas</p> <p>16% of customers live small urban areas</p>	<p>24% of customers live in major urban areas</p> <p>27% of customers live in large urban areas</p> <p>11% of customers live medium urban areas</p> <p>18% of customers live in small urban areas</p>	<p>40% of customers live in major urban areas</p> <p>34% of customers live in large urban areas</p> <p>11% of customers live in medium urban areas</p> <p>8% of customers live small urban areas</p>
Deprivation	11% of customers live in a deprivation level 7	10% of customers live in a deprivation level 7	9% of customers live in a deprivation level 7

	<p>13% of customers live in a deprivation level 8</p> <p>12% of customers live in a deprivation level 9</p> <p>9% of customers live in a deprivation level 10</p>	<p>12% of customers live in a deprivation level 8</p> <p>19% of customers live in a deprivation level 9</p> <p>31% of customers live in a deprivation level 10</p>	<p>12% of customers live in a deprivation level 8</p> <p>17% of customers live in a deprivation level 9</p> <p>33% of customers live in a deprivation level 10</p>
Income (Pakeke)	<p>13% earned less than \$15,000</p> <p>62% earned between \$15-30,000</p> <p>21% earned between \$30-70,000</p> <p>5% earned \$70,000 and over</p>	<p>8% earned less than \$15,000</p> <p>66% earned between \$15-30,000</p> <p>23% earned between \$30-70,000</p> <p>3% earned \$70,000 and over</p>	<p>Majority earned between \$15-30,000. Percentages are not provided as many of the values are suppressed (low counts).</p>
Income (Kaumatua)	<p>1% earned less than \$15,000</p> <p>74% earned between \$15-30,000</p> <p>22% earned between \$30-70,000</p> <p>3% earned \$70,000 and over</p>	<p>1% earned less than \$15,000</p> <p>76% earned between \$15-30,000</p> <p>21% earned between \$30-70,000</p> <p>1% earned \$70,000 and over</p>	<p>Majority earned between \$15-30,000. Percentages are not provided as many of the values are suppressed (low counts).</p>
Migrant Status	<p>13% of customers were born overseas</p>	<p>1% of customers were born overseas</p>	<p>42% of customers were born overseas</p>
Chronic Condition (Pakeke)	<p>14% of customers have diabetes</p> <p>5% of customers have had gout</p> <p>3% of customers have had a stroke</p>	<p>29% of customers have diabetes</p> <p>7% of customers have had gout</p> <p>6% of customers have had a stroke</p>	<p>49% of customers have diabetes</p> <p>19% of customers have had gout</p> <p>4% of customers have had a stroke</p>

Chronic Condition (Kaumatua)	23% of customers have diabetes 9% of customers have had gout 6% of customers have had a stroke	39% of customers have diabetes 21% of customers have had gout 7% of customers have had a stroke	49% of customers have diabetes 26% of customers have had gout 11% of customers have had a stroke
Employed, aged 15 years and over (2021/22)	15% of European customers are in employment	11% of Māori customers are in employment	8% of Pacific customers are in employment

*Note: Figures for Migrant Status are from 2021/22*

In terms of average spend the first point to note is that older people have significantly lower spend. In fact, it is 3 to 5 times less than for other age groups. This along with the same two factors as above account for many of the differences observed in Table 16. However, there are some notable differences:

- Pacific and Māori receive significantly higher average spend across almost all age groups.
- Rural customers receive significantly higher average spend across all ethnicities

As above, while there are clear differences in average spend this does not necessarily mean that there are equity differences. Nor does the higher spend for Māori and Pacific people demonstrate evidence that there are no equity issues for these groups. It could be instead that only the most severely disabled Māori and Pacific people access equipment or services and less severe cases do not enter the system at all. The higher instance of diabetes and gout amongst Māori and Pacific customers may imply that these priority groups have more complex needs. Again, this would require further analysis to conclusively prove/disprove a difference.

Table 16: Average spend per Whaikaha EMS customer by ethnicity and other demographic characteristics (2022/23)

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Age	<p>Tamariki (aged 0 to 11 years): on average, \$5,984 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$6,850 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$3,551 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$1,110 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$6,349 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$6,780 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$3,151 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$1,720 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$6,609 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$8,913 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$3,817 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$2,089 is spent per customer.</p>
Sex	<p>On average, \$1,633 is spent per female customer.</p> <p>On average, \$2,046 is spent per male customer.</p>	<p>On average, \$2,577 is spent per female customer.</p> <p>On average, \$3,192 is spent per male customer.</p>	<p>On average, \$3,336 is spent per female customer.</p> <p>On average, \$3,886 is spent per male customer.</p>
Urban / rural	<p>On average, \$1,841 is spent per customer living in an urban area.</p> <p>On average, \$2,112 is spent per customer living in a rural area.</p>	<p>On average, \$2,852 is spent per customer living in an urban area.</p> <p>On average, \$2,989 is spent per customer living in a rural area.</p>	<p>On average, \$3,575 is spent per customer living in an urban area.</p> <p>On average, \$4,034 is spent per customer living in a rural area.</p>

<p>Urban / rural areas</p>	<p>On average, \$1,972 is spent per customer living in a major urban area.</p> <p>On average, \$1,898 is spent per customer living in a large urban area.</p> <p>On average, \$1,678 is spent per customer living in a medium urban area.</p> <p>On average, \$1,716 is spent per customer living in a small urban area.</p> <p>On average, \$1,613 is spent per customer living in a rural settlement area.</p> <p>On average, \$2,319 is spent per customer living in a rural other area.</p>	<p>On average, \$2,845 is spent per customer living in a major urban area.</p> <p>On average, \$2,788 is spent per customer living in a large urban area.</p> <p>On average, \$3,128 is spent per customer living in a medium urban area.</p> <p>On average, \$2,785 is spent per customer living in a small urban area.</p> <p>On average, \$2,569 is spent per customer living in a rural settlement area.</p> <p>On average, \$3,191 is spent per customer living in a rural other area.</p>	<p>On average, \$3,306 is spent per customer living in a major urban area.</p> <p>On average, \$3,936 is spent per customer living in a large urban area.</p> <p>On average, \$4,096 is spent per customer living in a medium urban area.</p> <p>On average, \$2,704 is spent per customer living in a small urban area.</p> <p>Spend for rural settlement is suppressed due to low count of individuals.</p> <p>On average, \$5,895 is spent per customer living in a rural other area.</p>
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*Trend over time visualisations can be found in Appendix 3.*

## Whaikaha spectacles and hearing

This section describes the representation of Whaikaha spectacles and hearing services in the base population across the whole of New Zealand (as these services are delivered by Enable New Zealand throughout the country). The characteristics of Whaikaha spectacles and hearing customers show some differences across the three ethnicities. Table 17 details the characteristics of these customers by sex, age, urban/rural areas, deprivation, migrant status and chronic condition.

Anecdotally, there are two quite distinct subpopulations – young people primarily receiving spectacles and older people primarily receiving hearing aids. Again, there are also key societal differences at play.

Even so there are some notable points:

- Females are more highly represented than males in all three ethnicities.
- There are some differences in age for all three ethnicity groups. The Kaumatua (65+ years) age group is much more highly represented for Europeans (even more so than for Whaikaha EMS). This could suggest that European older people are much more likely to access hearing aid equipment supplied by Whaikaha.
- For the other two ethnicities, the numbers skew towards the Tamariki and Rangatahi (12–24 years) age groups.
- Customers in all three ethnicity groups have a bigger skew towards large and major urban areas. The skew is a lot more significant for Pacific ethnicity than the other two ethnicity groups.
- There is a significantly stronger skew towards higher deprivation areas for both Māori and Pacific ethnicities when compared to European customers of Whaikaha spectacles and hearing services. The majority of Whaikaha spectacles and hearing Māori and Pacific customers are living in deprivation levels 10, 9, 8, and 7, indicating that Māori and Pacific Peoples are more likely to reside in highly deprived areas.
- The majority of customers across all three ethnic groups are born in New Zealand.
- With chronic conditions, Diabetes and Gout are the two most common chronic conditions across Māori and Pacific customers for Whaikaha spectacles and hearing services.

Table 17: Whaikaha spectacles and hearing customers demographic characteristics comparing European, Māori and Pacific ethnicity groups (2022/23)

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Sex	58% of customers are female	57% of customers are female	55% of customers are female
Age	<p>20% of customers are Tamariki (0-11 years)</p> <p>18% of customers are Rangatahi (12-24 years)</p> <p>14% of customers are Pakeke (25-64 years)</p> <p>47% of customers are Kaumatua (65+ years)</p>	<p>40% of customers are Tamariki (0-11 years)</p> <p>31% of customers are Rangatahi (12-24 years)</p> <p>13% of customers are Pakeke (25-64 years)</p> <p>16% of customers are Kaumatua (65+ years)</p>	<p>43% of customers are Tamariki (0-11 years)</p> <p>34% of customers are Rangatahi (12-24 years)</p> <p>10% of customers are Pakeke (25-64 years)</p> <p>14% of customers are Kaumatua (65+ years)</p>
Urban/Rural areas	<p>36% of customers live in major urban areas</p> <p>17% of customers live in large urban areas</p> <p>12% of customers live medium urban areas</p> <p>12% of customers live in small urban areas</p>	<p>35% of customers live in major urban areas</p> <p>23% of customers live in large urban areas</p> <p>9% of customers live medium urban areas</p> <p>14% of customers live in small urban areas</p>	<p>66% of customers live in major urban areas</p> <p>15% of customers live in large urban areas</p> <p>5% of customers live in medium urban areas</p> <p>5% of customers live small urban areas</p>
Deprivation	10% of customers live in a deprivation level 7	10% of customers live in a deprivation level 7	8% of customers live in a deprivation level 7



	<p>10% of customers live in a deprivation level 8</p> <p>10% of customers live in a deprivation level 9</p> <p>8% of customers live in a deprivation level 10</p>	<p>12% of customers live in a deprivation level 8</p> <p>17% of customers live in a deprivation level 9</p> <p>27% of customers live in a deprivation level 10</p>	<p>11% of customers live in a deprivation level 8</p> <p>17% of customers live in a deprivation level 9</p> <p>34% of customers live in a deprivation level 10</p>
Income (Pakeke) (2021/22)	<p>10% earned less than \$15,000</p> <p>17% earned between \$15-30,000</p> <p>34% earned between \$30-70,000</p> <p>39% earned \$70,000 and over</p>	<p>7% earned less than \$15,000</p> <p>29% earned between \$15-30,000</p> <p>43% earned between \$30-70,000</p> <p>21% earned \$70,000 and over</p>	<p>0% earned less than \$15,000</p> <p>45% earned between \$15-30,000</p> <p>23% earned between \$30-70,000</p> <p>32% earned \$70,000 and over</p>
Income (Kaumatua) (2021/22)	<p>2% earned less than \$15,000</p> <p>62% earned between \$15-30,000</p> <p>26% earned between \$30-70,000</p> <p>11% earned \$70,000 and over</p>	<p>0% earned less than \$15,000</p> <p>62% earned between \$15-30,000</p> <p>26% earned between \$30-70,000</p> <p>12% earned \$70,000 and over</p>	<p>0% earned less than \$15,000</p> <p>85% earned between \$15-30,000</p> <p>8% earned between \$30-70,000</p> <p>7% earned \$70,000 and over</p>
Migrant Status	<p>14% of customers were born overseas</p>	<p>2% of customers were born overseas</p>	<p>17% of customers were born overseas</p>
Chronic Condition (Pakeke)	<p>7% of customers have diabetes</p> <p>1% of customers have had gout</p> <p>1% of customers have had a stroke</p>	<p>14% of customers have diabetes</p> <p>4% of customers have had gout</p> <p>1% of customers have had a stroke</p>	<p>21% of customers have diabetes</p> <p>7% of customers have had gout</p> <p>1% of customers have had a stroke</p>

Chronic Condition (Kaumatua)	14% of customers have diabetes 5% of customers have had gout 3% of customers have had a stroke	30% of customers have diabetes 13% of customers have had gout 3% of customers have had a stroke	46% of customers have diabetes 19% of customers have had gout 4% of customers have had a stroke
Employed, aged 15 years and over (2021/22)	41% of European customers are in employment	36% of Māori customers are in employment	30% of Pacific customers are in employment

*Note: Figures for Migrant Status are from 2021/22*

The patterns of hearing spend per customer are similar across the three ethnicities. The only exceptions of note are:

- Europeans have less spend per customer in all the breakdowns
- Males have slightly more spend across all the ethnicities

Table 18: Average spend per Whaikaha hearing (hearing full funding and hearing subsidy) customer in 2022/23 by ethnicity and other demographic characteristics

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Age	<p>Tamariki (aged 0 to 11 years): on average, \$1,637 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$1,408 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$1,025 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$907 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$1,724 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$1,706 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$1,250 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$973 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$1,893 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$1,737 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$1,275 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$927 is spent per customer.</p>
Sex	<p>On average, \$985 is spent per female customer.</p> <p>On average, \$987 is spent per male customer.</p>	<p>On average, \$1,252 is spent per female customer.</p> <p>On average, \$1,355 is spent per male customer.</p>	<p>On average, \$1,308 is spent per female customer.</p> <p>On average, \$1,472 is spent per male customer.</p>
Urban / rural	<p>On average, \$992 is spent per customer living in an urban area.</p> <p>On average, \$988 is spent per customer living in a rural area.</p>	<p>On average, \$1,316 is spent per customer living in an urban area.</p> <p>On average, \$1,209 is spent per customer living in a rural area.</p>	<p>On average, \$1,372 is spent per customer living in an urban area.</p>

			On average, \$1,473 is spent per customer living in a rural area (only rural other included).
Urban / rural areas	<p>On average, \$981 is spent per customer living in a major urban area.</p> <p>On average, \$1,006 is spent per customer living in a large urban area.</p> <p>On average, \$983 is spent per customer living in a medium urban area.</p> <p>On average, \$1,012 is spent per customer living in a small urban area.</p> <p>On average, \$987 is spent per customer living in a rural settlement area.</p> <p>On average, \$988 is spent per customer living in a rural other area.</p>	<p>On average, \$1,328 is spent per customer living in a major urban area.</p> <p>On average, \$1,330 is spent per customer living in a large urban area.</p> <p>On average, \$1,173 is spent per customer living in a medium urban area.</p> <p>On average, \$1,348 is spent per customer living in a small urban area.</p> <p>On average, \$1,196 is spent per customer living in a rural settlement area.</p> <p>On average, \$1,215 is spent per customer living in a rural other area.</p>	<p>On average, \$1,327 is spent per customer living in a major urban area.</p> <p>On average, \$1,450 is spent per customer living in a large urban area.</p> <p>On average, \$1,667 is spent per customer living in a medium urban area.</p> <p>On average, \$1,568 is spent per customer living in a small urban area.</p> <p>Spend for rural settlement is suppressed due to low count of individuals.</p> <p>On average, \$1,473 is spent per customer living in a rural other area.</p>

The spectacles spend per customer shows very little variation in any of the breakdowns.

Table 19: Average spend per Whaikaha spectacles customer in 2022/23 by ethnicity and other demographic characteristics

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Age	<p>Tamariki (aged 0 to 11 years): on average, \$286 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$291 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$289 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$286 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$287 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$289 is spent per customer.</p>
Sex	<p>On average, \$289 is spent per female customer.</p> <p>On average, \$287 is spent per male customer.</p>	<p>On average, \$289 is spent per female customer.</p> <p>On average, \$286 is spent per male customer.</p>	<p>On average, \$293 is spent per female customer.</p> <p>On average, \$282 is spent per male customer.</p>
Urban / rural	<p>On average, \$290 is spent per customer living in an urban area.</p> <p>On average, \$278 is spent per customer living in a rural area.</p>	<p>On average, \$291 is spent per customer living in an urban area.</p> <p>On average, \$264 is spent per customer living in a rural area.</p>	<p>On average, \$289 is spent per customer living in an urban area.</p> <p>On average, \$260 is spent per customer living in a rural area.</p>
Urban / rural areas	<p>On average, \$300 is spent per customer living in a major urban area.</p> <p>On average, \$283 is spent per customer living in a large urban area.</p>	<p>On average, \$298 is spent per customer living in a major urban area.</p> <p>On average, \$290 is spent per customer living in a large urban area.</p>	<p>On average, \$293 is spent per customer living in a major urban area.</p> <p>On average, \$267 is spent per customer living in a large urban area.</p>

	<p>On average, \$288 is spent per customer living in a medium urban area.</p> <p>On average, \$272 is spent per customer living in a small urban area.</p> <p>On average, \$274 is spent per customer living in a rural settlement area.</p> <p>On average, \$279 is spent per customer living in a rural other area.</p>	<p>On average, \$277 is spent per customer living in a medium urban area.</p> <p>On average, \$284 is spent per customer living in a small urban area.</p> <p>On average, \$270 is spent per customer living in a rural settlement area.</p> <p>On average, \$261 is spent per customer living in a rural other area.</p>	<p>On average, \$300 is spent per customer living in a medium urban area.</p> <p>On average, \$294 is spent per customer living in a small urban area.</p> <p>On average, \$247 is spent per customer living in a rural settlement area.</p> <p>On average, \$260 is spent per customer living in a rural other area.</p>
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Trend over time visualisations can be found in Appendix 4.

## ACC

This section describes the representation of ACC services delivered by Enable New Zealand in the base population across New Zealand. The characteristics of ACC customers show some differences across the three ethnicities. Table 19 details the characteristics of these customers by sex, age, urban/rural areas, deprivation, migrant status and chronic condition.

The patterns of Enable ACC customers are similar across the three ethnicities with the following exceptions:

- There are more older European people
- There are more Pacific customers living in major urban areas
- Māori and Pacific customers are strongly overrepresented in deprivation index 9 and 10 regions, although this pattern isn't as strong as was seen for Whaikaha customers
- More customers are born overseas for European and particularly Pacific people
- European customers are more strongly skewed towards women.

*Table 20: ACC customers demographic characteristics comparing European, Māori and Pacific ethnicity groups (2022/23)*

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Sex	60% of customers are female	52% of customers are female	49% of customers are female
Age	<p>1% of customers are Tamariki (0-11 years)</p> <p>6% of customers are Rangatahi (12-24 years)</p> <p>60% of customers are Pakeke (25-64 years)</p>	<p>3% of customers are Tamariki (0-11 years)</p> <p>10% of customers are Rangatahi (12-24 years)</p> <p>74% of customers are Pakeke (25-64 years)</p>	<p>4% of customers are Tamariki (0-11 years)</p> <p>13% of customers are Rangatahi (12-24 years)</p> <p>72% of customers are Pakeke (25-64 years)</p>

	33% of customers are Kaumatua (65+ years)	13% of customers are Kaumatua (65+ years)	12% of customers are Kaumatua (65+ years)
Urban/Rural areas	<p>36% of customers live in major urban areas</p> <p>15% of customers live in large urban areas</p> <p>9% of customers live in medium urban areas</p> <p>12% of customers live small urban areas</p>	<p>34% of customers live in major urban areas</p> <p>19% of customers live in large urban areas</p> <p>8% of customers live medium urban areas</p> <p>15% of customers live in small urban areas</p>	<p>68% of customers live in major urban areas</p> <p>11% of customers live in large urban areas</p> <p>4% of customers live medium urban areas</p> <p>4% of customers live in small urban areas</p>
Deprivation	<p>10% of customers live in a deprivation level 7</p> <p>10% of customers live in a deprivation level 8</p> <p>9% of customers live in a deprivation level 9</p> <p>7% of customers live in a deprivation level 10</p>	<p>10% of customers live in a deprivation level 7</p> <p>12% of customers live in a deprivation level 8</p> <p>16% of customers live in a deprivation level 9</p> <p>23% of customers live in a deprivation level 10</p>	<p>8% of customers live in a deprivation level 7</p> <p>12% of customers live in a deprivation level 8</p> <p>16% of customers live in a deprivation level 9</p> <p>27% of customers live in a deprivation level 10</p>
Income (Pakeke) (2021/22)	<p>6% earned less than \$15,000</p> <p>13% earned between \$15-30,000</p> <p>46% earned between \$30-70,000</p> <p>34% earned \$70,000 and over</p>	<p>4% earned less than \$15,000</p> <p>17% earned between \$15-30,000</p> <p>54% earned between \$30-70,000</p> <p>25% earned \$70,000 and over</p>	<p>0% earned less than \$15,000</p> <p>17% earned between \$15-30,000</p> <p>56% earned between \$30-70,000</p> <p>27% earned \$70,000 and over</p>



Income (Kaumatua) (2021/22)	1% earned less than \$15,000 60% earned between \$15-30,000 28% earned between \$30-70,000 10% earned \$70,000 and over	0% earned less than \$15,000 76% earned between \$15-30,000 14% earned between \$30-70,000 10% earned \$70,000 and over	0% earned less than \$15,000 100% earned between \$15-30,000 0% earned between \$30-70,000 0% earned \$70,000 and over
Migrant Status	17% of customers were born overseas	1% of customers were born overseas	33% of customers were born overseas
Chronic Condition (Pakeke)	5% of customers have diabetes 1% of customers have had gout 1% of customers have had a stroke	9% of customers have diabetes 2% of customers have had gout 1% of customers have had a stroke	12% of customers have diabetes 3% of customers have had gout 1% of customers have had a stroke
Chronic Condition (Kaumatua)	16% of customers have diabetes 6% of customers have had gout 4% of customers have had a stroke	28% of customers have diabetes 15% of customers have had gout 5% of customers have had a stroke	44% of customers have diabetes 19% of customers have had gout 3% of customers have had a stroke
Employed, aged 15 years and over (2021/22)	53% of European customers are in employment	46% of Māori customers are in employment	55% of Pacific customers are in employment

*Note: Figures for Migrant Status are from 2021/22*

When it comes to non-serious injury customers there are some noticeable differences in spend per customer shown in Table 21. These include:

- Notable variation in spend by age group for all the ethnicities with Tamariki having much higher spending
- Māori having higher spending across all age groups than Europeans
- Pacific people have more variation, potentially due to lower numbers of people
- Males tend to have more spending than females across all three ethnicities
- Spending is higher for people in urban areas for Māori and Pacific people.

There are no immediately apparent explanations for these, so they warrant further investigation to determine the cause of the differences.

*Table 21: Average spend per ACC non-serious injury customer in 2022/23 by ethnicity and other demographic characteristics*

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Age	Tamariki (aged 0 to 11 years): on average, \$2,124 is spent per customer.	Tamariki (aged 0 to 11 years): on average, \$2,625 is spent per customer.	Tamariki (aged 0 to 11 years): on average, \$3,371 is spent per customer.
	Rangatahi (aged 12 to 24 years): on average, \$463 is spent per customer.	Rangatahi (aged 12 to 24 years): on average, \$522 is spent per customer.	Rangatahi (aged 12 to 24 years): on average, \$496 is spent per customer.
	Pakeke (aged 25 to 64 years): on average, \$604 is spent per customer.	Pakeke (aged 25 to 64 years): on average, \$637 is spent per customer.	Pakeke (aged 25 to 64 years): on average, \$456 is spent per customer.
	Kaumatua (aged 65 years and over): on average, \$713 is spent per customer.	Kaumatua (aged 65 years and over): on average, \$1,230 is spent per customer.	Kaumatua (aged 65 years and over): on average, \$1,309 is spent per customer.

Sex	<p>On average, \$573 is spent per female customer.</p> <p>On average, \$770 is spent per male customer.</p>	<p>On average, \$592 is spent per female customer.</p> <p>On average, \$939 is spent per male customer.</p>	<p>On average, \$533 is spent per female customer.</p> <p>On average, \$756 is spent per male customer.</p>
Urban / rural	<p>On average, \$628 is spent per customer living in an urban area.</p> <p>On average, \$707 is spent per customer living in a rural area.</p>	<p>On average, \$756 is spent per customer living in an urban area.</p> <p>On average, \$646 is spent per customer living in a rural area.</p>	<p>On average, \$662 is spent per customer living in an urban area.</p> <p>On average, \$346 is spent per customer living in a rural area.</p>
Urban / rural areas	<p>On average, \$574 is spent per customer living in a major urban area.</p> <p>On average, \$652 is spent per customer living in a large urban area.</p> <p>On average, \$725 is spent per customer living in a medium urban area.</p> <p>On average, \$689 is spent per customer living in a small urban area.</p> <p>On average, \$866 is spent per customer living in a rural settlement area.</p>	<p>On average, \$824 is spent per customer living in a major urban area.</p> <p>On average, \$765 is spent per customer living in a large urban area.</p> <p>On average, \$709 is spent per customer living in a medium urban area.</p> <p>On average, \$615 is spent per customer living in a small urban area.</p> <p>On average, \$682 is spent per customer living in a rural settlement area.</p>	<p>On average, \$662 is spent per customer living in a major urban area.</p> <p>On average, \$683 is spent per customer living in a large urban area.</p> <p>On average, \$715 is spent per customer living in a medium urban area.</p> <p>On average, \$570 is spent per customer living in a small urban area.</p> <p>On average, \$353 is spent per customer living in a rural settlement area.</p>

	On average, \$663 is spent per customer living in a rural other area.	On average, \$633 is spent per customer living in a rural other area.	On average, \$344 is spent per customer living in a rural other area.
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For serious injury customers, there are several significant differences in ACC serious injury spend per customer. Most notably men have more spending per customer across all three ethnicities and people living in rural areas have more spending per customer.

Similarly, people in the 12 to 24 year old age group have higher spend across all three ethnicities. This is not readily explainable but may be due to different types of accident for this age group (e.g. more car accidents).

