Transport experiences of disabled people in Aotearoa New Zealand

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Abbreviations and acronyms

ADA Americans with Disabilities Act

MELAA Middle Eastern, Latin American, African

NZQA New Zealand Qualifications Authority

NZSL New Zealand Sign Language

TM Total Mobility

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Executive summary

This research explores the transport experiences of disabled people in Aotearoa New Zealand in 2021. The research scope was broad, including determining what barriers exist for people wanting to use the Total Mobility scheme, exploring enablers of and barriers to all forms of transport (including walking, cycling, and public and private transport), and exploring new, emerging transport opportunities. Following a literature review, we conducted surveys and workshops with disabled people, which resulted in over 15,000 responses. We also conducted surveys and workshops with transport providers working in areas related to the provision of Total Mobility. Additionally, we surveyed disabled and non-disabled New Zealanders about their transport experiences during COVID-19 lockdown.

Review of literature

The literature review described the breadth and intersectionality of disability in Aotearoa New Zealand. While approximately one-quarter of the population identifies as disabled, rates vary by age and ethnicity. Older people, Māori, and Pacific peoples have the highest rates of disability. In terms of everyday difficulties, the most common is difficulty with walking, which has relevance for transport. Many disabled people exist at the intersection of multiple historically marginalised identities, exacerbating the worst life experiences that disabled people experience. For example, disabled Māori are far less likely than others to have access to the transport that would enable them to meet their cultural needs, and they are at greater risk than other disabled people of transport-based exclusion. As another example, disabled women are between two and five times more likely to experience hate crimes than non-disabled women and disabled men.

In 2003, the Human Rights Commission conducted an inquiry into accessible public land transport in New Zealand. In 2005, the Commission published its findings in a report titled *The Accessible Journey*, which recommended a range of system-wide interventions to make transport more accessible. While some of these recommendations have been progressed, there has not been a measurable increase in disabled people's access to the transport system. Many of the challenges highlighted by *The Accessible Journey* remain cited in literature published in recent years.

The Total Mobility scheme provides subsidised taxi fares for eligible disabled people for whom public transport is difficult to access. The scheme was reviewed in 2005. Many of the issues identified in that review have not yet been addressed. These problems include fares remaining prohibitively expensive for many disabled people; availability of the service only where taxis exist, meaning many people in smaller towns and in rural places cannot use it; limited availability of wheelchair-accessible taxis; and inconsistency in the delivery of the service.

A review of international schemes similar to Total Mobility did not find any marked differences to how it operates in New Zealand. A review of emerging technologies highlighted the increasing ways that technology is giving people more transport options. While there is potential for technologies such as app-based rideshare to be an accessible, affordable option for disabled people, there is little evidence to date of any places where such technologies are heralded as creating significant improvements to disabled people's wellbeing through better transport choice.

Surveys and workshops with disabled people

An online and email survey distributed in a variety of formats, including New Zealand Sign Language and Easy Read, resulted in 15,102 responses from disabled people. Analysis revealed that while there is wide variety in disabled people's experiences of transport, there were commonly reported experiences, most of which were negative. Themes arising from the open-field survey responses and from 11 workshops with

disabled people corroborated the quantitative analysis of survey responses and are summarised in the following eight distinct themes.

1. **Total Mobility**

   - The scheme helps people to meet their needs independently.
   - For some respondents, a 50% subsidy made transport affordable. For others, the current subsidy with the cap was still unaffordable.
   - The availability of Total Mobility taxis could be improved at certain times of the day and be expanded to more locations. Rideshare could be included.
   - There is a lack of regional consistency, which makes the scheme difficult to use while travelling.
   - Simple fixes could be made to the administration of the scheme to make it easier to access.

2. **Trips not made**

   - Multiple barriers work together to prevent people from making trips.
   - The most commonly missed types of trips are recreation and leisure, and daily needs.
   - Problems with parking were the most commonly mentioned reason for not being able to take a trip, followed by problems with accessibility of footpaths and public transport.
   - The availability and affordability of transport were also commonly mentioned reasons for not making a trip.

3. **Challenges using buses**

   - A lack of available bus services was the most common challenge mentioned by respondents. Buses were either not provided, not close enough to walk to, or too inconvenient to catch.
   - Issues with the accessibility of buses, and the attitudes of passengers and drivers, also prevent people from catching the bus.

4. **Challenges using trains**

   - Trains tend to be more accessible than buses.
   - A lack of train services was the most common reason people would not catch the train.

5. **Challenges related to walking, cycling and e-scooters**

   - Problems with the footpath are the biggest barrier to people walking.
   - Pedestrians feel vulnerable on shared paths with bikes and e-scooters.

6. **Advantages and challenges of private cars**

   - The freedom that comes with a personal vehicle is the biggest advantage of access to a private car.
   - The attitude of other drivers was a challenge that made disabled drivers and pedestrians feel unsafe.

7. **Benefits and challenges associated with car parking**

   - Mobility parking permits greatly improve accessibility for permit holders.
   - Use of mobility parks without permits needs much stronger enforcement.
   - Stigma of invisible disabilities exists, and public education on why someone might use a parking permit is needed.

8. **Lack of inclusion in planning of sustainable cities and transport**

   - Disabled people fear they are being 'left behind' in planning for sustainable city centres.
   - Improving accessibility of public transport and active modes would enable disabled people to travel more sustainably.
   - Transport planners lack awareness of what it means to be disabled. This needs to change.

Transport during lockdown: disabled and non-disabled people's views

Disabled people were significantly more likely than non-disabled people to report difficulties travelling for essential and non-essential reasons during New Zealand's COVID-19 lockdowns. The starkest differences between disabled and non-disabled people's experiences of transport during lockdown were in accessing essential services (including shelter, food or health care), accessing employment, and in trips not made due to transport difficulty. During the survey period:

- 37% of disabled people reported difficulty accessing essential services, compared with 10% of non-disabled people
- 18% of disabled people reported difficulty accessing employment, compared with 5% of non-disabled people
- 29% of disabled people reported a trip not made due to transport difficulty in a given week of lockdown, compared with 5% of non-disabled people.

Transport providers' views on Total Mobility

Data from transport providers across surveys and workshops revealed opportunities for improvements to the Total Mobility scheme, based on three main areas. Regarding planning for Total Mobility, providers suggested increasing:

- the consistency of provision and delivery of the scheme
- the profile, and therefore the numbers, of providers (or finding other ways to do this)
- the grant available to providers to purchase wheelchair-accessible vehicles.

In terms of the quality of the Total Mobility experience, providers recommended improving consistency of training across the country, including adopting a more nuanced understanding of disability. Finally, providers recommended making Total Mobility more affordable by increasing clients' subsidies.

Conclusions

The persistent challenges faced by disabled people using transport in Aotearoa New Zealand have not changed in any measurable way since the Human Rights Commission's inquiry almost two decades ago. The problems are broad (across multiple domains of transport and everyday life), complex (related to a variety of transport and non-transport sector reasons), and urgent (affecting the wellbeing of disabled people and their families on a daily basis, in serious ways). To summarise the main issues raised by disabled people and interpreted by transport professionals in this research:

- There is no accountability for disabled people's journeys in the transport sector, and no evaluation of the ways that investments in transport improve those journeys.
- Disabled people's travel takes longer, with more effort than non-disabled people's travel.
- Because of the time and effort required, disabled people forgo many journeys that would otherwise support their wellbeing.
- Total Mobility helps some disabled people make some trips, but it also costs time and effort and is sometimes an unreliable or unavailable transport option.
- There is poor flow of information and feedback between the transport sector and disabled people, and vice versa, limiting potential for meaningful improvements to make transport more accessible to more people.

- Inter-regional travel is an often-cited challenge for disabled people who wish to travel around the country.

To make demonstrable improvement in the transport experiences of disabled people, we recommend that the transport sector makes itself accountable to a vision of accessible journeys for all. A whole-of-journey approach should be supported by system interventions (including accessible vehicles, infrastructure, information and attitudes, and empowered advocacy), and four system pillars:

- measuring the variety in transport experiences of disabled and non-disabled people on streets and through surveys to understand the causes of difficulty, and working systematically to remove barriers

- promoting the voices of marginalised people, so that the ableism inherent in Aotearoa New Zealand society, including in transport planning, can be dismantled and proactively addressed

- connecting the vision across government so that the complex system components related to transport can be made accessible and inclusive

- questioning and researching the root causes of ableism in transport and other sectors that affect it so that interventions do not introduce new barriers, and complexities can be progressively simplified to be understood for the sake of more accessible journeys for all people.

We recommend that Total Mobility is improved by:

- increased effort towards comprehensive forecasting

- consistency of training of providers and of administration and delivery around Aotearoa New Zealand

- increased profile and capacity through more services in more places

- an overhaul to make the scheme more affordable, reliable, and accessible to more people, in more places.

Finally, we recommend that all research involving people's experiences of transport includes accessible research methods so that the voices of disabled people are heard throughout the transport research sector, and not solely for research that is specifically about them.

Abstract

The purpose of this research was to explore disabled people's experiences of transport in Aotearoa New Zealand. The methods included a nationwide online survey and workshops with disabled people to discuss their travel patterns, trips not made, and accessibility barriers; a survey and workshops with transport providers and professionals involved in delivering the Total Mobility scheme; and an additional survey about disabled and non-disabled people's transport experiences during COVID-19 lockdown. Overall, we analysed data from over 15,000 disabled and non-disabled people in response to the surveys and workshops. The data confirmed what the literature has reported for decades – that disabled people have many difficulties accessing transport in Aotearoa New Zealand. Their trips are often longer than those of non-disabled people due to a lack of accessible direct routes to destinations and limited transport choices, increasing their transport-related effort and cost. Because of these financial and non-financial costs, disabled people forgo many trips they would otherwise like to make. The results of the survey about people's transport experiences during lockdown highlighted that disabled people are more likely than non-disabled people to forgo an 'essential' trip. Additionally, disabled people's access to relevant transport-related information is incomplete, and their opportunities to provide relevant feedback to decision makers are inconsistent. This lack of conversation is one example of a missing feedback loop in the provision of accessible transport, which prevents improvements from being made. In terms of the Total Mobility scheme, while many disabled people appreciate the extra convenience and independence it offers, many do not use it due to prohibitive costs and reliability issues. We concluded that a system-wide paradigm shift in the way that inclusive access is approached in transport and other sectors is needed. Crucially, if disabled people's participation and ability to make or not make complete journeys are not monitored, there will be no way of knowing whether their experiences have meaningfully improved as a result of isolated transport infrastructure and service investments and policies.

1 Introduction

Waka Kotahi NZ Transport Agency commissioned MRCagney (NZ) Ltd and the Disabled Persons Assembly to investigate the transport experiences of disabled people in Aotearoa New Zealand. The research scope was broad, including determining what barriers exist for people wanting to use the Total Mobility scheme, exploring enablers of and barriers to all forms of transport (including walking, cycling, and public and private transport), and exploring new, emerging transport opportunities.

Access to transport is a human rights issue. Under the United Nations Convention on the Rights of Persons with Disabilities, disabled people are guaranteed full participation in society (United Nations, 2006). Without access to transport, it is impossible for this to occur. This research seeks to understand the current transport experiences of disabled people with the aim to improve transport access and community participation. Whilst human rights and fundamental freedoms are interrelating, the Convention articles most pertinent to this research are:

- Article 4.3: Involving disabled people and our organisations in decisions that affect us
- Article 5: Equality and non-discrimination
- Article 9: Accessibility
- Article 19: Living independently and being included in the community
- Article 20: Personal mobility
- Article 30: Participation in cultural life, recreation, leisure and sport

This research takes a co-designed approach – an authentic collaboration between the transport sector and Aotearoa New Zealand's disabled community – to provide insights into the experiences of both disabled people and those who provide transport services to them across Aotearoa New Zealand. The research team comprised professional transportation consultants; academics, including a disabled researcher; and disability advocates. Co-design – that is, developing the research methods and approaches with disabled people working alongside the researchers – began at the project's inception. Researchers, disabled people and a disabled researcher were involved in developing the research methods, collating the literature review, recruiting participants, facilitating and hosting workshops, analysing data, and reporting on results.

1.1 Report structure

This report presents evidence from the review of literature, describes the research methods, presents our findings, and discusses what we have found in relation to policy and practice recommendations.

Our research methods include a literature review, workshops, and surveys. The broad scope means that the evidence captured is wide-ranging. The literature review describes disability in New Zealand and how it is measured, including intersectionalities with gender and ethnicity. It goes on to discuss accessible journeys and transport barriers that make some people's journeys difficult or impossible. The literature review then describes the Total Mobility scheme, including its history in Aotearoa New Zealand, and similar international models of subsidised transport. Finally, the literature review summarises emerging technologies and their actual or potential role in transport for disabled people.

The surveys and workshops allow for breadth as well as depth, aiming to tell a story of both the range of transport challenges and opportunities that affect disabled people's lives in Aotearoa New Zealand, and the impact that those challenges have at an individual, whānau, and community level. The surveys and workshops are described, followed by a summary of how the results were analysed.

We present the research results in four sections.

- First, we describe the quantitative data of the survey of disabled people, with analyses of differences according to stated difficulties in everyday life, age, ethnicity, and location in New Zealand.

- Second, we pool responses from the open-field survey comments and workshops with disabled people to describe some interesting stories about transport experiences of disabled people.

- Third, we describe results from the survey about transport during COVID-19 lockdown, which was the only component of the research that combined disabled and non-disabled people's experiences.

- Fourth, we present what transport service providers told us about their experiences working in government, transport provision and/or advocacy related to Total Mobility.

The discussion section summarises transport challenges and opportunities in the context of the professional transport sector. It describes actions that are already taken in the sector, at all levels of government, in terms of how those actions are, or are not, meeting disabled people's needs for access to transport. The discussion then goes on to explore why some of those challenges persist, despite decades of advocacy and research into disabled people's experiences of transport.

The recommendations section summarises insights from the discussion into what is currently a missing, overarching policy framework for inclusive and equitable access to transport. It includes specific recommendations for a review of the Total Mobility scheme and proposes metrics that could be used to assess government progress towards demonstrating inclusion in the transport system.

Finally, the report describes what we have learned about inclusive transport research. We describe our co-design approach, and how it could be used to improve the inclusiveness of all research, not just that focused on disabled people as though they are a special case.

The report includes text descriptions of figures and graphs for the benefit of people who cannot see them or who would otherwise benefit from having them explained in words.

1.2   Defining disability: the social model

Throughout this report we have used the social model of disability (Shakespeare, 2006). The social model places disability in the context of a problem with society not being inclusive of all people. The problem is not with any individual, but with society, and in the case of transport, with barriers that make some people's participation more difficult than others' – that is, transport can be disabling. This model was developed in response to the medical model, which historically has framed disability as a medical issue for an individual to endure or overcome. In the context of the social model, the origin of an individual's impairment is not relevant to their experience of disabling transport infrastructure and services. Rather, inaccessible transport has the potential to be disabling.

We therefore use the language of 'disabled people' because people are disabled by something, in this case inaccessible transport infrastructure and systems. Where we depart from this language it is due to a quote from literature or from a research participant. We respect the rights of all people to speak in their own voice.

We recognise that the underlying cause of disability is ableist social values (Smith et al., 2021). Society is ableist in its favouring of certain abilities and devaluing of anyone whose body and abilities sit outside of what is perceived as 'the norm'. Ableism exists at many levels of society, ranging from government and institutional levels to within interpersonal relationships. This ableism gives rise to inequalities and disadvantages that disable people and undermine their wellbeing (Smith et al., 2021).

Ableism operates on a binary understanding of disability that relies heavily of dominant ideas of what disability 'looks like' (Calder-Dawe et al., 2020). There is a strict divide between people who are visibly identifiable as disabled based on society's ableist understandings of what constitutes a disability, and those

who are not. This leads to harm and misunderstanding of many disabled people, including those who are judged as non-disabled based purely on appearances (Calder-Dawe et al., 2020).

We also acknowledge that culture and language evolve. We present this work in its context of 2021 Aotearoa New Zealand. We have done our best to use the most inclusive language and research methods that we could. In doing so we appreciate that others may have approached the research and its communication differently, so we have stated our approach and rationale for the sake of transparency.

2   Literature and evidence

This literature review provides information about disability and transport, both in Aotearoa New Zealand and overseas. We collated this literature through a desktop review of academic sources, government documents, review documents, and newspaper articles.

We first explore disability in Aotearoa New Zealand using data from the 2018 Census, 2013 Disability Survey, and 2020 Household Disability Survey. This data provides evidence of the types of everyday activities that New Zealanders have difficulty completing, the extent to which different communities are affected by disability, and the impacts of loneliness on disabled people.

We then cover the concept of intersectionality and how it relates to disabled communities and the transport system. We include discussion of what this means for disabled Māori as they navigate the transport system.

We provide an overview of the Human Rights Commission's (2005) report *The Accessible Journey*, which was the last nationwide review of the accessibility of transport in Aotearoa New Zealand.

We draw on international and Aotearoa New Zealand literature to explore factors in the transport system that enable or block community participation, lessons that can be learned from international schemes that are similar to Total Mobility, and emerging technological and social developments that impact disabled people's transport experiences.

2.1   Literature review methods

Suitable sources were identified using a range of search terms on Google and Google Scholar. Sources were manually reviewed to assess suitability and were included based on relevance and recency. Work published within the last five years was preferred (as at February 2021), with some sources from the last 10 years included if no more recent information on the topic was available. In all cases, where few sources are cited, it is due to a lack of evidence in literature.

Table 2.1 shows the search terms we employed. The anchor search terms ensured a focused search for sources related to disability and transport, while secondary search terms assisted in searching for key topics. Specific search terms were used for greater specificity around the experiences of people who may be further marginalised, and to find information on specific schemes or technologies. The sources were then screened for relevance based on their title, keywords, and abstract content.

International sources were limited to academic literature only. Additional sources were identified using the 'snowballing' technique once literature had been gathered in the online search to increase the depth of the literature review.

2.2   Disability in Aotearoa New Zealand

2.2.1   Everyday difficulties

Statistics New Zealand collects data about the difficulties people have in their everyday lives. In the 2018 census, data was collected on people's difficulty seeing, hearing, walking and/or climbing steps, remembering and/or concentrating, washing all over and/or dressing, and communicating using one's usual language. People were asked to rate their difficulty with these everyday activities on a scale from no difficulty, some difficulty, a lot of difficulty, or cannot do at all. Although difficulty with these tasks is not the same as self-identifying as disabled, we use this data to provide a guideline as to how many people in areas of Aotearoa New Zealand may be disabled in some way, based on the number of people who have a lot of difficulty with, or cannot do, an activity at all. This data is summarised in Table 2.1.

Table 2.1   Summary of everyday difficulties data

	Difficulty seeing	Difficulty hearing	Difficulty walking or climbing steps	Difficulty remembering or concentrating	Difficulty washing or dressing	Difficulty communicating
Northland Region	1.66%	1.97%	3.23%	2.04%	1.17%	0.83%
Auckland	1.27%	1.11%	2.10%	1.45%	0.99%	0.80%
Hamilton City	1.50%	1.31%	2.58%	1.84%	1.05%	0.94%
Tairāwhiti Region	1.74%	1.97%	3.28%	2.27%	1.36%	0.98%
Horizons Region	1.81%	1.88%	3.39%	2.19%	1.37%	0.96%
Wellington City	1.01%	0.81%	1.59%	1.27%	0.69%	0.57%
Marlborough Region	1.41%	1.98%	3.10%	1.86%	1.07%	0.72%
Christchurch City	1.46%	1.42%	2.63%	1.98%	1.20%	0.92%
Dunedin City	1.47%	1.40%	3.07%	2.14%	1.25%	0.88%
Southland Region	1.57%	1.79%	3.18%	2.06%	1.23%	0.84%
New Zealand	1.41%	1.43%	2.57%	1.73%	1.07%	0.82%

Source: Study Team using data from New Zealand Census 2018

Across all the areas of interest, walking or climbing steps is the most common difficulty that people have. Remembering or concentrating is the second most common difficulty in all regions, apart from Marlborough, where difficulty hearing is the second most common difficulty. Communicating is the least common difficulty in all the regions, followed by difficulty washing or dressing. The proportions of people who have difficulty seeing and difficulty hearing vary across the areas; in regional areas, difficulty hearing tends to be more common, whereas in cities, difficulty seeing tends to be more common. The national averages are very similar at 1.41% for seeing, and 1.43% for hearing.

2.2.2   Intersectionality and disabled communities

Intersectionality is a concept developed by feminist and critical race theorists to describe the unique discrimination people face when they are members of multiple marginalised groups. This can influence the intensity of discrimination a person experiences. It also changes the type of discrimination they experience due to the interaction of aspects of their identity (Shaw et al., 2012). For example, a straight, Pākehā, disabled woman will experience different discrimination to a queer, Māori, non-disabled man.

Great diversity exists within disabled communities, with many people existing at the intersection of multiple historically marginalised identities. Intersectionality as it applies to disabled communities is an emerging topic in academic literature, with many recent publications exploring the differing experiences of disabled people based on their multiple identities or membership of marginalised groups.

Ethnicity intersects with disability. Banks (2018) highlights the way ethnicity, gender, and disability interact for a Black man with cerebral palsy in the USA. The man's intersecting identities meant he was invisible to social service workers and faced barriers when accessing housing and employment. Invisibility is also highlighted by Berghs and Dyson (2020), who studied the exclusion of Black disabled people from employment in the UK. In Aotearoa New Zealand this is expressed in a health and disability system that is less responsive to Māori and is not culturally appropriate (Kaiwai & Allport, 2019).

Kattari et al. (2017) examined the experience of transgender and gender non-conforming disabled people. They found that social service providers often lack the cultural competency to provide quality support to people who are both disabled and transgender or gender non-conforming, and that these people experience higher levels of discrimination than non-disabled transgender and gender non-conforming people.

When gender and disability intersect, there are also poor outcomes for disabled women. Disabled women are between two and five times more likely to experience sexual violence and hate crimes than non-disabled women and disabled men (Balderston, 2013). Saxe (2017) highlights that autistic women are both disabled and a gender minority, as well as a minority within autism communities, which can affect their levels of care and make them less likely to receive a formal diagnosis.

These experiences show that disabled people face increased barriers when trying to access social services when their impairment intersects with another marginalised identity. One way this is likely to show up in the transport sector is feeling unsafe while waiting for and travelling on public transport. It could also show up as a lack of public transport routes that are accessible to all people. Intersectionality needs to be considered in the transport sector to ensure that any changes to the transport system support the disabled people who are marginalised by society in multiple ways.

The following sections of the report use national data from the 2013 Disability Survey and the 2018 Census to examine the relationship between age, sex, income, ethnicity, and disability in Aotearoa New Zealand. This allows for a more detailed understanding of disability in Aotearoa New Zealand, particularly of how different communities are affected by disability.

2.2.2.1 Disability and ethnicity

The disability rate varies across the different ethnic groups in Aotearoa New Zealand, as shown in Figure 2.1. The group including Middle Eastern, Latin American, African (MELAA) and other ethnicities has the highest rate of disability at 28%. Māori have the next highest disability rate at 26%, followed by New Zealand European at 25%, Pacific peoples at 19% and Asian at 13%.

There is also substantial variation in the disability rate by age for each ethnicity, as shown in Figure 2.2. The disability rates by age of the New Zealand European population closely resemble the total rates of disability by age for all ethnicities, with disability rates gradually increasing with each age group and spiking at 65+. Most other ethnicities follow a similar pattern, with Māori, Pacific peoples, and MELAA and others having higher rates of disability in the 65+ years age group. Additionally, Māori have the highest disability rates across every age group. The Asian disability rate is lower than for all ethnicities at every age group. Māori, and MELAA and others, have very high disability rates in the 45–64 age group compared to all ethnicities at 43% and 38% respectively.

This data highlights that although disability and age have a close relationship, there is a significant proportion of younger disabled people. This is particularly the case for Māori who have a disability rate of 15% for the 0–14 age group.

Figure 2.1   Disability rate by ethnicity
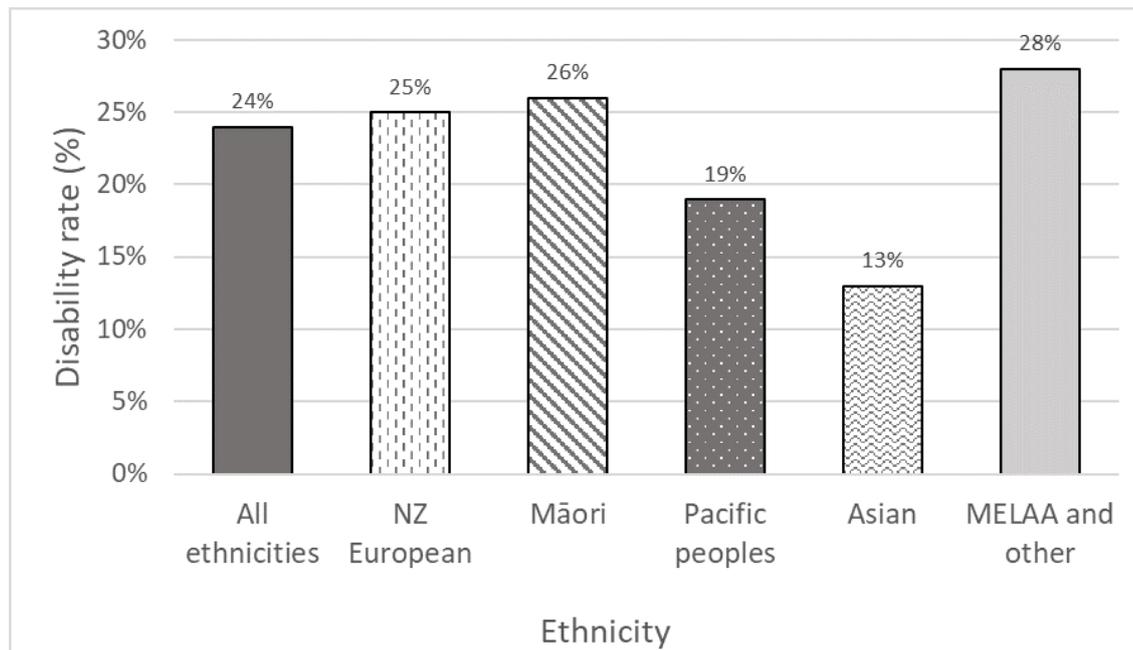
Source: Study Team using data from the Statistics New Zealand 2013 Disability Survey

Image description: A simple bar graph showing disability rates by ethnicity. The *y*-axis shows disability rate as a percentage. The *x*-axis shows six ethnic groupings: all ethnicities; New Zealand European; Māori; Pacific peoples; Asian; and Middle Eastern/Latin American/African and other.

The graph shows that the disability rate for all ethnicities is 24%. For New Zealand European, it is 25%. For Māori, it is 26%. For Pacific peoples, it is 19%. For Asian, it is 13%. For Middle Eastern/Latin American/African and other, it is 28%.

Figure 2.2   Disability rate, by age group and ethnicity

Source: Study Team using data from the Statistics New Zealand 2013 Disability Survey

Image description: A clustered bar graph showing disability rates by age group for different ethnicities. The *y*-axis shows disability rate as a percentage. The *x*-axis shows six ethnic groupings: all ethnicities; New Zealand European; Māori; Pacific peoples; Asian; and Middle Eastern/Latin American/African and other. Each ethnic grouping has four bars representing the age groups 0–14 years, 15–44 years, 45–64 years, and 65+ years. The graph shows that:

- for all ethnicities, the disability rate is 11% for people aged 0–14; 16% for people aged 15–44; 28% for people aged 45–64; and 59% for people aged 65+

- for respondents who identify as New Zealand European, the disability rate is 11% for those aged 0–14; 16% for those aged 15–44; 28% for those aged 45–64; and 58% for those aged 65+

- for respondents who identify as Māori, the disability rate is 15% for those aged 0–14; 23% for those aged 15–44; 43% for those aged 45–64; and 63% for those aged 65+

- for respondents who identify as Pacific peoples, the disability rate is 9% for those aged 0–14; 17% for those aged 15–44; 26% for those aged 45–64; and 74% for those aged 65+

- for respondents who identify as Asian, the disability rate is 4% for those aged 0–14; 10% for those aged 15–44; 20% for those aged 45–64; and 50% for those aged 65+

- for respondents who identify as Middle Eastern/Latin American/African and other, the disability rate is 8% for those aged 0–14; 18% for those aged 15–44; 38% for those aged 45–64; and 69% for those aged 65+.

Disabled Māori and the transport system

Māori have distinct transport patterns influenced by the need to access cultural activities and sites important to their cultural identities (Raerino et al., 2013). These activities and sites are less likely to be accessible by public and active transport because they tend to be in rural areas.

Disabled Māori, or tāngata whaikaha, are at increased risk of transport poverty and transport-based exclusion. Transport poverty occurs when an individual or household is forced to spend more than they can afford on transport – for example, on high-interest car loan repayments. This then leads to transport-based exclusion when people cannot access everything they need to because of a transport problem. Historical and ongoing colonisation and ableism mean Māori and disabled people are more likely to have low incomes. This problem is compounded for people who are both Māori and disabled.

In short, there is an additional layer of transport need related to being Māori, but the intersection of being Māori and disabled means disabled Māori are far less likely to have access to the transport that would enable them to meet these cultural needs.

2.2.2.2 Disability and sex

Males and females experience disability at similar rates, particularly from age 15 to 64, as shown in Figure 2.3. The disability rate is higher for males aged 0–14 at 13%, compared to 8% for females. Among people aged over 65, disability is more common among females at 60%, compared to males at 58%.

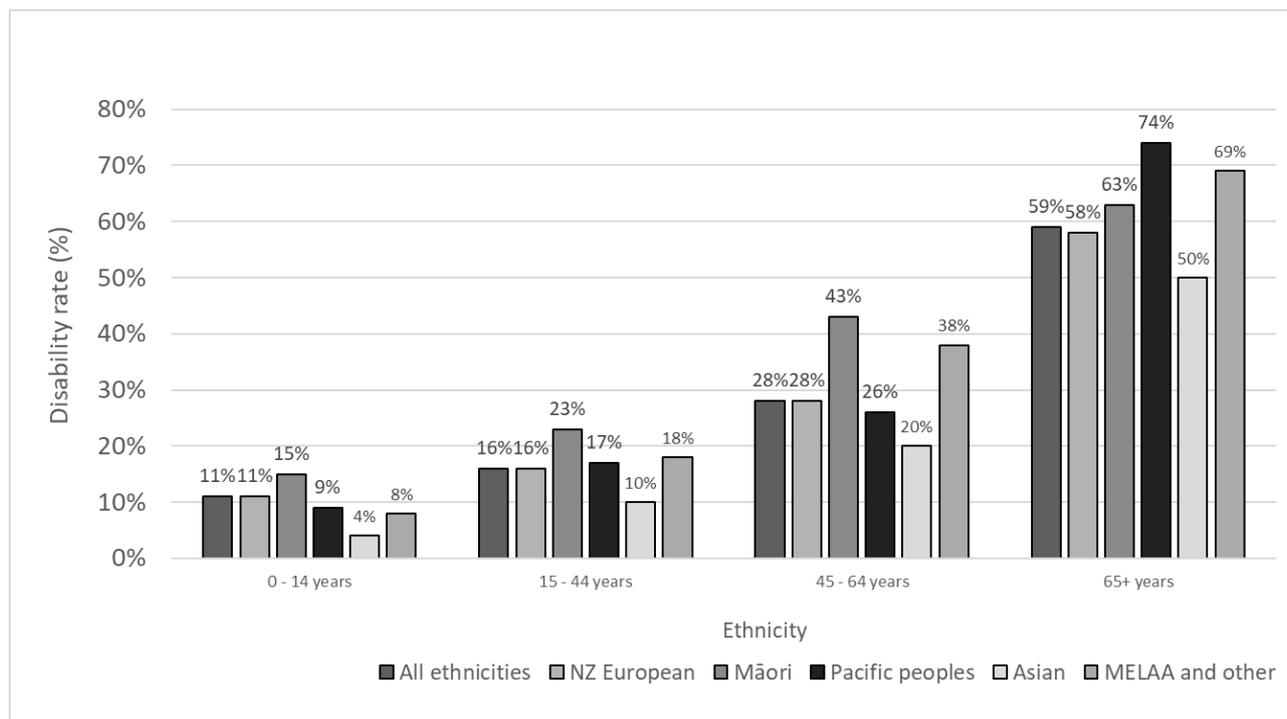**Figure 2.3   Disability rate of males and females, by age**
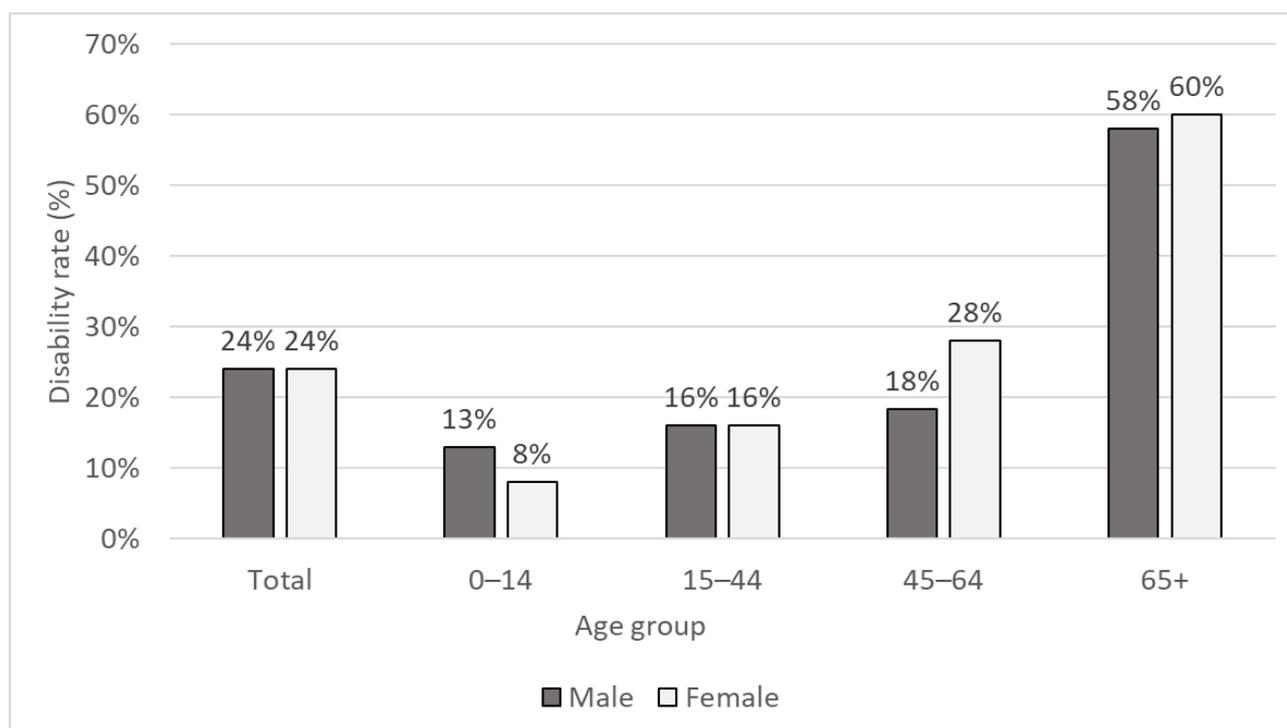
Source: Study Team using data from the Statistics New Zealand 2013 Disability Survey

Image description: A clustered bar graph comparing the disability rates of males and females. The *y*-axis shows disability rate as a percentage. The *x*-axis shows total population as well as four age groups: 0–14, 15–44, 45–64 and 65+. Each group has two bars: one representing males, and one representing females. The graph shows that:

- for the total population, males and females each have a disability rate of 24%
- for people aged 0–14, males have a disability rate of 13%, and females 8%
- for people aged 15–44, males have a disability rate of 16%, and females 16%
- for people aged 45–64, males have a disability rate of 28%, and females 28%
- for people aged 65+, males have a disability rate of 58%, and females 60%.

