From Data to Dignity: Health and Wellbeing Indicators for New Zealanders with Intellectual Disability

Mai i te Raraunga ki te Rangatiratanga o te Noho: Ngā Tūtohu Hauora, Toiora Hoki mō te Hunga Whai Kaha o Aotearoa

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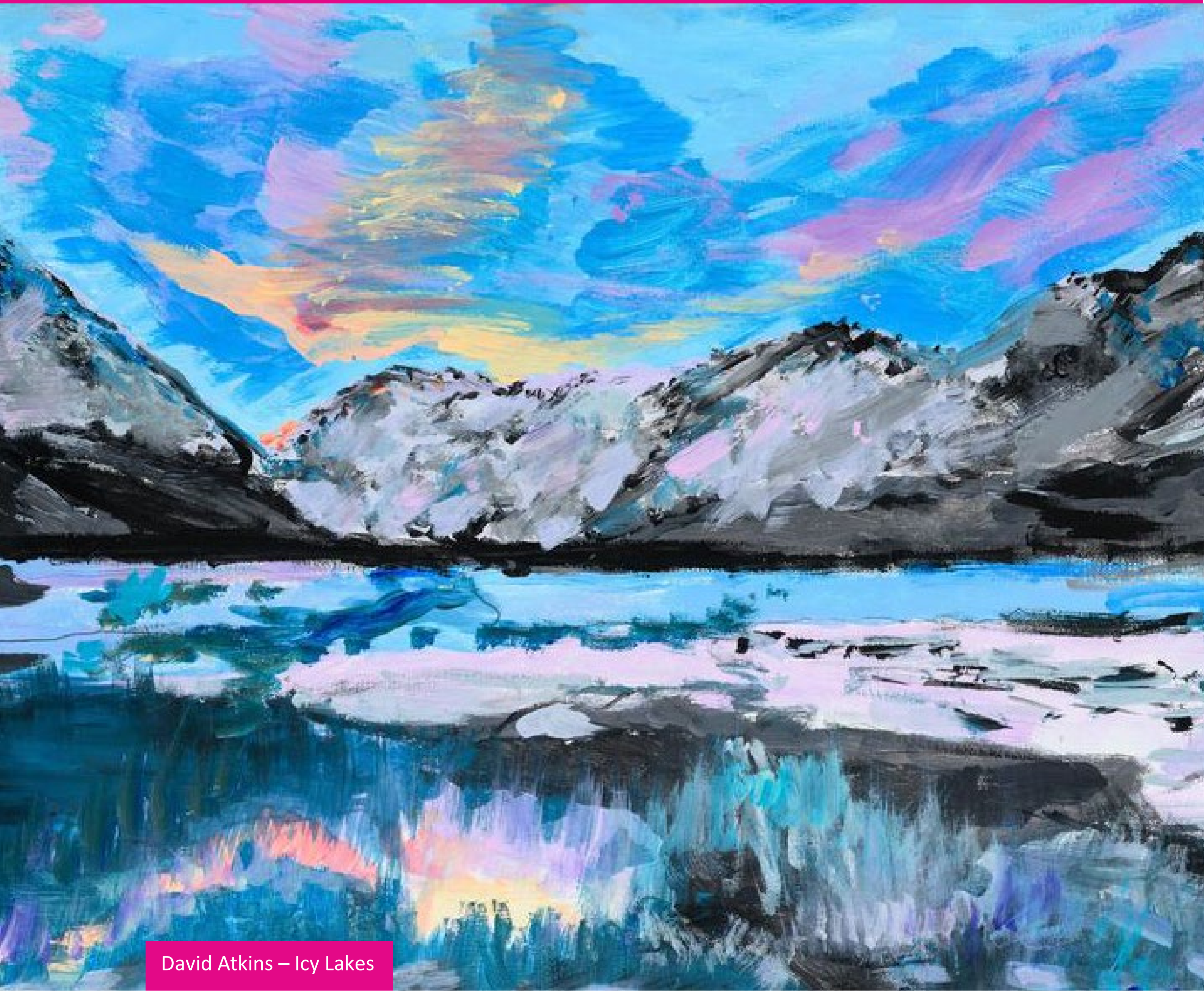

David Atkins – Icy Lakes

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Falefatu Enari – Five Houses

Disclaimer

Access to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers.

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI), which is carefully managed by Stats NZ. For more information about the IDI please visit https://www.stats.govt.nz/integrated-data/.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994 for statistical purposes. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

Acknowledgements

This report was commissioned and funded by IHC New Zealand. IHC advocates for the rights, inclusion and welfare of all people with intellectual disabilities and supports them to live satisfying lives in the community.

The data and analysis for this report were generated with the generous support of Craig Wright from the Social Wellbeing Agency who shared his code and experience from the development of the 2011 Ministry of Health report, as well as code he has developed more recently to identify people with intellectual disability and associated health conditions.

The authors are also thankful for the valuable input of Shara Turner, Tania Thomas and David Corner from IHC New Zealand, Shari Mason from Manatū Hauora – Ministry of Health, Sharon Brandford from the New Zealand Disability Support Network, staff from the Evidence Centre – Oranga Tamariki, Diane Anderson from the Ministry of Social Development, Michelle Gezentsvey from Whaikaha – Ministry of Disabled People, Deb Potter from Te Tari Mātāwaka – Ministry for Ethnic Communities, and Sam Murray.

All the art in this report was created by intellectually disabled artists. The art was selected by the authors from over 500 entries into the IHC Art Awards in 2023. The authors were inspired by the complexity and diversity of the art created by the talented artists and thought it was critical to show what intellectually disabled people are capable of when they are well supported and included. The authors are very grateful to the artists for their contribution to the report.

Foreword

I am pleased to present the findings of our comprehensive report on the wellbeing of intellectually disabled individuals in New Zealand. This report represents a significant step towards understanding and improving the lives of those we support.

At IHC our mission has always been to advocate for the rights, inclusion and welfare of all people with intellectual disabilities and support them to live satisfying lives in the community. This report is one of the few in the world that has gathered quantitative data about the wellbeing of all the intellectually disabled people in one country. It provides vital information and is key to our continued advocacy.

It has been 20 years since *To Have An 'Ordinary' Life* was published by the National Advisory Committee on Health and Disability. It took two years for the Committee to do the work needed for the report, and they gathered their information mainly through dialogue directly with people with intellectual disability.

In that report, the Committee told us that the word 'ordinary' was being used to convey the desires of adults with intellectual disabilities to have access to everyday experiences that are taken for granted by others. The report explained that the lives of New Zealanders with intellectual disability remained distinct from those of the general population. The report also placed great importance on affording all individuals 'ordinary' opportunities such as access to necessities like housing, income, healthcare, education and community engagement.

In that spirit, IHC in partnership with Kōtātā Insight, has produced a report extracting quantitative data about people with intellectual disability from the New Zealand government's Integrated Data Infrastructure. The results of our report show that people with intellectual disability are still distinct from that of the general population.

In the 20 years since *To Have An 'Ordinary' Life* there has been a dearth of policy or focus on people with intellectual disability, and the families and whānau who surround them. The 'ordinary' opportunities that people with intellectual disability want and deserve are still denied to them. They are still not supported to pursue the 'ordinary' opportunities that are a given for most people.

Our hope is that this report will serve as a catalyst for positive change. It is not merely a document to be read and shelved but a call to action for all of Aotearoa New Zealand to be involved in the wellbeing of intellectually disabled individuals. Together, we can work towards creating a more inclusive, compassionate and equitable world.

As we move forward, let us remain steadfast in our commitment to empowering individuals with intellectual disabilities and ensuring that they have the opportunities and support they need to lead fulfilling lives.

I hope you enjoy reading this report and it provides you with a picture of what life is like for intellectually disabled people. The continued neglect of their wellbeing must stop. I look forward to our collective efforts in driving positive change.

Ralph Jones
IHC Group Chief Executive

Awhina Andrew – In My Garden

Executive summary

The Ministry of Health developed and published a report in 2011 showing health indicators for New Zealanders with intellectual disabilities using data from 2008. Although more than 10 years have passed, the results have not been updated since that time, and for this reason IHC commissioned Kōtātā Insight to update the indicators and to extend the scope to cover areas beyond health.

The indicators have been developed using Stats NZ's Integrated Data Infrastructure, a large research database that collects administrative and survey datasets from across government and non-government organisations. The project reports on the lives of people with and without intellectual disability in Aotearoa and includes a broad range of indicators across different areas of wellbeing.

These indicators provide a baseline that can be used to track progress in outcomes for the intellectually disabled community. They will also inform advocacy for people with intellectual disabilities by providing evidence to influence the direction of government policy. The hope is that it will support better outcomes for people with intellectual disabilities in the future.

The project has followed a set of principles to ensure that intellectually disabled people would receive the benefits of the research and had opportunities to participate in it.

The results of the research can be found in detail in this report, including technical documentation and data tables. An Easy Read summary and a web-based interactive tool accompany this report to broaden access to the results. The web-based interactive tool can be found at: https://ihcnewzealand.shinyapps.io/IDI_report/. The code has been made publicly available and the database can be accessed for research following Stats NZ data access protocols. The code can be accessed at: https://github.com/Kotata-Insight/IHC_Intellectual_Disability

The results of the study are from 2018. The year was chosen as it coincided with the most recently available Census data collection, allowing for the linking of administrative data with Census data, and expanding the amount of information that could be analysed.

In the 2011 report Māori were identified as having higher rates of intellectual disability than the rest of the population. This made it particularly important that the particular needs of Māori were explored in the study. For the first time, life expectancy for Māori with intellectual disability has been calculated for this report, and whenever there is sufficient data, indicators have been generated for the Māori population.

The report uses a combination of identity-first language ('intellectually disabled people') and people-first language ('people with intellectual disability'). This approach was taken after a discussion with IHC and is consistent with the variety of preferences within the intellectually disabled community.

Prevalence of intellectual disability

While 0.8 percent of the population in 2018 was identified in this study as living with intellectual disability, statistical methods used to estimate the undercount put the true number a little higher, at around 1.0 percent of the population. This is very similar to the estimate in the 2011 report (1.1

percent in 2008) but lower than estimates from the New Zealand Disability Survey of 1.3 percent in 2006 and 2 percent in 2013.

The true rate of intellectual disability is likely to lie somewhere in between these estimates. The rate of intellectual disability is likely to be underestimated using administrative sources of data, as people are identified when they have contact with publicly funded health services or other government services and a diagnosis is recorded. The 2013 New Zealand Disability Survey estimate was unusually high and may have over-represented the true rate.

Demographic profile

Age

The population identified with intellectual disability is in general much younger than the rest of the population, although very few people under the age of five are identified as having intellectual disability, reflecting the time needed for diagnosis and reporting. The difference in age profiles between the populations with and without intellectual disability reinforces the importance of adjusting for age when comparing outcomes of the two populations.

Gender

Rates of intellectual disability are considerably higher in males than they are in females across all ages, with 1.0 percent of men and 0.6 percent of women identified as having intellectual disability.

Ethnic group

As in the previous study, Māori have the highest rates of intellectual disability (1.3 percent), followed by Pacific peoples (0.9 percent) and Europeans (0.8 percent). Asian and Middle Eastern/ Latin America/African ethnic groups have the lowest rates of intellectual disability.

Geography

Intellectually disabled people live across all areas of Aotearoa, but there are some areas where they are more likely to live than others. This likely reflects a range of factors, including the underlying age and ethnic distribution of the population in each area as well as choices made due to differences in access to services or differences in the cost of living.

Territorial authority areas with the highest rates of intellectual disability are the North Island provincial areas of Whanganui District, Masterton District, Horowhenua District, South Waikato District and Kawerau District (all with rates in excess of 1.25 percent and up to 1.7 percent in the case of Whanganui). Slightly lower rates (of more than 1.2 percent) were recorded in the South Island in Invercargill City and Buller District.

The lowest rates of intellectual disability were identified in the South Island provincial areas of Hurunui District, Southland District, Selwyn District and Mackenzie District, all with rates between approximately 0.4 percent and 0.45 percent, and Queenstown-Lakes District with by far the lowest rate of intellectual disability, at 0.15 percent. This latter result could reflect both the high living costs of the Queenstown area and the large number of migrant workers living and working in the area.

Urbanicity

The large centres of Auckland City and Wellington City also had relatively low rates of intellectual disability, at 0.65 percent and 0.45 percent respectively.

People with intellectual disability were more likely to live in urban areas than in rural areas, but less likely to live in urban areas with populations of 100,000 or more than in smaller urban areas.

Deprivation

There is also a strong relationship between socioeconomic deprivation and intellectual disability, with higher rates of intellectual disability in more deprived areas. More than one in five people with intellectual disability live in the most deprived 10 percent of small areas in New Zealand (21.4 percent), compared to just over one in 10 people without intellectual disability (11.2 percent). Very few people with intellectual disability live in the least deprived decile (only 3.8 percent, compared to 9.1 percent of people without intellectual disability).

Outcomes

People with intellectual disability and their whānau show poorer outcomes across a wide range of social and economic outcomes. For populations already at higher risk of disadvantage, intellectual disability, with the societal barriers associated with it, acts as an additional risk factor.

Outcome indicators have been organised following the Treasury's Living Standards Framework domains.

Health

Health is an integral part of wellbeing, and it was the sole focus of the 2011 report. This study has updated most of the indicators available in the previous report, showing that in 2018 people with intellectual disability still have poorer health than people without intellectual disability. The intellectually disabled population are high users of health services but, on average, they have poorer outcomes than the non-intellectually disabled population across almost every indicator examined.

Life expectancy at birth

The intellectually disabled die at a much younger age than the non-intellectually disabled. This gap in life expectancy is particularly pronounced for females. Overall, females with intellectual disability have an estimated life expectancy of 65.7 years compared to 83.8 years for non-intellectually disabled females. The life expectancy for males is 65.3 years for the intellectually disabled compared to 80.3 for the non-intellectually disabled.

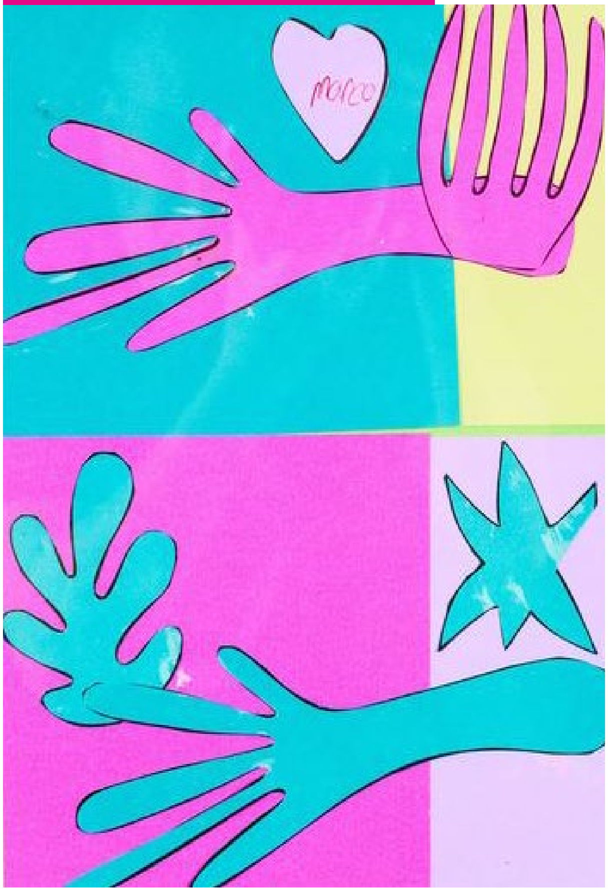
Māori with intellectual disability have the lowest life expectancy across ethnic groups. Intellectually disabled Māori males have a life expectancy of 61.9 years compared to 73.6 for Māori males without an intellectual disability. For Māori females the life expectancy is 63.3 for the intellectually disabled compared with 77.3 for those without intellectual disability.

Chronic health conditions
We have compared the rates of four chronic health conditions (coronary heart disease, chronic obstructive pulmonary disease, diabetes and cancer) in people with and without intellectual disability. Adjusted by age, the rates of all these four conditions are higher for the intellectually disabled population compared to the rates of the non-intellectually disabled population.

Mental health
Intellectually disabled people show much higher rates of mood disorders, psychotic disorders and dementia than people without intellectual disability. This is true across age, gender and ethnic groups.

Primary health care use
Primary health care is the first point of contact for most health services. People with intellectual disability have high rates of enrolment with primary health organisations and are more likely to be enrolled for Care Plus primary health services than people without intellectual disability. The intellectually disabled are also more likely to have had recent general practice consultations than the non-intellectually disabled.

Marco Owen – Handy Sandy Art



Public hospital services
Overall, people with intellectual disability are 10 times more likely than people without intellectual disability to require dental treatment at a public hospital.

Emergency department visits are also consistently more frequent for the intellectually disabled across all age groups, and people with intellectual disability are more than twice as likely to have public hospital treatment for injury than people without intellectual disability.

Adjusted by age, people with intellectual disability are almost four times more likely to experience potentially avoidable hospitalisations than people without intellectual disability.

Secondary health care costs
Adjusted for age, the age standardised cost per person for secondary health care for people with intellectual disability is estimated as $6,800 for the year to 30 June 2018. This is almost five times higher than the secondary health care cost per person for people without intellectual disability ($1,400) for the same time period.

Knowledge and skills

There are no significant differences in participation rates in early childhood education between intellectually disabled children and non-intellectually disabled children. Participation in schooling is just as high for both populations. However, while 20.5 percent of students with intellectual disability attend specialist schools, only 0.7 percent of students without an intellectual disability do.

Although most adults without an intellectual disability hold driver licences (88.5 percent), only 32 percent of intellectually disabled adults do.

The percentage of people without qualifications is considerably higher for people with intellectual disability than it is for those without intellectual disability across all ages. This indicator shows disparity, but it also shows potential as almost six in 10 adults aged under 35 with intellectual disability in the study population had attained at least a Level 1 qualification, while four in 10 had attained at least an NCEA Level 2 qualification.

Work, care and volunteering

Children with intellectual disability are less likely to have at least one parent in full-time employment and are less likely to have all parents in the household in paid work. Adjusted by age, the percentage of children with intellectual disability with all parents in the household in paid employment was 48.0 percent compared with 64.1 percent for children without intellectual disability.

Participation in paid employment for people 18 years or older is significantly lower for people with intellectual disability (age-adjusted rate of 20.8 percent) compared to people without intellectual disability (age-adjusted rate of 77.8 percent). Rates of unpaid work are also lower for adults with intellectual disability. Most intellectually disabled adults were receiving an income-tested benefit and they were eight times more likely to receive a benefit than non-intellectually disabled adults.

Income, consumption and wealth

Children with intellectual disability are more likely to live in low-income households, and overall, the average equivalised disposable household income is lower for children with intellectual disability than it is for children without intellectual disability.

There is a large household income disparity between intellectually disabled and non-intellectually disabled adults, especially in the older working-age population. While people in their 20s and 30s may be able to live with working parents who provide financial support, this may be less possible as they get older, exacerbating the differences in household income for the older working age.

With low employment rates and high benefit receipt, people with intellectual disability are generally reliant on government financial support. Consequently, the average total annual personal income of a person with intellectual disability does not vary significantly by gender or ethnic group.

People with intellectual disabilities are more likely to live in areas of higher deprivation, to experience digital exclusion and to not participate in international travel compared to people without intellectual disability.

Housing

People with intellectual disability experience a higher rate of residential mobility, or transience. Adjusted by age, the intellectually disabled population has a residential mobility rate of 4.26 houses in five years compared with a rate of 3.25 houses in five years for the non-intellectually disabled population.

Intellectually disabled people are also more likely to report living in a mouldy or damp house, regardless of age. Forty-three percent of children with an intellectual disability live in a mouldy or damp home compared to 35.7 percent of children without an intellectual disability. Children with intellectual disability are also more likely to live in crowded houses than children without an intellectual disability.

Family and friends

Most children live in households with a birth parent. However, while this is the case for just over 95 percent of children (aged under 15) without intellectual disability, for those with intellectual disability the rate is lower at 83.4 percent. This pattern reverses as people get older, and young adults with intellectual disabilities are much more likely to live with a birth parent than non-disabled adults.

Intellectually disabled children are more likely to live in sole parent families and are also more likely to be born to a teen parent than non-intellectually disabled children.

Intellectually disabled adults are less likely to be married or in a civil union than non-intellectually disabled adults, and the likelihood of divorce is higher if they do marry.

Safety

Police victimisation data shows that intellectually disabled people are three times more likely to be victims of crime than non-intellectually disabled people. The likelihood of being a witness to family violence almost doubles for children with intellectual disability compared to children without intellectual disability.

Data from Oranga Tamariki shows that children (0 to 14 years old) with intellectual disability (in the study population) are more than seven times more likely to be placed in care than children without intellectual disability. Parents with intellectual disability are 13 times at risk of having their child placed in care.

Intellectually disabled adults are 1.5 times more likely to be convicted of a crime and more than three times more likely to be incarcerated than non-intellectually disabled adults, even though there is little international evidence that intellectual disability is a risk factor for engaging in violence or crime.

Variability of results

The indicators show average results across the population, however there is considerable variation within the intellectually disabled population, as there is in the total population. For all indicators there are people with intellectual disability experiencing good outcomes, showing the potential that could be achieved at a population level.

The results have been analysed by age, gender and ethnic group. For most indicators the patterns by subgroups are similar for people with and without intellectual disability. But that is not always the case.

Variation by age

For the intellectually disabled population, the rate of visits to injury and emergency departments increases by age group until the mid-30s then decreases, while the inflection point is in the mid-20s for the non-intellectually disabled population.

While the estimated secondary health care costs for people without intellectual disability increase very slowly from childhood to middle age (the 45 to 55 age group) and gets steeper from then on, people with intellectual disability experience a steep rate of increase in average secondary health care costs from childhood to the 45 to 54 age group. This is the age group with the highest average cost.

Within the intellectually disabled population 25 to 34-year-olds are the most likely to participate in paid or unpaid work. This differs for the non-intellectually disabled population: the age groups with the highest rate of participation in paid and unpaid work are the 45 to 54 and the 65 to 74 age groups respectively.

Because of their low rate of paid work and reliance on benefit receipt, the average personal annual income does not vary by age for the intellectually disabled population. This is not the case for people without intellectual disability. For people with intellectual disability, the average equivalised disposable household income increases until they are 25 to 34 years of age and then decreases. This compares with the pattern for people without intellectual disability, for whom the average equivalised disposable household income increases until retirement age and then decreases.

The rate of internet access decreases by age much more rapidly for people with intellectual disability when compared with people without intellectual disability.

Variation by gender

Life expectancy rates for males and females are very similar for the intellectually disabled population, while for the non-intellectually disabled population the rates are higher for females.

For people with intellectual disability, the rates of coronary heart disease are higher for females than they are for males; It is the other way around for people without intellectual disability. A similar reversal of pattern happens with injury rates and emergency department visits. These rates are higher for females in the intellectually disabled population but higher for males in the non-intellectually disabled population.

While average annual income varies significantly by gender in the non-intellectually disabled population, as was observed with age, this is not the case for the intellectually disabled population.

Variation by ethnic group

For people with intellectual disability, the rates of dental treatment in public hospitals are highest for people in the European and Asian ethnic groups. However, these groups in the non-intellectually disabled population have the lowest rates of dental treatment.

People of Asian ethnicity are more likely to have qualifications than other ethnic groups in both the intellectually disabled and non-intellectually disabled populations. The highest rates of unqualified adults are found among Māori and Pacific people. However, for people with intellectual disability, the percentage of adult Māori and Pacific people who have no qualifications (54.8 percent and 54.4 percent respectively) is lower than that of Europeans (57.2 percent).

As can be observed by age and gender, benefit receipt rates and average total personal income do not vary as much by ethnicity in the intellectually disabled population as they do in the non-intellectually disabled population.

Although criminal conviction rates for adults with intellectual disability are higher than they are for people without intellectual disability overall, this is not the case for Māori and Pacific adults.

Conclusion

The project has demonstrated the possibility of generating a broad range of monitoring indicators that describe the lives of people with intellectual disability using already collected administrative and population survey data.

This outcome indicators report provides a wealth of information not previously available in Aotearoa about the intellectually disabled population across several domains. It brings visibility to intellectually disabled people and provides an important source of data to inform intellectual disability advocacy and policy development.

Intellectually disabled people are shown on average to be disadvantaged across multiple domains of wellbeing compared to the non-intellectually disabled, bringing to the surface areas for potential policy development to support equity goals in Aotearoa.

These outcome indicators could be updated in the future to monitor the efforts towards a more equitable future.

Cameron Viles – Fancy tattoo

2 Introduction

The Ministry of Health developed and published a report in 2011, *Health Indicators for New Zealanders with Intellectual Disability*, using data from 2008 (Ministry of Health, 2011). Although more than 10 years have passed, the results have not been updated since that time. Recognising the need for more current information, IHC commissioned Kōtātā Insight to update the health indicators and extend the scope to cover areas beyond health.

2.1 Aim of this report

This report presents a picture of the lives of people with intellectual disabilities through a selection of outcome indicators for New Zealanders with and without intellectual disability, using data from Stats NZ's Integrated Data Infrastructure (IDI). The report does not present a comprehensive view of every aspect of the lives of the intellectually disabled but compiles important information that contributes to a view of their wellbeing.

The report follows a 2011 report developed and published by the Ministry of Health (Ministry of Health, 2011), which presented a selection of health status and health care utilisation indicators for New Zealanders with and without intellectual disability. The indicators were developed using data from a range of Ministry of Health data sets and focused mainly on chronic diseases, mental health and the utilisation of primary health care and public hospital services.

The 2011 report showed that people with intellectual disability were disadvantaged in terms of their health and life expectancy, compared to people without intellectual disability. People with intellectual disability experienced higher rates of all health conditions examined and they also used more health services, except for preventive screening services. These results were consistent with similar overseas studies.

The current report widens the scope of the 2011 report by including a much broader set of social and economic outcomes. Its content is limited in scope to data that can be easily constructed using data held in Stats NZ's IDI. The IDI enables us to present a broad picture of people's lives, but it also has limitations. This means the data presents a partial view of the things that are important to people, such as subjective wellbeing, social and cultural connections and the degree of choice and control they have over their lives. The choice of indicators has been guided by IHC.

The analysis in this report broadly follows the same methods and structure as the 2011 report to aid comparability of the results for those indicators that are common to both reports. Any differences in methods or data are explained in the report.

These indicators provide a baseline that can be used to track progress in outcomes for the intellectually disabled community. They will also inform advocacy for people with intellectual disabilities by providing evidence to influence the direction of government policy. The hope is that they will support better outcomes for people with intellectual disabilities in the future.

Throughout the report we use 'intellectually disabled people' and 'people with intellectual disability'. The decision to use a combination of identity-first language and people-first language followed a discussion with IHC and is consistent with the variety of preferences within the intellectually disabled community.

2.2 Project kaupapa

The project was undertaken with several foundational principles in mind.

- **Inclusion** – The project was undertaken under the guidance of IHC, which provided a strong voice for people with intellectual disabilities throughout. People with intellectual disability within IHC were involved in the project from the start. The report has undergone an extensive review process involving technical experts, subject matter experts and people within the intellectually disabled community. The members of the analytical team are part of the community of carers for the disabled.
- **Benefit** – Information provided by this project will allow monitoring of outcomes for the intellectually disabled community, and provide a tool for accountability. Throughout the project we have carefully considered how each indicator chosen will benefit the intellectually disabled community.
- **Minimising burden** – Consideration was given to the potential burden of the project on members of the intellectually disabled community. As this project has not collected any additional data, it does not pose any direct burden on the community.
- **Privacy and confidentiality** – The project uses data from the IDI and has therefore been undertaken under Stats NZ's 'Five Safes' framework.[1] This ensures people's privacy is respected and no information that could identify individuals is released.
    - Safe people – Researchers are vetted and must commit to using data safely.
    - Safe projects – Researchers must demonstrate that a project is in the public interest.
    - Safe settings – A range of privacy and security arrangements are in place to keep data safe.
    - Safe data – Data has had identifying information removed, and researchers can only access the data they need.
- **Safe output** – All information has been checked to ensure it does not contain any identifying information.
- **Accessibility** – To ensure that those in the intellectually disabled community are able to access the findings of the project, the report includes a non-technical summary and an easy-read summary of results. To facilitate data exploration, the report is accompanied by an interactive web-based tool through which the data is available for viewing. The computer code and datasets are available through the IDI and disability researchers can gain access to them by following Stats NZ microdata access protocols.[2]

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[1] https://www.stats.govt.nz/integrated-data/integrated-data-infrastructure/#data-safe

[2] https://www.stats.govt.nz/integrated-data/apply-to-use-microdata-for-research

- **Recognition of tangata whenua** – In the earlier study Māori were identified as having higher rates of intellectual disability than other ethnic groups. This made it particularly important that the needs of Māori be explored in the study. Whenever there is sufficient data, indicators have been generated for the Māori population. IHC's Director of Advocacy, of Māori descent, has provided governance and guidance throughout the project.
- **Efficiency and value** – To ensure the project resources were used efficiently for the optimum output, the research team has followed a collaborative approach and, when possible, used existing knowledge and code. The team has worked with future proofing in mind, so the monitoring indicators can be easily updated in the future. Documentation and code have been made publicly available to encourage re-use and future development.

2.3 Research methodology

This section documents the methodology used to arrive at the results shown in this report. The research started with a conceptual phase during which the study populations were defined and a list of outcome indicators for the project was decided on. After that, the analytical database was generated in the IDI and the data was analysed to compare the indicators for people with and without intellectual disability in the study population.

2.3.1 Population definition

The aim of the project was to generate results that were representative of the New Zealand population. The study population was defined as the 2018 Administrative Population Census (APC) population available in the IDI. The APC is constructed by Stats NZ from administrative data that have been collected at different times and then linked in the IDI.[3] It provides a good estimate of the true New Zealand resident population for a given year.

Although the APC currently holds annual data from 2006 to 2021, this analysis uses the 2018 APC, which coincides with the 2018 collection of data from New Zealand's five-yearly population Census. Choosing a Census year as the population base date allows us to use a mix of administrative and Census data. This is useful as it allows us to generate indicators for which a Census is the only source, as well as enabling us to identify people who live together in the same household. The 2011 report primarily used data from 2008, so this report presents a picture 10 years on from the previous study. All key data sources in the IDI are complete up to 2018 and therefore had the potential to be used in the project.

The 2018 APC population and the 2018 Census usually resident population in the IDI have a very large but not complete overlap. A small minority of people (considerably less than 10 percent of either population) appear in one of the populations and not the other. Given that the

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[3] https://www.stats.govt.nz/experimental/experimental-administrative-population-Census/ .

vast majority of indicators were derived from administrative sources, the APC population was considered more appropriate than the Census for this study. This had the added benefit of enabling comparable measures to be constructed between Census years. Indicators that relied on Census data were generated using only those people in the 2018 IDI Census usually resident population who link to the APC population.

The APC population has approximately 100,000 more people than the Census usually resident population (4,776,369, compared to 4,669,755). This is explained by the inclusion of people who were temporarily absent at Census night or who did not respond to the Census. Table 1 shows the rate of linking between people in the APC who had intellectual disabilities and those who did not. Both were in excess of 92 percent, and the rates of intellectual disability in the linked and un-linked populations were both around 0.8 percent. This provides some reassurance that indicators derived from Census data are not likely to be biased with respect to intellectual disability.

Table 1 – Linking between APC and Census for people with and without intellectual disability

Linked to Census	disability	intellectual disability	intellectual disability (%)
No	2,886	361,524	0.80
Yes	35,805	4,414,848	0.81
Yes (percent)	92.5	92.4	

2.3.2 Identification of intellectual disability in the population

Intellectual disability is a term used when a person has difficulty understanding, concentrating, learning and remembering new things in their everyday life.[4] The Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003[5] defines intellectual disability as a permanent impairment that:

- results in an IQ of 70 or less;
- results in significant deficits in adaptive functioning in areas such as communication, self-care, home living and social skills; and
- becomes apparent before a person reaches the age of 18.

To aid comparability, the current study uses a definition of intellectual disability as close as possible to the 2011 study. This definition reflects the Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003 definition. We also identified some conditions associated with intellectual disability, such as Down syndrome, fetal alcohol spectrum disorder, spina bifida and

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[4] https://www.ihc.org.nz/about-intellectual-disability/intellectual-disability
[5] https://www.legislation.govt.nz/act/public/2003/0116/latest/DLM225179.html

cerebral palsy (see section 2.2.1), but to maintain consistency with the previous report, these diagnoses were not used to identify people with intellectual disability in this study. However, in section 2.2.1 we report on the number of people diagnosed and the extent to which they were also identified as having intellectual disability.

There is no single source of data in the IDI that identifies intellectual disability for the whole population. The invisibility of the intellectually disabled population in health administrative data has been documented in Brandford (2020), noting that the mortality data collections and health utilisation data do not flag a person's disability. This reinforces the importance of combining several sources of data to identify intellectual disability. In all sources intellectual disability has been diagnosed by a health professional.

People in the study population were identified as having an intellectual disability if they met the criteria described in Table 2. We have used most of the same sources as the 2011 study but were not able to use the Client Claims Processing System, as this is not available in the IDI. Instead, we have been able to use additional IDI sources from the Ministry of Social Development, Ministry of Education and Oranga Tamariki.

As in the previous report, the method used to identify people with intellectual disability in this report is likely to be most accurate for people with moderate or severe intellectual disability who need support services, have serious health conditions or need to access other government support. People with mild intellectual disability in good health are less likely to be identified because they may not have had contact with government services or are less likely to have been recorded as having an intellectual disability when coming into contact with those services.

Ela Tukuhaukava – The Galaxy of the Eyes and the Stars

Table 2 – Criteria for the identification of intellectual disability in the study

Data source[6]	Criteria for defining intellectual disability
Public hospital discharges (NMDS)	A diagnosis of intellectual disability in the ICD-9, ICD-10 or DSM-IV classification systems or inpatient/day patient treatment in public hospitals by health specialties for people with intellectual disability.
Private hospital discharges (NMDS)	A diagnosis of intellectual disability ('mental retardation' in the ICD-9, ICD-10 or DSM-IV classification systems) or inpatient/day patient treatment in private hospitals by health specialties for people with intellectual disability.
National Non-Admitted Patient Collection (NNPAC)	Treatment by health specialties for people with intellectual disability in public hospital outpatient and emergency departments.
Programme for the Integration of Mental Health Data (PRIMHD)	A diagnosis of intellectual disability in the ICD-9, ICD-10 or DSM-IV classification systems in secondary mental health and addiction services and/or treatment by an intellectual disability dual diagnosis team.
Mental Health Information National Collection (MHINC)	A diagnosis of intellectual disability in the ICD-9, ICD-10 or DSM-IV classification systems in secondary mental health and addiction services.
Disability Support Services database (SOCRATES)	Recorded as having an intellectual disability in the Referral Diagnosis/Health Condition field.
interRAI assessment data[7]	An indicator of intellectual disability in the interRAI residential history data.
Ministry of Social Development income support data	A diagnosis of intellectual disability recorded on a medical certificate provided for the purposes of establishing eligibility for benefits or other Ministry of Social Development payments.
Ministry of Education Ongoing Resourcing Scheme	Cognitive criteria defined as moderate to high cognitive needs, high cognitive needs or very high cognitive needs.
Oranga Tamariki Gateway Assessments	A need type of intellectual disability in a Gateway Assessment.

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[6] Ministry of Health if not stated otherwise.

[7] interRAI is a suite of comprehensive clinical assessment tools. It currently is the primary assessment for collecting information about people who are assessed for eligibility for publicly funded home and community support and admission to residential care.

2.3.3 Outcome indicators

A series of outcome indicators was selected to provide as comprehensive a view as possible of the lives of people with intellectual disabilities using data available in the IDI, in consultation with IHC. Within the scope of what was available, potential indicators taken from datasets available in the IDI were prioritised to present a comprehensive and meaningful story. Indicators were categorised within the domains under the 'Our Individual and Collective Wellbeing' level of the Treasury's Living Standards Framework [8] (LSF), and presented under those domain headings.

While it is not designed specifically for a population with disability, the LSF captures many of the things that are important for New Zealanders' wellbeing, regardless of whether or not they have a disability. Verdugo et al. (2005) note that quality of life "is important for all people and should be thought of in the same way for all people, including individuals with intellectual disability".

Nevertheless, it is important to consider aspects of wellbeingthat may be particularly relevant to people with intellectual disability. For example, the New Zealand Disability Strategy outlines eight outcome areas (education, employment and economic security, health and wellbeing, rights protection and justice, accessibility, attitudes, choice and control, and leadership), while Schalock and Verdugo (2002) also identify eight outcome areas specifically related to people with intellectual disability (personal development, self-determination, interpersonal relations, social inclusion, rights, emotional wellbeing, physical wellbeing, and material wellbeing).

While most of these are well represented under the LSF domains, some domains, such as accessibility, attitudes, choice and control/self-determination may be less evident. Unfortunately, there are few measures that explicitly address these outcome areas in the IDI. This highlights the gaps in the data and the need for future work that focuses on these areas. The 2023 New Zealand Disability Survey will be one important source that could help fill this gap.

Table 3 shows the indicators that have been generated for this report by LSF domain. The Engagement and Voice, Environmental Amenity, Leisure and Play and Subjective Wellbeing domains are not included in the table as there is limited administrative data available to generate indicators from the IDI. Indicators have been classified within the domains following a pragmatic approach. Some indicators fall clearly into one domain while others could be viewed as applying to more than one. Decisions were made according to where an indicator would be most intuitively looked for.

While these 36 indicators talk about things that are important for everyone, they also illustrate areas that have been ound to be particularly important to people with intellectual disability, such as independence (personal development and self-determination), inclusion (interpersonal relations, social participation and rights) and wellbeing (emotional, physical and material wellbeing).

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[8] https://www.treasury.govt.nz/information-and-services/nz-economy/higher-living-standards/our-living-standards-framework

Table 3 – List of indicators by domain

Domain	Indicator
Health	Life expectancy at birth Coronary heart disease care or treatment Chronic obstructive pulmonary disease care or treatment Diabetes care or treatment Cancer care or treatment Dental treatment hospitalisations Mood disorder care or treatment Psychotic disorder care or treatment Dementia care or treatment Any mental disorder treatment Primary health organisation (PHO) and Care Plus enrolment General practice consultations Emergency department attendance Potentially avoidable and injury-related hospitalisations Secondary health care costs Number of different pharmaceuticals dispensed Cigarette smoking and smoking cessation
Knowledge and skills	Early childhood education participation School and specialist school enrolment Ongoing Resourcing Scheme support Driver licensing Qualifications
Work, care and volunteering	Parents as carers Parental employment participation Employment participation Volunteering outside the home Benefit receipt Youth not in employment, education or training (NEET)
Income, consumption and wealth	Total annual income Equivalised disposable household income Neighbourhood deprivation (NZDep) Internet access International travel
Housing	Transience Housing quality – mouldy or damp Household crowding
Family and friends	Living with a birth parent Living in a sole parent family Born to teenage parents Marriages or civil unions Divorces and dissolutions Parenting
Safety	Criminal victimisation Children exposed to family violence Children placed in care or having a child placed in care Convictions Incarceration

2.3.4 Estimating the true prevalence of intellectual disability in the study population

As in the 2011 report, we estimated the true prevalence of intellectual disability using a 'capture-recapture' analysis. Capture-recapture is a well-documented method of estimating the number of individuals missing from an identified population.

The approach looks at the degree of overlap in a study's data sources to estimate the under-reporting of diagnosed intellectual disability in the study population. Statistical models are used to estimate how many people are likely to be missing from all data sources. The 2011 report outlined the approach in detail. As in that report, we applied a Poisson regression model using PROC GENMOD in SAS.

Several assumptions need to hold for a capture-recapture analysis to be robust, as outlined in the 2011 report. Two in particular have been identified as having the potential to undermine the estimates. These are the assumption that the data sources are independent of each other, and that people not identified in any source are similar to people who are identified in one or more sources.

In the 2011 report, five Ministry of Health data sources (three derived from the Needs Assessment Coordination Service[9] data) were used to identify diagnosed intellectual disability and were included in the capture-recapture analysis. Due to the greater diversity of data held in the IDI, the current study used a total of 11 sources, including three non-health sources, and these were all included in the capture-recapture analysis. We expect this to strengthen the plausibility of the independence assumption overall.

The second assumption, that people who were not identified in any source were similar to those who were identified in each source, was still unlikely to be true however, as we would have expected people with more mild intellectual disability to be less likely to require government services or support and to not be identified in the data. As a result, the capture-recapture estimates are likely to underestimate the true prevalence of intellectual disability and should be treated with some caution.

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[9] Every person who wishes to receive disability support services from a DHB must be needs assessed by the NASC (https://www.tewhatuora.govt.nz/for-the-health-sector/specific-life-stage-health-information/health-of-older-people/needs-assessment/).

2.4 Content of the report

The rest of the report covers the following topics:

- The prevalence of intellectual disability and demographic characteristics – people's ages, genders and ethnic groups, their family situations and where they live.
- Results for indicators under each Living Standards Framework domain.
- A discussion section, bringing together the overall themes of the report.
- A next steps section, suggesting work that could be done to expand on the work in this report.

In each section of the report, text and graphs are used to highlight selected data comparing the lives of people with and without intellectual disability.

2.5 How to read the results

Throughout the report, indicators are presented both as unadjusted population percentages and rates and as age-standardised rates (ASRs), which adjust according to the age composition of the population with intellectual disability. In most cases, unadjusted results are presented broken down by age[10] group, then age-standardised results are presented by both sex and ethnic group. While some descriptive results are reported for the MELAA[11] and 'Other' ethnic groups, the report focuses on ethnic groupings that are large enough to give reliable estimates: European, Māori, Pacific and Asian.[12]

In the text and tables of the report, percentages and rates are generally rounded to one decimal place, while some smaller numbers are rounded to two decimal places. Underlying counts for the unadjusted rates are random rounded to a multiple of 3, in accordance with Stats NZ confidentiality rules, ensuring that no individual can be identified in the data. This means that some counts may not add up to reported population totals. Small counts of less than six are suppressed and are not reported.

ASRs are calculated by applying age-specific rates to a standard population and producing a single, age-adjusted rate for each group. For this report, ASRs have been calculated using the Stats NZ estimated resident population as at 30 June 2018, broken down into five-year bands. In the 2011 report, rates were standardised to the World Health Organization (WHO) world standard population, which may be more appropriate for international comparisons. The differences

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[10] Age is as at 30 June 2018, which is the Administrative Population Census date.

[11] Middle Eastern, Latin American and African.

[12] Ethnic grouping is based on total response, meaning an individual will appear in all the ethnic groups they have identified with.

between the two ASR sets are typically small; however, WHO-population ASRs are presented in Table 9 (Appendix 4).

Alongside ASRs we present rate ratios, which are calculated as the ASRs for people with intellectual disability divided by the ASRs for people with no intellectual disability. This is one measure of the difference between outcomes for people with and without intellectual disabilities. Rate ratios of more than one indicate that people with intellectual disability have higher ASRs for that measure than people without intellectual disability, while rate ratios of less than 1 mean they have lower ASRs. A rate ratio of 2, for example, tells us that people with intellectual disability have double the chance of having that outcome (or double the rate of outcome, depending on the measure) than people without intellectual disability, while a rate ratio of 0.5 means people with intellectual disability have half the chance of having the outcome compared with people without intellectual disability.

The confidence intervals listed in the Appendix indicate the statistical reliability of key data in the report, taking account of the uncertainty introduced in the age-standardisation adjustments. In general, the confidence intervals are narrow, especially for the data on people without intellectual disability. This is because the number of people included in most indicators is large, and so the results are relatively reliable.

Caroline Tatton-Brown - Petals of Patience

3 Prevalence and demographic profile of intellectual disability

This section presents data on the prevalence of intellectual disability and compares the demographic characteristics of the people in the population identified as having an intellectually disability and the people not identified as having an intellectual disability. The results are also compared to other published data, including the 2011 report. This information provides a context for interpreting the outcome indicator information presented afterwards.

3.1 Prevalence of intellectual disability

The study population includes a total of 4,776,369 people. Of these, 38,688 (0.8 percent) have been identified as having an intellectual disability. This represents an increase of almost 7,000 from the 31,847 people with intellectual disability identified in the 2011 report, or an increase from 0.7 to 0.8 percent of the total population.

The rate of intellectual disability is likely to be underestimated using administrative sources of data, however, as people are generally only identified when they have contact with a publicly funded health service or other government service, and a diagnosis is recorded.