*Table 22: Average spend per ACC serious injury customer in 2022/23 by ethnicity and other demographic characteristics*

Topic area	European ethnicity	Māori ethnicity	Pacific ethnicity
Age	<p>Tamariki (aged 0 to 11 years): on average, \$16,213 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$15,986 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$13,381 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$12,200 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$15,921 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$18,116 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$15,262 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$12,842 is spent per customer.</p>	<p>Tamariki (aged 0 to 11 years): on average, \$15,740 is spent per customer.</p> <p>Rangatahi (aged 12 to 24 years): on average, \$23,671 is spent per customer.</p> <p>Pakeke (aged 25 to 64 years): on average, \$16,464 is spent per customer.</p> <p>Kaumatua (aged 65 years and over): on average, \$11,707 is spent per customer.</p>

Sex	<p>On average, \$12,866 is spent per female customer.</p> <p>On average, \$13,959 is spent per male customer.</p>	<p>On average, \$14,761 is spent per female customer.</p> <p>On average, \$15,819 is spent per male customer.</p>	<p>On average, \$13,821 is spent per female customer.</p> <p>On average, \$17,935 is spent per male customer.</p>
Urban / rural	<p>On average, \$13,091 is spent per customer living in an urban area.</p> <p>On average, \$15,230 is spent per customer living in a rural area.</p>	<p>On average, \$14,916 is spent per customer living in an urban area.</p> <p>On average, \$17,718 is spent per customer living in a rural area.</p>	<p>Average spend is suppressed due to low customer count.</p>
Urban / rural areas	<p>On average, \$13,657 is spent per customer living in a major urban area.</p> <p>On average, \$11,640 is spent per customer living in a large urban area.</p> <p>On average, \$11,885 is spent per customer living in a medium urban area.</p> <p>On average, \$14,461 is spent per customer living in a small urban area.</p> <p>On average, \$12,865 is spent per customer living in a rural settlement area.</p>	<p>On average, \$15,074 is spent per customer living in a major urban area.</p> <p>On average, \$15,007 is spent per customer living in a large urban area.</p> <p>On average, \$14,225 is spent per customer living in a medium urban area.</p> <p>On average, \$14,861 is spent per customer living in a small urban area.</p> <p>On average, \$12,787 is spent per customer living in a rural settlement area.</p>	<p>On average, \$19,24 is spent per customer living in a major urban area.</p> <p>On average, \$9,430 is spent per customer living in a large urban area.</p> <p>Average spend is suppressed for all other urban and rural areas.</p>

	On average, \$15,872 is spent per customer living in a rural other area.	On average, \$19,960 is spent per customer living in a rural other area.	
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*Trend over time visualisations can be found in Appendix 5.*

When it comes to ACC non-serious injury claims there are some noticeable differences in injury claims lodged shown in Table 23. These include:

- Little variation between ethnicities in terms of time from the lodgement to first receipt of equipment, indicating that the process for receiving equipment is fairly consistent across the different ethnic groups.
- Europeans experiencing a slightly longer wait time compared to Māori and Pacific ethnicities. This shows a minor gap in the time-of-service delivery among different ethnic groups.
- Time from lodgement to first receipt of equipment has increased slightly between the 2021/2022 and 2022/2023 financial years for services provided.

*Table 23: For ACC non-serious injury claims, time from lodgement to first Enable service (claims lodged in 2021/22 and 2022/23) for services provided in 2021/22 and 2022/23.*

Service financial year	European ethnicity	Māori ethnicity	Pacific ethnicity
2021/22	52% within 30 days of lodgement. 22% between 31 and 60 days of lodgement.	56% within 30 days of lodgement. 19% between 31 and 60 days of lodgement.	56% within 30 days of lodgement. 20% between 31 and 60 days of lodgement.
2022/23	46% within 30 days of lodgement. 21% between 31 and 60 days of lodgement.	49% within 30 days of lodgement. 19% between 31 and 60 days of lodgement.	49% within 30 days of lodgement. 18% between 31 and 60 days of lodgement.

# Discussion

## Overall Conclusion

There are some clear differences in terms of receiving disability and recovery services and average spend on equipment. These are apparent in all the areas we looked at – gender, ethnicity, age, rural/urban and deprivation index. However, many of the differences are due to equity issues in New Zealand society.

While Whaikaha, ACC and Enable New Zealand didn't cause these issues and cannot solve them alone, they should be aware of them and how that translates into the delivery of equipment and recovery services.

As well as the societal issues there are some clear differences that cannot be explained. These would be excellent areas to focus on for more in-depth analysis that looks at the steps in the process Enable have no visibility of, such as the NASC process for Whaikaha and the claim acceptance process for ACC. This analysis should be done in conjunction with these agencies to incorporate the larger systems contribution to equity.

Below is a summary of the differences that cannot be explained for each of the funding streams.

### *Whaikaha EMS summary:*

Pacific and Māori receive significantly higher average spend across almost all age groups compared to European, and rural customers receive significantly higher average spend across all ethnicities.

### *Whaikaha spectacles and hearing summary:*

When looking at average spend across the three ethnicities, the patterns of hearing spend per customer are similar except for Europeans having less spend per customer across all the breakdowns, and males have slightly more spend across all the ethnicities. For spectacles spend per customers, there is little variation across the three ethnicities.

### *ACC summary:*

Males have more spending than females. Young customers have higher spend. For non-serious injury customers, spending is higher for people in urban areas for Māori and Pacific customers.

# Glossary

Term	Definition
ACC	Accident Compensation Corporation
Claimants	This is used to refer to customers with an ACC claim. Claimants is used rather than customers as a customer can have multiple claims.
Customer	This is used to refer to unique individuals
Ethnicity (total response)	This counts an individual in all ethnic groups that they identify with rather than in a single ethnic group. This means that individuals can appear more than once in reporting.
EMS	Equipment and Modification Services
Received services	This is used to refer to any equipment, housing modification or vehicle modification services provided by Enable.
Whaikaha (Ministry of Disabled People)	The ministry representing the interests of disabled people in New Zealand. At the time of the research being conducted, Whaikaha delivered the EMS, hearing and vision services now provided by Disability Support Services (DSS) under Ministry of Social Development.



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# Appendix 1: New Zealand population statistics

Table 24: New Zealand population by ethnic level 1 groups (total response) over time (Stats NZ, 2024c)

Ethnicity	2018	2019	2020	2021	2022	2023
Māori	816,500	832,400	852,400	872,400	889,000	905,800
Asian	770,600	808,000	846,900	846,500	850,400	861,000
Pacific	407,700	419,500	440,600	449,300	459,200	469,500
European or Other*	3,441,700	3,478,100	3,536,000	3,559,300	3,573,600	3,588,700
Total people	4,900,600	4,979,200	5,090,200	5,111,400	5,127,900	5,149,500

\* including New Zealander

Table 25: Proportion of New Zealand population by ethnic level 1 groups over time (Stats NZ, 2024c)

Ethnicity	2018	2019	2020	2021	2022	2023
Māori	17%	17%	17%	17%	17%	18%
Asian	16%	16%	17%	17%	17%	17%
Pacific	8%	8%	9%	9%	9%	9%
European or Other*	70%	70%	69%	70%	70%	70%

Total people	100%	100%	100%	100%	100%	100%
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Table 26: New Zealand population by sex over time (Stats NZ, 2024c)

Sex	2018	2019	2020	2021	2022	2023
Male	2,430,200	2,471,100	2,527,200	2,537,100	2,544,900	2,554,700
Female	2,470,500	2,508,100	2,563,000	2,574,300	2,583,000	2,594,700

Table 27: Proportion of New Zealand population by sex over time (Stats NZ, 2024c)

Sex	2018	2019	2020	2021	2022	2023
Male	49.6%	49.6%	49.6%	49.6%	49.6%	49.6%
Female	50.4%	50.4%	50.4%	50.4%	50.4%	50.4%

Table 28: 2023 New Zealand population by age groups (Stats NZ, 2024c)

Age group	Number	Proportion
0-9 years	617,800	12%
10-19 years	662,000	13%
20-29 years	664,100	13%
30-39 years	743,300	14%
40-49 years	629,700	12%
50-59 years	651,500	13%
60-69 years	576,900	11%
70-79 years	395,800	8%

80–89 years	172,600	3%
90 years and over	35,600	1%

*Table 29: Proportion in each NZ deprivation 2018 index for usual residence population (total and by ethnic groups)*

NZ deprivation 2018 decile	Usual residence	Māori	Pacific	Asian	European
1	9.6%	3.9%	2.1%	7.3%	11.6%
2	9.6%	4.5%	2.9%	9.1%	11.2%
3	9.7%	5.2%	3.4%	9.3%	11.1%
4	9.8%	5.9%	4.4%	10.7%	10.7%
5	9.8%	6.7%	5.3%	11.1%	10.5%
6	10.0%	8.1%	6.7%	11.4%	10.4%
7	10.1%	10.2%	8.5%	11.4%	10.1%
8	10.3%	12.5%	11.7%	11.5%	9.7%
9	10.3%	16.4%	18.1%	11.1%	8.5%
10	10.8%	26.6%	36.8%	7.0%	6.1%

## Appendix 2: Overview of Enable customers

Figure 22 shows the number of customers for ACC customers and Whaikaha customers over time. Majority of the customers (49%) received spectacles and hearing services through Whaikaha, 28% of customers received services from ACC and 26% of customers received equipment, vehicle services and housing modifications through Whaikaha.

Note that customers who receive services from multiple funding agencies are counted in each funding agency.

Figure 22: Number of customers by funding agency over time.

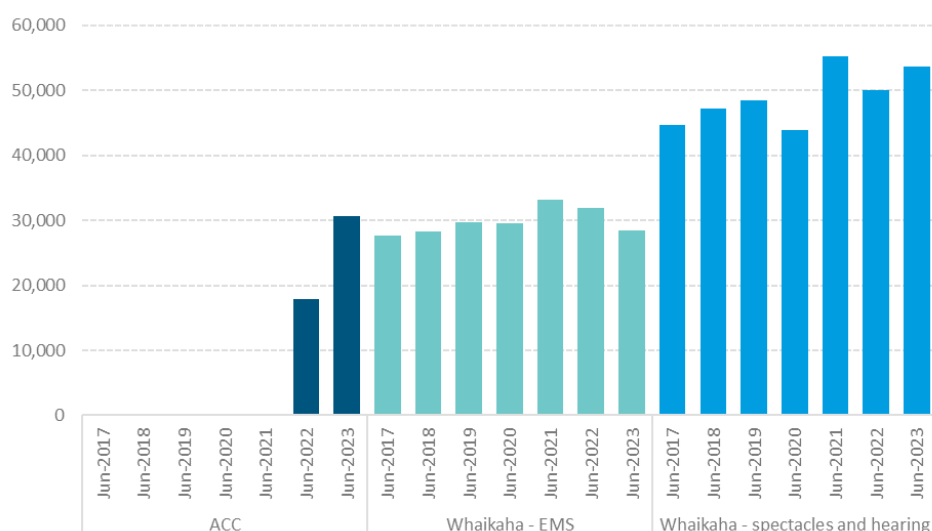


Figure 23: Number of customers by sex over time

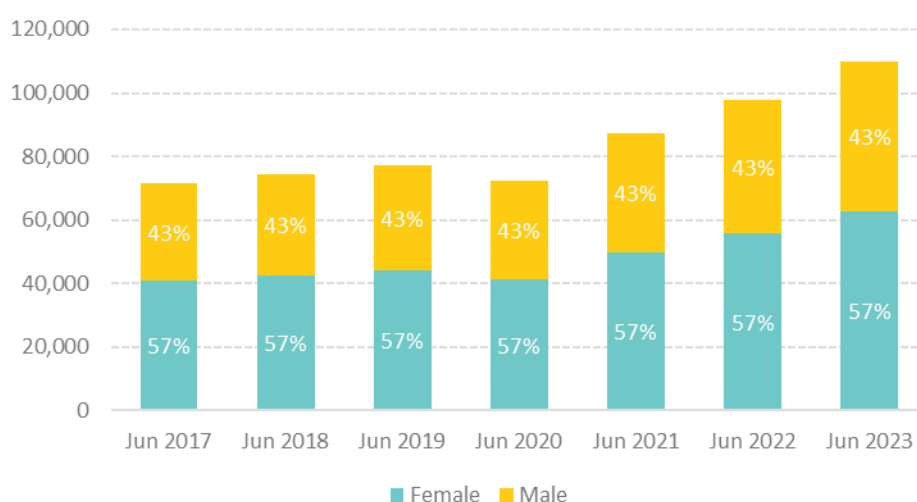


Figure 24: Number of customers by age (2021/22 and 2022/23)

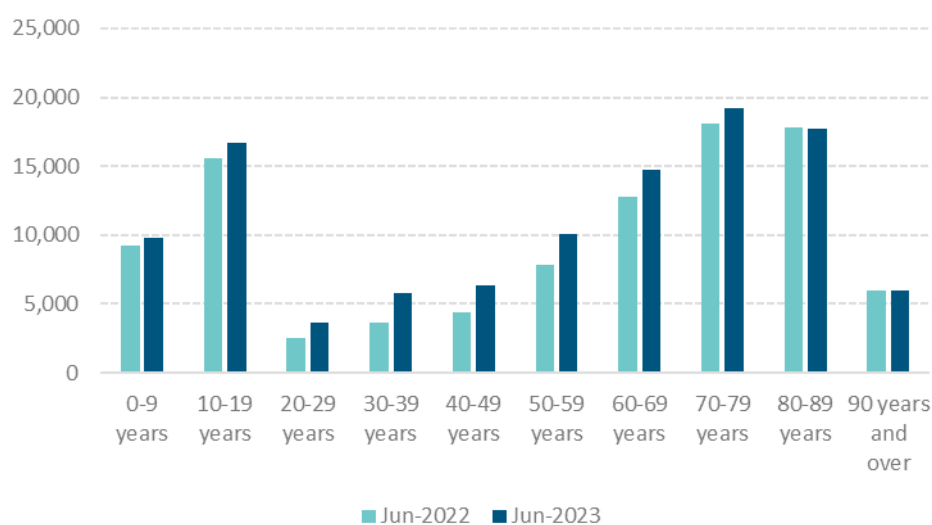
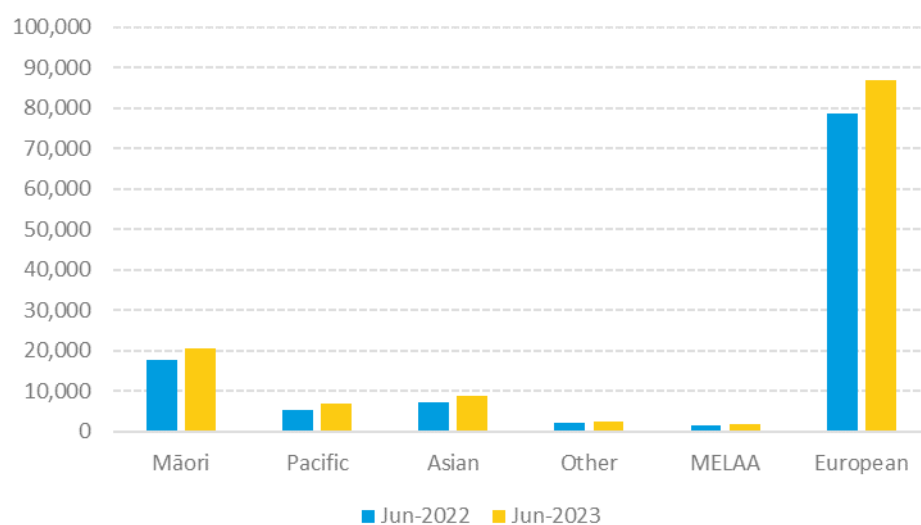


Figure 25: Number of customers by ethnicity level 1 groups (2021/22 and 2022/23)



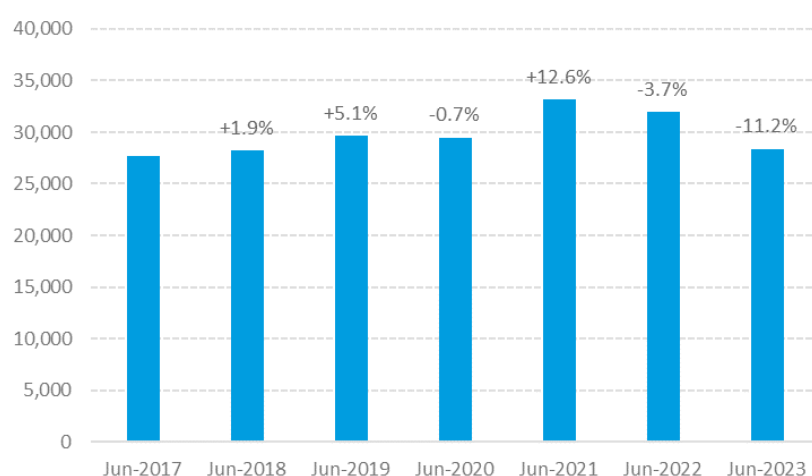
# Appendix 3: Whaikaha EMS

## Customers demographic characteristics analysis

### Customer number

There is an increasing trend of Whaikaha EMS customers between 2016/17 to 2020/21 reaching 33,195 customers. Since 2020/21, the number of Whaikaha EMS customers has decreased to 28,395 customers in 2022/23.

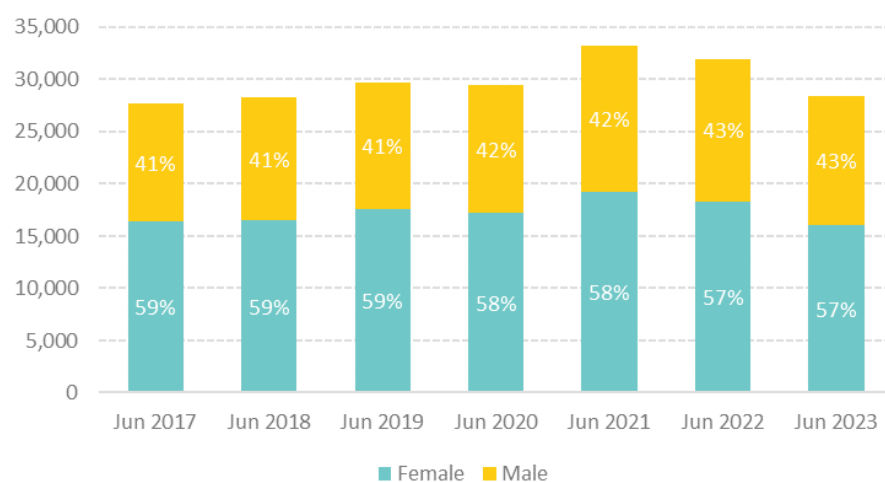
Figure 26: Number of Whaikaha – EMS customers over time



### Sex of customers

The greater proportion of Whaikaha EMS customers are female but the proportion of male customers has increased from 41% in 2016/17 to 43% in 2022/23.

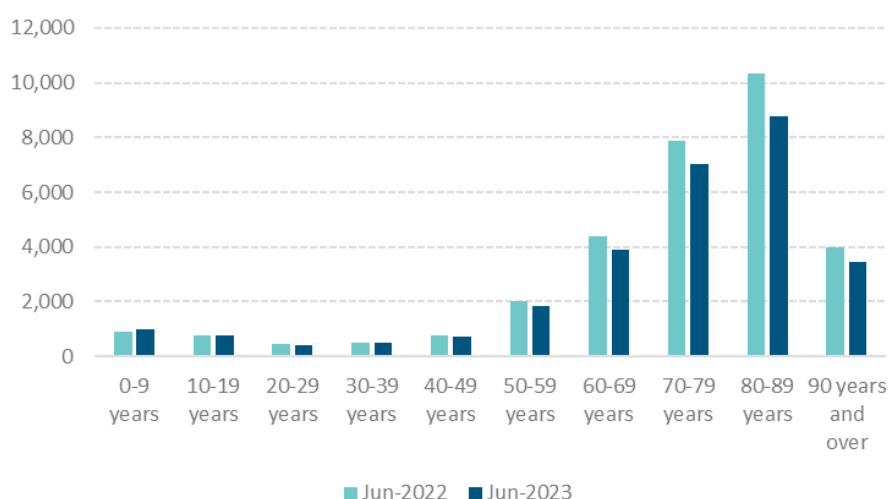
Figure 27: Number and proportion of Whaikaha EMS customers by sex over time



## Age of customers

81% of Whaikaha EMS customers are aged over 60 with an increasing trend in number with age up to age 89. 31% of customers were in the 80 – 89 age group in 2022/23 and 12% aged over 90. The proportion of customers in the 0–9 (3%) age group is the largest for all ages below age 50.

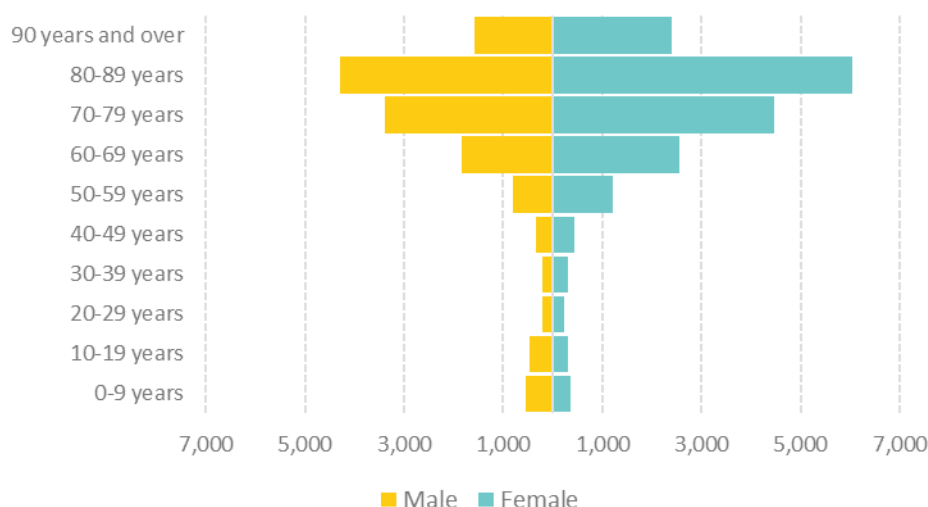
Figure 28: Number of Whaikaha EMS customers by age group (2021/22 and 2022/23)



## Age and sex of customers

In 2022/23, in the 0–9 and 10–19 year old age groups, there were more male Whaikaha EMS customers than female, but this trend is reversed for age groups over age 30.

Figure 29: Number of Whaikaha EMS customers by sex and age groups (2022/23)



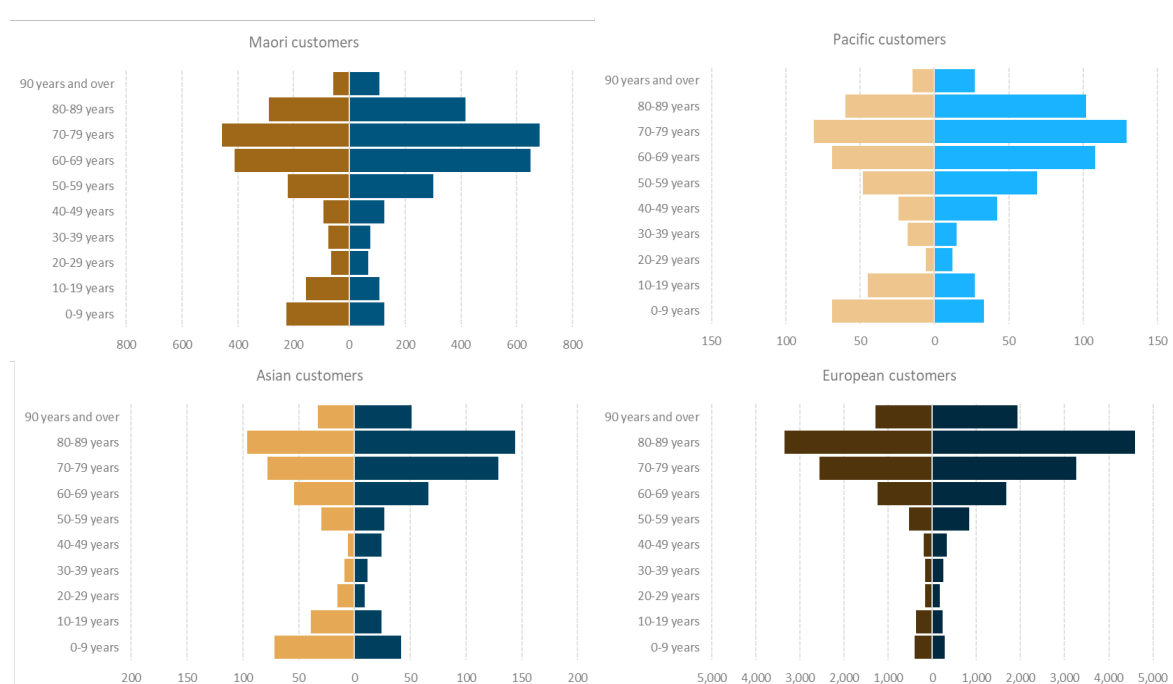


## Ethnicity and age of customers

The percentage of male Māori Whaikaha EMS customers that are in the 0-9 age group is 11%, compared to 16% for Pacific males, 17% for Asian males and 4% for European males.

The largest percentage of Whaikaha EMS customers is in the 70-79 year age groups for both male and female Māori and Pacific customers, whilst the largest percentage is in the 80-89 year old age groups for both male and female Asian and European customers.