2.2.2.3 Disability and income

Figure 2.4 compares the work status of disabled and non-disabled people. Labour force participation is made up of employed people and unemployed people of working age who are actively seeking work. It does not include people of working age who are not employed and not looking for work.

Disabled people have a much lower employment rate of 45%, compared to non-disabled people who have an employment rate of 72%. Disabled people are unemployed at nearly twice the rate of non-disabled people, with unemployment rates of 9% and 5% respectively.

In terms of income and transport, people in the lowest income bracket (the 20% of households with the lowest household income) spent 28% of their household income on transport in 2019. This was an increase from 16% in 2016, and higher than all other income groups, who spent from 8% (highest quintile) to 17% (second quintile) (Ministry of Transport, 2021). Although this data is not specific to disabled people, the low income of disabled people (and disabled Māori in particular) means that on average, households that include disabled people are likely to spend disproportionately more of their income on transport than other households spend.

Figure 2.4   Work status of disabled and non-disabled people
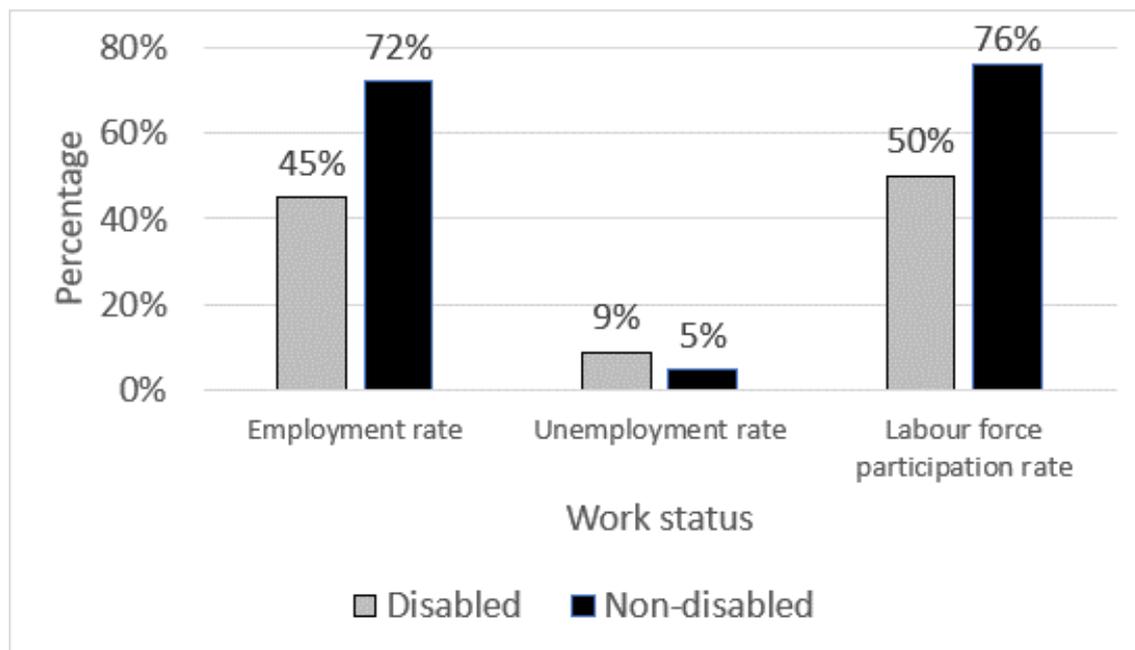
Source: Study Team using data from the Statistics New Zealand 2013 Disability Survey

Image description: A bar graph comparing the work status of disabled and non-disabled people. The *y*-axis shows percentage of respondents. The *x*-axis shows three employment rate categories: employment rate, unemployment rate, and labour force participation rate. Each rate has two bars: one representing disabled people, and one representing non-disabled people. The graph shows that:

- the employment rate of disabled people is 45%, compared to 72% for non-disabled people
- the unemployment rate of disabled people is 9%, compared to 5% for non-disabled people
- the labour force participation rate of disabled people is 50%, compared to 76% for non-disabled people.

Figure 2.5 shows the personal income of disabled and non-disabled people. Disabled people are overrepresented in the low-income brackets and underrepresented in the high-income brackets.

A liveable annual gross income is $47,320 based on the 2021 living wage for a 40-hour work week, 52 weeks of the year. Approximately 82% of disabled people have a personal income below this rate, compared to 67% of non-disabled people (Living Wage Aotearoa New Zealand, 2021).

Figure 2.5   Personal income of disabled and non-disabled people

Source: Study Team using data from the Statistics New Zealand 2013 Disability Survey

Image description: A bar graph comparing the personal income of disabled and non-disabled people. The *y*-axis shows percentage of respondents. The *x*-axis shows five income brackets: less than $15,001; $15,001 to $30,000; $30,001 to $50,000; $50,001 to $70,000; and $70,001+. Each income bracket has bars representing disabled people and non-disabled people. The graph shows that:

- 29% of disabled people earn less than $15,001, compared to 27% of non-disabled people
- 35% of disabled people earn between $15,001 and $30,000, compared to 18% of non-disabled people
- 18% of disabled people earn between $30,001 and $50,000, compared to 22% of non-disabled people
- 11% of disabled people earn between $50,001 and $70,000, compared to 16% of non-disabled people
- 8% of disabled people earn $70,001 or more, compared to 17% of non-disabled people.

2.2.3   Disability and life satisfaction

The 2013 Disability Survey (Statistics New Zealand, 2013) also measures feelings of loneliness, and satisfaction with non-resident friends and family of disabled and non-disabled people. This is useful to study as it helps to paint the picture of satisfaction with levels of community participation.

Figure 2.6 shows that disabled people report feeling lonely more frequently than non-disabled people. Six percent of disabled people feel lonely often, while only 1% of non-disabled people feel lonely often. Fifty-seven percent of disabled people feel lonely none of the time, compared with 69% of non-disabled people (Statistics New Zealand, 2013). It is likely that difficulty in accessing transport plays a role in preventing access to social networks by disabled people, and that improved access to transport would reduce feelings of loneliness.

Figure 2.6   Feelings of loneliness for disabled and non-disabled people

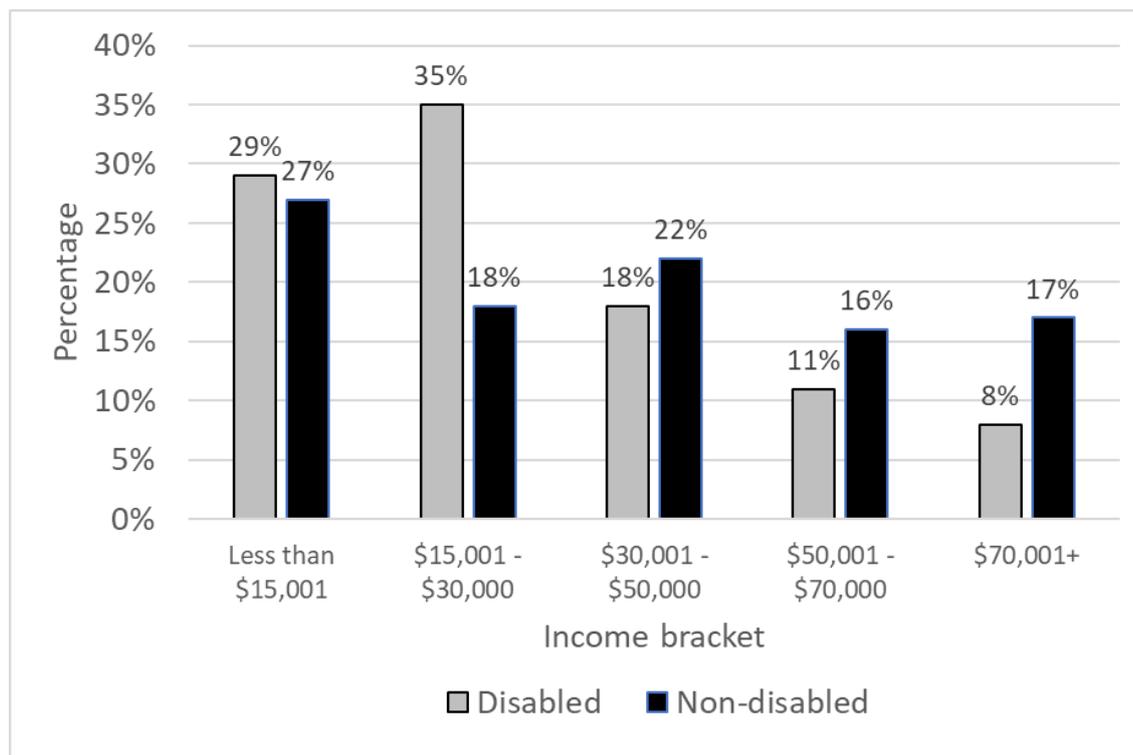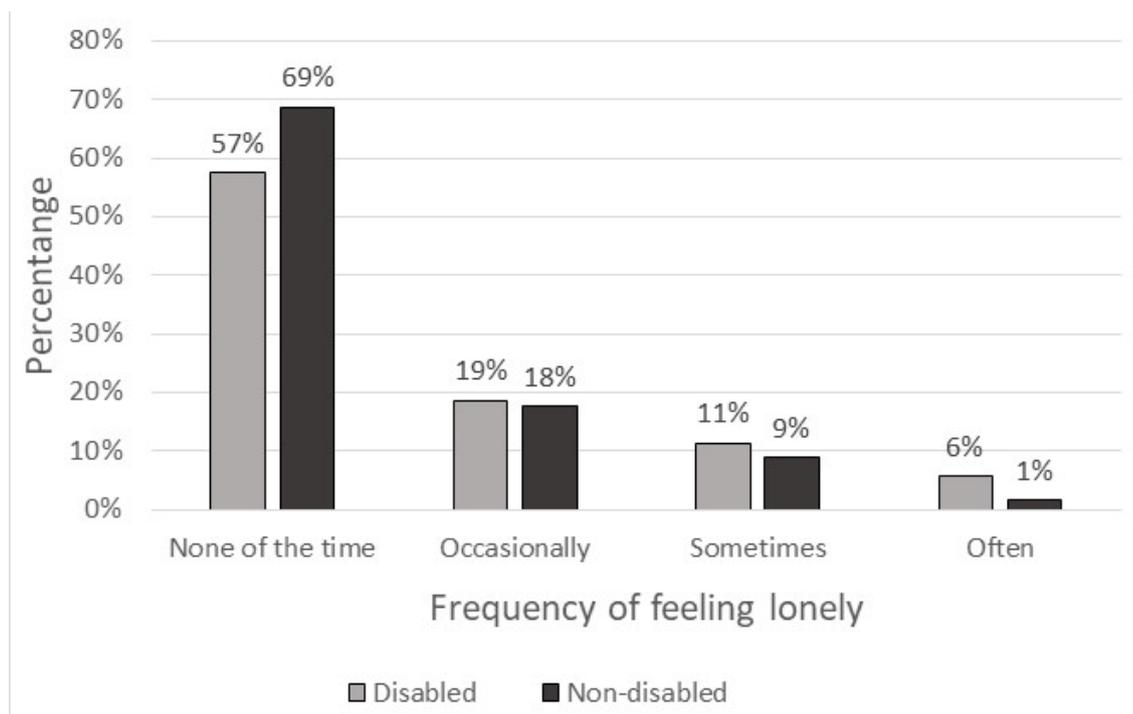**Source:** Study Team using data from the Statistics New Zealand 2013 Disability Survey

Image description: A bar graph comparing feelings of loneliness for disabled and non-disabled people. The *y*-axis shows the percentage of respondents. The *x*-axis shows four frequencies of feeling lonely: none of the time, occasionally, sometimes, and often. For each frequency there are two bars: one representing disabled people, and one representing non-disabled people. The graph shows that:

- 57% of disabled people feel lonely none of the time, compared to 69% of non-disabled people
- 19% of disabled people feel lonely occasionally, compared to 18% of non-disabled people
- 11% of disabled people feel lonely sometimes, compared to 9% of non-disabled people
- 6% of disabled people feel lonely often, compared to 1% of non-disabled people.

2.3   The inquiry into accessible public land transport

The most significant inquiry into disability and the transport system was undertaken in 2003 by the Human Rights Commission. The findings of the inquiry were published in the Human Rights Commission's (2005) report *The Accessible Journey*. The inquiry was two-fold and investigated the following terms of reference:

I.   The Commission will inquire into the provision of public land transport in New Zealand, using the Otago Region and the Wellington Region as case studies, with reference to:

(i)   The availability, accessibility and affordability of public land transport services for people with disabilities;

(ii)   The quality and safety of public land transport services for users and service providers;

(iii)   The economics of providing accessible public land transport for people with disabilities;

(iv)   Whether the public land transport services available to people with disabilities comply with human rights standards;

(v)   The adequacy of the technical and engineering standards that are used in the design and construction of conveyances, premises and infrastructure;

(vi) The operational policies of service providers, the contractual arrangements between funders and service providers and the safety rules and regulations that apply to public land transport services;

(vii) The particular needs of those people living in the rural and provincial areas of New Zealand.

II. The Commission will consider, as a result of the Inquiry, whether to make recommendations on:

(i) Changes to legislation, regulations, policies and procedures and funding arrangements;

(ii) The value of promulgating national standards and a timetable for the implementation to ensure the provision of accessible public land transport services to people with disabilities;

(iii) The need for national standards of training for public land transport workers working with people with disabilities. (Human Rights Commission, 2005, pp. 8–9)

The key findings of the report are listed below.

- Despite perceived improvements to the land transport system, disabled people still face acute and ongoing difficulties accessing public transport.

- The transport system is inaccessible at many points of a journey.

- Stronger leadership and coordination are key to improving the accessibility of public transport.

- Disabled people feel disempowered because their needs are not considered as a core requirement of the current transport planning, funding, and implementation process.

- All people involved in planning, funding, and providing transport require comprehensive disability awareness training.

- Accessibility design standards are required nationally to ensure information provision, conveyances, premises, and infrastructure are consistently accessible and provide certainty.

- Community transport is a valuable part of the public transport network, and its funding framework should be revised to encourage these services.

The inquiry also produced a number of recommendations, which include legislative, regulatory, policy, and procedural changes related to funding and accessibility improvements. These recommendations also aligned with the New Zealand Disability Strategy and New Zealand Transport Strategy of the time (Human Rights Commission, 2005, pp. 13–14). While some of these recommendations have been progressed, there has not been a measurable increase in disabled people's access to the transport system. The lack of measures of access may be due in part to the nature of these recommendations as being about inputs to transport, rather than outcomes for disabled people's participation. The report recommended that:

- there is mandatory provision for the participation of disabled people in all public land transport planning, funding, and implementation processes at central, regional, and local government levels

- a national Ministerial advisory committee of disabled people be established to advise the Minister of Transport; the committee would have wide representation, adequate resourcing and training and support for its functions

- the Ministry of Transport develop National Accessibility Design Performance Standards for Public Land Transport and be the lead agency to ensure the implementation and monitoring of the standards, among other functions

- National Accessibility Design Performance Standards must be accompanied by a timetable for implementation of five-yearly steps acknowledging current funding of large capital works and to be consistent with human rights obligations

- industry-wide training in disability awareness and disability competency is required for all public land transport personnel; training requirements must be included in driver licensing and contract service delivery

- the Ministry of Education conduct a comprehensive review of School Transport Assistance that covers funding, policy, and practice to ensure delivery to disabled students on a non-discriminatory and equitable basis

- territorial authorities review the number and location of set down and pick up places for disabled passengers using taxis and rigorously enforce clear bus stops

- bus providers take immediate steps to provide driver disability awareness and competency training to ensure increased accessibility for all passengers, including the elimination of 'rough driving' and the secure seating of passengers

- train providers make immediate improvements to visual and audible information at staffed stations, timetabling display, and onboard announcements

- the Human Rights Commission undertakes a review of progress in implementing the recommendations in 2010 and continues its role in the promotion of the rights of disabled people to the accessible journey.

2.4 Factors in the transport system that enable or block community participation

Access to, and participation in, community is key to an adequate quality of life for disabled and non-disabled people (Baldwin & Stafford, 2019). Disabled people in Aotearoa New Zealand face disproportionate exclusion from transport, which negatively affects their ability to access their communities, lowering their quality of life (Baldwin & Stafford, 2019; Burdett, 2016). For example, Smith et al. (2016) found that community belonging was of strong importance to Christchurch residents disabled by a stroke; however, transport disruptions, including damage to footpaths from the earthquakes, made it difficult for them to participate in community activities.

Although measures have been taken to improve access to transport for disabled people, barriers to their full participation remain. Some improvements in recent years have included the introduction of low-floor, kneeling buses with wheelchair ramps, which make up 91% of the Auckland fleet; audio and visual announcements on all Auckland trains and some buses; and priority seating areas on public transport in most Aotearoa New Zealand cities (Park & Chowdhury, 2021). However, barriers remain as there is a lack of consistency in the uptake of accessibility features between and within cities.

2.4.1 Whole-of-journey approach

A whole-of-journey approach is necessary when considering the barriers to disabled people using public transport. A whole-of-journey approach involves examining the entire journey, from before a person leaves their house when they begin planning a trip, until they arrive at their destination (Park & Chowdhury, 2021). These elements of a journey must flow on from each other seamlessly if a person is to complete a public transport trip easily. Good access to clear and correct information is the first component of any journey. It also underpins the remaining components of a journey. Someone may forgo a journey if they cannot access information about the accessibility of each of its components (Park & Chowdhury, 2021).

Park and Chowdhury (2021) describe nine components of an accessible journey:

1. **Information**
   Information is needed so that a disabled person is confident they can make the entire trip. This may include timetable information or information about accessible features of the transport service or the presence/lack of barriers.

2. **Set off from origin**
   A barrier-free path from the front door is needed. If the footpaths are barrier-free but someone cannot get to the footpath, they will be unable to make that journey.

3. **Walk to stop/station**
   Barrier-free footpaths are needed to ensure people can travel from their front gate to their stop/station.

4. **Wait**
   A safe and comfortable waiting area is needed to support disabled people.

5. **Board**
   The stop/station and vehicle must be designed so that disabled people can feel safe and confident while boarding.

6. **Time in-vehicle**
   Disabled people must be able to feel safe as soon as they enter the vehicle, as well as being free from discrimination from the driver or other passengers.

7. **Alight**
   Disabled people must be able to feel physically secure while the vehicle is moving, as well as being free from discrimination from the driver or other passengers.

8. **Leave stop/station**
   There must be a barrier-free route from the stop/station to the footpath.

9. **Walk to destination**
   Barrier-free footpaths are needed to ensure people can travel from the stop/station to their destination.

This approach is useful as it allows consideration of all the barriers to disabled people that may prevent them from undertaking a journey at all. Even if a journey is theoretically achievable, someone may forgo a trip if they are unable to access the information that will give them certainty there are no barriers at any part of the journey. This approach is also useful for identifying barriers outside of the public transport system itself, allowing consideration of the barriers that exist on the streets a disabled person must use, or even barriers on their own property (Park & Chowdhury, 2021).

The whole-of-journey approach also highlights the high cognitive burden disabled people face when making journeys. Every aspect of the journey must be meticulously planned, and contingencies put in place (Smith et al., 2021). Trips that should be simple require problem-solving and adaptability, or simply do not occur at all because of barriers at every component of a journey (Smith et al., 2021).

Due to the diversity within the disabled community, the potential enablers and barriers to participation are wide-ranging (Wilkinson-Meyers et al., 2014). In the following sections we discuss some of the physical, sensory and temporal barriers, and issues related to the need for human support for journeys.

2.4.2 Trips not made

Trips not made are a useful indicator to measure as they show who is not well served by the transport system. For the purposes of this report, a trip not made occurs when a transport problem or transport disadvantage makes it too difficult for someone to take a trip. They remain home because it is too difficult or

impossible to make the trip. To some extent, trips not made are to be expected for everyone, regardless of impairment. However, disabled people experience more transport disadvantage and report higher levels of trips not made than non-disabled people due to transport barriers (Clery et al., 2017).

Missing out on trips is a human rights issue with a range of impacts on disabled people, according to the United Nations Convention on the Rights of Persons with Disabilities, as described previously. They may be less able to access healthcare, essential services, or employment, and likely miss out on social occasions (Shirgaokar et al., 2020). This contributes to poor health and wellbeing outcomes and higher levels of social isolation. Missing out on certain trips also adds burden to disabled people's lives if they have to worry about accessing groceries or other essential items.

The COVID-19 pandemic and lockdowns have increased the proportion of trips not made. A large proportion of these trips are a result of health guidelines and lockdown restrictions; however, new transport barriers have arisen as a result of the pandemic, including:

- reductions in public transport capacity to support social distancing; these do not tend to be accompanied by increases in frequency (Figliozzi & Unnikrishnan, 2021)

- fear of public transport and/or taxis due to concerns of catching the virus, or fear of other people not abiding by social distancing and hygiene requirements (Ashour et al., 2021; Koon et al., 2021)

- changes to how passengers board the bus – for example, only allowing entry from the rear doors, which do not kneel or have ramps, thus excluding some passengers (Auckland Transport, 2021; Jacobson, 2021).

2.4.3 Physical environment

The physical environment is a key factor in the transport system that blocks disabled people from achieving their desired levels of community participation. In Aotearoa New Zealand 2.57% of people have difficulty with walking or climbing steps or cannot do these activities at all. In some regions this figure is over 3% (Statistics New Zealand, 2013). Multiple potential barriers exist in the physical environment such as poor-quality footpaths and kerb ramps; inadequate lighting; lack of accessible crossings; and temporary barriers such as construction or road works (Burdett, 2016; Park & Chowdhury, 2021; Smith et al., 2016). These factors make travel to and from public transport stops/stations more difficult or completely unfeasible.

Barriers in the physical environment can also occur once a disabled person has reached their stop/station, particularly for people with physical and sensory impairments. Waiting at the stop may be uncomfortable or unsafe where shelter or lighting is not provided (Park & Chowdhury, 2021). For many people with physical impairments, steps or gaps at stations present a barrier to entering public transport (Park & Chowdhury, 2021).

Physical barriers to public transport use by disabled people are also common in international experience. Amongst stroke survivors in Sweden, anticipated physical constraints when moving onboard, embarking, and disembarking public transport was the most common reason cited for not using public transport (Asplund et al., 2012). Suggestions to enable better access to public transport include increasing the number of kneeling buses and having drivers stop closer to the pavement, waiting until people were seated before pulling out, and driving in a 'less stressful' way (Asplund et al., 2012, p. 296).

A study into the impact on the physical environment on disabled children in Australia showed how inaccessible streets limited children's participation in their neighbourhood (Stafford et al., 2020). A lack of footpaths 'bounded' them at the driveway or forced them into dangerous situations such as using busy roads as a pedestrian. In the absence of safe and accessible footpaths, disabled children were reliant on family members to go out – something that reduced their independence and that the children described as 'unfair' (Stafford et al., 2020, p. 305).

2.4.4   Personal security

Safety and security are key factors for people using public transport, including travelling to stops or stations, waiting for public transport, and when on the transport. Ceccato and Newton (2015) discuss the idea that disabled people are more at risk of crime and disorder when using public transport, and more likely to be fearful of crime and disorder even if it is unlikely to occur. This acts as a barrier to accessing public transport because disabled people will either not travel or will alter their travel behaviour if they are fearful of crime.

Rezae et al. (2020) highlight the particular personal security barriers people on the autistic spectrum face to using public transport, including getting lost, catching the wrong service, or being victimised by other passengers. Rezae et al. (2020) report that 40% of people on the spectrum have difficulties getting to a bus stop unassisted, and 43% worry about how they will be treated by others while travelling.

Xiang et al. (2006) highlight transport safety considerations for an often-overlooked group – disabled children. This USA-based study found that disabled children are five times more likely to be involved in an accident with a vehicle as a cyclist or pedestrian than non-disabled children. Disabled children are also more likely to experience difficulties as a pedestrian or cyclist. These difficulties include factors like insensitive drivers, missing pavements, uncertainty as to when to cross the road, and problems with the kerb. The most common difficulties experienced by disabled and non-disabled children were the same; however, disabled children reported them at a higher rate. These statistics highlight the disparity in personal security between disabled and non-disabled users of the transport system (Xiang et al., 2006).

Disabled women also face unique personal security challenges, as described by Iudici et al. (2017). Characteristics of many transport systems can facilitate criminal behaviour, which reduces personal security. These include overcrowding, lack of constant monitoring, sparse onboard staff, lack of security personnel at stops, and inadequate lighting (Iudici et al., 2017). These characteristics, coupled with disabled women's exposure to possible attackers and the perception of disabled women as 'easy targets', mean that women perceive public transport as having very low levels of personal security (Iudici et al., 2017).

2.4.5   Cost

There is a strong relationship between socio-economic status and access to transport (Spray et al., 2020). This is a challenge for disabled people who tend to have low incomes, particularly if they are unable to work. In Aotearoa New Zealand, 64% of disabled adults have an annual income of $30,000 or less, compared to 45% of non-disabled adults (Statistics New Zealand, 2013). Additionally, 23% of disabled people are employed in Aotearoa New Zealand, compared with 70% of non-disabled people (Park & Chowdhury, 2021). This problem is compounded by the fact that disabled people tend to have a higher cost of living than non-disabled people (Mitra et al., 2017), meaning they may not be able to meet all their essential transport needs.

It is likely the amount spent on transport by disabled people would be even higher if they could afford all the travel required to meet their needs (Mitra et al., 2017). Currently, disabled people forfeit trips because of the high cost of travel (Mitra et al., 2017). Although there are taxi subsidies through the Total Mobility scheme, the resulting fares remain higher than the equivalent public transport cost.

Disabled people may use more expensive modes of transport to mitigate transport barriers. For example, Godfrey and Brunning (2009) describe how blind and low-vision people face higher transport costs than non-blind people because of higher taxi use. Taxis were described as a valuable mode of transport because the drivers can help the passenger locate their destination, describe any changes in the area (such as construction works), and help the passenger become familiar with the city (Godfrey & Brunning, 2009).

Disabled people have reported high transport costs that relate specifically to their disability. For example, a commonly reported transport cost is the repair of mobility aid wheels that have been punctured by glass on the footpath (Spray et al., 2020).

People with higher incomes have a wider range of transport options to choose from, such as private mobility vans or their own car. Ironically, higher incomes also give people the ability to reduce their transport costs through schemes like the AT Hop card. Public transport cards typically offer lower fares than single paper tickets, but require a high outlay to acquire. The requirement to load the card with lump sums that are higher than a one-off cash fare is prohibitive for some people (Spray et al., 2020).

2.4.6   Information and communication

The provision of key information about the journey in multiple formats promotes safety and independence for Deaf travellers and travellers with vision impairments, thus enabling public transport use and community involvement.

If sufficient information is not accessible, bus and train trips can be inaccessible to vision impaired people who cannot rely on visual landmarks around them, and to Deaf people who cannot rely on audio announcements to tell them where they are (Azenkot et al., 2011). In Auckland, Wellington, and Canterbury, audio and visual information provision is being trialled on buses. The provision of information in both these formats can improve disabled peoples' access to public transport (Disabled Persons Assembly, 2020). When information is not provided in these different formats, vision impaired people must rely on the bus driver to announce which stop the bus has arrived at, which is not ideal (Park & Chowdhury, 2018).

It is also important that information about a trip is available in an accessible format, so that people can plan their journeys. Research into the barriers to transport for vision impaired people in Ireland found that bus timetables are often not available in an accessible format (Gallagher et al., 2011). This includes online timetables, which may not be accessible for a blind or low-vision person using software such as a screen reader (which reads text aloud) and physical timetables at bus stops.

Intellectually disabled people in Victoria, Australia, reported barriers accessing transport when transport staff tried to assist them using communication forms that were difficult to understand (van Holstein et al., 2020). This barrier can be alleviated through staff training on communication accessibility, which provides transport staff with tools they can use to assist people with different communication needs (van Holstein et al., 2020).

Deaf people also face communication barriers at transport stations and on services because they are less likely to be able to communicate with the driver/operator and other passengers. This may mean they miss out on emergency information, or unexpected changes to the service (Azenkot et al., 2011).

Autistic individuals experience unique sensory barriers to accessing public transport, which affects their community participation. The potential for irregularities in the transport system (such as the bus running late) can induce stress in autistic people who experience increased anxiety (Rezae et al., 2020). Busy transport services and stations that are noisy and have bright lights and different smells also present a barrier to public transport for those autistic people who are hypersensitive to environmental stimuli (Rezae et al., 2020).

2.4.7   Temporal

Temporal factors can affect disabled peoples' ability to achieve their desired levels of economic and community participation both because of the limited times transport is available to them and because of the extra time required by many disabled people to complete their journey (Wilkinson-Meyers et al., 2014). As part of the Aotearoa-based study by Wilkinson-Meyers et al. (2014), many disabled people expressed frustration that using public transport or taxis takes considerably longer for them than for non-disabled people. For example:

> I don't know how you can compensate in a real way for the fact that for many disabled people, not just blind and vision impaired, it naturally takes longer to do things. (Vision impaired participant, quoted in Wilkinson-Meyers et al., 2014, p. 1574)

Time is a key factor for many disabled people planning their transport as some everyday activities simply take longer. Time constraints become more difficult to work around at certain times of the day. For example, one participant described the difficulty in having a night out with friends. The drivers of mobility van taxis tend to work during the day, leaving no accessible taxis available for them to get home at the end of the night, meaning the participant could not participate in evening activities (Wilkinson-Meyers et al., 2014).

Time wastage was another temporal factor highlighted in the study. Many people described waiting hours for taxis that were only available at certain times, for example:

> I'm sick of waiting for three hours for a taxi … And when you order one, or ring up for one, they're late and when I ring back and say, look they're supposed to be here … So we eventually get them but it takes hours. (Physically impaired participant, quoted in Wilkinson-Meyers et al., 2014, p. 1548)

The time of day also influences what support may be available to disabled people, which influences their travel decisions if they require support to use transport (Wilkinson-Meyers et al., 2014). Having access to appropriate support when it is needed can enable people with physical and intellectual impairments to achieve their desired level of independence (Smith et al., 2016; Wilkinson-Meyers et al., 2014). Alternatively, when a disabled person does not have control over when and/or how they receive support, their access to transport may be limited by the time of day support is available to them or tasks the support person is able to carry out (Wilkinson-Meyers et al., 2014).

2.5 Factors that enable or block provision and uptake of high-quality Total Mobility services

2.5.1 Overview of Total Mobility

This section looks more specifically at the Total Mobility scheme, which forms part of the public transport network. Total Mobility assists disabled people in meeting their transport needs and increasing their levels of community participation. This assistance is provided as door-to-door taxi services that are subsidised up to 50%, with a subsidy cap that varies between regions. For example, in Hamilton, where the cap is $15, a $30 taxi fare using Total Mobility would cost $15 as the journey is short enough for Total Mobility to subsidise the whole fare. A slightly longer journey costing $35 would cost $20, as after the $15 subsidy cap has been reached the passenger pays 100% of the remaining fare. Total Mobility can also be used on companion driving services, which offer a more personalised service.

To use Total Mobility, a person must be unable to use buses, trains, or ferries in a safe and dignified manner because of a physical, intellectual, psychological, sensory, or neurological disability (Te Manatū Waka – Ministry of Transport, 2020). This disability may be temporary, permanent, or fluctuating. Waka Kotahi promotes Total Mobility as being available to anyone who has difficulty 'getting to the place from where transport departs, getting onto the transport, riding securely, getting off the transport, and getting to the destination' (Waka Kotahi, 2017, p. 5). If a person is unable to complete any part of their journey, even temporarily, they are eligible for the scheme. The scheme also provides funding for transport providers to purchase and install wheelchair hoists in their vehicles (Waka Kotahi, 2020). Unlike other travel schemes, which can only be used for medical trips, there are no limits to what type of trip Total Mobility can be used for.

The scheme operates nationwide and is funded jointly by central and local governments. Regional councils are responsible for managing and operating the scheme, meaning it varies from region to region. Transport service providers apply to their regional council to become Total Mobility providers, so regional councils are also responsible for setting service standards. The regional differences are explored further in section 4.5.3. Users of the service are issued with an electronic card or must obtain vouchers from their regional council. The card or vouchers can then be used to claim the subsidy directly from operators (Waka Kotahi, 2020).