Using capture-recapture analysis, it is estimated that an additional 8,367 people in the study population are actually living with an intellectual disability in Aotearoa. This brings the total estimated population of intellectually disabled to 47,055, or 1.0 percent of the total population. This is almost identical to the 46,664 estimated in the 2011 report. Table 4 compares the estimates based on administrative data from these studies with results from the New Zealand Disability Survey, which provides official estimates of disability in Aotearoa.

As in the 2011 report, the estimated rate of intellectual disability identified in this report is lower than that reported in the New Zealand Disability Survey, which estimated the prevalence of intellectual disability in Aotearoa at 1.3 percent in 2006 and 2 percent in 2013. Although it seems likely that the true prevalence of intellectual disability in New Zealand is somewhat higher than the 1 percent we estimate here, the 2013 Disability Survey estimates were unusually high, and may have over-represented the true rate.

In the rest of this report we focus on the population of people identified in the administrative data as having an intellectual disability. We do not attempt to adjust these estimates for under-coverage, as the capture-recapture analysis provides only crude estimates of under-coverage, and we do not know the size or the characteristics of the intellectually disabled population we are not able to identify. Nevertheless, we are likely to identify the majority of the population with at least moderate levels of intellectual disability.

Table 4 – Estimates of the prevalance of intellectual disability in New Zealand by source

Source	Study year	Estimated prevalence (n)	Study population (N)	Estimated prevalence (%)
Disability survey, 2006	2006	50,600	n/a	1.3
Health Indicators for New Zealanders with Intellectual Disability (2011) – adjusted using capture-recapture estimation	2008	46,664	4,293,447	1.1
Disability survey, 2013	2013	89,000	n/a	2[13]
Current study – adjusted using capture-recapture estimation	2018	47,055	4,776,369	1.0

3.2 Demographic profile of intellectual disability

Figure 1 shows the age distribution of the population with and without intellectual disability in New Zealand. We can see that few people under the age of five are identified as having an intellectual disability. This is likely to reflect delays in diagnosis and recording. However, the population identified with an intellectual disability is in general much younger than the rest of the population. This in part reflects differences in life expectancy but could also reflect different migration patterns and missing diagnoses in the data for older people. The difference in the age profiles reinforces the importance of accounting for age in any analysis of outcomes comparing the two populations.

The age profile of people with intellectual disability varies by ethnic group, with Europeans being the oldest on average (a median age of 34 years). Māori with intellectual disability have a median age of 27 years, while Pacific people, Asians and people in the MELAA ethnic group tend to be younger again, with median ages of 23, 21 and 18 years respectively.

Figure 2 shows the estimated prevalence of intellectual disability by age for males and females separately. The estimated prevalence of intellectual disability is higher in males for all age groups, and for both genders it is highest in the 15 to 24-year age group. Adjusted by age, the estimated

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[13] Note, the estimated prevalence from the 2013 Disability Survey was only reported to zero decimal places.

prevalence or rate of intellectual disability for males is 0.97 percent compared with 0.65 percent for females.

Figure 1 – Percentage of people with and without intellectual disability, 2018

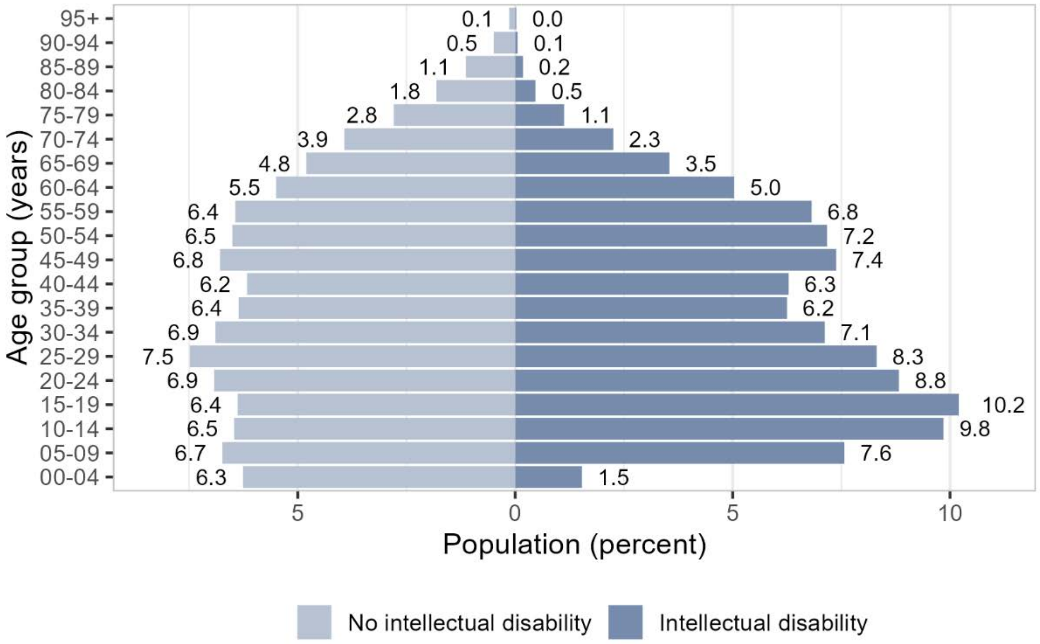
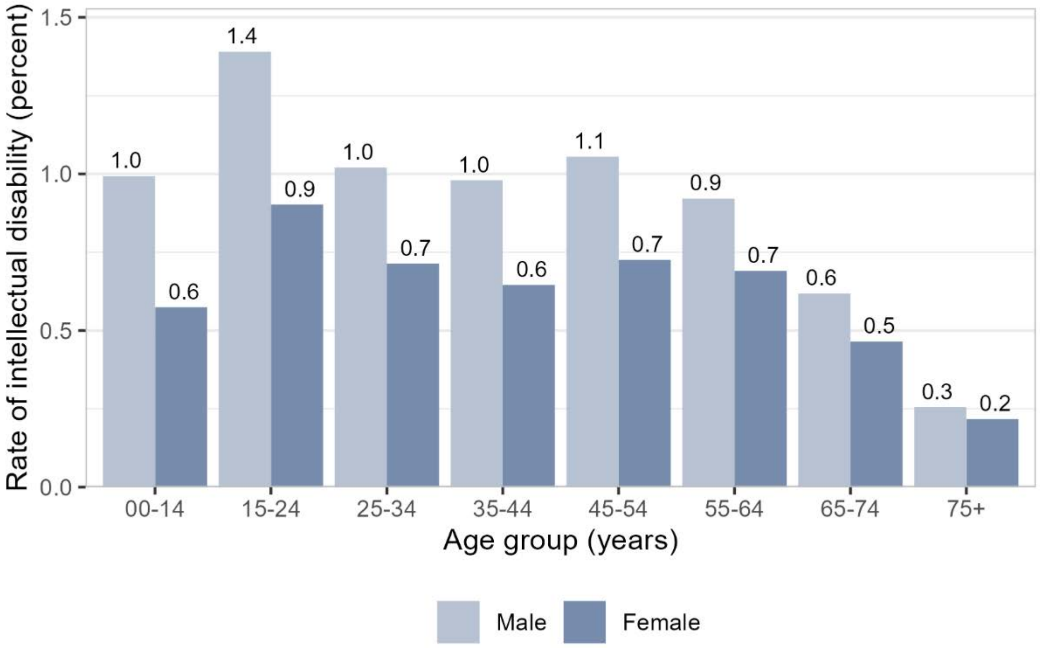


Figure 2 – Prevalence of intellectual disability by age and sex, 2018



In general, our reported rates of intellectual disability by age are consistent with those reported in the 2011 report. However, the 2011 report identified some of the highest rates of intellectual disability in the older age group (75 years or older), a group we identify as having particularly low rates. These differences are likely to derive from the different sources used, as those producing the earlier report had access to Client Claims Processing System data relating to needs assessments undertaken before SOCRATES was introduced in 2007. As a result, we may be missing some older people with intellectual disability who were picked up in the previous report.

Another possibility discussed in the 2011 study is that the higher rates may reflect the inclusion of people who may have developed cognitive impairment later in life as being intellectually disabled. Since most definitions of intellectual disability describe it as an impairment apparent in childhood, the current estimate may reflect the prevalence of intellectual disability in the older age bands more accurately. Either way, the size of the over-75-year-old population is relatively small, and this change is not expected to alter the results significantly.

3.2.1 Associated conditions

Many people identified as having an intellectual disability in the administrative data also have a recorded diagnosis of an associated condition, however the majority do not. Selected associated conditions are presented in Table 5. The most commonly identified conditions are attention deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), developmental delay , cerebral palsy and Down syndrome. Only around a sixth to a quarter of people with an ADHD, ASD or developmental delay diagnosis are also identified as having an intellectual disability. However, almost a third of people with cerebral palsy, and almost half of people with Down syndrome are also diagnosed with an intellectual disability. Few people with the other listed conditions are identified with a diagnosis in the IDI, and only fragile X syndrome is strongly predictive of an intellectual disability diagnosis being recorded.

Table 5 – Selected conditions diagnosed in administrative data source, with prevalance of an intellectual disability diagnosis

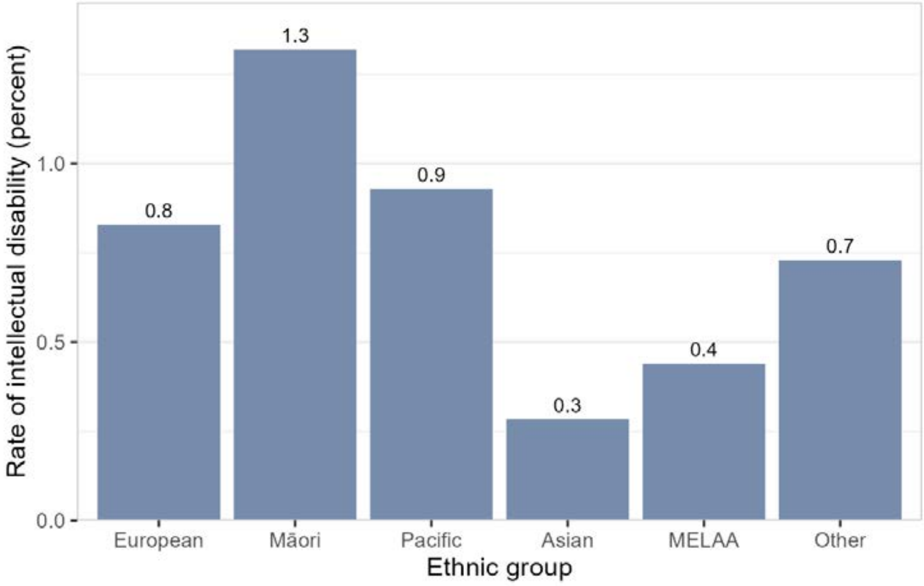
Associated condition (recorded diagnosis)	Intellectual disability diagnosed	No intellectual disability diagnosed	Total population identified	Rate of intellectual disability (%)
Attention deficit hyperactivity disorder (ADHD)	3,114	19,875	22,989	13.55
Autism spectrum disorder (ASD)	6,093	23,319	29,412	20.72
Cerebral palsy	2,700	6,069	8,769	30.79
Developmental delay	7,047	35,739	42,786	16.47
Down syndrome	2,445	3,093	5,538	44.15
Foetal alcohol syndrome	150	513	663	22.62
Fragile X Syndrome	177	252	429	41.26
Klinefelter syndrome	81	273	354	22.88
Spina bifida	153	1,452	1,605	9.53

Given that all people with Down syndrome and some other conditions will have some level of intellectual disability, this analysis highlights the difficulty inherent in using diagnostic codes to identify the intellectually disabled population. The population identified will be affected by inconsistent or erroneous reporting, as well as changes in diagnostic coding over time. We considered using some associated conditions, such as Down syndrome, to identify additional people with intellectual disability for this study, but decided to focus only on direct intellectual disability diagnoses. This maintains consistency with the 2011 report.

3.2.2 Ethnic group

Figure 3 shows the rates of intellectual disability by ethnic group. As in the 2011 study, Māori had the highest rates of intellectual disability (1.3 percent), followed by Pacific peoples (0.9) and Europeans (0.8). Asian and MELAA ethnic groups had the lowest rates of intellectual disability, potentially reflecting the relatively large number of migrants in these ethnic groups. Like people with other health conditions and disabilities, those with an intellectual disability may be less likely than other people to meet immigration requirements, as they may be considered to add costs to, or demands on, New Zealand’s health services. Age standardisation has little impact on these results and as such age-standardised results are not reported here.

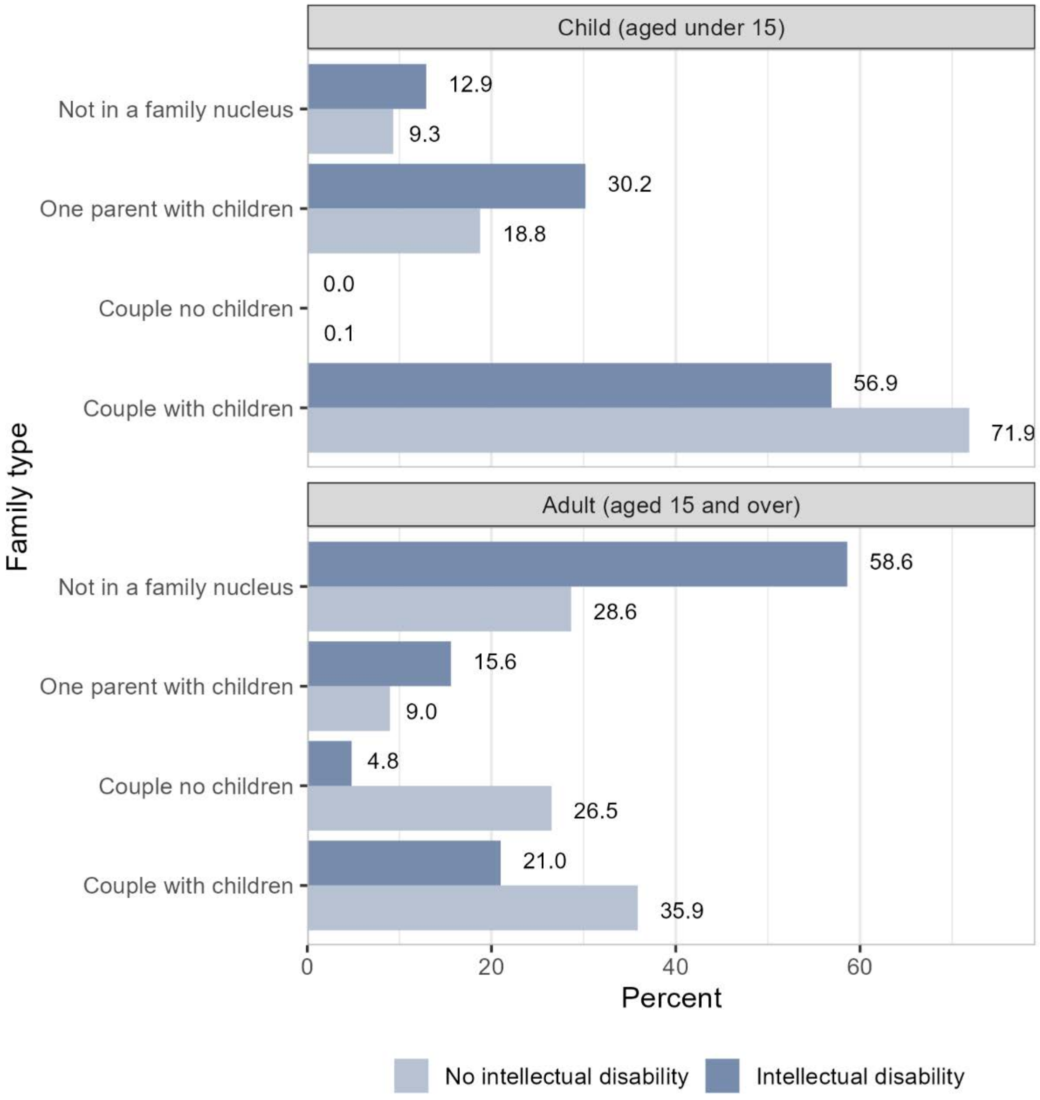
Figure 3 – Prevalence of intellectual disability by ethnic group, 2018



3.2.3 Family type

Figure 4 shows the distribution of the intellectually disabled and non-intellectually disabled populations by family type for adults and children. It shows that intellectually disabled adults are approximately twice as likely as those without an intellectual disability to not live in a family nucleus. This is based on the Stats NZ standard family type classification, which considers a family unit to consist of a couple, with or without dependent children, or a sole parent with dependent children. As such, people are considered to not be in a family nucleus if they are adults who do not have a partner or children, even if they are living with their parents or other family members. As such, this definition does not capture the lives of many people with intellectual disability very well.

Figure 4 – Distribution of family type by intellectual disability and whether adult or child, 2018



People with an intellectual disability are also more likely to live in a sole parent family unit. This is particularly the case for children with an intellectual disability, who are less likely than children without an intellectual disability to live in a two-parent family.

3.2.4 Living situation

We can infer whether people are living in residential care by whether they are receiving a residential support subsidy (RSS) or residential care subsidy (RCS). These subsidies are paid to residential service providers by Te Whatu Ora – Health New Zealand, to help with the costs of residential care.

The residential support subsidy is paid when a person needs residential care due to drug and alcohol rehabilitation, an intellectual, psychiatric, physical or sensory disability, or long-term chronic health conditions.

The residential care subsidy, on the other hand, pays for hospital or rest-home care for New Zealanders aged 65 and over, or aged 50 to 64 with no dependent children, who need long-term residential care. RCS eligibility is asset tested.

A little over one in five adults aged 15 and over with intellectual disability receive either RSS or RCS (21.18 percent), with most of those receiving RSS (19.76 percent of adults compared to 1.43 percent of adults receiving RCS). Few adults without intellectual disability receive RSS or RCS (0.54 percent) with almost all of those (0.46 percent of adults) receiving RCS. Only 0.08 percent of adults without intellectual disability receive RSS.

3.3 Geography

Results by territorial authority area are presented below, while results by the broader regional council and district health board areas are presented in Appendix 2.

3.3.1 Territorial authority

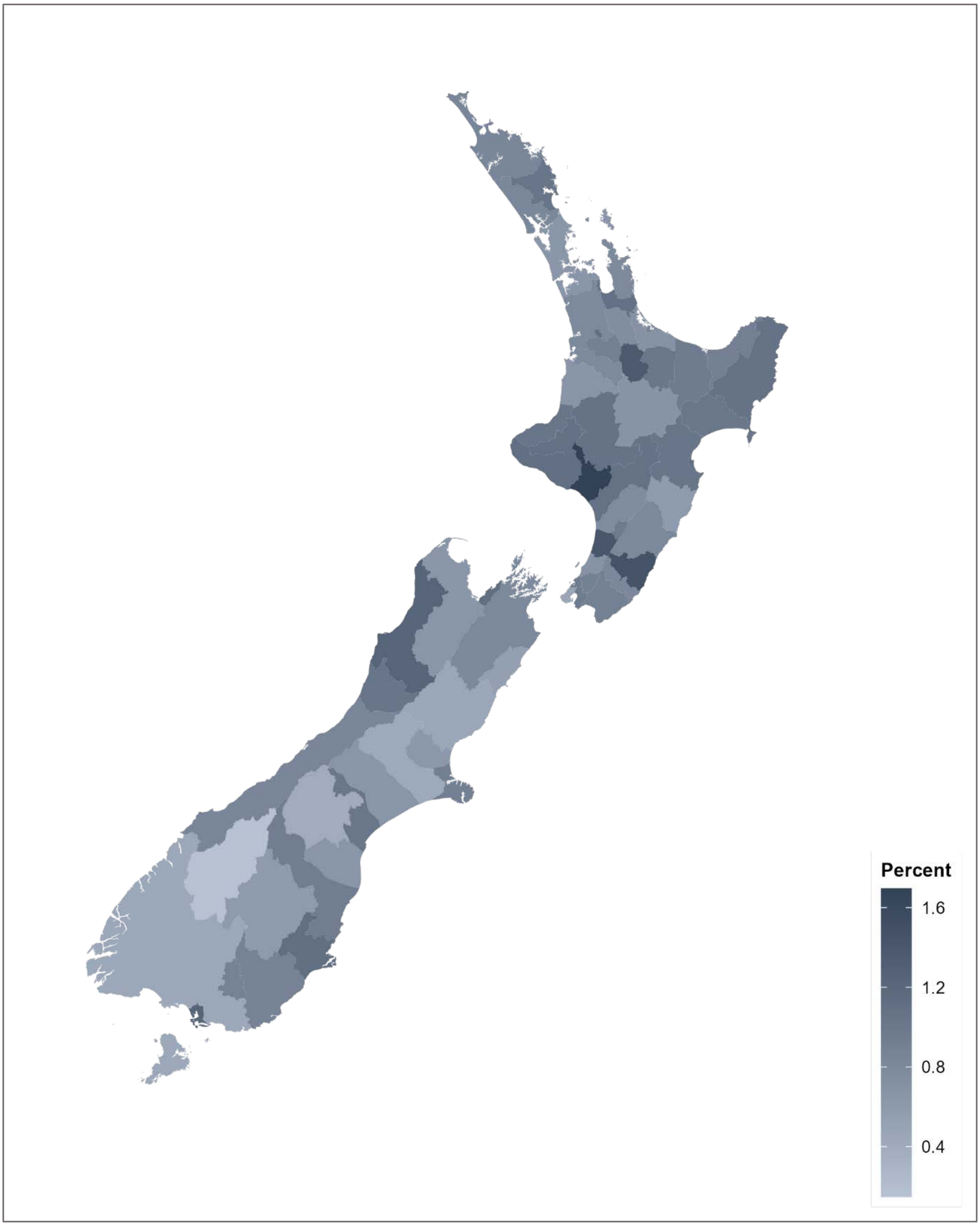
People with intellectual disability live across all areas of Aotearoa, but there are some areas where they are more likely to live than others. This reflects a range of factors, including the underlying age and ethnic distribution of the population in each area. It could also reflect choices people make due to differences in the cost of living, access to health or other services like specialist schools, and historical factors like the resettlement process after residential institutions were closed down. Figure 5 shows the rate of identified intellectual disability by territorial authority area.

Territorial authority areas with the highest rates of intellectual disability are the North Island provincial areas of Whanganui District, Masterton District, Horowhenua District, South Waikato District and Kawerau District (all with rates in excess of 1.25 percent and up to 1.7 percent in the case of Whanganui). Slightly lower rates (of more than 1.2 percent) were recorded in the South Island in Invercargill City and Buller District.

The lowest rates of intellectual disability were identified in the South Island provincial areas of Hurunui District, Southland District, Selwyn District and Mackenzie District, all with rates between approximately 0.4 percent and 0.45 percent, and Queenstown-Lakes District with by far the lowest rate of intellectual disability, at 0.15 percent. The latter result could reflect both the high living costs of the Queenstown area and the large number of migrant workers living and working in the area.

The large centres of Auckland City and Wellington City also had relatively low rates of intellectual disability, at 0.65 percent and 0.45 percent, respectively.

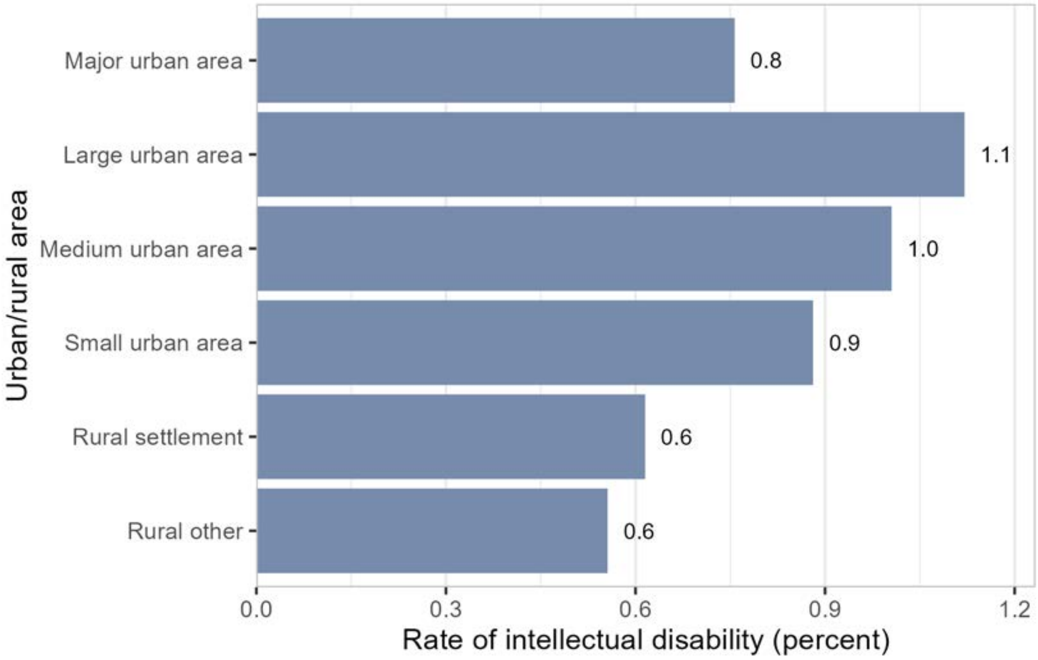
Figure 5 – Prevalence of intellectual disability by territorial authority (TA), 2018



3.3.2 Rural/urban geographic classification

Stats NZ defines urban and rural areas of New Zealand according to their population density.[14] Figure 6 shows the percentage of people with intellectual disability living in the different types of urban aznd rural areas. People with intellectual disability in the study population were more likely to live in urban areas than rural areas but were less likely to live in 'major urban areas' with populations of 100,000 or more than smaller urban areas.

Figure 6 – Prevalence of intellectual disability by rural/urban geographic classification, 2018



3.3.3 Deprivation

Looking at the relationship between socioeconomic deprivation and intellectual disability, it can be observed that the areas with the higher deprivation scores also have higher rates of intellectual disability. Figure 7 shows the distribution of people with and without intellectual disability across socioeconomic deprivation deciles measured by the New Zealand Index of Deprivation (NZDep).[15] Comparing the distributions, more than one in five people with intellectual disability live in the most deprived 10 percent of small areas in New Zealand (21.4 percent), compared to just over

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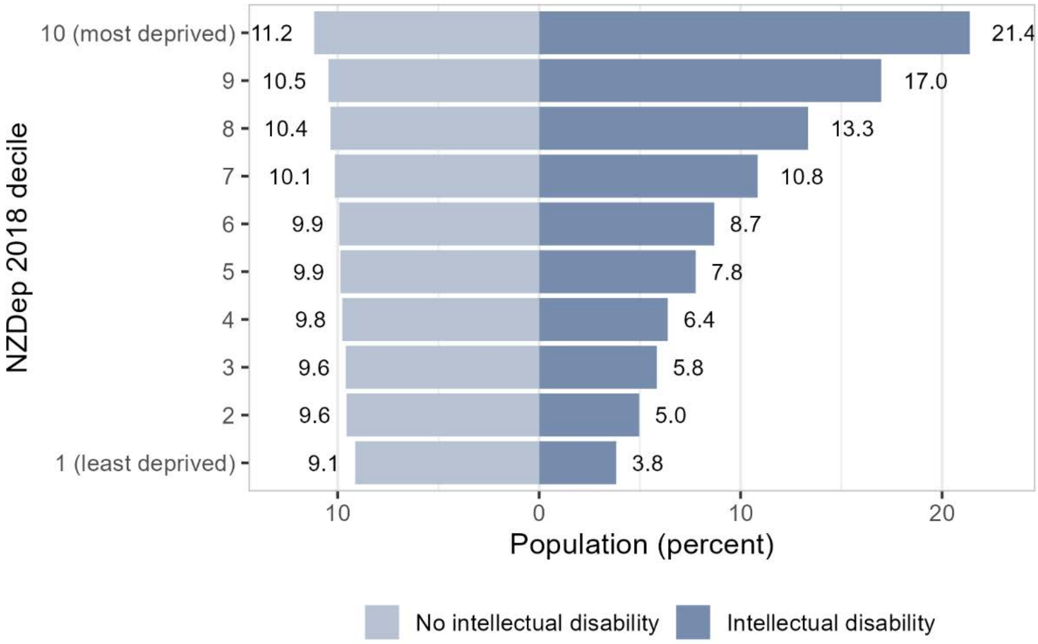
[14] https://www.stats.govt.nz/methods/statistical-standard-for-geographic-areas-2023/

[15] The New Zealand Index of Deprivation (NZDep) is an area-based measure of the level of deprivation for people in each small area. It is based on nine Census variables. NZDep is displayed as deciles. Each NZDep decile contains about 10 percent of small areas in New Zealand. The percentage of people in each decile is higher in the higher deprivation deciles as higher deprivation areas tend to have higher population density.

one in 10 people without intellectual disability (11.2 percent). Very few people with intellectual disability live in the least deprived decile (only 3.8 percent, compared to 9.1 percent of people without intellectual disability).

Figure 7 – Deprivation decile (NZDep) distribution for people with and without intellectual disability, 2018



Bricharne Hastie – Spiralling Heart

4 Health

Health is an integral aspect of wellbeing, and it was the sole focus of the 2011 report. This study has updated most of the indicators in the previous report for which data was available in the IDI. For comparability, consistent definitions have been used as much as possible.

The indicators below show that people with intellectual disability are high users of health care, but their health care outcomes are poorer on average than those of people without intellectual disability. This is consistent with findings of the 2011 report.

4.1 Life expectancy at birth

Life expectancy at birth is an average length of life for a specific population and is used internationally as an overall indicator of health for a population. Life expectancy at birth indicates the total number of years a person could expect to live, based on the mortality rates of the population at each age in a given year.

The life expectancy for people with intellectual disability in the study population is considerably lower than for the population without intellectual disability. The life expectancy for males with intellectual disability for 2017 to 2019 is estimated at 65.3 years compared to 80.3 years for males without intellectual disability. The life expectancy for females with intellectual disability for years 2017 to 2019 is 65.7 years compared to 83.7 for females without intellectual disability.

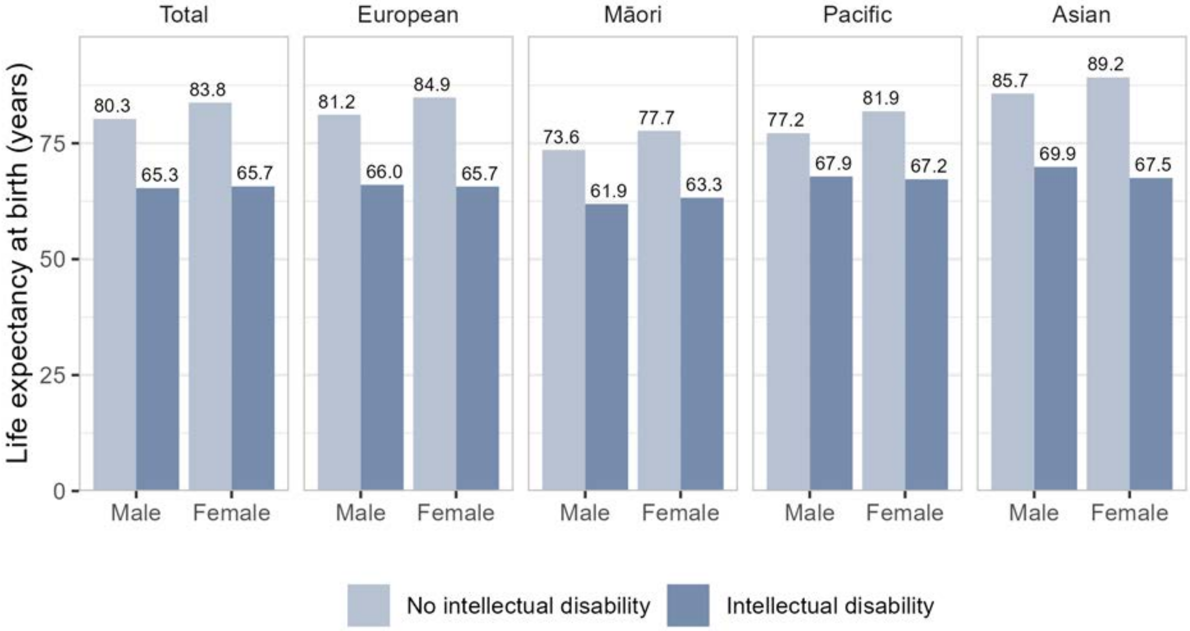
Other health indicators in this report show different health outcomes and risks that may help to explain this differential life expectancy between people with and without intellectual disability. An Australian study that compared mortality data for people with and without intellectual disability concluded that adults with intellectual disability experience premature mortality and over-representation of potentially avoidable deaths (Trollor, Srasuebkul, Xu, & Howlett, 2017).

When compared with the results of the 2011 report, the life expectancy for both males and females with intellectual disability increased by around six years, compared to increases of less than two years over the same period for the general population. These estimates should be treated with some caution however, due to changes in the way the intellectually disabled population is identified in this report.

Figure 8 shows life expectancy estimates for different subpopulations. It shows that life expectancy is lower for people with intellectual disabilities than for people without intellectual disability. This is across gender and ethnic groups. In the general population females have a longer life expectancy than males, but for people with intellectual disabilities there is no differential by gender.

The difference observed between people with and without intellectual disability is greater for those ethnic groups with longer overall life expectancy, as expected. The pattern across ethnic groups is similar for people with and without intellectual disabilities.

Figure 8 – Life expectancy at birth by ethnicity, sex and intellectual disability, 2017-2019



Source: Ministry of Health mortality data in the IDI.
Note: Life expectancy estimates have been calculated using the abridged Chiang II life table method (Chiang 1978, 1984) using data from 2017 to 2019.

4.2 Chronic health conditions

This section presents indicators for a selection of chronic health conditions.

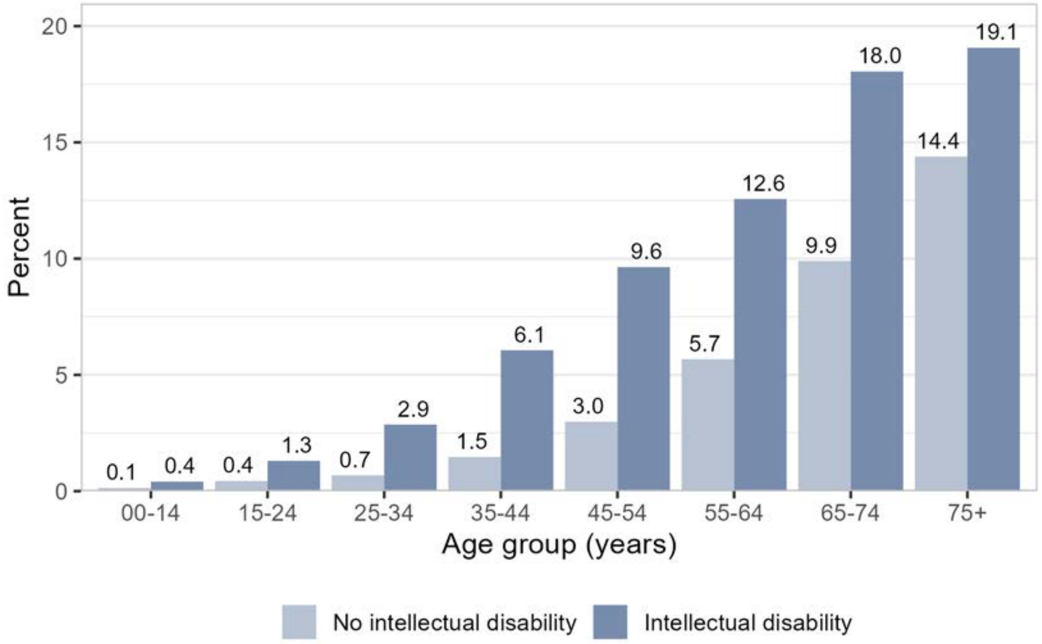
4.2.1 Coronary heart disease

This indicator reports on the prevalence of care or treatment for coronary heart disease (CHD) in New Zealand public and private hospitals for people with and without intellectual disability. CHD risk increases with age for people both with and without intellectual disability, but the risk is higher for people with intellectual disability. Figure 9 shows that, regardless of age, CHD is more prevalent in people with intellectual disability than in the non-intellectually disabled population. For example, 12.6 percent of people with intellectual disability aged 55 to 64 in the study population had received care or treatment for CHD, compared to 5.7 percent of the people without intellectual disability in the same age group.

Adjusting for age, the prevalence of CHD treatment in the population with intellectual disability is more than double (rate ratio of 2.18) that of the population without intellectual disability (see Figure 10). Looking at the adjusted rate by gender, we can observe that while males have a higher risk of CHD in the population without intellectual disability, this is not the case for people with intellectual disability, where the female rate of CHD is 7.8 percent compared to the male rate of 6.4 percent.

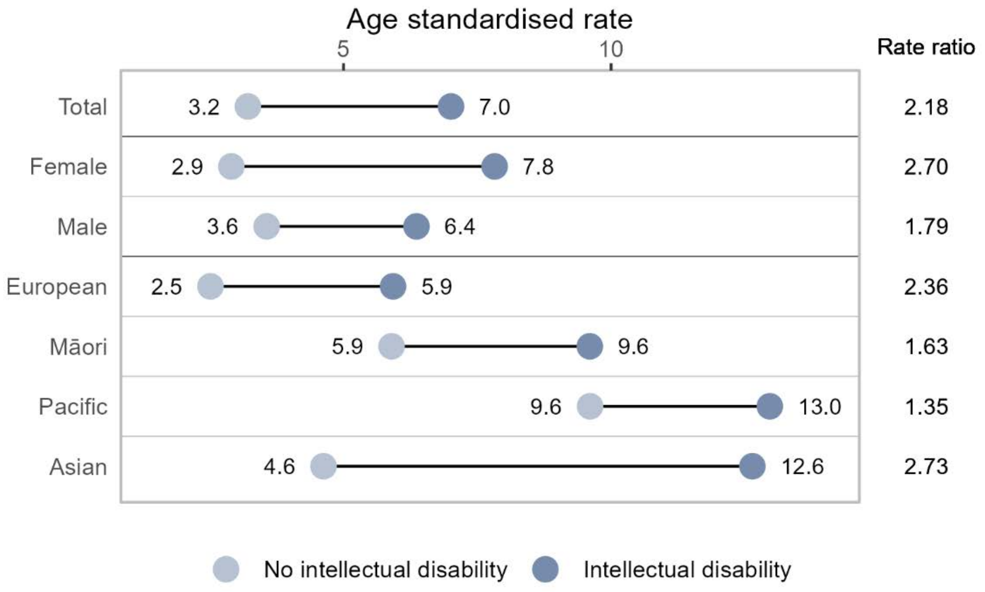
Pacific people with intellectual disability have the highest age-standardised rate of CHD (13.0 percent), followed by Asians (12.6 percent), Māori (9.6 percent) and Europeans (5.9 percent).

Figure 9 – Coronary heart disease (CHD) care or treatment, January 1998 – June 2018



Source: Ministry of Health publicly funded and privately funded hospital discharges (NMDS) in the IDI.
Definition: Percentage of people receiving public hospital treatment for CHD between 1 January 1998 and 30 June 2018.

Figure 10 – Coronary heart disease (CHD) care or treatment, age-standardised rates for the total population, by sex, and by ethnicity, January 1998 – June 2018.



Source: Ministry of Health publicly funded and privately funded hospital discharges (NMDS) in the IDI.
Definition: Percentage of people receiving public hospital treatment for CHD between 1 January 1998 and 30 June 2018.

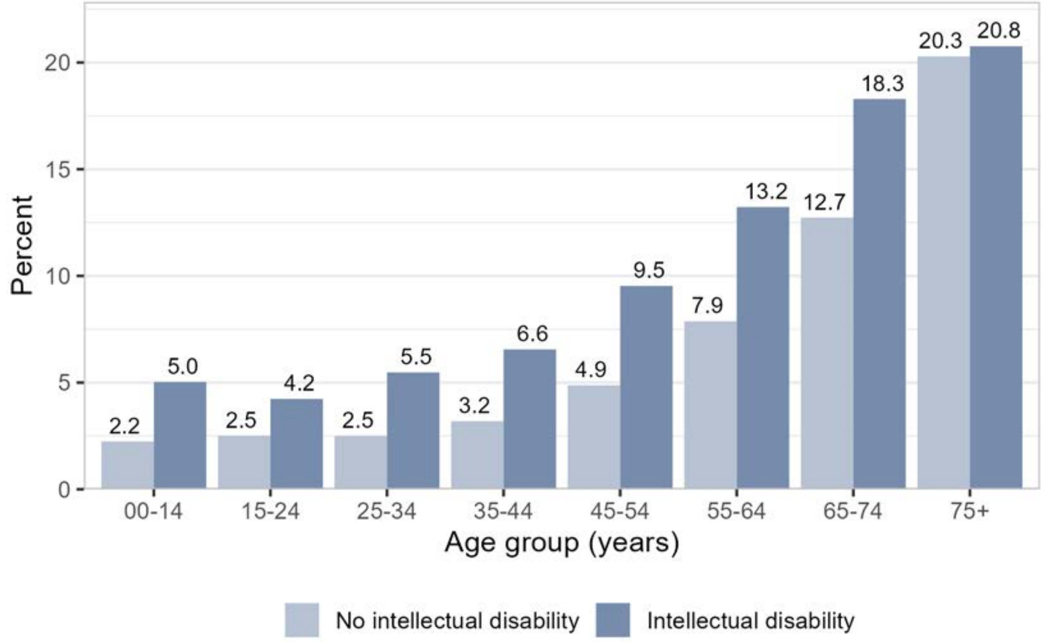
People with intellectual disability in the Asian ethnic group have the highest relative difference of CHD rates compared to people without intellectual disability (rate ratio of 2.73). Due to immigration health requirements, recent migrants to New Zealand are less likely than the general population to have chronic health conditions or disability. This means that the new migrant population is less likely than the rest of the New Zealand population to have an intellectual disability, and less likely to have other health conditions. For subpopulations with a large subgroup of new migrants, the relative difference in health outcomes between intellectual disabled and non-disabled will be exacerbated by this.

4.2.2 Chronic obstructive pulmonary disease

Chronic obstructive pulmonary disease (COPD) is a common lung disease causing restricted airflow and breathing problems. Smoking and air pollution are the most common causes of COPD. While the 2011 report used a broader measure of respiratory disease, which included conditions such as asthma and bronchitis, we do not have code to construct this measure. Instead, we focus on COPD care or treatment in this report.

Figure 11 shows the percentage of people receiving hospital care for COPD with and without intellectual disability by age group. As age increases so does the percentage of people receiving care for COPD. The percentage of people with intellectual disability who have received hospital care for COPD is higher compared to the population without intellectual disability across all age groups. Adjusted by age, the rate of COPD in the population with intellectual disability is 8.8 percent, compared to 5.5 percent for people without intellectual disability. This is a relative increase of 1.5 times
(rate ratio 1.59).

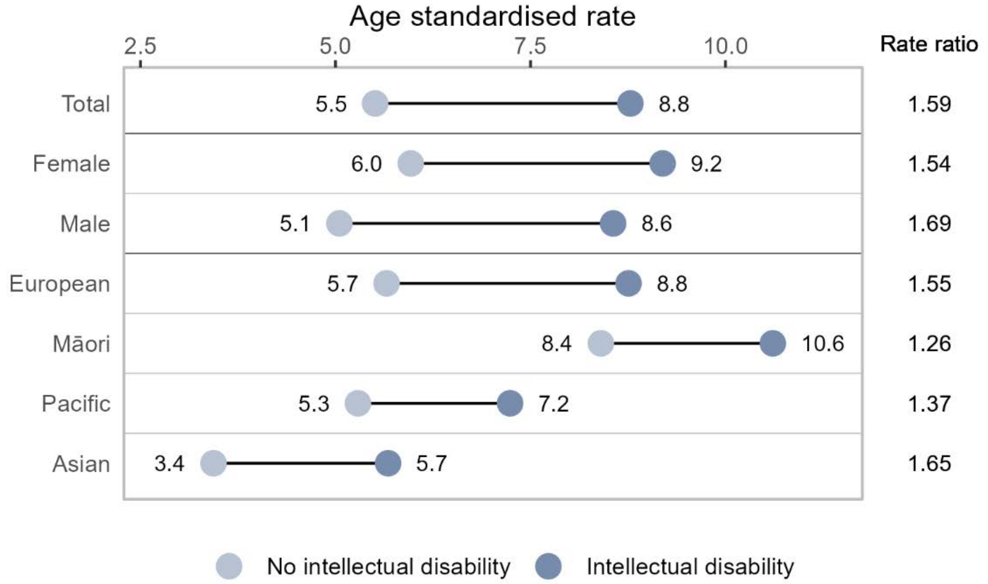
Figure 11 – Chronic obstructive pulmonary disease (COPD) care or treatment by age group, 1 January



Source: Ministry of Health publicly funded and privately funded hospital discharges (NMDS).
Definition: Percentage of people receiving public or private hospital care for COPD between 1 January 1998 and 30 June 2018.