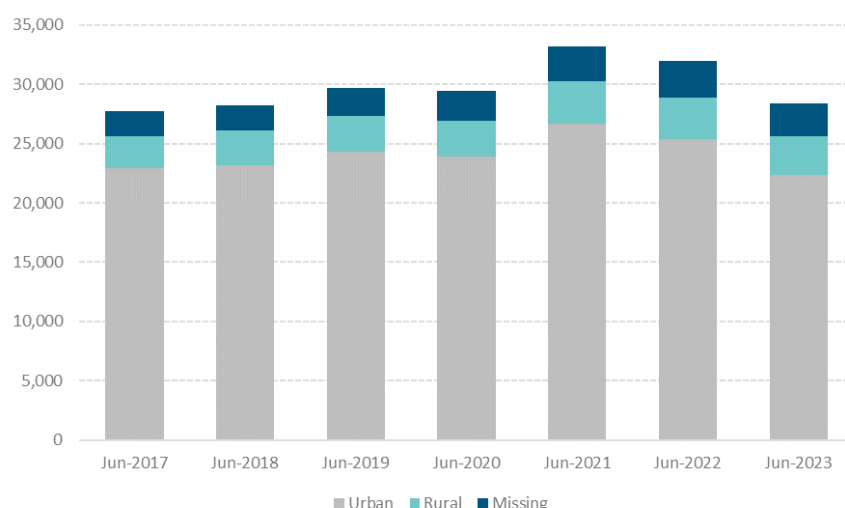
Figure 30: Number of Whaikaha EMS customers by ethnicity level 1 groups, age groups and sex (2022/23). Left side of each plot – Male, Right side of each plot – Female.



## Urban / rural customers

The majority of Whaikaha EMS customers live at an urban address. There has been a small increase in those with a rural address from 9.7% in 2016/17 to 11.4% in 2022/23. There has also been an increase in those for who this urban/rural data is missing, over time.

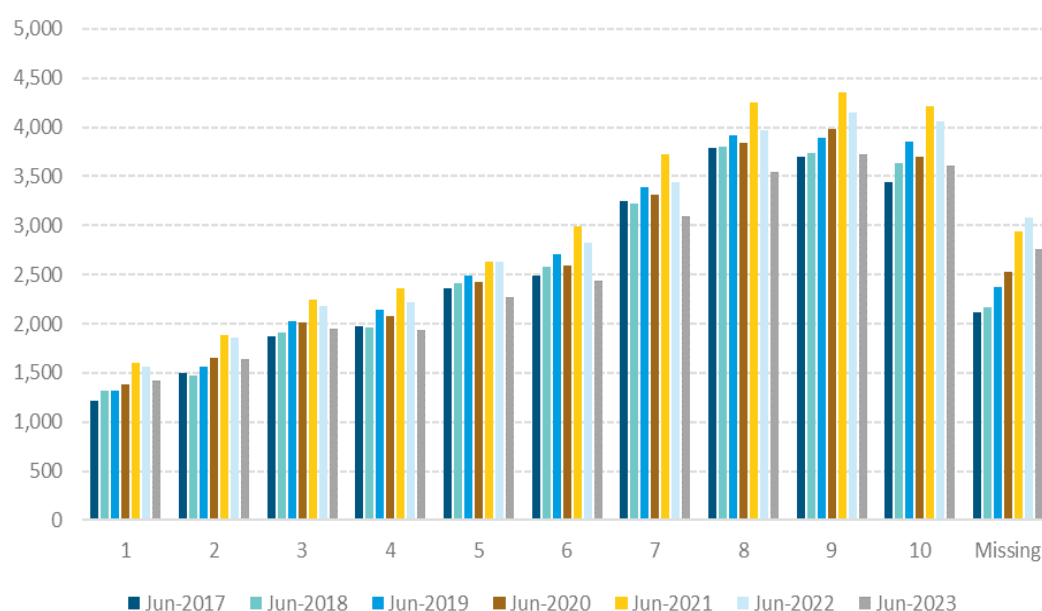
Figure 31: Number of Whaikaha EMS customers by urban and rural indicator over time



## Deprivation index 2018 for customer's address

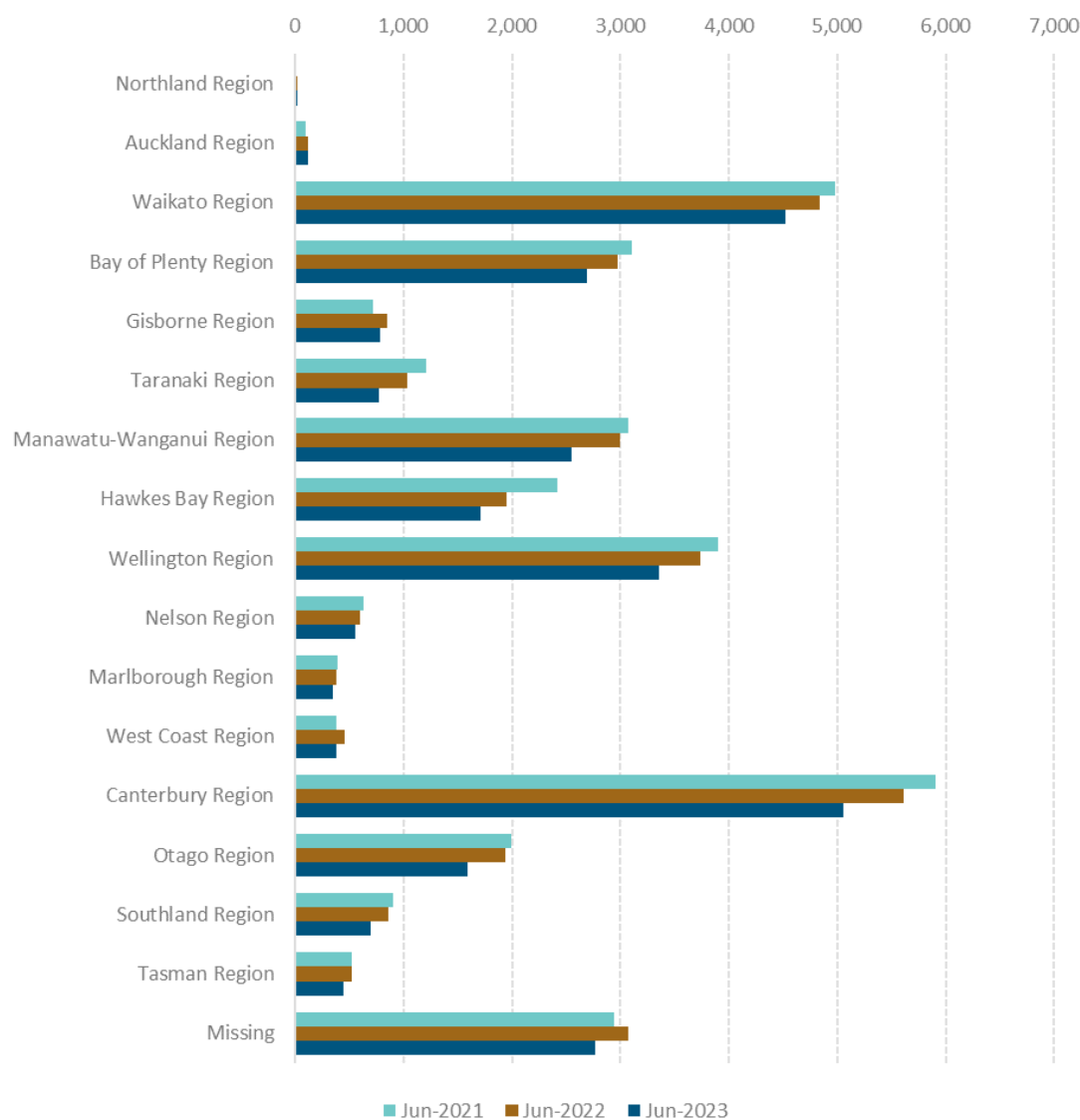
More Whaikaha EMS customers live in areas of higher deprivation than those in less deprived areas. Deprivation index 1 is an area of low deprivation and 10 is an area of high deprivation, as measured by the deprivation index 2018.

Figure 32: Number of Whaikaha EMS customers by deprivation index 2018 over time



## Region

Figure 33: Number of Whaikaha EMS customers by geographical region over time (2020/21 - 2022/23)



## Customer income

Income information was not available for 12%, 11% and 10% of customers for years 2021/22, 2020/21 and 2019/20. The majority of Whaikaha EMS customers earned between \$20,000 and \$30,000. The proportion of customers earning less than \$20,000 has decreased over time. The majority of Whaikaha EMS customers (85%) receive a benefit.

Figure 34: Number of Whaikaha EMS customers by personal income bands over time (2019/20 – 2021/22)

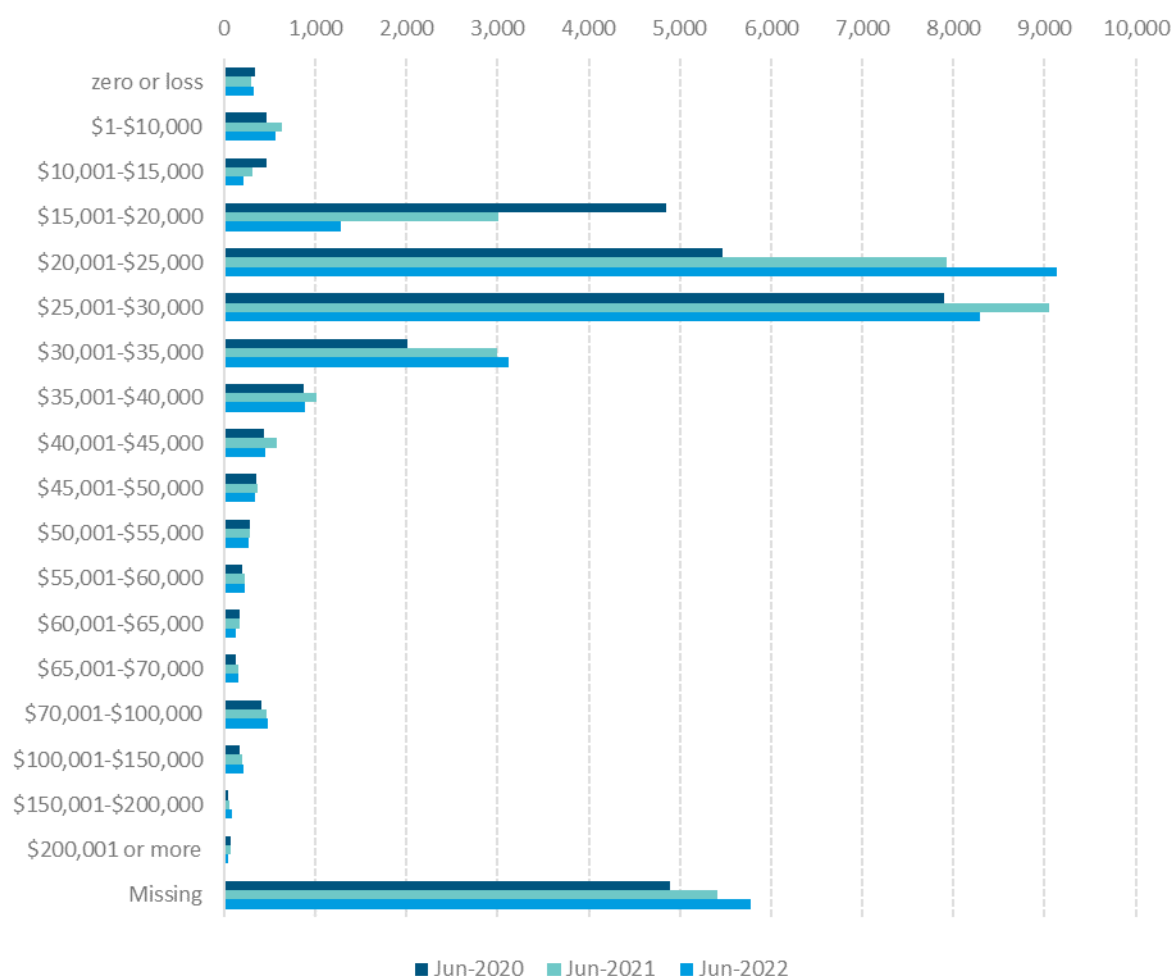
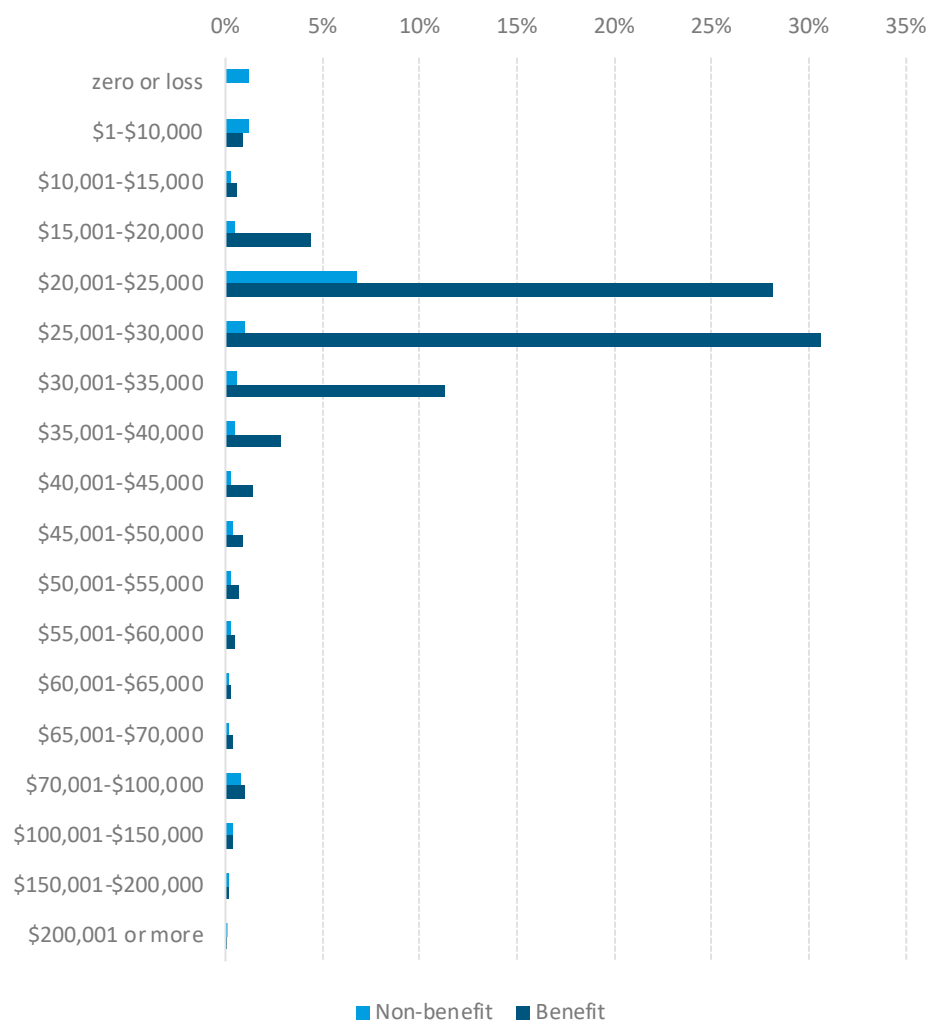


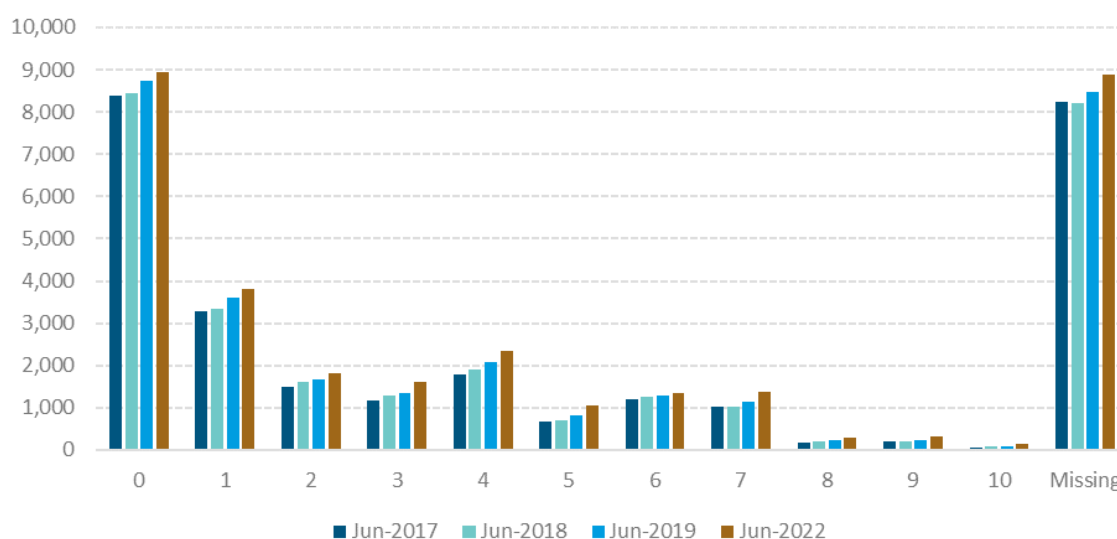
Figure 35: Proportion of Whaikaha EMS customers that received the benefit vs non-benefit by personal income bands (2021/22) (excluding customers with missing income)



## Customer highest qualifications

Qualification information was unavailable for 27–28% customers. The highest level of qualification for Whaikaha EMS customers has remained steady over the past 3 years. 28% of customers in 2021/22 had no qualifications. Only 6% of customers are in the 0–19 years old age groups, suggesting that many adult customers do not have qualifications. In 2021/22, 6% of customers had at least a university degree or equivalent.

Figure 36: Number of Whaikaha EMS customers by highest qualification level over time (2019/20 – 2021/22)



## NZ and overseas born customers

The majority of Whaikaha EMS customers are NZ-born. The proportion of customers who are NZ-born has remained steady over the past 6 years, with 87% in 2016/17 and 86% in 2021/22.

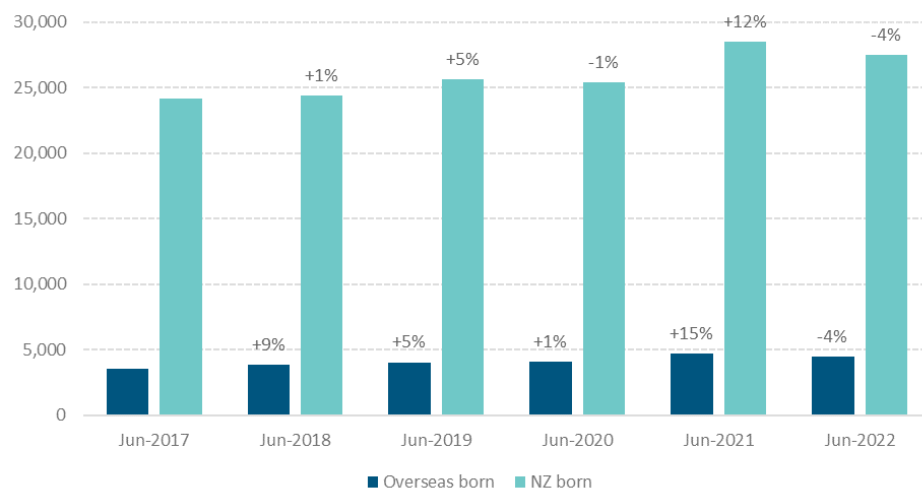
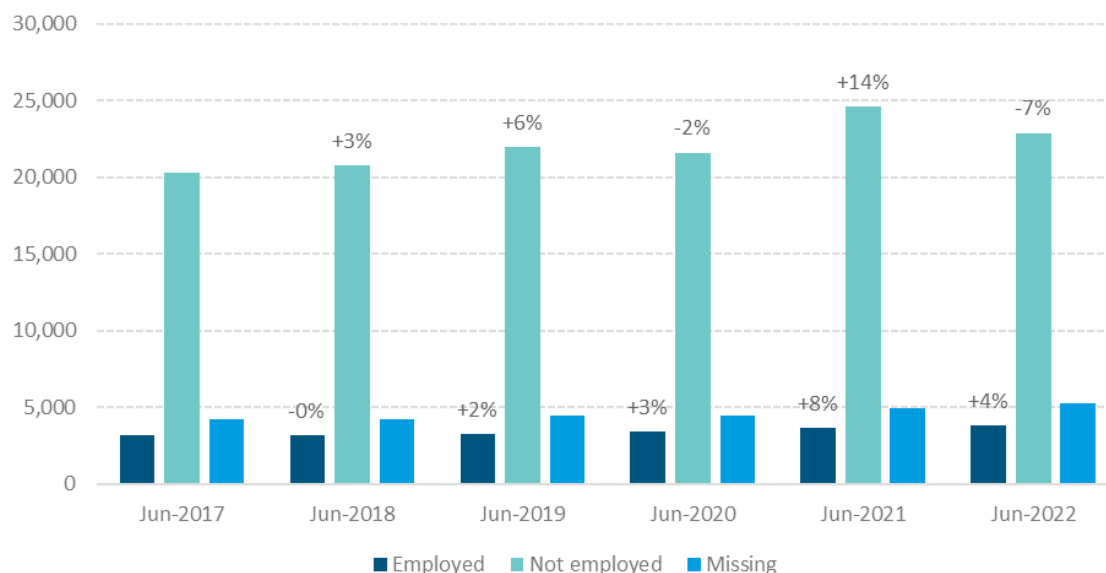


Figure 37: Number and growth of Whaikaha EMS customers broken down by NZ-born and Overseas-born customers over time

## Customer employment status

The majority of Whaikaha EMS customers are not employed. This trend has been stable with the past 6 years.

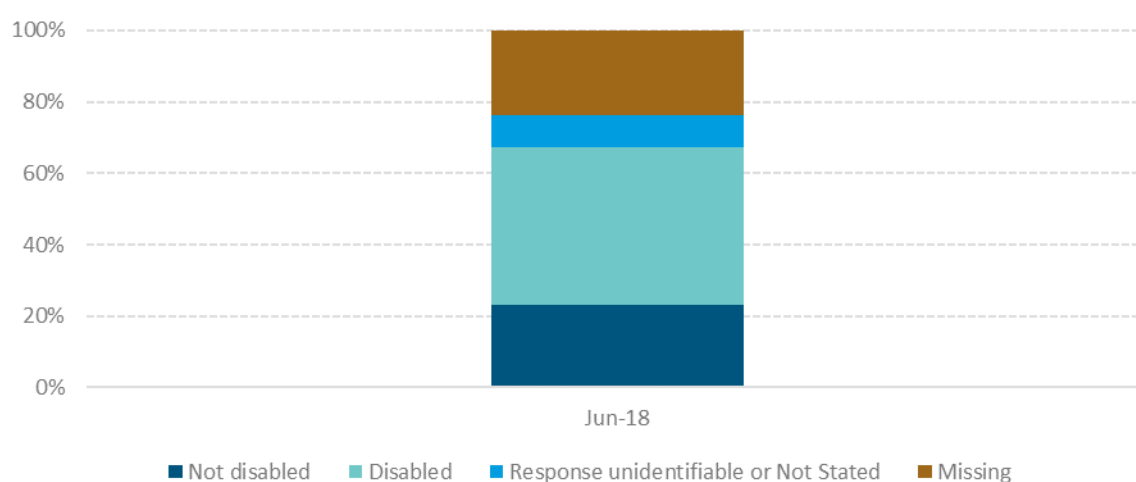
Figure 38: Number and growth of Whaikaha EMS customers broken down by employed and not employed groups over time (2016/17 - 2021/22)



## Washington Group Short Set Disability Indicator

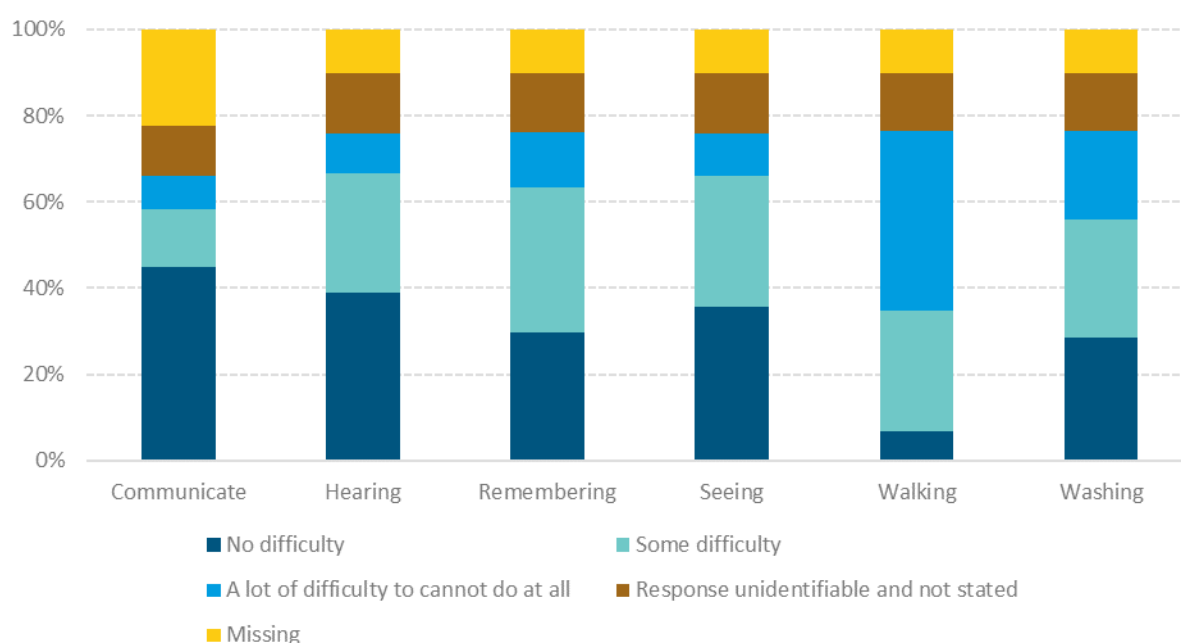
In 2017/18, 50% of Whaikaha EMS customers reported themselves as disabled.