Table 2.2   Summary of regional differences in the Total Mobility scheme

Region	Coverage	Price cap	Subsidy distribution method	Wheelchair accessibility
Northland	Whangārei urban area only	$25 per trip One voucher book is issued per month, users are asked to use the scheme sparingly	Voucher book	Hoist available with all providers
Auckland	Entire region	$40 per trip	Electronic card	Hoist available with most providers
Bay of Plenty	Excludes towns where no taxis operate Murupara, Katikati, Kawerau, and Ōpōtiki	$25 per trip	Electronic card Vouchers accepted for Hawke's Bay users	Hoist available with most providers
Waikato	Urban centres Hamilton, Taupō, Tokoroa, and Waipā	$15 per trip in Hamilton $12.50 per trip in Taupō $7.50 per trip in Tokoroa $15.50 per trip in Waipā	Electronic card Vouchers may be accepted if advised at booking	Hoist available with most providers
Hawke's Bay	Central Hawke's Bay (Waipukurau/Waipawa) Napier, Hastings, and Wairoa (on-demand service)	$15 per trip $25 per trip for trips to specific locations	Vouchers	Hoist available with some providers Folder wheelchairs provided for with some providers
Gisborne/Tairāwhiti	Gisborne district	$6 per trip	Vouchers	Hoist available with most providers
Taranaki	Entire region	$20 per trip	Electronic card	Hoist assistance available with one provider when pre-booked Wheelchair ramp available with some providers

Region	Coverage	Price cap	Subsidy distribution method	Wheelchair accessibility
Manawatū-Whanganui/Horizons	Available across the Manawatū-Whanganui region, including Feilding, Palmerston North, Levin, Marton, and Whanganui Excludes towns with no taxi service: Dannevirke, Raetahi, Pahiatua, Woodville, Taumarunui, and Ohakune	$10 per trip in Palmerston North, Whanganui, and Levin $5 per trip in Marton and Feilding	Vouchers	Hoist available with half of providers
Wellington	Entire Greater Wellington region	$40 per trip Up to 5 minutes of waiting time is subsidised	Electronic card	Hoist available with most providers
Nelson city and Tasman	Available across Nelson and Tasman, including Nelson city, Richmond, Brightwater, Wakefield, Māpua, and Motueka Excluded Golden Bay as there is no approved provider	$10 per trip	Vouchers	Hoist available with half of providers
Marlborough	Entire region	$15 per trip Users are requested to use the scheme sparingly	Vouchers	Hoist available with most providers
West Coast	Available across the West Coast, including Greymouth, Hokitika, and Westport	$15 per trip 25 vouchers per month, with more available on request	Vouchers	Hoist available with half of providers
Canterbury	Available across Christchurch, Ashburton, Timaru, and Waimate	$35 per trip	Vouchers	Hoist available with all providers
Otago	Available across Otago, including Alexandra, Ōamaru, Balclutha, Queenstown, Wānaka, and Dunedin	$25 per trip	Electronic card	Wheelchair access available with most providers
Southland	Invercargill urban area and Gore district	$25 per trip	Vouchers	Hoist available with most providers in Invercargill Hoist available with all providers in Gore

Source: Study Team using information from Waka Kotahi (2020)

2.5.2   Review of Total Mobility 2005

The Total Mobility scheme was reviewed from 2002 to 2005 with the intention of identifying key barriers in the scheme and providing recommended actions to enable better access and service. The review was informed by over 400 submissions from disabled people and advocates, and 16 consultation meetings across six cities. The resulting report identified barriers thematically grouped into scheme purpose, eligibility, entitlement, assessment services, administration, and transport operators (Mackay & Peters, 2005). The key barriers and recommendations for each theme are summarised in Table 2.3.

The review proposed a staged approach to funding and implementing the recommendations. At the time of writing, the central government financial contribution was 40%. It was proposed that this be gradually increased over three years to maintain a similar cost for local authorities, while allowing them to implement improvements to the scheme. In the 2006/07 financial year, central government funding would increase to 60%, with potential for further increases the following year. This would allow nearly all the recommendations to be adopted, including some, but not all, coverage expansions and promotion of the scheme. The review projects the number of people using the scheme would grow to approximately 69,000 following this approach.

It was not recommended that all recommendations be adopted in case this overwhelmed the Total Mobility scheme. The review acknowledged that coverage and publicity expansions may be part of work further in the future (Mackay & Peters, 2005). Comparison between the 2005 review of Total Mobility and the current state of the scheme shows that the recommendations relating to entitlement appear to be the only recommendations that were fully implemented.

Table 2.3   Summary of key barriers and recommendations in 2005 review

Theme	Barriers	Recommendations
Scheme purpose	• A lack of agreed understanding of the scheme's purpose and parameters. • The purpose statement refers to 'people with serious mobility constraints' while the target group is 'people with disabilities'. This terminology is internally inconsistent as well as inconsistent with the New Zealand Disability Strategy.	• Adopt a purpose statement that describes 'people with impairments'. • The founding tenet of Total Mobility and local authorities' roles are supported and strengthened. • Clearly define the parameters of Total Mobility.

Eligibility	• The eligibility criteria are interpreted and applied differently in each region.
	• Otherwise eligible people living in areas that do not have bus, train, or ferry services are ineligible, even if they have need of the scheme in areas where Total Mobility operates (eg, for holidays or business travel).
		• The eligibility criteria should be nationally agreed upon and applied.
		• The eligibility criteria should be updated to allow the following groups to use the scheme consistently throughout the country in areas where it operates:
		  – people whose ability to use the bus, train, or ferry fluctuates
		  – people with an impairment expected to last 6 months or more
		  – children with impairments
		  – people with impairments who live in residential care
		  – people who live in areas that do not have bus, train, or ferry services.

Theme	Barriers	Recommendations
Entitlement	• There is little information about whether the Total Mobility entitlements meet the travel needs of most people. • The Ministry of Transport does not have data to estimate the subsidy needed to make Total Mobility affordable for potential members.	• The subsidy should be 50% in all regions. • The scheme should have no minimum threshold. • Maximum subsidised fares should be developed in negotiation with Land Transport NZ and be reviewed annually. • Town boundary restrictions should be replaced with maximum subsidised fares. • The number of trips allocated to each person should be based on their self-assessed needs, adjusted by local authorities to manage budgets. • Remove the trip purpose restrictions.
Assessment services	• Inconsistency in applying the criteria region-to-region. • A lack of clear accountability arrangements between local authorities and assessment agencies. • Inconsistency between regions in assessment providers, which leads to inconsistency in the cost to join. • In some regions the only assessment provider is a GP, which is incompatible with the idea held by many disabled people that their disability should not be viewed as a medical condition.	• Land Transport NZ should develop contract guidelines between local authorities and assessment providers. • Local authorities should contribute to the financial cost of assessments/ administration carried out by assessment providers. • Appropriate training should be given to assessors to ensure consistency across the country. • A best practice handbook be published by Land Transport NZ in conjunction with local authorities to ensure consistency across the country. • The assessment process be updated to allow members to indicate the appropriate number of subsidised trips appropriate for them. • Potential members of Total Mobility should not have to become financial members of an assessment provider/agency to be assessed. • Potential members of Total Mobility have the right to be assessed by a voluntary organisation in every region (rather than a GP).
Administration	• A lack of data collection, monitoring, and evaluation of the scheme means there is no national picture of the scheme's use and the extent to which it meets travel needs. • Each region allocates its own vouchers. There is inconsistency in whether vouchers are accepted in regions outside of where they were allocated.	• Land Transport NZ should encourage data collection by local authorities. • Land Transport NZ should encourage administrative and allocation improvements. • Appropriate promotion methods should be introduced following other improvements to the scheme.

Theme	Barriers	Recommendations
	• There is little promotion of the scheme in fear that local authorities will become overwhelmed financially.	
Transport operators	• Inconsistency in contracting agreements region-to-region. • Inadequate numbers of wheelchair-accessible taxis. • Wheelchair-accessible taxis have higher capital and running costs. • There is no requirement for ongoing safety checks of wheelchair hoists. • It is likely taxis have begun operating in new areas, providing untapped potential to expand the scheme. • Total Mobility is mostly provided by taxis; this is not necessarily optimal, and there is potential to expand to other operators such as trust-operated community transport services.	• Guidelines for contracts between local authorities and Total Mobility should be developed to ensure quality and the provision of wheelchair-accessible taxis. • Land Transport NZ provide a flat payment (in addition to the fare) to the operator for each trip using a wheelchair hoist. • An appropriate regime be developed to ensure the ongoing safety of wheelchair hoists. • Local authorities investigate the possibility of expanding Total Mobility into areas newly covered by taxi operators. • The possibility of other transport providers participating in Total Mobility is investigated.

Source: Study team using information from Mackay and Peters (2005)

2.5.3   Summary of the limitations of Total Mobility for disabled people

Total Mobility is a nationwide scheme that provides an alternative for people who cannot access public transport. Eligible people are entitled to a 50% subsidy on their taxi fare, up to a regional subsidy cap, after which they pay for 100% of their fare. Although the scheme aims to provide 'total mobility' for its customers, as reported above, a review in 2005 found key issues prevented the scheme from being accessible to everyone. Many of these issues have not been addressed.

General issues for disabled people:

• Total Mobility is a symbol of their lack of access to society.

• There is a lack of integration of Total Mobility into the wider public transport system, which leads to it being considered a social service rather than part of core public transport.

Affordability:

• Basing the fees on taxi fares makes Total Mobility more expensive than public transport fares.

– Funders and users have little control over price fluctuations.

– Disabled people face higher costs for comparable journeys made using public transport.

– Disabled people are already more likely to have low incomes, amplifying this issue.

Availability, accessibility, and acceptability:

• Total Mobility is only available where taxis already operate.

• Restrictions on the subsidy based on trip purpose, trip length, and maximum fare reduce Total Mobility's availability.

• The availability of Total Mobility is not advertised widely to the people who might need it.

• Wheelchair-accessible taxis have very limited availability.

Issues for transport providers:

- A lack of national coordination and consistency of the scheme.
    - Political will varies region-to-region regarding services.
- Wheelchair-accessible taxis have high capital and running costs.
    - Fares are too low to fund replacement of ageing vehicles.
- Ministry of Education contracts compete with Total Mobility for wheelchair-accessible taxis.

Regional councils:

- Fare caps have been necessary to reduce impacts on ratepayers and ensure the scheme remains affordable for councils.
- Increasing advertising would increase use to unsustainable levels.

2.6   Lessons from international Total Mobility-like schemes

Several countries operate schemes similar to Total Mobility, commonly known as 'paratransit'. This section draws on international literature to provide lessons that can be applied in Aotearoa New Zealand. It looks at whether schemes are centralised or not and describes paratransit services in the USA.

The literature review did not find any outstanding examples of paratransit, so many of the lessons come from recommended improvements to schemes similar to Total Mobility. Few sources of relevance were found, so we draw on a small number of sources for these lessons.

2.6.1   Centralised vs decentralised systems

Two main techniques are used by paratransit service providers in the USA: centralised and decentralised (zone) systems. In a centralised system, the entire operation area is treated as one zone, which all paratransit providers operate in. The more common decentralised systems are characterised by several small zones, which vehicles may only cross to pick up or drop off passengers, in order to operate predominantly in a single zone (Lu et al., 2017).

Lu et al. (2017) explored this idea using paratransit data sourced from three USA cities as simulation inputs to compare the costs and benefits of centralised and decentralised systems. Decentralised systems are associated with lower operating costs and complexity; increased driver job satisfaction associated with route familiarity; and increased reliability due to the small zones encouraging shorter, less complex trips, which have less potential for travel time variability (Lu et al., 2017).

2.6.2   Use of taxis for paratransit

In the USA, paratransit services have commonly been provided by dedicated paratransit vans operating under the Americans with Disabilities Act (ADA). These vans typically operate at the same time as comparable bus services and along a fixed route. Burkhardt (2010) compared the cost efficiency of this form of paratransit with the taxi-based paratransit, which is more common in Aotearoa New Zealand, finding that on average taxi paratransit services had overall lower costs than services provided in dedicated ADA vans. This is because taxi drivers operate as independent contractors rather than employees, as is the case for ADA drivers; taxi vehicles are generally much less expensive than the ADA vans; and taxis are significantly less expensive to maintain and operate than ADA vans (Burkhardt, 2010).

Taxis also provide greater flexibility to paratransit customers, particularly for short trips, as they can organise door-to-door trips at relatively short notice. They are also useful at off-peak times or in hard-to-reach places where fixed route paratransit may not be operating (Burkhardt, 2010; Turmo et al., 2018).

This is not to say that ADA vans have no place in the paratransit system. Rather, it shows that shifting some patronage from the ADA vans to paratransit taxis and reducing the number of trips by ADA vans would improve both the level of service and cost effectiveness of paratransit systems.

Burkhardt (2010) and Turmo et al. (2018) found that for short trips, taxis were the most cost-effective way for disabled people to travel, while still retaining a high level of service in most cases. In Massachusetts, Turmo et al. (2018) used modelling to show it is more cost effective for trips costing less than US$26.01 to be directed to taxis while all trips over that amount take place in the fixed-route ADA vans.

2.7 Emerging technological and social developments impacting disabled people's transport experiences

2.7.1 App-based technology

There has been a large increase in apps designed to improve access to transport and travel for disabled people. Here we highlight a few ways transport barriers are being addressed using apps.

2.7.1.1 OrienTrip

OrienTrip is a phone app designed collaboratively with people on the autistic spectrum to assist autistic people wanting to use public transport. It has several features to make planning a public transport trip easier and to support autistic people while they are travelling. The app offers a journey planner with additional information such as how crowded the bus is likely to be, how long each leg of the journey will take, and how many changes will be required (Rezae et al., 2020). Other features provide specific support to autistic people, including anxiety-calming activities, tips for dealing with sensory overload, and customisable communication cards (Rezae et al., 2020), as shown in Figure 2.7.

When tested by autistic people, the primary benefits of the app were identified as being streamlining trip planning, anxiety and sensory overload support, and real-time journey tracking (Rezae et al., 2020). Overall, the app was received positively by autistic people and carers of autistic people. Rezae et al. (2020) concluded that OrienTrip or similar tools were effective in supporting autistic people to use public transport independently. This improves community participation by reducing reliance on other people and enabling autistic people to access education, employment, and social opportunities (Rezae et al., 2020).

Figure 2.7   Screenshots from the OrienTrip app
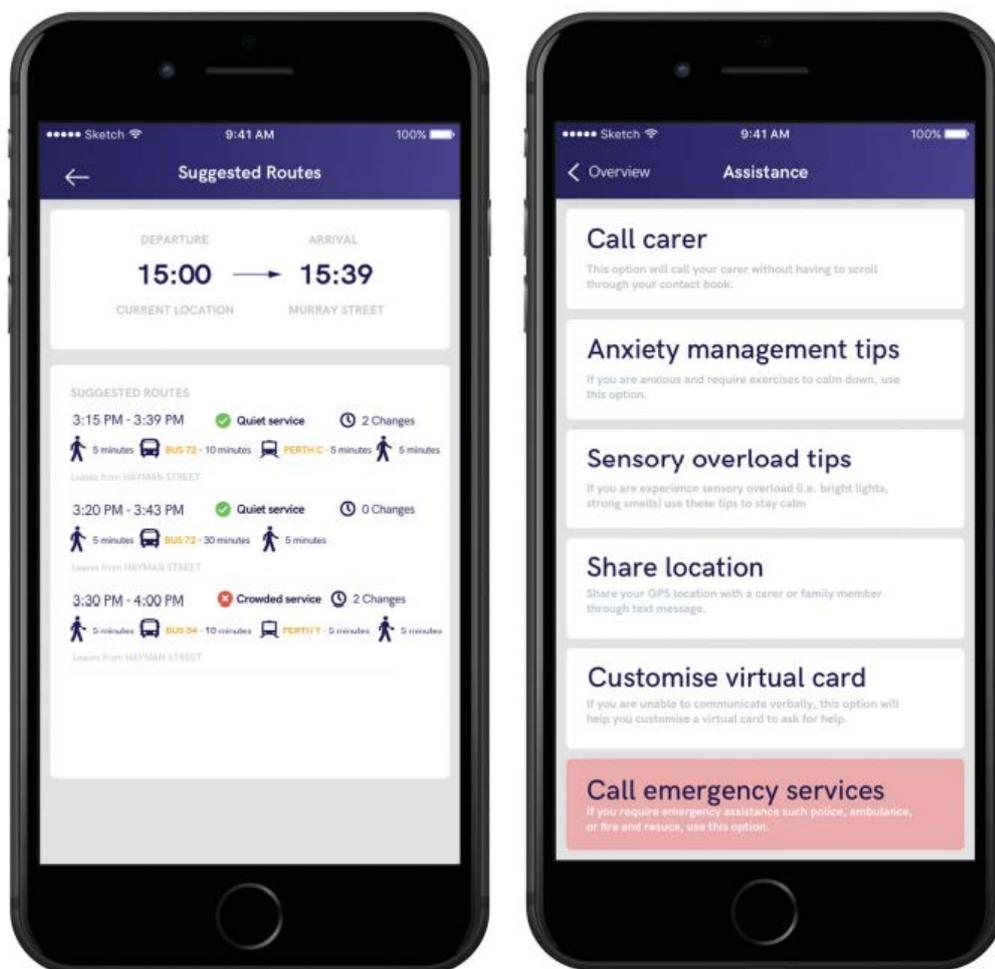
Source: Rezae et al. (2020)

Image description: The left-hand image shows an iPhone displaying suggested routes on the OrienTrip app. Three suggested routes are shown with comparisons between arrival times, number of bus changes, and whether the bus is crowded.

The right-hand image shows an iPhone displaying assistance options on the OrienTrip app. The app has five white boxes containing the following options: call carer; anxiety management tips; sensory overload tips; share location; and customise virtual card.

There is one red box, which gives users the option to call emergency services for assistance.

2.7.1.2   Wheelmap

Wheelmap is an example of a crowdsourced mapping app that shows information about whether a place is wheelchair accessible. Volunteers upload information about a place and rate it using a traffic light system. The purpose of Wheelmap is to provide wheelchair users with more information to allow them to plan their travel more effectively (Mobasheri et al., 2017).

As of 2017, over 800,000 places had been rated by volunteers. Wheelmap is described as being one of the most promising existing pieces of technology for disabled people who use wheelchairs or other mobility aids with small wheels (Mobasheri et al., 2017).

2.7.1.3   Rideshare

Rideshare services such as Lyft and Uber have risen in popularity since their inception in 2010 (Koffman, 2016). These types of services have potential to affect Total Mobility-like services because of the competition they provide with taxi companies that provide paratransit services, and because of their potential to develop as on-demand providers of paratransit services (Koffman, 2016). There is also potential for these services to provide a more accessible experience because they enable users to track arrival of the vehicle, know the driver's name, and allow tracking during the journey.

Jittrapiroma et al. (2019) studied the trial of Breng flex, a public, on-demand rideshare service in the Netherlands. The purpose of Breng flex is to bridge the gaps between bus stops and destinations. Users of the service either book a ride to or from a bus stop using a phone-based app, or ring a help desk. A ride will arrive within 20 minutes of the service being booked, although most rides arrive within 10 minutes. Rides are provided in either a four-seater sedan or a six-seater minivan that has capacity to carry prams and wheelchairs, although ramps into the vans are not available (Jittraprioma et al., 2019).

Breng flex offers a discount to elderly users and works with the government to provide a subsidy for eligible people under the Social Support Act, including disabled people. Breng flex was well used by elderly people during the trial and has potential to support elderly and disabled people in accessing public transport (Jittrapiroma et al., 2019).

2.7.1.4   Public on-demand transport services

In Timaru, New Zealand, on-demand public transport includes wheelchair-accessible services. The service collects passengers from locations close to their trip origin, or from their driveway if the Total Mobility option is requested. The door-to-door service costs passengers more than the standard pick-up because of the extra time incurred to the operator and driver. It is a less expensive option than a subsidised private taxi fare (Holden, 2020).

2.7.2   E-bikes

Cycling on an electric bike (e-bike) is an increasingly popular transport mode that can increase access to cycling for disabled people. E-bikes are particularly useful for older adults who wish to remain active but have decreasing mobility with age, and for adults who have recently acquired impairments due to injury or illness but previously enjoyed cycling (Johnson & Rose, 2015; Wild & Woodward, 2018).

Johnson and Rose (2015) examined e-bike use among older Australians and found that over 80% of older e-bike owners had been cyclists before purchasing their e-bike. For many older people, e-bikes reduce barriers to cycling such as lack of fitness, or perceived lack of fitness; hilly terrains; and distance. E-bikes require less physical exertion and muscular and cardiovascular strain than standard bicycles while still providing exercise-related health benefits to riders. This makes e-bikes attractive and accessible to older people whose physical fitness may be decreasing. They are also a useful rehabilitation tool for some disabled people (Johnson & Rose, 2015).

MacArthur et al. (2020) explored equity and accessibility in e-bike share schemes. As e-bikes present a high one-off cost, they are inaccessible to many low-income people. Bike share schemes provide a solution to this problem but currently have limited accessibility features to encourage use by disabled people. MacArthur et al. (2020) propose integrating adaptive bikes into bike share schemes, which would be targeted for use by disabled people. This could include trike or quadricycle options, tandem bikes, and hand cycles.

Multiple adaptive bike share trials have been carried out across the USA. The bike shares typically involve an online system that is used to book the bicycles, which can then be collected from and returned to designated points. These points are strategically placed on popular cycle trails to maximise use. The bike share programme Adaptive BIKETOWN was trialled in Portland, Oregon, which introduced hand-powered

bikes, trikes, and side-by-side tandems to the bike share fleet. The trial saw high rates of use by disabled people, with a 40% usage rate by disabled people and a further 40% of uses by caregivers of disabled people (MacArthur et al., 2020).

2.7.3   Autonomous vehicles

Autonomous vehicles such as self-driving cars are heralded as a solution to barriers to transport access for disabled people. Self-driving cars have the potential to provide independence to vision impaired people and people with physical impairments that prevent them from operating a car currently (Bennett et al., 2019). Contradictorily, while the benefits to disabled people are being pushed as a reason to embrace driverless cars, disabled people are being left out of the policy and design considerations of a driverless vehicle fleet (Herriotts, 2020).

People with vision impairments and those with physical impairments have less access to public transport because of physical barriers and societal attitudes. Access to a personal vehicle that a disabled person can use to travel door-to-door, without reliance on another person, could dramatically increase transport accessibility and, subsequently, community participation (Hwang et al., 2020). It is estimated that widespread use of autonomous vehicles could provide 2 million Americans with access to employment opportunities (Hwang et al., 2020, p. 262).

Bennett et al. (2019) found that roughly two-thirds of disabled people have negative or ambivalent feelings towards autonomous vehicles. This contrasts with non-disabled people, of whom 8 out of 10 were negative or ambivalent towards autonomous vehicles. Research in New Zealand also reported mixed views of emerging technologies amongst disabled people, with many noting that current rideshare options are not universally accessible, so there is some hesitancy about whether other technologies would be designed in inclusive ways (Starkey & Charlton, 2020). There is no current estimate for a time when autonomous vehicles might become a useful mode of transport for disabled people, and some contention as to whether that will ever be the case (Currie, 2018).

3 Research methods

The goal of this research was to investigate disabled people's experiences of transport in Aotearoa New Zealand in 2021. Within that broad scope, we used surveys and workshops in a variety of formats to explore the widest range of experiences within the project's constraints on time, cost, and geography. As well as disabled people being part of the research team, we provided as much opportunity as possible for disabled people to have a voice in the research, through the use of methods co-designed with disabled people's organisations, and through involving disabled people in piloting the surveys, and in facilitating and recruiting participants for focus groups.

3.1 A note on 'representativeness' of disability

The research methods were designed to provide insights into disabled people's experiences of transport, but we did not attempt to recruit representative samples. We could have aimed for stratified samples based on population age structures, but there is complex interaction of age, ethnicity, and disability in Aotearoa New Zealand. That means that defining 'representativeness' for disability is not straightforward. It would not have been simple to define categories to make up the stratification, or easy to recruit the requisite number of participants in each group. Further, disability is subjectively defined in the social model, so the range of impairments and how people experience them is not easily stratified.

Rather, we aimed to cast a wide net with the surveys and workshops. We sought to gain deeper insight into the complexity of transport for disabled people, with a specific focus on Total Mobility and its influence on mobility and participation. Our secondary goal was to provide an opportunity as best we could for any disabled person in Aotearoa New Zealand to have their voice heard as part of this research. The variety of research methods and accessible dissemination were the tools that we used to provide those opportunities.

3.2 Surveys of disabled people

We undertook surveys of disabled people across Aotearoa New Zealand to get detailed data about the travel patterns of disabled people. To our knowledge this is the largest travel survey of disabled people carried out in Aotearoa New Zealand to date, with 15,102 individual responses.

The survey included standard demographic questions adapted from the New Zealand Census about location, age, income, ethnicity, and everyday difficulty. Respondents were also screened with a question allowing them to self-identify as having an impairment or being a disabled person, or as someone completing the survey on behalf of someone with an impairment or identifying as a disabled person.

The rest of the questions (non-demographic) were a mix of open- and closed-field questions, which are shown in Table 3.1.

Table 3.1   Non-demographic survey questions

- How many trips do you make by public bus (or train) in a typical week? Getting on then off the bus (or train) counts as one trip. For example, if you use the bus twice per day, that would be 14 trips per week. (multichoice)
- How many times do you go for a walk (including if you use a mobility aid such as a wheelchair) just for exercise or recreation in a typical week? For example, if you usually go for a walk every day, that would be 7 times per week. (multichoice)
- How many times do you walk (including if you use a mobility aid such as a wheelchair) for transport in a typical week? Going somewhere for transport means a trip to another place such as work, the shops, a friend's house, church, or anywhere else. Walking for transport includes a walk to a bus or train stop. (multichoice)

- How many times do you ride a bicycle or tricycle (including a hand-operated bicycle or tricycle) for transport in a typical week? Going somewhere for transport means a trip to another place such as work, the shops, a friend's house, church, or anywhere else. (multichoice)
- Are you currently enrolled for the Total Mobility scheme? (yes/no/unsure)
- How many times do you use the Total Mobility scheme for subsidised taxi trips in a typical week? (multichoice)
- Would you use the Total Mobility scheme more often if it were cheaper? (yes/no)
- Would you use the Total Mobility scheme more often if it were easier to book a taxi at convenient times? (yes/no)
- What do you like best about the Total Mobility scheme? (open field)
- Are there any changes you would like to see made to the Total Mobility scheme? (open field)
- In the last week, was there an outing you would have liked to make, but you did not go because a transport problem made it too hard to get there? (yes/no)
- If yes, what was too hard? (multichoice)
- Please describe the trip that you decided not to take and why you decided not to go. (open field)
- Are you aware that public transport and Total Mobility were free during COVID-19 Alert Levels 4 and 3 in 2020? (yes/no)
- If yes, did you use Total Mobility more often when it was free? (yes/no/unsure)
- If yes, did you use public transport more often when it was free? (yes/no/unsure)
- Do you have anything else to say about transport in New Zealand? (open field)

None of the questions were compulsory. The decision to have all questions optional was so that participants would not be discouraged from completing as much of the survey as they were willing to, if they did not want to answer a particular question.

The survey was disseminated in multiple ways:

- The Disabled Persons Assembly advertised the survey link on social media, in their weekly newsletter, and through word-of-mouth in the local branches.
- MRCagney advertised the survey link on social media.
- The research team contacted more than 30 disability service providers, support groups, and/or advocacy organisations across the country. Many of these organisations forwarded the link to their databases and shared to social media.
- The social media/communications teams at all the regional councils were approached with a request to share the survey link among their databases.
- The survey link was forwarded by email to approximately 77,000 people on the CCS Mobility Parking email database.

The survey was offered in several different formats, including:

- plain English Survey Monkey online survey
- Survey Monkey online survey with New Zealand Sign Language translation videos
- Plain English Word document format
- Easy Read Word document format produced by People First.

In addition, we accepted contributions by people via email or phone call to minimise the barriers to participation.

The full list of survey questions of disabled people is attached in Appendix A.

3.3   Workshops with disabled people

Eleven workshops were hosted with a total of 115 disabled people from around the country. The purpose of these workshops was to provide a rich picture of the diverse transport needs of disabled people in Aotearoa New Zealand.

Three workshops took place online and eight were in-person. The workshop locations and approximate numbers of attendees were as follows. All workshops were in-person except where noted:

- Auckland (online, 11 attendees)
- Dunedin (11 attendees)
- Christchurch (20 attendees)
- Greymouth (5 attendees)
- Wellington (10 attendees)
- Palmerston North (8 attendees)
- New Plymouth (20 attendees)
- Whangārei (4 attendees)
- Hamilton (15 attendees)
- Whole country (online, 6 attendees)
- Whole country, New Zealand Sign Language (online, 6 attendees)

The workshops were advertised through Disabled Persons Assembly newsletters and social media, through contact with local disability and community groups in the workshop locations, and through word of mouth. When registering interest, participants were sent an information sheet about the workshops (included in Appendix B).

When they registered, participants had the opportunity to describe any assistance they might need attending or participating at the workshop. As well as a $20 koha for participation, participants were offered support with travel costs on request.

Workshops lasted approximately 90 minutes. The facilitated conversation focused on the following questions:

- What is good about transport for you in New Zealand?
- What is difficult for you about transport in New Zealand?
- What changes would make your journeys easier?
- If you were in charge of Total Mobility, what one change would you make?

A combination of large and small groups was used within workshops depending on their size, so that everyone had an opportunity to participate. Participants typically reported that they enjoyed the workshops and felt that they had good opportunity to contribute. During the online workshops, notes were taken by members of the research team. During the in-person workshops, paper notes were used by participants and in some cases their helpers to self-record their thoughts and answers to questions. These notes were then collated and summarised.

3.4   Surveys of Total Mobility providers

We carried out an online survey of providers of the Total Mobility scheme to explore factors providers saw as challenges or enablers to providing transport services to disabled people. We categorised transport

providers into three groups: local government staff, Total Mobility assessors and advocates, and staff of private and volunteer driving services.

We created three surveys tailored to each group to best capture the experiences of these providers. All three surveys asked respondents for their perspectives about the benefits and challenges for Total Mobility. The full list of survey questions is provided in Appendix A.

The surveys were advertised in a range of ways, including posts on social media, and direct emails to:

- all 16 regional councils
- all Total Mobility providers listed on regional council websites
- additional taxi companies in each region of Aotearoa New Zealand, identified through online searches
- the only known database of community transport providers (Waikato Community Transport Forum)
- Total Mobility assessors listed on regional council websites and identified through online searches.

3.5   Workshops with transport providers

Two workshops were hosted with transport providers. We defined transport providers as:

- people who run private transport companies or volunteer-based transport, including taxi, Uber/rideshare, and community transport (but not public transport/bus drivers)
- local government people working in provision of transport services (including public transport and Total Mobility) that impacts disabled people
- disability advocacy and service providers who assess people for Total Mobility, administer transport services, and who advocate for disabled people's access to transport.

The purpose of the workshops was to understand providers' perspectives on transport for disabled people, and what would make that better, with an explicit focus on Total Mobility. The facilitated conversations focused on the following questions:

- What are some of the best experiences you've had as a provider working in Total Mobility?
- What are some of the most challenging experiences you've had as a provider working in Total Mobility?
- Thought experiment: If you were in charge of Total Mobility, what one change would you make to its funding, rules, or procedures to make it *better*, from your perspective? Why?

The workshops were hosted in-person with participants from Auckland, and an online workshop involved participants from Wellington. There were four participants at the Auckland workshop and five at the Wellington workshop. Notes were taken by research team members.

3.6   Survey of people's transport experiences during lockdown

We carried out an additional survey about the transport experiences of disabled and non-disabled people during lockdown. This was largely in response to Aotearoa New Zealand moving to COVID-19 Alert Level 4 on 17 August 2021.

This survey focused on whether a transport problem had made accessing essential activities hard or impossible for people during Alert Level 3 or 4. The activities asked about were employment; essential services, including shelter, food, and health care; COVID-19 vaccination or testing; and any other essential or recreational trip.

Two hundred responses were gathered in total, including 139 from disabled people and 61 from non-disabled people. This enabled comparison between the two groups. Participants were asked to self-identify

as a disabled person at the beginning of the survey. Demographic information about the region respondents live in was also collected. Survey responses were offered in the following formats:

- online Survey Monkey
- plain English Word document
- email
- phone call or NZ Relay call

At the end of the survey, respondents were given the option to be contacted for a phone interview to further discuss their experiences. Eight of these phone interviews were carried out, with an additional respondent providing more detail by email due to difficulties using the phone to communicate.

The lockdown survey was shared on the Disabled Persons Assembly and MRCagney social media accounts, as well as advertised directly through the Disabled Persons Assembly newsletter.

4   Results

4.1   How we analysed the data

4.1.1   Quantitative analyses of surveys of disabled people

Across different survey formats – including web survey, web survey with New Zealand Sign Language videos explaining each question, and paper versions – 15,102 responses were received and collated in a spreadsheet. The total excluded submissions that did not include any responses or were otherwise unable to be analysed.

Descriptive statistics comparing disabled people's experiences of transport are presented in tables. Summary statistics included the number of respondents in the following categories:

- people's self-identification as a disabled person (to determine eligibility for the survey)
- number of trips per week by public transport, bicycle, walking for transport, walking for recreation, and Total Mobility
- whether or not the respondent would use Total Mobility more often if it were cheaper, and if it were more convenient
- whether or not there was a trip the respondent did not make in the last week because it was too difficult
- reasons given for a trip not made, selected from a list of options.

We also summarised participants' demographic information for the 1,211 respondents who provided it. Demographic information included:

- region of Aotearoa New Zealand
- place (whether they live in a city, town, or rural area)
- age
- ethnicity
- income
- impairment type.