Figure 12 shows that the age-standardised rate of COPD is higher in females than males, for people with and without intellectual disability. Focusing on the adjusted rates by ethnic group, Māori with intellectual disability, with an adjusted rate of 10.6 percent, have the highest rates of COPD, followed by Europeans (ASR 8.8 percent), Pacific people (ASR 7.2 percent) and Asians (ASR 5.7 percent). The relative risk of COPD is similar for males and females and for different ethnic groups, although the relative risk for Māori and Pacific peoples is slightly lower than other ethnic groups.

Figure 12 – Chronic obstructive pulmonary disease (COPD) care or treatment, age-standardised rates for the total population, by sex, and by ethnicity, 1 January 1998 to 30 June 2018



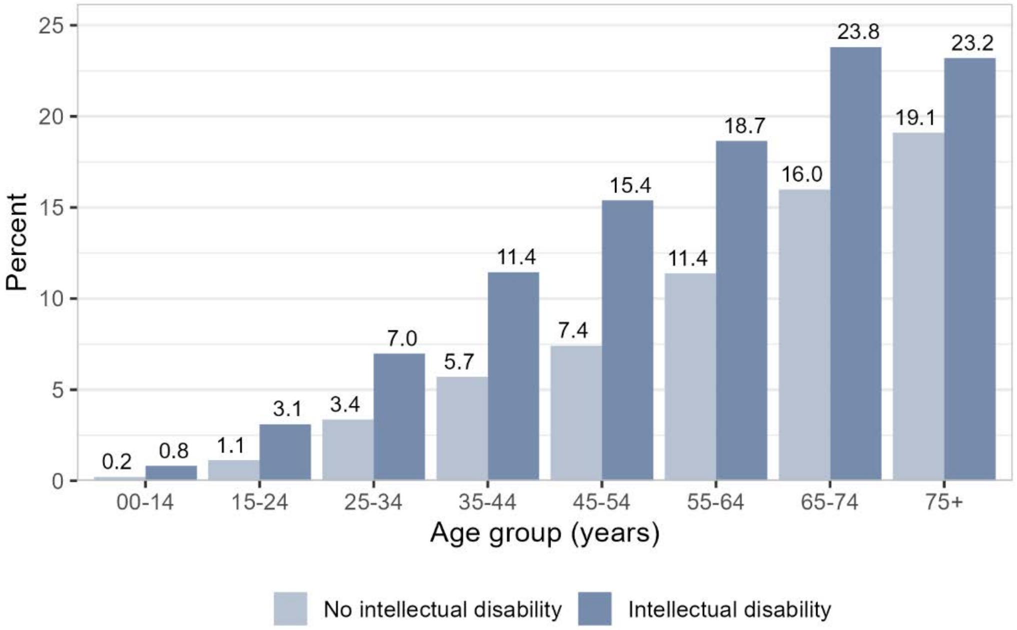
Source: Ministry of Health publicly funded and privately funded hospital discharges (NMDS).
Definition: Percentage of people receiving public or private hospital care for COPD between 1 January 1998 and 30 June 2018.

4.2.3 Diabetes

The prevalence of diabetes is higher at all ages for people with intellectual disability in the study population compared to people without intellectual disabilities (see Figure 13). The rates and patterns across age groups are very similar to what was reported in 2011. People with intellectual disability aged 65-74 show the highest prevalence of diabetes care or treatment.

Adjusted for age, people with intellectual disability (ASR 10.9 percent) are considerably more likely to receive diabetes care or treatment than people without intellectual disability (ASR 6.3 percent). Figure 14 shows that this is the case for different genders and ethnic groups. People with intellectual disability of Pacific ethnicity have the highest prevalence of diabetes (ASR 17.9 percent), followed by Asians (ASR 17.4). The rate ratio allows us to compare the prevalence of diabetes between people with and without disability for different population groups. Figure 14 shows that the prevalence is greater in females than males, and greater for Europeans and Asians than for Pacific or Māori.

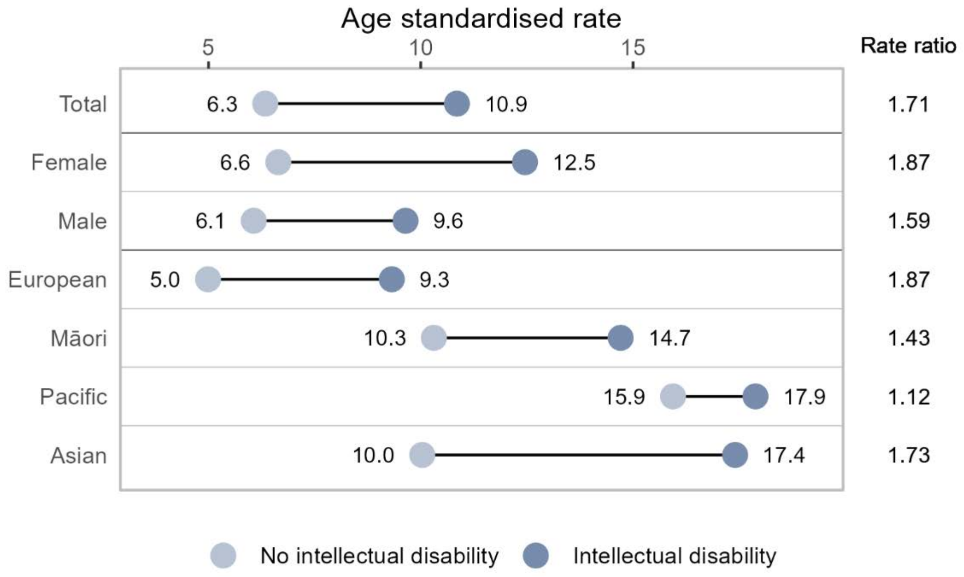
Figure 13 – Diabetes care or treatment by age group, to 30 June 2018



Sources: National Minimum Dataset, Pharmaceutical Collection, National Non-Admitted Patient Collection, Laboratory Claims data in the IDI.

Definition: Percentage of people receiving: public hospital treatment for diabetes; two or more diabetes-related prescribed medicines; services at a diabetes clinic; or four or more blood glucose tests.

Figure 14 – Diabetes care or treatment, age-standardised rates for the total population, by sex and by ethnicity, to 30 June 2018



Sources: National Minimum Dataset, Pharmaceutical Collection, National Non-Admitted Patient Collection, Laboratory Claims data in the IDI.

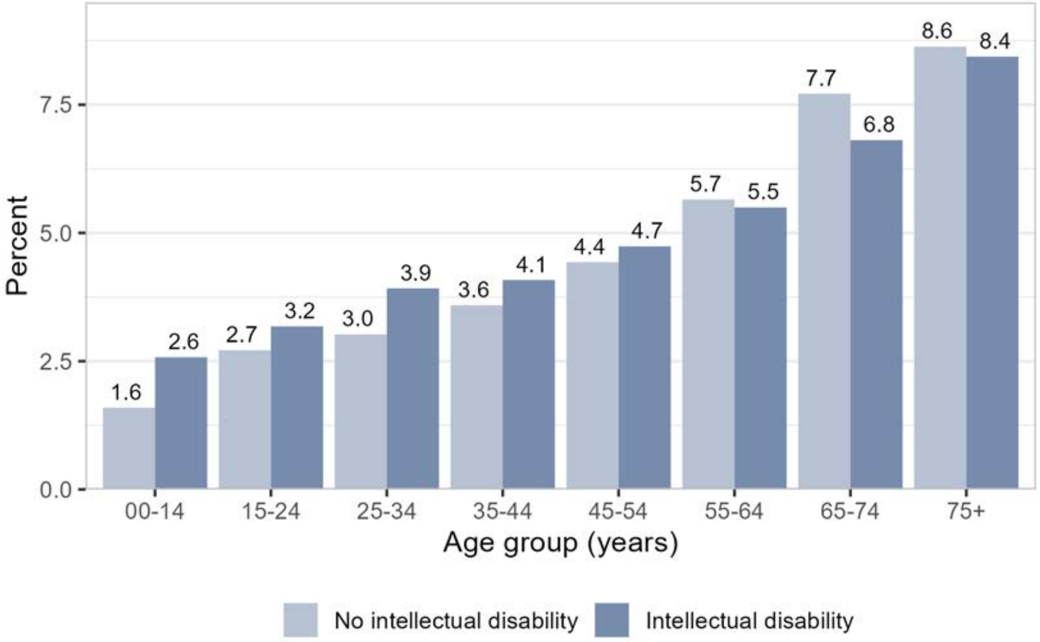
Definition: Percentage of people receiving: public hospital treatment for diabetes; two or more diabetes-related prescribed medicines; services at a diabetes clinic; or four or more blood glucose tests.

4.2.4 Cancer

Cancer prevalence is estimated by identifying people who have received cancer care or treatment in a hospital or outpatient setting in the past two years, as well as anyone who has been added to the Cancer Registry over that time period. This is different to the way cancer treatment was identified in the 2011 report, which additionally identified people who had been dispensed pharmacological cancer treatment in the previous two years.[16] Possibly as a result of this difference, the patterns we observe in this report in 2018 are quite different from those observed in 2008.

While the 2011 report showed that people with intellectual disability in 2008 were more likely to receive cancer care than those without intellectual disability until age 74, Figure 15 shows much smaller differences in rates, with people with intellectual disability only having higher rates until age 54. Nevertheless, as in 2008, rates of cancer treatment after adjusting for age were higher among people with intellectual disability than those without (see Figure 16).

Figure 15 – Cancer care and treatment by age group, two years to 30 June 2018



Sources: National Minimum Dataset, Ministry of Health cancer registrations, National Non-Admitted Patient Collection.
Definition: Percentage of people treated for cancer in the two years to 30 June 2018. Cancer care or treatment is defined as having been added to the New Zealand Cancer Registry or had treatment for cancer in a public hospital inpatient or outpatient setting.

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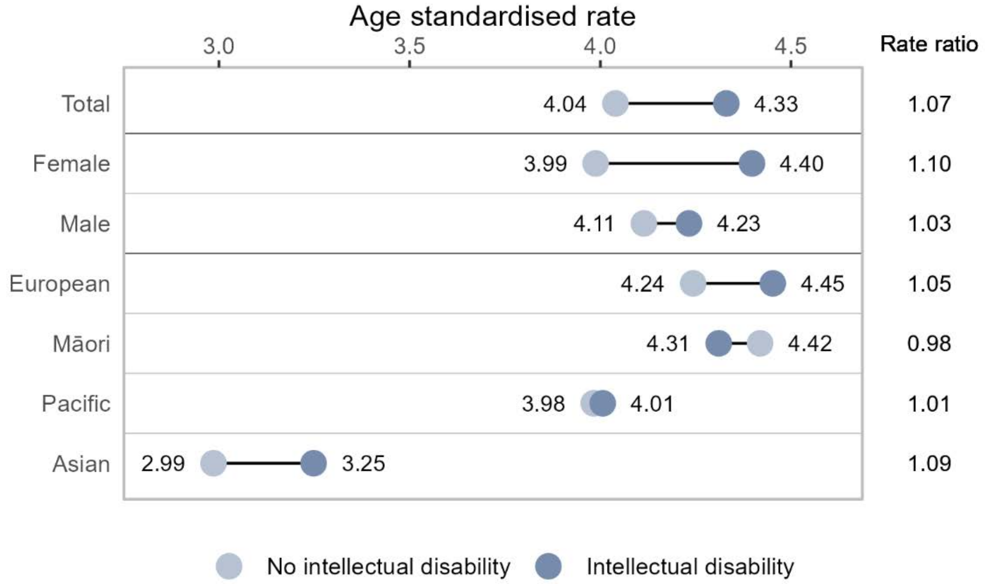
[16] Pharmacological cancer treatments are difficult to identify robustly, so we have erred on the side of caution and excluded them from this report. There is a risk of both missing treatments and inferring a cancer diagnosis from pharmaceuticals that may be used for other health concerns. For example, methotrexate, which was included as a pharmacological treatment in the 2011 report, can also be used to treat skin conditions such as psoriasis dermatitis and arthritis.

Figure 16 also shows age-standardised rates for cancer treatment by sex and ethnicity. While females without intellectual disability have lower cancer treatment rates than males, the converse is true for people with disability (rates of 4.4 and 4.2 respectively). Unlike the population more broadly, Māori and Pacific people with intellectual disability have similar or lower rates of cancer than people in the same ethnic group without intellectual disability. People of Asian ethnicity have low cancer treatment rates regardless of whether they have an intellectual disability.

Figure 16 – Cancer care and treatment, two years to 30 June 2018, age-standardised rates for the total population, by sex and by ethnicity



Sources: National Minimum Dataset, Ministry of Health cancer registrations, National Non-Admitted Patient Collection.
Definition: Percentage of people treated for cancer in the two years to 30 June 2018. Cancer care or treatment is defined as having been added to the New Zealand Cancer Registry or had treatment for cancer in a public hospital inpatient or outpatient setting.

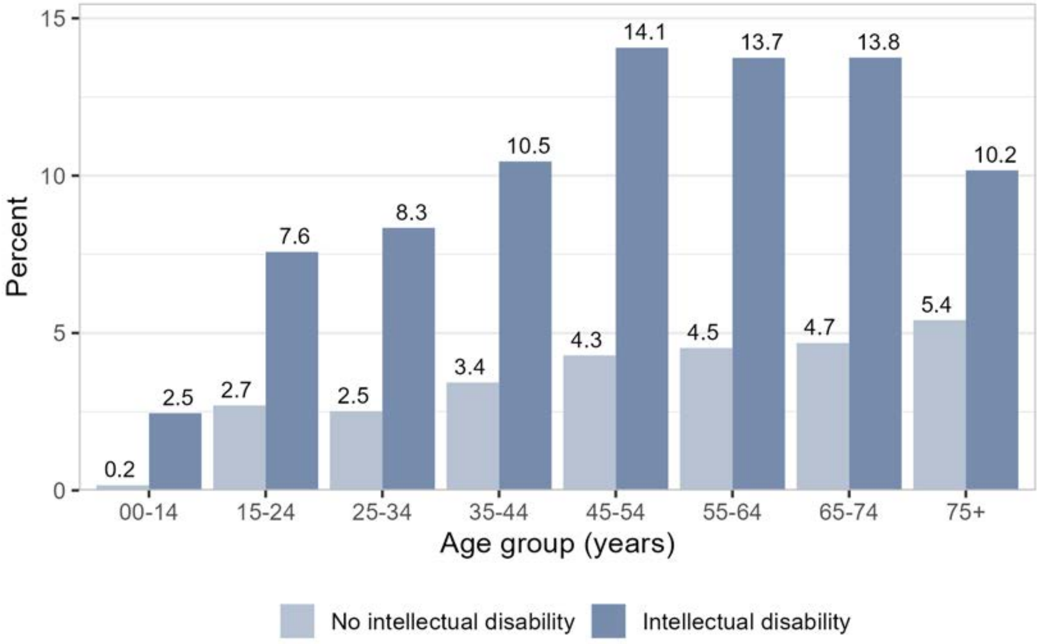
4.3 Mental health

This section presents indicators of the prevalence of mental disorder treatment in people with and without intellectual disability in the year to June 2018. Rates for mood disorders, psychotic disorders and dementia have been estimated using data from publicly funded mental health care as well as prescribed medication information. Variation may reflect differences in unmet need for services as well as differences in prevalence.

4.3.1 Mood disorders

In the year to June 2018, an estimated 3,546 people with intellectual disability in the study population were treated for mood disorders. Mood disorders include mental health conditions such as depression and bipolar disorder. For all age groups the rates of mood disorder treatment are higher for people with intellectual disability than they are for people without intellectual disability (see Figure 17). The rates of mood disorder in people with intellectual disability show a steep increase from childhood (2.5 percent for 0 to 14-year-olds) to the mid-50s (14.1 percent for 45 to 54-year-olds), while rates for people without disability show a gradual increase across the life course.

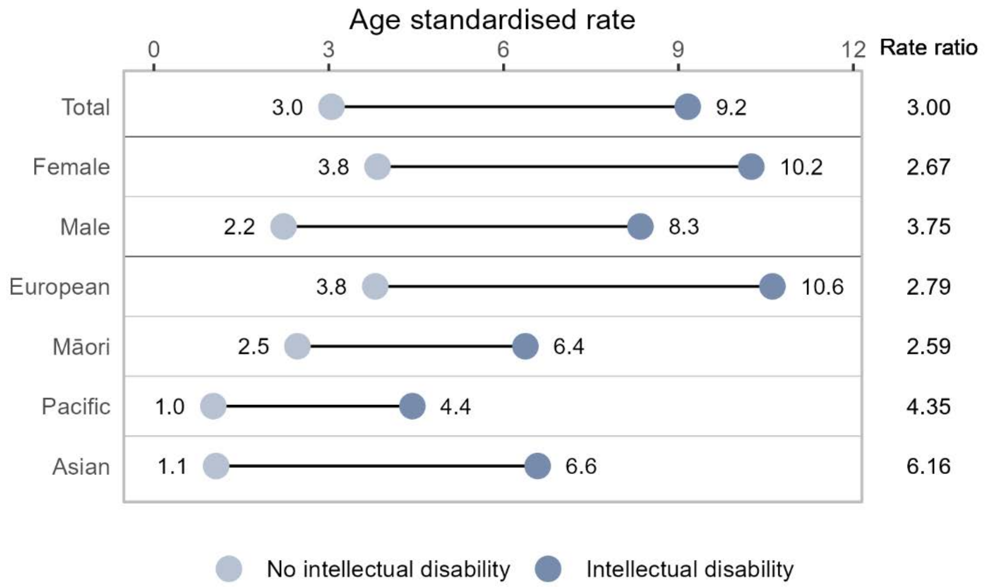
Figure 17 – Mood disorder care or treatment by age group, year to 30 June 2018



Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD) and Laboratory Claims data in the IDI.
Definition: Percentage of people having a public inpatient hospitalisation with a mood disorder diagnosis; secondary mental health and addiction service with a mood disorder diagnosis; prescription medicines for treating a mood disorder; or three or more laboratory tests for lithium.

Mood disorders are more prevalent in females than males for people with and without an intellectual disability. Adjusting for age, people of European ethnicity with intellectual disability have the highest rate of mood disorder treatment (see Figure 18).

Figure 18 – Mood disorders, age-standardised rates for the total population, by sex and by ethnicity



Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD) and Laboratory Claims data in the IDI.
Definition: Percentage of people having a public inpatient hospitalisation with: a mood disorder diagnosis; secondary mental health and addiction service with a mood disorder diagnosis; prescription medicines for treating a mood disorder; or three or more laboratory tests for lithium.

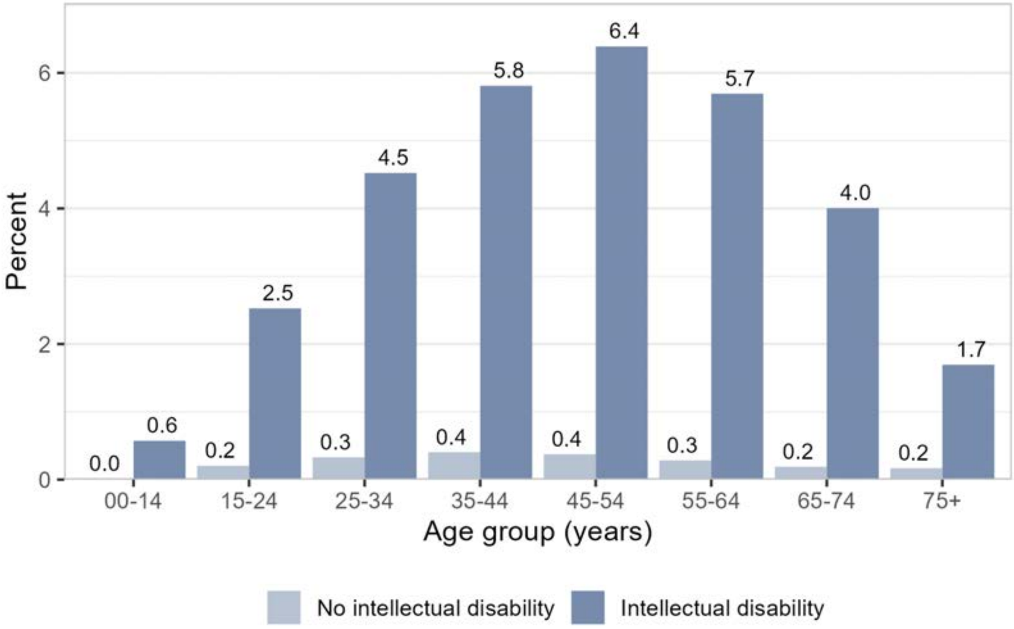
4.3.2 Psychotic disorders

Psychotic disorders include schizophrenia, paranoid states and other psychoses not related to substance use or physical health conditions. This indicator is constructed using data from publicly funded mental health care as well as prescribed medication information. In total, 1,506 people with intellectual disability were identified as having been treated for a psychotic disorder in the year to 30 June 2018.

Figure 19 shows that the proportion of people with intellectual disability receiving care for psychotic disorder is considerably larger than that for people without intellectual disability for all age groups. The rate of psychotic disorders in the study population increases with age until mid-life (45 to 54 year age group) and then decreases.

It is important to note that it is well documented in the literature, including in New Zealand (Skipper, 2013), that the use of antipsychotic medication for the management of behavioural challenges for people with intellectual disability is widespread. As a result, antipsychotic medication may not provide a good estimate of the prevalence of psychotic disorders in the intellectually disabled population. Some antipsychotic medications that may be used for behaviour management are excluded from both the 2011 report and this report, however, as they are also commonly used in the treatment of conditions other than psychoses.[17] This reduces the risk that people with intellectual disability are incorrectly assumed to have a psychotic condition due to medication prescribed for behaviour-management purposes.

Figure 19 – Psychotic disorder care or treatment by age group, year to June 2018



Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD) and Laboratory Claims data in the IDI.
Definition: Percentage of people having a public inpatient hospitalisation with a psychotic disorder diagnosis; secondary mental health service with a psychotic disorder diagnosis; or prescription medicines for treating a psychotic disorder.

Adjusting for age (see Figure 20), the rate of psychotic disorder care is slightly higher in males for people with and without intellectual disability. People of Māori ethnicity with intellectual disability, with an age-adjusted rate of 5.7, were the group most likely to receive care for psychotic disorder, followed by Pacific people (ASR 5.0), Asian (ASR 4.0) and European (ASR 3.8).

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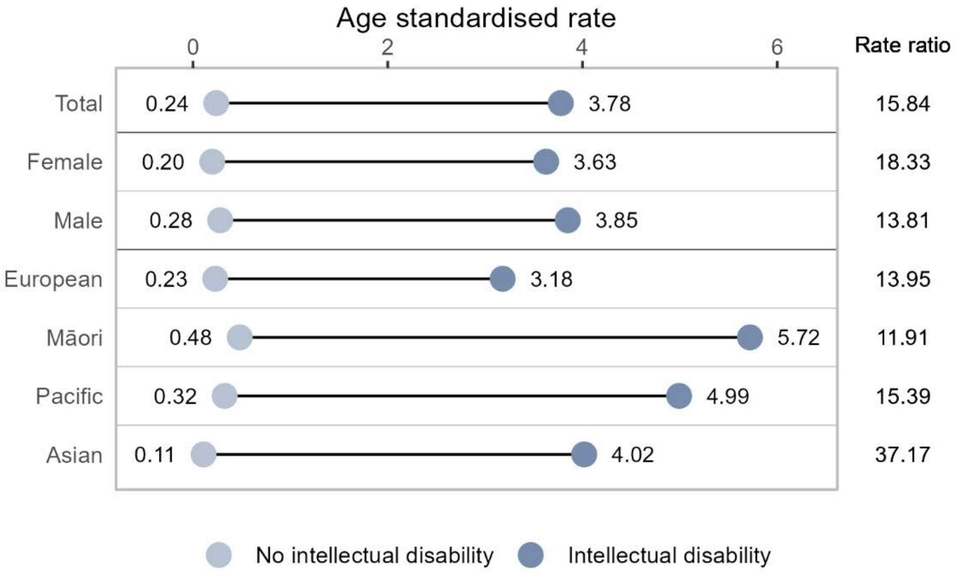
[17] Examples of such excluded medications include risperidone, olanzapine, chlorpromazine and quetiapine. However, other pharmaceuticals that are documented as having been used for behaviour-management purposes, such as thioridazine and thioxanthene, are included.

Figure 20 – Psychotic disorder care or treatment, year to June 2018, age-standardised rates for the total population, by sex and by ethnicity



Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD), and Laboratory Claims data in the IDI.
Definition: Percentage of people having: a public inpatient hospitalisation with a psychotic disorder diagnosis; secondary mental health service with a psychotic disorder diagnosis; or prescription medicines for treating a psychotic disorder.

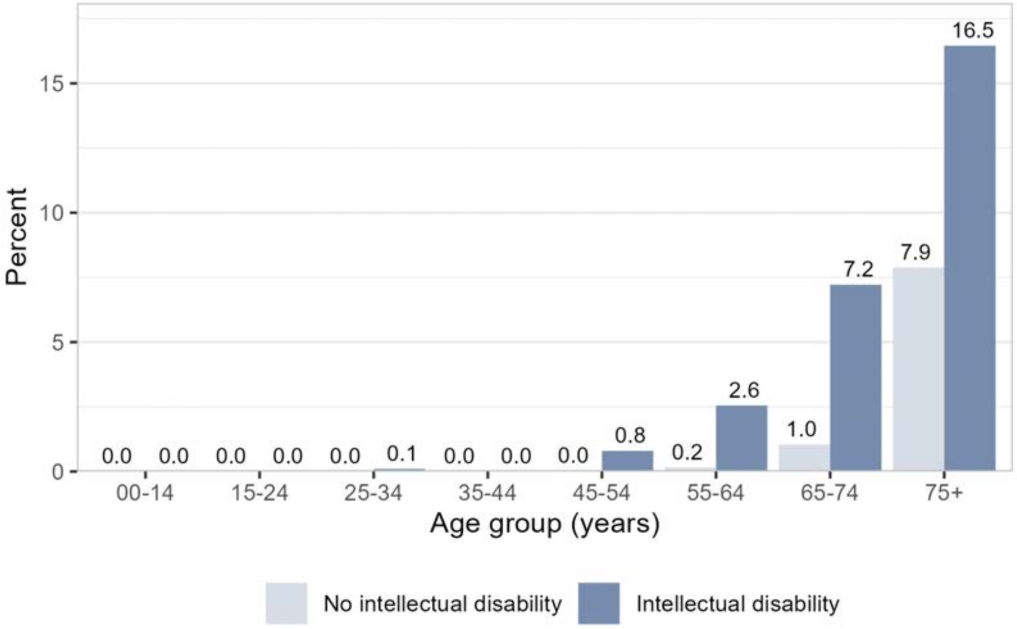
4.3.3 Dementia

Dementia is an umbrella term used when a person experiences gradual loss of brain function; it includes changes in memory, thinking, behaviour, personality and emotions. The most common form of dementia is Alzheimer's disease. This indicator measures treatment or care for dementia using data from public and private hospitals, prescribed medication and needs assessment information. It includes Alzheimer's, dementia and Parkinson's disease.

The distribution of dementia care or treatment by age for people with and without intellectual disability in the study population is shown in Figure 21. It indicates that the prevalence of dementia treatment is considerably higher in the intellectually disabled population compared to the non-disabled population across all ages. This is consistent with international literature documenting that dementia is more common in older adults with intellectual disability than in the general population (Strydom, Chan, King, Hassiotis, & Livingston, 2013).

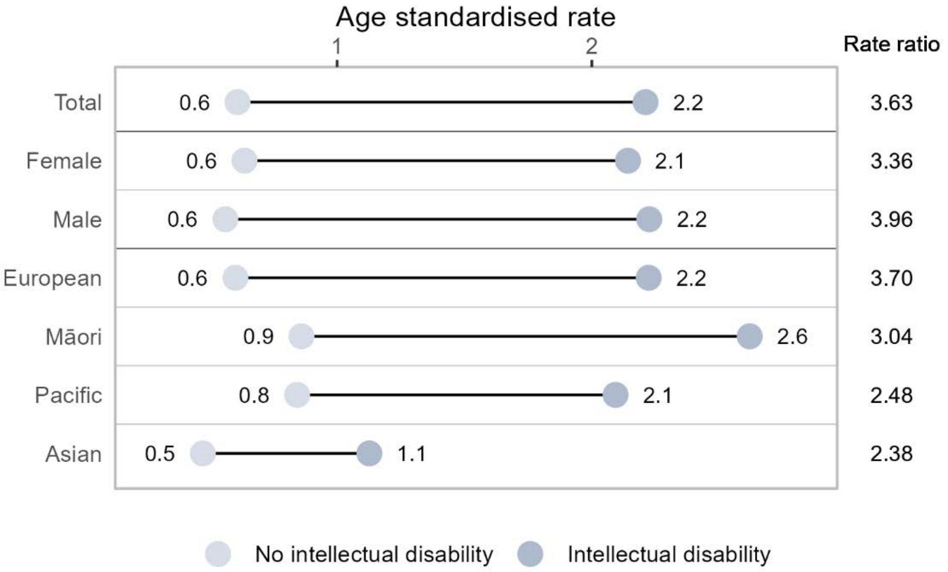
People in the 65 to 74 age group with intellectual disability in the study population are seven times more likely to receive dementia care or treatment than those in the same age group without intellectual disability. For the 55 to 64 age group the increase in likelihood is 13-fold. Comparing age-standardised rates for different subpopulations (Figure 22), we observe very similar rates of dementia treatment by sex. Māori with intellectual disability in the study population had the highest age-adjusted rate of dementia treatment, while Asians with intellectual disability had the lowest rate.

Figure 21 – Dementia care or treatment by age group, year to 30 June 2018



Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, PRIMHD, Pharmaceutical Collection data in the IDI.
Definition: Percentage of people having: a public inpatient hospitalisation with a dementia diagnosis; secondary mental health and addiction service with a dementia diagnosis; or prescription medicine for treating dementia.

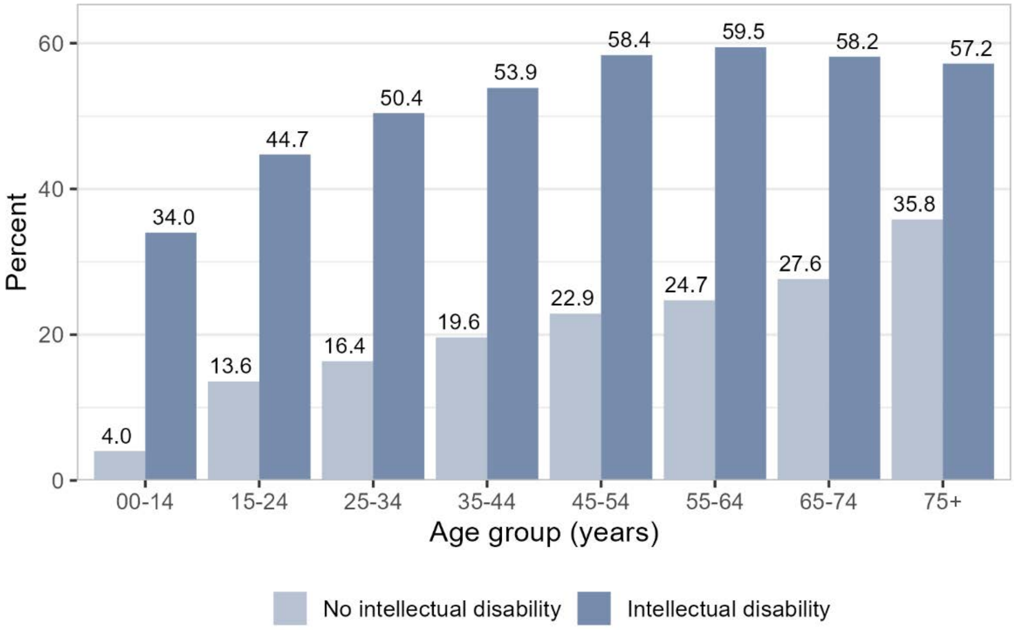
Figure 22 – Dementia care or treatment, age-standardised rates for the total population, by sex and by ethnicity



Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, PRIMHD, Pharmaceutical Collection data in the IDI.
Definition: Percentage of people having: a public inpatient hospitalisation with a diagnosis of dementia; secondary mental health and addiction service with dementia; or prescription medicine for treating dementia.

4.3.4 Any type of mental disorder

This indicator covers care or treatment for any mental health condition, including neurological conditions. The prevalence of mental disorders in people with intellectual disability in the study population is considerably higher than in people without intellectual disability for all age groups (see Figure 23). For all age groups 25 years or older, this prevalence is over 50 percent. Children under the age of 15 with intellectual disability in the study population are more than eight times more likely to receive care or treatment for a mental disorder than children without intellectual disability.

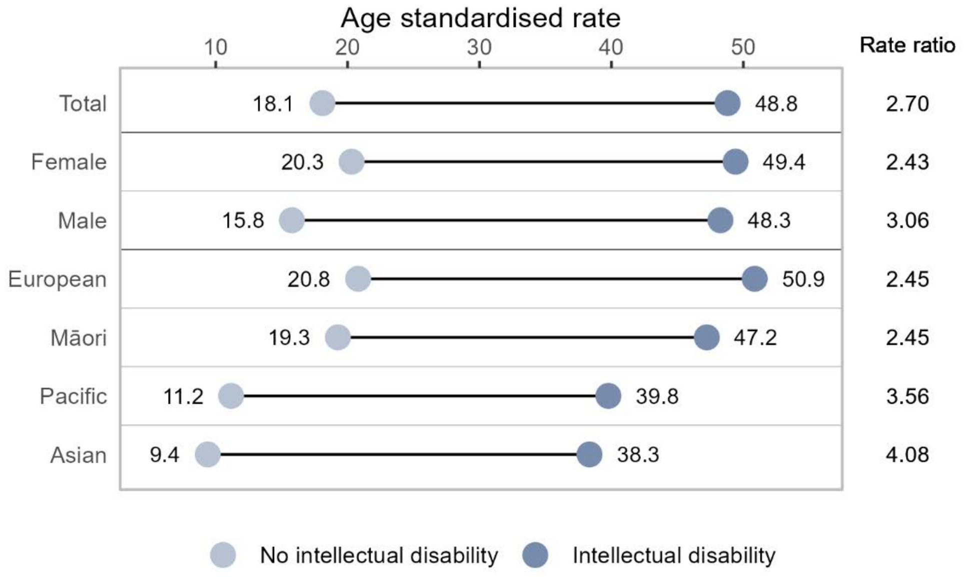


Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, PRIMHD, Pharmaceutical Collection data in the IDI.
Definition: Percentage of people with treatment for any mental health condition, including mood disorders, psychotic disorders, dementia, eating disorders, substance use disorders, ADHD, anxiety disorders, personality disorders and autism.

Adjusted by age (Figure 24), the rate of mental disorder is higher for females than males in the non-intellectually disabled population, but the rates are similar in people with intellectual disability.

Looking at ethnicity, people of European ethnicity have the highest rates of mental health care or treatment, with a 20.8 age-standardised rate for people without intellectual disability and 50.9 for those with intellectual disability. People of Asian ethnicity have the lowest rates of mental health care or treatment but the highest relative increase between people without and with intellectual disability (rate ratio of 4.08).

Figure 24 – Any mental health condition, age-standardised rates for the total population, by sex and by ethnicity



Sources: Ministry of Health National Minimum Dataset, Mental Health Information National Collection, PRIMHD, Pharmaceutical Collection data in the IDI.
Definition: Percentage of people with treatment for any mental health condition, including mood disorders, psychotic disorders, dementia, eating disorders, substance use disorders, ADHD, anxiety disorders, personality disorders and autism.

4.4 Primary health care

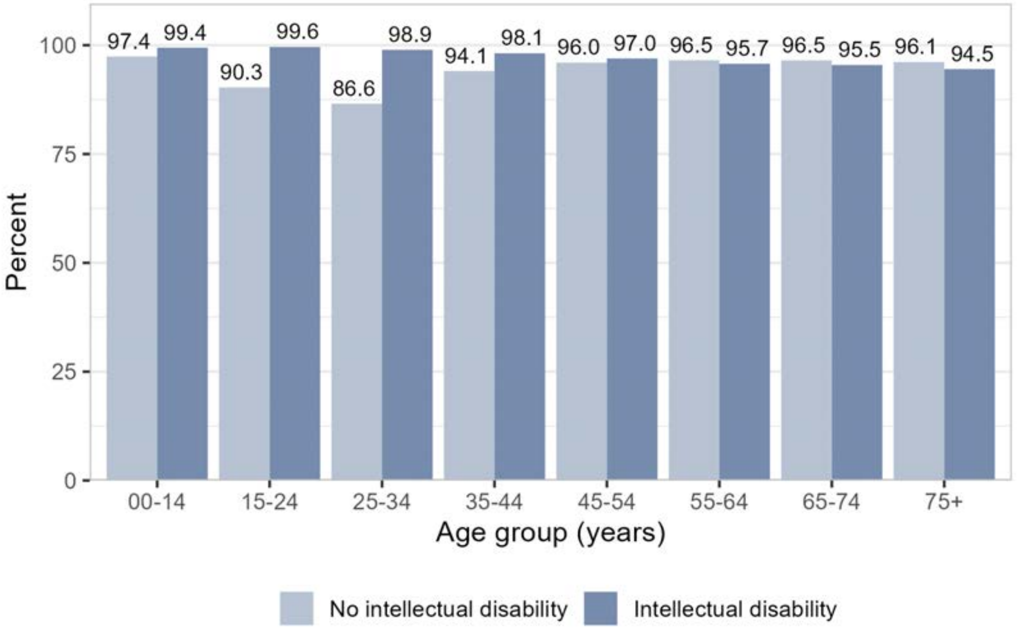
Primary health care is the first point of contact for most health services. These are services based in the community, including family doctors, and can be accessed without referral. This section reports on enrolment and the use of primary health care services.

4.4.1 Enrolled in a primary health organisation

Primary health organisations (PHOs) provide government-subsidised general practice services and other care to enrolled clients. Enrolment in PHOs is high across all ages for people with and without intellectual disability in the study population. Figure 25 shows that people with intellectual disability have a higher rate of enrolment in the younger age groups and slightly lower in the older age groups than people without intellectual disability. For example, 98.9 percent of people with intellectual disability in the 25 to 34 age group are enrolled in a PHO compared to 86.6 percent of non-intellectually disabled.

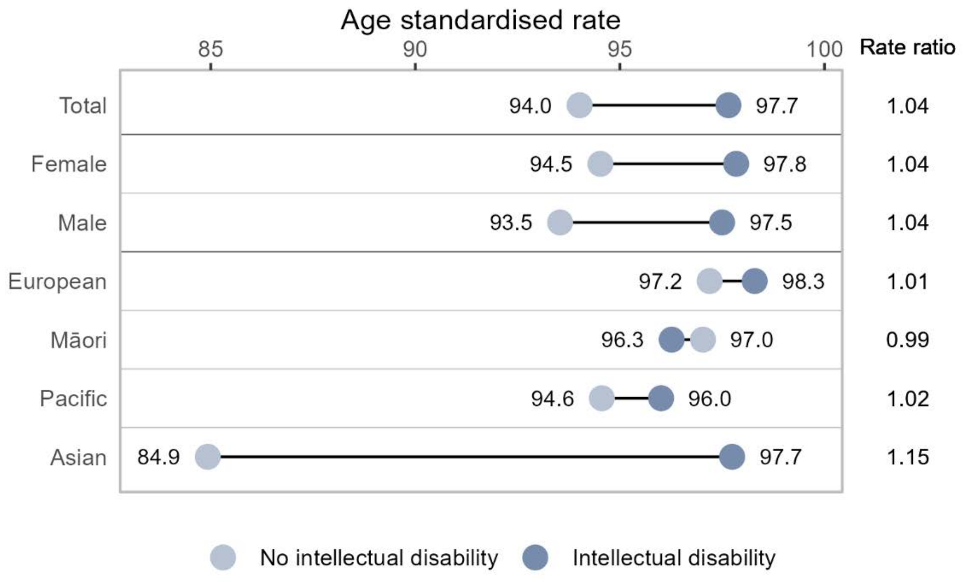
Figure 26 shows that people with intellectual disability (with an ASR of 97.7 percent) are more likely to be enrolled in a PHO than people without intellectual disability (94.0 percent). Males are slightly less likely to be enrolled in a PHO than females in both populations. Asians without intellectual disability are far less likely to be enrolled in a PHO than other groups (with or without an intellectual disability), possibly because they are more likely to be recent migrants who have yet to connect with health services. Many migrants on temporary visas are ineligible to enrol with a PHO.

Figure 25 – Enrolled in a PHO by age group, as at 30 June 2018



Source: Primary Health Organisation Enrolment Register data in the IDI.
Definition: Percentage of people enrolled in a PHO as at 30 June 2018.

Figure 26 – Enrolled in a PHO, age-standardised rates for the total population, by sex and by ethnicity, as at June 2018

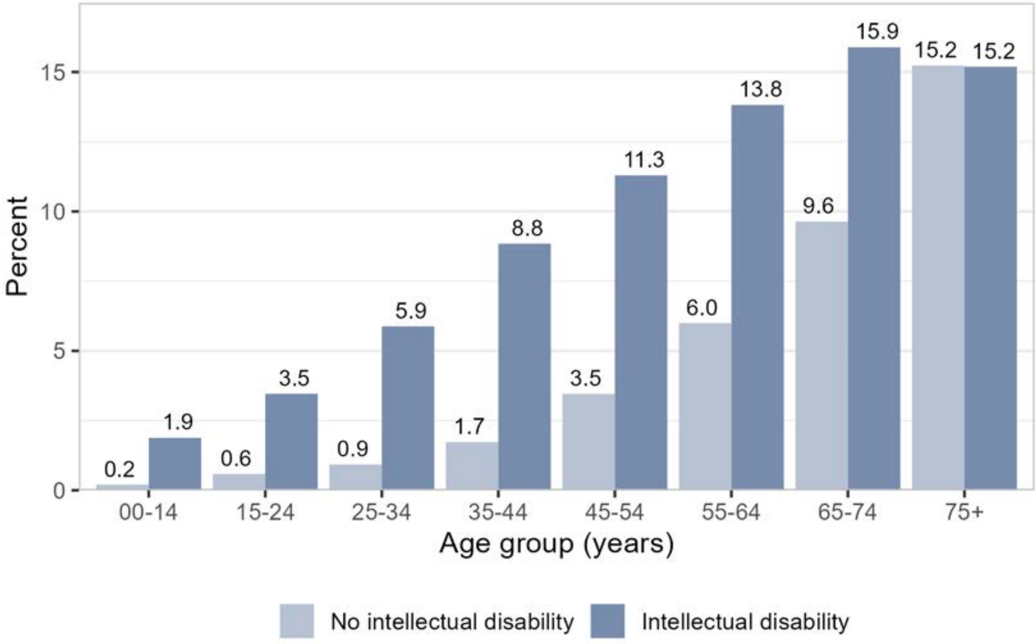


Source: Primary Health Organisation Enrolment Register data in the IDI.
Definition: Percentage of people enrolled in Pa HO as at 30 June 2018.

4.4.2 Enrolled for Care Plus primary health services

Care Plus is a primary health care funding initiative that supports people with high health needs. People with intellectual disability have a higher rate of enrolment in Care Plus primary services than people without intellectual disability in the study population. This is the case across all age groups with the exception of over-75s (see Figure 27). For both populations the rates of enrolment increase with age, although for the intellectually disabled population the age group with the highest rate of enrolment in Care Plus is the 64 to 75 age group, with a rate of 15.9 per 100 people.