Figure 39: Proportion of Whaikaha EMS customers in 2017/18 by disability indicator based on the Washington Group Short Set (Census 2018)



## Washington Group Short Set questions

Figure 40: Proportion of Whaikaha EMS customers in 2017/18 broken down by responses to the Washington Group Short Set questions





## Customers average spend analysis

Figure 41: Whaikaha EMS – average spend per customer by age over time

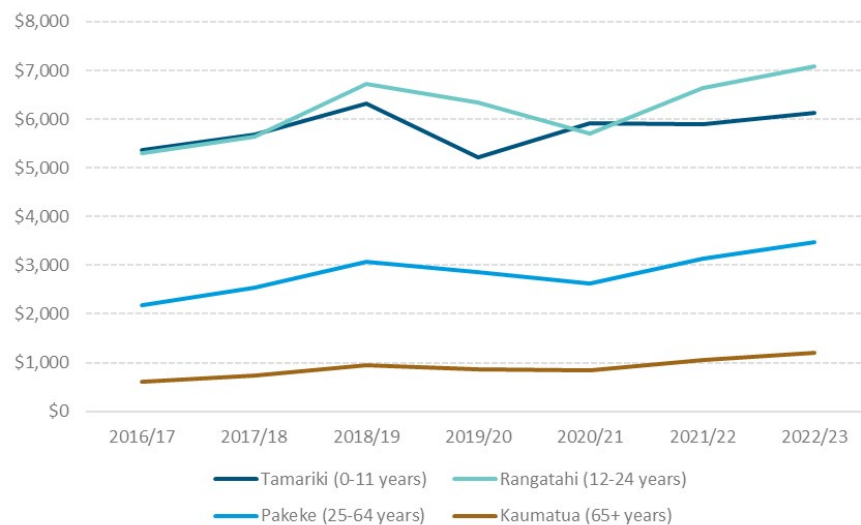


Figure 42: Whaikaha EMS – average spend per customer by ethnicity over time

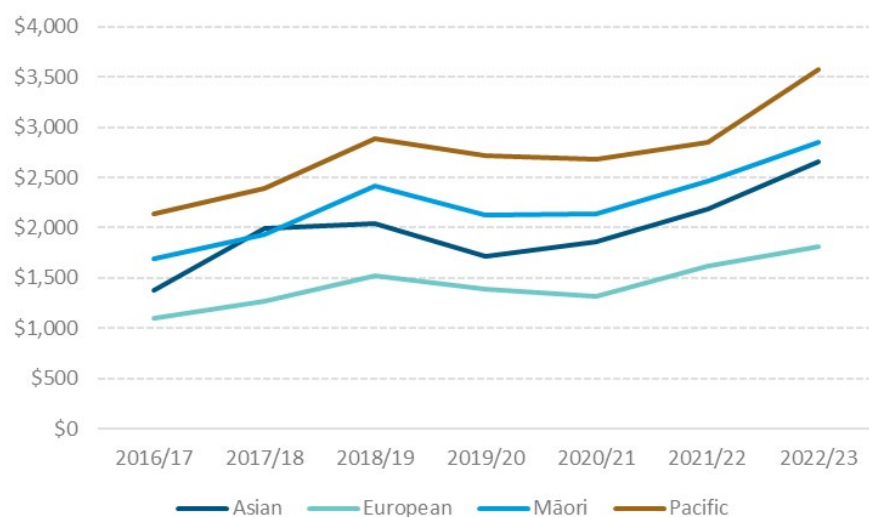


Figure 43: Whaikaha EMS – average spend per customer by sex over time

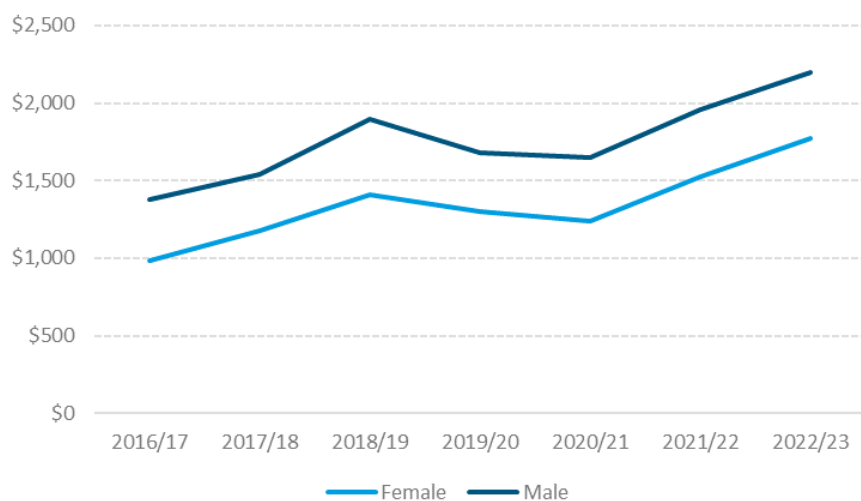


Figure 44: Whaikaha EMS - average spend per customer by urban/rural indicator over time

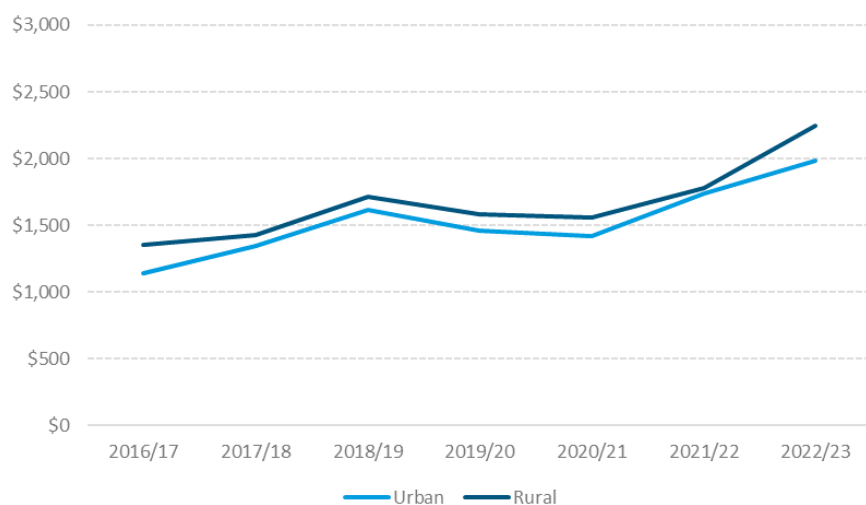


Figure 45: Whaikaha EMS - average spend per customer by urban/rural area types over time

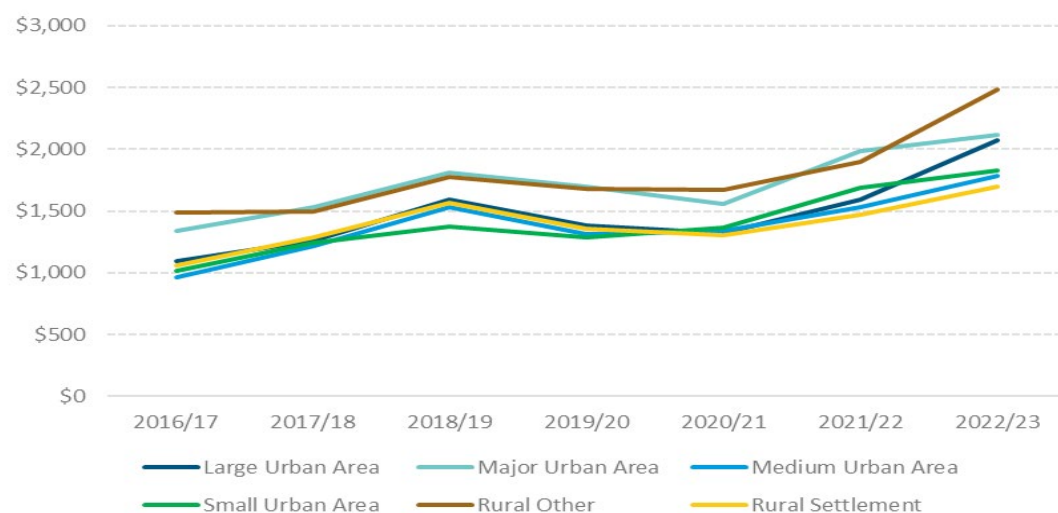


Figure 46: Whaikaha EMS - average spend per Māori customer by age groups over time

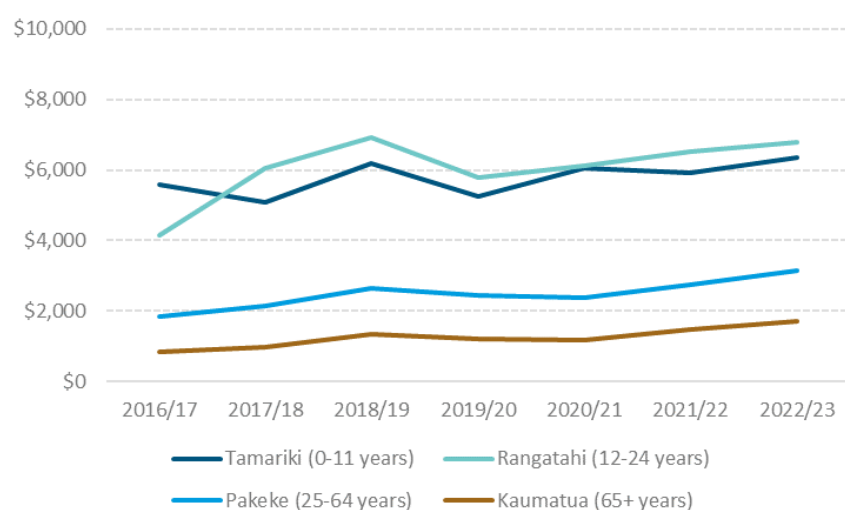


Figure 47: Whaikaha EMS – average spend per Pacific customer by age groups over time

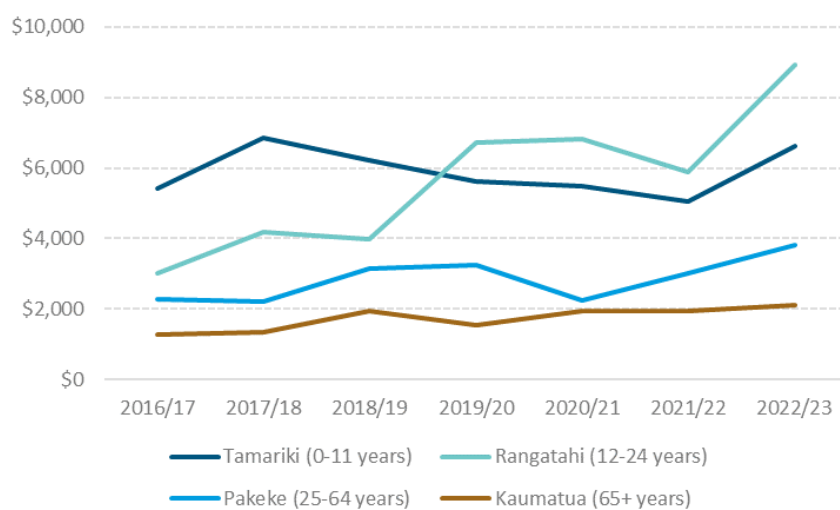


Figure 48: Whaikaha EMS – average spend per European customer by age groups over time

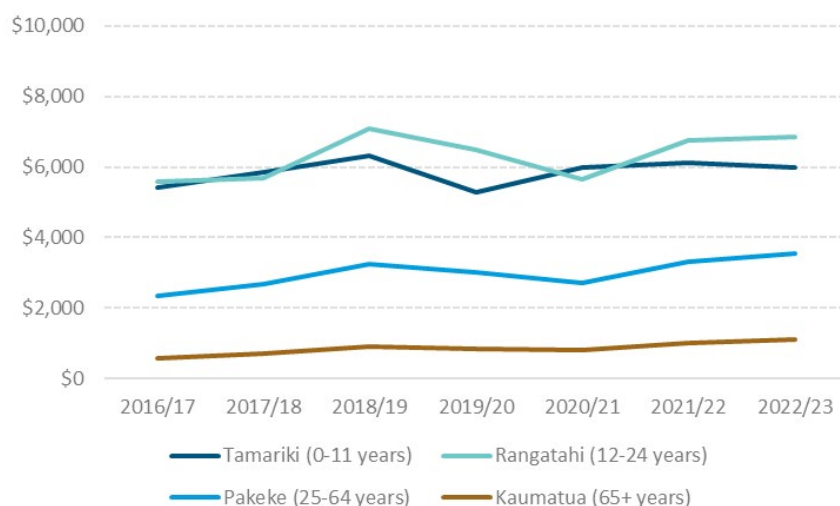


Figure 49: Whaikaha EMS – average spend per Māori customer by sex over time

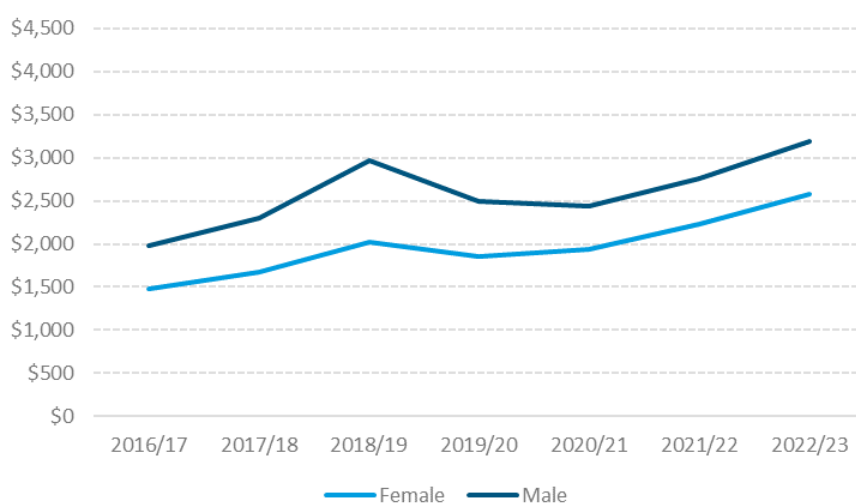


Figure 50: Whaikaha EMS – average spend per Pacific customer by sex over time

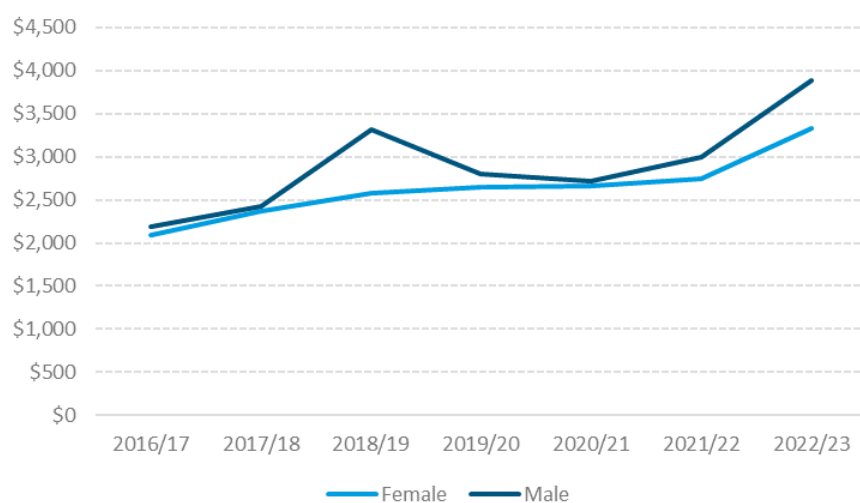


Figure 51: Whaikaha EMS – average spend per European customer by sex over time

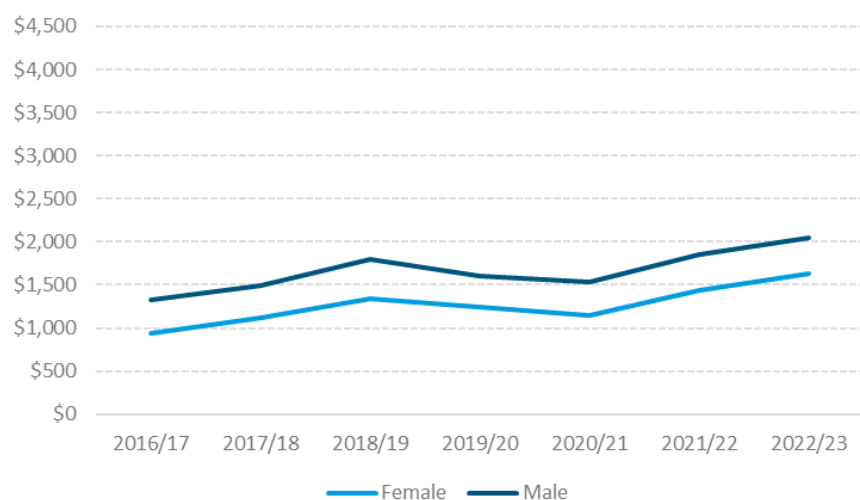


Figure 52: Whaikaha EMS – average spend per Māori customer by urban/rural over time

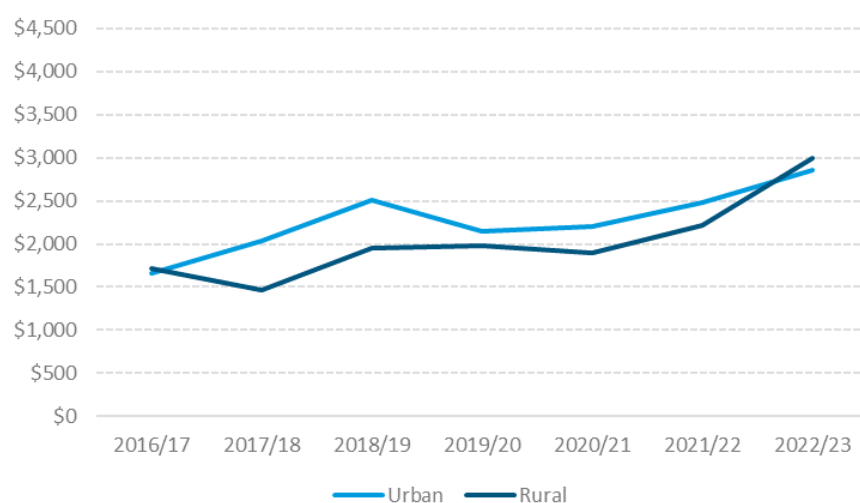


Figure 53: Whaikaha EMS – average spend per Pacific customer by urban/rural over time

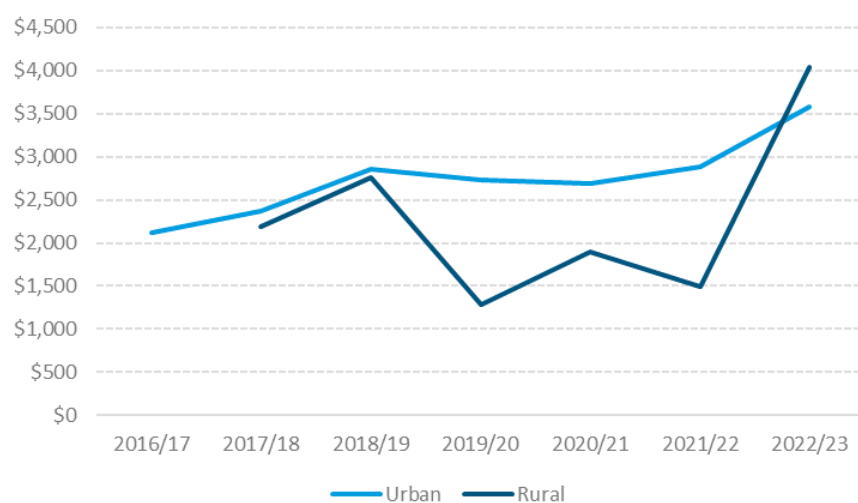
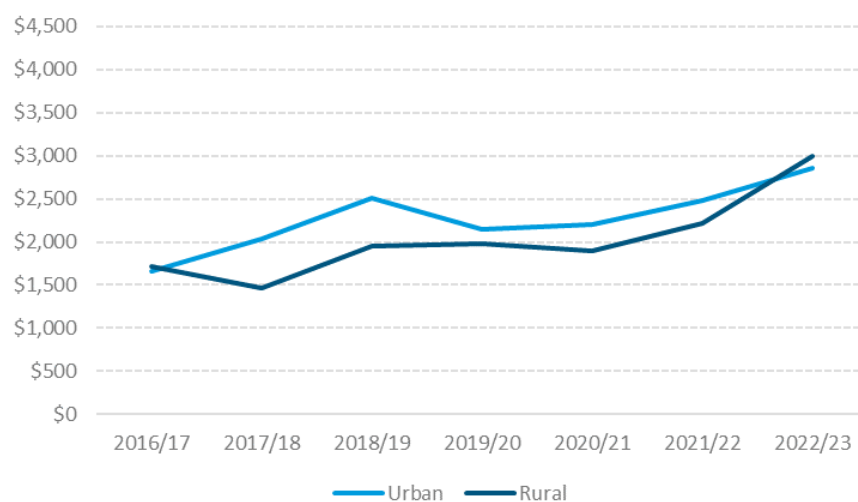


Figure 54: Whaikaha EMS – average spend per European customer by urban/rural over time



# Appendix 4: Whaikaha spectacles and hearing

## Customers demographic characteristics analysis

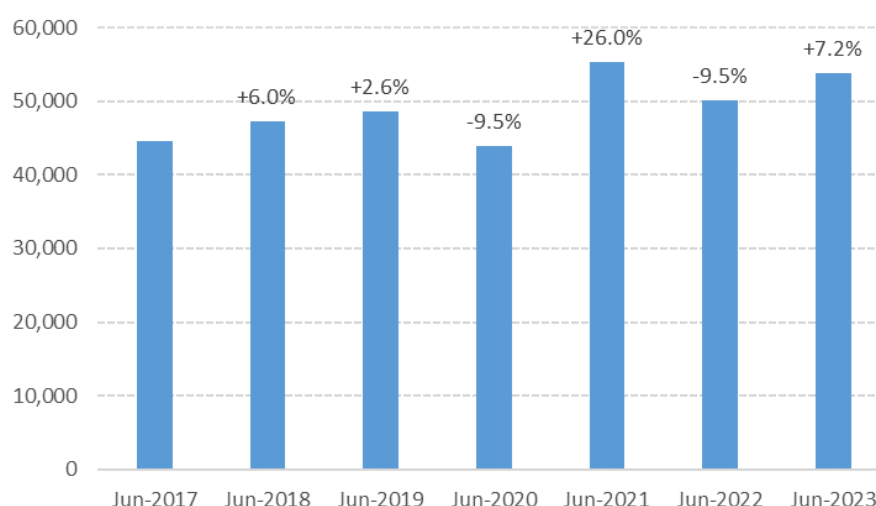
### Customer number

There is an overall increasing trend of Whaikaha specs customers between 2016/17 to 2022/23 but there has not been incremental growth each year.

Both 2019/20 and 2021/22 saw a decrease in customers from the previous year.

In 2022/23 there were 53,730 Whaikaha specs customers compared to 44,616 in 2016/17.

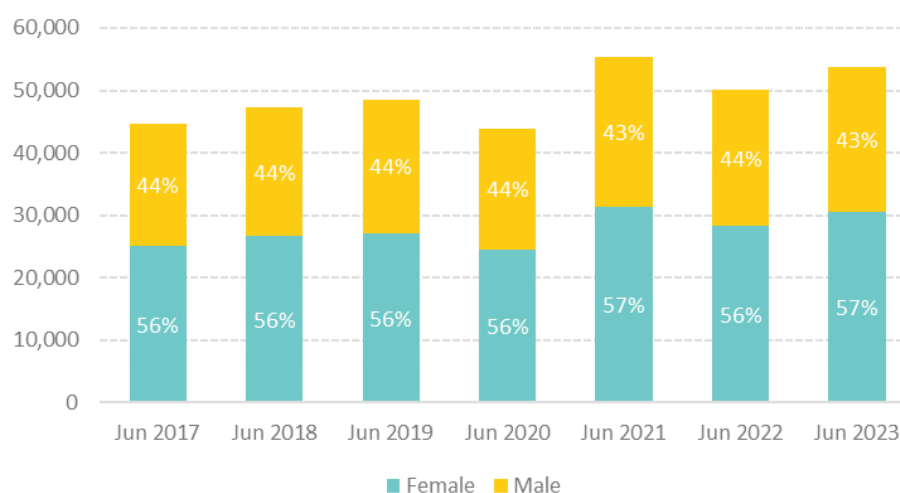
Figure 55: Number of Whaikaha specs customers over time



### Sex of customers

The greater proportion of Whaikaha specs customers are female with this proportion remaining steady at 56 – 57% over the past 7 years.