Differences between groups were graphed and analysed with Chi-squared tests of independence. The following differences were analysed:

- number of trips per week by different modes (no trips compared with at least one trip)
- whether or not the respondent would use Total Mobility more often if it were cheaper or more convenient
- whether or not the respondent reported a trip not made in the last week.

For each of the above responses, differences between groups were analysed. The comparison groups were selected based on even splits (median or tertile) depending on the response numbers and their variation. The groupings were based on demographic factors, including:

- region of Aotearoa New Zealand (Auckland, Wellington, Waikato, Canterbury, and all other regions combined)
- place (whether they live in a city, town, or rural area)
- age (under or over 70 years)
- ethnicity (New Zealand European or Other)
- income (personal income greater or less than $30,000 per year)

- impairment type.

For impairment type, those reporting either a lot of difficulty or that they could not do the stated action at all were compared to those who reported no or some difficulty. For example, those reporting a lot of difficulty seeing and those who reported that they could not see at all were compared to those who reported no or some difficulty seeing. Separate quantitative analysis was carried out on the computable differences between Māori, Pacific, and New Zealand European respondents according to the number of trips per week by different mode.

4.1.2   Qualitative analyses of open-field data collected in the survey of disabled people

Open-field data was analysed using NVivo 12, a qualitative data analysis program.

Two members of the research team co-developed a codebook for analysing the four open-field questions:

1. What do you like best about the Total Mobility scheme? ($N = 2,019$)
2. Are there any changes you would like to see made to the Total Mobility scheme? ($N = 1,687$)
3. Please describe the trip that you decided not to take and why you decided not to go. ($N = 3,413$)
4. Do you have anything else to say about transport in New Zealand? If you answered 'Yes', please enter your comments here. ($N = 3,468$)

Codes (themes) and child codes (sub-themes) enabled us to categorise answers based on the transport mode they related to, the difficulties or barriers people experienced, and what they like about aspects of the transport system.

Figure 4.1 shows an example of codes and child codes that were used in the analysis. After manual coding, each code was reviewed for accuracy and refined. In some cases, this involved adding an extra layer of coding to common codes. For simplicity it shows the two highest level codes. Additional child codes were added to common themes to allow for more detailed analysis.

Figure 4.1   Example codes and child codes used in NVivo 12 analysis
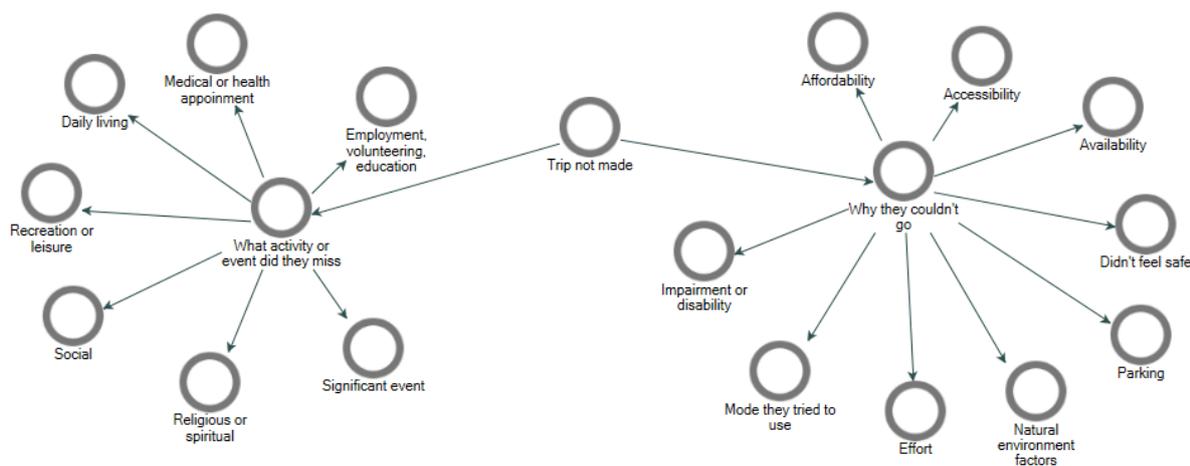
Source: Study team

Image description: A bubble map showing the links between codes (themes) and child codes (sub-themes). The central bubble says 'trips not made', which branches to two child codes.

The first child code is 'what activity or event did they miss', with seven additional child codes: significant event; social; employment/volunteering/education; daily living; medical or health appointment; recreation or leisure; and religious or spiritual.

The second child code is 'why they couldn't go', with eight additional child codes: accessibility; availability; effort; natural environment factors; parking; impairment or disability; didn't feel safe; and affordability.

Context is important to the answers to these questions, largely due to the complexity of the barriers in the transport system, which interact to prevent journeys or make them difficult. For this reason, we undertook manual coding of answers to ensure the whole meaning and complexity of answers were captured. This also meant that multiple codes were allocated to each response. For example, the following response was coded to 'taxi', 'affordability', 'train' and 'availability' to reflect the fact that barriers to accessing multiple modes interacted to ensure the trip could not occur.

> 'I could not visit my daughter for our weekly catch up. Mobility taxi vans are too expensive and my powered wheelchair does not travel more than 10 km on a charge. Trains weren't running on the western line.'

4.1.3   Descriptive analyses of workshop data

Insights from the workshops were summarised and, where relevant, combined with the data from the open-field data analysis from the survey of disabled people.

Findings from the service provider workshops were summarised and described, without any specific qualitative analysis. This was because the breadth of issues and brief nature of the workshops meant that the insights could be reported as described by participants.

4.1.4   Analysis of people's transport experiences during lockdown

As a somewhat distinct study that included disabled and non-disabled people's experiences, the methods, results, and sample sizes are reported together in this section. Descriptive statistics comparing disabled and non-disabled people's experiences of transport during lockdown were presented in graphs and analysed with

Chi-squared tests of independence. Individual comments related to transport challenges were listed and grouped by trip purpose. Further issues that were described in phone interviews were then described.

4.2 Differences between groups: quantitative survey data about disabled people's experiences of transport

4.2.1 Our sample: demographic profile of our respondents

There were 15,102 respondents to our survey across its different formats, of whom 1,211 completed some or all of the demographic questions. Summary statistics about those who completed the demographic questions are presented in Table 4.1.

Table 4.1 Summary statistics of survey respondents

Question	Response options	Number of respondents	Percentage of respondents
What region do you live in?	☐ Northland	53	4.7%
	☐ Auckland	316	27.8%
	☐ Waikato	160	14.1%
	☐ Bay of Plenty	104	9.2%
	☐ Gisborne	8	0.7%
	☐ Hawke's Bay	47	4.1%
	☐ Taranaki	28	2.5%
	☐ Manawatū-Whanganui	50	4.4%
	☐ Wellington	93	8.2%
	☐ Tasman	10	0.9%
	☐ Nelson	15	1.3%
	☐ Marlborough	19	1.7%
	☐ West Coast	11	1.0%
	☐ Canterbury	140	12.3%
	☐ Otago	59	5.2%
	☐ Southland	23	2.0%
Do you live in a city, a town, or a rural area? Select one answer.	☐ City	706	60.6%
	☐ Town	287	24.6%
	☐ Rural area	172	14.8%
Please enter your age.	☐ <10	12	1.2%
	☐ 10–19	9	0.9%
	☐ 20–29	13	1.3%
	☐ 30–39	18	1.8%
	☐ 40–49	26	2.6%
	☐ 50–59	68	6.7%
	☐ 60–69	174	17.2%
	☐ 70–79	384	37.9%
	☐ 80–89	269	26.5%
	☐ >90	41	4.0%

Question	Response options	Number of respondents	Percentage of respondents
What is your ethnicity? Tick as many as apply to you.	☐ NZ European	1,033	n/a: respondents could select more than one ethnicity
	☐ Māori	100	
	☐ Samoan	8	
	☐ Cook Islands Māori	5	
	☐ Tongan	5	
	☐ Niuean	1	
	☐ Chinese	14	
	☐ Indian	6	
	☐ Other (please specify)	85	
What is your annual personal income?	☐ $0–$10,000	95	9.6%
	☐ $10,001–$20,000	281	28.3%
	☐ $20,001–$30,000	321	32.3%
	☐ $30,001–$40,000	112	11.3%
	☐ $40,001–$50,000	60	6.0%
	☐ $50,001–$60,000	42	4.2%
	☐ $60,001–$70,000	18	1.8%
	☐ $70,001–$80,000	21	2.1%
	☐ $80,001–$90,000	10	1.0%
	☐ $90,001–$100,000	17	1.7%
	☐ More than $100,000	16	1.6%
Do you have difficulty seeing, even if wearing glasses?	☐ No difficulty	688	60.4%
	☐ Some difficulty	404	35.4%
	☐ A lot of difficulty	48	4.2%
	☐ Cannot do at all	6	0.5%
Do you have difficulty hearing, even if using a hearing aid?	☐ No difficulty	661	58.0%
	☐ Some difficulty	392	34.4%
	☐ A lot of difficulty	82	7.2%
	☐ Cannot do at all	5	0.4%
Do you have difficulty with walking or climbing steps?	☐ No difficulty	32	2.7%
	☐ Some difficulty	484	41.5%
	☐ A lot of difficulty	526	45.1%
	☐ Cannot do at all	125	10.7%
Do you have difficulty with remembering or concentrating?	☐ No difficulty	650	55.7%
	☐ Some difficulty	433	37.1%
	☐ A lot of difficulty	75	6.4%
	☐ Cannot do at all	10	0.9%
Do you have difficulty with communicating using your usual language; for example, understanding or being understood by others?	☐ No difficulty	942	80.6%
	☐ Some difficulty	168	14.4%
	☐ A lot of difficulty	44	3.8%
	☐ Cannot do at all	15	1.3%

4.2.2 Disabled people's experiences of transport: differences between groups

Our sample was not representative of disabled people as a whole, so summary statistics about the average response is not necessarily helpful. Rather, comparisons between groups within our sample in terms of how often people do and do not travel by different modes is summarised here. Responses for numbers of trips per week, likelihood to travel more often with Total Mobility if it were cheaper or more convenient, and likelihood to report a trip not made due to a transport challenge are compared for different demographic groups.

We analysed responses with Chi-squared tests. More sophisticated analyses such as regression and factor analysis were investigated but not practical due to collinearity across the data, and relatively small numbers of responses within smaller demographic groups of interest.

Only significant differences are reported. In this section we do not report responses as percentages of total respondents (as we have done in other sections) because of the variations in the number of people who responded to each question. The percentages are not necessarily indicative of people's concerns or experiences as a whole, so only the most relevant data is described.

4.2.2.1 Trips in a typical week by public transport and Total Mobility

In terms of numbers of trips per week, the most common response across all transport modes was zero trips. Therefore, proportions of responses between different demographic groups compare the proportions reporting either zero trips or one or more trips. Results in Figures 4.2 and 4.3 show that there were significant differences by region and by place for number of trips per week by public transport.

- Respondents in Wellington were most likely to report a trip by public transport in a typical week.

- Respondents in Waikato and other regions were least likely to report a public transport trip in a typical week (X^2 (4, $N = 1,014$) = 44.892, $p < .001$).

- Unsurprisingly, respondents living in cities were more likely than those living in towns or rural areas to report one or more public transport trips in a typical week (X^2 (2, $N = 1,039$) = 14.232, $p = .001$).

- Additionally, respondents aged less than 70 years were more likely than older respondents to report at least one trip using Total Mobility in a typical week (X^2 (1, $N = 233$) = 4.112, $p = .043$).

- Overall, these results show that disabled people in our survey were unlikely to use public transport at all in a typical week. Differences between regions, and between cities, towns and rural areas, are likely due to the different amount and quality of public transport in different locations.

Figure 4.2   Disabled people's reported number of trips per week by public transport, by region

Image description: A simple bar graph showing the number of trips taken per week by disabled people using public transport, separated by region. The *y*-axis shows the number of respondents. The *x*-axis is labelled with five regions: Auckland, Wellington, Waikato, Canterbury, and 'other region'. Each region has two bars: one representing one or more trips by public transport, and one representing zero trips. The graph shows that in Auckland, 41 people made one or more trips, and 242 made zero trips. In Wellington, 19 people made one or more trips, and 67 made zero trips. In Waikato, 2 people made one or more trips, and 144 made zero trips. In Canterbury, 12 people made one or more trips, and 115 made zero trips. In other regions, 19 people made one or more trips, and 353 made zero trips.

Figure 4.3   Disabled people's reported number of trips per week by public transport, by place

Image description: A simple bar graph showing the number of trips per week taken by disabled people using public transport, separated by place. The *y*-axis shows the number of respondents. The *x*-axis is labelled with three places: city, town, and rural area. Each place has two bars: one representing one or more trips by public transport, and one representing zero trips. The graph shows that in cities, 74 people made one or more trips, and 560 made zero trips. In towns, 21 people made one or more trips, and 229 made zero trips. In rural areas, 3 people made one or more trips, and 152 made zero trips.

Figure 4.4   Disabled people's reported number of trips per week using Total Mobility, by age group

Image description: A simple bar graph showing the number of trips taken per week by disabled people using Total Mobility, separated by age group. The *y*-axis shows the number of respondents. The *x*-axis is labelled with two age groups: less than 70 years, and 70 years and older. Each age group has two bars: one representing one or more trips using Total Mobility, and one representing zero trips. The graph shows that for people aged under 70, 33 made one or more trips, and 44 made zero trips. For people aged 70 or older, 46 made one or more trips, and 110 made zero trips.

4.2.2.2   Trips in a typical week by walking, including with a mobility aid

The only differences in amount of walking per week were related to age and stated impairment. Figures 4.5 to 4.7 show the following results:

- Respondents aged less than 70 years were more likely than those aged 70+ to report at least one walking trip for transport in a typical week (X^2 (1, $N = 986$) = 3.885, $p = .049$).

- Respondents with no or only some difficulty seeing were more likely to walk at least once for exercise in a typical week, compared to those with a lot of difficulty seeing or who could not see at all (X^2 (1, $N = 1,052$) = 5.243, $p = .022$).

- Respondents who have a lot of difficulty walking or cannot walk at all were less likely than those with no or some difficulty walking to report a walking trip for exercise (including with a mobility aid) in a typical week (X^2 (1, $N = 1,070$) = 9.614, $p = .002$).

Interestingly, however, those with the most difficulty walking were no less likely to report walking for transport than other disabled people ($p = .954$). People aged less than 70 years are typically more active in general than older people, including being more likely to work, which may explain some of the difference in trip-making.

Figure 4.5   Disabled people's reported number of trips per week by walking for transport (including with a mobility aid), by age group
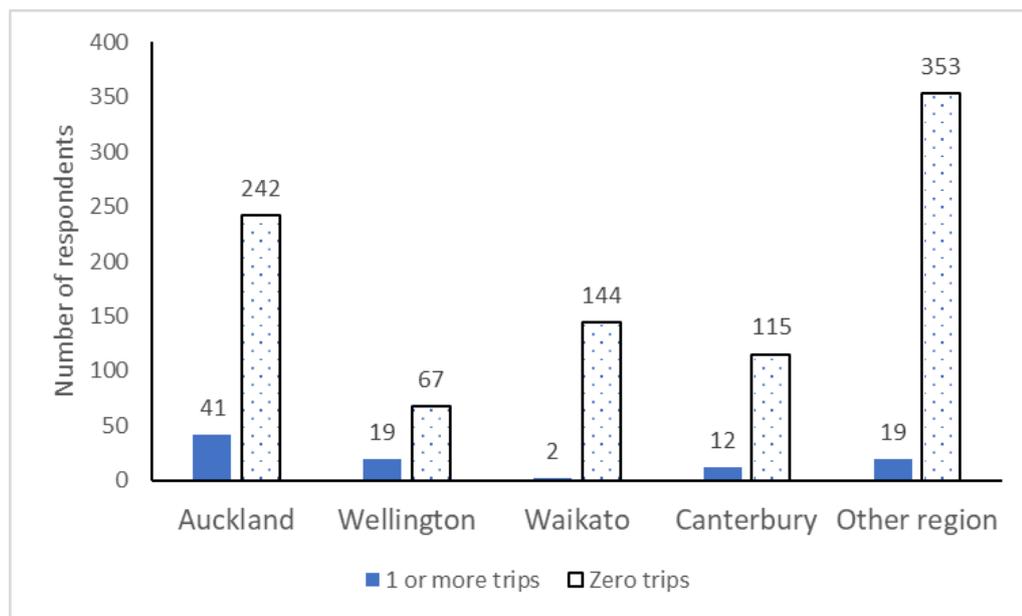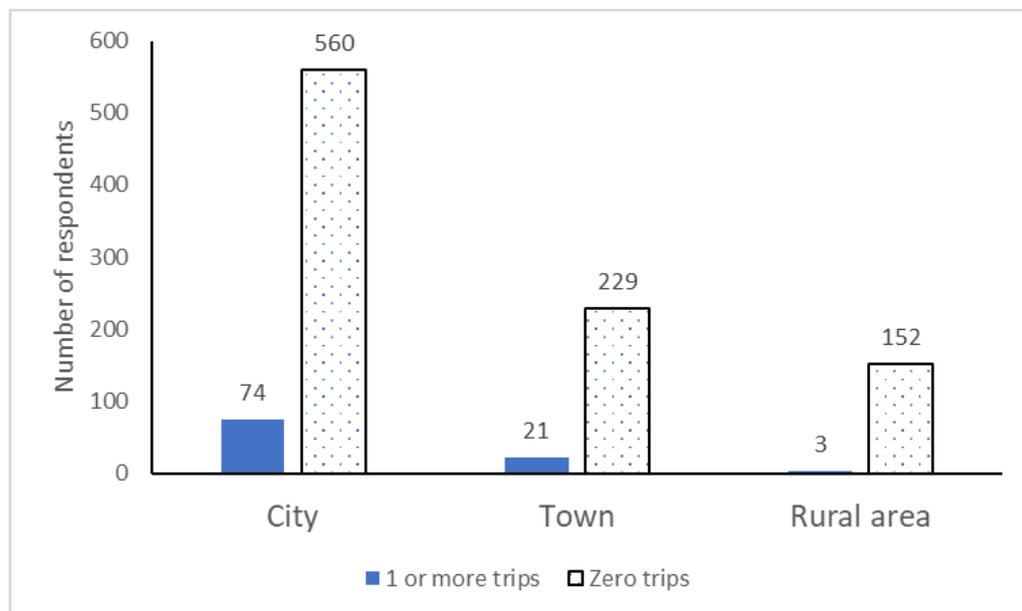

Image description: A simple bar graph showing the number of trips taken per week by disabled people by walking for transport, separated by age group. The *y*-axis shows the number of respondents. The *x*-axis is labelled with two age groups: less than 70 years, and 70 years and older. Each age group has two bars: one representing one or more trips, and one representing zero trips. The graph shows that for people aged under 70, 161 made one or more trips, and 186 made zero trips. For people aged 70 or older, 225 made one or more trips, 384 made zero trips.

Figure 4.6   Disabled people's reported number of trips per week by walking for exercise, by stated difficulty seeing

Image description: A simple bar graph showing the number of trips taken per week by disabled people by walking for exercise, separated by stated difficulty seeing. The *y*-axis shows the number of respondents. The *x*-axis is labelled with two groups: 'seeing: a lot of difficulty or cannot do at all', and 'seeing: no or some difficulty'. Each group has two bars: one representing one or more trips, and one representing zero trips. The graph shows that for people who have a lot of difficulty seeing or who cannot see at all, 29 made one or more trips by walking, and 23 made zero trips. For people who have no or some difficulty seeing, 707 made one or more trips, and 293 made zero trips.

Figure 4.7 **Disabled people's reported number of trips per week by walking for exercise (including with a mobility aid), by stated difficulty walking (including with a mobility aid)**

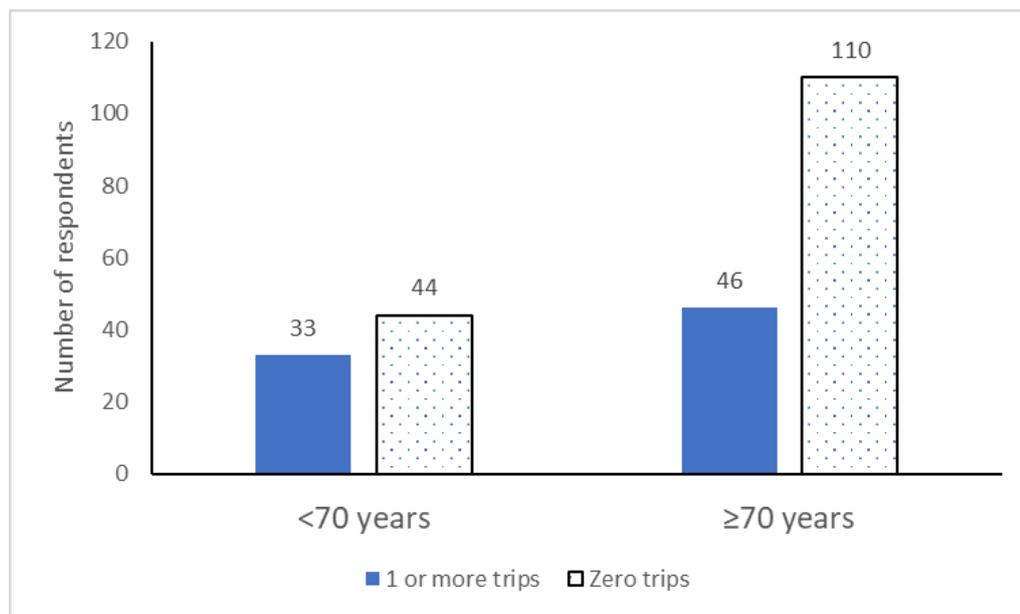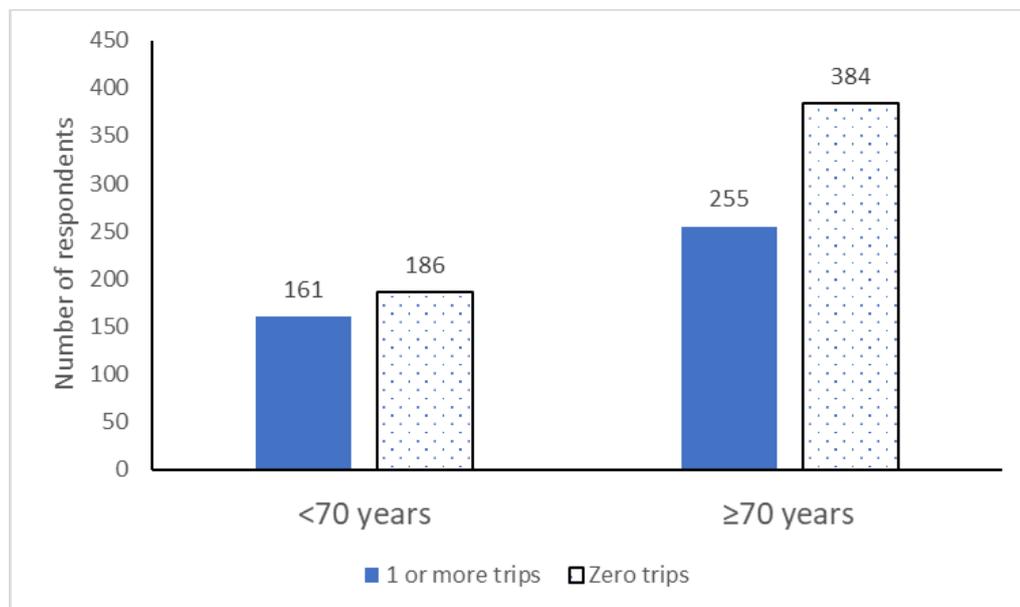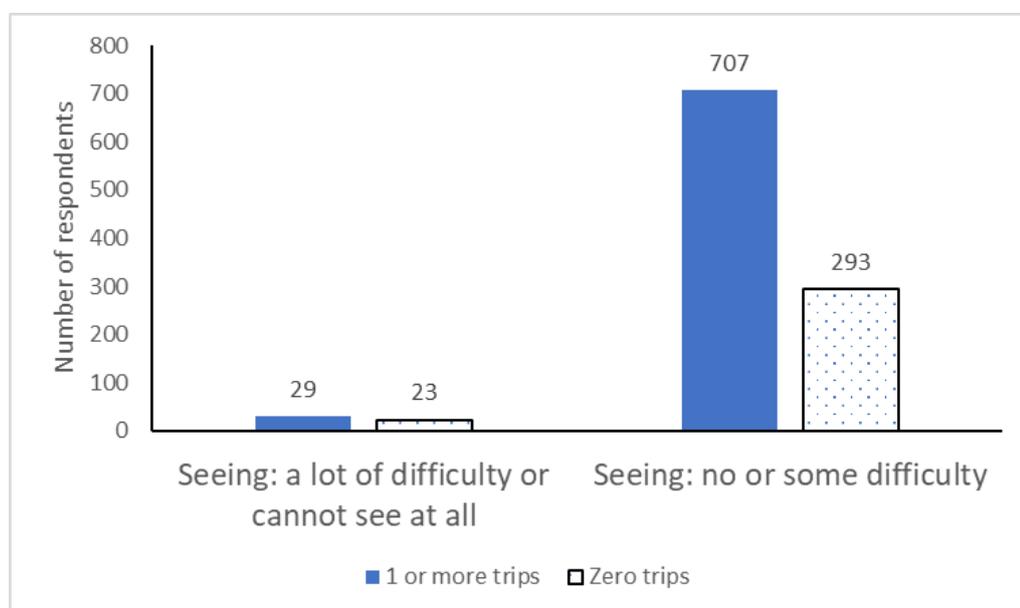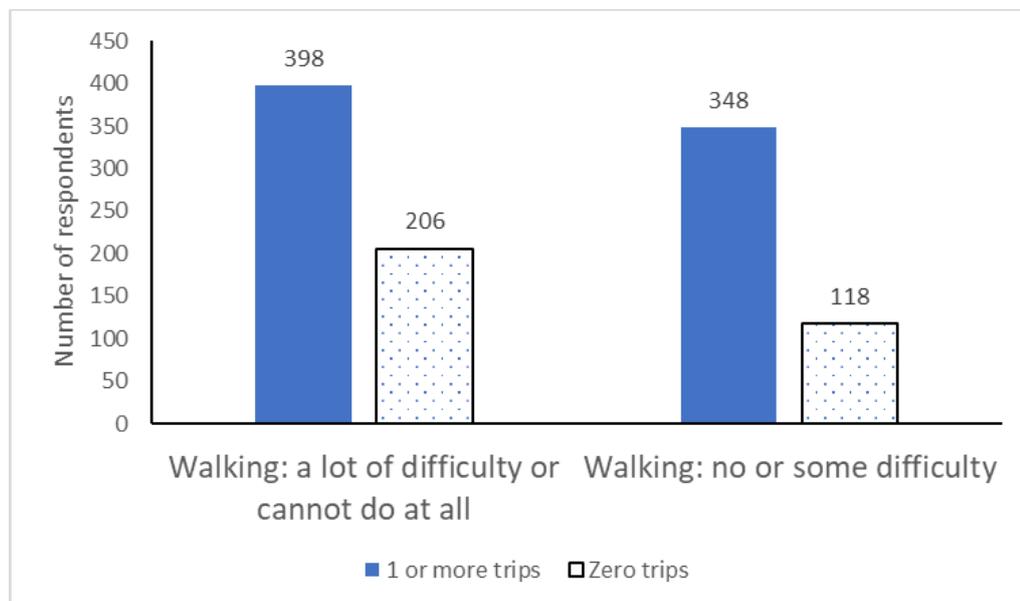**Image description:** A simple bar graph showing the number of trips taken per week by disabled people by walking for exercise, separated by stated difficulty walking. The *y*-axis shows the number of respondents. The *x*-axis is labelled with two groups: 'walking: a lot of difficulty or cannot do at all', and 'walking: no or some difficulty'. Each group has two bars: one representing one or more trips, and one representing zero trips. The graph shows that for people who have a lot of difficulty walking or who cannot walk at all, 398 made one or more trips, and 206 made zero trips. For people who have no or some difficulty walking, 348 made one or more trips, and 118 made zero trips.

4.2.2.3 Likelihood to use Total Mobility more if it were cheaper or more convenient

There were several differences between demographic groups in terms of their stated likelihood to 'use Total Mobility more often if it were cheaper'. Figures 4.8 to 4.13 show the following results:

- Those living in Auckland and Wellington were more likely than those in other regions to say they would use it more often if it were cheaper (X^2 (4, $N = 212$) = 10.522, $p = .032$). This result may reflect the longer trip distances possible within the city boundaries of Auckland and Wellington, resulting in some more expensive trips for residents there.

- Those living in cities and towns were also more likely to say that they would use Total Mobility more often if it were cheaper, than those in rural areas (X^2 (2, $N = 220$) = 9.903, $p = .007$).

- People aged less than 70 years (X^2 (1, $N = 215$) = 14.015, $p < .001$) and those who have the most difficulty walking (X^2 (1, $N = 228$) = 3.491, $p = .062$) were also more likely to use Total Mobility more often if it were cheaper. These results may reflect the greater number of trips overall for people aged less than 70 years, and the heavier reliance on Total Mobility for people who have the most difficulty walking (compared with, for example, using public transport).

- Those most likely to report more use of Total Mobility if it were more convenient lived in cities and towns rather than in rural areas (X^2 (2, $N = 215$) = 7.144, $p = .028$) and were aged under 70 years (X^2 (1, $N = 210$) = 21.361, $p < .001$).

Figure 4.8   Disabled people's likelihood to use Total Mobility (TM) more often if it were cheaper, by region

Image description: A simple bar graph showing disabled people's likelihood to use Total Mobility (TM) more often if it were cheaper, separated by region. The *y*-axis shows the number of respondents. The *x*-axis is labelled with five regions: Auckland, Wellington, Waikato, Canterbury, and 'other region'. Each region has two bars: one representing 'yes, would use TM more often if it were cheaper', and one representing 'no, would not use TM more often if it were cheaper'. The graph shows that in Auckland, 34 people answered yes, and 31 answered no. In Wellington, 21 people answered yes, and 10 answered no. In Waikato, 6 people answered yes, and 11 answered no. In Canterbury, 14 people answered yes, and 18 answered no. In other regions, 24 people answered yes, and 43 answered no.

Figure 4.9   Disabled people's likelihood to use Total Mobility more often if it were cheaper, by place

Image description: A simple bar graph showing disabled people's likelihood to use Total Mobility more often if it were cheaper, separated by place. The *y*-axis shows the number of respondents. The *x*-axis has three labels: city, town, and rural area. Each place has two bars: one representing 'yes, would use TM more often if it were cheaper', and one representing 'no, would not use TM more often if it were cheaper'. The graph shows that in cities, 75 people answered yes, and 75 people answered no. In towns, 24 people answered yes, and 22 people answered no. In rural areas, 4 people answered yes, and 20 people answered no.

Figure 4.10   Disabled people's likelihood to use Total Mobility more often if it were cheaper, by age group
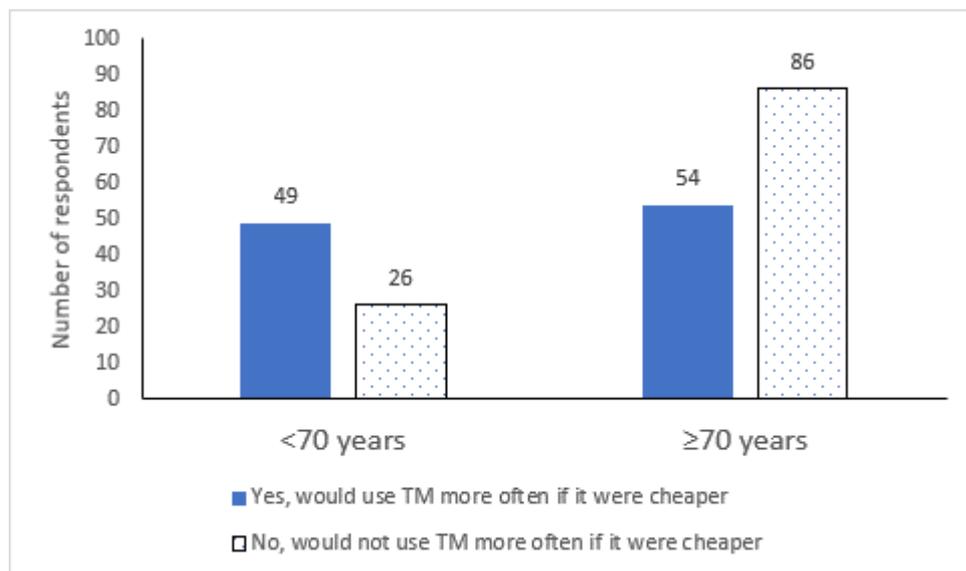
Image description: A simple bar graph showing disabled people's likelihood to use Total Mobility more often if it were cheaper, separated by age group. The y-axis shows the number of respondents. The x-axis is labelled with two age groups: less than 70 years, and 70 years and older. Each age group has two bars: one representing 'yes, would use TM more often if it were cheaper', and one representing 'no, would not use TM more often if it were cheaper'. The graph shows that for people aged under 70, 49 answered yes, and 26 answered no. For people aged 70 or older, 54 answered yes, and 86 answered no.