Figure 27 – Enrolled for Care Plus primary health services by age group, as at 30 June 2018

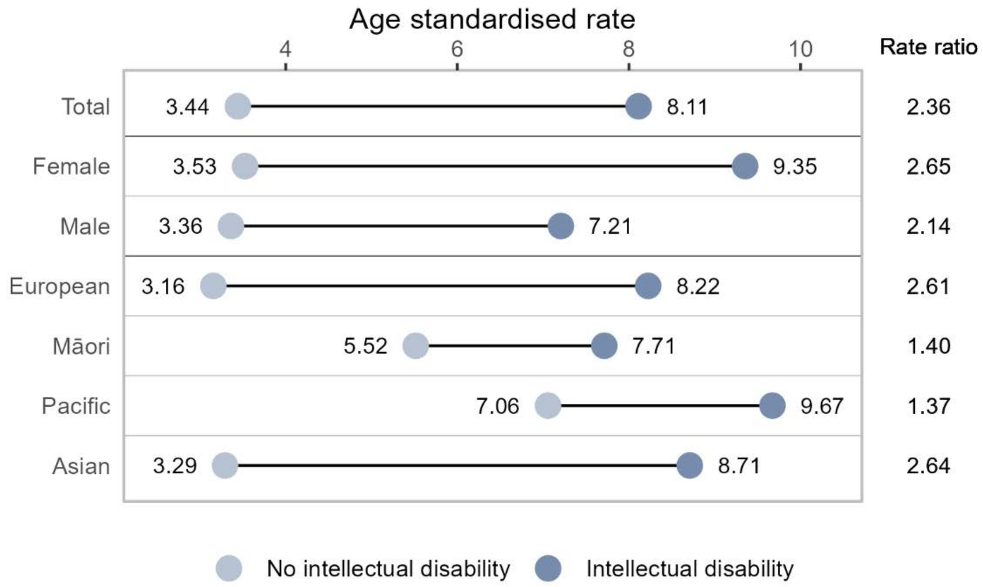


Source: Primary Health Organisation Enrolment Register data in the IDI.
Definition: Percentage of people enrolled for Care Plus primary health services as at 30 June 2018.

Adjusted for age, people with intellectual disability (with an ARS of 8.11 percent) are more than twice as likely to be enrolled in Care Plus services than people without intellectual disability (3.44 percent). Looking at age-standardised rates by subgroup in Figure 28, the rate of enrolment in Care Plus is higher for females than males. This is particularly the case for people with intellectual disability. The adjusted rate of enrolment in Care Plus for females with intellectual disability is 9.35 percent compared with 7.21 percent for males.

Pacific people have the highest rates of enrolment in Care Plus, regardless of whether they have intellectual disability. People with intellectual disability in the Pacific ethnic group have an ASR of 9.67 percent compared to 8.22 percent for Europeans and 7.71 percent for Māori.

Figure 28 – Enrolled for Care Plus primary health services, age-standardised rates for the total population, by sex and by ethnicity, as at 30 June 2018



Source: Primary Health Organisation (PHO) Enrolment Register data in the IDI.
Definition: Percentage of people enrolled for Care Plus primary health services as at 30 June 2018.

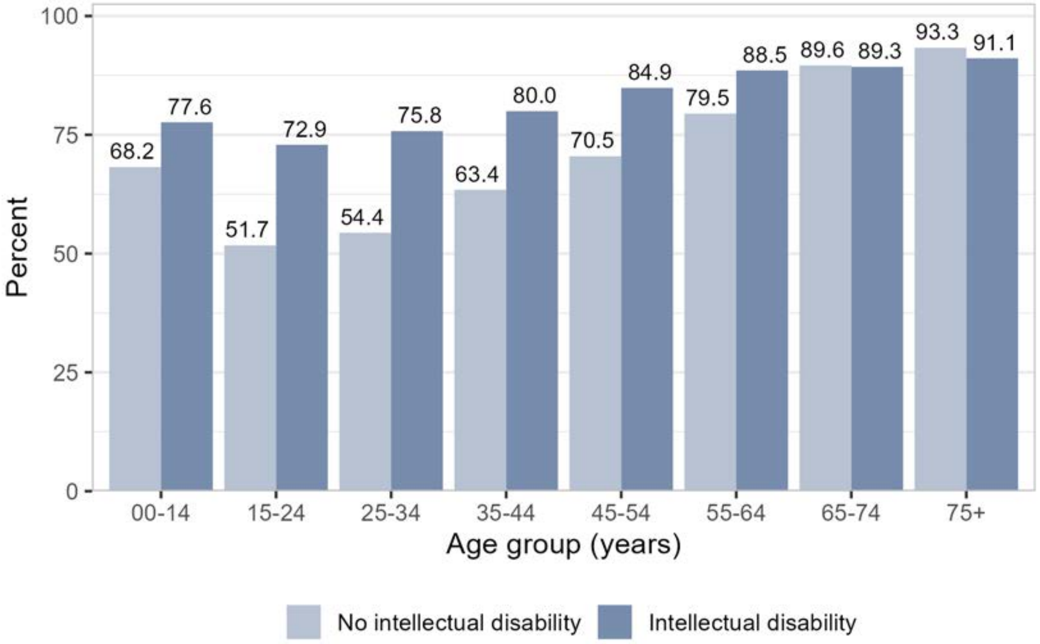
4.4.3 General practice consultations

This indicator looks at people who have consulted a general practice in the past three months. General practice consultations include visits to PHO general practice clinics to see a doctor or a nurse, as well as after-hours services and non-PHO primary health services.

People with intellectual disability in the study population are more likely to have a general practice consultation than people without intellectual disability in all age groups until they reach 65 years of age. The absolute difference in rates is highest for the 15 to 24 age group, with 72.9 percent of people with intellectual disability having consulted general practices in the three-month period, compared with 51.7 percent of people without intellectual disability (see Figure 29). This difference decreases with age as the rate of general practice consultation increases. This pattern is consistent with that reported in the 2011 report.

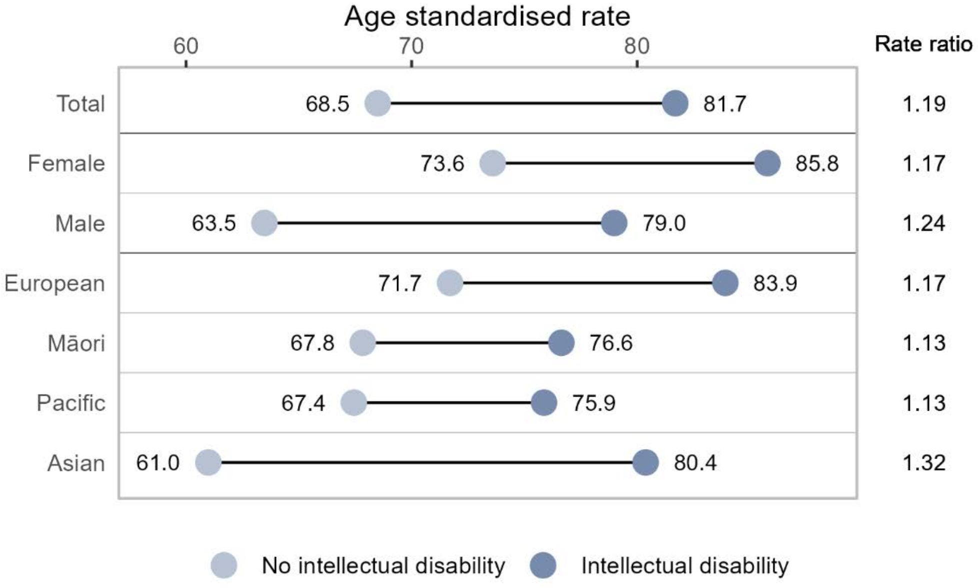
Figure 30 reports age-adjusted rates for gender and ethnic groups. Females are more likely to have general practice consultations in the three-month period than males. Having an intellectual disability increased the likelihood of having a consultation for both sexes. In the group of intellectually disabled, those with European ethnicity (with an ASR of 83.3 percent) were more likely to have consulted a general practice in the three-month period than Māori (75.9 percent) or Pacific people (75.1 percent). Asians without intellectual disability had the lowest rates of GP visits, at 61 percent, consistent with the lower rates of PHO enrolment seen earlier, while those with intellectual disability had higher rates than Māori or Pacific people with intellectual disability.

Figure 29 – Consulted general practice in the three months to 30 June 2018, by age group



Sources: Primary Health Organisation (PHO) Enrolment Register data and General Medical Service (GMS) data in the IDI.
Definition: Percentage of people who consulted a general practice in the three months to 30 June 2018.

Figure 30 – Consulted general practice in the three months to 30 June 2018, age-standardised rates for the total population, by sex and by ethnicity



Sources: Primary Health Organisation (PHO) Enrolment Register data and General Medical Service (GMS) data in the IDI.
Definition: Percentage of people who consulted a general practice in the three months to 30 June 2018.

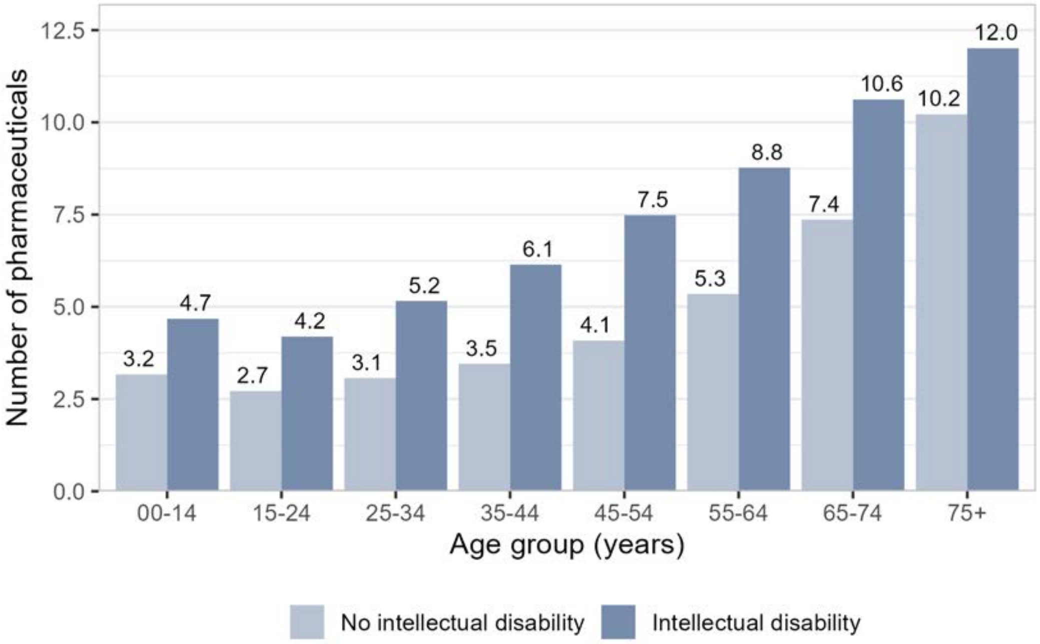
4.4.4 Dispensed pharmaceuticals

The number of pharmaceutical types dispensed increased by age for both the intellectually disabled and non-intellectually disabled adult population. At all ages, people with intellectual disability were dispensed a higher number of different types of pharmaceuticals than people without intellectual disability (see Figure 31).

Disabled people, with an age-adjusted rate of 6.81 average pharmaceutical types per person per year, were dispensed more than 1.5 times the number of pharmaceutical types than non-intellectually disabled people, whose adjusted rate was 4.32 pharmaceutical types.

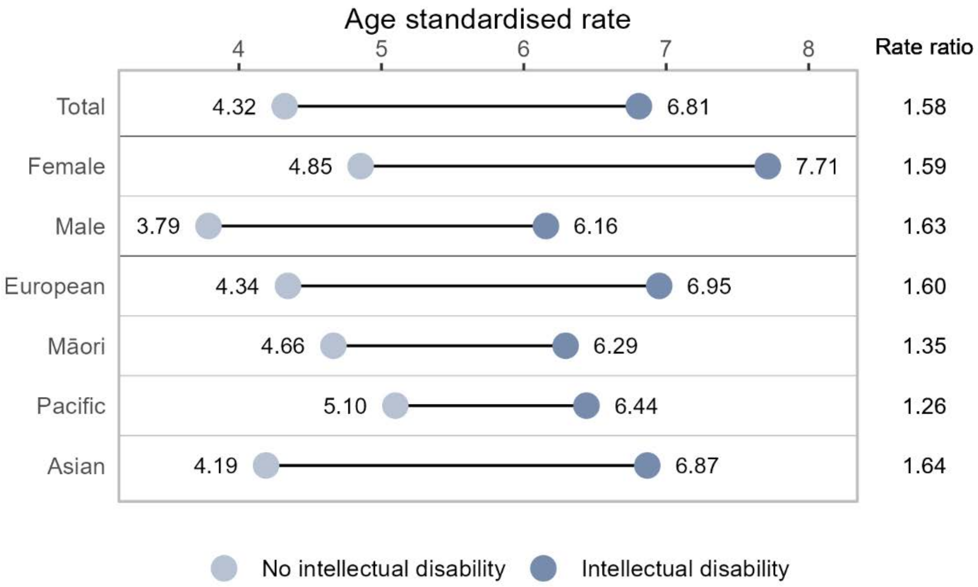
Females are on average dispensed more pharmaceutical types per year than men, regardless of whether they have an intellectual disability. While people without intellectual disability in the European ethnic group had lower age-adjusted rates of dispensed pharmaceutical types than Māori and Pacific people, for people with intellectual disability this was not the case. Europeans with intellectual disability had the highest age-adjusted rate of dispensed pharmaceutical types (an average of 6.95 pharmaceuticals per year).

Figure 31 – Dispensed pharmaceutical types per person by age group, year to 30 June 2018



Source: Pharmaceutical Collection data in the IDI.
Definition: Mean number of different pharmaceutical types per person, year to 30 June 2018.

Figure 32 – Dispensed pharmaceutical types per person, year to 30 June 2018, age-standardised rates for the total population, by sex and by ethnicity



Source: Pharmaceutical Collection data in the IDI.
Definition: Mean number of pharmaceutical types per person, year to 30 June 2018.

4.5 Public hospital services

This section reports on indicators related to care in public hospitals: dental treatment, emergency department visits, treatment for injuries and potentially avoidable hospitalisations.

4.5.1 Public hospital dental treatment

Dental care is critical, as pain and extractions have multiple profound and compounding effects. People not only experience pain and resist eating/drinking (with usual nutritional outcomes) but also, through multiple extractions, have difficulty chewing and swallowing.

Dental services are publicly funded for children and adolescents until their 18th birthdays.[18] Only a limited range of dental services are funded for some adults. People with disabilities or some medical conditions may be referred to a hospital for their dental treatment and people on low

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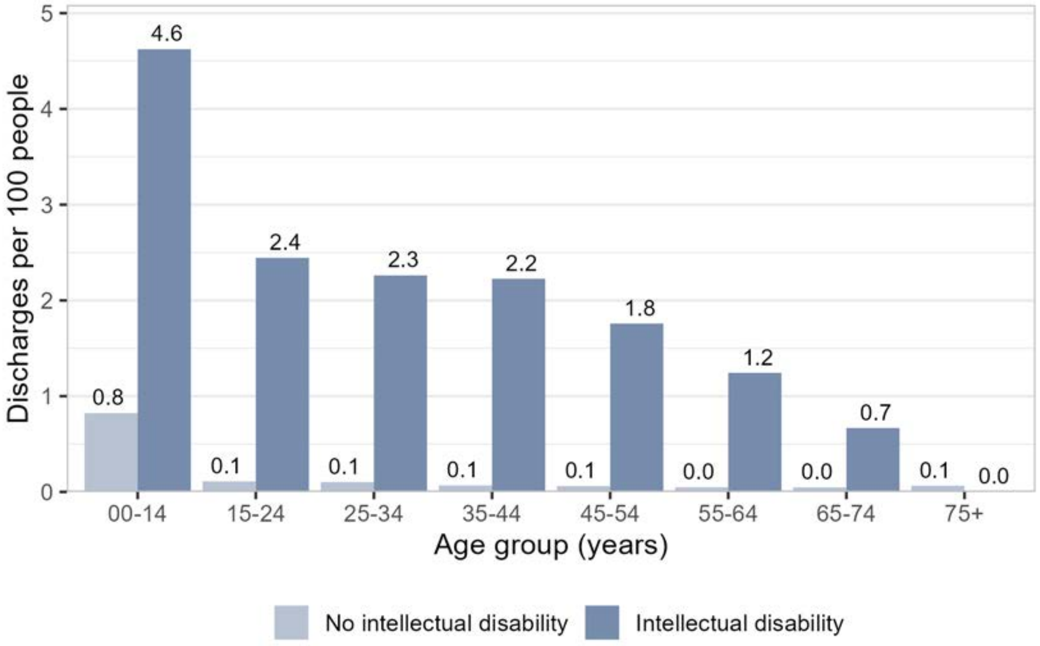
[18] https://www.health.govt.nz/your-health/services-and-support/health-care-services/visiting-dentist/publicly-funded-dental-care

incomes who have a Community Services Card may be able to get funded emergency dental care at a public hospital.

Commonly, children admitted to hospital for dental treatment present with advanced dental caries, while adults can present with a complex interaction of disabilities, health conditions and dental disease. A 2012 report found intellectual disability to be one of four conditions associated with hospital dental admissions (Whyman, Mahoney, Stanley, & Morrison, 2021).

In the year to 30 June 2018, 933 of the 11,376 public hospital discharges for dental treatment were for people with intellectual disability. The proportion of people without intellectual disability who receive dental treatment at public hospitals is low: 0.8 discharges per 100 children under 15 years of age and less than 0.1 discharges per 100 people in the adult population. The proportion is much higher for people with intellectual disability in all age groups under 65 years of age and is especially notable for children, who had 4.5 discharges per 100 people (see Figure 33).

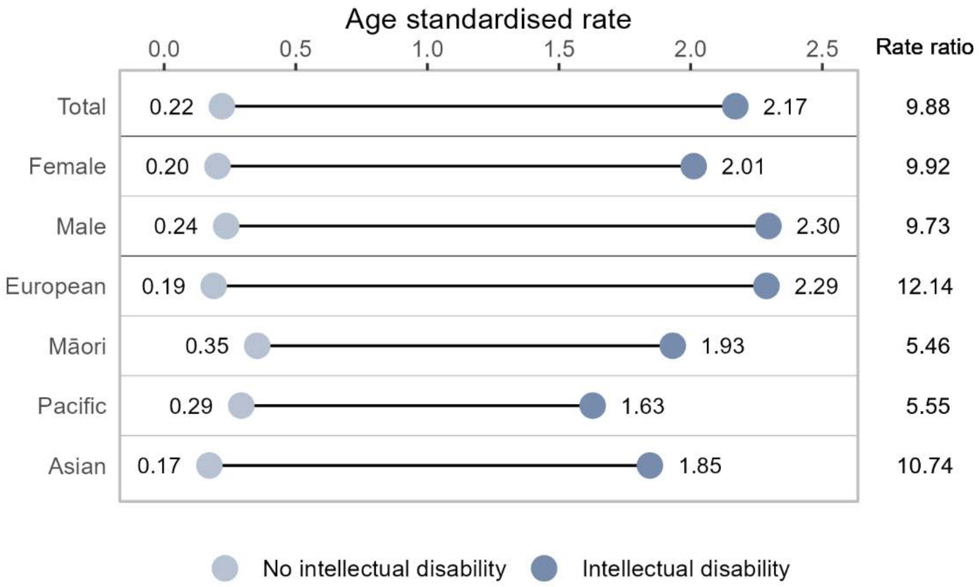
Figure 33 – Dental treatment public hospital discharges by age group, year to 30 June 2018



Sources: Ministry of Health publicly funded hospital discharges, National Minimum Dataset (NMDS) data in the IDI.
Definition: Mean number of public hospitalisations for dental treatment between 1 July 2017 and 30 June 2018. Includes dental extractions, dental restorations and other oral and dental treaments.

Figure 34 shows age-standardised rates of dental hospital discharges for people with and without intellectual disability. They are shown for the whole population and for gender and ethnic subgroups. Overall, the likelihood of having dental treatment at a public hospital is almost 10 times higher for people with intellectual disability than for people without intellectual disability. The increase is similar for males and females. People with an intellectual disability of European ethnicity have the highest rates of admission to hospital for dental care (ASR 2.3 discharges per 100 people), compared with Māori and Asians (1.9) and Pacific people (1.6).

Figure 34 – Dental treatment in public hospital, discharges per 100 people in the year to 30 June 2018, age-standardised rates for the total population, by sex and by ethnicity



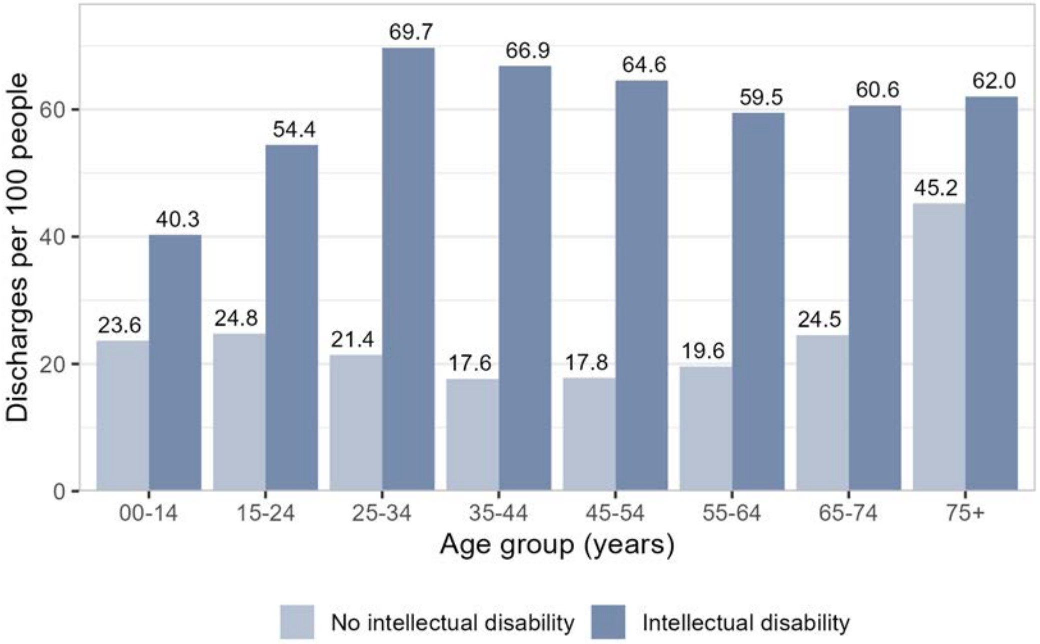
Sources: Ministry of Health publicly funded hospital discharges, National Minimum Dataset (NMDS) data in the IDI.
Definition: Mean number of public hospitalisations for dental treatment between 1 July 2017 and 30 June 2018. Includes dental extractions, dental restorations and other oral and dental treatments.

4.5.2 Emergency department visits

Emergency department visits were consistently higher for the intellectually disabled across all age groups (see Figure 35). However, this pattern was quite different than for the non-intellectually disabled population, with differences being most notable in the age range of 25 to 54 years. The intellectually disabled population in this range had the highest emergency department attendance rates. In the non-intellectually disabled population, people over the age of 75 had the highest rates of emergency department attendance, followed by people aged between 65 and 74, and between 15 and 24.

Age-standardised rates of emergency department attendance are shown in Figure 36. Females with an intellectual disability had higher rates of emergency department attendance than males (ASR of 69 discharges per 100 people, compared to 56), while rates were almost identical for males and females without intellectual disability. Māori and Pacific people had higher rates of emergency department attendance than other ethnic groups, regardless of whether they had an intellectual disability.

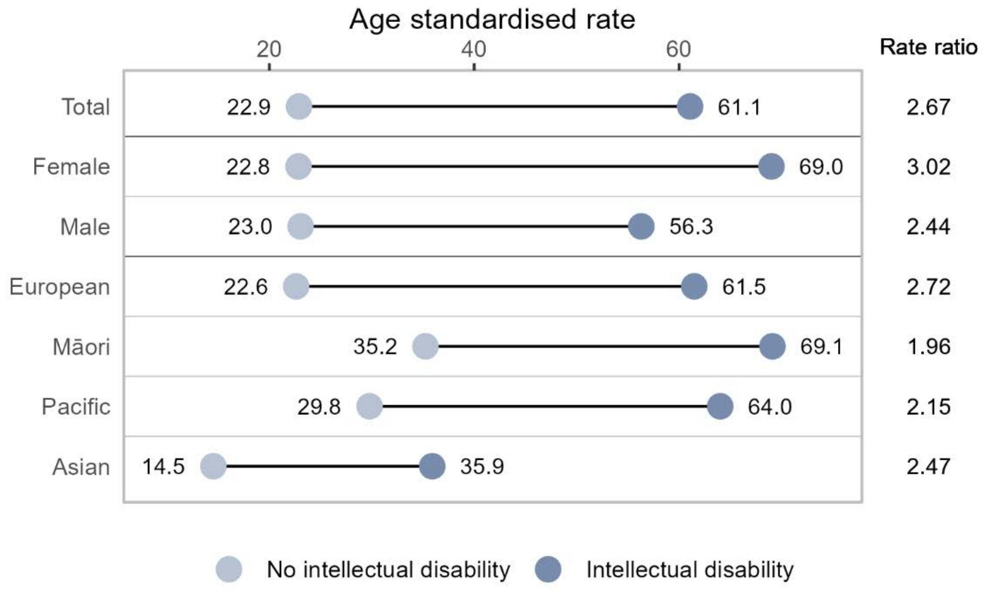
Figure 35 – Public hospital emergency department attendance by age group, year to 30 June 2018



Source: National Non-Admitted Patient Collection data in the IDI.

Definition: Percentage of people discharged from a public hospital emergency department, year to 30 June 2018.

Figure 36 – Public hospital emergency department attendance, year to 30 June 2018, age-standardised rates for the total population, by sex and by ethnicity



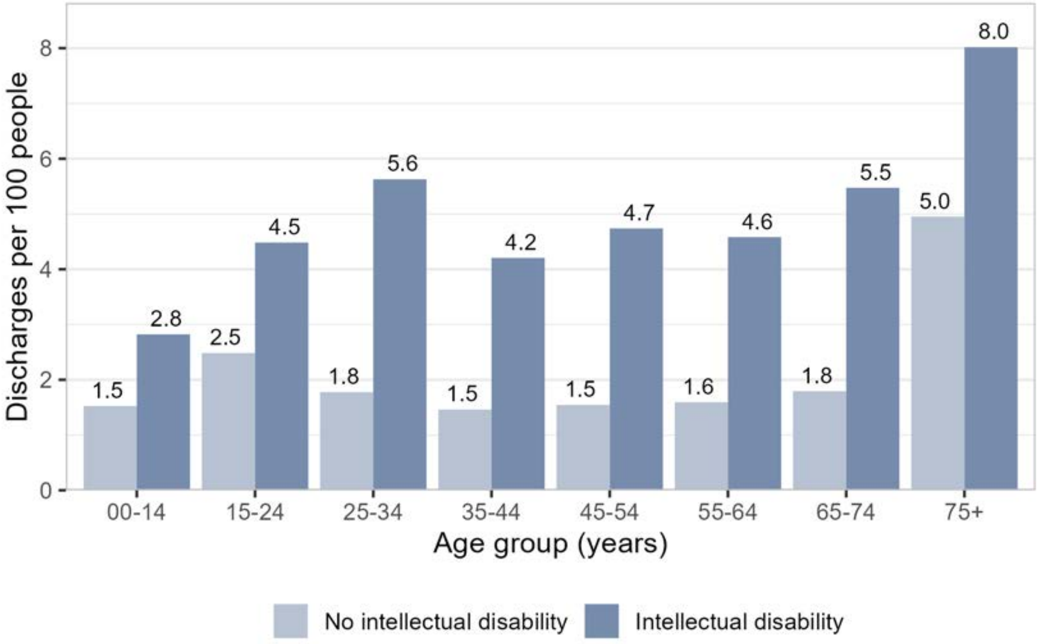
Source: National Non-Admitted Patient Collection data in the IDI.

Definition: Percentage of people discharged from a public hospital emergency department, year to 30 June 2018.

4.5.3 Public hospital care for injury

Figure 37 shows the age pattern for injury-related public hospital discharges. Consistent with the patterns shown in the 2011 report, the prevalence of injuries is highest for people aged 75 years and over for both the intellectually disabled and non-intellectually disabled populations. However, in the younger age groups the rate of injury decreases from 25 years of age for the population without intellectual disability but continues to increase for the intellectually disabled population, with the second highest rate of injury being the 25 to 34 age group. For all age groups the rate of injury is considerably higher for the population with intellectual disabilities.

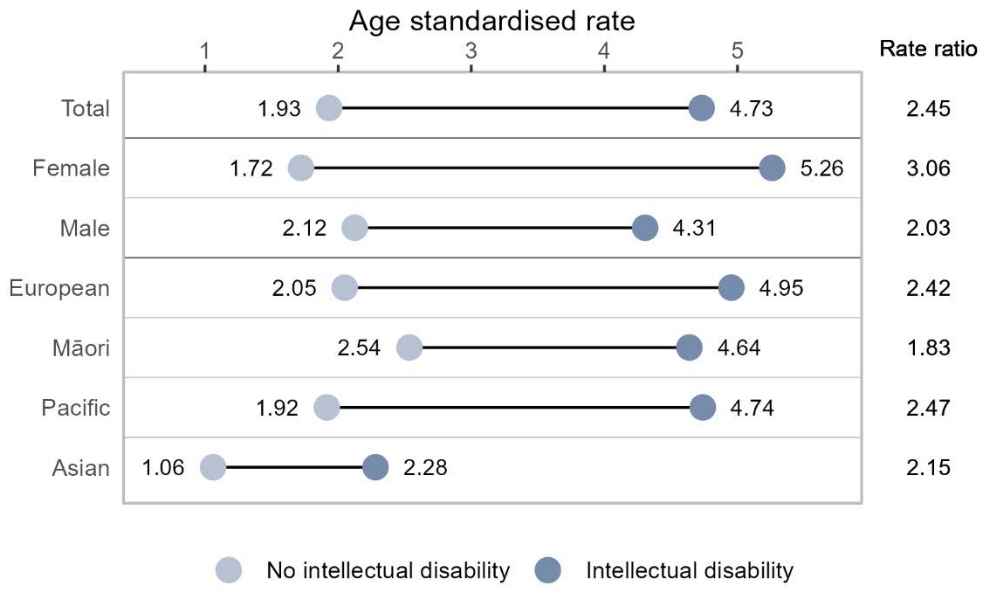
Figure 37 – Public hospital care for injury by age group, year to 30 June 2018



Source: National Minimum Dataset data in the IDI.
Definition: Mean number of public hospitalisations for injury. Public hospital care for injury is defined as medical or surgical treatment for intentional and unintentional injury (excluding the complications of hospital treatment) between 1 July 2017 and 30 June 2018.

After adjusting for age, Figure 38 shows that people with intellectual disability were more than twice as likely to have public hospital injury treatment than people without intellectual disability (rate ratio 2.45). The intellectually disabled had higher rates of injury-related treatment across all gender and ethnic groups. Females had lower rates of injury than males in the non-intellectually disabled population but the rates were higher for the intellectually disabled. People of Asian ethnicity were less likely to be treated for injuries than people of other ethnicities, whether intellectually disabled or non-intellectually disabled.

Figure 38 – Public hospital care for injury, discharges per 100 people in the year to 30 June 2018, age-standardised rates for the total population, by sex and by ethnicity



Source: National Minimum Dataset data in the IDI.

Definition: Mean number of public hospitalisations for injury. Public hospital care for injury is defined as medical or surgical treatment for intentional and unintentional injury (excluding the complications of hospital treatment) between 1 July 2007 and 30 June 2018.

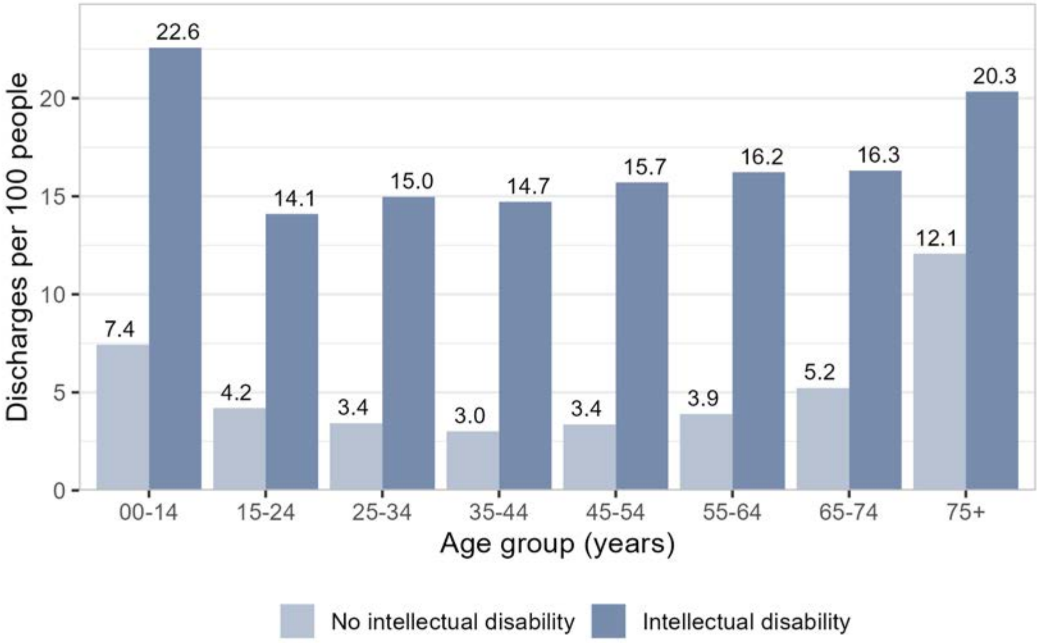
4.5.4 Potentially avoidable hospitalisations

This indicator measures the prevalence of hospitalisations that, in theory, could have been avoided with health prevention measures, primary care treatment or by avoiding a preventable injury. The measure is based on the Ministry of Health official definition (Ministry of Health, 2020) and includes respiratory conditions, gastroenteritis, skin infections, vaccine preventable illnesses and injuries.

Figure 39 shows the estimated rates of potentially avoidable hospitalisation per 100 people for people with and without intellectual disability for the year to 30 June 2018. Rates were highest among the youngest and oldest age groups. People with intellectual disability had considerably higher rates of potentially avoidable hospitalisations compared to non-disabled people across all age groups, with the difference being smallest in the population aged 75 years and over.

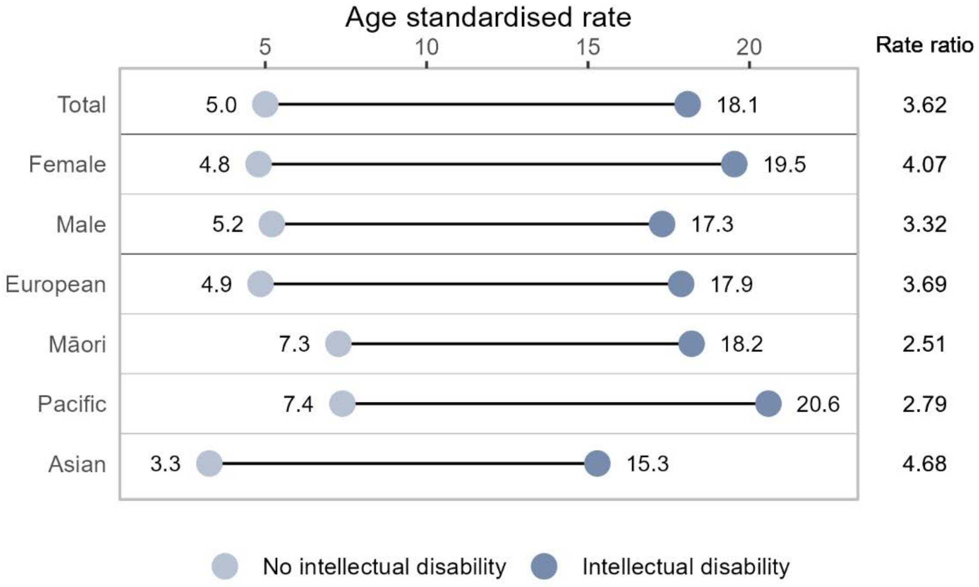
Adjusted for age, the number of people with intellectual disability experiencing avoidable hospitalisations was four times that of people without intellectual disability (rate ratio of 3.62). As with the injury rates discussed earlier, females without intellectual disability had lower rates of potentially avoidable hospitalisation than males, but those with intellectual disability had higher rates (19.5 hospitalisations per 100 people compared to 17.3 for males). Looking at ethnic groups within the intellectual disabled study population, Pacific people had the most potentially avoidable hospitalisations, while people of Asian ethnicity with intellectual disability experienced the highest relative increase in the potentially avoidable hospitalisation rate (rate ratio of 4.68).

Figure 39 – Potentially avoidable hospitalisations (public hospital) by age group, year to 30 June 2018



Source: Ministry of Health publicly funded hospital discharges (National Minimum Dataset) data in the IDI.
Definition: Mean number of potentially avoidable hospitalisations per 100 people in the year to 30 June 2018, including respiratory conditions, gastroenteritis, skin infections, vaccine preventable illnesses and injuries.

Figure 40 – Potentially avoidable hospitalisation (public hospital) discharges per 100 people in the year to 30 June 2018, age-standardised rates for the total population, by sex and by ethnicity



Source: Ministry of Health publicly funded hospital discharges (National Minimum Dataset) data in the IDI.
Definition: Mean number of potentially avoidable hospitalisations per 100 people in the year to 30 June 2018, including for respiratory conditions, gastroenteritis, skin infections, vaccine preventable illnesses and injuries.

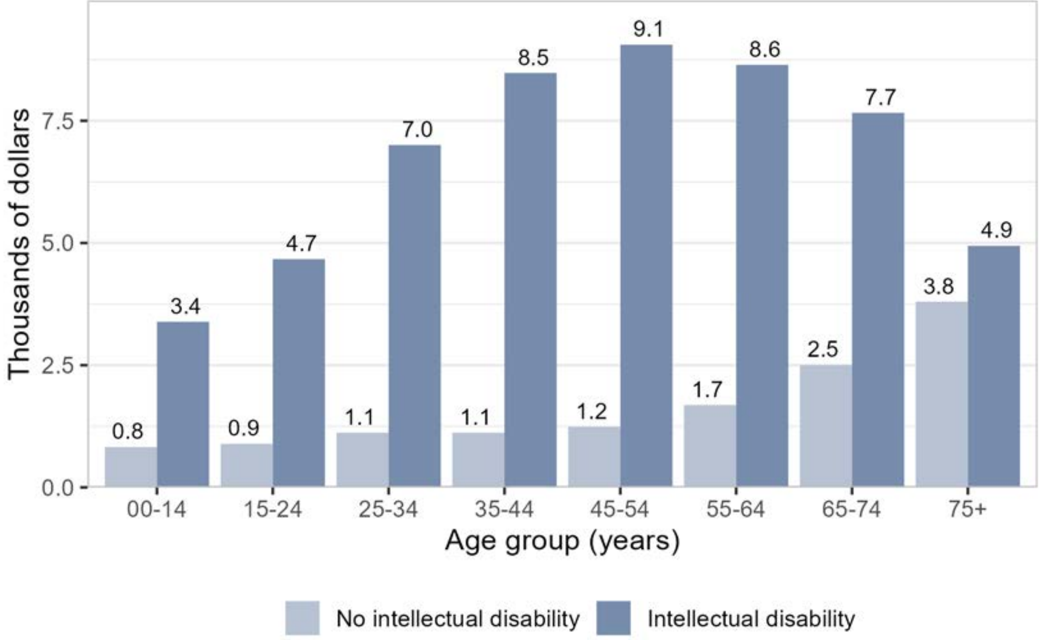
4.6 Secondary health care costs

This indicator measures the secondary health care costs of publicly funded hospitalisations and outpatient care and the provision of secondary mental health services in the year to 30 June 2018, excluding GST. The measure excludes costs of disability support services funded by the Ministry of Health and DHBs, such as residential care, carer support, respite care and home support (help with housework and personal care).

The average cost of secondary health care is consistently higher for people with intellectual disability than it is for people without intellectual disability across all age groups. For people with intellectual disability the average cost per person increases with age until middle age (45 to 54 years old) and then decreases. This is different to the pattern for people without intellectual disability in our study, for whom the average care cost continues to increase by age after middle age to reach its maximum for people aged 75 years or older (see Figure 41).

Adjusted for age, the cost per person for secondary health care for people with intellectual disability is estimated as $6,800 for the year to 30 June 2018. This is almost five times higher (rate ratio of 4.86) than the secondary health care cost per person for people without intellectual disability (ASR $1,400) for the same time period (see Figure 42).

Figure 41 – Average secondary health care costs per person by age group, year to 30 June 2018

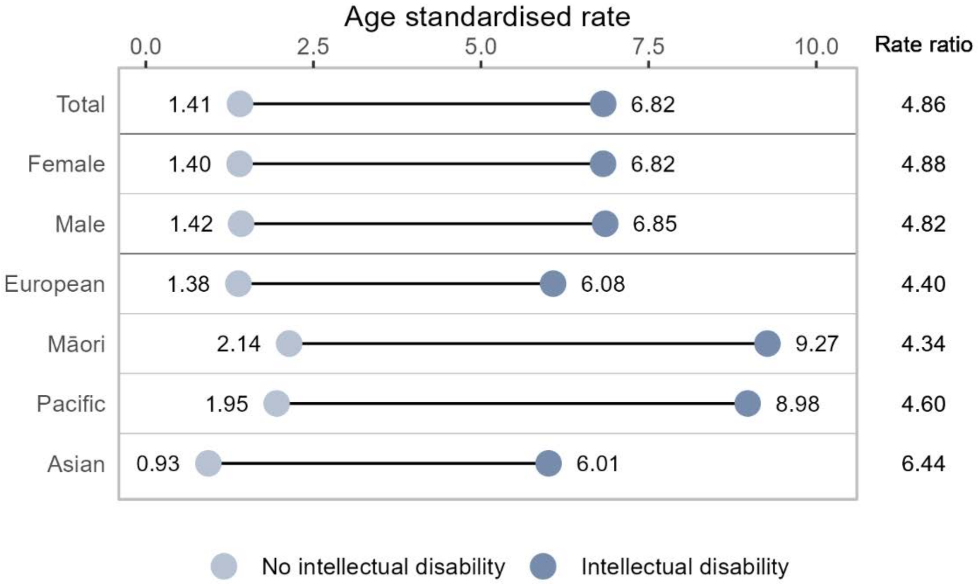


Sources: Ministry of Health publicly funded hospital discharges (NMDS), National Non-Admitted Patient Collection (NNPAC), Programme for the Integration of Mental Health Data (PRIMHD) data in the IDI.
Definition: Mean estimated secondary health care costs from publicly funded hospitalisations, outpatient care and provision of secondary mental health services in the year to 30 June 2018, excluding GST. Excludes costs of disability support services funded by the Ministry of Health and DHBs.

Figure 42 shows age standardised average secondary health care costs for the total population and for gender and ethnic subgroups. The age adjusted cost was similar for females and males, regardless of whether they had an intellectual disability.

Looking at ethnic groups, for people with intellectual disability the age-adjusted cost were highest for Māori (with an average of $9,300 per person), followed by Pacific people ($9,000), Europeans ($6,100) and people in the Asian ethnic group ($6,000).

Figure 42 – Average secondary health care costs per person, age-standardised rates for the total population, by sex and by ethnicity, thousands of dollars, year to 30 June 2018



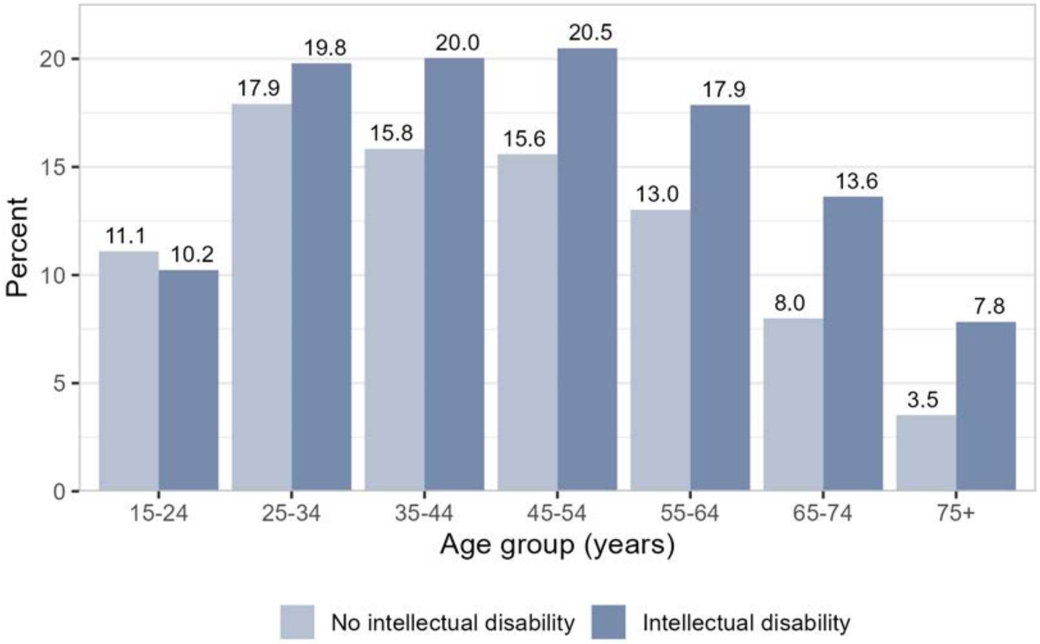
Sources: Ministry of Health publicly funded hospital discharges (NMDS), National Non-Admitted Patient Collection (NNPAC), Programme for the Integration of Mental Health Data (PRIMHD)data in the IDI.
Definition: Mean estimated secondary health care costs from publicly funded hospitalisations, outpatient care and provision of secondary mental health services in the year to 30 June 2018, excluding GST. Excludes costs of disability support services funded by the Ministry of Health and DHBs.