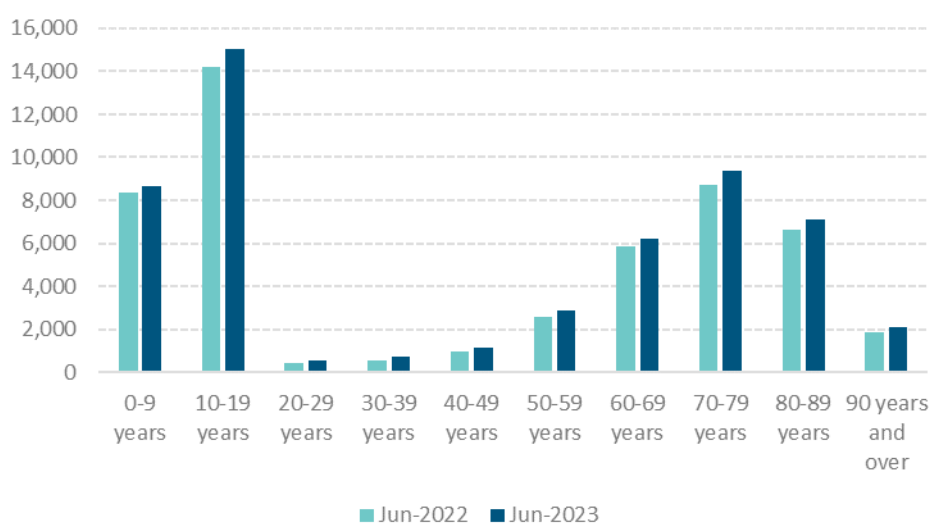
Figure 56: Number and proportion of Whaikaha specs customers by sex over time



## Age of customers

Almost half of Whaikaha specs customers are under 20. In 2021/22, 26% of customers were aged 10 to 19 with a similar proportion, 28% in this age group in 2022/23. Younger customers aged 0 to 9 years made up 15% and 16% of total customers in 2021/22 and 2022/23 respectively. There is an increasing trend in the number of Whaikaha specs customers with age with 46% customers being over 60 and 17% being over 80 in 2022/23.

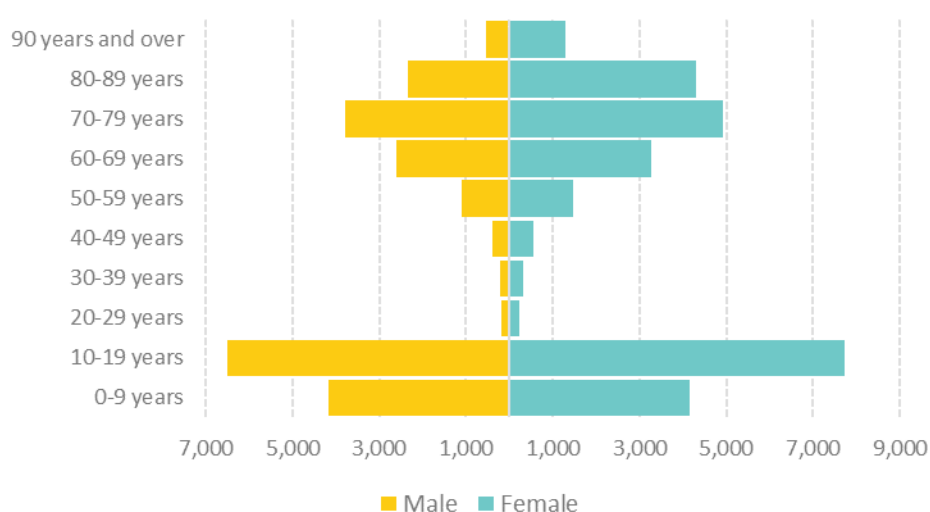
Figure 57: Number of Whaikaha specs customers by age group (2021/22 and 2022/23)



## Age and sex of customers

In 2022/23, for all age groups, there were more female Whaikaha specs customers than male.

Figure 58: Number of Whaikaha specs customers by sex and age groups (2022/23)



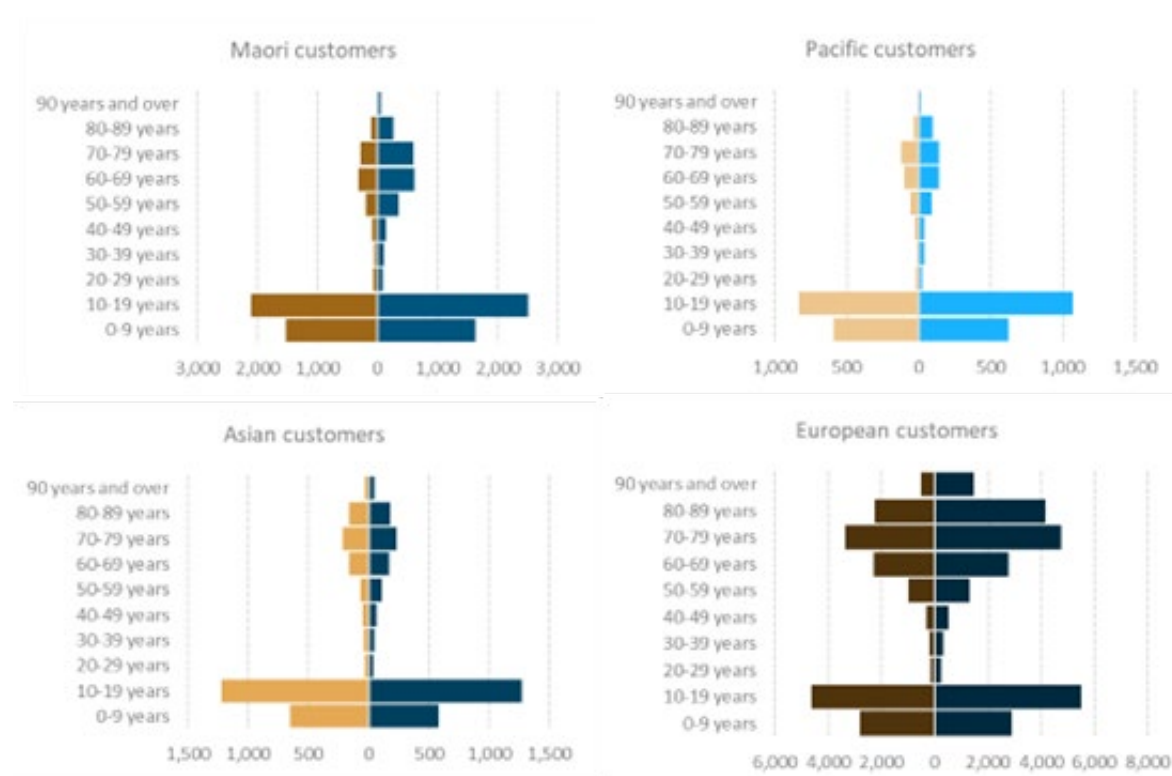
## Ethnicity and age of customers

A greater proportion of Māori, Pacific and Asian Whaikaha specs customers are under 20 than European customers.

The percentage of Māori Whaikaha specs customers that are in the 0–9 age group is 28%, compared to 30% for Pacific males, 23% for Asian males and 14% for Europeans. The percentage of Māori Whaikaha specs customers that are in the 10–19 age group is larger than the 0–9 age group for all ethnicities, 42% Māori customers, 46% Pacific customers, 47% of Asian customers and 24% European customers.

48% of European customers and 20% of Asian customers are in the 60–89 age groups. 21% of Māori customers and 14% of Pacific customers are in the 50–79 age group.

Figure 59: Number of Whaikaha specs customers by ethnicity level 1 groups, age groups and sex (2022/23). Left side of each plot – Male, Right side of each plot – Female.

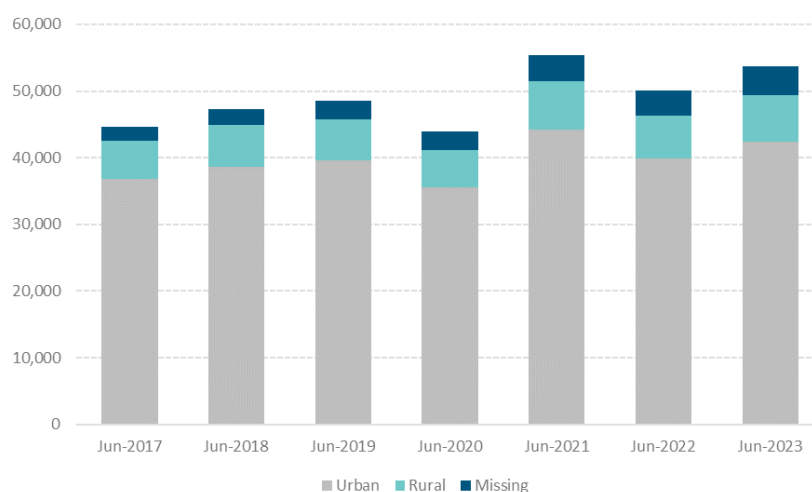




## Urban / rural customers

The majority of Whaikaha specs customers live at an urban address. There has been a very small increase in those with a rural address from 12.7% in 2016/17 to 13.2% in 2022/23. There has also been an increase in those for who this urban/rural data is missing, over time.

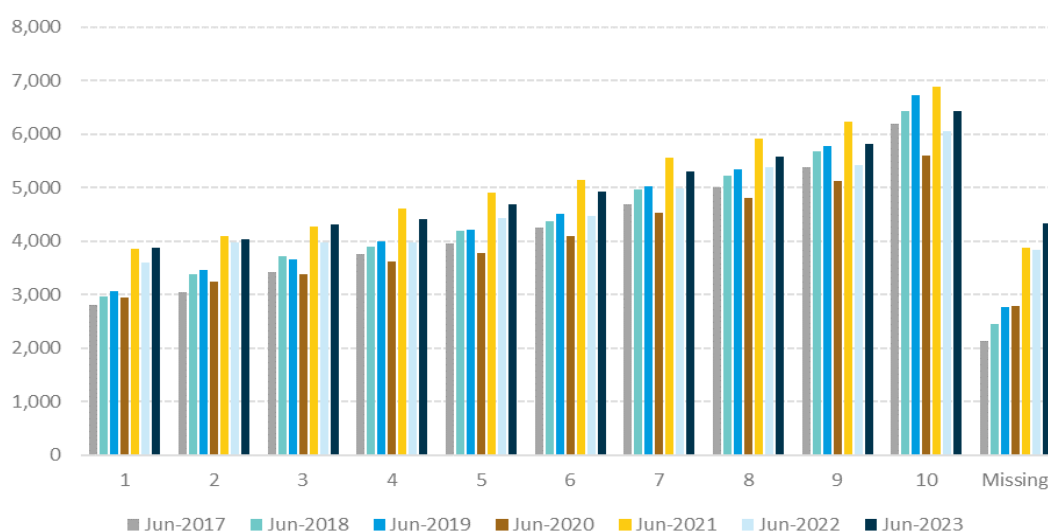
Figure 60: Number of Whaikaha specs customers by urban and rural indicator over time



## Deprivation index 2018 for customer's address

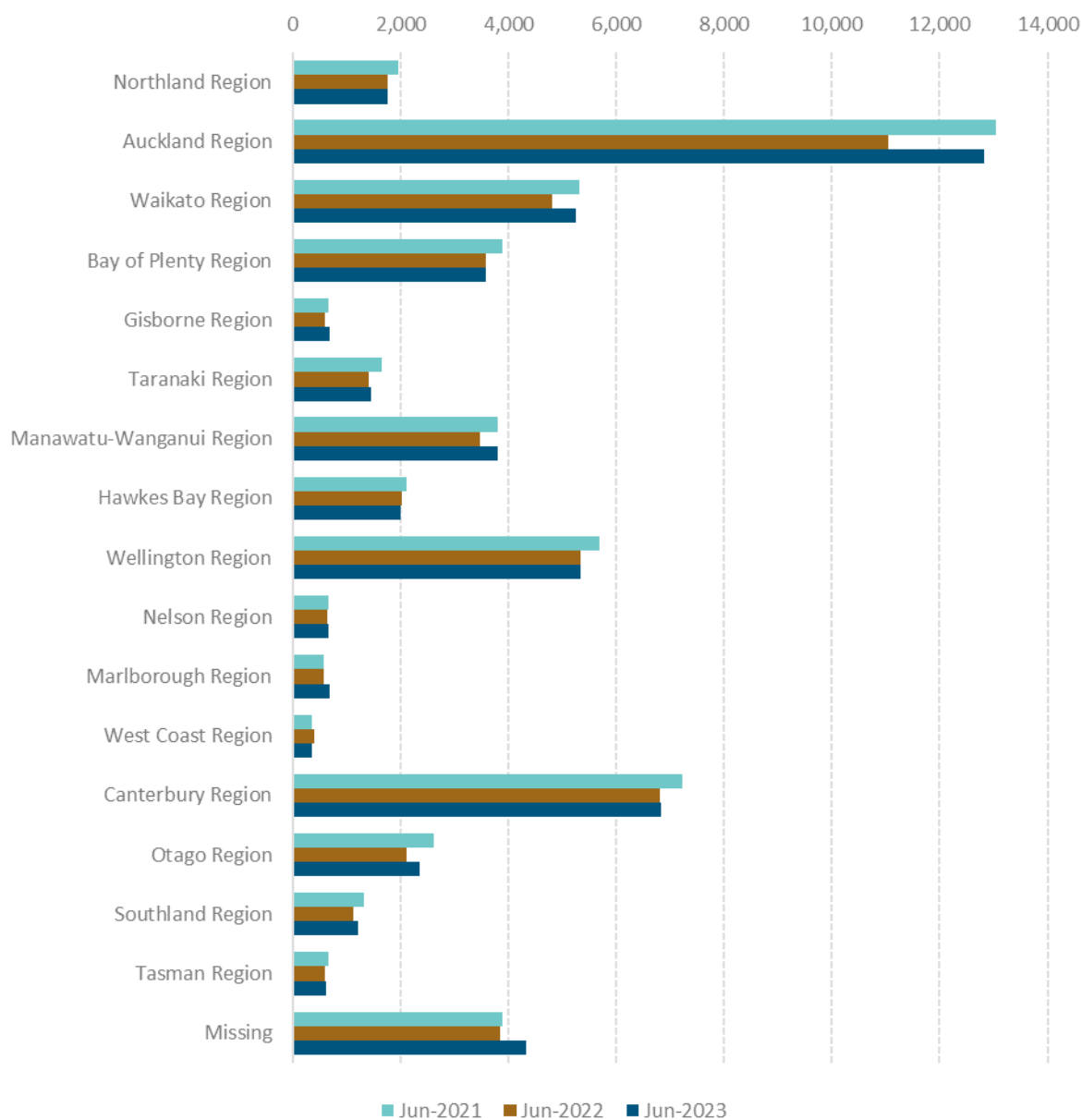
More Whaikaha specs customers live in areas of higher deprivation than those in less deprived areas. Deprivation index 1 is an area of low deprivation and 10 is an area of high deprivation, as measured by the deprivation index 2018. In 2022/23, 15% customers lived in areas with deprivation index 1 and 2 (least deprived), 20% in areas with deprivation index 7 and 8 and 23% in deprivation index 9 and 10 (most deprived).

Figure 61: Number of Whaikaha specs customers by deprivation index 2018 over time



## Region

Figure 62: Number of Whaikaha specs customers by geographical region over time (2020/21 - 2022/23)



## Customer income

Income information was not available for 42%, 46% and 49% of customers for years 2021/22, 2020/21 and 2019/20.

Figure 63: Number of Whaikaha specs customers by personal income bands over time (2019/20 – 2021/22)

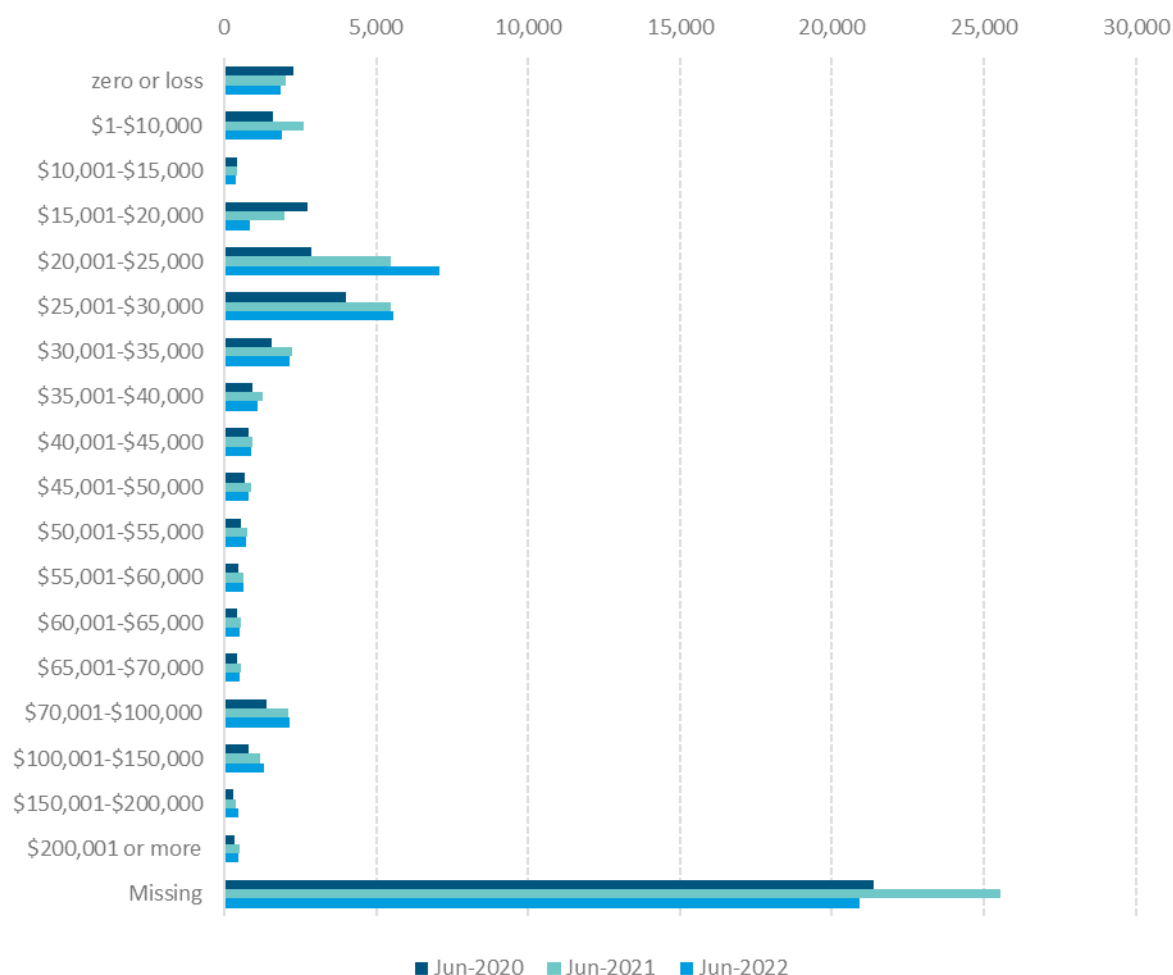
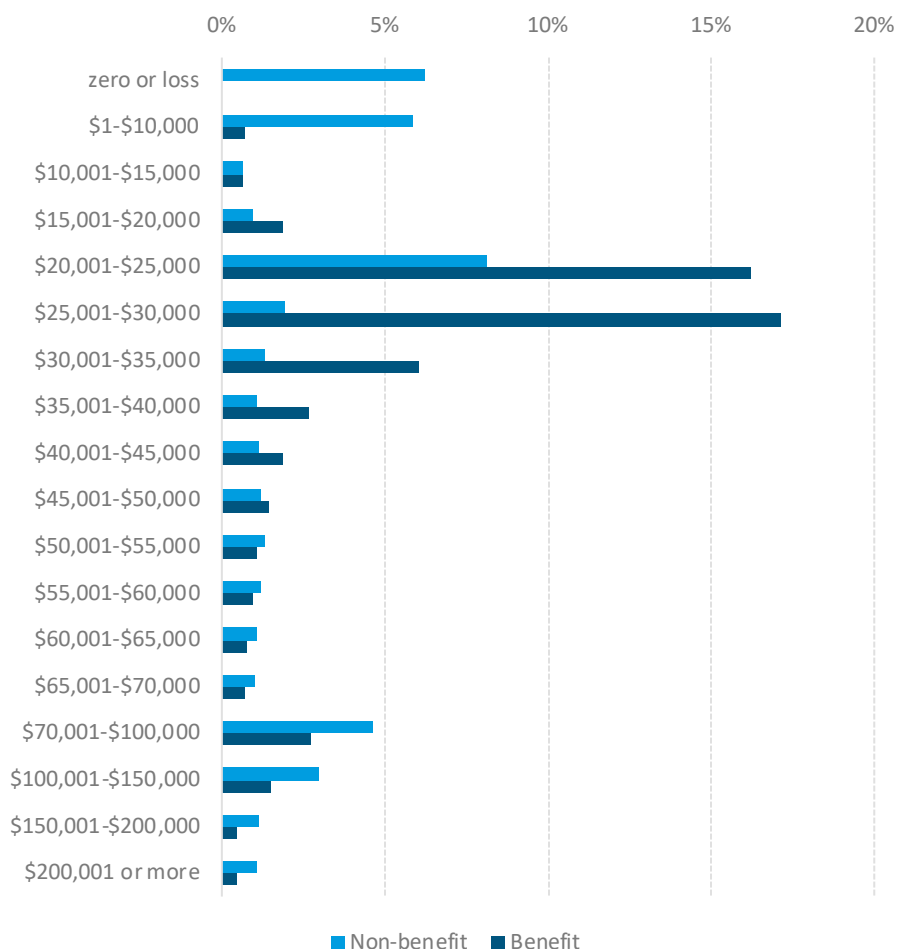


Figure 64: Proportion of Whaikaha spectacles and hearing customers that received the benefit vs non-benefit by personal income bands (2021/22) (excluding customers with missing income)

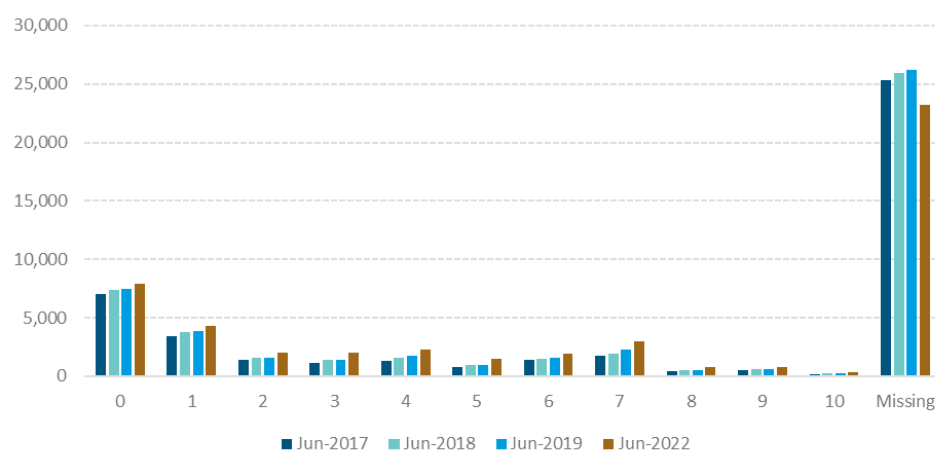


## Customer

### highest qualifications

Qualification information was unavailable for 46% (2021/22) to 53% (2019/20) customers. In 2021/22, 44% of customers were in the 0-19 years old age groups, who may form part of the missing data. There has been a slight upwards trend in the proportion of customers holding qualifications over the period 2019/20 to 2021/22. 16% of customers in 2021/22 had no qualifications. In 2021/22, 10% of customers had at least a university degree or equivalent.

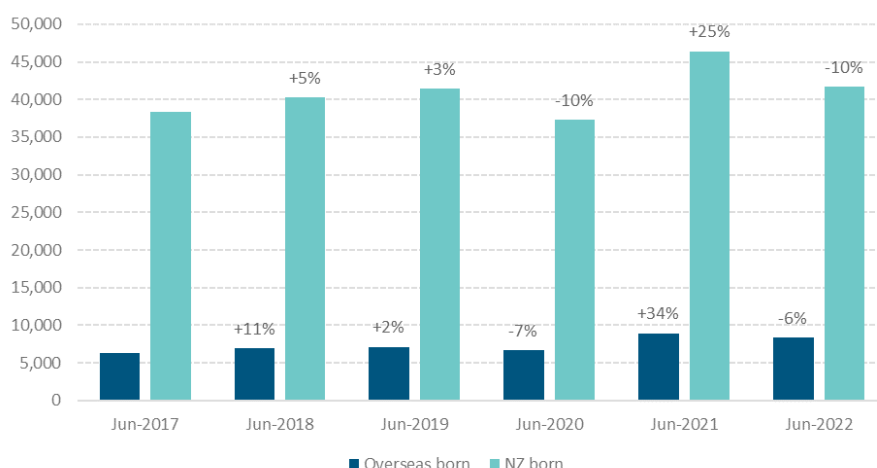
Figure 65: Number of Whaikaha specs customers by highest qualification level over time (2019/20 - 2021/22)



## NZ and overseas born customers

The majority of Whaikaha specs customers are NZ-born. The proportion of customers who are born overseas has increased slightly over the past 6 years with 14% born overseas in 2016/17 and 17% in 2021/22.

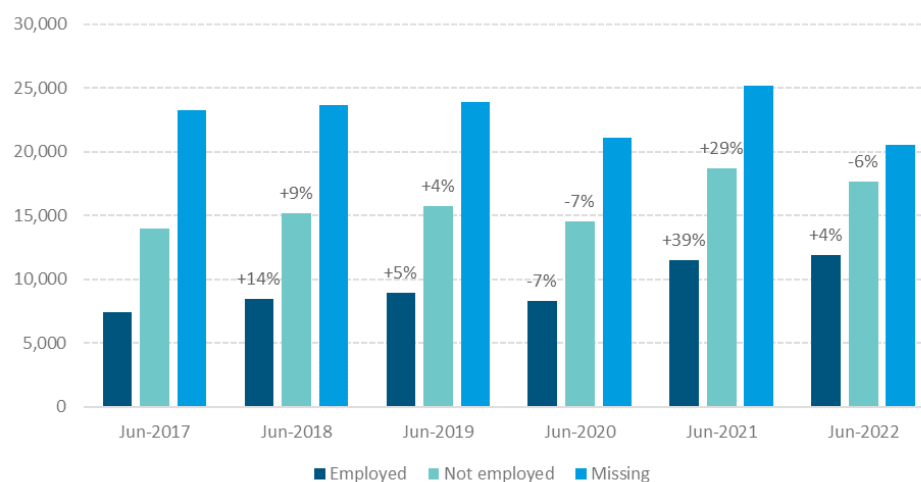
Figure 66: Number and growth of Whaikaha specs customers broken down by NZ-born and Overseas-born customers over time.