Figure 4.11   Disabled people's likelihood to use Total Mobility more often if it were cheaper, by stated difficulty walking
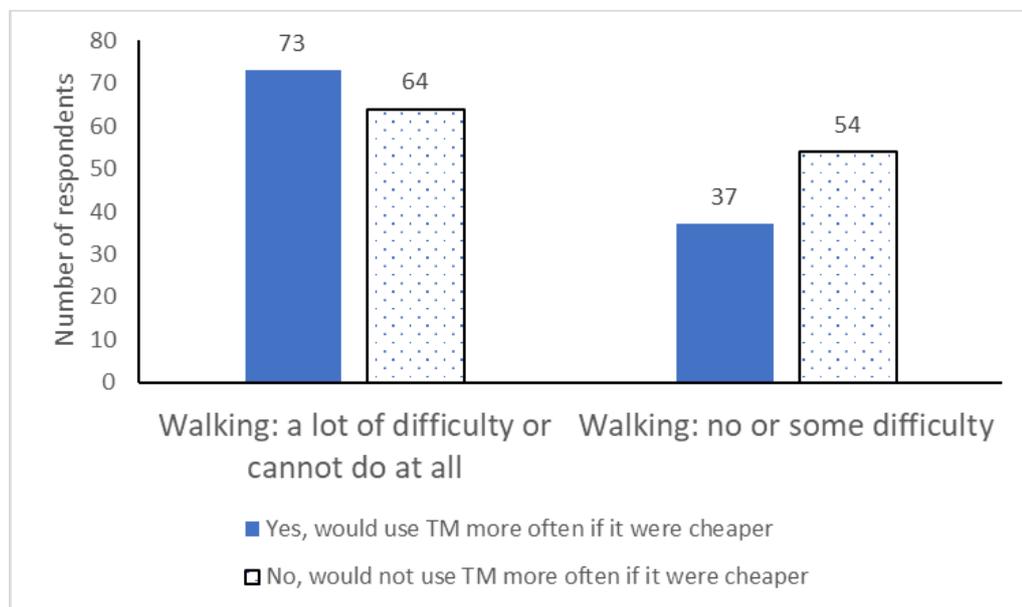
Image description: A simple bar graph showing disabled people's likelihood to use Total Mobility more often if it were cheaper, separated by stated difficulty walking. The y-axis shows the number of respondents. The x-axis is labelled with two groups, 'walking: a lot of difficulty or cannot do at all' and 'walking: no or some difficulty'. Each group has a bar representing one or more trips by walking, and a bar representing zero trips. The graph shows that for people who have a lot of difficulty walking or who cannot walk at all, 73 answered yes, and 64 answered no. For people who have no or some difficulty walking, 37 answered yes, and 54 answered no.

Figure 4.12   Disabled people's likelihood to use Total Mobility more often if it were more convenient, by place
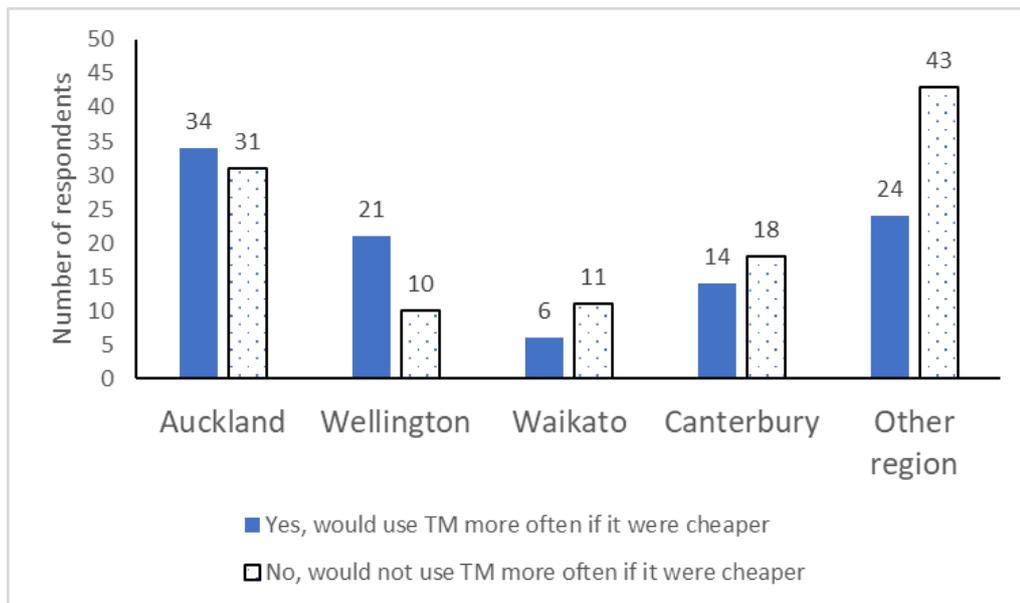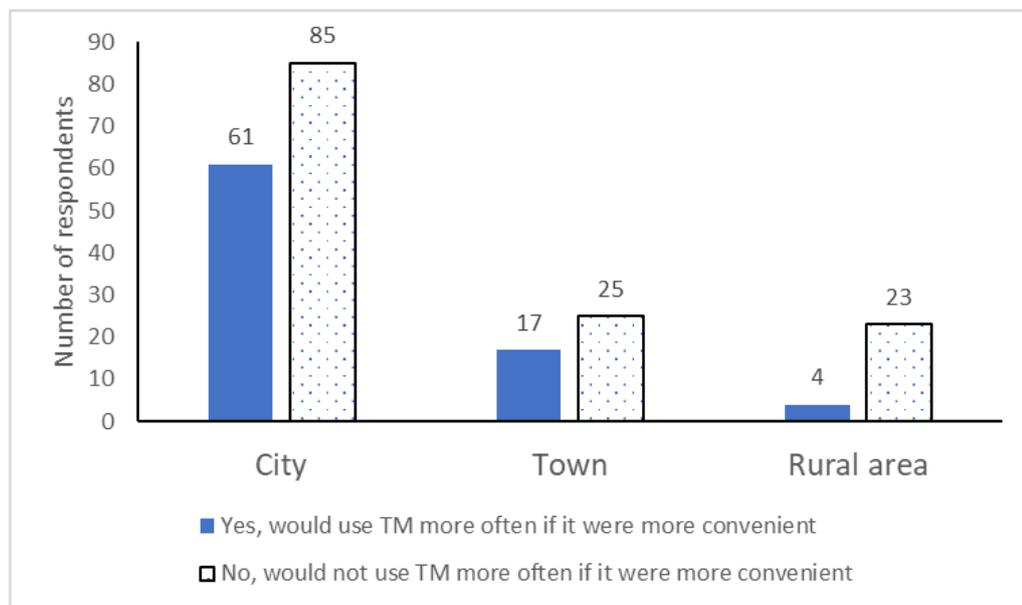

Image description: A simple bar graph showing disabled people's likelihood to use Total Mobility more often if it were more convenient, separated by place. The *y*-axis shows the number of respondents. The *x*-axis has three labels: city, town, and rural area. Each place has two bars: one representing 'yes, would use TM more often if it were more convenient', and one representing 'no, would not use TM more often if it were more convenient'. The graph shows that in cities, 61 people answered yes, and 85 people answered no. In towns, 17 people answered yes, and 25 people answered no. In rural areas, 4 people answered yes, and 23 people answered no.

Figure 4.13   Disabled people's likelihood to use Total Mobility more often if it were more convenient, by age group
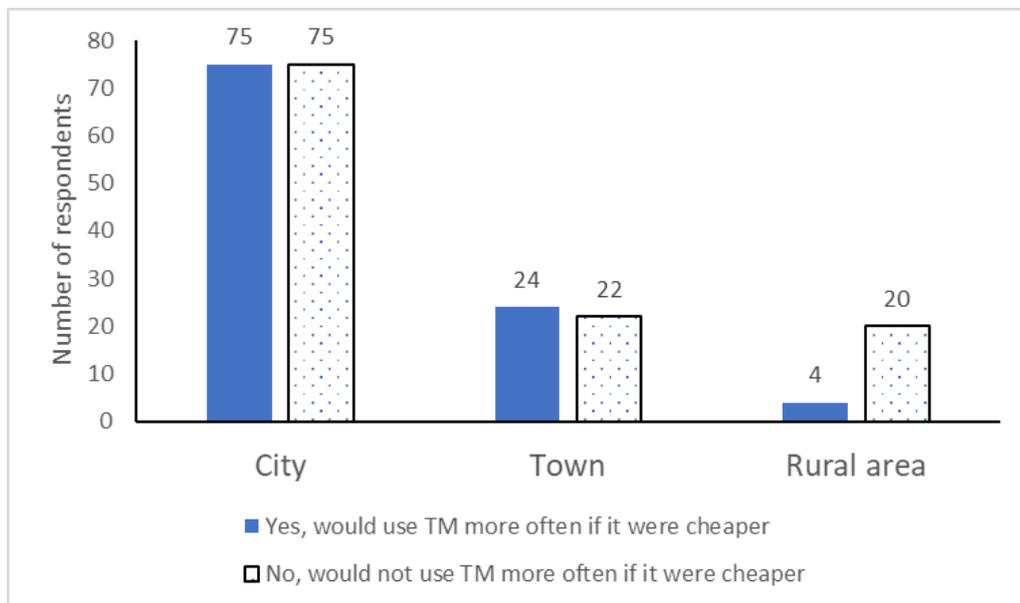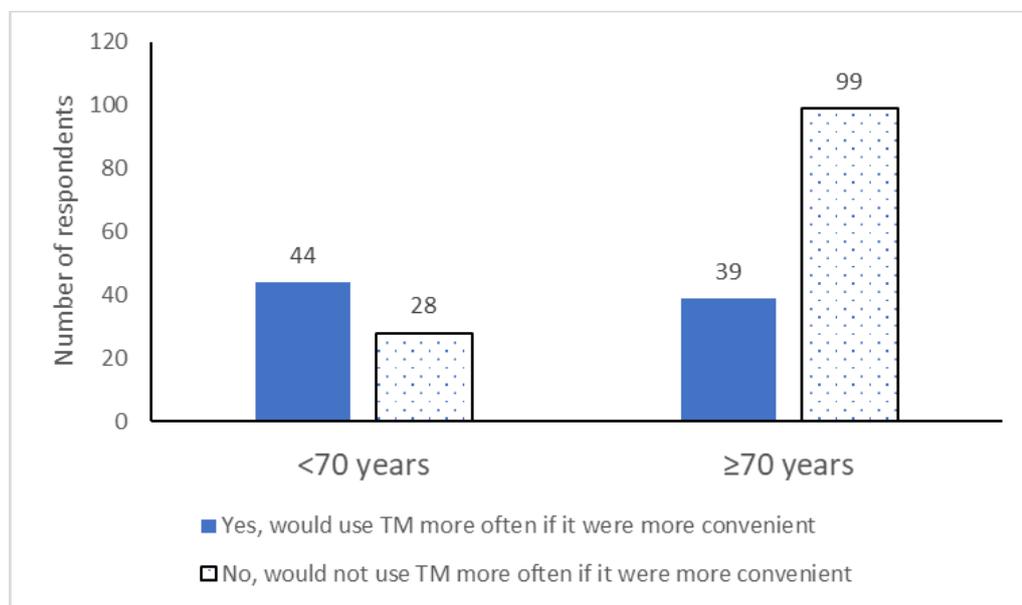

Image description: A simple bar graph showing disabled people's likelihood to use Total Mobility more often if it were more convenient, separated by age group. The *y*-axis shows the number of respondents. The *x*-axis is labelled with two age groups: less than 70 years, and 70 years and older. Each age group has two bars: one representing 'yes, would use TM more often if it were more convenient', and one representing 'no, would not use TM more often if it were more convenient'. The graph shows that for people aged under 70, 44 answered yes, and 28 answered no. For people aged 70 or older, 39 answered yes, and 99 answered no.

4.2.2.4 Likelihood to report a trip not made in the past week

Figures 4.14 to 4.17 show the following results:

- By region, those in Wellington (33%) and Auckland (29%) were most likely to report a trip not made in the previous week due to a transport problem making it too difficult. Respondents in Waikato (16%) were least likely to report a trip not made (X^2 (4, $N = 1,019$) = 10.197, $p = .037$).

- Respondents aged less than 70 years were more likely than those aged 70+ to report a trip not made (X^2 (1, $N = 1,003$) = 13.548, $p < .001$).

- Ethnicities other than New Zealand European were more likely to report a trip not made (32%, compared to 24% for New Zealand European; X^2 (1, $N = 1,064$) = 5.154, $p = .023$).

- Respondents who have a lot of difficulty walking or cannot walk at all were more likely than those who have no or some difficulty walking to report a trip not made in the previous week (35%, compared to 15% of those with no or some difficulty walking; X^2 (1, $N = 1,045$) = 53.226, $p = < .001$).

Figure 4.14 Disabled people's likelihood to report a trip not made in the previous week due to a transport difficulty, by region

Image description: A simple bar graph showing rates of trips not made by disabled people in the previous week due to a transport difficulty, separated by region. The *y*-axis shows the number of respondents. The *x*-axis is labelled with five regions: Auckland, Wellington, Waikato, Canterbury, and 'other region'. Each region has two bars: one representing people who reported a trip not made, and one representing people who did not report a trip not made (ie, they were able to make all the trips they wanted to). The graph shows that in Auckland, 83 people reported a trip not made, and 200 did not report a trip not made. In Wellington, 27 people reported a trip not made, and 55 did not report a trip not made. In Waikato, 22 people reported a trip not made, and 112 did not report a trip not made. In Canterbury, 35 people reported a trip not made, and 97 did not report a trip not made. In other regions, 98 people reported a trip not made, and 290 did not report a trip not made.

Figure 4.15   Disabled people's likelihood to report a trip not made in the previous week due to a transport difficulty, by age group
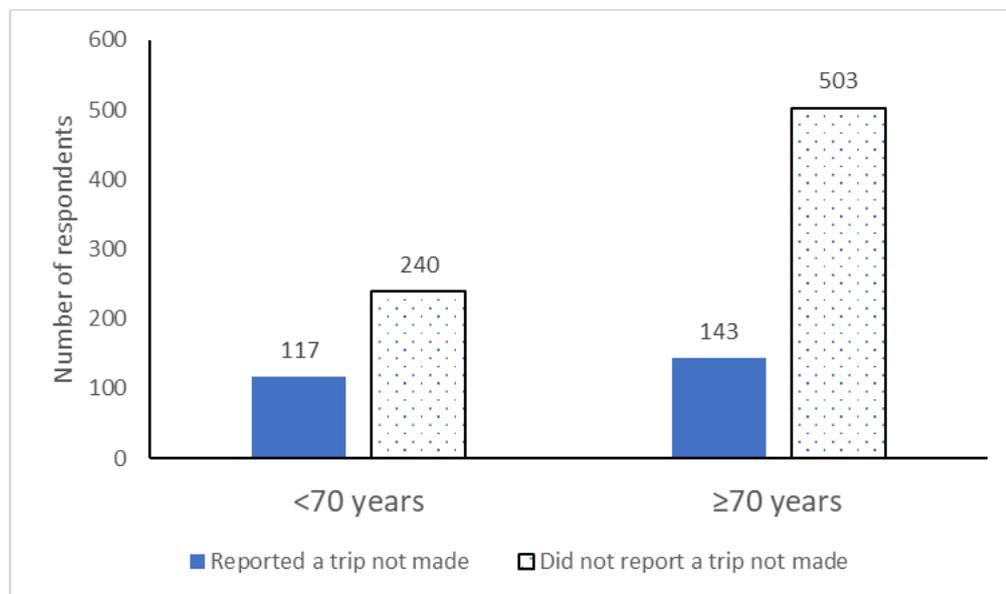
Image description: A simple bar graph showing rates of trips not made by disabled people in the previous week due to a transport difficulty, separated by age group. The *y*-axis shows the number of respondents. The *x*-axis is labelled with two age groups: less than 70 years, and 70 years and older. Each region has two bars: one representing people who reported a trip not made, and one representing people who did not report a trip not made (ie, they were able to make all the trips they wanted to). The graph shows that for people aged under 70, 117 answered yes, and 240 answered no. For people aged 70 or older, 143 answered yes, and 503 answered no.

Figure 4.16   Disabled people's likelihood to report a trip not made in the previous week due to a transport difficulty, by ethnicity
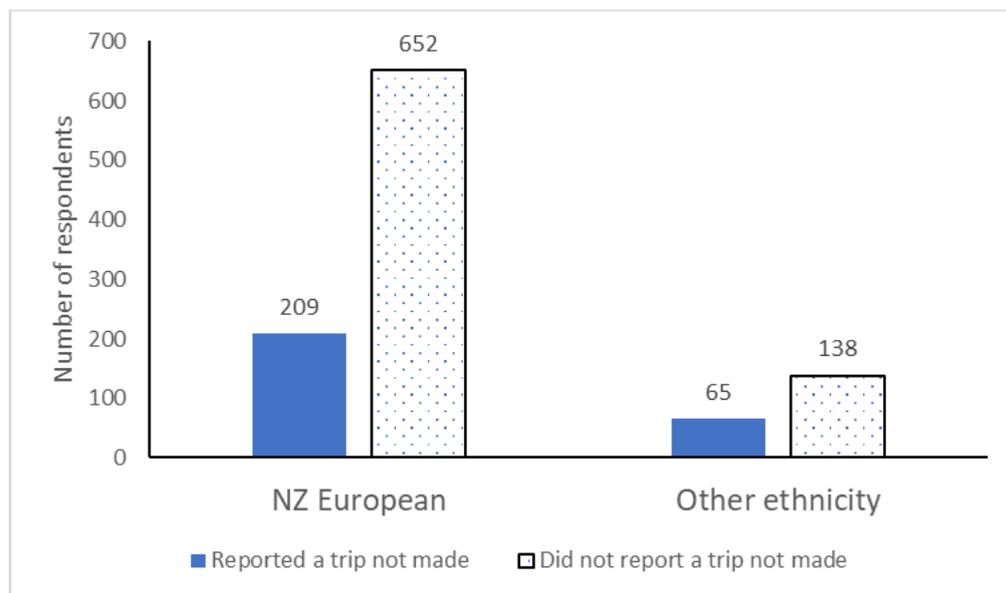
Image description: A simple bar graph showing rates of trip not made by disabled people in the previous week due to a transport difficulty, separated by ethnicity. The *y*-axis shows the number of respondents. The *x*-axis shows two ethnic groupings: New Zealand European and other ethnicity. Each ethnic grouping has two bars: one representing people who reported a trip not made, and one representing people who did not report a trip not made (ie, they were able to make all the trips they wanted to). The graph shows that for people identifying as NZ European, 209 reported a trip not made, and 652 did not report a trip not made. For people identifying with another ethnicity, 65 reported a trip not made, and 138 did not report a trip not made.

Figure 4.17 Disabled people's likelihood to report a trip not made in the previous week due to a transport difficulty, by stated difficulty walking
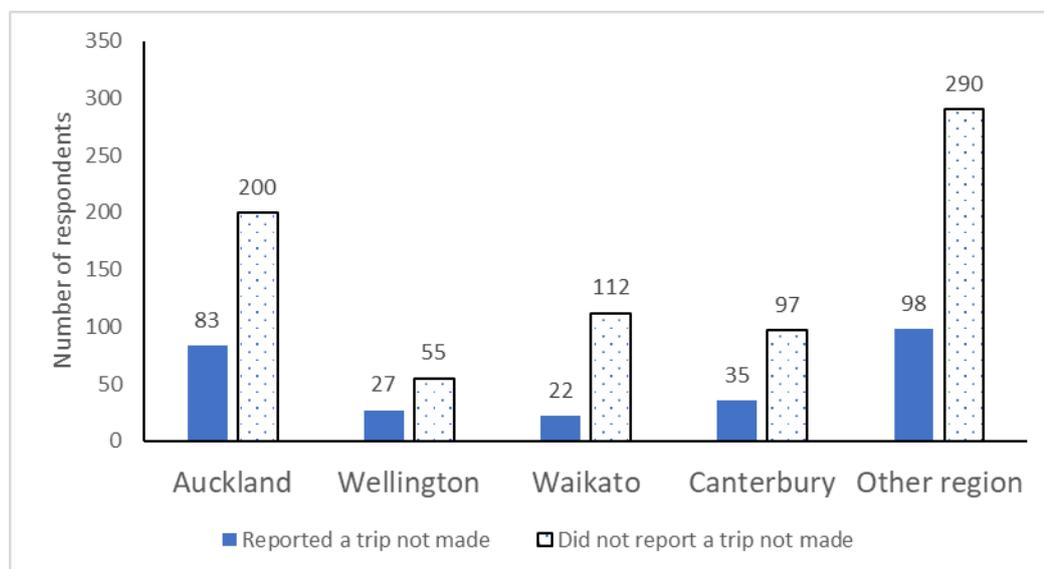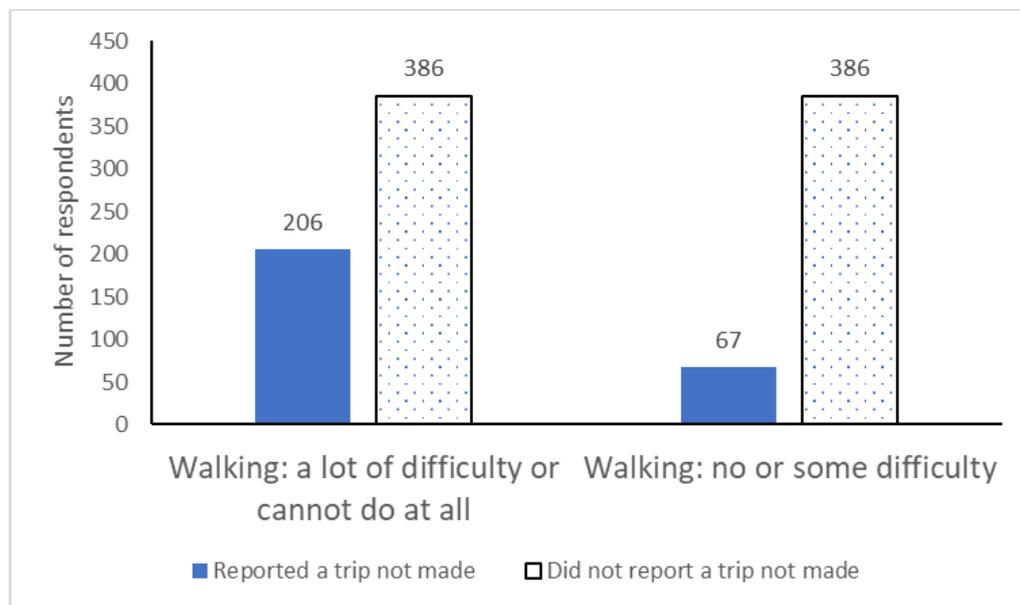

Image description: A simple bar graph showing rates of trip not made in the previous week due to a transport difficulty, separated by stated difficulty walking. The *y*-axis shows the number of respondents. The *x*-axis is labelled with two groups: 'walking: a lot of difficulty or cannot do at all' and 'walking: no or some difficulty'. Each group has two bars: one representing people who reported a trip not made, and one representing people who did not report a trip not made (ie, they were able to make all the trips they wanted to). The graph shows that for people who have a lot of difficulty walking or who cannot walk at all, 206 reported a trip not made, and 386 did not report a trip not made. For people who have some or no difficulty walking, 67 reported a trip not made, and 386 people did not report a trip not made.

4.3   Disabled people's stories about transport: qualitative insights

The workshops with disabled people and their answers to open-field questions in the survey provide valuable insights into the current state of transport for disabled people. The analysis includes open-field comments from the 15,102 survey responses, and inputs from the 115 workshop respondents, combined. The following sections group similar experiences together and examine those most common. Where a similar experience was mentioned more than 100 times, the number of mentions is included in brackets to highlight its extensiveness.

The findings are reported under eight main themes, summarised in Table 4.2. First, we explore themes related to Total Mobility, including what people like about it and the improvements they would make to the cost. We then explore the trips people have been unable to make, before discussing the challenges and advantages of particular modes of transport: buses, trains, active modes and private cars. We also include a section on the challenges and advantages of car parking. The final theme is broader and concerns city centre planning, transport sector responses to climate change, and perceptions of disabled people held by transport planners and other passengers.

Table 4.2   Summary of key themes and insights

Theme	Insights
Total Mobility	• The scheme helps people to meet their needs independently. • For some respondents, a 50% subsidy made transport affordable. For others, the current subsidy with the cap was still unaffordable. • The availability of Total Mobility taxis could be improved at certain times of the day and be expanded to more locations. Rideshare could be included. • There is a lack of regional consistency, which makes the scheme difficult to use while travelling. • Simple fixes could be made to the administration of the scheme to make it easier to access.
Trips not made	• Multiple barriers work together to prevent people from making trips. • The most commonly missed types of trips are recreation and leisure, and daily needs. • Problems with parking were the most commonly mentioned reason for not being able to take a trip, followed by problems with accessibility of footpaths and public transport. • The availability and affordability of transport were also commonly mentioned reasons for not making a trip.
Challenges using buses	• A lack of available bus services was the most common challenge mentioned by respondents. Buses were either not provided, not close enough to walk to, or too inconvenient to catch. • Issues with the accessibility of buses, and the attitudes of passengers and drivers, also prevent people from catching the bus.
Challenges using trains	• Trains tend to be more accessible than buses. • A lack of train services was the most common reason people would not catch the train.
Challenges related to walking, cycling, and e-scooters	• Pedestrians feel vulnerable on shared paths with bikes and e-scooters. • Problems with the footpath are the biggest barrier to people walking.
Advantages and challenges of private cars	• The freedom that comes with a personal vehicle is the biggest advantage of access to a private car. • The attitudes of other drivers were a challenge that made disabled drivers and pedestrians feel unsafe.
Benefits and challenges associated with carparking	• Mobility parking permits greatly improve accessibility for permit holders. • Use of mobility parks without permits needs much stronger enforcement. • Stigma of invisible disabilities exists, and public education on why someone might use a parking permit is needed.
Lack of inclusion in planning of sustainable cities and transport	• Disabled people fear they are being 'left behind' in planning for sustainable city centres. • Improving accessibility of public transport and active modes would enable disabled people to travel more sustainably. • Transport planners lack awareness of what it means to be disabled. This needs to change.

4.3.1 Total Mobility

This section explores the themes related to Total Mobility that arose in the workshops and survey of disabled people. The full list of questions asked in the survey of disabled people is included in Appendix A. The workshop questions are included in Appendix C. It includes things people think currently work well and possible improvements to the scheme.

4.3.1.1 The value of Total Mobility: what people like about it

When asked what participants liked about Total Mobility, the most common response provided (483 mentions) was appreciation in how the scheme allows people to meet their various needs with more independence.

Some respondents provided detailed descriptions of the types of trips they take using Total Mobility and the impact of being able to take those trips, for example:

> 'Gives me the ability to do essential house jobs such as shopping and medical and social. Keeps me from being isolated in the community.'

Other respondents emphasised that the scheme gives them a way to meet their daily needs without having to rely on friends or family. One respondent said:

> 'Being independent, not relying others to take me to doctors' appointments, visiting friends, shopping in another suburb, or just getting out and about.'

Some respondents described not using the scheme for daily needs but enjoying the peace of mind it provides in an emergency. Some of these respondents had used the scheme when their primary transport method had fallen through. Others reported using the scheme if they were stranded somewhere and needed an emergency ride, for example:

> 'The assurance in an emergency I can get reliable and responsible transport without any stress.'

Workshop participants also described benefits of Total Mobility. A number of broad benefits were apparent, including:

- the availability of door-to-door transport
- the quality-of-life improvements the scheme enabled
- the increased independence and freedom brought about by the scheme
- the ability to continue working
- generally being able to get out and about.

Workshop participants particularly praised the door-to-door nature of the scheme:

> 'I know a taxi will get as close to my destination without having to worry about parking my car a long distance away.'

> 'For some appointments (eg, hospital) I cannot be sure I will get a park so I tend to taxi.'

> 'The pick-up drop off at the place where I need to be, which I otherwise would not be able to visit.'

Many workshop participants told us that the Total Mobility scheme enabled them to overcome social isolation and participate in activities outside of their homes:

> 'Enables me to get out of my home and socialise.'

> 'It is crucial for trying to help limit the isolation a single person, living alone, experiences. I would be very lonely without this scheme.'

'If it was unavailable I would be unable to leave my house and participate in everyday activities so, it is important and needed.'

The increased freedom and independence the Total Mobility scheme enables was frequently mentioned by workshop participants:

'Freedom to go where I want when I want, I do not have access to public transport where I live.'

'I am independent and can go when I please and not have to rely on other people to take me.'

'The best thing is actually just having it, it's like a passport to the world outside of home.'

A number of workshop participants said that the Total Mobility scheme made it possible for them to continue working:

'It gets me to work.'

'It has allowed me to continue with paid employment due to difficulty with travelling by bus to work in morning and when employer imposed restrictions on staff using public transport during COVID-19 Alert Level 3 constraints.'

'When I am ill I can still get to mahi [work]. My employer appreciates that I utilise this option which keeps me able to continue my job but also doesn't cost them huge amounts to reimburse. It makes it easier for us with mobility issues to continue being productive members of society ... plus it gets us out of house so increases our mana but also gives us self respect to contribute.'

4.3.1.2 Affordability benefits and challenges

Cost, in terms of affordability, was a commonly discussed aspect of Total Mobility in responses to both the question about what people like best about Total Mobility (354 mentions) and the question about what changes could be made (265 mentions).

The subsidy was appreciated by many people because it allows them to travel more often than they would otherwise be able to afford. Many respondents described the difficulty they have in surviving on Supported Living Payments or working a small number of hours, so any discount they could access is helpful.

'I can get to places that I might not go to otherwise because of price.'

However, the respondents also noted there were a number of challenges with the subsidy in terms of value and disparity in the subsidy amount for regional respondents.

Insufficient subsidy amount

A significant number of respondents felt the scheme does not do enough to reduce the cost of travel for disabled people (265 mentions). There are multiple aspects to the scheme being unaffordable for many people. Disabled people tend to have low incomes, as shown in Table 4.1 in section 4.2.1. This means taxis, a relatively expensive mode of transport, are still out of budget, even when subsidised.

'Being on a supported living benefit, I can't afford food, let alone a taxi!'

'Cheaper, I appreciate 50 percent off, but being Differently Able comes with higher costs, most of us are on really low incomes so we struggle to afford necessary transport, we don't have the options that the general public have to cheap transport.'

'The cost is still prohibitive when compared to the cost of transportation for an able bodied person, especially given disability is often linked to low income or surviving on a benefit plus increased medical appointments etc.'

> 'I can only go out about three times a week, due to the combination of the price of taxis under the Total Mobility scheme, and the fact that buses and walking drain my health so drastically. I could do a lot more, go out more often, be active in my community, I could visit friends and family. I could, in short, have a life. If I could catch taxis to where I need to be. But I can't, because of the cost.'

Insufficient subsidy for people in regional areas

The level of subsidy and the cap were also discussed often, particularly by respondents who must travel reasonably long distances by taxi because they cannot access public transport. The regional subsidy caps mean that mid- and long-distance journeys are still very expensive, forcing people to either miss out on a trip or find some way to cover the cost.

The consistency of the regional caps was also discussed. Larger cities tend to have higher fare caps than small towns. Respondents called for a consistent nationwide cap. The cap was originally designed to account for more expensive taxi fares in large cities, but this is not necessarily fair. While taxi fares may be lower in small towns, people tend to have to travel further to meet their needs.

> 'It works very well locally (i.e. in my township) but needs much more subsidy to work between villages. In Kapiti that is vital if you don't live in Paraparaumu because too many services can only be reached in Paraparaumu.'

> 'As I live 45 mins away from my Mum it would be great if there was a bigger subsidy so Mum could come out to me.'

Workshop participants also cited cost, and making Total Mobility free for passengers was a common response to the workshop question 'What is one change you would make to Total Mobility?' Workshop participants' reasons for bringing up cost were similar to those mentioned by survey participants.

4.3.1.3 Improvements to availability

Improving the availability of Total Mobility was raised by multiple survey respondents and workshop participants. The suggested improvements fit into four broad categories: time, options, location, and rideshare.

Time of the day/night

Access to Total Mobility vehicles is difficult for people wanting to go out in the evenings. Many respondents reported difficulty in booking a taxi ride home in the evening, or later at night after going out for dinner or to a bar. Respondents also reported problems with booking accessible taxis during the mid-afternoon school pick-up run. The inability to book taxis at key times due to demand exceeding supply is causing people to miss out on trips. This limited availability also means people struggle to make spontaneous trips.

Limited options

The need to book ahead was compounded for some by the limited availability of wheelchair-accessible taxis, which has consequences beyond a trip not being made. Some of the trips respondents described carried extra stress that would not have been incurred if they had more convenient and reliable transport choices:

> 'After hours there are very few vans available, even for emergencies and we had to walk/roll home at night because there wasn't a mobility taxi available when our van was getting repaired.'

> 'More Mobility Vans available at weekends. ... I had to wait 2 hours past my booking time to transfer my terminally ill husband back to his palliative care accommodation.'

'More hoisted available – often I ring around taxis, Driving Miss Daisy and some private providers, days in advance and still there is no vehicle available. My life is limited by this.'

'Friends invited me out for dinner but could not find a taxi Van that would collect me at 10 pm – 10:30 pm ... was told latest that would have one on road was 7:30 pm ... grrr.'

Location

Total Mobility availability also varies by location. People in smaller towns and rural areas face challenges in accessing the scheme.

'I live rural so I don't qualify for [Total Mobility] but I work in town so it is crazy that I don't qualify for the scheme. It costs a fortune to catch taxis … I have more need for the [Total Mobility] subsidised transport yet can't access it!'

Extending mode – Rideshare

Extending the Total Mobility scheme to cover rideshare providers like Uber or Ola was raised by multiple survey respondents. Respondents reported that rideshare services tend to be cheaper than taxi services, even when discounted with Total Mobility. Being able to get a 50% discount on rideshare journeys would be more affordable for many people:

'I would like to be able to use them on Ubers. I'm a single parent beneficiary, and 50 percent off often is still more expensive than an Uber.'

4.3.1.4   Regional consistency

Many survey respondents and workshop participants raised issues of variation in the Total Mobility scheme around Aotearoa New Zealand, including inconsistencies relates to subsidies and fare caps, cards or vouchers, expiry dates, and being able to use the one card on all forms of public transport. Some concerns were related to the accessibility of the system itself, and consistency of that access, whereas others related to differences in Total Mobility in different regions. Comments included:

'Have a national consistent system in terms of subsidy.'

'Maybe the admin could be handled at national level. TM's got to keep up with national ticketing initiatives. It's not been reviewed in Auckland for over 10 years, so, when will TM adjustments keep up with travel cost?'

'It should be useable for payment across all public transports.'

'Do not expire the card, just because I am not using it. On the one occasion when I really needed it to get to my Medical Centre, the card had expired.'