4.7 Smoking

Tobacco smoking is the lead modifiable, non-dietary cause of death at risk factor level in New Zealand (Ministry of Health, 1997). The Ministry of Health estimates that half of all long-term tobacco smokers will die from a smoking-related disease.[19] These indicators look at data from the Census on cigarette smoking and smoking cessation. Smoking cessation rates are calculated as the percentage of people who have regularly smoked cigarettes at some stage in their lives, who have since quit smoking.

Figure 43 shows that, except for the youngest age group (15 to 24 years old), intellectually disabled adults smoke at a higher rate than non-intellectually disabled adults regardless of age. The difference in rates is least pronounced in younger adults (25 to 34 years old). On the other hand, smoking cessation rates (Figure 44) are lower for the intellectually disabled adult population than they are for the non-intellectually disabled adult population at all ages.

Figure 43 – Cigarette smoking rate by age group, 2018



Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) data in the IDI. **Definition:** Percentage of adults aged 15 years or over who smoke regularly (that is, one or more cigarette a day).

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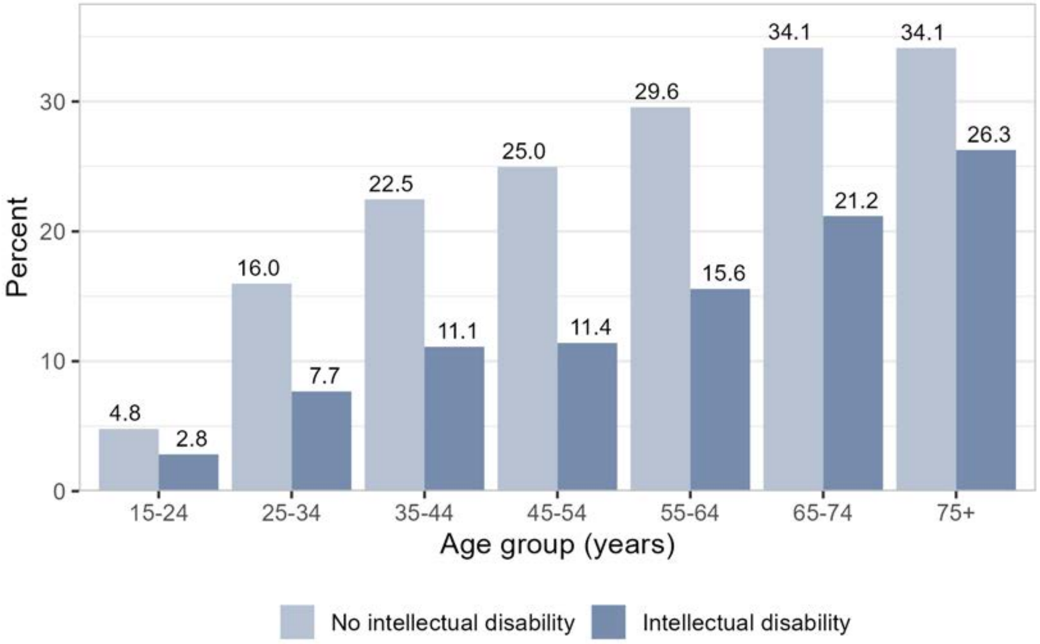
[19] https://www.health.govt.nz/your-health/healthy-living/addictions/quitting-smoking/health-effects-smoking

Figure 44 – Cigarette smoking cessation rate by age group, 2018

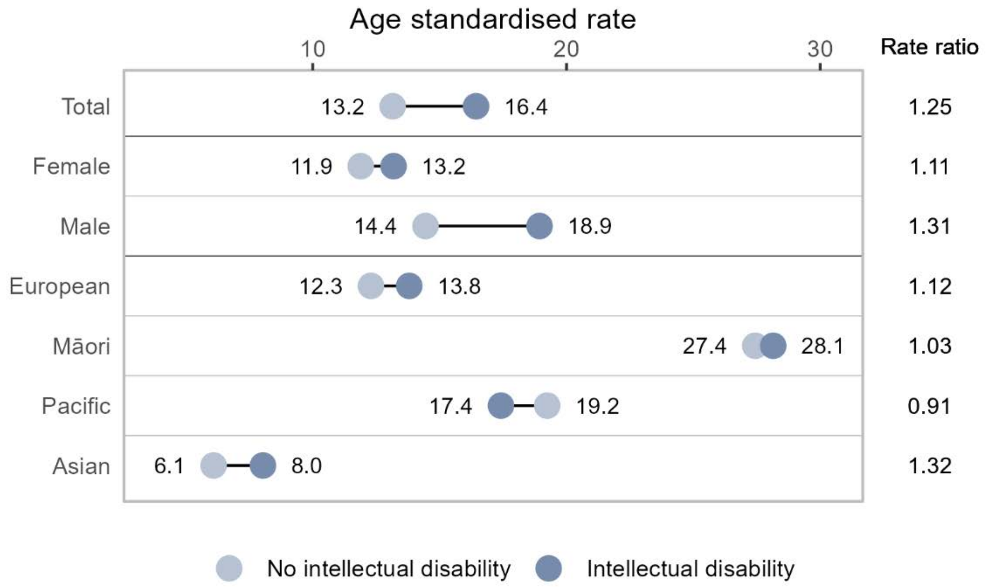


Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) data in the IDI.
Definition: Percentage of adults aged 15 years or over who have ever been regular smokers of one or more cigarettes a day but do not smoke regularly now.

Looking at subpopulations (see Figure 45 and Figure 46), it is clear that within the Māori and European populations the rate of smoking for intellectually disabled and non-intellectually disabled adults is similar, but the rate of cessation is different. Within the Māori and European adult populations, the likelihood of a smoker with intellectual disability having stopped smoking is around half that of a non-intellectually disabled Māori or European smoker respectively (rate ratios of 0.60 and 0.48).

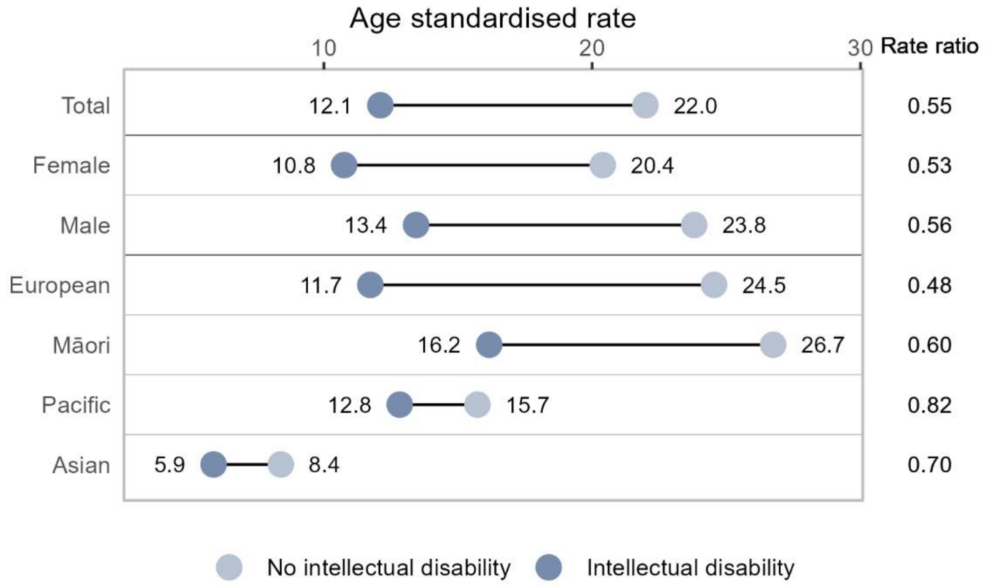
Adjusted by age, people with intellectual disability are around half as likely to have quit smoking as those without intellectual disability, with a rate ratio of 0.55 (ASR of 12.1 percent compared to 22.0 percent). Males were more likely to smoke than females regardless of intellectual disability, with males with intellectual disability being particularly likely to smoke (ASR of 18.9 percent).

Figure 45 – Cigarette smoking rate, 2018, age-standardised rates for the total population, by ethnicity and by sex



Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) data in the IDI.
Definition: Percentage of adults 15 years or over who smoke regularly (that is, one or more a day).

Figure 46 – Cigarette smoking cessation rate, 2018, age-standardised rates for the total population, by ethnicity and by sex



Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) data in the IDI.
Definition: Percentage of adults 15 years or over who have ever been regular smokers of one or more cigarettes a day but do not smoke regularly now.

Mathew Schrader – The lighthouse

5 Knowledge and skills

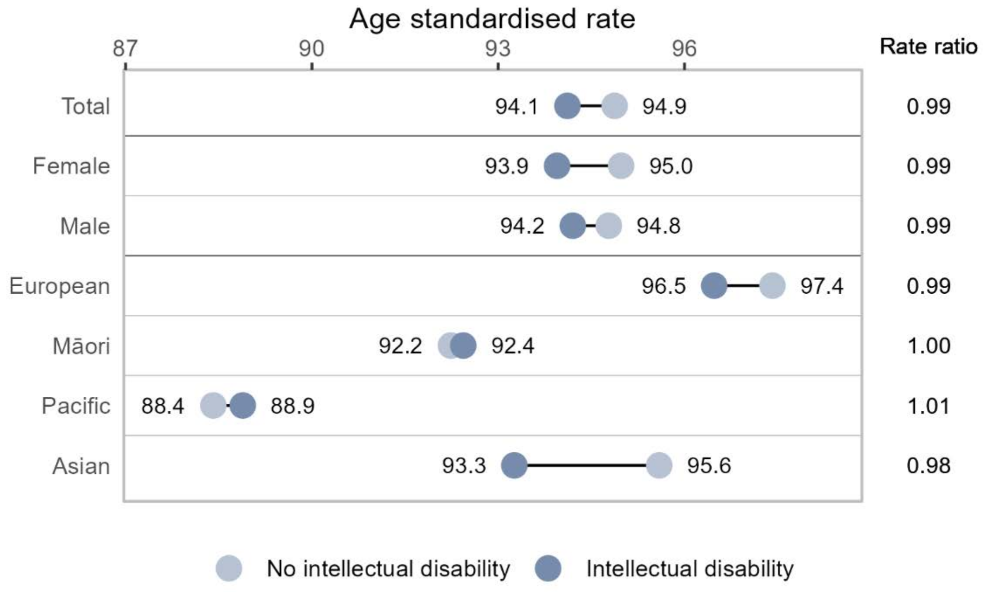
This section reports on indicators that relate to participation and achievement in formal education and learning.

5.1 Early learning participation

Schools collect information from parents when their children first enrol at school about their participation in early childhood education (ECE). This data shows how many children have regularly attended early learning in the six months before starting school. Looking at prior participation data for children 5 to 14 years old in the study population, there were no significant differences in the ECE participation rates for children with and without intellectual disability. The age-adjusted rates were 95 percent for children 5 to 14 years with intellectual disability and 96 percent for children 5 to 14 years without intellectual disability.

Participation in ECE can also be measured using administrative data drawn from the Early Learning Information system, which includes enrolment data for 3 and 4-year-olds. The age-adjusted participation rates of 90 percent for children with intellectual disability and 93 percent for children without intellectual disability also showed no significant different between the two populations. Figure 47 shows the age adjusted prior-participation rates for children with and without intellectual disability, including the rates by gender and ethnic groups.

Figure 47 – Prior participation in early learning, age-standardised rates for the population aged 5 to 17 years, by sex and by ethnicity



Source: Ministry of Education school enrolment data in the IDI.
Definition: Percentage of children reported by parents as having attended ECE before starting school.

There is no difference in participation by gender. The differences by ethnic group are the same for children with and without intellectual disability. Of all children 5 to 14 years of age with intellectual disability, Pacific children have the lowest regular ECE participation rate (ASR 88.9 percent) in the six months before starting school. The rate for Māori is 92.2 percent, followed by 93.3 percent for children in the Asian ethnic group and 96.5 for children in the European ethnic group.

5.2 School enrolment

Most children in New Zealand aged 5 to 17 are enrolled at school, whether or not they have an intellectual disability or not (92 percent for young people with intellectual disability compared to 91 percent for those without). In this section we focus on enrolment in specialist schools. Specialist schools are designed to support high-needs students with an education that best suits their individual needs.[20] Specialist schools include day schools, residential schools and regional health schools.

Children and young people (5 to 17 years of age) with intellectual disability are much more likely to attend specialist schools than children and young people without intellectual disability. The age-adjusted rate of specialist school enrolment is 25.1 percent for children and young people with intellectual disability compared to 0.9 percent for children and young people without intellectual disability (see Figure 48).

Focusing on the children and young people (5 to 17 years old) with intellectual disability, males (ASR 25.5 percent) are slightly more likely to be enrolled at a specialist school than females (24.3 percent). Looking at ethnic groups, Asian (ASR 34.4 percent) and Pacific (ASR 34.2 percent) ethnic groups have the highest rates of specialist school enrolment, followed by Māori (ASR 24.0 percent) and Europeans (ASR 22.6 percent).

The Ongoing Resourcing Scheme (ORS) provides funding for the approximately 1 percent of children who are most in need of ongoing specialist support at school.[21] Apart from those attending specialist schools, many students enrolled in ‘mainstream’ schools also receive ORS funding support. In total, 50.3 percent of children with intellectual disability aged 5 to 14 years receive ORS funding. This implies that around half of students with intellectual disability receive ORS funding, with half of these students being enrolled in a specialist school.

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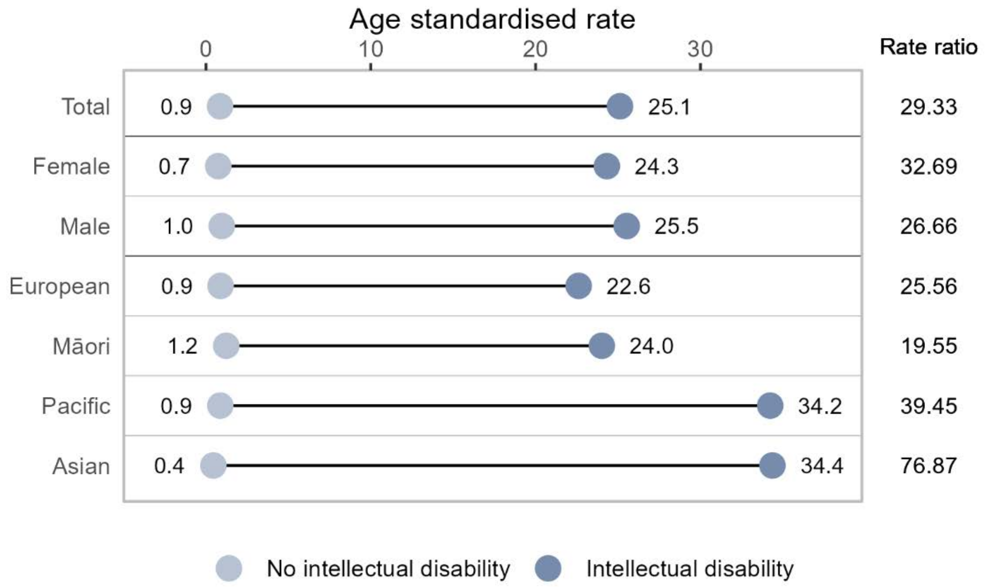
[20] https://www.education.govt.nz/school/student-support/special-education/specialist-schools-for-students-with-high-needs/.

[21] https://www.education.govt.nz/school/student-support/special-education/ors/overview-of-ors/.

Figure 48 – Specialist school enrolment, age-standardised rates for the population aged 5 to 17 years, by sex and by ethnicity as at June 2018



Source: Ministry of Education primary and secondary school data in the IDI.
Definition: Percentage of children enrolled in a specialist school (including health schools).

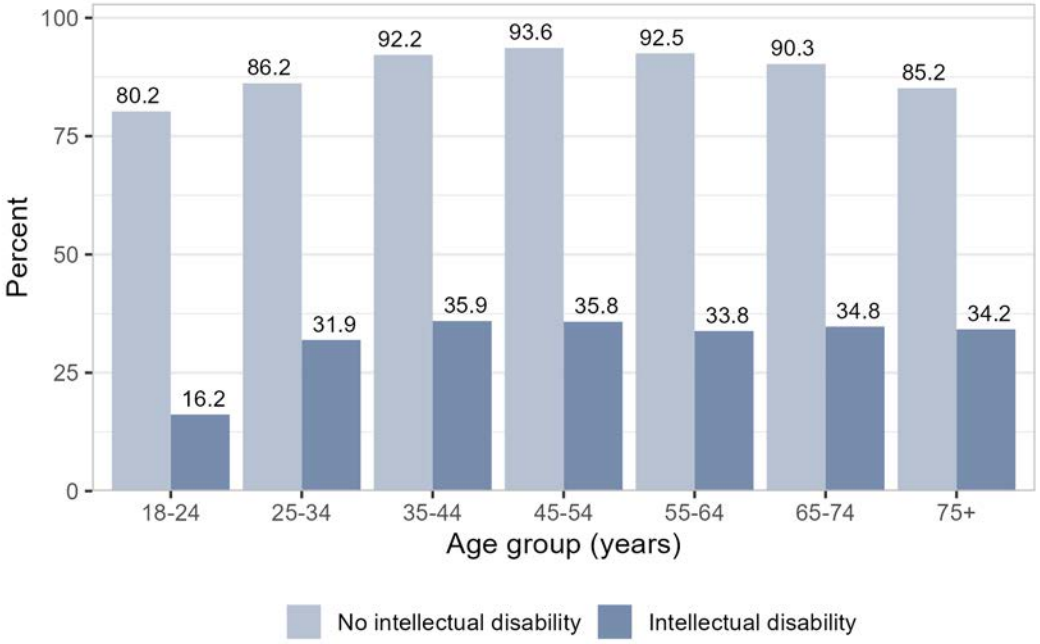
5.3 Holding a driver licence

Driving is an important life skill, and can be an important source of independence, particularly for people living in areas with limited public transport options. This indicator looks at the proportion of people in the study population holding driver licences, whether learner, restricted or full. Figure 49 shows that although the majority of adults (aged 18 and over) without intellectual disability hold a driver licence, only around a third of adults with intellectual disability hold a licence. This difference between adults with and without intellectual disability holds across all age groups.

Adjusted for age (see Figure 50), 31.3 percent of adults with intellectual disability hold a driver licence compared to 88.5 percent of adults without an intellectual disability. This relative difference in rates holds across gender and ethnic groups.

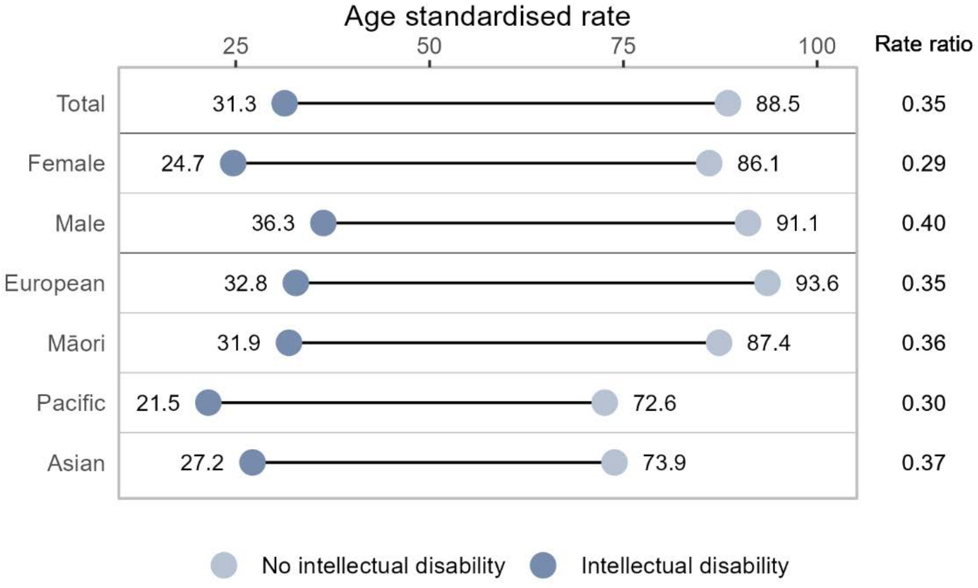
Looking at the intellectually disabled study population, males (ASR 36.3 percent) are more likely to have a driver licence than females (ASR 24.7 percent). Of all the ethnic groups, Pacific people with intellectual disability (ASR 21.5 percent) have the lowest percentage of driver licences, followed by Asians (ASR 27.2 percent), Māori (ASR 31.9 percent) and Europeans (ASR 32.8 percent). Pacific peoples and Asians were also the least likely to have a driver licence in the non-intellectually disabled population.

Figure 49 – Holding a driver licence by age group, 2018



Sources: NZ Transport Agency driver licence and motor vehicle register data in the IDI.
Definition: Percentage of adults 18 years or over with a driver licence (learner, restricted or full).

Figure 50 – Holding a driver licence, age-standardised rates for the population aged 18 and over, by sex and by ethnicity, 2018



Sources: NZ Transport Agency driver licence and motor vehicle register data in the IDI.
Definition: Percentage of adults 18 years or over with a driver licence (learner, restricted or full).

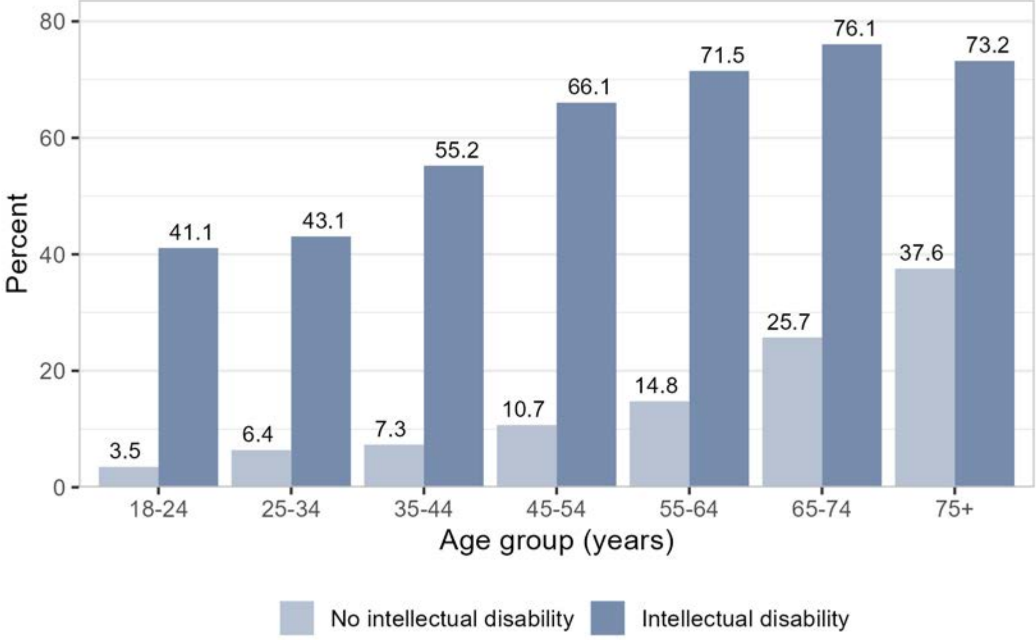
5.4 Highest qualification

Education and training are crucial to enabling people's full participation in society through work and volunteering. A 2020 report published by the Ministry of Education reported lower rates of attainment for disabled students (Mhuru, 2020). A 2014 report by the Donald Beasley Institute reported that one of the biggest problems stopping adults with intellectual disability learning was the expectations of others (Mirfin-Veitch B. , 2003). This section reports on two indicators of adult attainment generated from highest qualification data from the 2018 APC. The APC uses 2013 population Census data combined with administrative data from the Ministry of Education. It is worth noting that many people with intellectual disability complete unit standards, acquiring important skills, without gaining a full NCEA qualification. As such, these measures will not reflect all learning by people with intellectual disability.

5.4.1 No qualifications

Adjusting for age, 56.7 percent of adults (18+) with intellectual disability do not hold any qualifications. This compares with 12.5 percent for people without intellectual disability. Figure 51 shows the percentage of people with no qualifications by age for people with and without intellectual disability in the study population.

Figure 51 – Percentage of people with no qualifications by age group, 2018

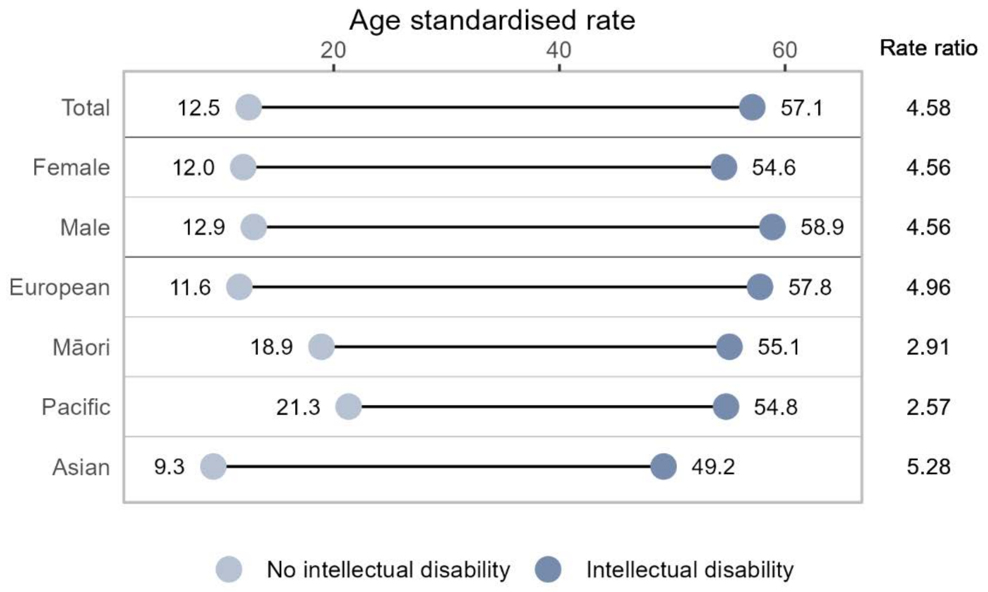


Sources: 2018 Administrative Population Census (APC) data in the IDI.
Definition: Percentage of adults 18 years or over with no qualifications.

The proportion of people without qualifications increases with age. Among people with intellectual disability, 43.1 percent of the 25 to 34 age group have no qualifications compared to 75.9 percent in the 65 to 74 age group. The percentage of people without qualifications is considerably higher for people with intellectual disability compared with those without intellectual disability across all ages. This indicator shows disparity, but it also shows potential as more than half of under 34-year-old adults with intellectual disability in the study population had attained at least an NCEA Level 1 qualification.

Looking at the age-adjusted rates for people with intellectual disability (see Figure 52), males (ASR 58.9 percent) are slightly more likely to have no qualifications than females (ASR 54.6 percent). Looking at ethnic groups, Europeans have the highest rate of no qualifications (ASR 57.8 percent), followed by Māori (ASR 55.1 percent), Pacific (ASR 54.8 percent) and Asian (ASR 49.2 percent) ethnic groups. This is quite different from the non-intellectually disabled population, with Māori and Pacific people having the highest rates.

Figure 52 – Adults with no qualifications, age-standardised rates for the population aged 18 years and over, by sex and by ethnicity, 2018



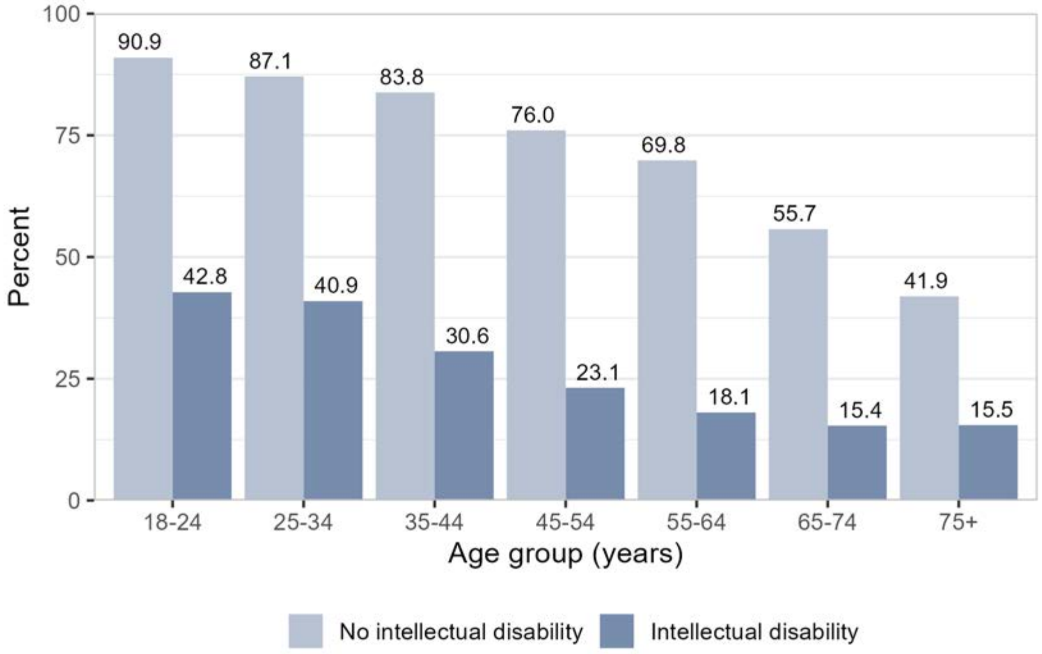
Source: 2018 Administrative Population Census (APC) data in the IDI.
Definition: Percentage of adults 18 years or over with no qualifications.

5.4.2 At least a Level 2 qualification

This indicator looks at educational attainment in upper secondary schools by measuring the percentage of people with and without intellectual disability with at least one qualification equivalent to NCEA Level 2. There are many determinants of educational attainment. Restricted attainment may not simply be the result of limitations in the capacity of individuals with disability. Instead, it can come as a result of lower expectations or restricted access to a diverse and relevant curriculum.

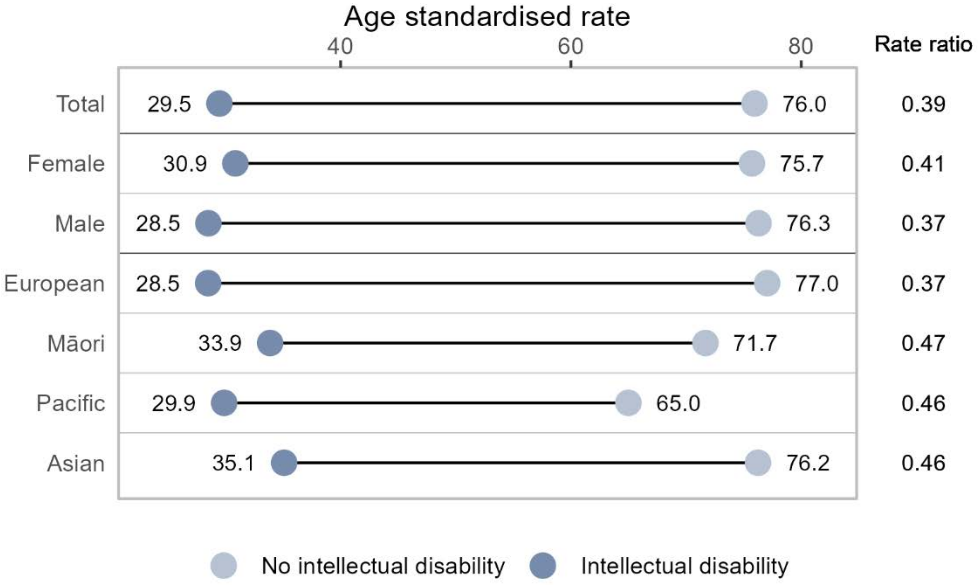
The percentage of people with at least one Level 2 qualification decreases with age (see Figure 53). For all age groups, people with intellectual disability have considerably lower rates of NCEA Level 2 or equivalent attainment. In the study population, 40.9 percent of 25 to 34-year-olds with intellectual disability have attained one Level 2 qualification. This is more than double the rate of the 55 to 64-year-old population (18.1 percent).

Figure 53 – Highest qualification at least NCEA Level 2 or equivalent by age group, 2018



Source: 2018 Administrative Population Census (APC) data in the IDI.
Definition: Percentage of adults with at least one NCEA Level 2 qualification or equivalent.

Figure 54 – Highest qualification at least NCEA Level 2 or equivalent, age-standardised rates for the population aged 18 years and over, by sex and by ethnicity, 2018



Source: 2018 Administrative Population Census (APC) data in the IDI.
Definition: Percentage of adults with at least one NCEA Level 2 qualification or equivalent.

Adjusted by age, the rate of Level 2 attainment is 29.5 percent for the intellectually disabled population compared to 76.0 percent for the non-intellectually disabled (see Figure 54). Māori and Asians with intellectual disability have higher rates of Level 2 attainment than Pacific people and Europeans. While Pacific people had the lowest age adjusted rates of Level 2 attainment in the non-intellectually disabled population, Europeans had slightly lower rates in the population with intellectual disability.


Joanne Derix – Starburst

6 Work, care and volunteering

In this section we present six indicators related to work, care and volunteering. Two explore how having a child with intellectual disability relates to parent/caregiver work and care, while the others look at the participation of adults with intellectual disabilities in paid and unpaid work.

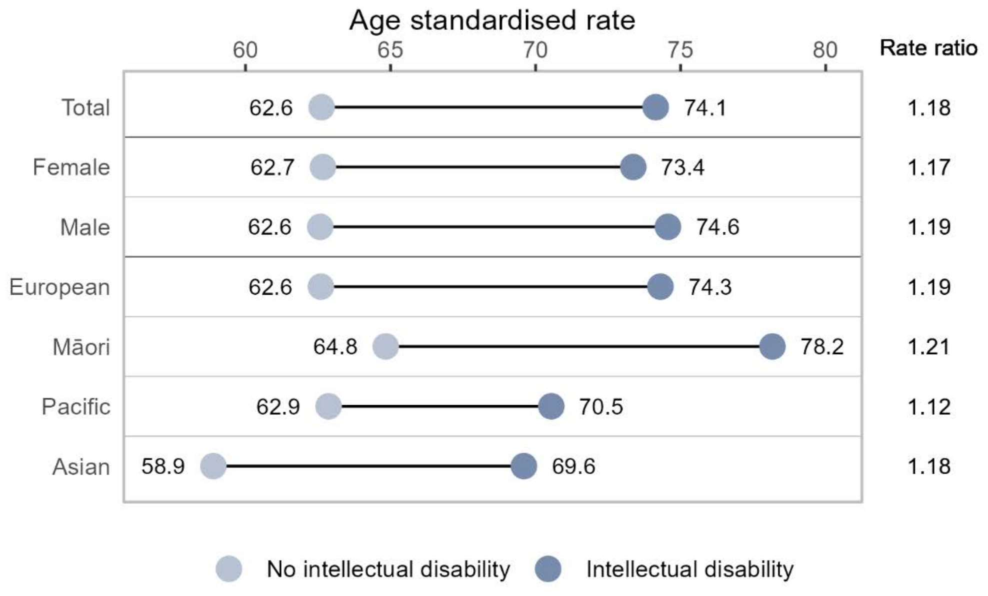
6.1 Parents/caregivers in employment and care

Disability has an impact on the whole family. This section looks at parents' and caregivers' roles in caring and employment participation. Statistics relate to the percentage of children with and without intellectual disability who have parents or caregivers in different roles.

6.1.1 Parents/caregivers as carers

Adjusting for age, the percentage of children under 15 years of age with intellectual disability in the study population who have at least one parent or caregiver not in full-time employment is 74.1 percent for children with intellectual disability and 62.6 percent for children without intellectual disability. Figure 55 shows that the rates of having at least one parent not in full-time employment are quite similar across gender and ethnic groups. However, while having intellectual disability increases that likelihood for both genders and most ethnic groups, that increase is smaller and not statistically significant for children in the Pacific ethnic group.

Figure 55 – Children aged 0 to 14 with at least one parent/caregiver not in full-time employment, age-standardised rates for the total population, by sex and by ethnicity, 2018

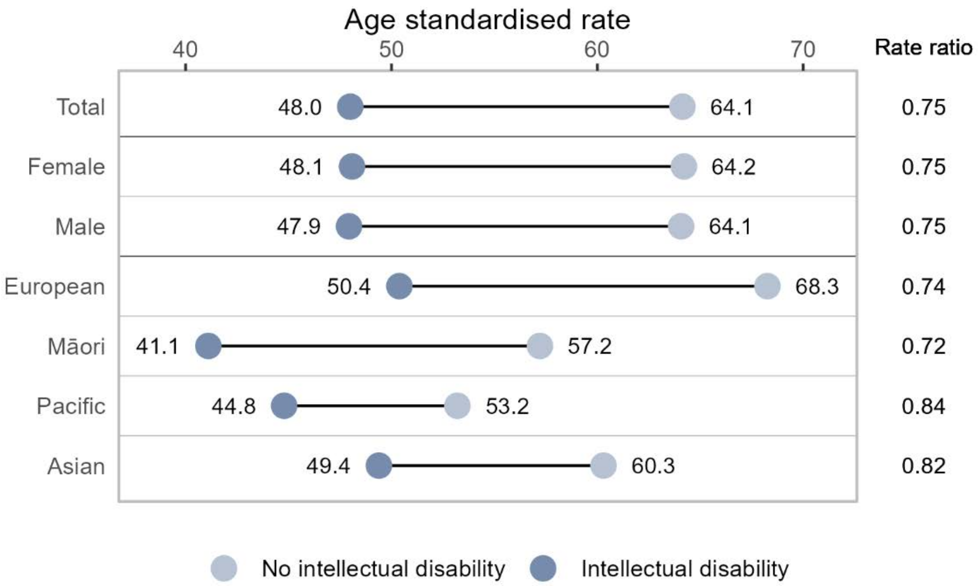


Source: 2018 Census of Population and Dwellings data in the IDI.
Definition: Percentage of children 0 to 14 years old who have at least one parent who is not in full-time employment at the date of the 2018 Census.

6.1.2 Parents/caregivers in employment

Adjusted by age, the percentage of children with intellectual disability with all parents/caregivers in the household in paid employment is 48.0 percent, compared with 64.1 percent for children without intellectual disability (see Figure 56). This difference in parental employment participation between intellectually disabled children and non-disabled children can be seen across gender and ethnic groups, with the largest differences for Europeans and Māori.

Figure 56 – Children aged 0 to 14 with all parents/caregivers in employment, age-standardised rates for the total population, by sex and by ethnicity, as at Census 2018



Source: 2018 Census of Population and Dwellings data in the IDI.
Definition: Percentage of children with all parents in the household in paid employment at the date of the 2018 Census.

6.2 Participation in paid and unpaid work by people with intellectual disability

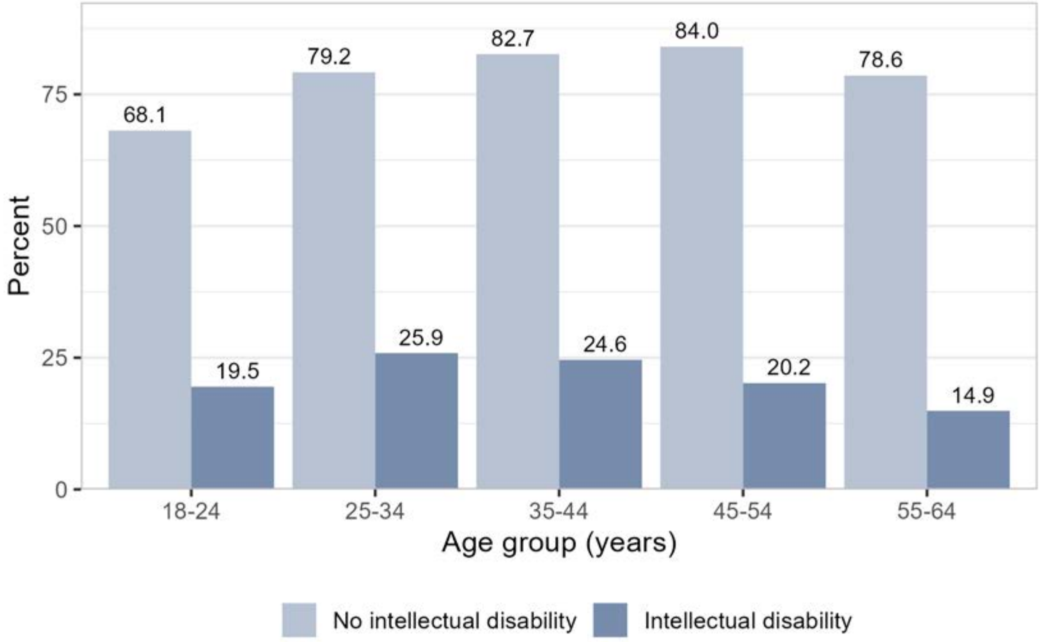
Internationally, unemployment among adults with an intellectual disability is much higher than it is for other people. Those who engage in work often end up in unpaid work or sheltered employment. But good transition programmes and supported employment programmes can help young people with intellectual disabilities to get a job. A review of literature found that when people with intellectual disability are asked, many adults with intellectual disability say they would like to work in real jobs in the community. However, often their parents or support workers do not think they are able to have jobs (Bray & Donal Beasly Institute, 2003).

In this section we report on participation in paid and unpaid work, benefit receipt and the number of young people not in employment, education or training (NEET).

6.2.1 Participation in paid work

Figure 57 shows that more than a quarter (25.9 percent) of 25- to 34-year-olds with intellectual disability in the study population were in paid employment as at 30 June 2018. The percentage of people in paid employment decreases from age 35 for the population with intellectual disability. The rate for the 55 to 64 age group is 14.9 percent.

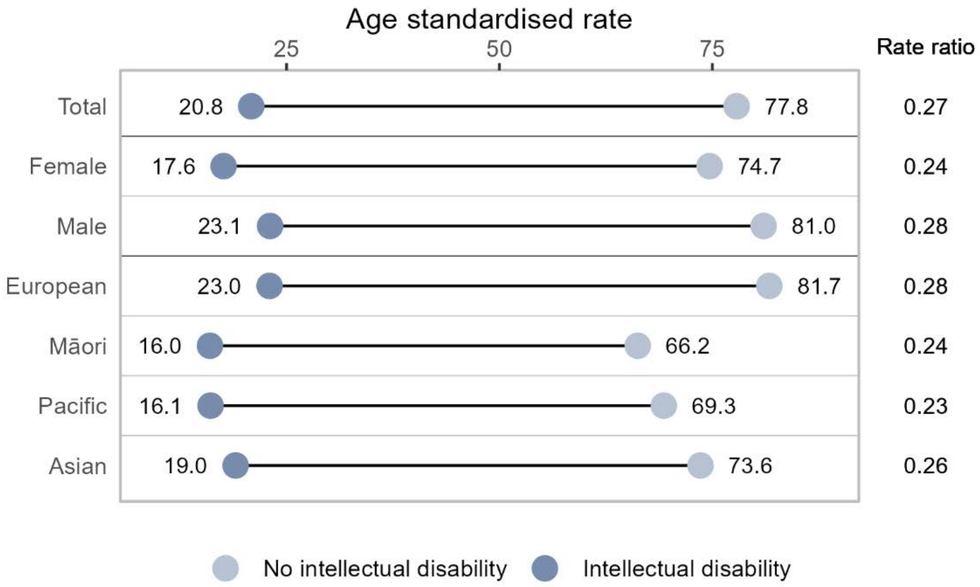
Figure 57 – Employment participation by age group, ages 18 to 64 years, as at 30 June 2018



Source: Administrative Population Census (APC) data in the IDI, sourced from Inland Revenue tax data.
Definition: Percentage of people in paid employment as at 30 June 2018. People were considered to be employed if they had PAYE wage and salary income in May or June 2018, or if they had self-employment income in the tax year to March 2018.