## Customer employment status

Employment status information is not available for the majority of Whaikaha specs with 41% missing for 2021/22 and 48% missing for 2019/20. Since 44% of the customers were aged 0 to 19 years old in 2021/22, this may account for some of the missing employment information. There is an increasing trend of employment, 17% of customers were employed in 2016/17, rising to 24% in 2021/22. There was also an increase in the percentage not employed from 31% to 35% for the same period.

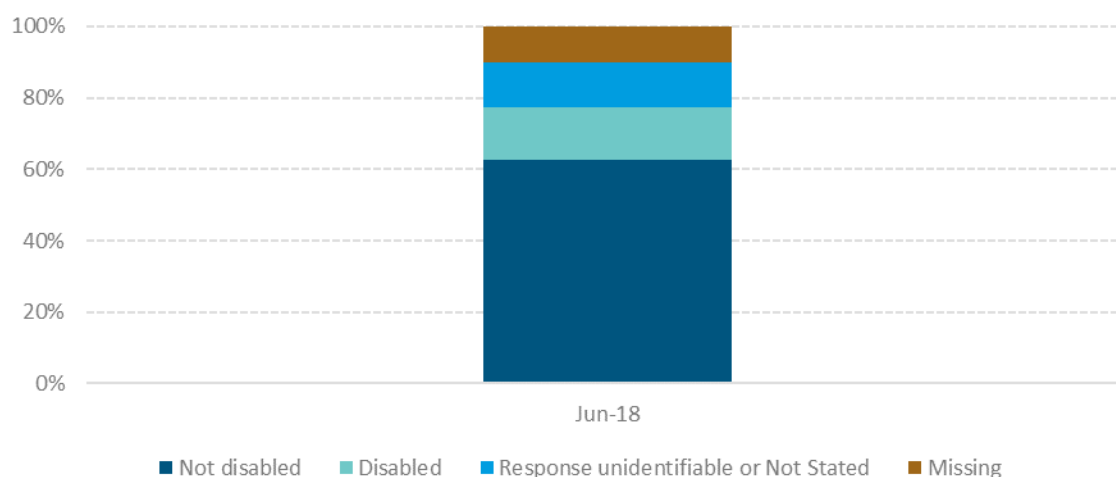
Figure 67: Number and growth of Whaikaha specs customers broken down by employed and not employed groups over time (2016/17 - 2021/22)



## Washington Group Short Set Disability Indicator

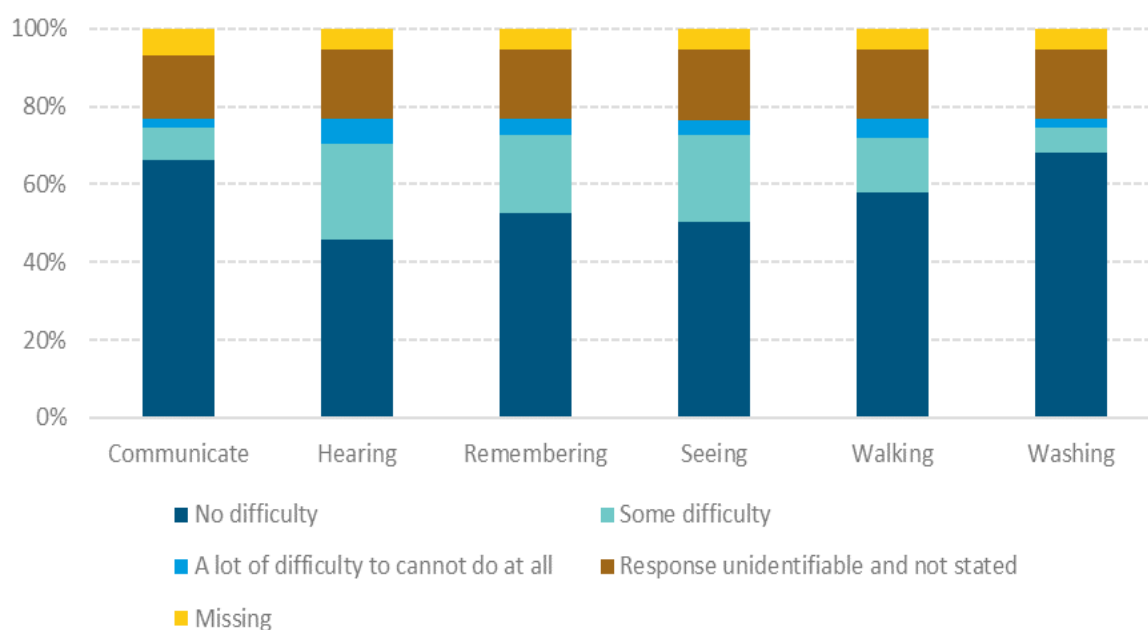
In 2017/18, 14% of Whaikaha EMS customers reported themselves as disabled.

Figure 68: Proportion of Whaikaha specs customers in 2017/18 by disability indicator based on the Washington Group Short Set (Census 2018)



## Washington Group Short Set questions

Figure 69: Proportion of Whaikaha specs customers in 2017/18 broken down by responses to the Washington Group Short Set questions



## Customers average spend analysis

Figure 70: Whaikaha hearing – average spend per customer by age over time

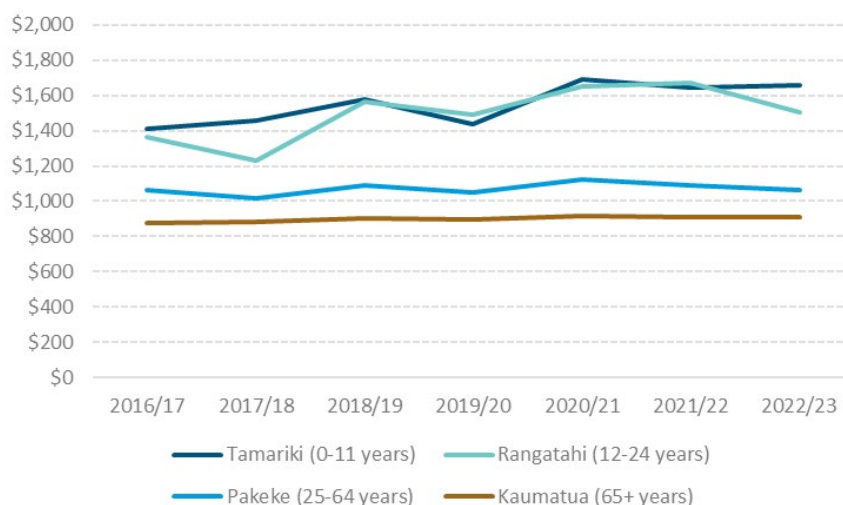


Figure 71: Whaikaha hearing – average spend per customer by ethnicity over time

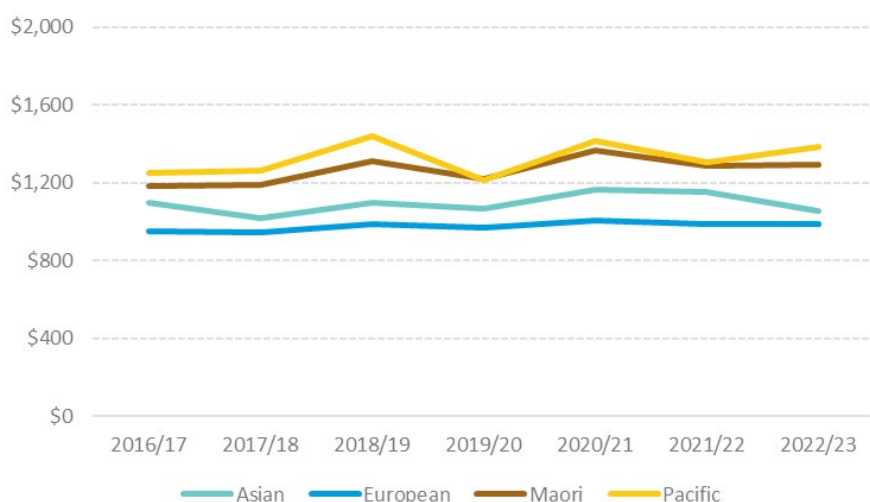


Figure 72: Whaikaha hearing – average spend per Māori customer by age over time

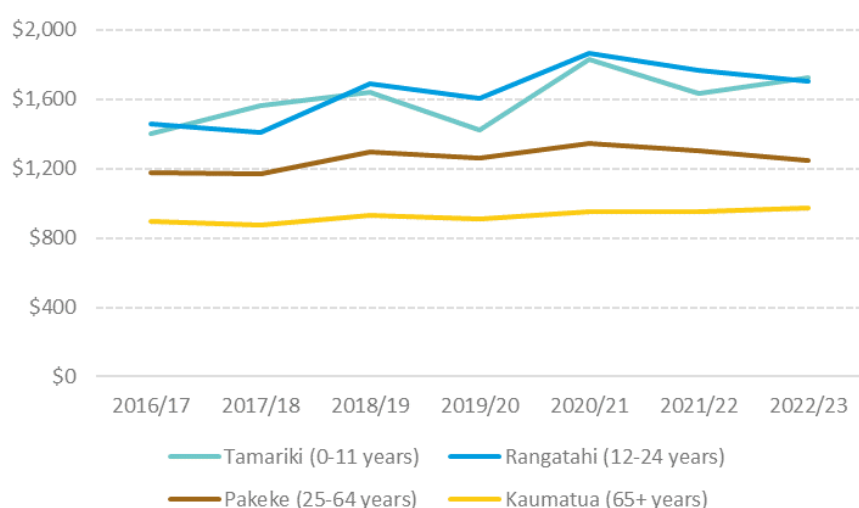


Figure 73: Whaikaha hearing – average spend per Pacific customer by age over time

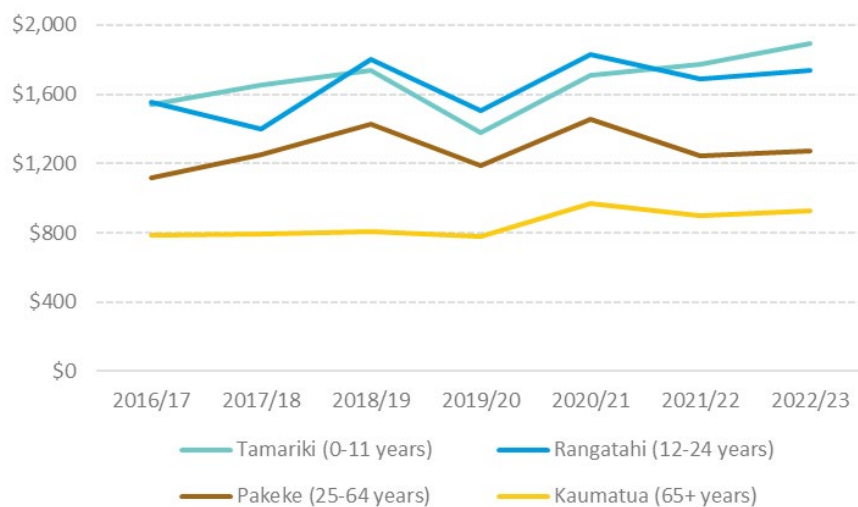
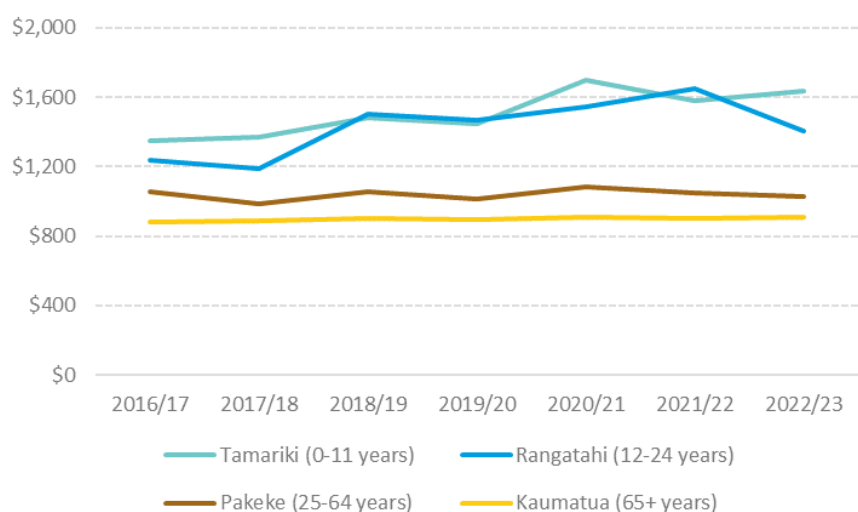


Figure 74: Whaikaha hearing – average spend per European customer by age over time



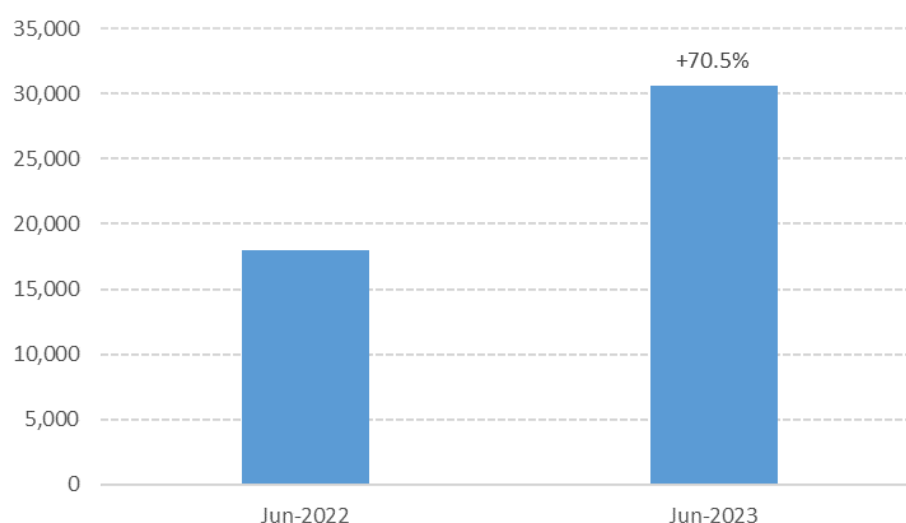


# Appendix 5: ACC customers analysis

## Customer number

There were 70.5% more ACC customers in 2022/23 (30,591) than 2021/22 (17,940).

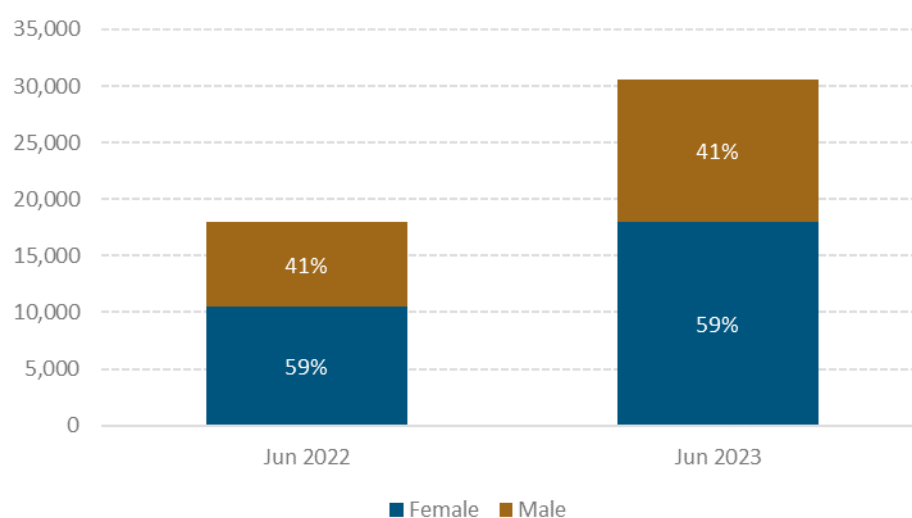
Figure 75: Number of ACC customers over time



## Sex of customers

The greater proportion of ACC customers are female.

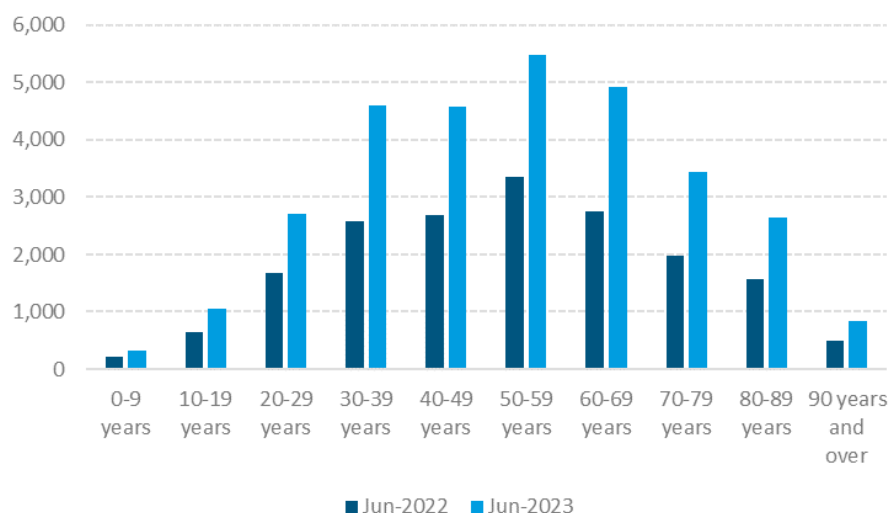
Figure 76: Number and proportion of ACC customers by sex over time



## Age of customers

The majority of ACC customers are aged between 30 and 69. In 2021/22, 63% of customers were in this age band, with 64% in this group in 2022/23. Younger customers, aged 0 to 19 years, made up 4 to 5% of total ACC customers.

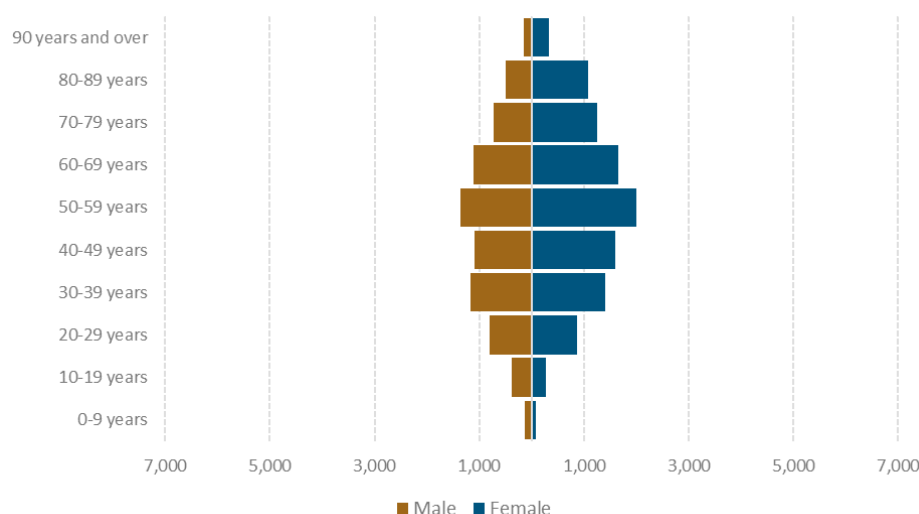
Figure 77: Number of ACC customers by age group (2021/22 and 2022/23)



## Age and sex of customers

In 2022/23, there were more male ACC customers in the 0 to 9 and 10 to 19 age groups than females, but the reverse was true for all other age groups.

Figure 78: Number of ACC customers by sex and age groups (2022/23)

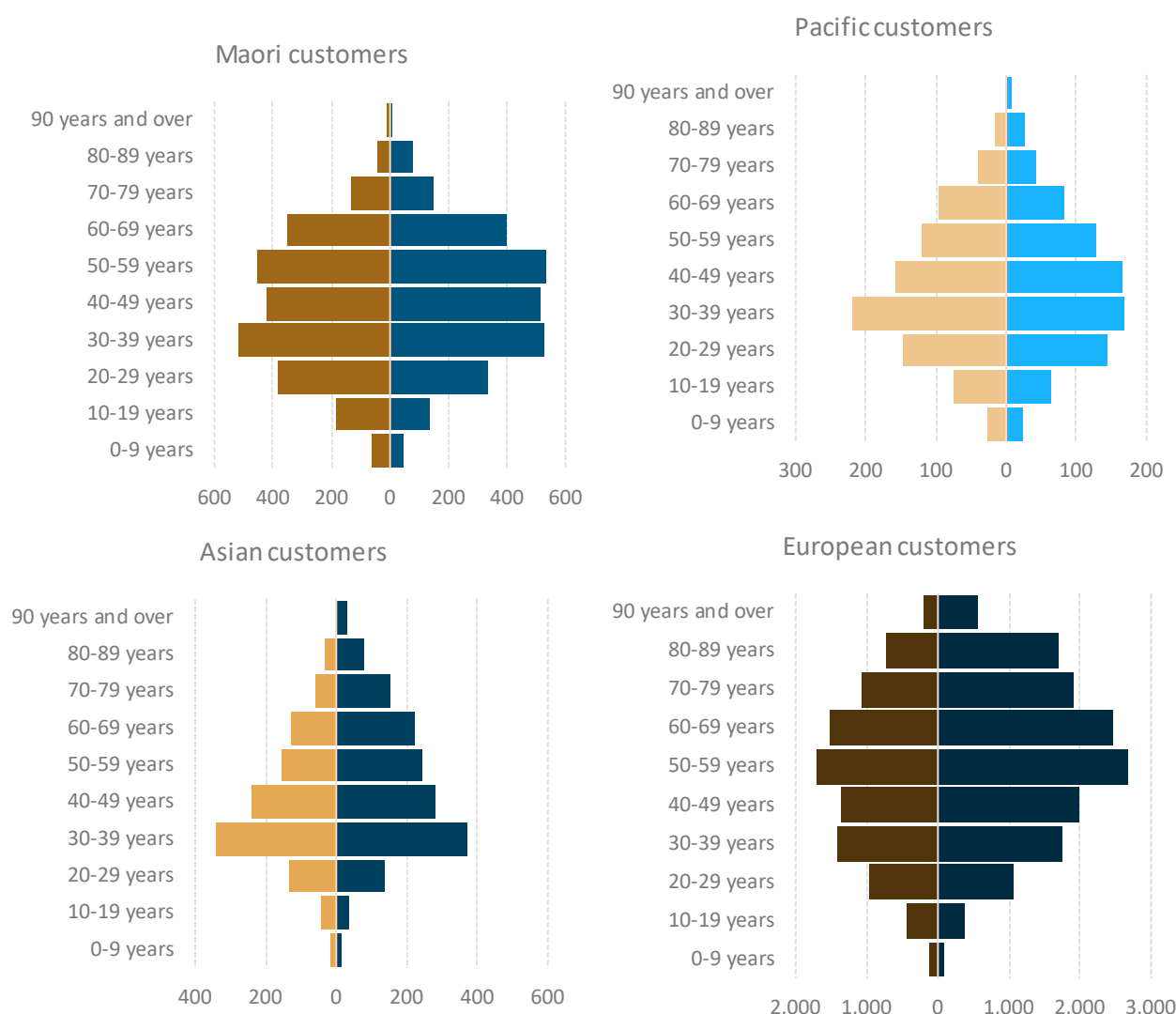


## Ethnicity and age of customers

A greater proportion of customers are young males for all ethnicities. There is a greater proportion of male Asian and European customers in the 0 to 19 year old age group than for females. For male Māori customers, the proportion is greater in the 0 to 29 year old groups than for females and for male Pacific customers, the proportion is greater in the 0 to 39 year old and 60-69 year old groups.

73% of Asian customers, 70% of Māori customers, 65% of Pacific customers and 62% of European customers are aged between 30 and 69.

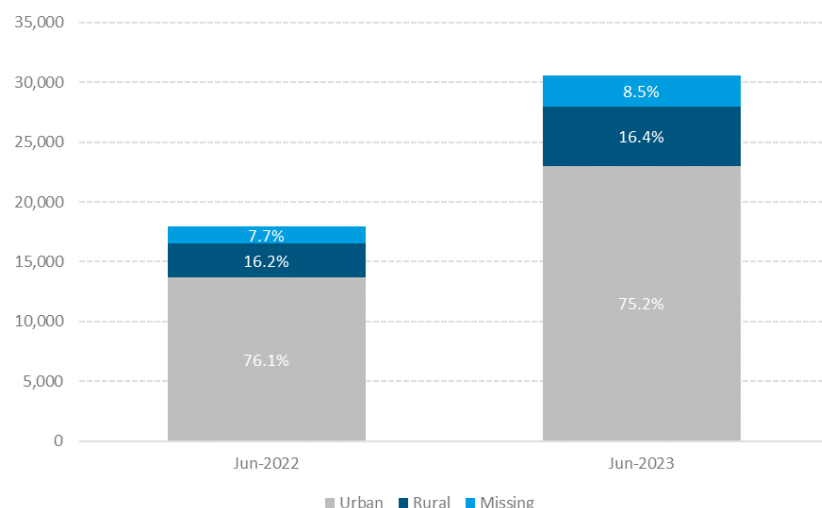
Figure 79: Number of ACC customers by ethnicity level 1 groups, age groups and sex (2022/23). Left side of each plot – Male, Right side of each plot – Female.



## Urban / rural customers

The majority of ACC customers live at an urban address.