'When will TM link/be on the same card as the AT HOP card and other similar cards across NZ?'

'I find it very challenging to fill in the vouchers. My hand writing is bad, and I get flustered, and feel like I am holding up the driver. I don't know how to fix this, but the embarrassment and stress mean I have only used a taxi in this scheme once, and I won't use it again.'

Workshop participants made some suggestions for additional features and uses for a nationally consistent Total Mobility scheme:

'It would be cool if it was able to be used like a card on your phone through barcode.'

'Could the Total Mobility AT Hop card be used for parking machines where Mobility parking is not available or limited ... (eg, Hospital parking)?'

'Being able to register with a particular taxi firm so that your details and preferences are automatically saved to your profile. On one occasion, a minivan turned up and I had to send it away because I am unable to pull myself up on a step and needed a normal taxi vehicle.'

'I would like to see the TM card accepted as a legal photo ID card.'

'The card should also work as a disability parking permit.'

'Use as proof of disability at places where a carer can get in for free with you, or you can get in for cheaper price.'

'It would be great if it were extended to air travel.'

'I would like a way to book a taxi through an app that I can use Total Mobility with that doesn't require having to talk to someone as I use Augmentative and Alternative communication and it's a lot harder to communicate over the phone.'

'Use for Uber trips which are far more convenient not having to mess around with cash and cards. Some taxi drivers say their machine is faulty and cannot take the Total Mobility. The Total Mobility card adds more time to the trip processing and paying the remainder of the fare; very inconvenient and time consuming, and taxi drivers get annoyed too.'

'There should be no difference to the cost of the ride whether paying cash or debit card.'

Issues about consistency related to a broader theme about confusion and lack of understanding about how transport services are planned for, managed, and operated in New Zealand. Many people do not know what the roles of different organisations are, who to ask for information about a specific transport service, and importantly, how to make a complaint.

4.3.1.5   Improving scheme administration

Many survey respondents had suggestions for ways to improve administration of the scheme that would make using it simpler. Common suggestions included:

- removing the surcharge for EFTPOS
- allowing Total Mobility cards to be swiped at the end of journeys if people forget before the journey starts
- enabling payWave on Total Mobility cards to support contactless payments for blind and vision impaired people
- introducing a nationally consistent payment system that does not rely on vouchers
- introducing a family card for families or households with more than one disabled member.

4.3.1.6   Improving information provision

The survey responses highlighted a need to improve the provision of information about Total Mobility to people who already use the scheme and potential members. Many respondents stated that they did not know what Total Mobility was, whether they were members, or how Total Mobility interacted with other schemes such as the Gold Card or Mobility Parking Permit.

'I don't know what the Total Mobility scheme is – I do have a mobility card for parking – is this the same?'

Many of the survey respondents assumed Total Mobility and mobility parking permits were the same thing, based on suggested changes to Total Mobility. Answers relating to monitoring and enforcement of mobility parks were really common, despite Total Mobility not relating to mobility parks. For example:

'Enforcement of parking offenders and more spaces available to people that need them please.'

Better information provision would also be helpful to people once they have been accepted into the Total Mobility scheme. Some respondents described difficulty in knowing how to use the scheme, while others just asked questions about the scheme in their answer.

Ongoing communication about changes to the scheme is also important. Over 75% of respondents reported not knowing that Total Mobility was fully subsidised during COVID-19 Alert Levels 3 and 4.

4.3.1.7   Level and quality of service

Many survey respondents commented on how accessible and convenient Total Mobility is compared to taking a bus or driving themselves and having to look for parking. In particular, companion driving services were described as providing a higher quality of service than taxis. Respondents appreciated the personal service and extra assistance provided by these types of services, including being escorted to and from the vehicle. In some cases, assistance makes trips possible:

> 'My mother uses Driving Miss Daisy for getting to appointments at the hospital as it offers a room-to-room service getting her where needed within the hospital campus. Very good service although still relatively expensive for pensioner. My mother will not use a 'normal' taxi service as she feels unsafe with a male driver and it only drops off at the front door of the hospital not escorted to required clinic.'

Others reported a different level of service from taxi drivers. While the service is less expensive, in some cases the service feels impersonal, and customers want more assistance than is offered. For example:

> 'Taxis offer a very impersonal service. Drivers mostly not aware of difficulties facing elderly most of whom are too proud and embarrassed, often in pain from e.g. arthritis who are still fighting for their independence to ask for help.'

This is not the case for all taxi drivers though, with many respondents having formed relationships with specific drivers who have come to know their needs.

> 'Having the mobility card for mum was awesome. She could go in the taxi there and back for club day and I didn't have to take her. We got to know the taxi driver well, and so we had a permanent booking with him, which made it easy. Plus the taxi man was fantastic with mum (almost 8 years). He even came to the funeral'.

A second recurring comment was a perception by respondents that taxi drivers are reluctant to take the short trips that many Total Mobility customers need to take. There is a perception that five-minute trips or trips within a suburb are not 'worth it' because the taxi driver then has the inconvenience of re-entering the queuing system after a less profitable trip. One respondent said:

> 'They [taxi drivers] don't like to come out if you just want to go to the local supermarket or Doctors saying it costs them more to come out than what they make from your trip, showing them the Total Mobility card would anger some drivers, I found it uncomfortable at times when your trip in the cab consisted of them complaining about your trip to the local store or how they don't get paid when using the TM card.'

4.3.2   Trips not made

Of the four open-field questions, the responses to 'Please describe the trip you decided not to take and why you decided not to go' were the most complex. Many responses included very detailed descriptions of the various barriers that worked together to prevent them from taking a trip. In many cases this spanned different modes – for example, when a primary mode of transport was unavailable and problems occurred with a backup mode. One respondent wrote:

> 'My modified vehicle was getting a WOF. I wanted to go into town while repairs were getting done but couldn't afford the taxi, there was nobody to drive me and there are no buses or trains accessible for rural customers.'

Other responses were difficult to categorise. For example, many people described trips as simply being 'too hard' or 'too much effort' (167 mentions). These responses do not immediately appear to be directly related to transport, but on closer examination show that for many people the complexity and difficulty of navigating the transport system for past trips is preventing people from undertaking trips now.

> 'I just didn't have the energy to deal with the obstacles in place that day to go run some errands. I had minor surgery and was still recovering and had less capacity than usual so decided to just stay at home.'

It is possible that the true number of trips not taken by some disabled people is higher than what is reported in the survey results. One respondent summarised this by saying:

> 'This is a hypothetical question. People who use wheelchairs simply live a life where they do not consider taking trips because of the accessibility issues they face. They would take trips every week if they could. No one likes to feel isolated and trapped.'

4.3.2.1 Types of trips not made

There were a range of trips that people were not able to make because of a transport problem. Some types of trips were missed extremely frequently, such as a supermarket trip that was postponed to another day. Other trips were missed less, such as missing a funeral. All of these trips not made impact on the lives of disabled people.

Missing out on recreation and leisure activities

The most common type of trip that survey respondents were not able to make was for recreation or leisure (802 mentions). Common recreation or leisure trips that were missed included activities like concerts, going to cafes or restaurants, libraries, and visiting natural spaces such as the beach or parks. Missing out on this type of trip is disappointing for people and means their quality of life is reduced.

> 'I wanted to go up to Mt Taranaki and Ruapehu. No access no disability parking. Just to be able to sit in the cafes and enjoy the view or outside, to enjoy the beauty. I left both in tears.'

> 'Māori new year celebration at the town's public park, lots of lights and fireworks, but not enough mobility parks nor public buses working that late at night. Makes me feel very sad that I have to miss out on festival and public celebrations, all because I have a disability and rely on using a wheelchair – I'm 62y/o and live alone plus my parents are far too old to ask for help now.'

Not fulfilling daily needs

Trips for fulfilling daily needs were also commonly missed (677 mentions). Survey respondents described not taking trips to the supermarket, cancelling haircuts because they would not be able to get there, or not being able to 'just go shopping'. Missing out on this type of trip has a wide range of impacts, including on people's health and financial wellbeing if they cannot access affordable healthy food. This also has an impact on people's quality of life when they are not able to access services and items they need.

> 'I need to travel from Rosebank Road to New Lynn to do my shopping. The nearest bus stop is approx 400 metres from my house. It takes me about 15 mins to walk this distance. Then I need to find somebody (the drivers are usually very helpful) to lift me and my walker up the bus steps – and then back down again. I feel embarrassed that I hold up the bus for so long, and it is very

tiring. I do try and make the trip once a week, but sometimes I just can't summon the strength. Fortunately there is a bakery and takeaway next door to wear I live – but the food is not healthy, and I can't afford to buy all my food from here.'

'Trip to purchase new pants. Put in the too hard basket because no public transport, might have to go to multiple shops, too far to access by foot.'

Missing out on whānau, family and friends

Many survey respondents reported not making a trip for socialising with friends/acquaintances (340 mentions) or family members (170 mentions). Most respondents reported challenges with getting to a venue they wished to visit with their friends or family like a cafe or restaurant. It can be very distressing for people to miss out on this type of trip, particularly as multiple respondents reported cancelling a trip at the very last minute because of an unexpected transport problem like a lack of parking or a cancellation to a transport service.

'Dinner in Courtenay Place with friends. I didn't go because it was raining and I was anxious about being able to find a car park close to the restaurant and being able to get to the restaurant safely with my mobility walker or walking stick. I didn't want to inconvenience a family member as I was afraid they would not be able to park anywhere to drop me off safely. Also the dinner was in peak traffic time and town would be very busy at that time.'

'Trying to visit my husband at Erin Park Care Centre Russell Road Manurewa, most times I have to drive away as there are no disability parks on the main road in front for some reason, then he gets annoyed with me not seeing him.'

Missing out on medical and health needs

A significant number of survey respondents described not being able to make trips for medical or health purposes (260 mentions). These trips ranged in severity from being unable to collect prescription medicines, to missing GP or specialist appointments, to rescheduling surgery because they had no way to get there. This has multiple health impacts – not only are they missing out or postponing medical care, but they also have the added anxiety of knowing their health is declining because of transport problems.

'A taxi never turned up and I had to miss a hospital appt because of it.'

'Covid vaccination in city centre – no accessible parking wide enough if I was driving myself in atrium parking and couldn't have managed to push up Wellesley Street myself if I parked in an AT building.'

'I couldn't afford to attend my Oncology appointed scans so missed them and through that missed progression so now am Stage 4 metastatic breast cancer (incurable).'

Other

The remainder of trips that survey respondents reported missing out on were for:

* employment, volunteering, or education purposes (68 mentions)
* significant events (57 mentions) such as a funeral, wedding, or tangihanga
* religious or spiritual purposes (50 mentions) such as church services, visiting the temple, or participating in Matariki celebrations.

4.3.2.2 Challenges with parking

Parking problems were the most common reason survey respondents cited for not being able to make a trip (671 mentions). This is not unexpected, as most responses came from people contacted through the CCS Mobility Parking database, as described in Section 3.1.

Limited parking availability

Most survey respondents who described a problem with parking said that a lack of parking prevented their journey (611 mentions). For approximately 76% of these respondents, the journey was prevented based on an assumption that there would be no suitable parking or that suitable parking would be full. The remaining 24% of respondents specifically described attempting a trip and having to abandon it on arriving at the destination and discovering that there was no suitable parking, or that the mobility parking was fully occupied.

It is noteworthy that most of the respondents who did not make a trip because of a parking problem did so on assumptions based on past experiences. Even if accessible parking is available at a destination, people might still be reluctant to make a trip based on negative experiences of the past.

> 'Was invited to go to Ponsonby for dinner with friends at 6pm on Friday, I knew I would struggle to find a park and get out using my ABI loader hoist [mechanical wheelchair loader] so didn't go.'

> 'A community meeting, I knew that in the time of day it was being held there would be no parks.'

> 'A friend invited me to dinner in the CBD near the Sky Tower. I know of one mobility park close to it, but when I drove past it was occupied by a non mobility parker. I drove around the block several times but they had not moved and I could not find a park close enough (within my walking distance). The nearby Wilson parks were at a peak rate (which I could not afford right now) because it was Friday and by this point I would be too late so I went home.'

Inaccessible parking design

A smaller number of respondents described problems with the car parks themselves that made the park inaccessible (41 mentions). Common problems mentioned include:

- The car park was either too wide or too narrow for safe loading/unloading of a wheelchair using a hoist or ramp, or the car park was too narrow to open side doors enough to get out the car.

- Angled car parks meant people did not feel safe unloading from the rear of a van due to passing traffic.

- Parallel car parks meant people did not feel safe unloading from the driver side of the car due to passing traffic.

- The car park was too far away from the destination, or there was no accessible walking route between the car park and the destination.

- A lack of ramps or poor ramp placement made it extremely difficult to access the footpath from the car park while using mobility aids.

- Uneven surfacing in car parking lots or buildings meant people felt unsteady walking to and from their car.

- The presence of poles or bollards behind the car park blocked people from being able to open car doors or safely load/unload a wheelchair from the rear foot.

Cost

The cost of parking was mentioned by only a few respondents (19 mentions).

4.3.2.3 Accessibility

Problems with accessibility were a common cause of trips not made reported by survey respondents (456 mentions). Accessibility problems with the footpath and public transport were mentioned most frequently.

Inaccessible walking infrastructure

Problems with the footpath prevented a large number of people from making a trip (109 mentions). The majority of these problems involved footpaths that were uneven or steep. People also mentioned the camber of the footpaths being too steep, which created difficulties if they were using a wheeled mobility aid. Problems with pedestrian crossings were also mentioned, including the gutter being too steep and a lack of safe crossings. Problems with the footpath were not limited to people who use wheeled mobility aids; people also described having difficulty walking across poor-quality footpaths.

> 'I couldn't join husband on stroll with dog because the path wasn't smooth and flat enough for the wheelchair.'

> 'Can't walk very far. … Get fed up with neighbourhood sidewalks being so uneven that I often trip up.'

Inaccessible public transport infrastructure

Accessibility problems with public transport were also common. Problems accessing the bus were the most common problem reported. This mainly involved difficulty or inability to get on or off the bus, and anxiety that the driver would start driving before the respondent had sat down.

> 'I found climb up to bus entrance or getting off is very challenging.'

Problems accessing trains and ferries were also mentioned, but to a lesser extent. In general, the trains themselves tend to be more accessible. Respondents reported trouble when rail buses replaced a train or when a train station was inaccessible. The main barrier to respondents using ferries was a lack of information about whether they are accessible. For the few respondents who had attempted to board a ferry, the lack of a ramp, or perceptions that the ramp was unsafe, prevented them from boarding.

> 'Was going to meet my wife and have lunch with her in Manukau City. Not able to take my mobility scooter as the trains were not running from Pukekohe (How unusual!! hah) and rail buses are unable to accommodate mobility scooters, which is my main form of transport when out of the house.'

4.3.2.4 No available driver

Not having transport available was a commonly reported problem. Most survey respondents who reported not having transport available said they did not have a driver (141 mentions). These responses include instances where a regular driver such as a friend or spouse was unavailable, and comments that did not specify who the driver was.

> 'I couldn't get gas plus I suffer migraines and I couldn't get a driver that day.'

Significantly, there were an additional 56 people who reported not asking someone they knew for a ride because they felt like a burden or did not want to bother that person.

> 'To my friend's new house in Napier, she offered to pick me up but I am independent, that is too much to ask.'

> 'Saturday Farmers Market and our local Market Day. I would love to be able to get some fresh local produce and other items that you can only get from the Markets, it's also a great place to see friends and family, unfortunately my (lack of) transport and mobility issues do not allow for

me to go to such places, I do not go nor do I ask family members or friends to take me as I know my limitations, I know how it can be a nuisance and I feel like a burden on others, this is why I do not go.'

4.3.2.5 Unaffordability

The cost of travel was a common reason for survey respondents not being able to make a trip (218 mentions). These responses tended to relate to the cost of petrol and parking for people travelling in their own car, and to the cost of taxis or driving services. Many respondents cancelled their trips, while others described delaying trips until a friend or family member could drive them, or waiting until the next pay day.

> 'Because I live in a small town, with limited shops, it's nice (& necessary) to go to a bigger town for a greater variety of available shops. Usually I can't afford to do this, and have to wait for a day when I have a hospital appointment & can claim travel assistance from [Ministry of Health]. It would give me better quality of life if I could go more often to a bigger town, but sadly I can't afford it.'

> 'Going to Doctors, it's far to walk to bus stop and catch 4 buses there & back. Too expensive for a taxi, I don't use a mobile and don't trust Uber. I wait for daughter to pick me up and take me.'

4.3.2.6 Challenges using buses

The primary issue raised relating to buses for survey respondents was their availability (691 mentions). Inaccessibility of buses was also a common issue (394 mentions) (as discussed above in section 4.3.2.3), as were the attitudes of drivers and other passengers (122 mentions).

Challenges in availability

Problems with bus availability fell into three main groups.

- Some respondents simply stated that there was no public transport at all in their area, with a few specifying that they live rurally.

- Others stated that there was a bus service nearby, but it was too far for them to walk to catch the bus.

- Others stated that there was no convenient bus service – they would have to make several transfers and take inconvenient routes with long travel times.

> 'I would like to use public transport to get to work one or two days a week but it is not feasible. I would need to catch 3–4 separate buses, including one all the way into town and it would take up to 80 minutes each way. There is no train link. That is 2 hours 40+ per day, as opposed to 40 minutes there and back by car.'

> 'I would use public transport more if it was easier to get to a bus stop or train station, and easier to get on and off the bus/train. Where I live, I would have to walk uphill and a far distance to get to the nearest stop. Therefore it is easier for me to drive myself, or take an Uber taxi to get where I need to go.'

Challenges in accessibility

Challenges in accessibility largely related to boarding the bus, and to a lesser extent travelling on the bus and waiting at bus stops. Many respondents described difficulty getting onto the bus due to the large step up, particularly on older buses that are not able to kneel. Respondents also described anxiety or embarrassment at being watched while boarding inaccessible buses.

> 'Bus steps, height wise can be tricky and the expectation is that the entry will be done with speed which is not always possible.'

'Even with a shallow step onto the bus or a kneeling bus the next step is usually far too high to easily access. I find it very embarrassing and humiliating to have to be 'helped' onto and off so-called accessible buses.'

Many respondents reported that after getting on the bus, they had difficulty navigating to the priority seating area. For people using wheelchairs it is often possible to get on the bus, but not possible to fit into the priority seating area. Many respondents reported not feeling safe or comfortable on the bus. This was a problem for people with limited strength or who are in pain and cannot brace against the movement of the bus.

'Buses are not easy to access at all. Both getting on or off as well as moving once in the bus unless you have a child sized wheelchair.'

'I absolutely hate it when Auckland Transport takes the trains off at weekends and replaces them with buses – trains are comfortable to ride but buses shake you about and some of the drivers are rough drivers (e.g. turn corners sharply, brake suddenly, don't wait until you are seated before driving off).'

Waiting for the bus was also difficult for many respondents. A lack of weatherproof seating makes waiting for a bus painful and prevents some people from using the bus.

'I live semi-rural in Kumeu and it would be nice if there was more public transport but also where there are stops have them covered and with seats. I've just upgraded to a walker so I can now sit on that but before that I would have had to have stood and I can't stand for long periods of time.'

'Policymakers do not seem to be aware that a) getting to the bus stop in the first place b) standing there (inevitably no seating or seating out in the rain) through the inevitable delay/bus failing to turn up and c) enduring the stop/start jolting of a bus and a too-small hard seat, assuming one can get one and to say nothing of other passengers unavoidably brushing past, is intensely painful when one has significant injuries.'

Challenges in the attitudes of others

The attitudes of other people on the bus, particularly drivers, interacts with accessibility. Some drivers are perceived as uncaring or reluctant to assist disabled people onto the bus such as by kneeling the bus, folding out the ramp, stopping for vision impaired and blind passengers, and waiting for people to sit down before pulling out from the bus stop. Respondents described how fear of encountering a bus driver like this prevents them from taking the bus as it impacts their ability to get on the bus and feel safe on the journey. The opposite is also true, with a smaller number of respondents describing their appreciation of caring bus drivers who make them feel safe and accommodated.

'Blind bus passengers are not able to see a bus coming and therefore can't wave them down. Despite bus drivers being required to stop if a person with a white cane or guide dog is standing at a bus stop they seldom do so. I am an elderly blind person and I have often been left stranded and therefore have not used buses for a long time, particularly if it was necessary to change routes during a journey to a distant location.'

'Buses are too hard to get on and drivers do not give you a chance to take a seat so it is dangerous if you are unsteady on your feet.'

'Some are AMAZING and do everything possible to ensure the trip is great. While others are clearly frustrated with having to fold out the ramp and wait for you to get sorted.'

The attitudes of other passengers also affected some respondents' experience of the bus. Some respondents described not being able to get a seat, despite asking other passengers they perceived as non-

disabled using the priority seating for their seat. Negative comments and stares from other passengers also made respondents feel uncomfortable on their journey.

> 'I used to take the bus, but as people hog the front seats for the disabled, or can't necessarily see your disability, then you have to stand. I can't manage standing on a bus, and don't have the strength in my (usually numb) hands to hold the poles.'

Other respondents were appreciative of other passengers' respect and willingness to aid them when necessary. Respondents described how it was passengers, rather than the driver, who came to their aid if the bus was not fully accessible.

> 'Bus drivers are very judgemental and won't help. I almost always get stuck on the ramp into the bus, and 9 times out of 10 another passenger gets out of their seat to help me as the driver watches. I sometimes have comments made about how young I am and in a chair, or why I'm in a chair if I can move my legs, and I've been stuck in a 'wheelchair' area (that's more likely made for prams) and other passengers had to get me out while the driver watched. It's humiliating and degrading, you don't feel like a person. Please train them to have more empathy.'

4.3.2.7 Challenges using trains

The most commonly raised concerns with trains were the availability of train services (118 mentions), accessibility of the trains and stations, accessible parking at the train station, and reliability of trains.

Challenges in availability

Many respondents suggested expansions to the passenger rail network in the cities that already have trains to serve a greater area. Comments about train availability also came from people in rural areas with a train station and rail lines that are currently only used for freight.

> 'I wish there were trains into the main cities and a local bus (which we don't have in this area). The railway runs right through our village and surely it would be helpful if passengers could have at least one passenger carriage attached to it. This would be a great help to many people in my position.'

> 'I think it would be a good solution to traffic congestion if there were light rail options to the towns surrounding Hamilton, e.g. Morrinsville, Te Awamutu, Cambridge, Huntly.'

Challenges in accessibility

Many respondents considered trains a more accessible option than buses, particularly step-free train carriages at the same level as the platform. Despite this, there were still reports of trains being inaccessible because of steps onto the carriage and a lack of toilets.

> 'I do not use public transport such as buses and trains because the buses are too high for me to climb into and train I feel the platform is either too high, too low and the gap between the train and platform is too wide. I'm cautious of the time it would take me to get in and out of the trains or buses and anxious of falling. Perhaps a special entrance or transport for people with a disability, elderly people or parents/caregivers with young children using public transport.'

Most of the accessibility problems reported with trains by respondents relate to the stations themselves (over 25%). The presence of stairs, long ramps, and long distances to walk made it difficult to access the train, even if the carriages themselves were accessible.

> 'Access to the station at Papatoetoe has ramp access which is impossible for me to use, meaning I have not been able to use the train in the previous few years.'

Tied into accessibility is the availability of mobility parking, or general parking that has good levels of accessibility at train stations. Many respondents showed a willingness to replace commutes by car with the train, if they could park their car at the station and there was an accessible route from their car to the train.

> 'If I want to use public transport the biggest problem with the train service is trying to find a mobility park that is close to the Train Station that is not a limited time, i.e. 120 or 180 min. Very difficult if one wants to travel from Papakura to Britomart, go to an event then travel back and find that one has a ticket for parking over the time limit.'

Challenges in reliability

A less common but still important issue was the reliability of trains, particularly when trains are replaced with rail buses during track maintenance or for emergencies. Many respondents had problems accessing the replacement rail buses so either could not make a trip or were stranded away from home, depending on the direction of travel. Respondents also mentioned trains running late or being generally unreliable.

> 'When trains cancelled they put on buses which the person could not put his electric bike on so left stranded in city and unable to speak. Rode as far as he could but battery ran out.'

> 'Trains are unreliable in South Auckland and I cannot access bus replacements because of my disability.'

4.3.2.8 Challenges related to walking and other active transport forms

Walking, cycling, and e-scooters are considered together as many of the comments about safety and accessibility overlap and interact.

Walkability challenges

Most survey respondents who discussed walking described problems with accessibility (155 mentions). The survey included walking using a mobility aid such as a wheelchair, walker, or mobility scooter. The range of accessibility problems include:

- footpaths that are uneven causing tripping hazards for people who have difficulty walking, and tipping hazards and barriers for people using mobility aids
- missing footpaths, or footpaths that suddenly end
- long distances between the origin point and destination (some respondents suggested seats or rest stops for breaking up the journey)
- steep crossfalls on the footpath that make it difficult to balance or travel in a straight line
- crowded footpaths that make people feel unsafe and make it difficult to walk
- sharp kerb cuts at crossing points or missing kerb cuts, which make it difficult or impossible to cross the road using a wheelchair, walker or mobility scooter
- inadequate opportunities to cross the road, including informal crossings on busy roads where formal zebra crossings or controlled crossings would make it safer to cross
- poor lighting, which makes it hard for people to keep their footing in the evening
- not feeling safe on footpaths that are close to busy roads
- rubbish and recycling bins blocking the footpath on collection days
- cars and trucks parked across the footpath.

> 'It's just hard for people with autism to try and even use a footpath. So many cars everywhere, and so fast. Always have to be so alert.'

'I find uneven footpaths difficult to negotiate and I worry about a fall. Poor lighting is another reason I don't go to events at night because I can't always see my footing.'

'I use a mobility scooter and significant improvements could be made to footpaths and driveways to make that an easier thing. I have a severe pain condition so being jolted constantly is challenging. One of the things that concerns me is more recent footpaths that have been put in. They are completely unsuitable for wheelchairs or mobility scooters having very deep driveways so you're constantly going into the driveway then up onto the footpath it's more bumpy than horse riding!'

'I have answered these questions on behalf of my mother, she is in a rest home & requires a walker for mobility. If I take her for a drive into town, or for an outing, to the esplanade or somewhere, generally it is quite difficult to find a mobility park which is close enough to the shop that we want to go to. … A number of footpaths are so uneven that it is quite dangerous & mum has to be so careful not to trip.'

Safety concerns with shared infrastructure

Most survey respondents who mentioned bikes or e-scooters had specific comments about people's behaviour when using these modes or had complaints about the construction of cycle lanes.

Respondents did not like sharing a footpath or shared path with people using bikes and e-scooters because they felt vulnerable around the much faster moving modes. Publicly available rental e-scooters were also a barrier even when not in use because they are often left blocking the footpath.

'Electronic scooters on footpaths are a curse, dangerous, speed approaching you is un-nerving, obstacle when just left on the footpath.'

'I would walk more often if pedestrians and cyclists didn't share the same pathway. E-bikes tend to travel too fast and don't give pedestrians any warning and think walkers should step off walkway to let them pass.'

4.3.2.9   Advantages and challenges of private cars

When respondents discussed private vehicles, their comments tended to involve concerns about the attitudes and behaviours of drivers (76 mentions) or praise for the ease of use and convenience of their own car (88 mentions).

Attitudes and behaviours of other drivers

Aggressive driver behaviour such as tailgating and speeding were safety concerns for respondents who drive their own car. This type of behaviour made them feel unsafe. Respondents reported avoiding certain areas or times of the day so that there would be fewer vehicles on the road.

'I used to love driving around hence why I have tried to keep my independence in having a car I can use. But only go out when necessary now as find so many grumpy, negative and pushy/mean drivers limit when, how far and how long I can travel for. Going out early avoids many hurdles except most places I may never get to visit like Bayfair, shopping complexes or busy/central areas like the CBD during normal business hours due to lack of parking or information on where they are, new ones, changes etc.'

A small number of pedestrians and cyclists responded with comments about driver behaviour that made them feel unsafe. This included behaviours like not checking around the vehicle before reversing, failing to stop at pedestrian crossings, and speeding.

'I wish the traffic would slow down in urban areas! Sometimes it's frightening to try and get somewhere without getting knocked over because of the way and speed that I walk.'

Ease of use and convenience of a car

A common response from respondents who still drove themselves was appreciation for their cars as an easily available and reliable option for everyday travel. Some respondents preferred to drive themselves, even when other options were available because of convenience. Others stated that their own car was the only way they are able to travel due to a lack of other options.

'Due to living in a rural area just out of Hamilton there are no bus services provided for this area. Therefore all travel is by private car.'

'I am concerned about the growing trend to discourage cars, and encourage cycling and buses in cities. Cycling not safe for me. Buses – not everyone has close bus stops – then you have to climb onto many, which on many days I could not – waiting at bus stop, many unsheltered, and frankly feel unsafe from harassment, begging etc. No seat belts. I'm rather slow, and many a driver has taken off before I'm seated safely. I feel 100 percent safe in my little car, and can return home at any time if my physical day is not going so well. A one-hour outing turns into 3 or more in a bus, and I'm exhausted at the end of it. Being able to use my car to get around is the single most important thing to my having quality of life.'

4.3.2.10 Benefits and challenges associated with car parking

A large number of comments were received about car parking, with the majority relating to mobility parking. This was expected due to the large number of respondents recruited through the CCS Mobility Parking Permit database.

The most common complaints or suggestions from respondents related to the availability (309 mentions) and accessibility (102 mentions) of parking, or the attitudes of other people to mobility parking spaces and permit holders (254 mentions).

Respondents also had positive things to say about mobility parking and their appreciation for the permit (140 mentions).

Challenges with availability and accessibility of parking

Comments related to the availability and accessibility of parking were similar to those discussed in section 4.3.2.2 of this report. They mostly included general comments requesting more mobility car parks or specific descriptions of what makes car parks inaccessible, as covered in section 4.3.2.2.

Behaviour and attitudes of others

A new theme emerged in the responses to the question relating to the attitudes of other people towards mobility parking car parks and the people who use them. Most survey respondents expressed their frustration with non-permit holders using mobility car parks and/or a lack of enforcement of the permit system. When the number of mobility parks is limited, abuse of the small number of mobility parks reduces accessibility for mobility permit holders.

'Illegal disability parking needs to be taken more seriously.'

'It is very frightening to be verbally abused and threatened by those without permits when you ask them to please move. I don't know what the solution is but I now just go home if I cannot find a spot because of the repugnant behaviours that I have been subjected to.'

Enforcement was a particular issue in private car parks, such as supermarkets or shopping malls. Respondents described being told by staff that they have no jurisdiction over the car park and had no means by which to enforce the permit.

'There needs to be more Mobility Parking Spaces and they need to be policed. There was on 2 occasions recently at a Supermarket where people were parked in Mobility parking without a permit displayed and they most certainly were not disabled. I spoke to the Supermarket Manager and was told to call Council. I called Council and was told to speak to the Supermarket Manager. Neither knows who is looking after these parking spaces.'

Multiple respondents with invisible disabilities raised their own experiences of stigma when using mobility parking permits. There are many different reasons why someone might need a mobility parking permit. Some respondents felt judged for using mobility parks even with their permits because of a lack of public understanding about who uses parking permits and why.

'The stigma around holding a mobility parking placard is not very educated for non-disabled New Zealanders. There needs to be more publicity about invisible disabilities. My 3 girls have foetal valproate syndrome and myself epilepsy/TBI ... their syndrome is caused by Epilim exposure in utero. I feel that there would be more empathy towards disabled users when accessing parks in public areas and school car parks if the NZ public were more educated around disability in general through the media.'

'The stigma of using the card for an "abled body" child can be really hard. People think that disabled people only have wheelchairs. They do not think about intellectual disability or the safety reasons why we need to use these parks.'

Appreciation for mobility parking

Many respondents used this question to express their appreciation for mobility parking. They tended to comment on the better accessibility (75 mentions) provided by features like wider or longer parks and proximity to their destination, or simply having the scheme available (65 mentions).

'I appreciate having the use of the Mobility Scheme, it has made my being able to maintain some independence since my physical disability'

'Am very thankful for my mobility permit ... allowing me to park closer to the entrance to shops. I can walk but with difficulty some days so having the permit helps when needed.'

'Having the mobility parking ticket has certainly made things much easier for our day trips to the mall and movies etc. Having more room to exit the vehicle has been terrific.'

4.3.3   Lack of inclusion in planning of sustainable cities and transport

4.3.3.1   Disabled people being 'left behind' in city centre planning

There were 57 open-field comments related to concerns about changes to car access in city centres, such as pedestrian malls and car-free city centres. Respondents who rely on cars for access expressed concern that they will be excluded from city centres if large areas become pedestrianised. For many respondents, public transport is inaccessible, and modes like walking, cycling, or micro-mobility are impractical. Private cars, taxis, and rideshare vehicles are the only options some disabled people can be sure will provide genuine access to their local city centre because of the current inaccessibility of other modes. If the transition to low-carbon city centres is poorly managed, it is likely that disabled people will be excluded.

'Sympathetic to local governments' drive to make city centres more user-friendly for scooters and bikes and pedestrians, but people with limited mobility need to be able to get close to their

desired destination. I think increasing pedestrianisation needs to also include retention of some mobility car parks, otherwise those with mobility issues will be unable to access the town centres.'

'I feel that the current emphasis on pedestrianising city centres and focussing on public transport, bikes and walking does not take into account the varying and different needs of many disabled people, who simply do not have the ability to walk/move very far/at all. … There needs to be far greater in-depth consultation with the disabled community prior to transport decisions being made/implemented, as often people with disabilities are left out of these vitally important conversations, and they are the ones who will often be the most affected, often in a negative way.'

4.3.3.2   Concerns about climate change and/or current car-centric approaches to transport planning

Conversely to concerns about city centre pedestrianisation, 25 respondents were concerned that not enough is currently being done by councils to reduce carbon emissions from transport. These respondents expressed willingness to use public transport and active modes, rather than their own car, if those modes were accessible and safe to them. There was also recognition that if non-disabled people (who have less barriers to public transport) used public transport, there would be less pressure on roads and parking, which would improve mobility for disabled people who do not have a choice but to use their own car.