Figure 58 shows that, after adjusting for age, participation in paid employment for people aged 18 to 64 years is significantly lower for people with intellectual disability (ASR of 20.8 percent) than it is for people without intellectual disability (ASR of 77.8). Employment participation is higher for males (ASR 23.1 percent) with an intellectual disability than females (ASR 17.6 percent) and is higher for Europeans than it is for other ethnic groups. These differences are consistent with patterns seen in people without intellectual disability.

Figure 58 – Employment participation, age-standardised rates for the population aged 18 to 64 years, by se and by ethnicity, as at 30 June 2018



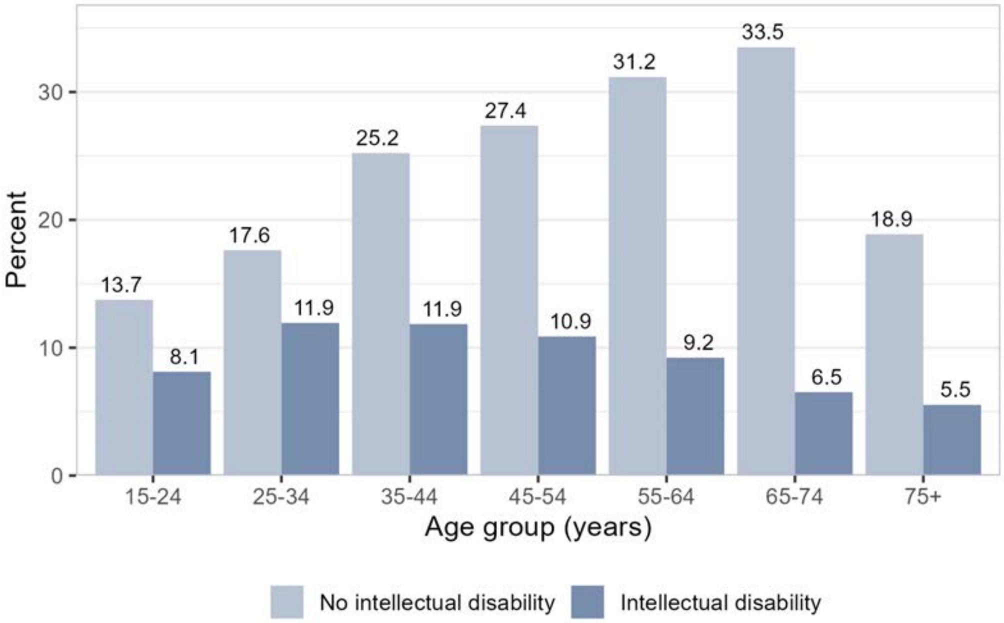
Source: Administrative Population Census (APC) data in the IDI, sourced from Inland Revenue tax data.
Definition: Percentage of people in paid employment as at 30 June 2018. People were considered to be employed if they had PAYE wage and salary income in May or June 2018, or if they had self-employment income in the tax year to March 2018.

6.2.2 Participation in unpaid work

One in 10 people with intellectual disability in the study population volunteer outside their home. Overall, the rate of volunteering among people with intellectual disability is highest in the 25 to 34 age group and it decreases from that age onwards. This is different from the rates across age groups for people without intellectual disability, which keep increasing until the 65 to 74 age group, which has the highest volunteering rate (see Figure 59).

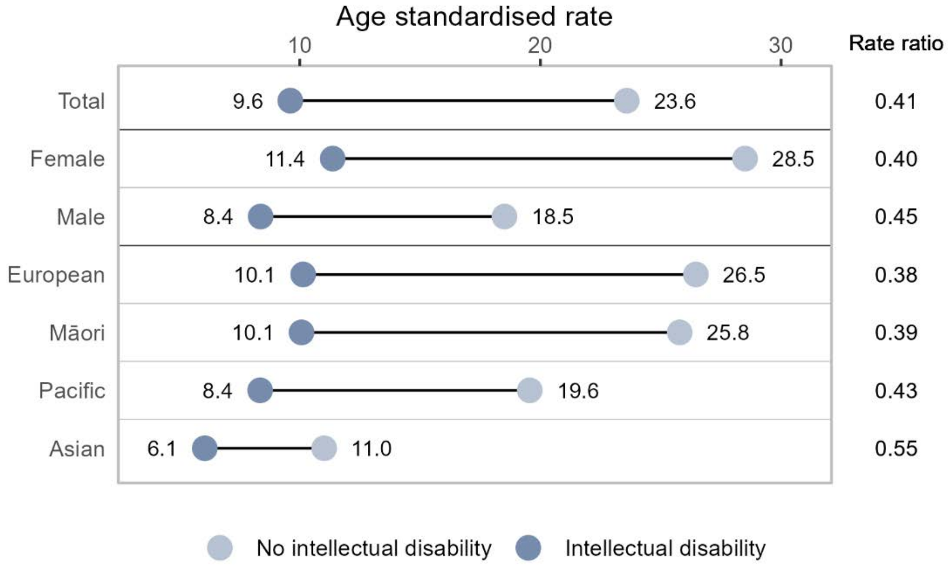
Figure 60 compares rates of volunteering among people with and without intellectual disability by gender and ethnic group. Adjusted by age, females are considerably more likely to volunteer than males, but the gender difference is less pronounced in people with intellectual disability. European and Māori ethnic groups have the highest and very similar age adjusted rates of volunteering, one in 10 for the intellectually disabled and approximately one in four for the non-intellectually disabled.

Figure 59 – Volunteering outside the home by age group, 2018



Source: 2018 Census of Population and Dwellings data in the IDI.
Definition: Percentage of people who participated in unpaid activities outside their homes in the four weeks to 6 March 2018. Activities could include looking after a child in another household, looking after someone who was ill or with a disability in another household, or other helping or voluntary work for or through any organisation, group or marae.

Figure 60 – Volunteering outside the home, 2018, age-standardised rates for the population aged 15 years and over, by sex and by ethnicity

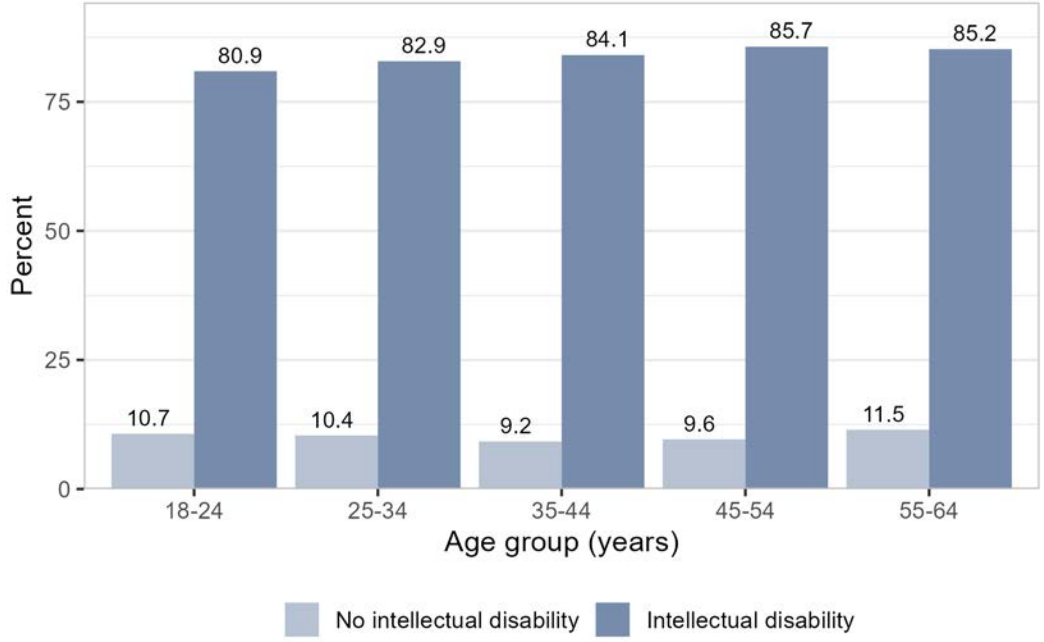


Source: 2018 Census of Population and Dwellings data in the IDI.
Definition: Percentage of people who participated in unpaid activities outside their homes in the four weeks to 6 March 2018. Activities could include looking after a child in another household, looking after someone who was ill or with a disability in another household, or other helping or voluntary work for or through any organisation, group or marae.

6.2.3 Benefit receipt

The majority of people aged 18 to 64 with intellectual disability were receiving income-tested benefits as at 30 June 2018, with only small differences across age groups (see Figure 61). This compared to around one in 10 people without intellectual disability receiving a benefit.

Figure 61 – Benefit receipt by 18 to 64 age group, as at 30 June 2018

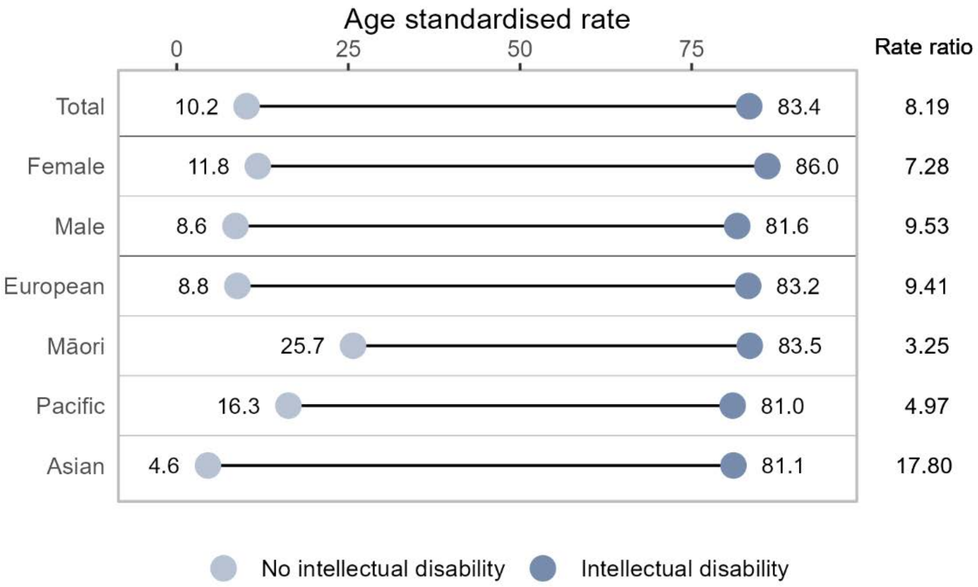


Source: Ministry of Social Development benefit data in the IDI.
Definition: Percentage of people receiving income-tested benefits as at 30 June 2018.

Looking at the age adjusted rates (Figure 62), the likelihood of people with intellectual disability receiving benefits is eight times that of the non-intellectually disabled.

The rate of benefit receipt is slightly higher for females than males, as with the non-intellectually disabled population. The differences in the benefit receipt rates among ethnic groups for people without intellectual disability are not present in the intellectually disabled population. People in the European and Asian ethnic groups have the highest relative differences in benefit receipt rates between people with and without intellectual disability, with rate ratios of 17.80 for Asians and 9.41 for Europeans.

Figure 62 – Benefit receipt, age-standardised rates for the population aged 18 to 64, by sex and by ethnicity, as at June 2018



Source: Ministry of Social Development benefit data in the IDI.
Definition: Percentage of people receiving income-tested benefits as at 30 June 2018.

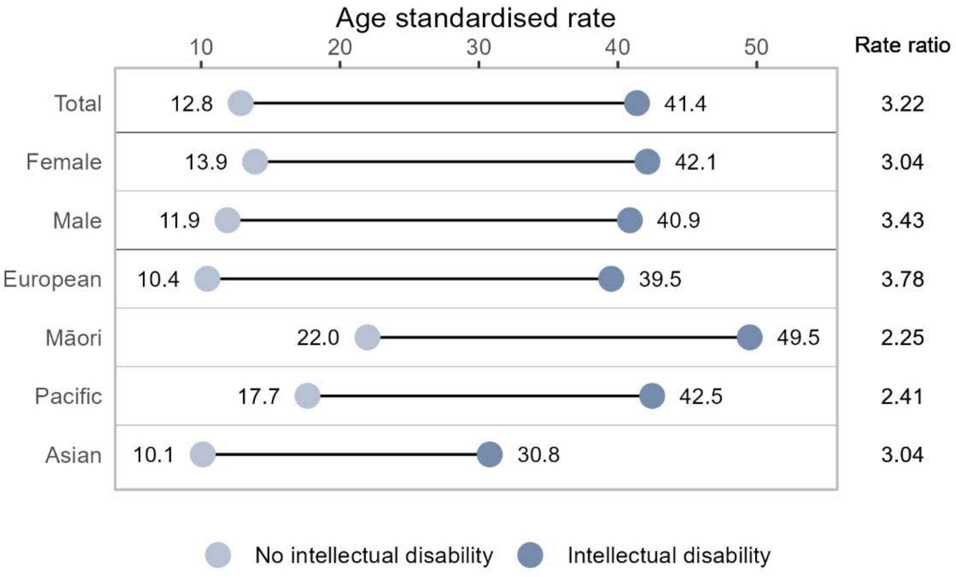
6.2.4 Youth not in employment, education or training

In the study population, 39.2 percent of the 15- to 24-year-olds with intellectual disability were not in employment, education or training (NEET). This compares with 12.9 percent of 15- to 24-year-olds without intellectual disability. Looking at age adjusted rates (Figure 63), the likelihood of intellectually disabled youth being NEET is more than three times that of non-intellectually disabled youth. NEET is more prevalent in females than in the males in both populations, with and without intellectual disability.

As with other indicators, the ethnic groups with lower rates in the population without intellectual disabilities have higher relative differences in rates between intellectually disabled and non-intellectually disabled. People in the European ethnic group have the highest rate ratio (3.78), followed by the Asian ethnic group (3.04). Looking at people with intellectual disability, Māori have the highest NEET rate (ASR 49.5), followed by Pacific people (ASR 42.5), Europeans (ASR 39.5) and Asians (ASR 30.8).

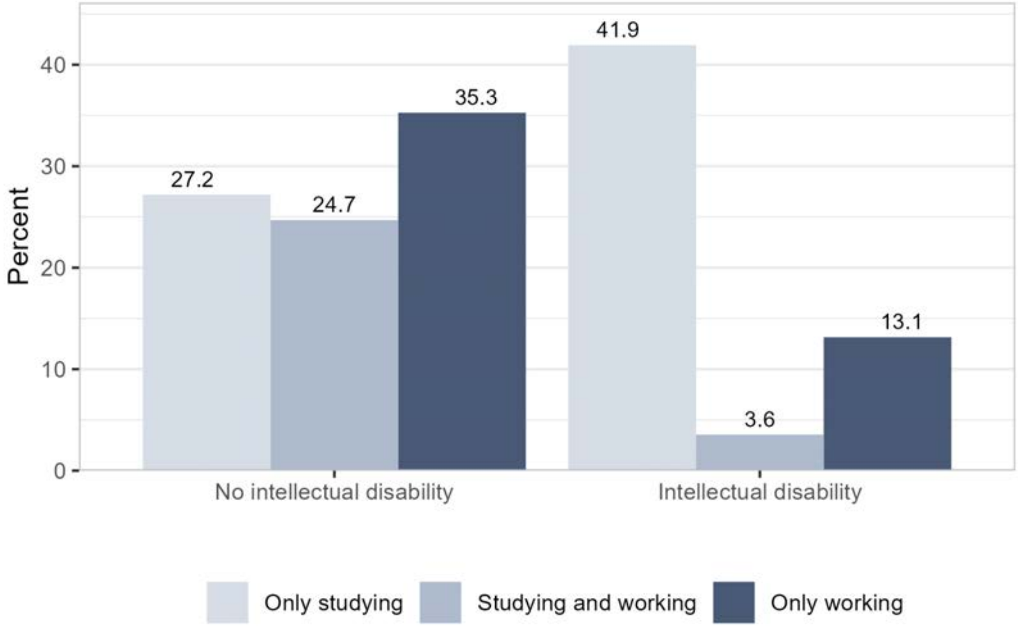
Figure 64 shows rates of activities for the youth population who are not NEET. It shows a reasonably even split among people without intellectual disability who are working, studying or both working and studying, with the latter group being most prevalent (35.3 percent of all young people without intellectual disability). The distribution of young people with intellectual disability is quite different, however. They are most commonly studying only (41.9 percent), while 13.1 percent are only working and very few (3.6 percent) are both working and studying.

Figure 63 – Youth not in employment, education, or training (NEET), age-standardised rates for the population aged 15 to 24, by sex and by ethnicity, as at June 2018



Source: Administrative Population Census (APC) sourced from Inland Revenue and Ministry of Education data in the IDI.
Definition: Percentage of youth not in employment, education or training (NEET). People were considered to be employed if they had had wage or salary income in May or June 2018 or self-employment income in the 2018 tax year.

Figure 64 – Age-standardised rates of youth activity (study or work) by intellectual disability



Source: Administrative Population Census (APC) sourced from Inland Revenue and Ministry of Education data in the IDI.
Definition: Percentage of youth aged 15 to 24 in employment, education or training. People were considered to be employed if they had had wage or salary income in May or June 2018 or self-employment income in the 2018 tax year.

Kaye Vivienne McMurray – Decor Houses

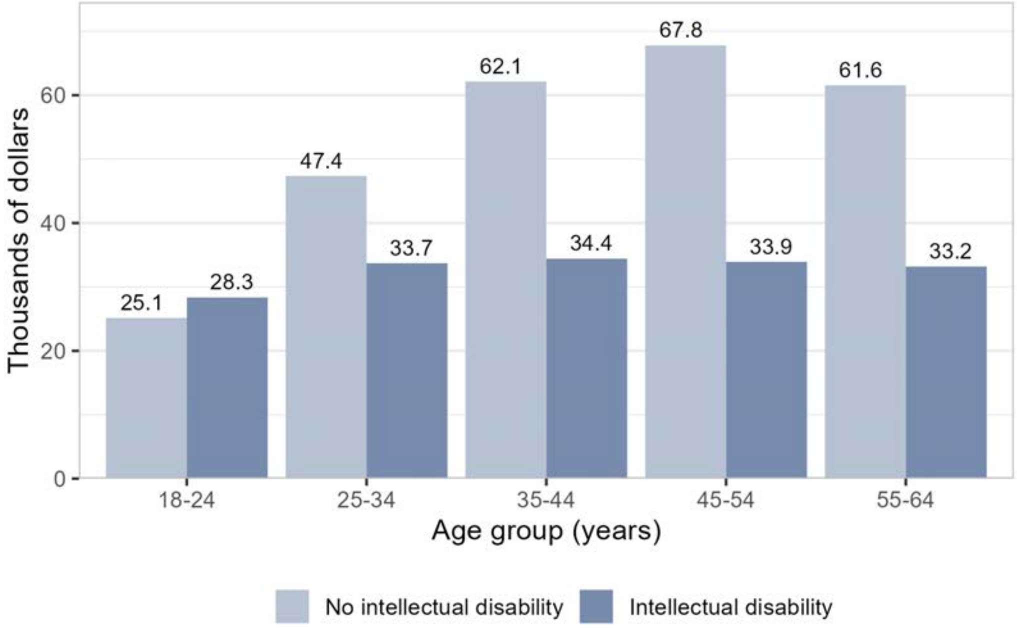
7 Income, consumption and wealth

Income and wealth are important in enabling people to live independent lives, free of poverty and hardship. This section reports on several indicators of individual and household income and consumption. There is only limited wealth data available in New Zealand, however, and no data that could be reported robustly for the intellectually disabled population.

7.1 Total annual income

People with intellectual disability have lower average annual personal incomes than people without intellectual disability across all age groups (see Figure 65). The average total annual income of around $30,000 does not vary significantly by age for people with intellectual disability, and is consistent with the large number of people with intellectual disability on benefits and the relatively small number in paid work. In the 15 to 24-year-old age group people with intellectual disability have slightly higher incomes than those without intellectual disability; however, they have much lower incomes at older ages, with the gap becoming progressively wider with age.

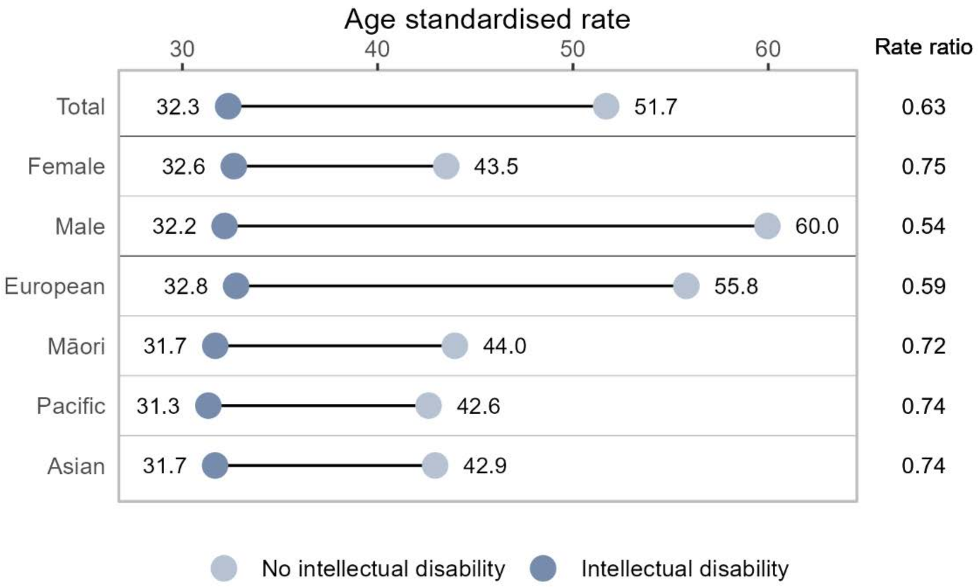
Figure 65 – Average total annual personal income by age group, year ended 31 March 2018



Sources: Administrative Population Census (APC) in the IDI, sourced from Inland Revenue tax and Working for Families data, and Ministry of Social Development benefits data.
Definition: Mean total before-tax personal income for the year ending 31 March 2018.

Figure 66 shows age adjusted average annual income figures for people with and without intellectual disability. While the average annual income of people without intellectual disability varies significantly according to gender and ethnicity, this is not the case for the intellectually disabled population. This is consistent with earlier figures showing that the majority of people with intellectual disability receive benefit income, regardless of ethnicity and sex.

Figure 66 – Total annual personal income in thousands of dollars, age-standardised rates for the population aged 18 to 64, by sex and by ethnicity, year to 31 March 2018



Sources: Administrative Population Census (APC) in the IDI, sourced from Inland Revenue tax and Working for Families data, and Ministry of Social Development benefits data.

Definition: Mean total before-tax personal income for the year ending 31 March 2018.

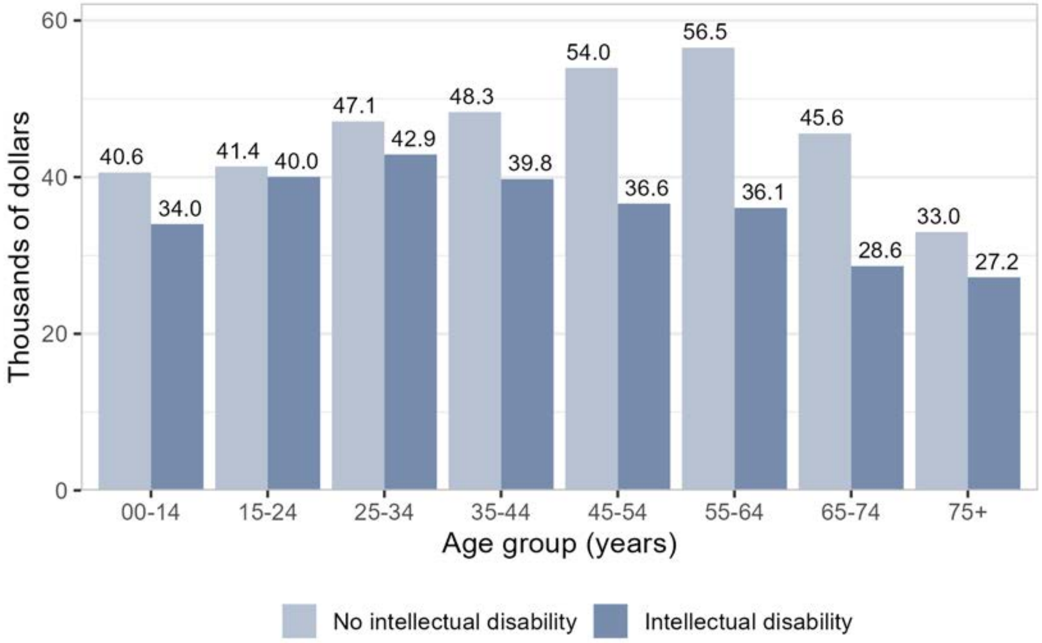
7.2 Equivalised disposable household income

Disposable household income is the sum of after-tax personal income for everyone aged 15 years and older in a household. Equivalised income adjusts household income measures to take account of differences in household size and composition so living standards can be compared across households. Figure 67 shows the average equivalised disposable household income for people with without intellectual disability by age group. The data shows that, for people without intellectual disability, equivalised average disposable household income increases by age until the age of 65, the most common retirement age. From 65 years of age onwards the average equivalised disposable household income decreases with age.

For people with intellectual disability the pattern is different, and the age group with the highest average equivalised disposable household income is the 25 to 34 age group. From then onwards equivalised disposable household income decreases with age. This could indicate that adults up to the age of 34 may still be living at home and be supported by parents still in full-time employment, while older people with intellectual disability may no longer have that support.

For all age groups, people with intellectual disability have lower equivalised disposable household incomes than people without intellectual disability. Children younger than 15 years of age with intellectual disability live in households with average equivalised disposable incomes of $34,000 compared to the $40,600 average income of households with children without intellectual disability. The difference in household incomes between people with and without intellectual disability is largest in childhood and between 45 and 74 years. For the 55 to 64 age group the household income gap is the highest ($20,100), as this is the peak earning age for people without intellectual disability.

Figure 67 – Average equivalised disposable household income by age group, year ending 31 March 2018

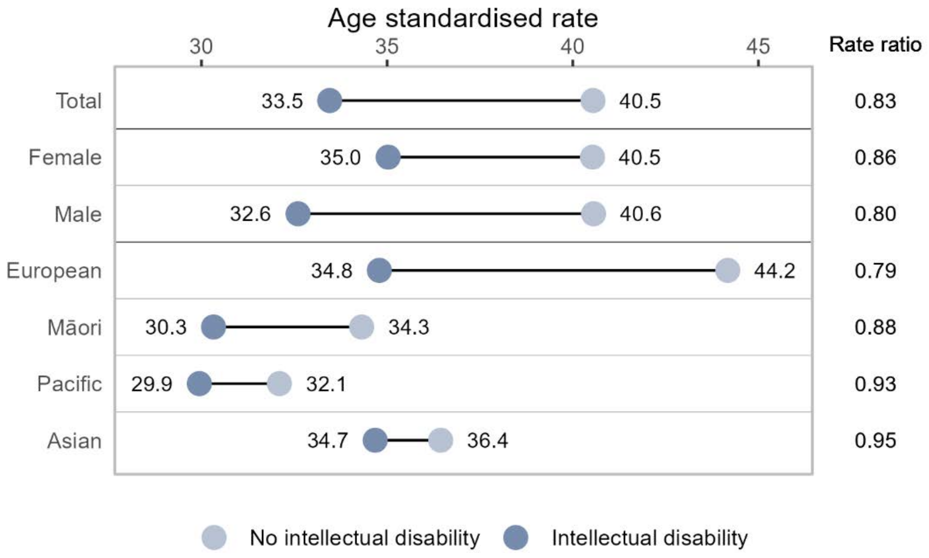


Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) and Inland Revenue tax data in the IDI. Income sourced from APC, taxes from Inland Revenue, and household structure for equivalisation from Census.
Definition: Mean equivalised disposable household income for the year ending 31 March 2018. Equivalised using the OECD-modified scale. Measure is before housing costs.

The age adjusted average disposable household income for people with and without intellectual disability and the relative differences between them (rate ratio) are shown separately for children (Figure 68) and adults (Figure 69). The figures show the information for the total population and by age and ethnic groups. Average household incomes do not vary by gender for children without intellectual disability, but they do for children with intellectual disability. The average household income for boys with intellectual disability is $32,600 compared to $35,000 for girls.

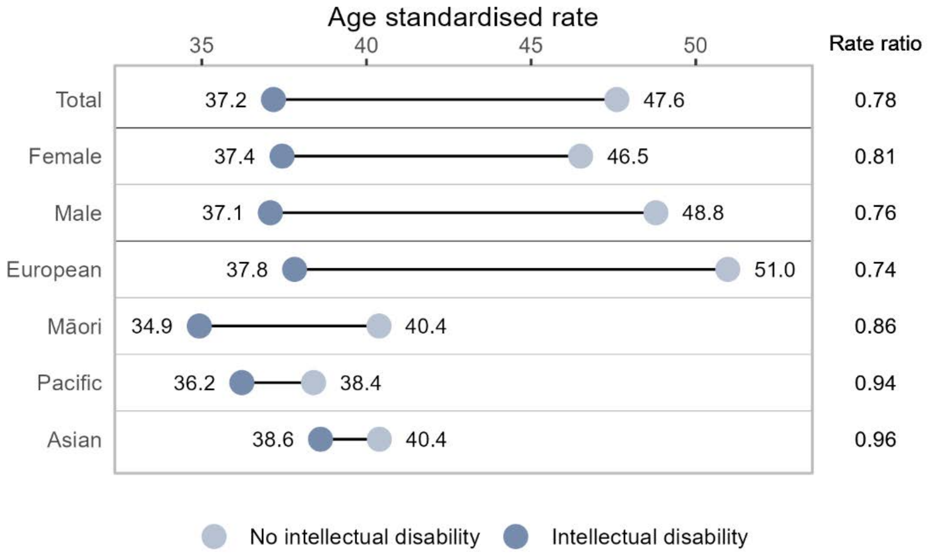
For children in the European ethnic group, there is a considerable relative difference between average disposable household incomes with and without disability (0.79 rate ratio). But the relative difference is much smaller for other ethnicities, especially Pacific and Asian ethnic groups, with rate ratios close to 1. Nevertheless, Māori and Pacific children wit intellectual disability have the lowest levels of household equivalised disposable income. The age adjusted average disposable household income for adults with intellectual disability shows no significant differences by gender and ethnicity.

Figure 68 – Equivalised disposable household income in thousands of dollars, age-standardised rates for the child population aged under 15, by sex and by ethnicity, year to March 2018



Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) and Inland Revenue tax data in the IDI. Income sourced from APC, taxes from Inland Revenue and household structure for equivalisation from Census.
Definition: Mean equivalised disposable household income for the year ending 31 March 2018. Equivalised using the Modified OECD scale. Measure is before housing costs (BHC).

Figure 69 – Equivalised disposable household income in thousands of dollars, age-standardised rates for the adult population aged 15 and over, by sex and by ethnicity, year to March 2018



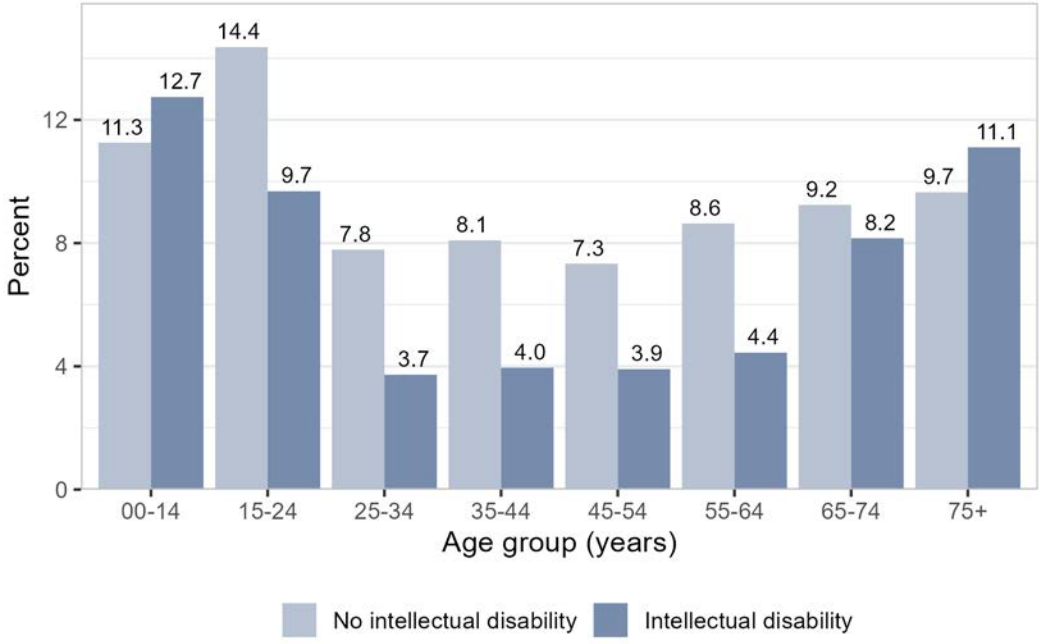
Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) and Inland Revenue tax data in the IDI. Income sourced from APC, taxes from Inland Revenue and household structure for equivalisation from Census.
Definition: Mean equivalised disposable household income for the year ending 31 March 2018. Equivalised using the OECD-modified scale. Measure is before housing costs (BHC).

7.3 Living in a low-income household

This indicator measures the percentage of people living in low-income households, defined as less than 50 percent of the median household equivalised disposable income. This is an established measure of poverty, used for example by Stats NZ as one of the indicators in its child poverty statistics.[22]

Figure 70 shows the percentage of people with and without intellectual disability living in low-income households. The figure shows that only the young (0 to 14 years of age) and the very old with intellectual disability are more likely to live in low-income households than the non-intellectually disabled, despite the lower incomes on average reported in section 6.2. In all other age groups, people with intellectual disability have lower rates of very low income than people without intellectual disability.

Figure 70 – Living in a low-income household by age group, year to 31 March 2018



Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) and Inland Revenue tax data in the IDI. Income sourced from APC, taxes from Inland Revenue and household structure for equivalisation from Census.
Definition: Percentage of people with equivalised disposable household income less than 50 percent of the median for the year ending 31 March 2018. Equivalised using the OECD-modified scale. Measure is before housing costs (BHC).

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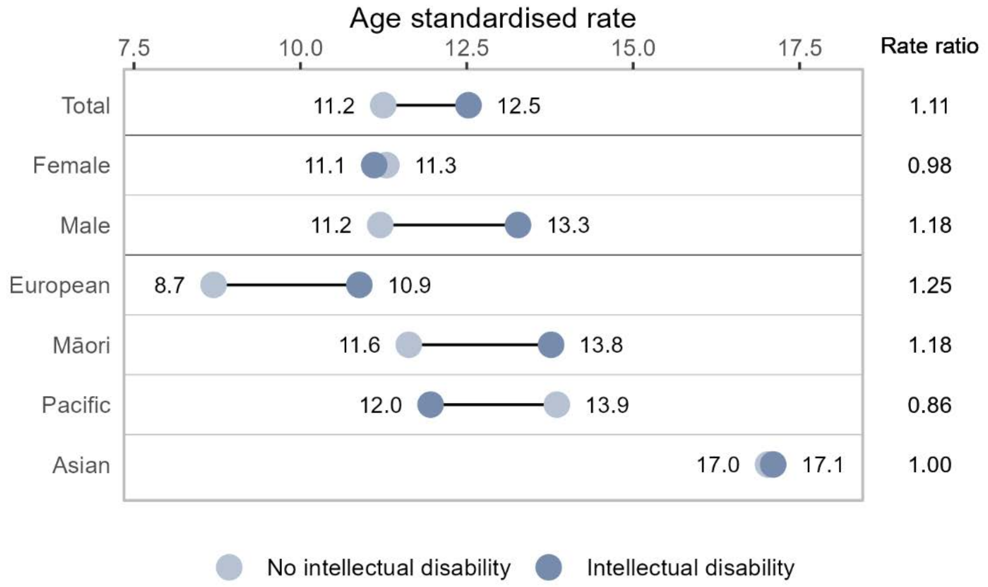
[22] https://www.stats.govt.nz/news/child-poverty-statistics-show-no-annual-change-in-the-year-ended-june-2022.

While this seems counterintuitive, it could be that benefit rates, while low, are just sufficient for most intellectually disabled adults to lift them above the 50 percent threshold.[23] It could also be that the population with no intellectual disability are more likely to have personal circumstances resulting in especially low reported incomes, for example through being self-employed. Finally, people with intellectual disability are less likely to have children than others. The presence of children in a household will generally reduce equivalised household income, as they need to be supported by the household, but they are generally not a source of employment income.

Figure 71 – Living in a low-income household, age-standardised rates for the child population aged under 15 years, by sex and by ethnicity, year to March 2018



Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) and Inland Revenue tax data in the IDI. Income sourced from APC, taxes from Inland Revenue and household structure for equivalisation from Census. **Definition:** Percentage of people with equivalised disposable household income less than 50 percent of the median for the year ending 31 March 2018. Equivalised using the Modified OECD scale. Measure is before housing costs (BHC).

For the populations of people with and without intellectual disability, children are more likely to live in low-income households than adults (ASR of 12.5 percent compared to 11.2 percent). This pattern is only observed for boys, however (see Figure 71), along with European and Māori ethnic groups. While Asian children are more likely than European or Māori children to live in low-income

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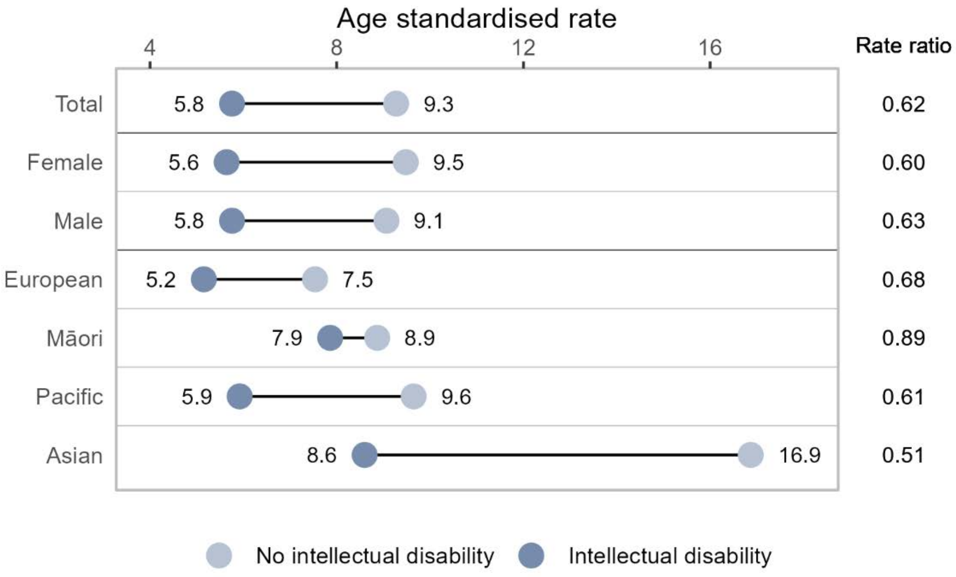
[23] It is worth noting that many people with intellectual disability live in residential care settings and receive residential support subsidies or residential care subsidies. Much of these are paid to the care providers, leaving small weekly allowances to the people. It is difficult to know how much discretionary income people in this situation have relative to those not in residential care.

households, previous research has shown that this is not generally reflected in high material hardship among Asian children when non-income measures are used (Perry, 2022).

Unlike children, adults with intellectual disability have lower rates of household income than adults without disability. This could be explained by several factors, as discussed above, including the lack of children living in the households. Adjusted by age, 5.8 percent of adults with intellectual disability live in low-income households compared to 9.3 of adults without intellectual disability.

The age adjusted rates for adults with intellectual disability (see Figure 72) show that the rates do not vary significantly by gender. Looking at the different ethnic groups, the percentage living in low-income household for Māori does not vary significantly between adults with and without intellectual disability. As with children, the Asian ethnic group has the highest rates of low household income, particularly for people without intellectual disability.

Figure 72 – Living in a low-income household, age-standardised rates for the adult population aged 15 and over, by sex and by ethnicity, year to March 2018



Sources: 2018 Census of Population and Dwellings, Administrative Population Census (APC) and Inland Revenue tax data in the IDI. Income sourced from APC, taxes from Inland Revenue and household structure for equivalisation from Census. **Definition:** Percentage of people with equivalised disposable household income less than 50 percent of the median for the year ending 31 March 2018. Equivalised using the Modified OECD scale. Measure is before housing costs (BHC).

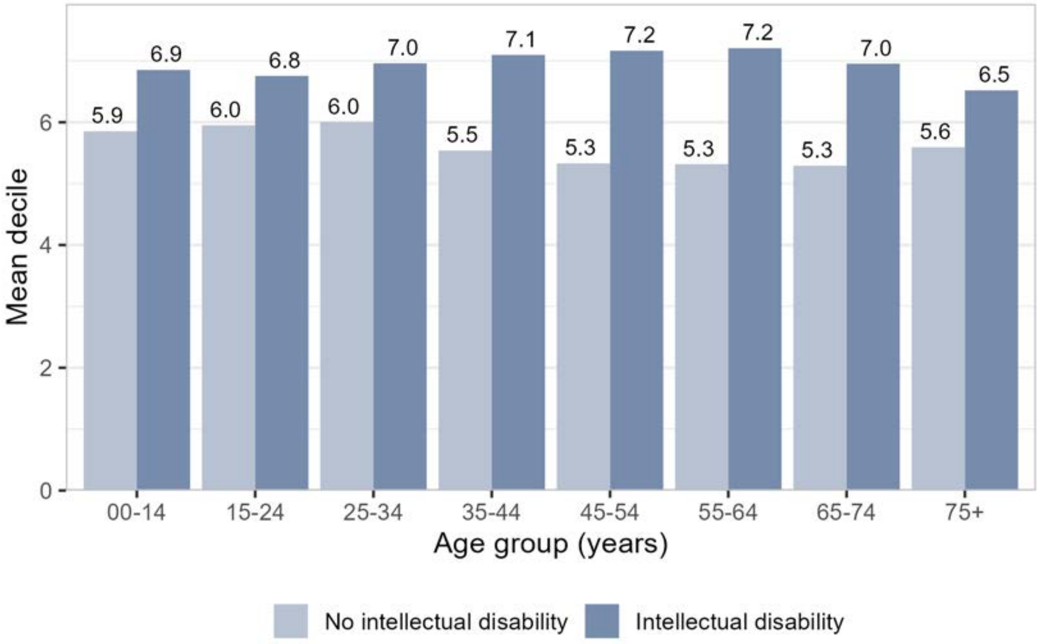
7.4 Neighbourhood deprivation (NZDep)

This indicator looks at the socioeconomic status of the areas in which people live. It is based on people's addresses in 2018. The New Zealand Deprivation Index (NZDep) is an area-based measure of socioeconomic deprivation in Aotearoa. It measures the level of deprivation among people in each small neighbourhood area (or 'meshblock'). It is based on nine Census variables. NZDep groups deprivation scores into deciles, where 1 represents the areas with the least deprived scores and 10 the areas with the most deprived scores. A value of 10 therefore indicates that a small area is in the most deprived 10 percent of areas in New Zealand. The NZDep is updated regularly. For this indicator we have used the 2018 NZDep.

This indicator measures the percentage of people living in decile 10, i.e., in the most deprived 10 percent of areas in New Zealand.

People with intellectual disability are considerably more likely to live in the most deprived areas in New Zealand. Adjusted by age, 23.9 percent of people with intellectual disability live in an area in decile 10 of the NZDep, compared with 14.7 percent of people without intellectual disability. This disparity is the case across all age groups (see Figure 73), with the largest differences in the 45 to 54 and 55 to 64 year age groups.