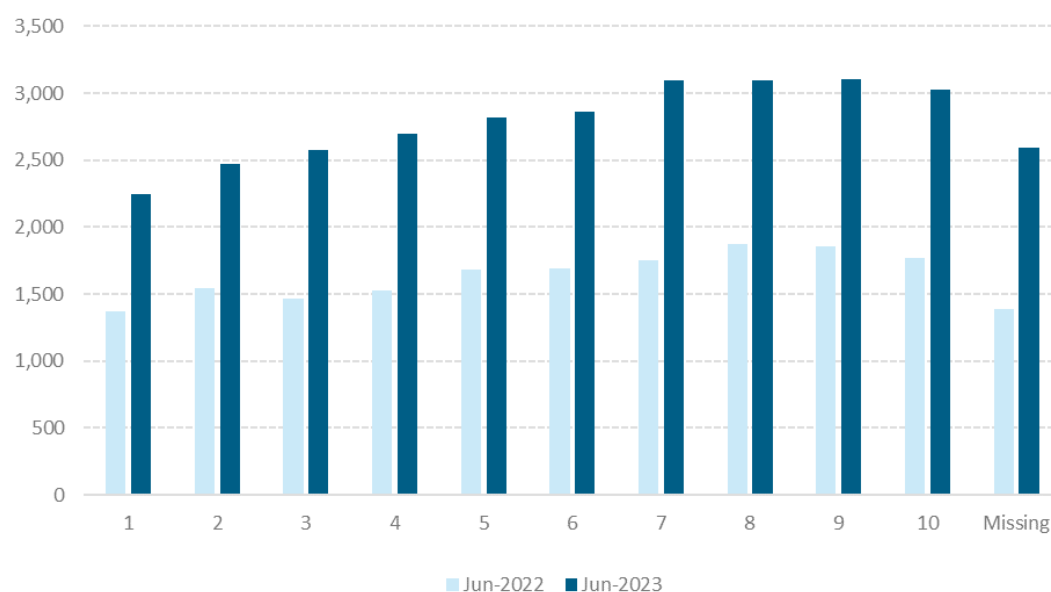
Figure 80: Number of ACC customers by urban and rural indicator over time



## Deprivation index 2018 for customer's address

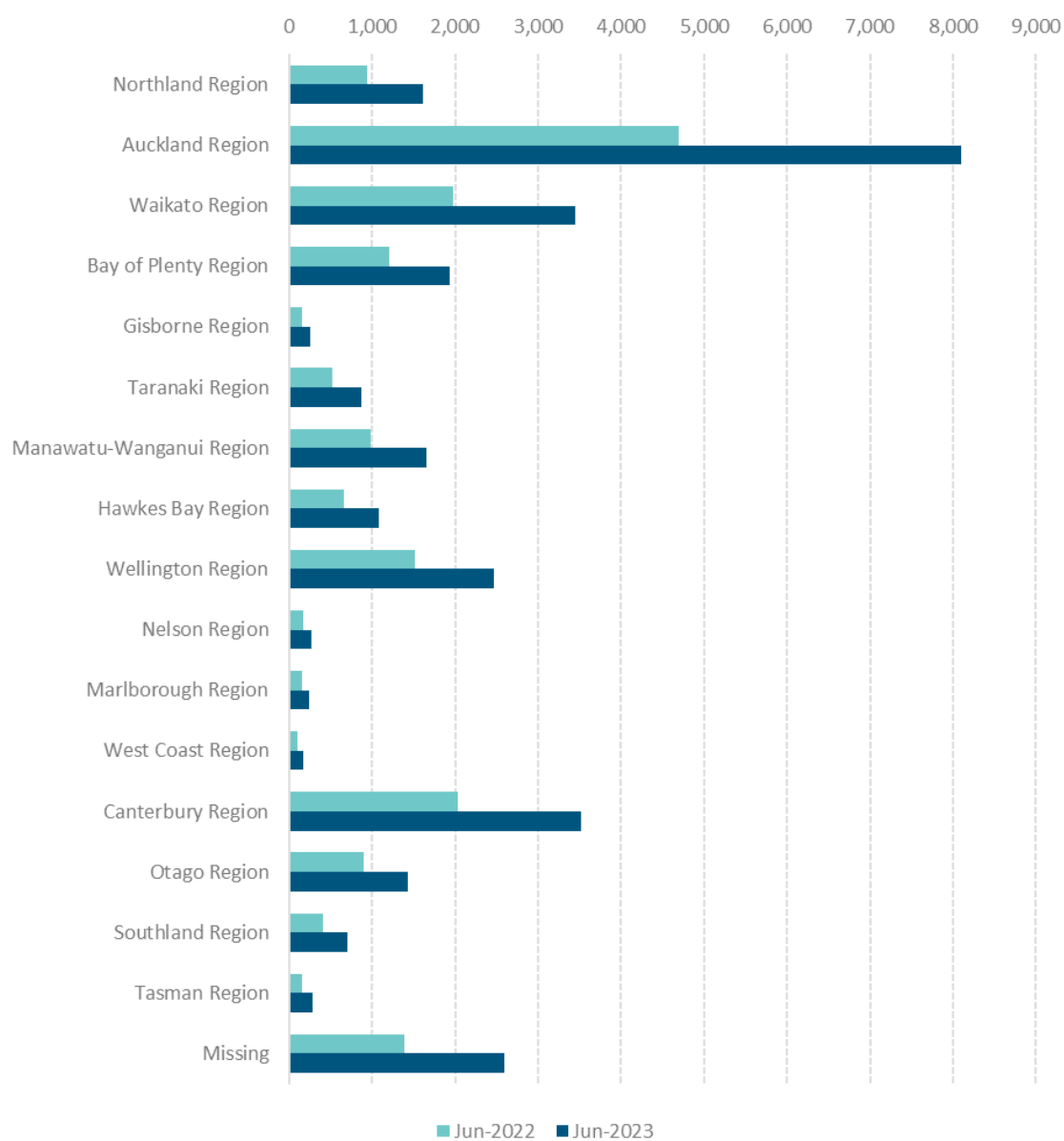
More ACC customers live in the areas with the greatest deprivation. Deprivation index 1 is an area of low deprivation and 10 is an area of high deprivation, as measured by the deprivation index 2018. In 2022/23, 18% customers lived in areas with deprivation index 1 and 2 (least deprived), 23% in areas with deprivation index 7 and 8 and 23% in deprivation index 9 and 10 (most deprived).

Figure 81: Number of ACC customers by deprivation index 2018 over time



## Region

Figure 82: Number of ACC customers by geographical region over time (2020/21 – 2022/23)



## Customer income

Income information was not available for 7% of customers for 2021/22.

Figure 83: Number of ACC customers by personal income bands (2021/22)

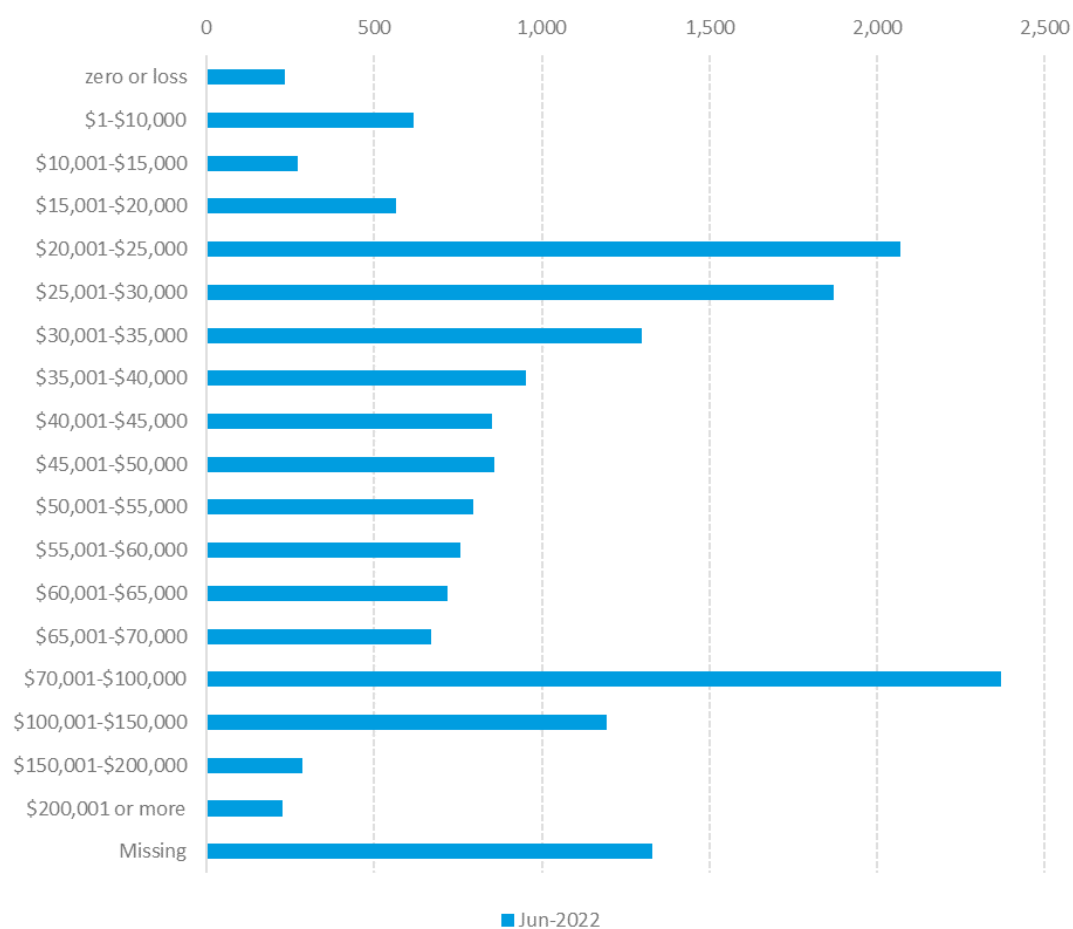
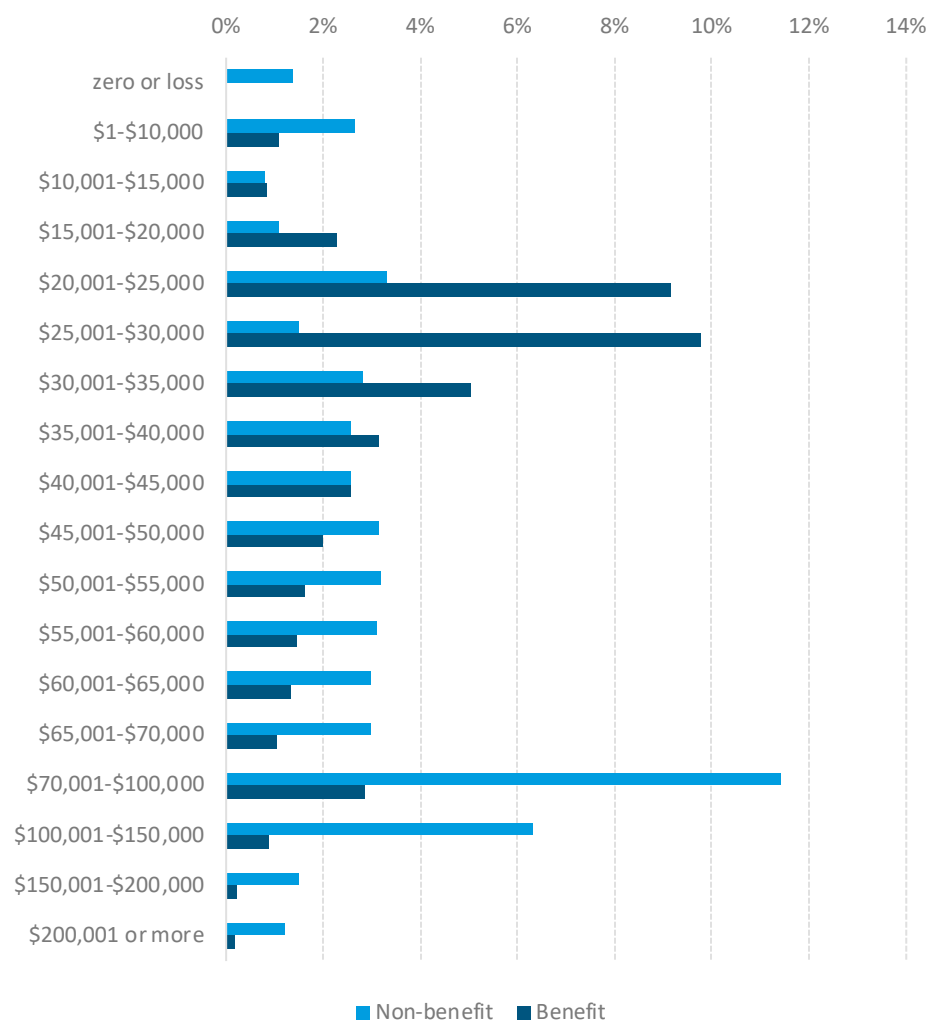


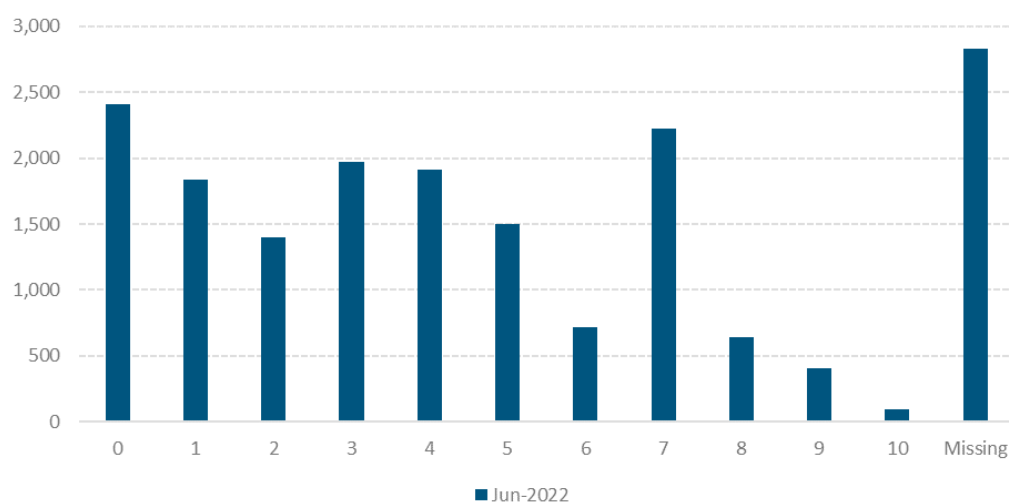
Figure 84: Proportion of ACC customers that received the benefit vs non-benefit by personal income bands (2021/22) (excluding customers with income missing)



## Customer highest qualifications

Qualification information was unavailable for 16% customers.

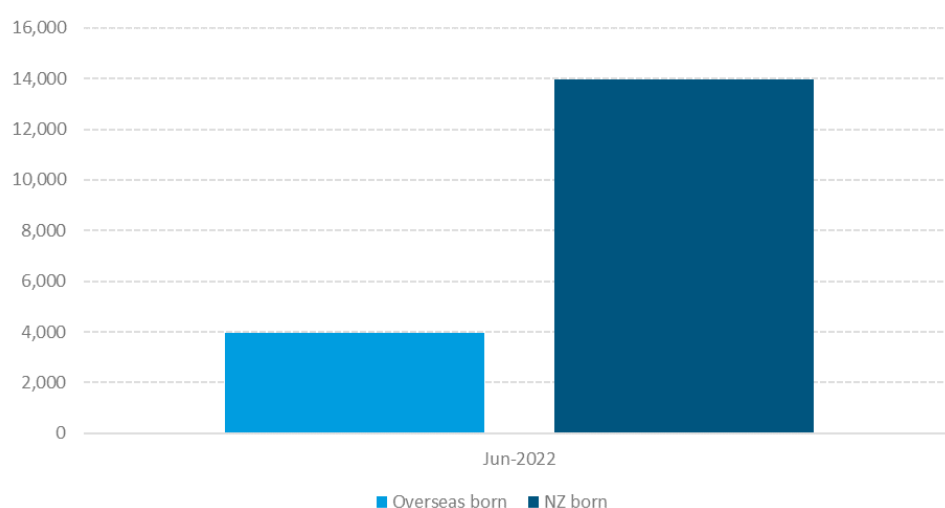
Figure 85: Number of ACC customers by highest qualification level (2021/22)



## NZ and overseas born customers

The majority of ACC customers are NZ-born, with 78% of 2021/22 customers being NZ-born and 22% being born overseas.

Figure 86: Number and growth of ACC customers broken down by NZ-born and Overseas-born customers (2021/22)

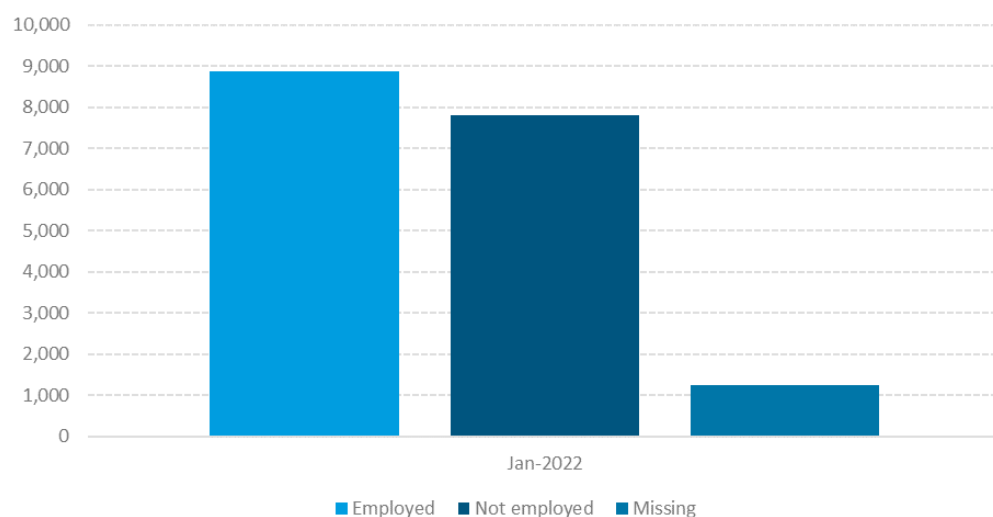




## Customer employment status

Employment status information was not available for 7% of ACC customers. 49% of ACC customers were employed and 44% were not employed in 2021/22.

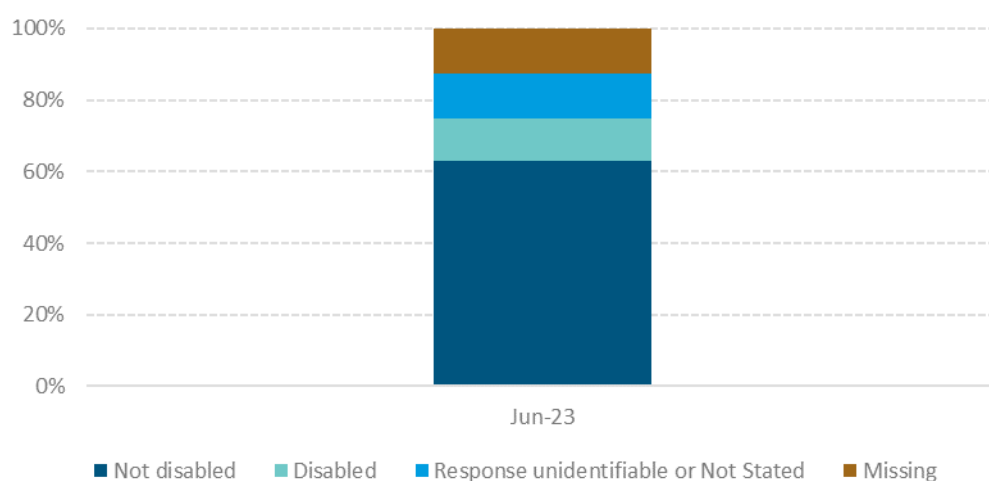
Figure 87: Number and growth of ACC customers broken down by employed and not employed groups (2021/22)



## Washington Group Short Set Disability Indicator

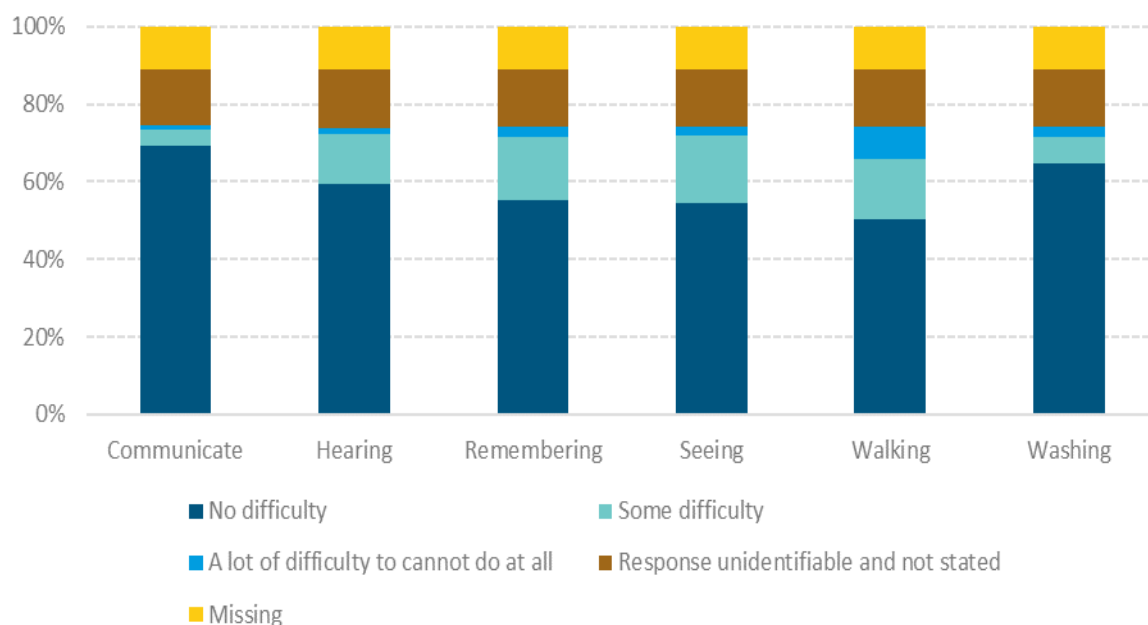
In 2017/18, 14% of ACC customers reported themselves as disabled.

Figure 88: Proportion of ACC customers in 2022/23 by disability indicator based on the Washington Group Short Set (Census 2018)



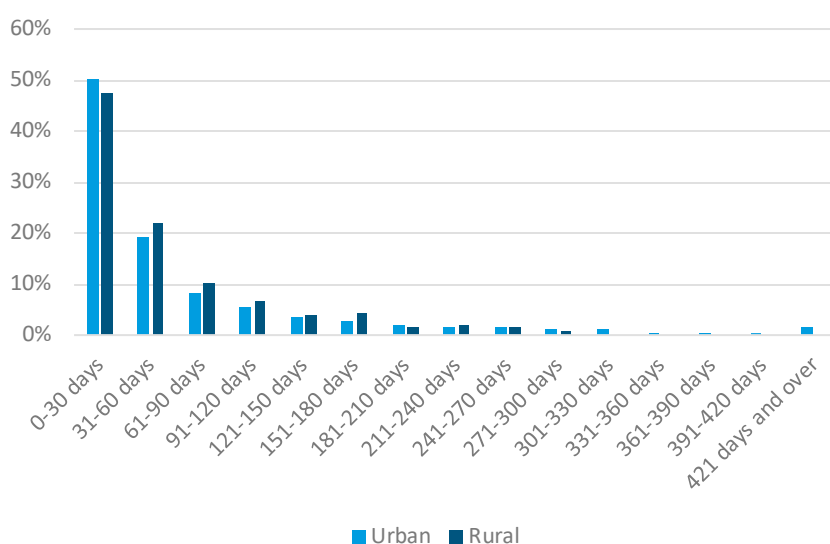
## Washington Group Short Set questions

Figure 89: Proportion of ACC customers broken down by responses to the Washington Group Short Set questions



## Time taken from lodgement to first service

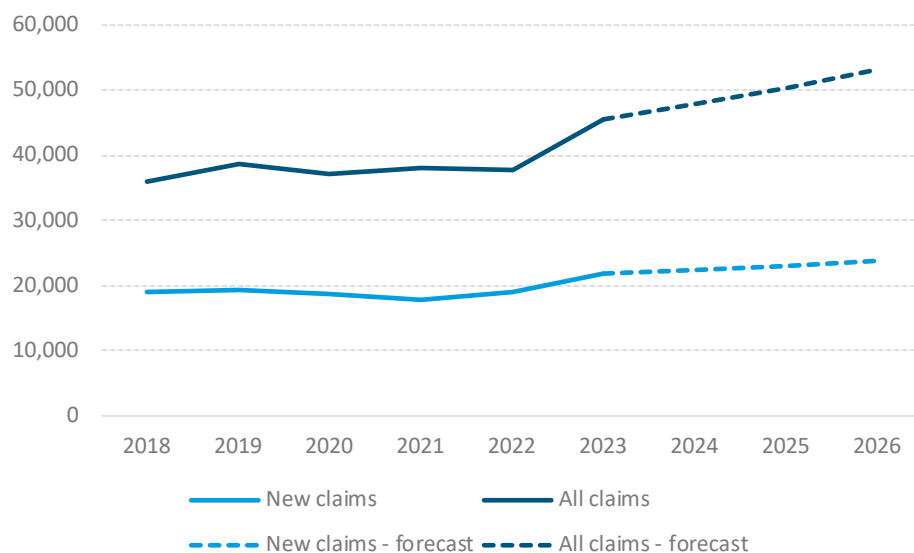
Figure 90: Distribution of ACC claimants by time from lodgement to first service for claims lodged and service provided in 2021/22 and 2022/23



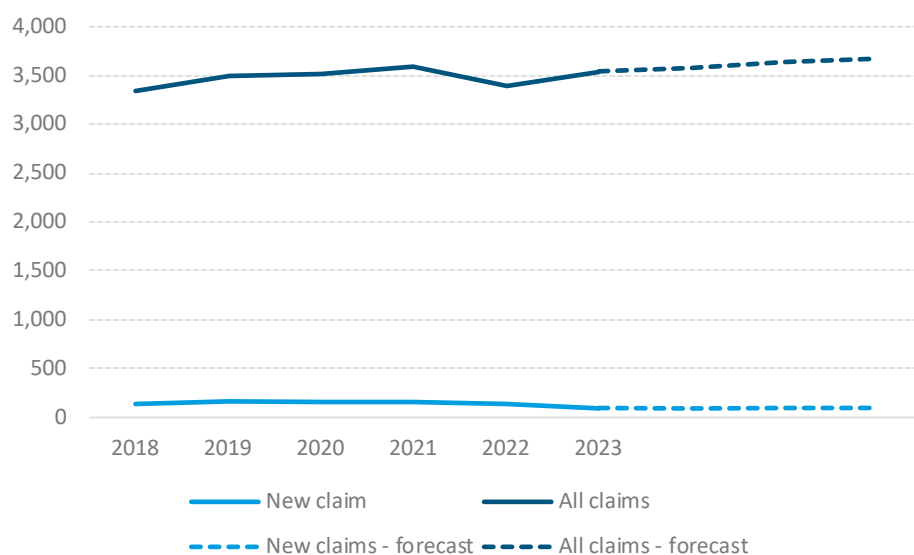
## ACC claims forecast

The count of ACC claims in Figures 91 and 92 are based on ACC claims receiving support for independence capital spend (aids and appliances, housing modifications and vehicle modifications).