'There needs to be more public transport and fewer cars on the road for the climate, air quality and disabled people's mobility.'

'Even though driving my car is easiest for me as a disabled person, I firmly believe NZ should prioritise public transport infrastructure over car infrastructure. If there were better public transport options, I wouldn't have to drive my car all the time and park it. Buses are very slow (takes 3x as long as driving). We need light rail and lots more bike paths. People often bring up mobility parking users as an argument against focusing on public transport over cars, but I think instead we should focus on accessible public transport, to help both disabled people and everyone else.'

4.3.3.3   Concerns about the way disabled people are perceived by transport planners and other people using the transport system

A point raised by 15 respondents was about attitudes towards disabled people, particularly towards people who have an invisible illness or impairment. Multiple respondents reported being challenged at mobility parking spaces due to false perceptions by other members of the public that the respondent did not need the mobility car park, despite them holding a permit. Multiple respondents expressed a wish for better understanding and knowledge that people need a mobility parking permit for a wide range of reasons, not just due to difficulty walking.

'Having the permit is not enough in most cases, to put people off attacking me (I look fit and healthy). For a start the wheelchair symbol needs to be updated, and perhaps an advertising campaign explaining that not all disabilities are visible and that if a permit is used, to leave the person alone.'

Some comments on this topic showed greater understanding is needed for people both within the disabled community and outside of it to address false perceptions about who needs accessible transport. All the survey participants self-identified as having an impairment or disability. However, there were occasional comments that suggested a lack of awareness of people in similar situations. For example, this respondent describes their own hidden injury while, in the same sentence, making an assumption about someone else's need:

'…need a way of communicating disability with some dignity, instead of having to explain the whole situation to people as often encounter at events and with public transport. Example, I had just had major leg surgery, had medic alert necklace on but old man with cane and no visible signs of any health condition tried to kick me off disabled seat in bus as I was wearing corporate wear that covered leg surgery (his rampage and behaviour also put my leg at risk?)'

4.4   Transport during lockdown

As outlined in section 3.6 we undertook an additional survey about the transport experiences of disabled and non-disabled people during lockdown. The survey was distributed through social media and email lists. The survey had 200 respondents, of whom 139 identified as disabled. It asked the following questions:

1. Do you identify as a disabled person?
2. Has a transport problem made accessing employment during Alert Level 3 or 4 hard or impossible for you?*
3. Has a transport problem made accessing essential services, including shelter, food, or health care during Alert Level 3 or 4, hard or impossible for you?*
4. Has a transport problem made accessing COVID-19 vaccination and/or testing during Alert Level 3 or 4 hard or impossible for you?*
5. Is there another essential or recreational trip you haven't made in the last week because a transport problem made it too hard?*
6. Have you used other means to access essential services such as online shopping (eg, pharmacy drop-off) and delivery or click and collect?*
7. Is there anything about the August–September 2021 COVID-19 lockdown (Alert Levels 3 or 4) that has had a positive impact on your transport, and ability to move around your community?*
8. Where in New Zealand do you live?
9. Are you willing to participate in a brief phone interview about your experiences of transport during Alert Level 3 or 4?

* Questions 2–7 included an extra question: If yes, please describe the problem/trip/challenge.

Results are summarised in Figures 4.18 to 4.23 below. The following differences between disabled and non-disabled people's responses were significant, assessed with Chi-squared tests of independence.

- **Difficulty accessing employment**
  Disabled people reported more difficulty than non-disabled people (disabled people: 18% yes, 82% no, $n = 139$; non-disabled people: 5% yes, 95% no, $n = 61$; X^2 (1, $N = 200$) = 6.013, $p = 0.014$, Cramér's V = 0.173).

- **Difficulty accessing essential services (including shelter, food, or health care)**
  Disabled people reported more difficulty than non-disabled people (disabled people: 37% yes, 63% no, $n = 139$; non-disabled people: 10% yes, 90% no, $n = 61$; X^2 (1, $N = 200$) = 15.655, $p < 0.001$, Cramér's V = 0.280).

- **A 'trip not made' in the previous week due to a transport difficulty**
  Disabled people reported more difficulty than non-disabled people (disabled people: 29% yes, 71% no, $n = 139$; non-disabled people: 5% yes, 95% no, $n = 61$; X^2 (1, $N = 135$) = 14.925, $p < 0.001$, Cramér's V = 0.273).

- **Any positive impacts of lockdown on ability to move around community**
  Disabled people were less likely to report something positive than non-disabled people (disabled people: 27% yes, 73% no, $n = 137$; non-disabled people: 54% yes, 46% no, $n = 61$; X^2 (1, $N = 198$) = 13.554, $p < 0.001$, Cramér's V = 0.262).

There were smaller, non-significant differences between disabled and non-disabled people's responses to the questions regarding ability to access COVID-19 vaccination or testing (disabled people: 23% yes, 77% no, $n = 139$; non-disabled people: 11% yes, 89% no, $n = 61$; X^2 (1, $N = 135$) = 3.600, $p = 0.06$, Cramér's V = 0.273) and using other means to access essential services (disabled people: 58% yes, 42% no, $n = 139$; non-disabled people: 64% yes, 36% no, $n = 61$; X^2 (1, $N = 135$) = 0.716, $p = 0.397$, Cramér's V = 0.06).

Figure 4.18   Responses to the question 'Has a transport problem made accessing employment during Alert Level 3 or 4 hard or impossible for you?'

Image description: A bar graph showing the results of the survey question 'Has a transport problem made accessing employment during Alert Level 3 or 4 hard or impossible for you?' The *y*-axis shows the proportion of respondents as a percentage. The *x*-axis is labelled with two groups: disabled and non-disabled. Each group has two bars: one representing 'yes', and one representing 'no'. The graph shows that for disabled people, 18% answered yes, and 82% answered no. For non-disabled people, 5% answered yes, and 95% answered no.

Figure 4.19   Responses to the question 'Has a transport problem made accessing essential services during Alert Level 3 or 4 hard or impossible for you?'

Image description: A bar graph showing the results of the survey question 'Has a transport problem made accessing essential services during Alert Level 3 or 4 hard or impossible for you?' The *y*-axis shows the proportion of respondents as a percentage. The *x*-axis is labelled with two groups: disabled and non-disabled. Each group has two bars: one representing 'yes', and one representing 'no'. The graph shows that for disabled people, 37% answered yes, and 63% answered no. For non-disabled people, 10% answered yes, and 90% answered no.

Figure 4.20   Responses to the question 'Has a transport problem made accessing COVID-19 vaccination and/or testing during Alert Level 3 or 4 hard or impossible for you?'
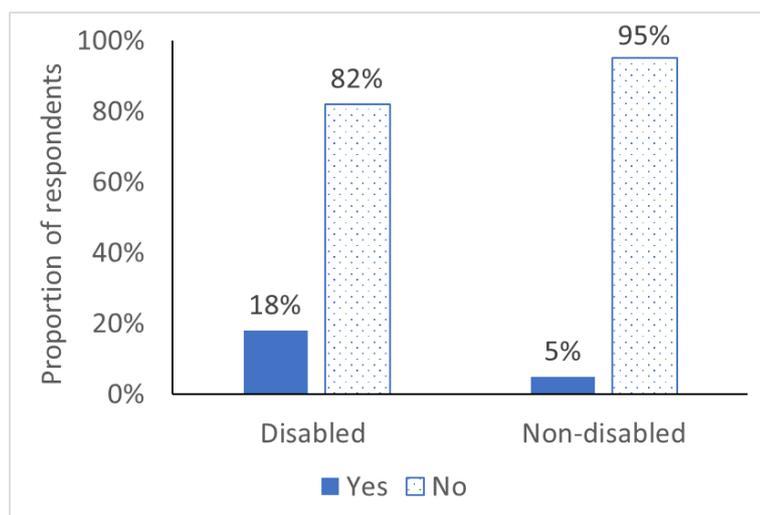

Image description: A bar graph showing the results of the survey question 'Has a transport problem made accessing COVID-19 vaccination and/or testing during Alert Level 3 or 4 hard or impossible for you?' The *y*-axis shows the proportion of respondents as a percentage. The *x*-axis is labelled with two groups: disabled and non-disabled. Each group has two bars: one representing 'yes', and one representing 'no'. The graph shows that for disabled people, 23% answered yes, and 77% answered no. For non-disabled people, 11% answered yes, and 89% answered no.

Figure 4.21   Responses to the question 'Is there another essential or recreational trip you haven't made in the last week because a transport problem made it too hard?'
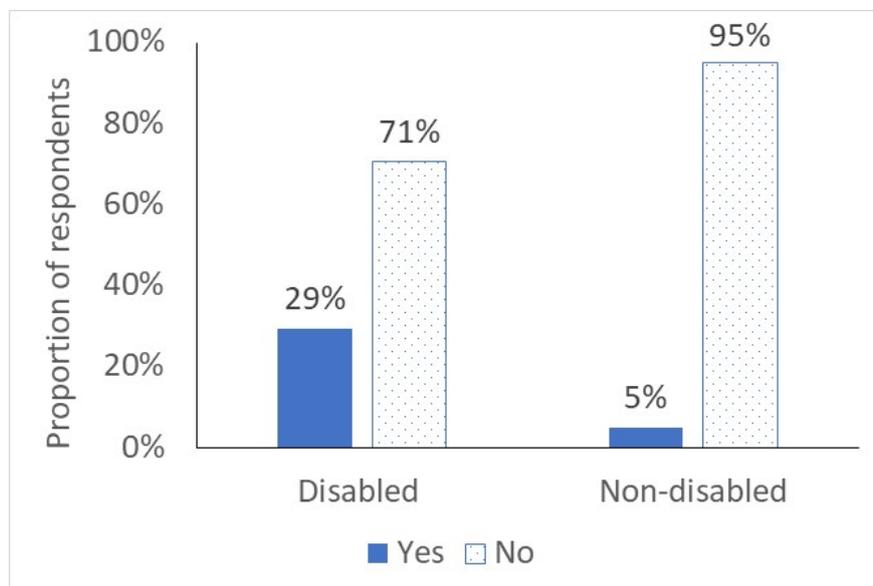
Image description: A bar graph showing the results of the survey question 'Is there another essential or recreational trip you haven't made in the last week because a transport problem made it too hard?' The *y*-axis shows the proportion of respondents as a percentage. The *x*-axis is labelled with two groups: disabled and non-disabled. Each group has two bars: one representing 'yes', and one representing 'no'. The graph shows that for disabled people, 29% answered yes, and 71% answered no. For non-disabled people, 5% answered yes, and 95% answered no.

Figure 4.22   Responses to the question 'Have you used other means to access essential services such as online shopping and deliver or click and collect?'
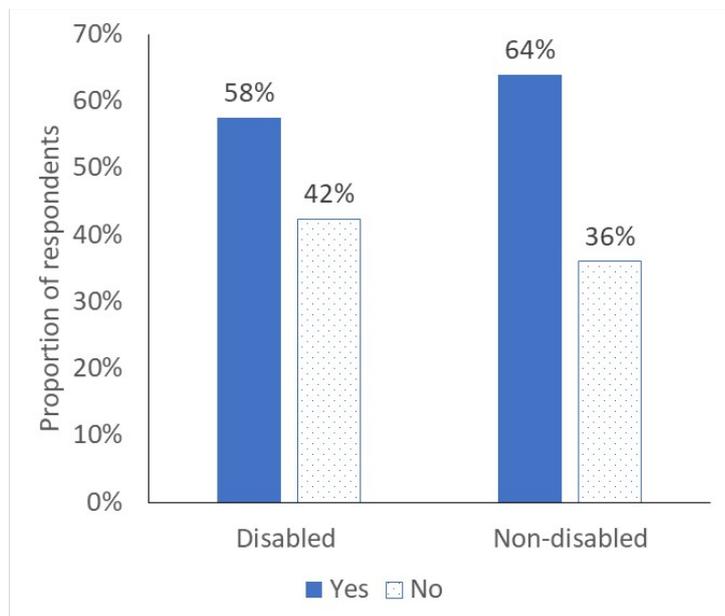
Image description: A bar graph showing the results of the survey question 'Have you used any other means to access essential services such as online shopping and deliver or click and collect?' The *y*-axis shows the proportion of respondents as a percentage. The *x*-axis is labelled with two groups: disabled and non-disabled. Each group has two bars: one representing 'yes', and one representing 'no'. The graph shows that for disabled people, 58% answered yes, and 42% answered no. For non-disabled people, 64% answered yes, 36% answered no.

Figure 4.23   Responses to the question 'Is there anything about the August–September 2021 COVID-19 lockdown that has had a positive impact on your transport, and ability to move around your community?'
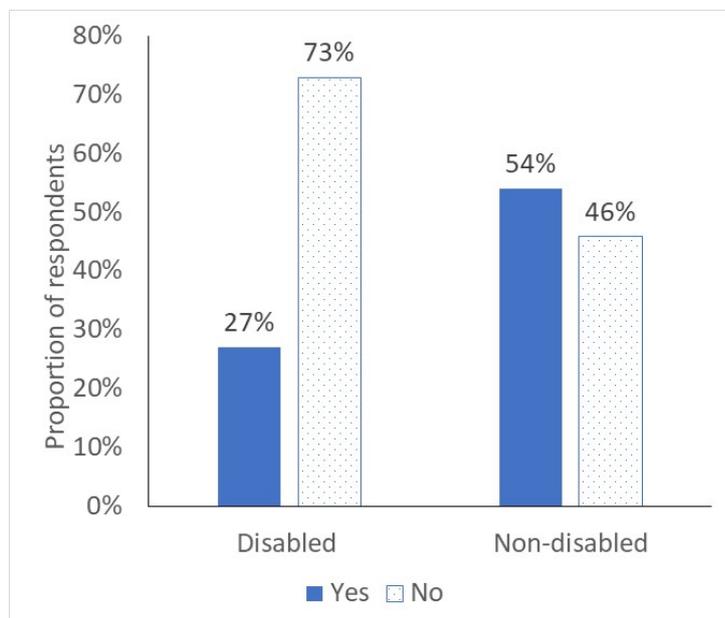
Image description: A bar graph showing the results of the survey question 'Is there anything about the August–September 2021 COVID-19 lockdown that has had a positive impact on your transport, and ability to move around your community?' The *y*-axis shows the proportion of respondents as a percentage. The *x*-axis is labelled with two groups: disabled and non-disabled. Each group has two bars: one representing 'yes', and one representing 'no'. The graph shows that for disabled people, 27% answered yes, and 73% answered no. For non-disabled people, 54% answered yes, and 46% answered no.

4.4.1.1 Transport challenges during lockdown: general issues in Alert Levels 3 and 4

Many of the issues people described about transport challenges were not specific to trip purpose. One person was unaware that Total Mobility had been available during Alert Levels 3 and 4. Further, some transport providers (staff and drivers) appear unaware of what constitutes essential travel, and concerning mask exemptions. Some driver attitudes make travel more difficult than usual. The following comments have been included by area to illustrate these issues.

Northland:	'My son is profoundly deaf (NZSL [New Zealand Sign Language] is first language) so he couldn't use public transport because with a mask on he can't read your lips.'
Auckland:	'Train station guards would not let me get on the train; they advised me that public transport was only available for essential workers going to or from work. I explained that I was blind (given that I was holding a mobility cane in plain view) and that I needed to use the train for other essential personal movement as is allowed. They continued to refuse access to the train but suggested I could take a bus instead – contradicting their own reasoning. The same incorrect information (i.e. only workers allowed) was given again the next day I went to the train station as well, but this time they allowed me through after seeing my cane – although they did not really think that going to get food was an approved purpose; they only allowed me through because in their words "you're different".'
Bay of Plenty:	'Due to the increased costs of accessing essential food services I have not been able to afford to receive other essential services as I must travel by Taxi.'
Wellington:	'I literally haven't been anywhere. Even to pick up meds. Or takeaways. Or anything. Because buses aren't accessible and taxis are too expensive.'
Wellington:	'With the mandatory requirement of masks, the fact my exemption card hasn't arrived yet and that generally people don't seem to know how much 2 metres is ... all three have meant I haven't left my house since Level 3. I've also heard horrific stories from other disabled people about the exemption cards not being accepted at businesses, on buses and taxis ... so am scared to use it when I have it.'
Otago:	'Went to get on bus with bags of groceries and my white cane but because bus couldn't kneel, I approached the driver to tell him I could not get on the back. When I asked what I could do he replied very rudely that he didn't know as he was just a bus driver. I asked him on more than one occasion what I could do and got the same answer. When I said it was driver discretion to allow me on the front he then snapped that I could get on but I would have to crawl under the tape across the aisle. When I did this he then yelled and told me I didn't tag on. I then tagged on at the back. A man on the bus then aided me to get off the bus at my home stop.'

Accessing essential services

Some of the problems that people had accessing essential services related to complexities associated with people's impairments, as described in the following comments.

Auckland:	'I would have made a contactless drop off of food to family members who are unable to leave their house due to their own disabilities, but given earlier problems with using public transport, and lack of funds for taxi trips I wasn't able to.'

Auckland: 'I had to ask for someone to drive me to get a Covid test because the buses had tape across the front at the start of lockdown and I'm not used to getting on the back door as a blind person or able to easily socially distance. Last year there was free fares for Total Mobility users to travel for essential reasons in level 4 which would have made this easier.'

Manawatū: 'Yes it did make it difficult to access food as we had shortages at our local Pahiatua super market so would need to go to Palmerston North on occasion & wider to source special interest food (autism food preferences).'

Otago: 'Can't get to supermarket, doctors etc as can't access the bus, cannot afford a taxi, not allowed to ask friends for help due to lockdown rules.'

Otago: 'When TM is so inaccessible by cost that it is impossible and you are too ill to drive yourself with severe pain and symptoms there is literally nothing you can do. Other emergency medical events are the same.'

Otago: 'Blood tests that I have to have 2 times every month, local one closed, other option involves 2 buses [one] of which is currently inaccessible.'

Accessing COVID-19 vaccination and/or testing

There were several issues raised related to accessing COVID-19 vaccination and testing. Some of the themes were similar to disabled people's experiences of transport generally but exacerbated due to the stress of being tested or of COVID-19 overall. Some of the problems that people described accessing vaccination or testing are described below.

Northland: 'For my second jab, the whole do it in cars thing became a whip. I got a taxi there, then had to stand on side of road to get jab. But that was not the hellish part. It was waiting outside in the cold wind for 20 minutes before they let me go. The nurses were great and gave me a chair. But my arms decided they didn't like the cold so started shaking and flapping around. Then my body followed suit and stopped working properly. I left and walked for a bit to get warm, but the damage was done, and I got stuck in bed for a couple of days after because everything just hurt too much.'

Auckland: 'I don't have a car and I'm disabled, so it's felt incredibly hard to access any of the local CBAC centres [community-based assessment centres] over previous level 4/3 at times when I've had some level of viral symptoms. The only reason I have had access is because I am a nurse and could organise swabbing myself through work.'

Wellington: 'Again, the usual back doors issue. I am ambulatory but the step up is difficult and sometimes painful especially when drivers don't pull into the stop but instead angle the bus so only the front door is at the footpath so you're stepping up further from the road. This happens often. Honestly, I think GWRC/Metlink have treated the drivers so badly they're being a bit bloody minded about it all – which isn't okay, but I don't think the fault lies primarily with the drivers. Jumping down to the road carries a risk of falling/injury for me. Also the reduced timetables make it harder to get to a specific appointment time, especially as there's nowhere open that's safe to wait, use a bathroom, etc. I haven't needed to access testing personally, but from what I've heard it's virtually impossible to do without a car.'

Canterbury:	'...long wait like a month to get an appointment close enough to home that I can walk and take my child in his wheelchair or with his blind cane.'
Otago:	'Temporary accessible parking was established in George Street outside the Meridian Mall entrance. However, there was no temporary kerb ramps provided.'
Otago:	'When going for my 2nd vaccination I decided because of the nausea felt at my 1st one, I couldn't catch the two buses each way needed for me to get there as I didn't want to feel like waiting for buses and risk vomiting onboard. The buses had a reduced timetable. I ended up by getting a taxi.'

4.4.1.2 Disabled people's experiences of transport during lockdown: Interviews

Interviews were carried out with nine survey participants who indicated they were willing to share more about their experiences. Of these, eight people participated in a phone interview. One other participant who lives in Otago/Ōtākou and is hard of hearing provided further detail of their experience via email.

The interviews included people from around the country, including a mix of people who live in small towns, semi-rural areas, and cities. The regions represented in the phone interviews include Manawatū-Whanganui, Auckland/Tāmaki-makau-rau, Nelson/Whakatū, and Otago/Ōtākou.

Interview participants were not asked specifically about their impairment, but most offered this information anyway. The stories collected represent people with different impairments, including hearing impairment, vision impairment, blind, difficulty walking, and temporary loss of mobility following a fall.

All participants expressed difficulty moving around their community during lockdown, and that the difficulties that they are used to experiencing as a disabled person were exacerbated with COVID-19 restrictions in place. It was clear that the interactions of multiple challenges made their lives particularly difficult. Many expressed anxiety related to the illness itself, to other people's attitudes if they did not or could not follow the lockdown rules, and to difficulties due to disruptions to their normal transport and activity choices. Their transport challenges had effects on their lives and on the lives of those in their households. In sum, the effects of lockdown on disabled peoples' lives appear to be universally serious in terms of their wellbeing.

Three main themes emerged from these stories: accessing the bus, accessing Total Mobility, and accessing transport information. These themes are described in more detail here.

Accessing the bus

Many of the interview participants described difficulty accessing the bus due to the rear loading requirements during lockdown. Most bus-controlling transport authorities stated that front entry to buses would still be available for passengers who needed it. Despite this, interview participants described reluctance from drivers to let them board at the front of the bus. Most participants had compassion for the drivers, who they believed were fearful of 'breaking the rules' or being exposed to the virus themselves.

For people with difficulty walking, entering at the front of the bus is important as the bus is able to kneel, allowing for easy access. Multiple participants shared that it would be extremely painful or impossible to access the bus without the bus kneeling.

Participants with vision impairment explained that entering the front of the bus is more familiar for them, making it easier for them to pay for their journey by tagging on, and easier to find a seat. One participant shared that they can get on the bus without it kneeling, but that their guide dog is trained to enter only the front door for safety reasons. If they were to trip entering or exiting the bus, being at the front door ensures they are visible to the driver.

Participants asked for better training of drivers, more explicit rules related to public transport during lockdown, and better accountability from bus companies when access needs were not met. One respondent suggested that during lockdown if someone requests to enter from the front, the driver should simply ask what the passenger needs in order to be able to access the bus. This prevents assumptions, makes the passenger feel accommodated, and increases the chance they will be able to access the bus. It is also likely to make the driver feel more confident and comfortable.

Accessing Total Mobility

Two interview participants who were blind or vision impaired described challenges in paying for their taxi rides using Total Mobility cards. Due to a taxi company's preference for contactless payment, one participant was asked by the driver to swipe their card themself, which was impractical with their vision impairment. Multiple interview participants suggested that Total Mobility cards have a payWave feature or other contactless payment method in the future.

Some respondents, who did know about the 100% subsidy in 2020, discussed the differences in the trips they were able to take in the first lockdown when Total Mobility was fully subsidised, compared to the subsequent lockdowns where it was not. One participant described rationing their trips, including medical trips, because of the expense. Some participants described how they are at greater risk from COVID-19 so need to avoid exposure to the virus on public transport by taking taxis. The 100% subsidy enabled them to do this.

Accessing transport information

Multiple participants described uncertainty about their transport options during lockdowns. Many of the participants who were Total Mobility customers said they did not know about the full subsidy the first time Aotearoa New Zealand was in Alert Levels 3 and 4 and were unsure about whether it would be provided if the country went into Alert Level 3 or 4 again.

Information uncertainty also applied to changes to bus route and timetables during lockdown. Some participants described being unsure whether their bus would show up and if it would be operating as normal. One vision-impaired participant highlighted that signage at bus stops detailing changes is not useful for everyone. They suggested that advice on where to find information about transport changes be shared with disabled communities now so that they know where to look in future lockdowns. This would also enable disability advocacy and support organisations to come up with a proactive plan to pass on information to their members who might not have access to the internet.

4.4.1.3 Non-disabled people's experiences of transport during lockdown: Interviews

Seven non-disabled participants also discussed their experiences in follow-up phone interviews. The respondents came from three areas: Waikato (Hamilton/Kirikiriroa), Auckland/Tāmaki-makau-rau and Wellington/Te Whanga-nui-a-Tara, skewing the sample towards those who live in cities.

The comments from this group of participants were starkly different from those from the disabled peoples' interviews. Generally, non-disabled respondents mentioned enjoying transport-related aspects of lockdown and the reduced car travel that came with it. Most said they enjoyed cycling and walking more, which they were able to do because they felt safer and it was more pleasant to do (due to reduced motorised traffic) and because they had more time for slower transport modes (due to reduced overall travel time). Others mentioned enjoying a lack of congestion on the roads when they did decide to drive. Of note, most participants emphasised they were 'lucky' and lived within walkable distances to essential services.

Only one participant out of the seven, who described themselves as immuno-compromised, mentioned experiencing a (non-transport related) barrier. This participant mentioned having to rely on others to collect

groceries for them, which they otherwise would not have. They said the experience made them realise how much vulnerable people must rely on others around them and felt they had little structural support to get their needs met.

4.5 Transport providers' perspectives on Total Mobility

Results from the three online surveys of transport providers and two workshops are summarised here. While the surveys were targeted at different provider groups (local government staff; advocates for, and assessors of, Total Mobility eligibility; and private/community transport operators), the workshops hosted representatives of all groups. Results are grouped according to the themes arising across surveys and workshops.

- **The survey of local government Total Mobility providers** had six responses: five from regional councils and one from a city council.

- **The survey of advocates and assessors** had 27 responses. The majority of respondents worked in large cities (21 responses), with smaller numbers working in small cities/large towns (2 responses) or small towns/rural areas (4 responses).

- **The survey of drivers and transport operators** yielded just two results, and it was not analysed further.

- **There were nine workshop participants in total**, including five local government staff, two staff members of disability advocacy organisations, and two owner/operators of private taxi companies that deliver Total Mobility services.

4.5.1 Provider views on the benefits of Total Mobility

The respondents were unanimous in identifying the greatest benefit of Total Mobility as the access it provides to disabled community members who would not otherwise be able to travel as often. In the workshops, all participants felt that the scheme allowed disabled people a level of independence and the ability to get out into the community. Specialist mobility services (companies specialising in transporting disabled people) and companion driving services were viewed as particularly important for people requiring additional assistance.

4.5.2 Provider views on the challenges delivering Total Mobility

Two council representatives in the survey identified providing the service to people in rural/small towns as a key challenge. For people who live in relatively isolated areas, the subsidy is not enough to cover the large cost of getting between home and the destination. In these small towns there are also challenges as small transport providers struggle to survive. One council raised concerns about potential increases in the cost of providing the service as the population ages.

Workshop participants also discussed challenges relating to costs for clients, noting that many customers have low incomes, and that the baseline costs of companion driving services are more expensive than taxis.

As well as the cost for clients, other challenges raised at provider workshops were the shortage of wheelchair-accessible vehicles, and inconsistency of customer service. The shortage of wheelchair-accessible vehicles related to:

- areas without any wheelchair-accessible services at all

- the cost to providers of wheelchair-accessible vehicles

- the hoist lift fee that providers receive not being sufficient to cover the necessary time

- a reported shortage of vehicles at school pick-up and drop off-times, and in the evenings and weekends.

Inconsistency of customer service related to:

- a reported inconsistent quality of driver training

- shortage of training providers

- drivers reportedly taking advantage of disabled customers.

Stories of corrupt practices ranged from drivers taking disabled customers on indirect trips so that they got a larger fare, through to providing the wrong change, or not swiping the customer's Total Mobility card.

4.5.3   Provider views on potential improvements to Total Mobility

Recurring themes across survey questions and in the workshops included the following recommendations related to potential improvements of the Total Mobility scheme:

- **Planning for Total Mobility**

  – Improve forecasting for future demand, given ageing populations.

  – Improve the consistency of Total Mobility provision between regions.

  – Increase advertisement of the scheme.

  – Allow for flexible assessment options, such as over Zoom or phone call.

  – Increase capacity: attract more providers, in more locations.

  – Consider increasing the grants available to providers to purchase wheelchair-accessible vehicles.

  – Consider changes to administration to make assessments simpler and less expensive.

- **Providing a quality Total Mobility experience**

  – Improve consistency and reach of driver training.

  – Incorporate a more nuanced understanding of disability into the scheme.

- **Providing an affordable Total Mobility experience**

  – Increase equity of the scheme by increasing the subsidy available for clients because the cap does not allow for long journeys.

  – Consider reallocating the wheelchair hoist fee from customers to government to remove inequity for passengers who use a wheelchair.

  – Consider removing the fare cap altogether by fully subsidising Total Mobility.

With reference to planning for Total Mobility, there was concern that because many customers are older people, there is likely to be increased demand in future. Councils and council-controlled organisations do not necessarily have good data to forecast demand. While customers may not see inconsistencies between regions unless they travel between regions, those involved in local government recognise inequities in Total Mobility availability, and the cost to customers in different parts of Aotearoa New Zealand.

Providers were concerned about the inconsistency of service experienced by Total Mobility customers. Regarding driver training, it was noted that in Wellington, drivers who are part of the Total Mobility scheme have to pass two New Zealand Qualifications Authority (NZQA) unit standards, whereas in Auckland, drivers have to pass five NZQA unit standards. Both the limited availability of organisations providing this training and a lack of monitoring of the delivery of this training was raised. It was felt that there is a lack of consistency in the quality of this training. The training was seen as an 'add-on' by agencies that normally provide 'truck and trailer-type' training.

The service that customers experience is also affected by the quality of assessments. Some participants felt assessments did not provide an accurate picture of the challenges faced by the Total Mobility applicant in

travelling either by public or private transport. Annual training for assessors was raised along with regular review of contracts and requirements of assessing agencies. Discussions about assessment highlighted that assessment agencies are not paid by authorities to complete the assessments. Some assessment agencies pass on their costs to customers, and some do not. Some only carried out assessments for their own members, while others assessed any applicants for the scheme whether they were members of their organisation or not. There was no consensus on whether or not assessment agencies should be paid by the regional authorities for carrying out Total Mobility assessments.

Affordability of the scheme for customers was a key concern for providers. Some customers face costs accessing essential services such as health care because their trip is a long way across a city and the subsidy is not enough to cover half of their fare. Other inequities customers face include the inconsistent availability of wheelchair-accessible vehicles, as noted above.

An interesting point arose in the responses about understandings of impairments and disability. Several individual survey respondents expressed the need for improved understandings of different impairments or disabilities. One of these same respondents then demonstrated a lack of understanding about why people with certain impairments need access to Total Mobility, insinuating that people with intellectual disabilities should be excluded from the scheme because they can physically get on the bus.

> '… go back to different cards for people who are able to catch public transport, eg intellectual impairment, as I feel the current system is being abused by people who just want cheaper bus fares.'

This is concerning as it raises questions as to whether personal biases like this are preventing people with certain impairments from accessing the scheme if they need it. An opportunity for improvement, then, is to raise awareness across the transport sector of the purpose and scope of Total Mobility.

5   Discussion

This research has highlighted a very wide range of transport challenges that disabled people experience in Aotearoa New Zealand. From the 15,102 respondents, it is clear that transport is difficult for disabled people. This research confirms what the literature has reported for decades – that disabled people have challenges with transport (Human Rights Commission, 2005).

Many of the issues presented in this report were highlighted in the Human Rights Commission's (2005) report *The Accessible Journey*. While some interventions have been made since 2005, many problems remain. The extent to which interventions have been successful at improving people's journeys is unclear, partly because accessible journeys are not measured. This and other issues are discussed here.

5.1   Systemic insights into disabled people's experiences of transport

5.1.1   Accountability for the accessible journey

Time and again in literature and in disabled people's stories, we hear of accessibility for disabled people being about 'the whole journey'. But while a single component of a trip can make the whole journey impossible, the transport sector operates in distinct sectors, each with responsibility for a unique component of infrastructure, or for part of the public transport sector. At policy level in transport there are overarching goals and vision, but that coherence falls apart at project and service delivery. The measures used in planning and investment that determine how an authority will deliver on its vision are based on traffic network models, and analyses of crash patterns from a road safety lens. There are no staff employed at councils to find out whose journeys are difficult, painful, or impossible.

Equally, there is no evaluation of the journeys that new investment enables, or whose lives are made easier when infrastructure is improved. It is unsurprising that disabled people report the exact same barriers and challenges today as they have been doing for decades when there is zero accountability in the transport sector for making their journeys better. Disabled people incur a time and effort cost for their journeys.

5.1.2   Even if a trip goes well for them, disabled people's travel takes longer than non-disabled people's travel

There are known delays, such as longer routes due to inaccessible footpaths and road crossings. Some infrastructure that looks accessible to a transport planner may not feel safe for a disabled person, so they take a longer, more trusted route as a rule. In addition to known diversions compared to the most direct route, disabled people are more likely to incur 'unexpected' delays, such as temporary works sites with no accessible route through, or a public transport connection that becomes unmanageable due to not enough time between connections, or because of the actions or attitudes of staff or passengers making the journey difficult. Disabled people are less likely to have backup options on their journeys such as a car at home, and their lower incomes mean fewer choices when journeys do not go to plan.

On top of the time and distance premiums of everyday journeys that disabled people bear, they are more likely than other people to experience complex physical and mental health problems. Therefore, their energy and resilience may be lower than other people's, making a taxing transport journey even more difficult. These time, distance, and effort costs are not accounted for by the transport system, which measures distances according to a view of what is possible by different modes, rather than a more nuanced analysis of the choices available to different people in any community. This ableist view misunderstands disabled people's needs and the seriousness of challenges that arise when transport options are inaccessible.

Our results suggest that the time and effort costs are one of the most disabling aspects of transport. While individual factors such as footpath standard and the presence of tactile pavers are important, it is the combined impact of a multitude of barriers that makes for long and tiring journeys for many disabled people.