Figure 73 – Living in the most deprived decile by age group, 2018



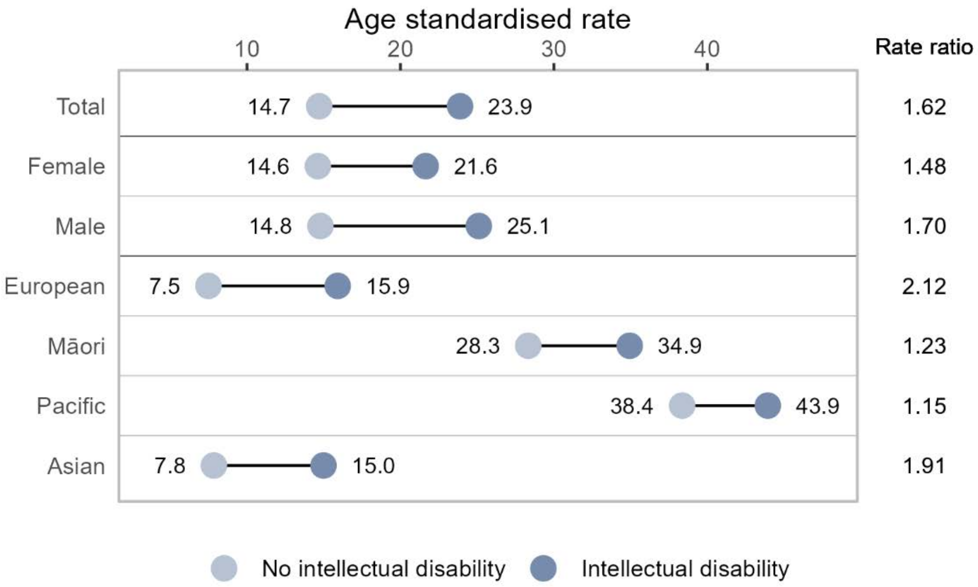
Sources: Address notifications in the IDI core datasets.

Definition: Percentage of people living in most deprived decile based on NZDep 2018.

The rates of people living in the most deprived areas adjusted by age are shown in Figure 74 for children and Figure 75 for adults.

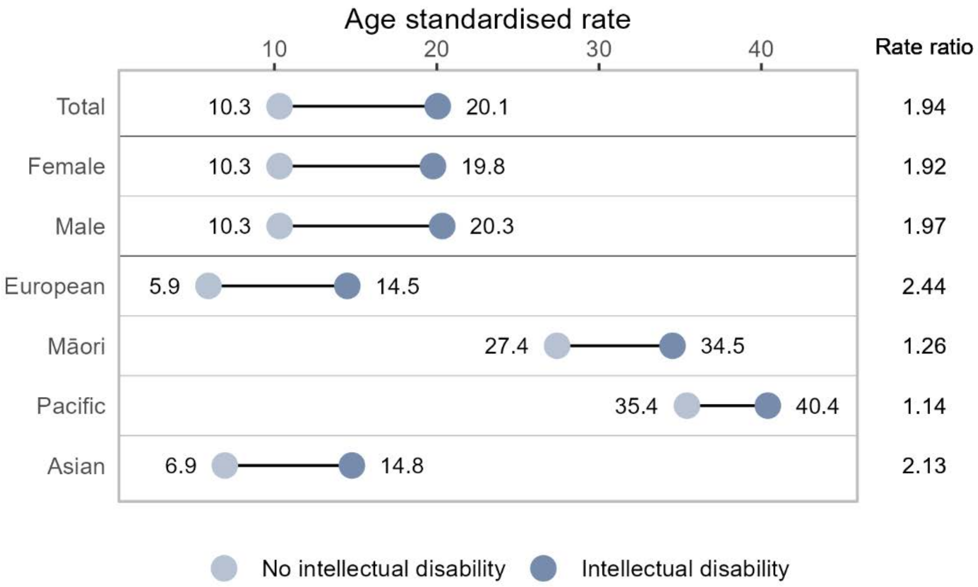
Having intellectual disability increases the likelihood of living in one of the most deprived areas for all gender and ethnic groups for both children and adults. Focusing on people with intellectual disability, the rates of people living in the most deprived areas by gender are similar. Looking at ethnic group, 43.9 percent of children in the Pacific ethnic group live in decile 10 areas, compared with 34.9 percent of Māori children, 15.9 percent of Europeans and 15.0 percent of Asians. The percentages for adults are slightly lower but follow a similar pattern.

Figure 74 – Living in the most deprived decile, age-standardised rates for the child population aged under 15 years, by sex and by ethnicity, 2018



Sources: Address notifications in the IDI core datasets.
Definition: Percentage of people living in most deprived decile based on NZDep 2018.

Figure 75 – Living in the most deprived decile, age-standardised rates for the adult population aged 15 years and over, by sex and by ethnicity



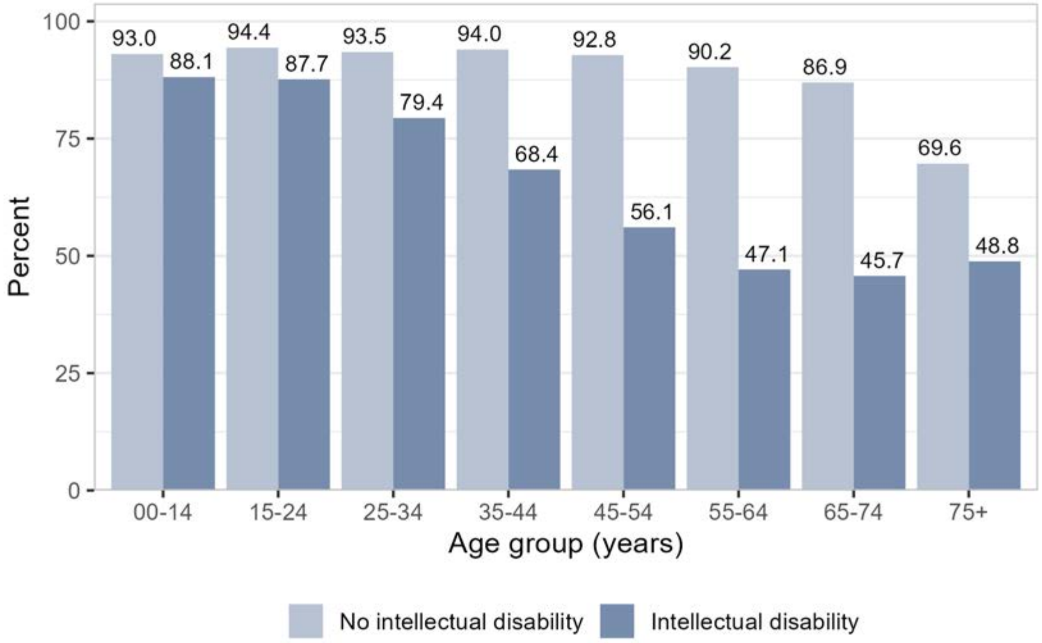
Sources: Address notifications in the IDI core datasets.
Definition: Percentage of people living in most deprived decile based on NZDep 2018.

7.5 Access to internet

Digital inclusion is important for a range of social economic and social outcomes and influences improved livelihoods. A 2019 report funded by the Department of Internal Affairs reported that those in social housing and disabled people were particularly disadvantaged with respect to internet access (Grimes & White, 2019). Internet access is identified in the 2018 Census and relates to access in the dwelling, not necessarily for the individual.

The rates of internet access are lower for people with intellectual disability for all age groups, but the difference in rates between intellectually disabled and non-disabled increases gradually with age until 65 years of age (see Figure 76). Only 47.1 percent of 55- to 64-year-olds with intellectual disability in the study population had access to the internet, compared to 90.2 percent for the non-intellectually disabled.

Figure 76 – Access to internet by age group, 2018

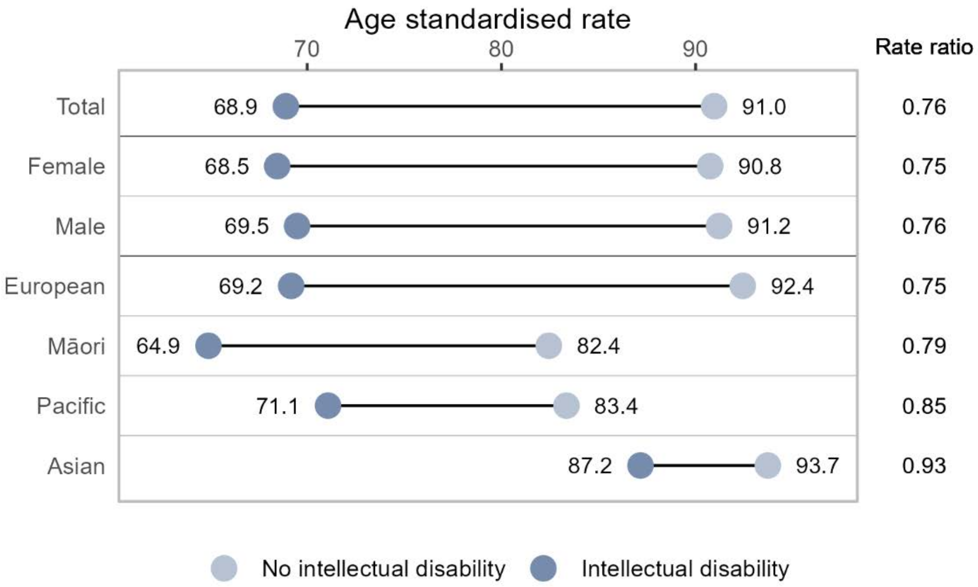


Sources: 2018 Census of Population and Dwellings.
Definition: Percentage of people living in a household with access to the internet.

The overall age adjusted rate of internet access for people with intellectual disability is 68.9 percent compared with 91.0 percent for non-disabled.

Age adjusted rates by gender and ethnic group (Figure 77) show the lower internet access of intellectually disabled can be observed across gender and ethnic groups. Focusing on the intellectually disabled population, Māori, with an age adjusted rate of 64.9 percent, had the lowest rate of internet access, followed by Europeans (ASR 69.2 percent), Pacific people (ASR 71.1 percent) and Asians (ASR 87.2 percent). The difference between internet access for people with and without intellectual disability was by far the smallest for Asian people.

Figure 77 – Access to internet, age-standardised rates for the total population, by sex and by ethnicity, 2018



Source: 2018 Census of Population and Dwellings.
Definition: Percentage of people living in a household with access to the internet.

7.6 International travel

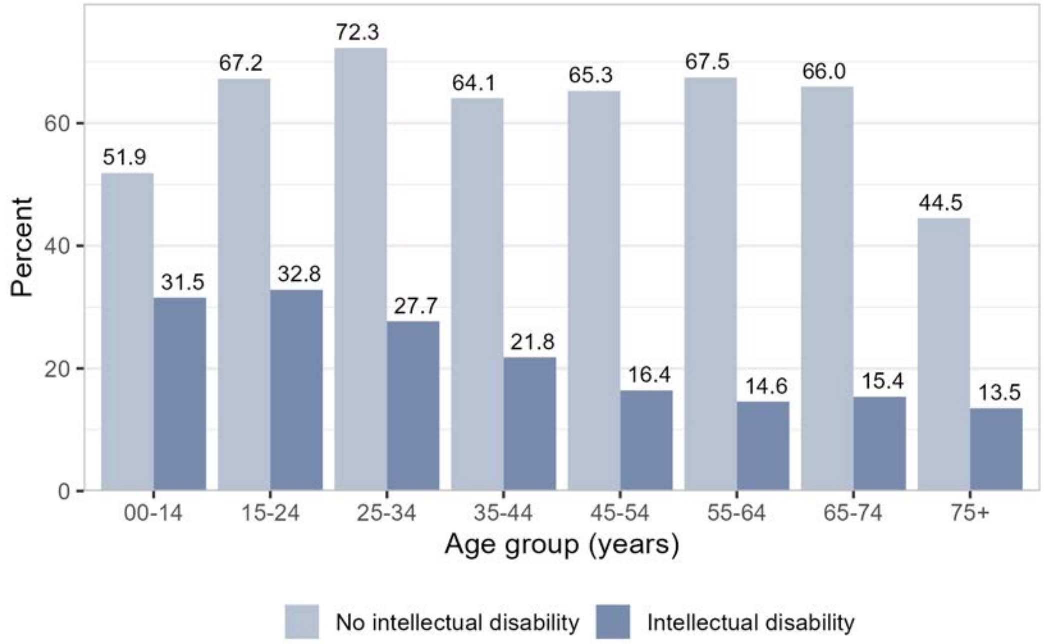
The likelihood of participating in international travel is a lot lower for people with intellectual disability than it is for people without intellectual disability.

The lower rates of international travel for intellectually disabled people can be observed across all age groups (see Figure 78). Fifteen- to 24-year-olds have the highest rate of international travel (32.9 percent) within the study's intellectually disabled population. This rate compares with 67.2 percent for the same age group for people without intellectual disability.

Adjusted by age, 23.0 percent of people with intellectual disability participated in international travel in the five years to June 2018, compared to 62.8 percent of people without intellectual disability.

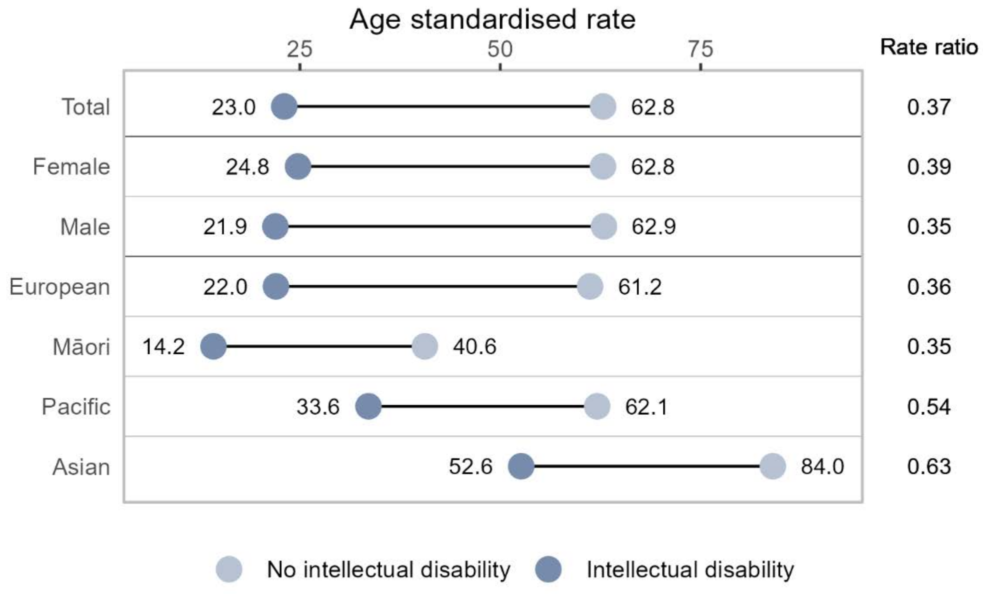
The age adjusted rates in Figure 79 show that the relative differences in international travel between people with and without intellectual disability are present in all genders and ethnic groups. For people in the Asian and Pacific ethnic groups, which have the highest overall rates of international travel, living with intellectual disability reduces the likelihood of travelling internationally by a third to a half. Māori and Europeans, who had slightly lower rates of international travel, had a reduction of almost two-thirds if they had intellectual disability.

Figure 78 – People who have made at least one international trip, five years to 30 June 2018



Source: New Zealand Customs Service International Travel and Migration data in the IDI.
Definition: Percentage of people with at least one international trip in the five years to 30 June 2018.

Figure 79 – People who have made at least one international trip, age-standardised rates for the total population, by sex and by ethnicity, five years to 30 June 2018



Source: New Zealand Customs Service International Travel and Migration data in the IDI**.**
Definition: Percentage of people with at least one international trip in the five years to 30 June 2018.

George McLeod – Connections

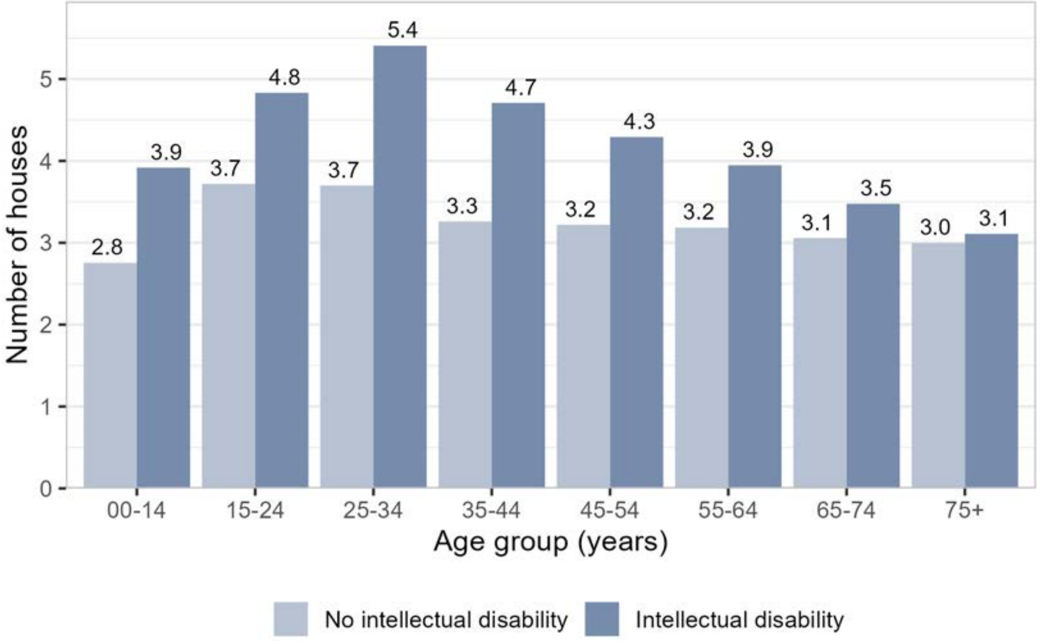
8 Housing

Access to adequate housing has long been viewed as a basic human right, and having access to good quality housing is considered essential to health and wellbeing.

8.1 Transience

This indicator looks at residential mobility and transience, defined as the average number of addresses recorded for a person in the five years to 30 June 2018. People with intellectual disability have a higher average number of addresses than people without intellectual disability across all age groups. This difference in transience rate between people with and without intellectual disability is more pronounced for the 25 to 34 age group. Adult 25- to 34-year olds with intellectual disability had on average 5.4 addresses in the five years to 30 June 2018, while adults without intellectual disability of the same age lived on average in 3.7 different addresses (see Figure 80).

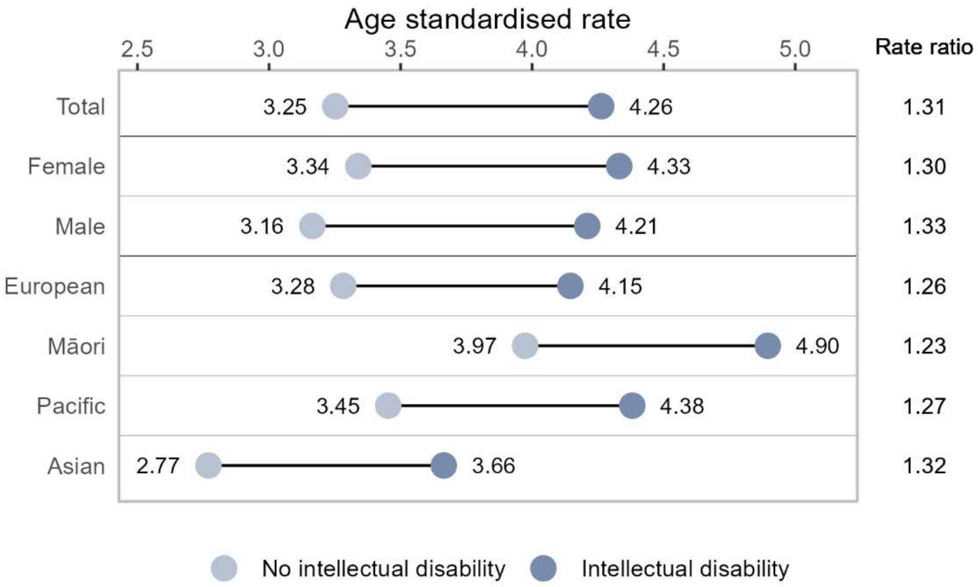
Figure 80 – Average number of addresses recorded by age group, 1 July 2013 to 30 June 2018



Sources: Address notifications in the IDI core datasets.
Definition: Mean number of addresses recorded in the IDI from any source between 1 July 2013 and 30 June 2018.

Adjusted by age, people with intellectual disability have a residential mobility rate of 4.26 houses in five years compared with a rate of 3.25 houses in five years for people without intellectual disability. Transience is slightly higher for females than males. Looking at people with intellectual disability by ethnic group, Māori have the highest age adjusted rates of residential mobility (ASR 4.90 houses in five years), followed by Pacific (ASR 4.38 houses in five years), European (4.15 houses in five years) and Asian (ASR 3.66 houses in five years). Differences compared to people without intellectual disability were similar across all groups. The adjusted rates for gender and ethnicity can be seen in Figure 81.

Figure 81 – Average number of address, age-standardised rates for the total population, by sex and by ethnicity, 1 July 2013 to 30 June 2018



Sources: Address notifications in the IDI core datasets.
Definition: Mean number of addresses recorded in the IDI from any source between 1 July 2013 and 30 June 2018.

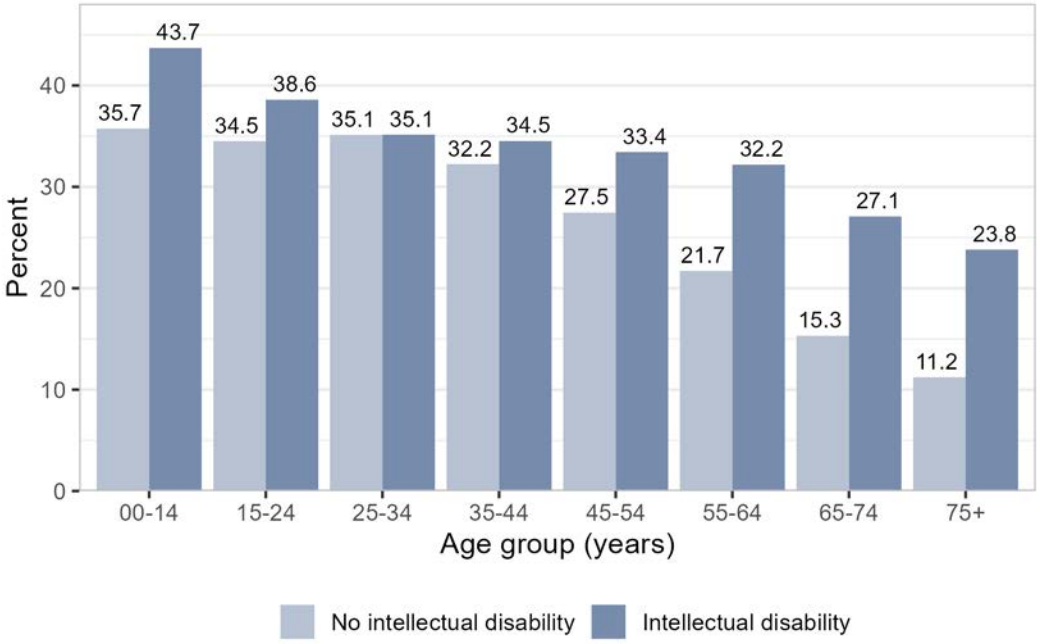
8.2 Housing quality – mouldy or damp

The links between housing and health are well documented. Living in a cold or damp home can worsen asthma and other respiratory illnesses and increases the risk of heart disease and cardiac events. This indicator uses data from the 2018 Census to report on the percentage of people living in mouldy or damp homes. People with intellectual disability are more likely to report living in mouldy or damp homes than people without intellectual disability. This is especially true for the older age groups (see Figure 82).

Children with intellectual disability were more likely to live in mouldy or damp homes than adults. Forty-three percent of children (0-14 years old) with intellectual disability lived in mouldy or damp homes, compared with 35.7 percent of children without intellectual disability.

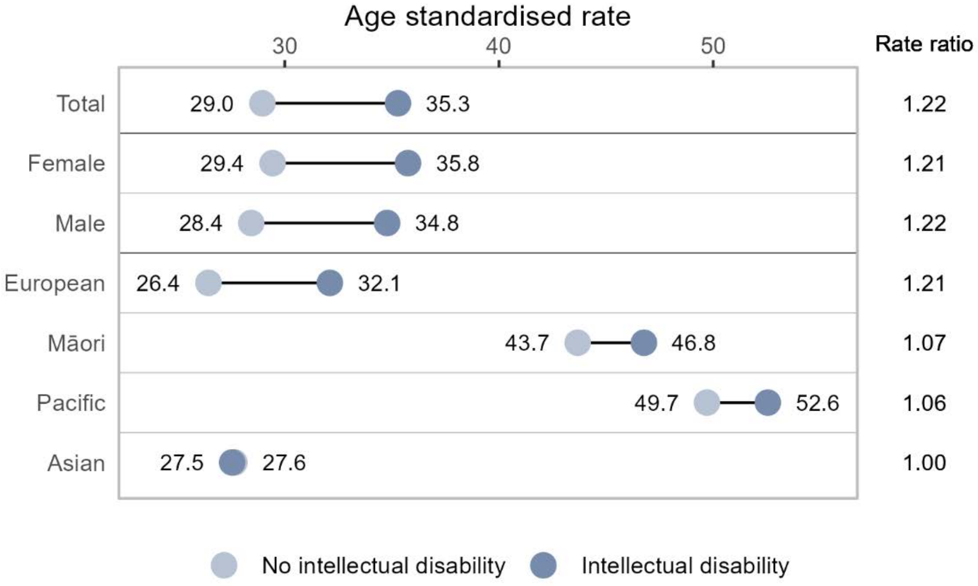
The age adjusted rates by subgroups in Figure 83 show that at least one in two people with intellectual disability with Pacific ethnicity (ASR 52.6 percent) lived in a mouldy or damp house. The rate for Māori with intellectual disability is 46.8 percent. People in the European ethnic group without intellectual disability have the lowest age adjusted rate of living in a mouldy or damp house (ASR 26.4 percent) but have the largest relative difference in rates between people with and without intellectual disability (rate ratio of 1.21). Asian people with intellectual disability are equally as likely as those without intellectual disability to live in mouldy or damp homes.

Figure 82 – Housing quality – mouldy or damp by age group, 2018



Source: 2018 Census of Population and Dwellings.
Definition: Percentage of people reporting living in a mouldy or damp home, 2018.

Figure 83 – Housing quality – mouldy or damp, age-standardised rates for the total population, by sex and by ethnicity, 2018



Source: 2018 Census of Population and Dwellings.
Definition: Percentage of people reporting living in a mouldy or damp home, 2018.

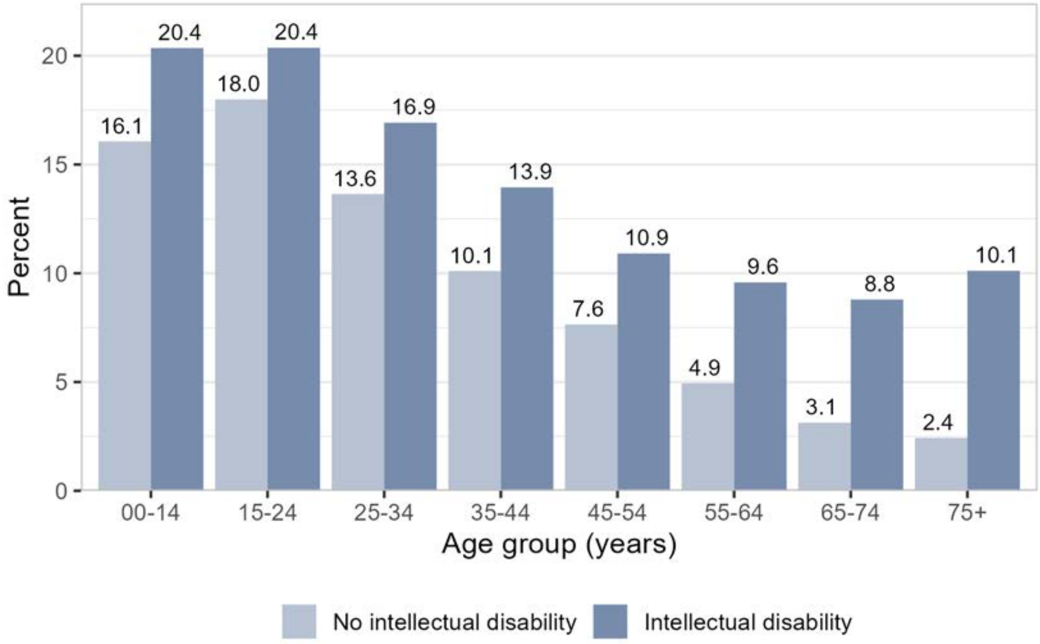
8.3 Household crowding

International and national literature document the association between crowding and a range of infectious diseases (Baker, Zhang, & Howden-Chapman, 2013).

Household crowding happens when homes are too small to accommodate the number of people who live in them. This section reports on the proportion of people living in crowded housing with and without intellectual disability. Crowding is defined as requiring one or more additional bedrooms, as defined by the Canadian National Occupancy Standard.[24]

The percentage of people living in crowded houses is higher for people with intellectual disability than it is for people without intellectual disability for all age groups (see Figure 84). The likelihood of living in a crowded house is highest for children and decreases with age. One in five children with intellectual disability lives in a crowded house. People over 75 years old show the highest absolute difference in rates of crowding between those with and without intellectual disability.

Figure 84 – Household crowding by age group, 2018



Source: 2018 Census of Population and Dwellings.
Definition: Percentage of people living in crowded homes. This is defined as needing additional bedrooms, based on the number and ages of people living in the household, according to the Canadian National Occupancy Standard, 2018.

The highest rates of overcrowding are observed in people with intellectual disability of Pacific ethnicity (ASR 36.9 percent), followed by Pacific people without intellectual disability (ASR 34.9

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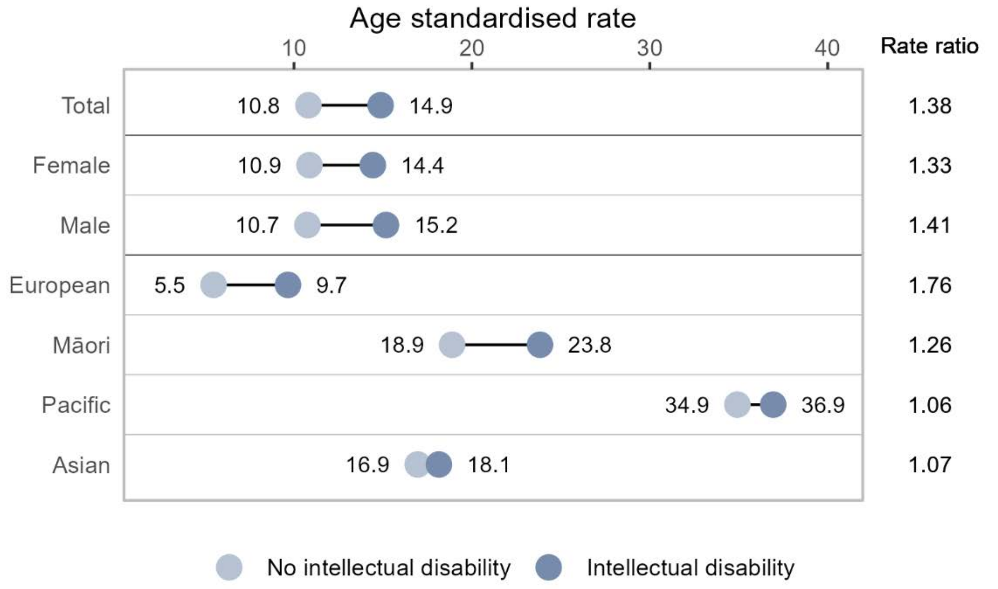
[24] https://meteor.aihw.gov.au/content/386254

percent) and Māori with intellectual disability (ASR 23.8 percent). Europeans have the highest rate ratio (1.76), indicating the greatest relative difference between the crowding rates of the intellectually disabled and those of the non-intellectually disabled. Age adjusted rates are presented in Figure 85.

Figure 85 – Household overcrowding, age-standardised rates for the total population, by sex and by ethnicity, 2018



Source: 2018 Census of Population and Dwellings.

Definition: Percentage of people living in crowded homes. This is defined as needing additional bedrooms, based on the number and ages of people living in the household, according to the Canadian National Occupancy Standard, 2018.

Michael O’Conner – The Hug

9 Family and friends

Under the family and friends domain, six indicators illustrate different aspects of family structure and family relationships of people with intellectual disability. There is very limited data thay would enable reporting on friendships for people with intellectual disability, no indicators were able to be included.

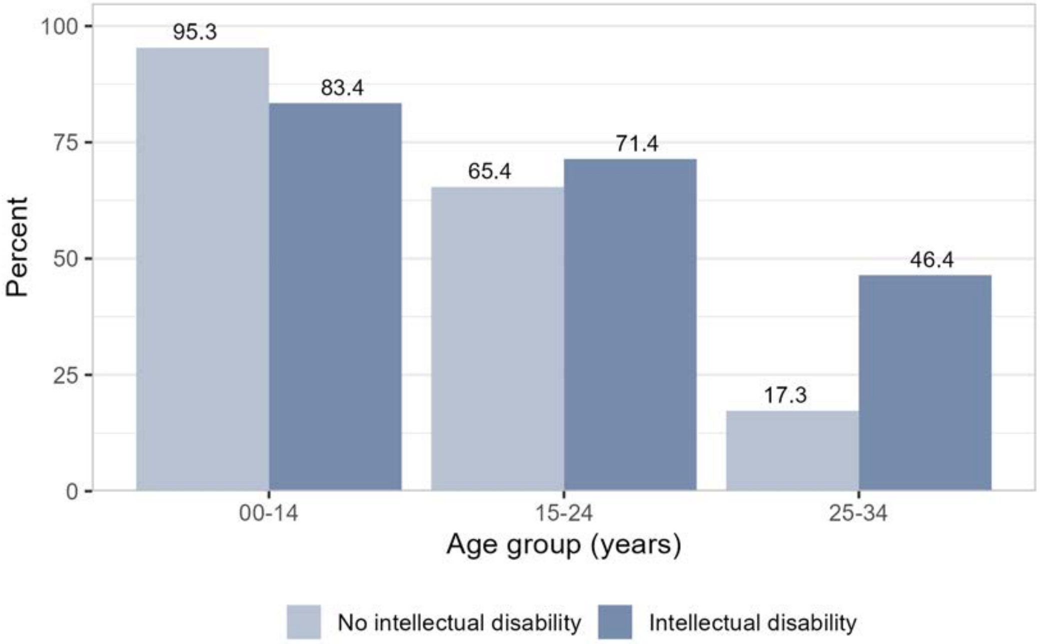
9.1 Living with a birth parent

The majority of children live in the same household with a birth parent. However, while this is the case for just over 95 percent of children (0 to 14 years old) without intellectual disability, the rate is lower at 83.4 percent for those with intellectual disability. This pattern reverses as people get older, with those in older age groups with intellectual disability being more likely to live with a birth parent compared with non-disabled adults. Just under half of all adults with intellectual disability aged 25 to 34 years old (46.4 percent) lived with a birth parent, compared with 17.5 percent of adults of the same age without intellectual disability. Note that we are not able to identify birth parents consistently for people aged over 34 or for people born overseas.

Figure 87 shows the age adjusted rates of children under 18 years old living with a birth parent for the total population and by gender and ethnic group. Children with intellectual disability under 18 are approximately 10 percent less likely to live with a birth parent than children without intellectual disability.

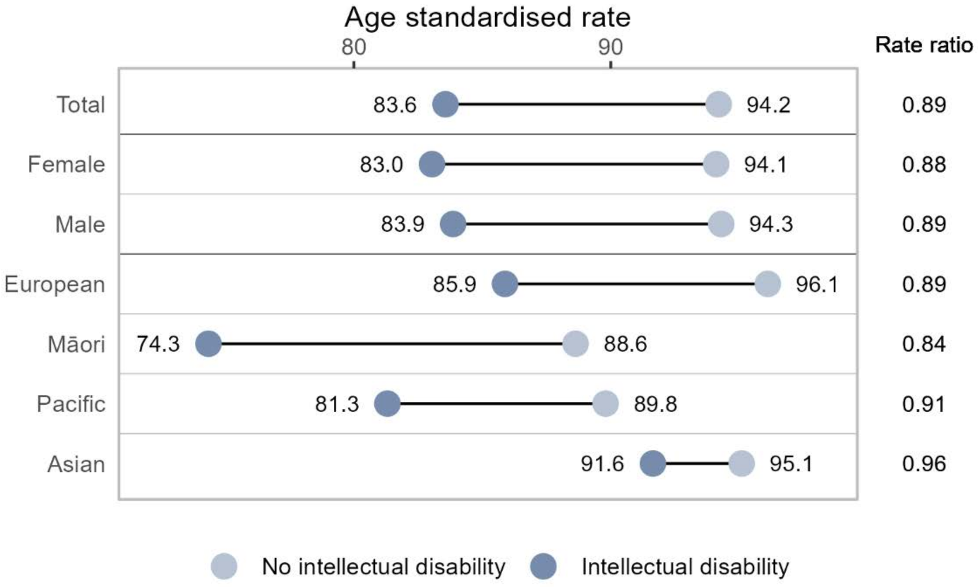
A quarter of Māori children with intellectual disability under 18 years old (ASR 74.3 percent) do not live with a birth parent, although they may still be living with whānau, for example through whāngai arrangements. Māori children also have the lowest rate ratio (0.84) showing the largest increase in the likelihood of not living with a birth parent for people with intellectual disability compared to people without intellectual disability.

Figure 86 – Living with a birth parent by age group



Sources: 2018 Census of Population and Dwellings and Department of Internal Affairs – Life event data in the IDI. **Definition:** Percentage of people born in New Zealand living in the same household at the 2018 Census date with a person who is named as a parent on the person's birth registration. Birth parents reliably identifiable for about the past 40 years.

Figure 87 – Living with parents, age-standardised rates for the child population aged 0 to 17 years, by se and by ethnicity, 2018

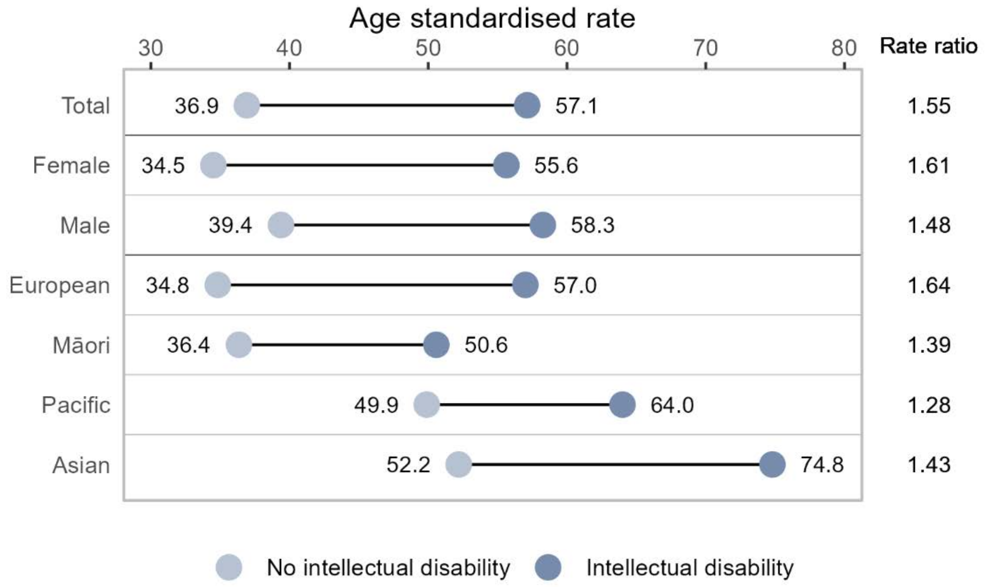


Sources: 2018 Census of Population and Dwellings and Department of Internal Affairs – Life event data in the IDI. **Definition:** Percentage of people born in New Zealand living in the same household at the 2018 Census date with a person who is named as a parent on the person's birth registration. Birth parents reliably identifiable for about the past 40 years.

Looking at adults 18 to 34 years, people with intellectual disability (ASR 23.2 percent) are more likely to live with their birth parents than those without intellectual disability (ASR 13.6). This is the case across all gender and ethnic groups (see Figure 88).

Males aged 18 to 34 years are slightly more likely than women the same age to live with their birth parents, regardless of whether or not they have intellectual disability. Focusing on ethnic groups, people over 18 years old in the Asian and Pacific ethnic groups had the highest likelihood of living with their birth parents. People over 18 years of age in the Asian ethnic group had the highest rate ratio, meaning that they experience the highest relative differences in the percentage of living with birth parents between intellectually disabled and non-disabled.

Figure 88 – Living with parents, age-standardised rates for the adult population aged 18 to 34 years, by sex and by ethnicity, 2018

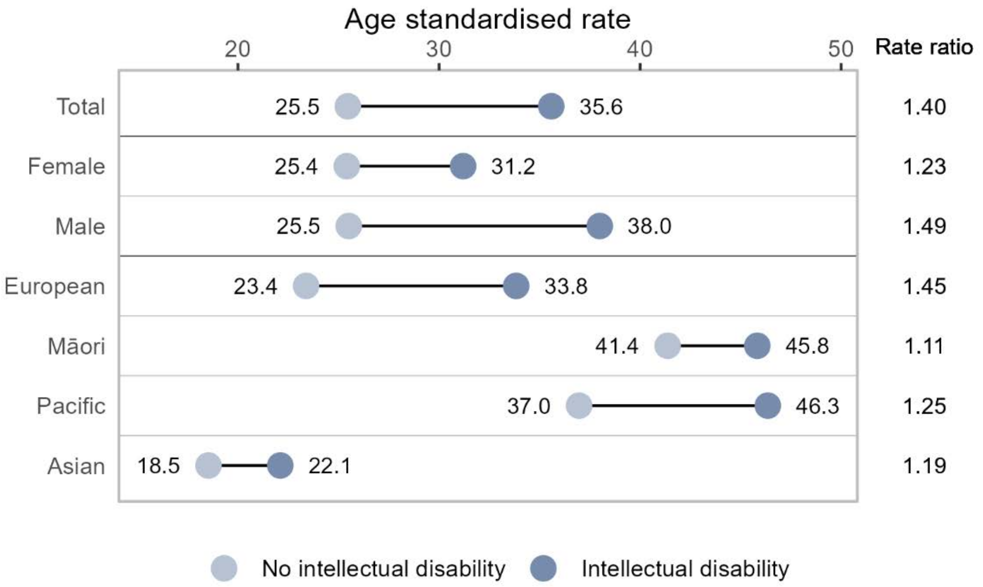


Sources: 2018 Census of Population and Dwellings and Department of Internal Affairs – Life event data in the IDI. **Definition:** Percentage of people born in New Zealand living in the same household at the 2018 Census date with a person who is named as a parent on the person's birth registration. Birth parents reliably identifiable for about the past 40 years.

9.2 Living in a sole parent family

A higher proportion of children aged under 15 years of age with intellectual disability in the study population lived in a sole parent household (35.6 percent) compared with children without intellectual disability (25.5 percent). Age adjusted rates (Figure 89) show that being intellectually disabled increases the likelihood of a person living in a sole parent household for all genders and ethnic groups, particularly for boys. Māori and Pacific children are most likely to live in sole parent families, regardless of whether or not they have intellectual disability.

Figure 89 – Living in a sole parent family, age-standardised rates for the child population aged 0 to 17 years, by sex and by ethnicity, 2018



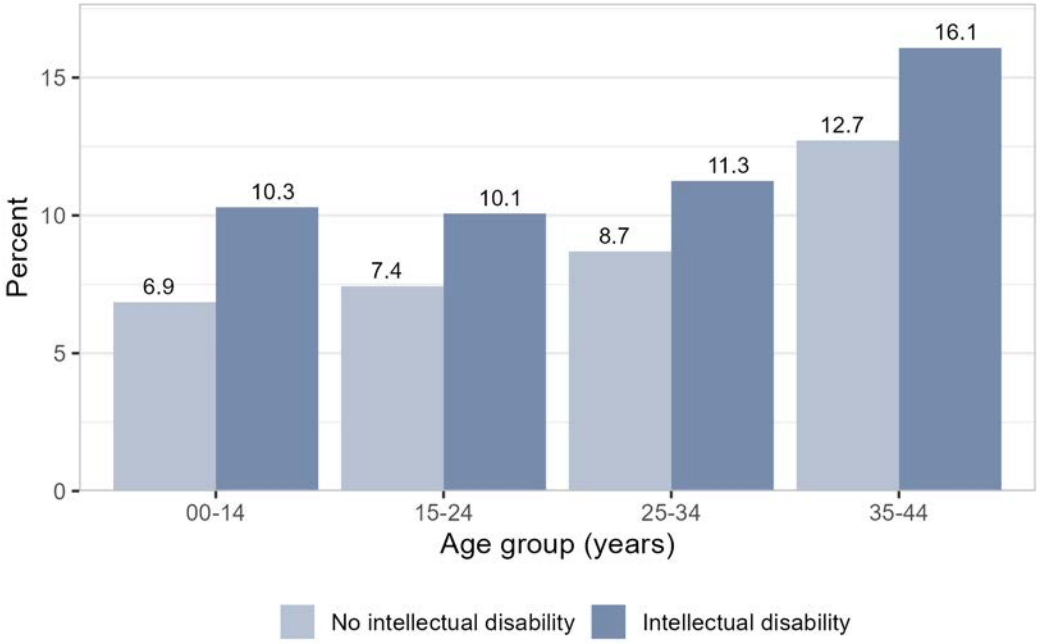
Source: 2018 Census of Population and Dwellings.
Definition: Percentage of people living in a family with only one parent as at the date of the 2018 Census.