*Figure 91: ACC non-serious injury claims over time. Forecast based on growth between 2018 and 2023.*



*Figure 92: ACC serious injury claims over time. All claims forecast is based on annual growth between 2018 and 2023. New claims forecast is based on annual growth between 2018 and 2022.*



# Appendix 6: Autism Spectrum Disorder

Figure 93: Proportion of ASD customers that received Band 1 equipment, Band 2 equipment, Band 3 equipment and Complex Housing funds over time (Whaikaha EMS customers)

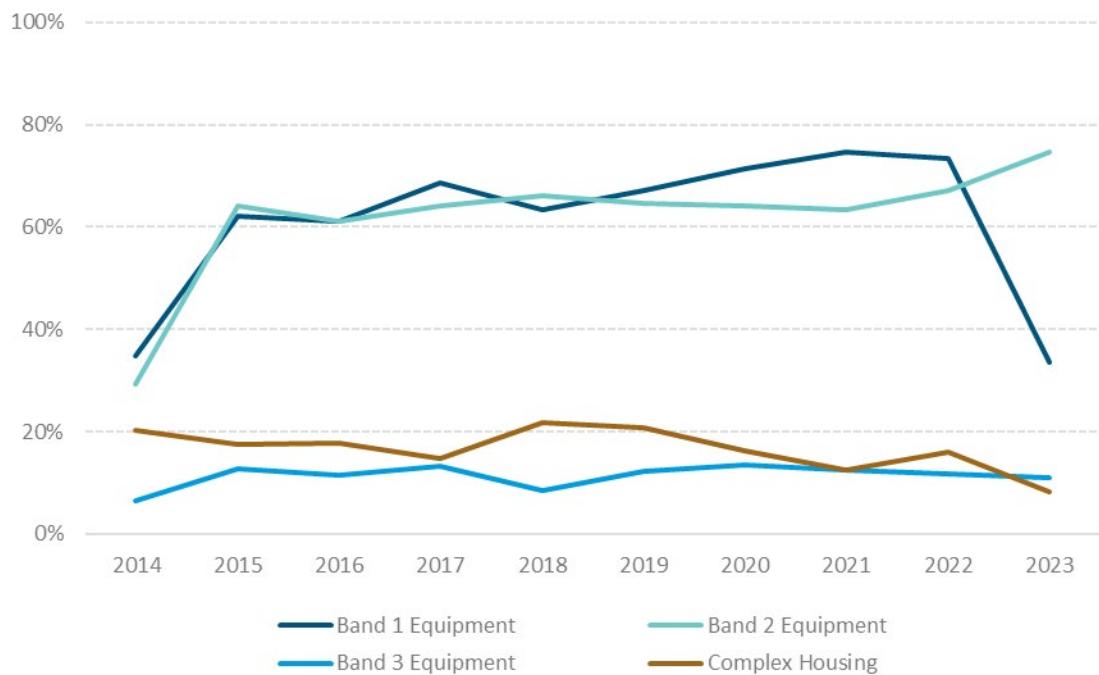
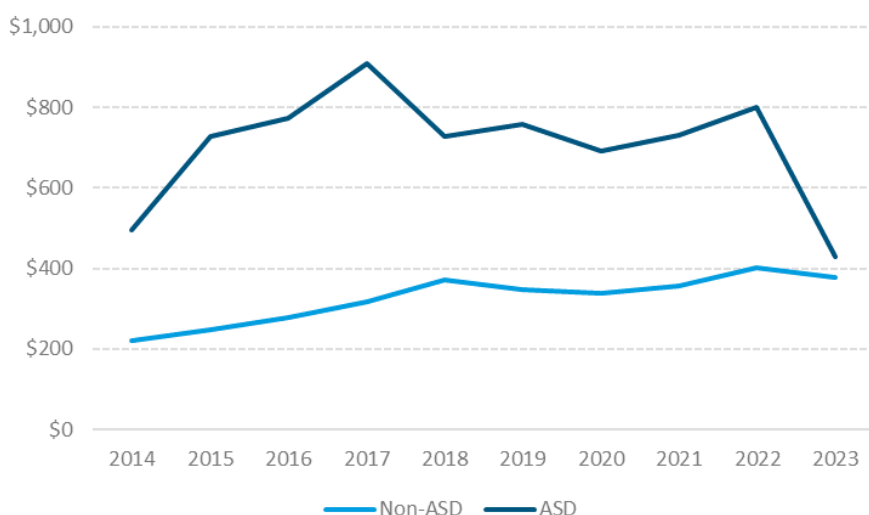


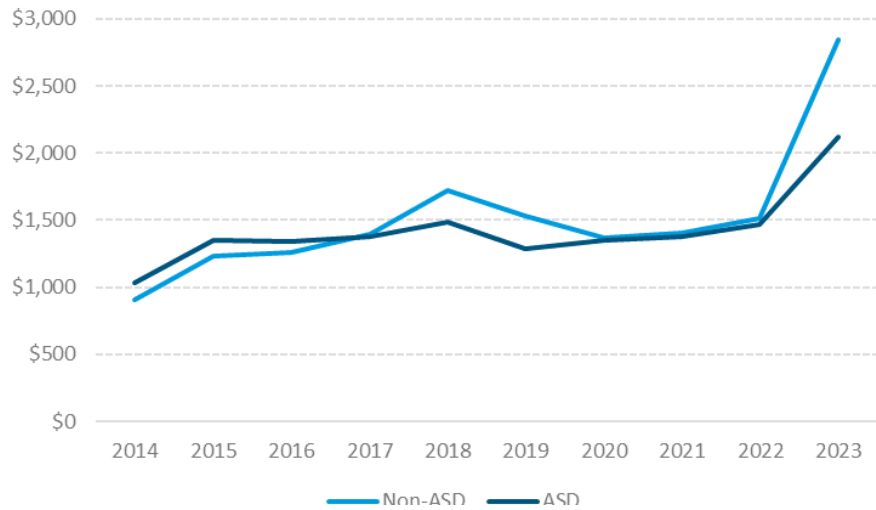
Figure 94: Band 1 equipment contract - average cost per Whaikaha EMS customer broken down by ASD and non-ASD customers over time (calendar year)



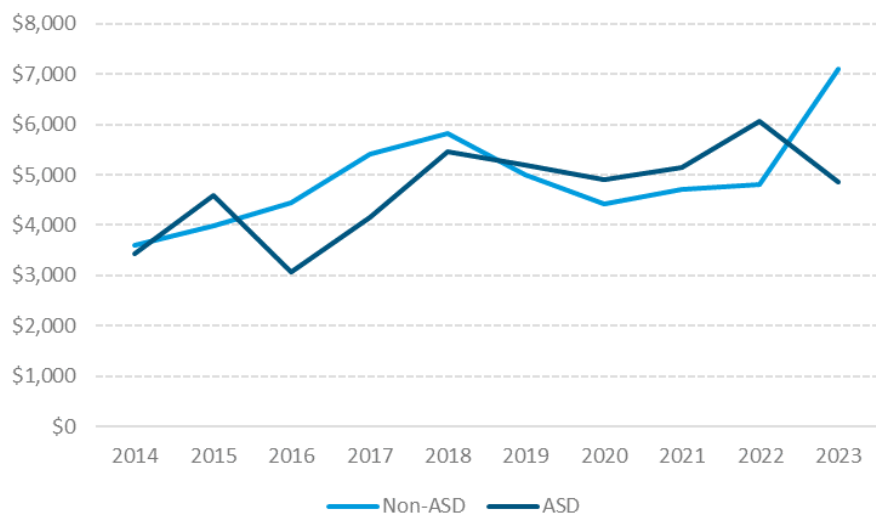
For customers that received Band 2 equipment, Band 3 equipment or Complex housing services, there does not appear to be any consistent difference between the average cost per ASD and non-ASD customer. There appears to be an increasing trend for all three services for both ASD and non-ASD customers.

These can be seen in Figure 95, Figure 96 and Figure 97.

*Figure 95: Band 2 equipment contract - average cost per Whaikaha EMS customer broken down by ASD and non-ASD customers over time (calendar year)*



*Figure 96: Band 3 equipment contract - average cost per Whaikaha EMS customer broken down by ASD and non-ASD customers over time (calendar year)*



*Figure 97: Complex housing contract - average cost per Whaikaha EMS customer broken down by ASD and non-ASD customers over time (calendar year)*

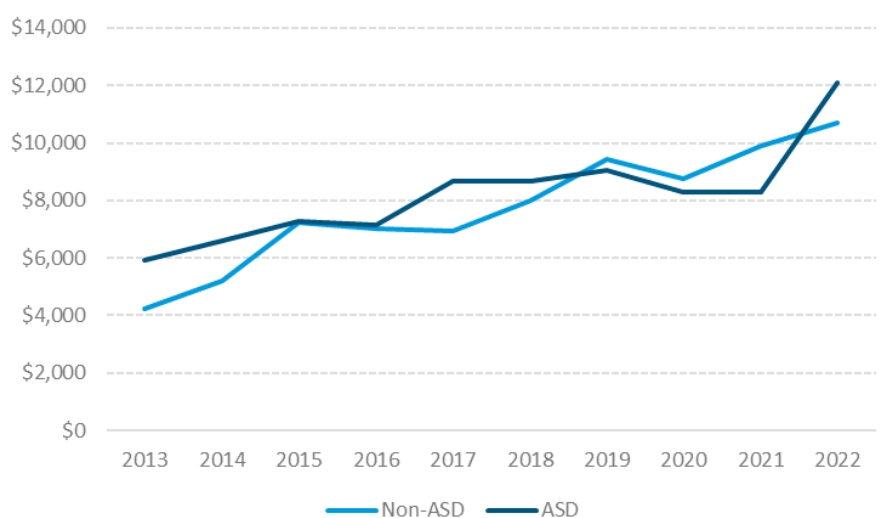
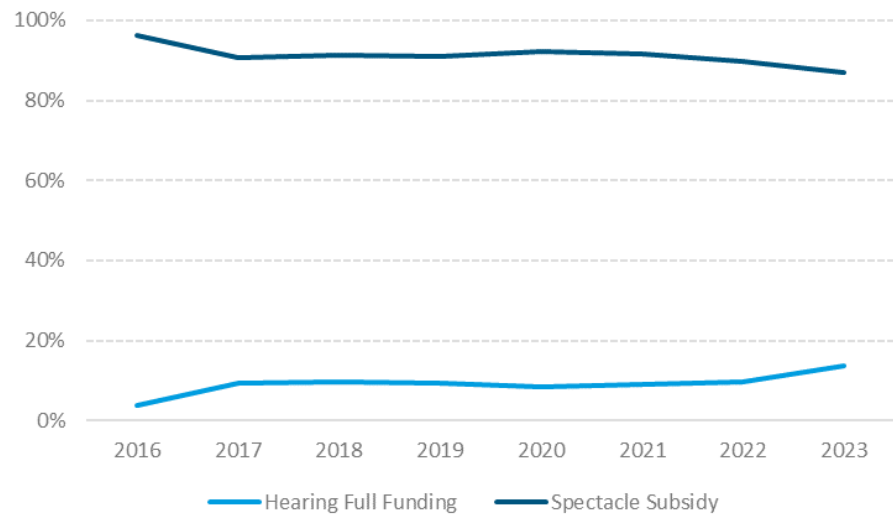


Figure 98: Proportion of ASD customers that received Hearing full subsidy and Spectacle subsidy funds over time (Whaikaha spectacles and hearing customers)



For customers that received hearing full funding services, the average cost per ASD customer is between \$33 to \$569 lower than the average cost per non-ASD customer. This can be seen in Figure 99.

For customers that received spectacle subsidy services, the average cost per ASD customer is very similar to the average cost per non-ASD customer. This can be seen in Figure 100.

Figure 99: Hearing full subsidy contract - average cost per Whaikaha spectacle and hearing customer broken down by ASD and non-ASD customers over time (calendar year)

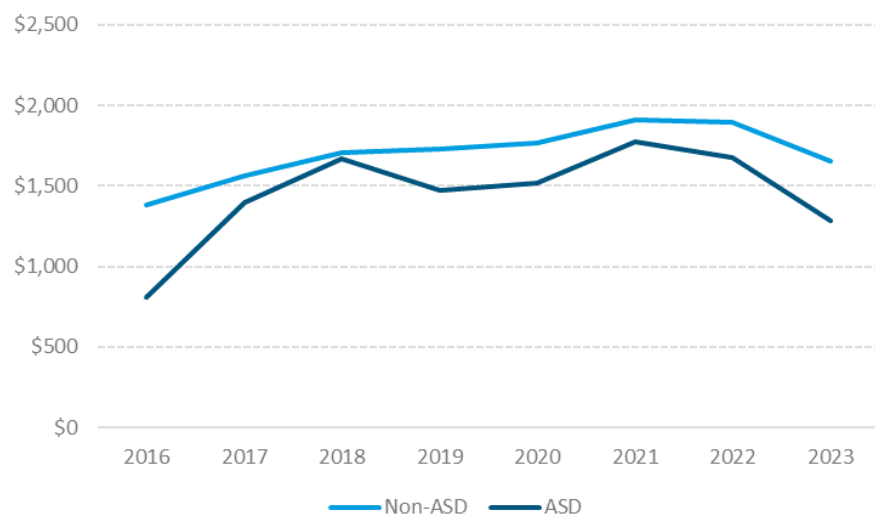
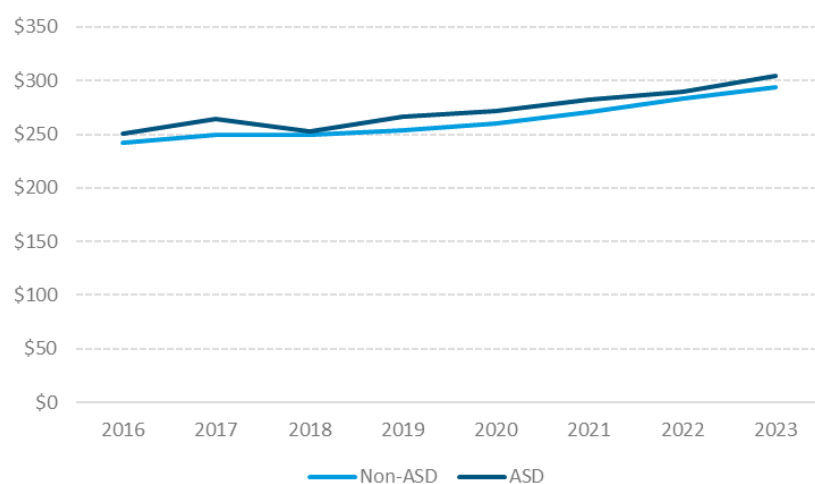
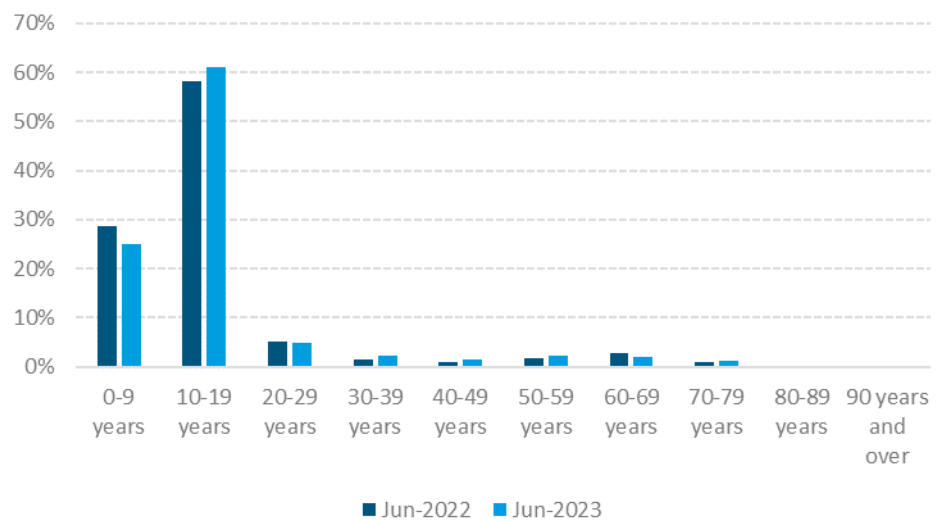


Figure 100: Spectacle subsidy contract - average cost per Whaikaha spectacle and hearing customer broken down by ASD and non-ASD customers over time (calendar year)

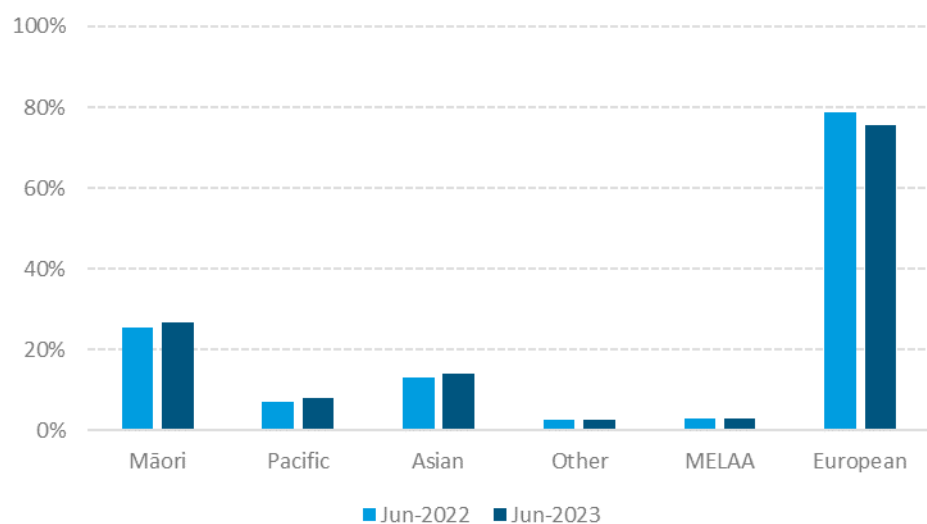


## Demographic characteristics for Autism Spectrum Disorder customers

*Figure 101: The proportion of Whaikaha EMS and Whaikaha spectacles customers by age group over time*



*Figure 102: The proportion of Whaikaha EMS and Whaikaha spectacles customers by ethnicity level 1 group over time (total response)*



*Figure 103: Number and proportion of Whaikaha EMS and Whaikaha spectacles customers by urban rural categories over time*

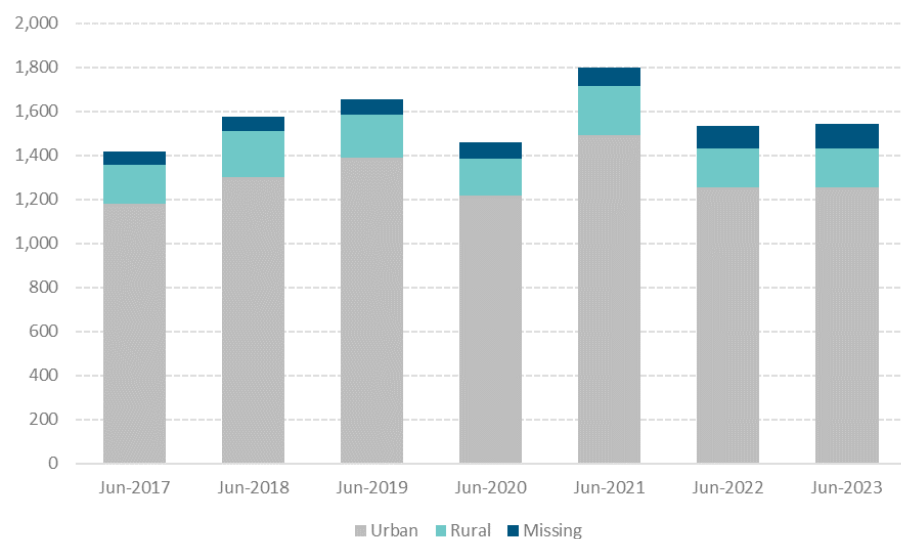


Figure 104: Number of Whaikaha EMS and Whaikaha spectacles by geographical region over time

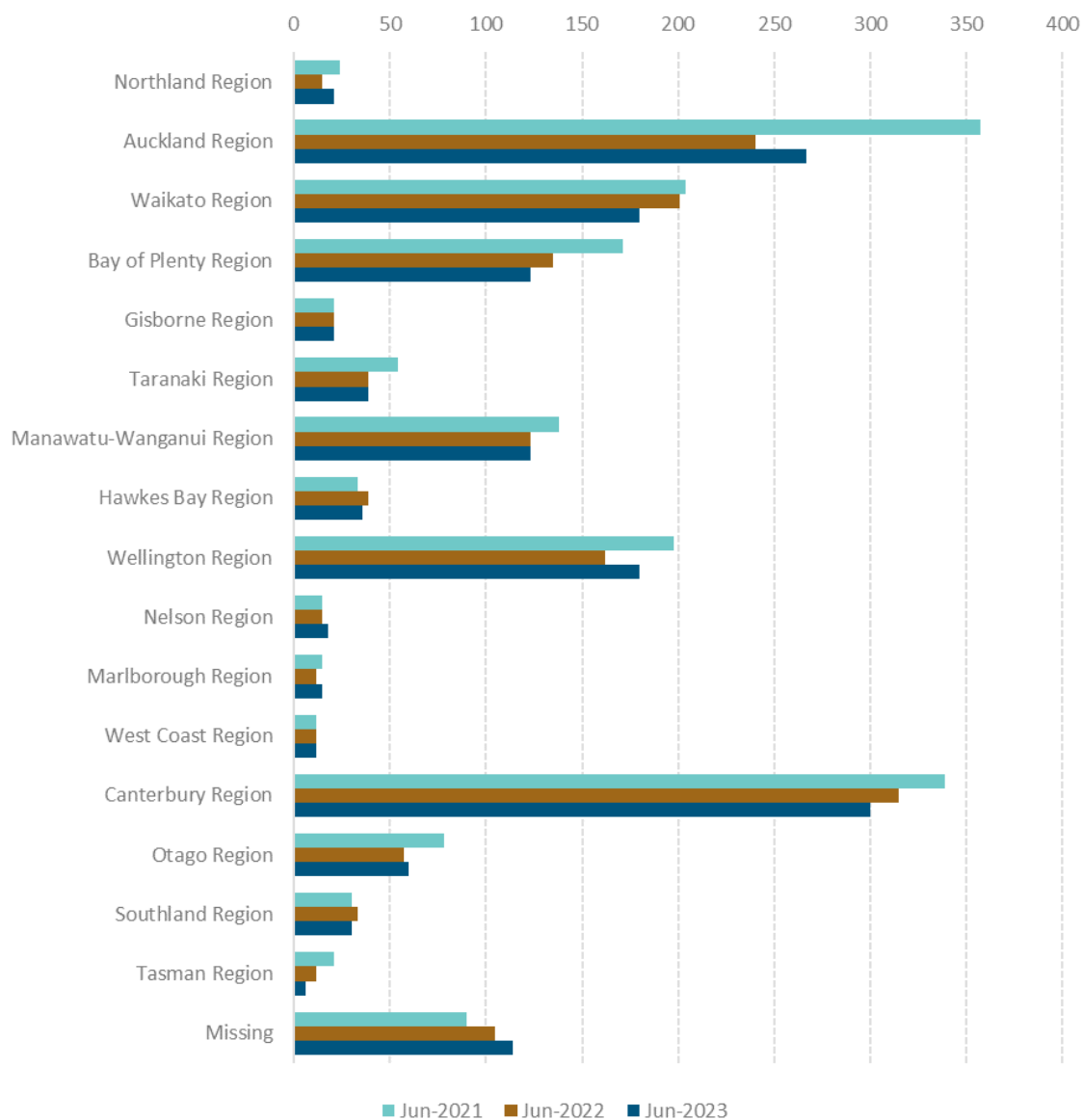


Figure 105: Number of Whaikaha EMS and Whaikaha spectacles customers by deprivation index 2018