5.1.3 Because of the time, distance, and effort, disabled people forgo more travel than other people

Disabled people are more likely to report a trip not made than other people because the time, distance, and effort required make their threshold for staying home lower than that for other people. Further, based on the results of our survey of people's transport experiences during lockdown, the trips that disabled people forgo are more often than others' 'essential' trips that support their wellbeing directly. For people who find it difficult to move around, a trip not taken can mean deficits in health care, including not being able to take those they care for to the doctor; it can mean going without food; and in the direst cases it can mean it is impossible to get emergency care or to escape from an unsafe situation.

5.1.4 Total Mobility has benefits and costs for disabled people

It is clear from the stories they told us that disabled people appreciate the door-to-door convenience of travel subsidised by the Total Mobility scheme. For some people Total Mobility trips are a social experience as much as a transport trip. The door-to-door travel removes much of the anxiety associated with planning a journey using streets and public transport, where barriers caused by infrastructure, or by the attitudes of people along the way, have potential to cause distress and to add time, effort, and in some cases, physical pain to the journey. Total Mobility also reduces disabled people's reliance on family, whānau, and other support people to give them a ride.

There are also many costs associated with Total Mobility. Unlike its name suggests, the service does not provide disabled people with the same amount of transport choice as other people have, largely because it remains more expensive than most disabled people can afford. Many survey respondents who are registered for Total Mobility use it zero times or once per week on average, saving it for the most essential or complex trips. There are also problems with the inconvenience of having to book taxis in advance, and therefore not being able to live the spontaneous life than many non-disabled people take for granted. The lack of wheelchair-accessible services also limits many disabled people's choices for travel with the Total Mobility scheme.

Many of the issues raised in engagement with Total Mobility service providers are pertinent here, particularly the issue of consistent and effective training of drivers and managers of taxi services. An invigoration of the Total Mobility scheme would help to continually impress upon those involved the importance of providing a quality service for customers.

5.1.5 The flow of information between disabled people and those who work in transport is disrupted

Analysis of survey responses and of conversations with disabled people through this research highlighted that many disabled people do not know how to get information about public transport or Total Mobility. The language of the transport sector is complex, and it is difficult for transport planners and engineers to appreciate how hard it can be for anyone outside of that system to navigate its websites, timetables, maps, guidance documents, and infrastructure conventions successfully. The wide range of organisations involved in transport can be very confusing, and the names and boundaries for those organisations change regularly.

People who find it difficult to communicate in English are at most disadvantage using transport, particularly finding their way on unfamiliar routes and services. That includes:

• migrants who do not speak or read English

- disabled children yet to learn language

- people with learning disabilities who find complex language a barrier

- Deaf people whose first language is New Zealand Sign Language

- blind and vision impaired people who cannot see signs or display boards

- people with a brain injury (eg, for whom understanding language and signage can be confusing).

All of these challenges affect people's confidence when they are considering a journey. Their safety out on the street and in public places is also threatened when they cannot be sure how to get to where they are going.

The information flow from disabled people back to the transport sector in the form of complaints is also weak. Many disabled people do not know how to complain, or there is not a coherent system for them to do so. A complaint about a public transport journey, for example, could be related to street infrastructure managed by a local council transportation department; to a timetabling issue that a regional authority manages; to an issue with staff on a bus or train, which could be managed by a different organisation entirely; or to an aspect of the journey affordability or vehicle standards, which may be the responsibility of Waka Kotahi. Feedback loops between complaints and action are rare. Many disabled people report frustrations reporting the same barriers to their journeys year on year, without seeing any real change in the transport system to improve to meet their needs just to get around their communities safely and with dignity.

5.1.6 Inter-regional travel is a neglected barrier that disabled people face

The lack of accessible inter-regional public transport is often reported by disabled people as a problem for them. Public transport accessibility guidance applies almost exclusively to journeys within cities and regions. There is no wheelchair-accessible route between regions of Aotearoa New Zealand, except aeroplane travel. Private coaches are not required to maintain any accessibility standards, and currently in Aotearoa New Zealand there are no wheelchair-accessible intercity coaches, which means that many disabled people cannot get on or off them. The lack of accessible inter-regional transport choices affects people's ability to attend family events such as weddings, funerals, and tangi, and of course to holiday around Aotearoa New Zealand.

5.1.7 The fragile journey: A Swiss cheese model of accessible journeys

The Accessible Journey (Human Rights Commission, 2005) highlighted that disabled people are discriminated against because transport does not provide for them as well as it does for non-disabled people. Our research has replicated those findings, and little has changed in the intervening 16 years. The disconnect across the system reflects continued ableist attitudes, habits, and practices throughout society, and this research has demonstrated that the transport sector is not immune to pervasive ableism. A disabled person's journey is risky, effortful, and often not made at all. That risk is reflected in the fragility of each component of the journey.

All aspects of a disabled person's journey can include barriers, including:

- accessing information about the journey

- footpath and road crossing problems

- permanent and temporary physical barriers

- public transport unreliability

- staff attitudes

- on-transport problems with public transport boarding, seating, the trip itself, and alighting

- getting to the destination, including knock-on effects if one part of the journey doesn't work.

It is as though a disabled person's journey components are a ladder made of Swiss cheese, with a lot more holes in it than the solid cheddar that many non-disabled people have at their disposal. Non-disabled people have more money, on average; are more likely to own and drive a car than non-disabled people; are more likely to live closer to public transport routes and to have a bicycle as an option. Therefore, if one option is unsuitable – even if it is raining, for example – non-disabled people can revert to another plan or mode of transport. The holes mean that a disabled person is far more likely to fall through the gaps, and not make it to the top of the ladder, being their final destination.

A large problem for disabled people is that their barriers and challenges – the holes in their cheese – are not acknowledged as serious enough problems by the transport sector. Access barriers mean that disabled people often travel further as pedestrians because the accessible route is not always the most direct route. They travel with more risk and pain than non-disabled people, which is not measured or mapped by transport authorities. It is not factored into decisions about what infrastructure to upgrade, or indeed in considering how much funding to apply to pedestrian networks, compared with spending on intersection upgrades to address traffic flow problems. So, while traffic itself is measured, variation in individuals' likelihood to make a trip in the first place is not considered. It is as though the sector assumes that everyone has the same choices (an equality model), and does not look first to address, with an equity lens, those who do not have the same access in the first place.

5.2 Limitations and future research

5.2.1 Sample of disabled people

Across surveys and workshops, we analysed the reported experiences of thousands of disabled people. Most of those participants completed a web survey, and the majority of respondents were contacted through the email database of those who have a current mobility parking permit and an email address registered with the permit issuer organisation, CCS Disability Action.

Our sample is not a random sample of disabled people in Aotearoa New Zealand. For that reason, we do not draw any conclusions about what an average or typical experience is. In any case, it is clear from both literature and empirical data analysis that there is no 'typical' experience. Disability is subjective by definition. The social model of disability that we use in this report defines disability as the interaction of an individual with their environment. Every disabled person has a unique experience, so we have focused on the breadth and depth of their stories. We have highlighted some differences between groups with different demographic characteristics, but we do not suggest that those differences hold for all disabled people.

Overall, however, we believe that our large sample (15,102 people) and broad research methods have provided a comprehensive picture on some aspects of the transport experiences of disabled people in Aotearoa New Zealand. We also believe that in conjunction with analysis of literature, those experiences are a useful base from which to draw conclusions about how the transport sector might change to become more inclusive.

Despite the large sample, fewer than 10% of survey respondents completed questions about demographics. This may be due to reports from some workshop participants and in the surveys that disabled people are particularly reluctant to 'explain themselves' as they are required to do so more often than others in the population. We were not able to investigate intersectionalities in much depth in this research, which is an area for future research.

We note that the disabled people least likely to have participated in our research are likely to be amongst the most disadvantaged of all. They are less likely to have access to email or internet, and therefore less likely to

have known about our research, or to have been able to participate in it, despite our efforts to provide different ways for them to tell us about their transport experiences. Therefore, there is more urgency than our stories highlight because our evidence likely represents only the surface of barriers and challenges that disabled people face when interacting with transport in Aotearoa New Zealand.

We are least likely to have heard from disabled homeless people, from remote rural populations, and from disabled people in temporary accommodation, such as refugees. Given the known interaction of disability with other indicators of disadvantage such as poverty, likelihood to be victims of violence and discrimination, and mental health challenges, more research is recommended into those whose voices are not heard as much or as loudly as others'.

5.2.2   Rideshare drivers and service providers

Currently rideshare services are not included in the Total Mobility scheme. The survey of disabled people showed that many disabled people rely on services like Uber, Ola, and Didi because they are seen as more affordable than Total Mobility. So, we attempted to survey rideshare drivers and rideshare companies themselves.

No responses were gained from rideshare drivers (such as Uber, Ola, or Didi). After failed attempts to contact rideshare companies themselves, an online survey aimed at rideshare drivers was shared in a private Facebook group for Uber, Ola, and Didi drivers based in Aotearoa New Zealand. The group has over 3,900 individual members but did not generate any survey responses. Two comments on our Facebook post may explain why the uptake was low. Both commenters expressed an interest in providing services to disabled people and said they had never received ride requests from a disabled person.

Many of these companies are taking steps to improve the accessibility of their services (eg, Uber Assist). Future research could investigate integrating Total Mobility with rideshare services or assess the accessibility of these services in detail.

The relatively small number of insights from transport service providers is an area to build on with more research. Future research might consider going to larger taxi organisations or other provider firms directly to host workshops on-site at the start or end of shifts, and to incentivise participation in the research in some way.

6 Summary of recommendations

6.1 A whole-of-journey approach to transport investment

To address the systemic barriers to more accessible journeys, a radical shift in the way the transport sector considers disabled people's transport choices is recommended. If we continue to rely on isolated interventions that address specific aspects of some trips but fail to truly acknowledge the depth and seriousness of the problem, research into disabled people's transport experiences could be repeated every decade, with little change to the problems identified.

The recommended approach is akin to that developed for road safety and the Safer Journeys strategy. It provides a vision for accessible journeys for all. Next, systemic response pillars connect that vision to action. Finally, specific interventions place the good investments that already happen in a coherent and measurable context. By strengthening the system and improving interconnections between its elements, real improvement in working towards more inclusive transport can be demonstrated. Each component of the system is described in Figure 6.1 below.

Figure 6.1   Accessible Journeys for All: A Systems Approach
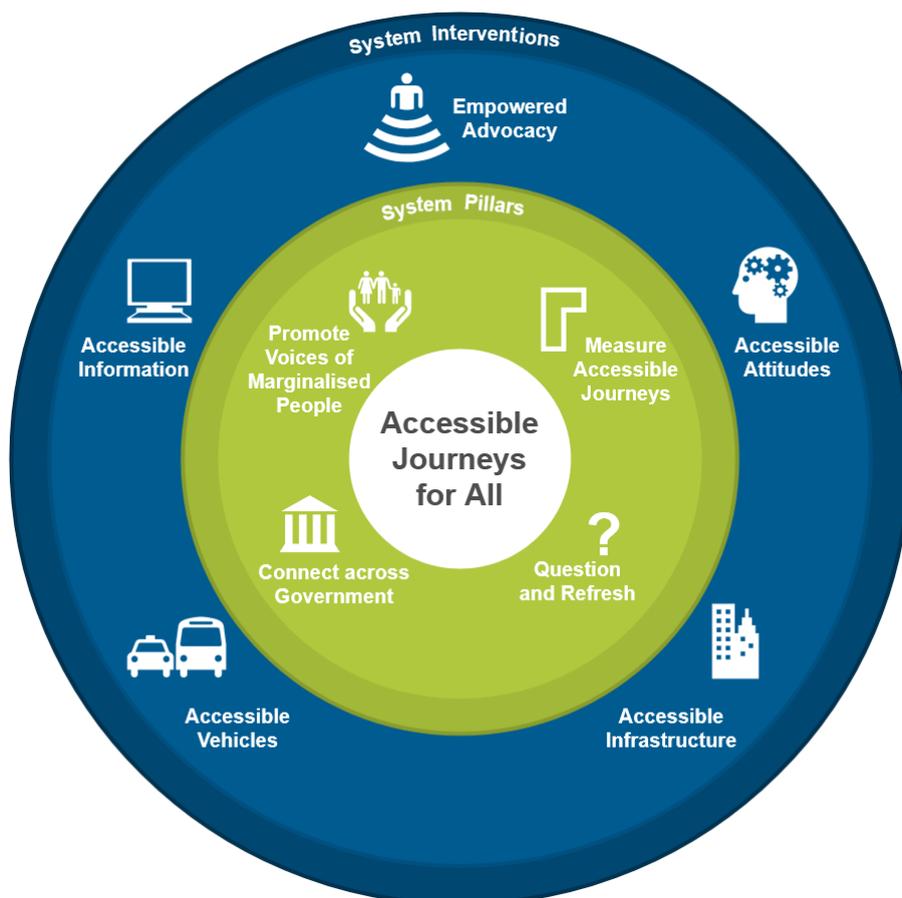
Image description: A diagram of the components of accessible journeys for all. The diagram is made up of three circles that sit inside each other. The centre circle is white and has text reading 'accessible journeys for all'. The white circle is inside a green circle, which contains four interventions that fall under the category 'system pillars'. The interventions are: promote voices of marginalised people; measure accessible journeys; connect across government; and question and refresh. The outer circle is blue and contains five interventions that fall under the category 'system interventions'. The interventions are: empowered advocacy; accessible attitudes; accessible infrastructure; accessible vehicles; and accessible information.

6.1.1 The vision: Accessible Journeys for All

There is currently no coherent, measurable vision for accessible journeys in Aotearoa New Zealand. There are several transport policy statements that reference inclusive access and providing journeys for everyone, but a specific focus on accessible journeys for all is lacking. Such a vision would provide a clear and measurable goal for the transport sector, which would help direct ongoing investment more effectively. It would also build on the original Human Rights Commission (2005) report *The Accessible Journey,* with more specific evidence as to where improvements have been made, and where there is more work to do.

6.1.2 System pillars: making the vision an accountable whole journey system

Disability and transport interact in a multitude of complex ways, as the many stories in this report attest. Therefore, having system pillars to link the vision of accessible journeys for all to the ground-level interventions is crucial if the complexities are to be understood, and barriers overcome. The recommended pillars are as follows.

1) Measure accessible journeys

The ability of all people to travel, and the diversity of people present on streets and using transport services, should be measured. There is no road safety sector without crash data, and measuring the failure of the transport system to deliver accessible journeys is a necessary step. In a climate change context, it would be naïve to simply assume that more trips are a good outcome and fewer trips are a poor outcome. However, measuring trips that disabled people need in order to live a good life, and ensuring those trips are able to happen, would be a good outcome.

There are two main ways to measure accessible journeys. First, by asking people about the number and nature of trips they make, and about trips not made. That way we can compare the rates of journeys made by different groups of people, including but not limited to disabled and non-disabled people. Other marginalised groups (eg, the LGBTQI+ community, ethnic minorities, migrants, and children) would also benefit from more effort to understand the journeys that they do and do not make. As noted in this research, disability intersects with other forms of marginalisation, so a comprehensive approach to understanding different people's experiences of trips is essential to working towards a transport system that demonstrates inclusion.

It is important to note that a trip can be 'not made' for good reason, such as an unnecessary car trip being replaced with participation from home, which does not necessarily reduce anyone's wellbeing. Indeed, reduction in trips using fossil-fuelled transportation can be considered a public good, given climate change mitigation efforts. Equally, replacing car trips with shorter trips, particularly by more sustainable modes than solo car travel, could be a way to maintain good levels of access while reducing transport-related emissions. A nuanced approach to measuring 'trips not made' is necessary to capture the benefits and costs in deciding what an optimal amount of travel is, for people in different contexts.

Second, people's presence on streets can be counted and measured, just as traffic composition is measured by categorising different kinds of vehicles. The number and proportion of mobility aids on any street can be used as a proxy measure for walking difficulty, and intercept surveys can be used to understand the distribution of people of different genders, age groups, ethnicities, and impairments (including vision, hearing and communication impairments). Over time, the more data that we have about revealed participation, the more we can connect those patterns back to infrastructure specifications. Just as crash patterns give insights into problems with infrastructure, so understanding diversity can help to improve the maturity of accessible journeys as an area of interest within the transport sector.

2) Promote voices of marginalised people

All transport and government authorities, including the recently announced Ministry for Disabled People, should do more to promote the voices of disabled people at all levels of transport policy and investment. Deconstructing ableism can only happen when disabled people's voices are heard throughout the transport policy and planning systems. It is clear from this research that disabled people have a lot to say about how transport does and does not meet their needs for participation. An urgent step towards improvement is for their voices to be promoted more broadly across local, regional, and national authorities so that transport investment considers their needs, from their perspective, in the context of whatever decisions are being made. Promoting the voices of marginalised people may include, for example, more involvement of accessibility subject matter experts in the review of policies, plans, and transport infrastructure designs. Roles in the community, advocacy and professional services sector should be made more inclusive so that more disabled people are welcomed to work there. More disabled people should also be recruited as transport professionals. The onus is on the transportation sector to become more aware of its biases and to become more inclusive and diverse. Only then will the presence of disabled people become the norm rather than the exception.

3) Connect across government

Roles should be created within the mandate of accessible journeys for all that cross transport, health, social development, education, and community sectors at national, regional, and local levels. Transport does not exist for itself, it exists to connect people to life-supporting opportunities to maintain good lives and to thrive. It is therefore crucial that a systemic response to providing accessible journeys includes conversations and strategies within a range of different sectors. Planning for new schools and early childhood education facilities, for example, should involve early conversations about how all people will access them, as should planning for health services and social development offices. Advice to jobseekers would benefit from consideration about how people can get to a job interview, or their transport choices to get to new places of employment. The more people there are within ministries and organisations other than transport who understand transport, the more likely it is that transport problems can be overcome.

4) Question and research

More specific research into the reasons why disabled people do not always have accessible journeys should be undertaken. Compared to other specialties within transport, accessibility is under-researched and misunderstood. It does not have an extensive library of journals devoted solely to its research. There are few international conferences that bring together disability and transport professionals, and those that do exist largely share case studies from isolated interventions rather than discuss systemic change. Whereas road safety has thousands of professionals worldwide and decades of measurement and quest for improvement, transport for disabled people is largely assumed to be addressed by design standards and local community engagement. These responses reflect an industry struggling to understand the complex interaction of disability, transport, and everyday life, and to apply that understanding to transport policy and investment. The extremely wide-ranging insights gathered by this research are testament to its immaturity as a concept, and the challenges relate to the lack of coherent vision and measurable outcomes, as described above.

6.1.3   System interventions: Business as usual, done better

The following intervention areas are already delivered to varying degrees but could be improved to respond to the insights raised by this research.

1) Empowered advocacy

The transport and disability sectors should work together to improve information about challenges and opportunities between them. It is clear that the language of transport is complex, and many disabled people do not understand how to find out information, or how to complain if transport does not work for them. By working together, disabled people can be invited to ask good questions, participate in democratic processes, and claim representation in government. In doing so, disabled people can themselves be part of the solution towards more accessible journeys.

The benefits of improving advocacy through strengthened flow of information are both direct, in terms of pushing for faster and more ambitious improvements to transport accessibility, and indirect, in terms of the visibility of disabled people in transport decision-making itself becoming an implicit incentive for those involved in the sector to do better. More disabled people should be encouraged to pursue careers in transport so that over time, change can be promoted even more strongly from within.

2) Accessible attitudes

The transport sector should improve its own awareness of, and approach to, accessible journeys through co-design of systemic responses with the disability sector. Such responses may include improved training of transport design engineers and planners, in both the tertiary education sector and as part of ongoing professional development. It must also include challenging implicit ableist attitudes in the transport sector, which reflect the ableist attitudes of society.

A focus on accessible journeys in organisational promotional activities and industry events, and explicit tools to promote better outcomes is required. This could include accessibility audits of plans with an 'accessibility sign off', and street audits of existing infrastructure to assess its accessibility standards. Ongoing training and professional development for all of those involved in public (and private sector) transport operations would strengthen the accessible journey for disabled people.

3) Accessible infrastructure

As well as co-designing responses to improve transport process, all transport infrastructure standards should be designed with an 'accessibility first' lens. Although many transport design guides state that the user hierarchy starts with consideration of disabled people, their needs are not always explicit in the guidance detail. Improving guidance includes the need for a disability lens to be applied to review of:

- District Plan technical specifications
- development standards
- local and national technical guidance, such as mode-specific guides, street design guides, and guidance related to the design of public places and urban design.

The opportunity presented by prioritising accessibility improvements through ongoing maintenance and renewals is missed if accessibility is not a strong driver of investment all through government. Many local authorities purport to replace and renew old infrastructure so that it meets new accessible standards, but implementation of that goal is inconsistent.

4) Accessible vehicles

Government should continually seek to improve design standards and funding for accessible vehicles, including taxis, community transport vans and shuttles, and public and commercial coaches, trains, and ferries. Accessible technology is particularly important, including websites and mobile phone applications. Disabled people should continue to be involved in decisions about vehicle accessibility standards.

Interventions that support accessibility must also be audited and made 'driver-proof' so that they cannot be turned off or disconnected if a driver does not appreciate their benefit.

5) Accessible information

Efforts to improve information flow between the transport sector and disabled people, and from disabled people to transport professionals, should be revamped and improved. An all-in-one government communications channel for transport that includes information about local, regional, and national transport choices, staffed for example by a government/community partnership, could provide an in-person, telephone, and online source of answers to people's questions about anything from current bus timetables and wayfinding, through to how to complain about flooded footpaths, or to report poor lighting at a public transport stop. The lack of reliable information about everyday journeys is a major and unnecessary barrier to many disabled people's journeys, and in conjunction with other system interventions and pillars, improving the flow of information could go a long way towards a more efficient and inclusive transport system. Improvements to communications and information flow would also support disabled people's access to complaints processes, providing a valuable feedback loop for the transport sector.

6.2   Recommendations for Total Mobility

Regarding Total Mobility specifically, this research has highlighted several interventions that could be considered to improve the reach and effectiveness of the scheme. The recommendations here describe how the scheme could be improved. They are drawn from insights provided by Total Mobility providers and their customers.

- **Planning for Total Mobility**
  - Improve forecasting for future demand, given ageing populations. Research should be undertaken into the kinds of trips that people make, and do not make, using the Total Mobility scheme, and how the number and nature of those trips might change given likely changes to population age and structure around Aotearoa New Zealand.
  - Improve the consistency of Total Mobility provision between regions. The funding mechanisms and subsidy levels could be clearer and more consistent between regions, which would create a fairer, more transparent scheme that is easier for national-level providers (including advocates and assessors) to work within.
  - Increase the scheme's profile. There are many disabled people who do not know about Total Mobility, so it is worthy of continued investment in its advertising.
  - Review the consistency and flexibility of assessment options. Provision of remote assessment, such as over video call or phone call, would help improve the affordability of assessment while giving customers and potential customers more choices.
  - Increase capacity: attract more providers, in more locations. Investigate partnerships with community transport providers, and innovative solutions such as publicly subsidised on-demand services, to extend the reach of Total Mobility into more areas.
  - Consider increasing the grants available to providers to purchase wheelchair-accessible vehicles.
  - Consider changes to administration to make assessments simpler and less expensive.
- **Providing a quality Total Mobility experience**
  - Improve consistency and reach of driver training. It is apparent that some drivers receive more training and at a higher quality than other drivers. Improving the professional development of government and other staff involved in the scheme could help to improve driver training and therefore the customer experience of Total Mobility.

–   Incorporate a more nuanced understanding of disability into the scheme. There is inconsistency in assessment and understanding of the complex needs of many disabled people that affects how they can or cannot use public transport. Improving the guidance of the Total Mobility scheme to increase awareness of the interaction of disability and transport would help for its reach to be extended to more people who would benefit from it.

- **Providing an affordable Total Mobility experience**

    –   Increase equity of the scheme by increasing the subsidy available for clients because the cap does not allow for long journeys.

    –   Consider reallocating the wheelchair hoist fee from customers to government to remove inequity for passengers who use a wheelchair.

    –   Consider removing the fare cap altogether by fully subsidising Total Mobility. The affordability of Total Mobility was the most commonly reported barrier that disabled people say stops them using it more often, despite its many clear benefits to their lives. The most accessible journey is a reliable door-to-door journey, so making that journey more affordable (given that it would be paid for through government funds, and therefore indirectly contributed towards by its customers) is the most obvious way to improve the scheme for disabled people.

6.3   Commentary and recommendations about inclusive transport research

This research was carried out in a co-designed process between disabled people and transport professionals. We note that all research involving the public should be inclusive, and methods such as providing New Zealand Sign Language interpreters and videos, translating surveys into Easy Read format, asking workshop participants about their access needs and aiming to meet them, and providing travel costs for participants should all be basic provisions.

We recommend that all transport research projects involving interaction with the public include provisional sums to make workshop venues, surveys, conversations, and dissemination activities accessible to all people so that researchers are not disadvantaged should they seek to make these accommodations.

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Appendix A: Full list of survey questions

Travel Survey
Questions about your travel as a disabled person

This survey is an opportunity for disabled people to share their experiences of transport in Aotearoa New Zealand. The survey is part of a research project that Waka Kotahi (the New Zealand Transport Agency) has funded, to understand disabled people's experiences of transport. The research project is being delivered by transport consultancy MRCagney, in collaboration with the New Zealand Disabled Persons Assembly.

The information you provide in the survey will be used to improve transport planners' understanding of how disabled people experience transport. The results from the survey and a series of workshops we are running will be analysed for a research report. The report will include recommendations for improvements that could be made to transport to make disabled peoples' journeys easier.

Any disabled person in New Zealand can participate.

There will be an opportunity at the end of the survey to provide or update your contact details. The only reason we collect contact details is to send a summary of the research results, when that is available later in 2021. Your contact details will be stored separately from the rest of your contributions.

If you have any questions about the research, survey, or would like information about the workshops we are hosting around the country, please contact researcher Fiona Thomas by email at fthomas@mrcagney.com

A New Zealand Sign Language version of this survey is available at:
https://www.surveymonkey.com/r/Transport_NZSL

1. Do you have a permanent disability, lasting six months or more, that prevents you from doing things that other people can do?

   ○ Yes

   ○ No

   ○ No, but I am completing this survey on behalf of a disabled person. (Note: If you select this option, please answer all following questions from the disabled person's perspective.)

2. How many trips do you make by public bus (or train) in a typical week? Getting on then off the bus (or train) counts as one trip. For example, if you use the bus twice per day, that would be 14 trips per week.

   [   ]

3. How many times do you go for a walk (including if you use a mobility aid such as a wheelchair) just for exercise or recreation in a typical week? For example, if you usually go for a walk for exercise every day, that would be 7 times per week.

   [   ]

4. How many times do you walk (including if you use a mobility aid such as a wheelchair) for transport in a typical week? Going somewhere for transport means a trip to another place such as work, the shops, a friend's house, church, or anywhere else. Walking for transport includes a walk to a bus or train stop.

5. How many times do you ride a bicycle or tricycle (including a hand-operated bicycle or tricycle) for transport in a typical week? Going somewhere for transport means a trip to another place such as work, the shops, a friend's house, church, or anywhere else.

Travel Survey
Questions about Total Mobility

6. Are you currently enrolled for the Total Mobility scheme?

○ Yes

○ No

○ I don't know

Questions 7–11 are for people enrolled in the Total Mobility scheme. Please leave these answers blank if you are not enrolled.

7. How many times do you use the Total Mobility scheme for subsidised taxi trips in a typical week?

○ 0 times

○ 1

○ 2

○ 3

○ 4

○ 5

○ 6

○ 7

○ 8

○ 9

○ 10

○ More than 10 times (please specify how many times per week on average you use Total Mobility)

8. Would you use the Total Mobility scheme more often if it were cheaper?

　○ Yes

　○ No

9. Would you use the Total Mobility scheme more often if it were easier to book a taxi at convenient times?

　○ Yes

　○ No

10. What do you like best about the Total Mobility scheme?

　

11. Are there any changes you would like to see made to the Total Mobility scheme?

　

Travel Survey

Questions about travel being too difficult

12. In the last week, was there an outing you would have liked to make, but you did not go because a transport problem made it too hard to get there?

　○ Yes

　○ No

13. If yes, what was too hard? Tick all that apply.

　○ It was too far to walk (including with a mobility aid)

　○ It was close enough to walk (including with a mobility aid) but there was no accessible walking route

　○ It was close enough to walk (including with a mobility aid) but I did not feel safe

　○ It was too far to use a bicycle or tricycle

　○ It was close enough to use a bicycle or tricycle but I did not feel safe

　○ I could not afford petrol

　○ I could not afford parking

　○ I would not be able to find a park

　○ There was nobody to drive me

　○ I could not afford a taxi

　○ There were no taxis available

　○ Traffic was too busy

　○ There was no convenient bus (or train)

Other (please specify)

14. Please describe the trip that you decided not to take and why you decided not to go:

Travel Survey

Questions about travel during COVID-19 Alert Levels 3 and 4

15. Are you aware that public transport and Total Mobility were free during COVID-19 Alert Levels 4 and 3 in 2020?

○ Yes

○ No

16. If yes, did you use Total Mobility more often when it was free?

○ Yes

○ No

○ Not sure/I can't remember

17. If yes, did you use public transport more often when it was free?

○ Yes

○ No

○ Not sure/I can't remember

Travel Survey

Question about anything else you would like to say about transport

18. Do you have anything else to say about transport in New Zealand?

○ No

○ Yes

If you answered 'Yes', please enter your comments here

Travel Survey
Question about you

19. Which region do you live in? Select one answer from the dropdown menu.

[   ]

20. Do you live in a city, a town, or a rural area?

○ A city (more than 20,000 people)

○ A town (fewer than 20,000 people: smaller than Blenheim or Levin)

○ A rural area

21. Please enter your age

[   ]

22. What is your ethnicity? Tick as many as apply to you.

○ New Zealand European   ○ Tongan

○ Māori   ○ Niuean

○ Samoan   ○ Chinese

○ Cook Islands Māori   ○ Indian

○ Other (please specify)

[   ]

23. What is your annual personal income?

○ $0–$10,000   ○ $60,001–$70,000

○ $10,001–$20,000   ○ $70,001–$80,000

○ $20,001–$30,000   ○ $80,001–$90,000

○ $30,001–$40,000   ○ $90,001–$100,000

○ $40,001–$50,000   ○ More than $100,000

○ $50,001–$60,000

Travel Survey

Question about you

Do you have difficulty with any of the following?

24. Seeing, even if wearing glasses

    ⭕ No difficulty

    ⭕ Some difficulty

    ⭕ A lot of difficulty

    ⭕ Cannot do at all

25. Hearing, even if using a hearing aid?

    ⭕ No difficulty

    ⭕ Some difficulty

    ⭕ A lot of difficulty

    ⭕ Cannot do at all

26. Walking or climbing steps?

    ⭕ No difficulty

    ⭕ Some difficulty

    ⭕ A lot of difficulty

    ⭕ Cannot do at all

27. Remembering or concentrating?

    ⭕ No difficulty

    ⭕ Some difficulty

    ⭕ A lot of difficulty

    ⭕ Cannot do at all

28. Communicating using your usual language – for example, understanding or being understood by others?

    ⭕ No difficulty

    ⭕ Some difficulty

    ⭕ A lot of difficulty

    ⭕ Cannot do at all

Travel Survey

Space for your contact details if you would like to receive a summary of the results of this survey

29. Thank you. That is the end of the survey.

If you would like to receive a summary of the survey results, please enter either your email address or postal address here and we will send you the results.

Your contact details will not be linked to the rest of your answers.

Travel Survey

30. This survey is only for disabled people, including those completing the survey on behalf of a disabled person. If you have any comment about transport for disabled people in New Zealand, please enter your comment here.

Appendix B: Participant information sheet

MRCagney
BETTER TRANSPORT • BETTER PLACES • BETTER CHOICES

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Information for participants

What is this workshop for?
This workshop is an opportunity for disabled people to share their experiences of transport in Aotearoa New Zealand. The workshop is part of a research project that Waka Kotahi (the New Zealand Transport Agency) has funded, to understand disabled people's experiences of transport. The research project is being delivered by transport consultancy MRCagney, in collaboration with the New Zealand Disabled Persons Assembly.

The information you provide in the workshop will be used to improve transport planners' understanding of how disabled people experience transport. The results from all workshops and from an online survey we are running, will be analysed for a research report. The report will include recommendations for improvements that could be made to transport, to make disabled peoples' journeys easier.

Who can participate?
Any disabled person in New Zealand can participate. We have limits on participation numbers at each workshop so that everyone's voice can be heard. You are welcome to bring a support person to the workshop. All disabled people who participate will receive a $20 koha voucher.

What will be discussed?
The workshop will explore your experiences of transport in New Zealand. It will add to information that we are gaining from a survey of disabled peoples' experiences of transport. We are expecting to publish this survey in the coming weeks and you will be sent an email inviting you to participate. This email will come with the option of a survey translated into NZ Sign Language or a separate Easy Read survey.

Before the workshop, please consider the following questions:
- What is good about transport for you in New Zealand?
- What is difficult for you about transport in New Zealand?
- What changes would make your journeys easier?

What will you do with the information I talk about?
There will be an opportunity at the end of the workshop to provide or update your contact details. The only reason we collect contact details is to send you information about the workshop, to send a summary of the research results, when that is available later in 2021, and to provide you with your Koha voucher for participating. Your contact details will be stored separately from the rest of your contributions.

How do I find out more information?
If you need help with transport costs or more information to attend a workshop, or if you have any questions about the workshop, please contact researcher Fiona Thomas by email at fthomas@mrcagney.com

Appendix C: Disabled peoples' workshop questions

First-round question (5–10 minutes)

How would you sum up your day-to-day experience of transport, in a sentence?

Second-round question (10–12 minutes):

In our group, what's common to several people and what's different?

Third-round question (15 minutes):

Thinking about these commonalities and differences in our experiences of getting around day to day, what are some big implications for New Zealand's transport systems?

Focus question:

If you were put in charge of Total Mobility and could make one big change, what would that be, and why?