9.3 Born to teenage parents

A higher proportion of people with intellectual disability were born to a teenage parent compared to children without intellectual disability. Figure 90 shows this being the case regardless of age. While 12.7 percent of people without intellectual disability aged 35 to 44 were born to teenage parents, the proportion for intellectually disabled 35- to 44-year-olds was 16 percent. Note that we are not able to identify birth parents consistently for people aged over 44 or for people born overseas.

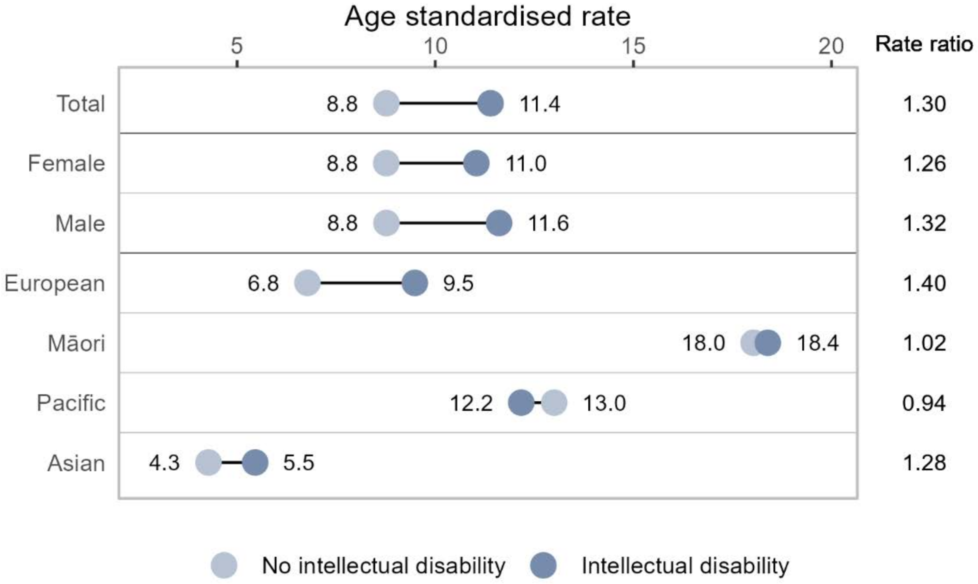
The age adjusted rates by gender and ethnicity (Figure 91) show that, overall, children with intellectual disability are 30 percent more likely to be born to a teen parent than children without intellectual disability. For Māori, Pacific and Asian ethnic groups the percentages of people born to a teenage parent are very similar for people with and without intellectual disability.

Figure 90 – Born to teenage parent by age group



Source: Department of Internal Affairs – Life event data in the IDI.
Definition: Percentage of people born in New Zealand with a parent under 20 years of age identified in the birth registration data.

Figure 91 – Born to teenage parent, age-standardised rates for the population aged 0 to 44 years, by sex and by ethnicity

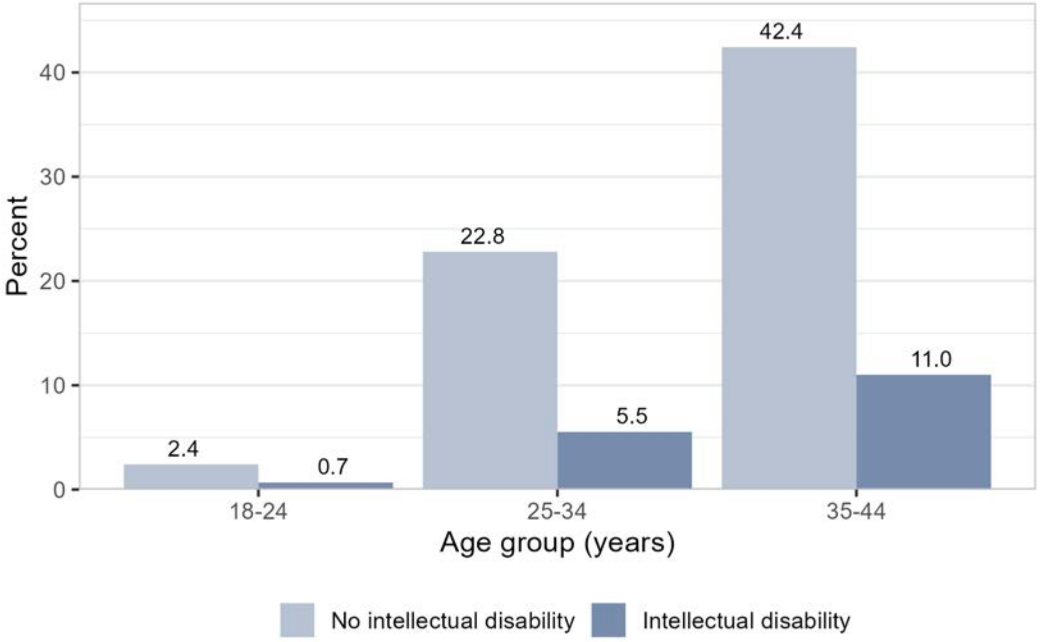


Source: Department of Internal Affairs – Life event data in the IDI.
Definition: Percentage of people born in New Zealand with a parent under 20 years of age identified in the birth registration data.

9.4 Marriages/civil unions

This indicator looks at the percentage of people registered as married or in a civil union. The available data has only been reliable for the past 20-25 years so the indicator is only shown for people under 45 years of age. People who were married overseas are not identified as married in the data. People with intellectual disability were much less likely to be in a marriage or civil union than people without intellectual disability for all age groups (see Figure 92).

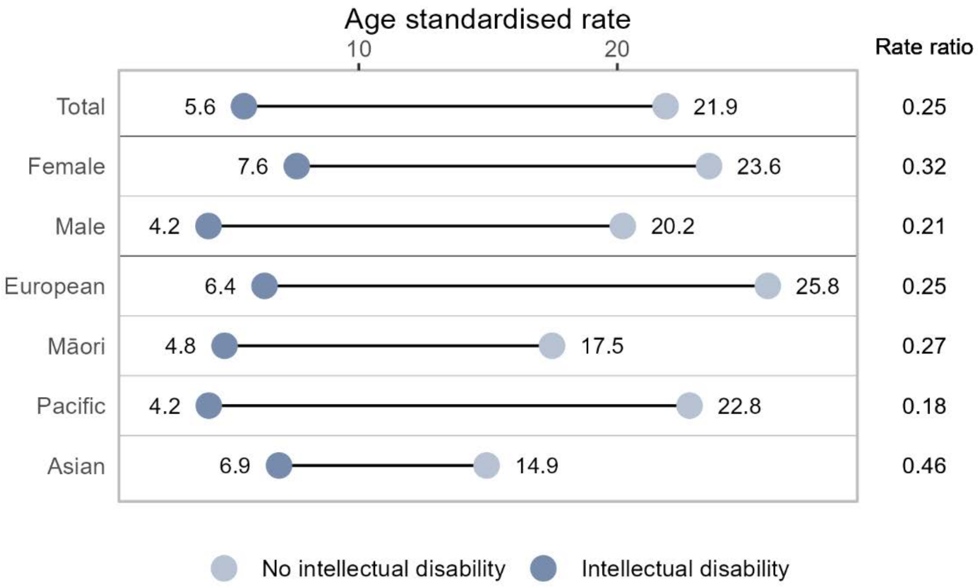
Figure 92 – Marriages/civil unions by age group, 2018



Source: Department of Internal Affairs – Life event data in the IDI.
Definition: Percentage of people who are identified as having been registered as married or with a civil union in the registration data. Data is reliable for the past 20 years or so.

The age adjusted rate of marriages or civil union for adults aged 18 to 44 years with intellectual disability is 5.6 percent compared with 21.9 percent for people without intellectual disability and of the same age. Females were more likely to have ever been married in both the populations with and without intellectual disability. Pacific people with intellectual disability had the lowest rate of marriage among the different ethnic groups, despite having one of the highest marriage rates for people without intellectual disability. The converse was true for people of Asian ethnicity.

Figure 93 – Marriages/civil unions, age-standardised rates for the population aged 18 to 44 years, by sex and by ethnicity, 2018



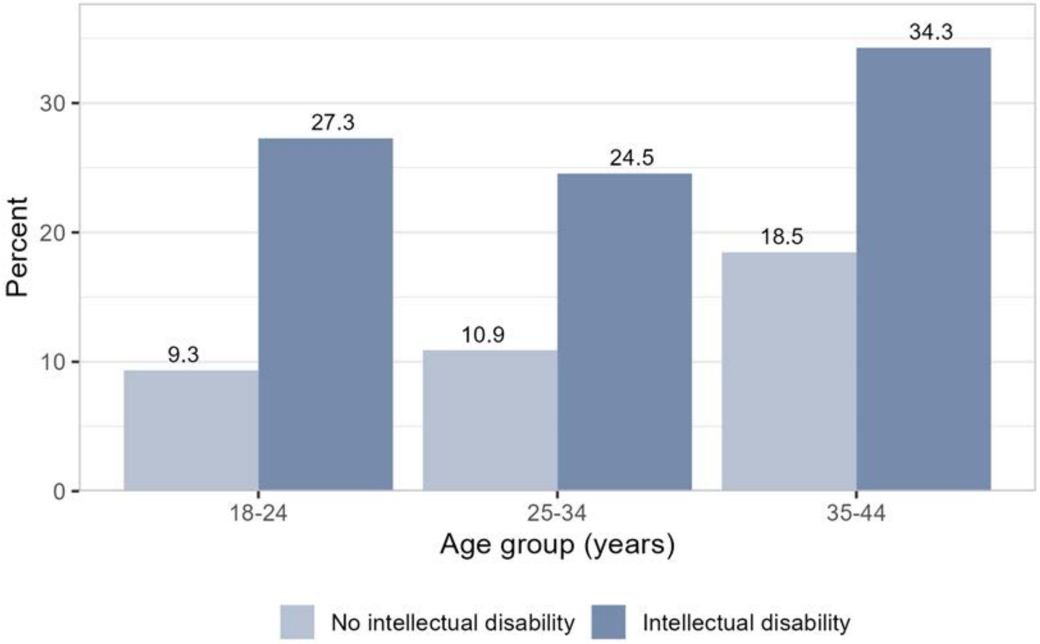
Source: Department of Internal Affairs – Life event data in the IDI.
Definition: Percentage of people who are identified as having been registered as married or with a civil union in the registration data. Data is reliable for the past 20 years or so.

9.5 Divorces

If they had ever been married or had a civil union, people with intellectual disability were more likely to have had a divorce or civil union dissolution than were people without intellectual disability. While 34.3 percent of people 35 to 44 years old with intellectual disability, who were identified as having married or had a civil union, had had a divorce or dissolution, the rate for the non-disabled population the same age was 18.5 (see Figure 94). As with marriages, due to data availability the indicator is only shown for people under 45 years of age.

The age adjusted rates in Figure 95 show that, overall, the likelihood of divorce or dissolution after a marriage or civil union is 28.5 percent for people under 44 years of age with intellectual disability, compared to 12.4 percent for people the same age without intellectual disability. While the Asian ethnic group with intellectual disability has a very high divorce rate of around 50 percent, this is based on a very small number of Asian people with intellectual disability who have been married, and therefore may not reliably reflect broader trends. The estimate has a very wide confidence interval, from 27 percent to 74 percent.

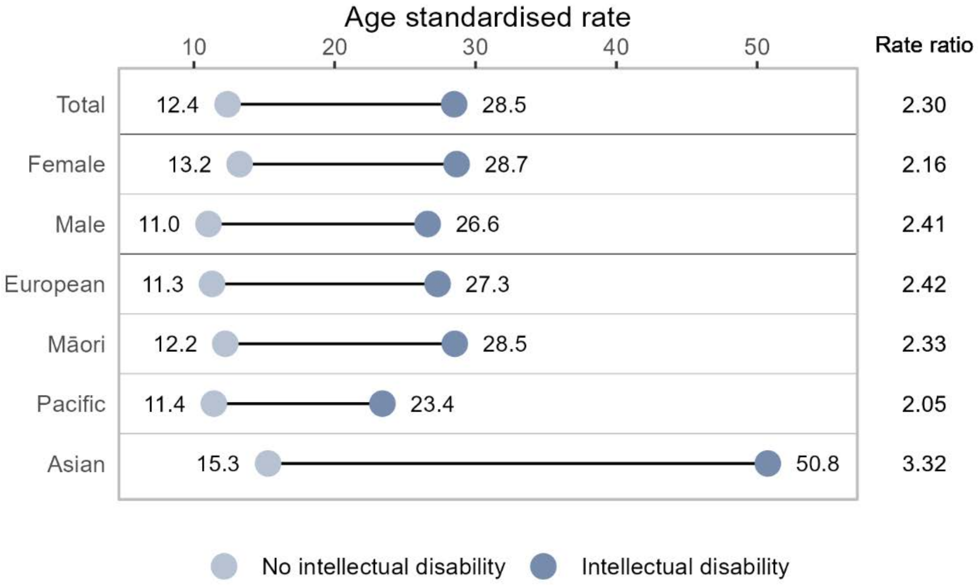
Figure 94 – Divorces and dissolutions by age group, 2018



Source: Department of Internal Affairs – Life event data in the IDI.

Definition: Percentage of people who were identified as having married or had a civil union who had had a divorce or dissolution of their civil union.

Figure 95 – Divorces and dissolutions, age-standardised rates for the population aged 18 to 44 years, by sex and by ethnicity, 2018



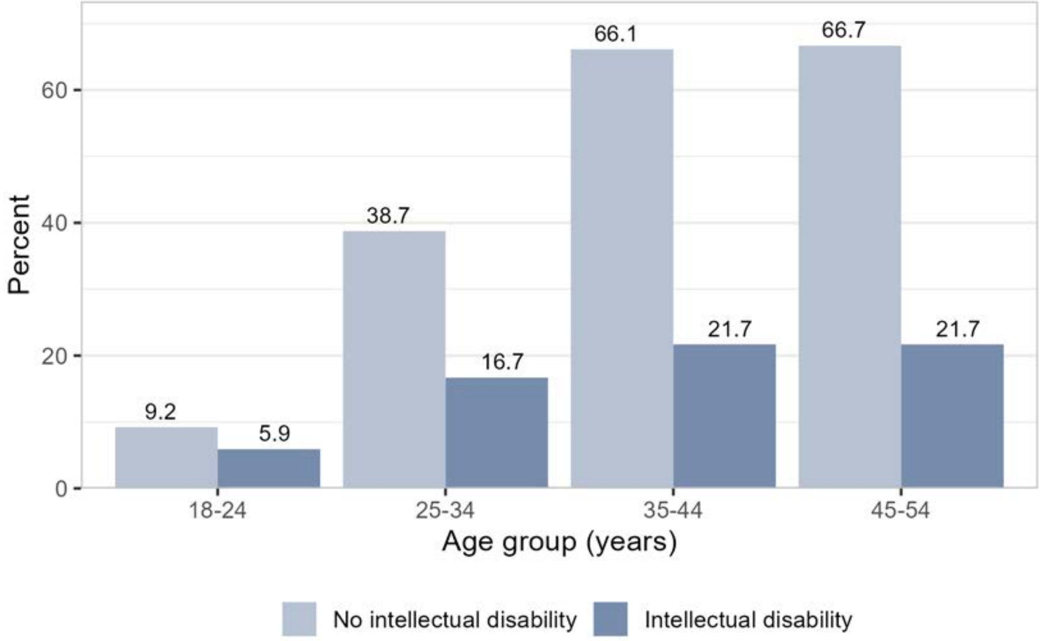
Source: Department of Internal Affairs – Life event data in the IDI.

Definition: Percentage of people who were identified as having married or had a civil union who had had a divorce or dissolution of their civil union.

9.6 Having children

This indicator looks at the rates of having children. Because of the reliability issues of older data, the rates are only shown for people under 55 years of age. People with intellectual disability in the study population are much less likely to have had children than are people without intellectual disability (see Figure 96).

Figure 96 – Fertility rates by age group, 2018

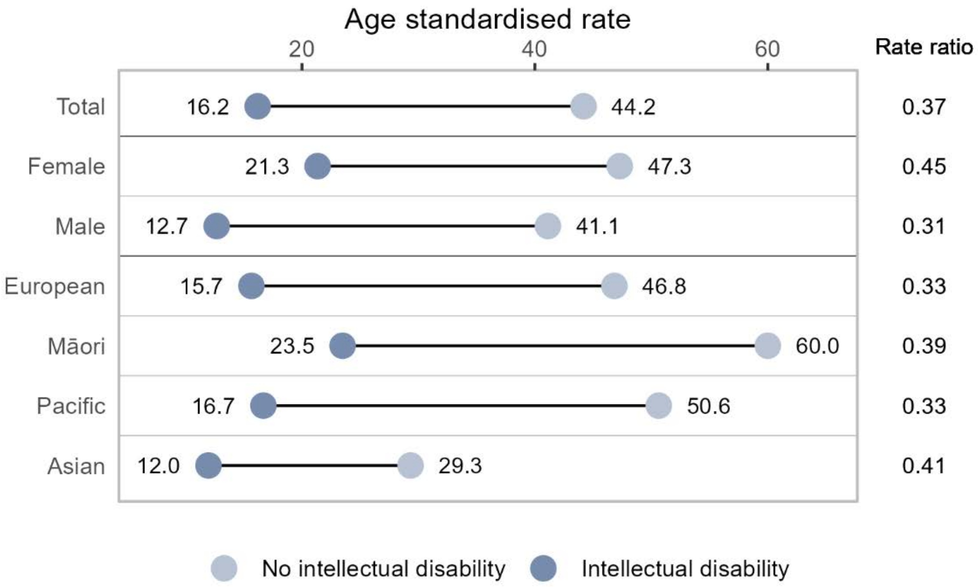


Source: Department of Internal Affairs – Life event data in the IDI.
Definition: Percentage of people who are identified as having had a child in the birth registration data. Data is reliable for the past 40 years or so.

The age adjusted rates (see Figure 97) show that, overall, 16.2 percent of people under 55 years of age with intellectual disability have had a child, compared to 44.2 percent of people without intellectual disability of the same age.

Women were more likely to have been registered as a parent than men, regardless of intellectual disability. Focusing on the adjusted rates of people under 45 years of age with intellectual disability, Māori with an age adjusted rate of 23.5 percent have the highest likelihood to have had a child, followed by Pacific people (ASR 16.7 percent), Europeans (15.7 percent) and Asians (12.0 percent). These reflect similar parenting patterns for people without intellectual disability.

Figure 97 – Fertility, age-standardised rates for the adult population aged 18 to 54, by sex and by ethnicity, 2018



Source: Department of Internal Affairs – Life event data in the IDI.

Definition: Percentage of people who are identified as having had a child in the birth registration data. Data is reliable for the past 40 years or so.

Denise Dennehy - Open the world to see the World

10 Safety

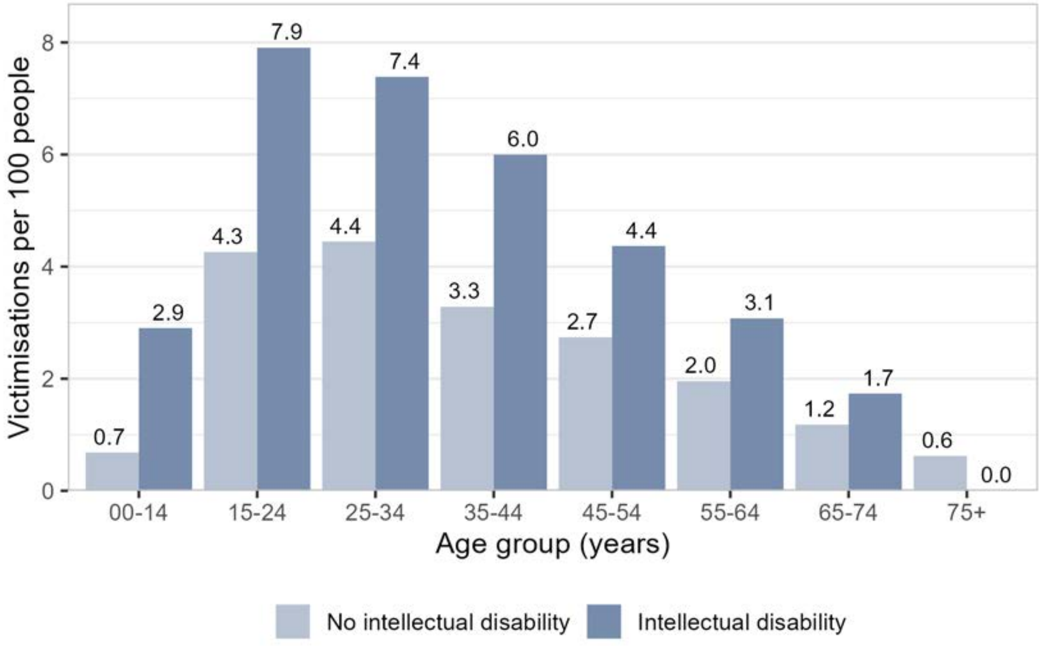
Studies have shown that people with intellectual disability are at higher risk of victimisation (Ministry of Justice, 2022). They are also recognised as being disadvantaged in their interactions with the legal system (Mirfin-Veitch, Diesfeld, Gates, & Henaghan, 2014) and are more susceptible to becoming involved with criminal justice agencies (Brookbanks, 2019). This section covers a selection of indicators including crime victimisation, involvement with the justice system and care and protection agencies.

10.1 Crime victimisation

10.1.1 Victims of crime

The 2020/21 New Zealand Crime & Victims Survey reported that disabled adults were significantly more likely to experience crime across personal offences and household offences when differences in average age were accounted for (Ministry of Justice, 2022). This indicator looks at victimisations based on New Zealand Police data from recorded crimes and reports on the average number of victimisations per 100 people recorded by Police. This indicator should be treated with caution, as around half of the victims were not able to be linked in the IDI. Figure 98 shows that victimisation rates are higher for the intellectually disabled across all age groups with the exception of those over 75. The age adjusted rates (Figure 99) show this to be the case for all gender and ethnic groups.

Figure 98 – Victimisations by age group

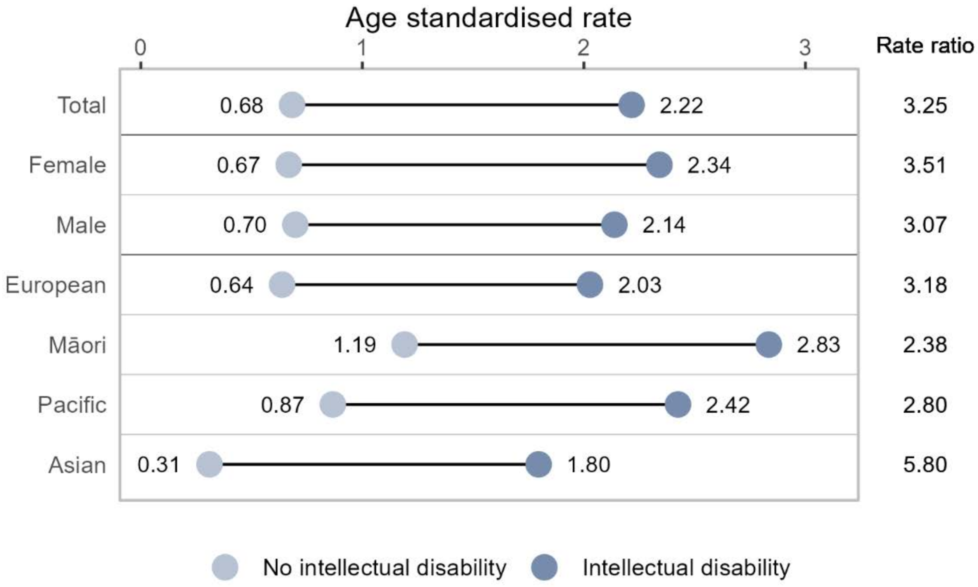


Sources: New Zealand Police recorded crime victims' data in the IDI.
Definition: Mean number of victimisations recorded by Police per 100 people.

Age adjusted rates of recorded crime (see Figure 99) show that children with intellectual disability (ASR 2.2 victimisations per 100 people) are more than three times more likely to be victims of crime than people without intellectual disability (ASR 0.7 victimisations per 100 people).

Looking at the age-adjusted victimisation rates for children with intellectual disability, females (ASR 2.34 victimisations per 100 people) have a slightly higher victimisation rate than males (ASR 2.14). Māori have the highest rate of victimisation (ASR 2.83) among ethnic groups, followed by children of Pacific ethnicity (ASR 2.42), Europeans (ASR 2.03) and Asians (ASR 1.80). These patterns reflected those among children without intellectual disability.

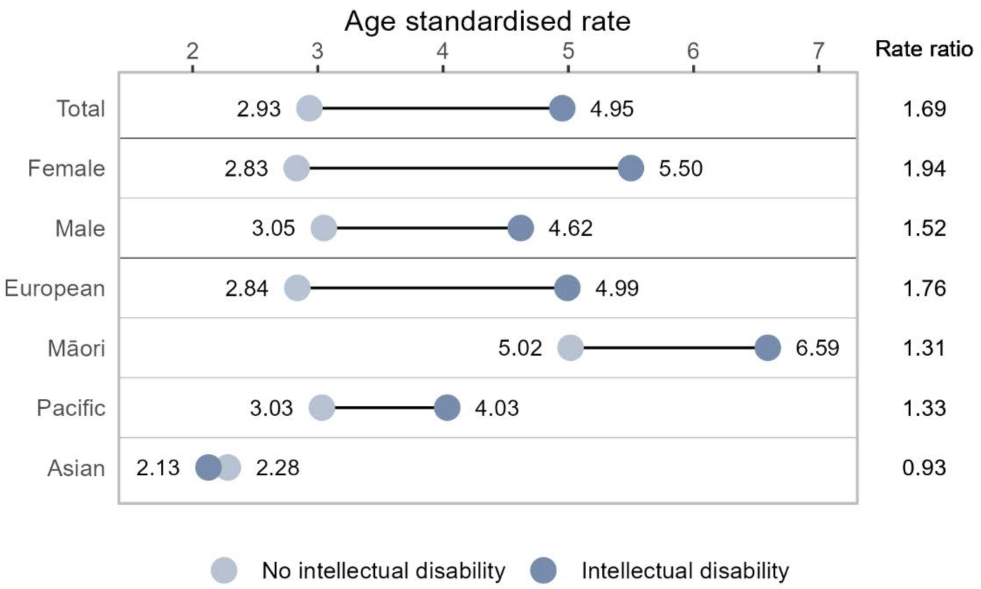
Figure 99 – Victimisations per 100 people, age-standardised rates for the child population aged 0 to 14 years, by sex and by ethnicity



Source: New Zealand Police recorded crime victims' data in the IDI.
Definition: Mean number of victimisations recorded by Police per 100 people.

Figure 100 shows age-standardised rates by ethnic group and sex for people aged 15 and over. Females with intellectual disability had higher victimisation rates than males (5.50 victimisations per 100 people compared to 4.62), in contrast to people without intellectual disability, where males had a higher rate. As with children, Māori were more likely to be victims of crime than other ethnic groups. Asian adults were the only group where people with intellectual disability were not more likely to be victimised than people without disability.

Figure 100 – Victimisations per 100 people, age-standardised rates for the adult population aged 15 years and over, by sex and by ethnicity



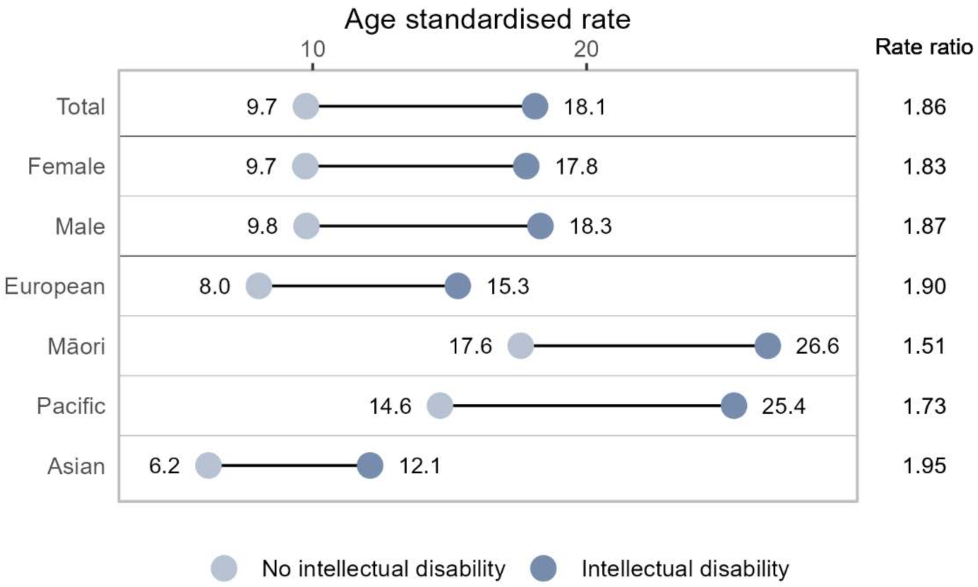
Source: New Zealand Police recorded crime victims' data in the IDI.
Definition: Mean number of victimisations recorded by Police per 100 people.

10.1.2 Children exposed to family violence

Almost 20 percent of children under 15 years old with intellectual disability in the study population had at some stages in their lives been reported by Police as having been present when attending family violence calls. The likelihood of children with intellectual disability being witnesses to family violence is almost double that of children without intellectual disability.

Figure 101 compares age-adjusted rates of exposure to family violence for children with and without intellectual disability, overall and by gender and ethnic group. The adjusted rates show that the likelihood of witnessing family violence increases for intellectually disabled children regardless of gender or ethnic group. Māori and Pacific children had the highest rates of exposure to family violence regardless of whether or not they had intellectual disability.

Figure 101 – Exposed to family violence, age-standardised rates for the child population aged 0 to 15 years, by sex and by ethnicity



Source: Oranga Tamariki data in the IDI.

Definition: Percentage of children reported by Police as being present when attending a family violence call.

10.1.3 Care and protection

10.1.3.1 Children placed in care by Oranga Tamariki

Disabled children are at greater risk of needing care or protection than non-disabled children.[25] Data from Oranga Tamariki show that children (0 to 14 years old) with intellectual disability in the study population are more than seven times more likely to be placed in care by Oranga Tamariki than children without intellectual disability. This increased risk can be observed across all genders and ethnic groups (see Figure 102).

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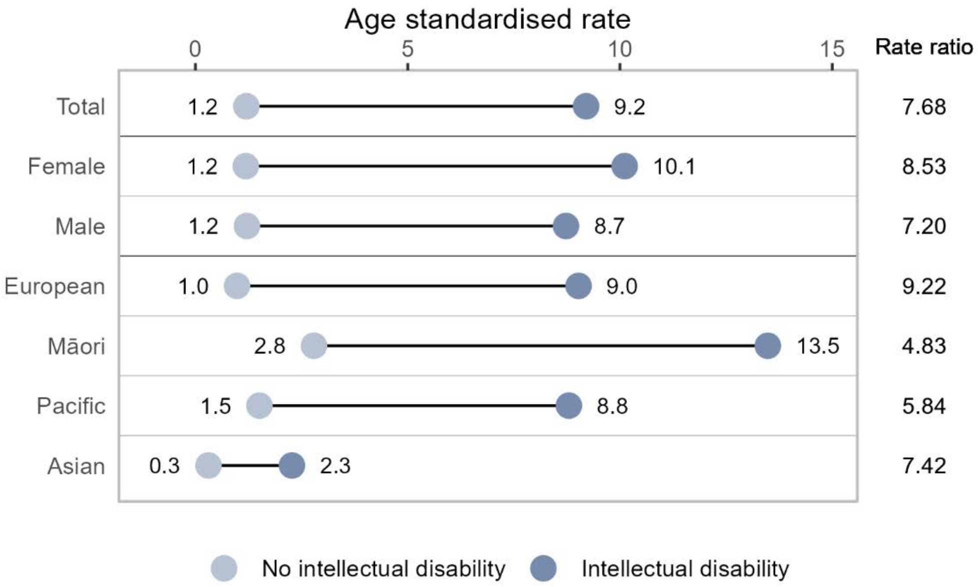
[25] https://practice.orangatamariki.govt.nz/our-work/assessment-and-planning/assessments/assessment-for-tamariki-and-rangatahi-in-care/assessment-of-needs-relating-to-any-disability/working-with-disabled-tamariki-and-their-familywhanau-who-may-need-specialised-out-of-home-care/

Figure 102 – Children (0-14) placed in care by Oranga Tamariki, age-standardised rates for the total population, by sex and by ethnicity, 2001 to June 2018



Source: Oranga Tamariki data in the IDI.
Definition: Percentage of children who were placed in care by Oranga Tamariki between 2001 and 30 June 2018.

10.1.3.2 Having a child placed in care by Oranga Tamariki

This indicator looks at care and protection from the parents' perspective and reports on the risk of having a child placed in care. The percentage of parents who have had a child placed in care by Oranga Tamariki is higher for parents with intellectual disability across all age groups.[26] More than one in five (21.2 percent) 35- to 44-year-old parents with intellectual disability in the study population had had a child placed in care. This compares with 1.2 percent for parents without intellectual disability in the same age group.

Parents with intellectual disability had almost 15 times the risk of having a child place in care than people without intellectual disability (see Figure 104). The relative risk increase was larger for females (rate ratio of 18.3) than it was for males (rate ratio of 10.7). Differences were evident across all ethnic groups.

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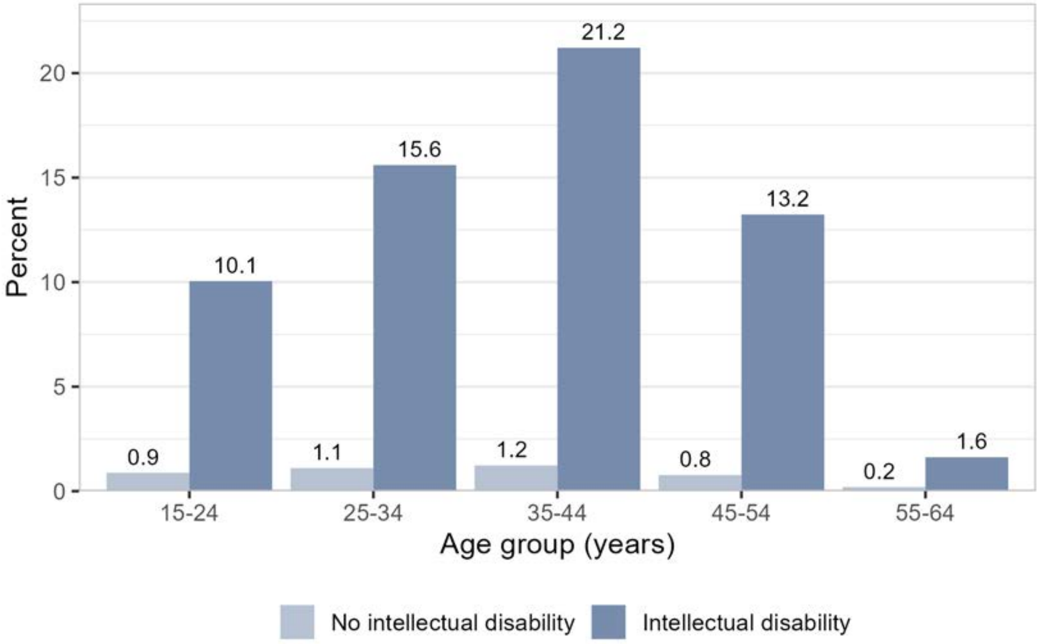
[26] Note that Oranga Tamariki Gateway Assessment data was used to identify some people with intellectual disability. As such, it is possible that this resulted in more young people with intellectual disability being identified, distorting the comparisons in this section. To test this, we re-ran the estimates excluding young people who were only identified as intellectually disabled through Gateway Assessment data. This had only a very small and immaterial impact on the results.

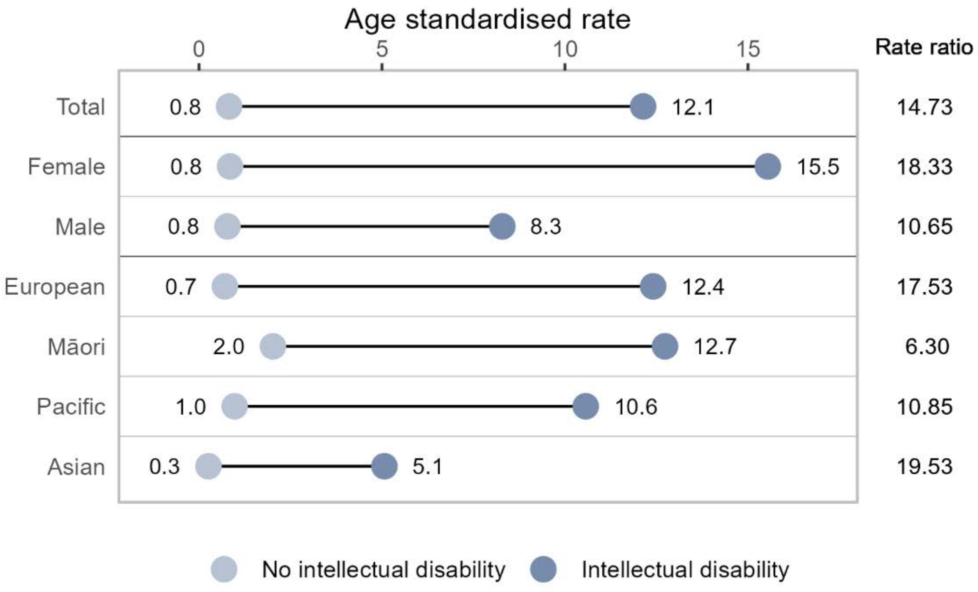
Figure 103 – Having a child placed in care by Oranga Tamariki by age group



Source: Oranga Tamariki data in the IDI.

Definition: Percentage of parents who have had a child placed in care by Oranga Tamariki between 2001 and 30 June 2018.

Figure 104 – Having a child placed in care by Oranga Tamariki, age-standardised rates for the adult population aged 15 to 64 years, by sex and by ethnicity, 2001 to 30 June 2018



Source: Oranga Tamariki data in the IDI.

Definition: Percentage of parents who have had a child placed in care by Oranga Tamariki between 2001 and 30 June 2018.

10.2 Adult justice system involvement

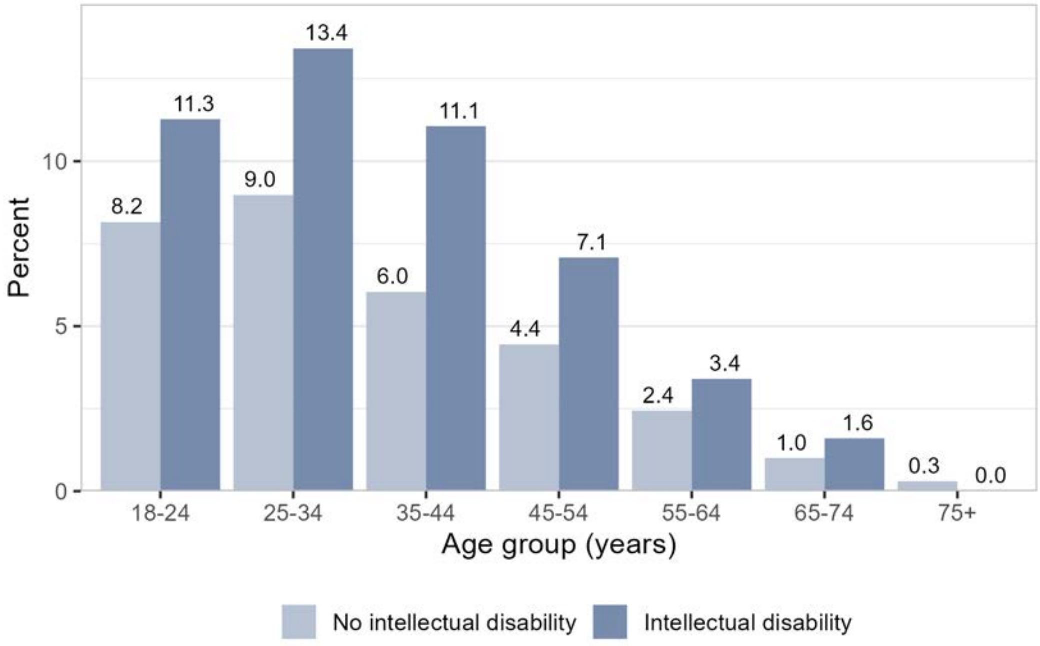
Although there is a correlation between intellectual disability and crime, studies do not identify intellectual disability as a criminogenic or violence risk factor, and there are likely many other explanatory, causal and mediating factors (e.g., trauma, socioeconomics) (Guina, et al., 2022). However, there is evidence that people with intellectual disability are at increased risk of compounding criminal justice consequences. People with intellectual disability may be vulnerable to criminal justice involvement not necessarily because they have higher offending risk factors, but because they may be more likely to get caught and are at risk of having a reduced capacity to understand the implications of their offending or to comprehend and effectively participate in the legal process (Lambie, 2020).

In this section, two indicators related to involvement with the justice system are presented: adult convictions and adult incarcerations.

10.2.1 Adult Criminal convictions

The rate of criminal convictions in adults with intellectual disability in the study population is higher than it is for people without intellectual disability for all age groups (see Figure 105), with the highest rates in the 25 to 34 age group.

Figure 105 – Criminal conviction rate by age group, 5 years to 30 June 2018



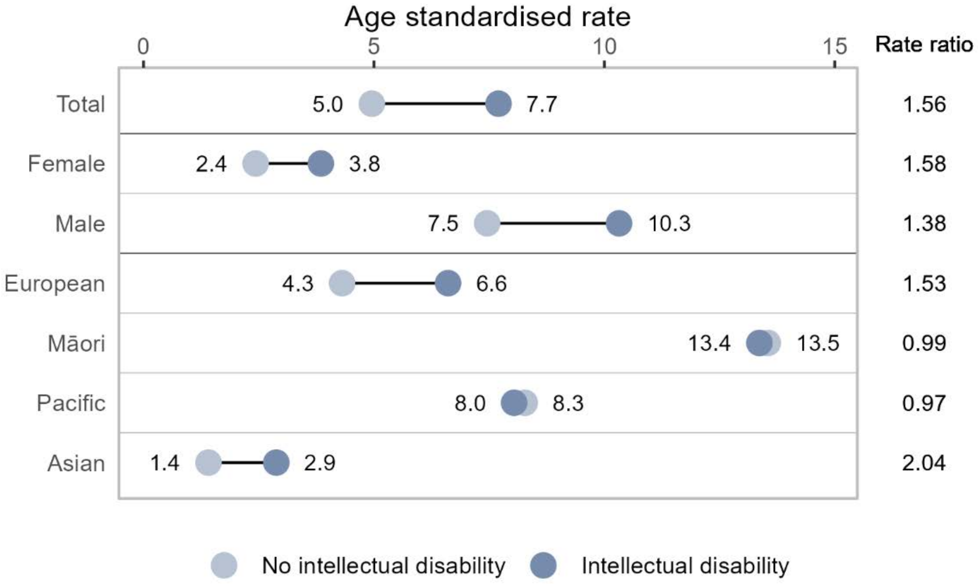
Source: Ministry of Justice – Court charges data in the IDI.

Definition: Percentage of people with at least one criminal conviction in the adult court in the five years to 30 June 2018.

Adjusted for age, 7.7 percent of adults with intellectual disability have criminal convictions. This compares with 5.0 percent for the non-disabled population (see Figure 108).

Males with and without intellectual disability are more likely to have convictions than females with and without intellectual disability. For both sexes the likelihood of their having convictions increases by around 1.5 times if they have intellectual disability. Looking at ethnic groups, the rate of convictions is higher for Māori, followed by Pacific people. For these two ethnic groups the likelihood of convictions does not increase for people with intellectual disability.

Figure 106 – Criminal conviction rate, age-standardised rates for the adult population aged 18 years and over, by sex and by ethnicity, five years to 30 June 2018



Source: Ministry of Justice – Court charges data in the IDI.
Definition: Percentage of people with at least one criminal conviction in the adult court in the five years to 30 June 2018.

10.2.2 Adult incarcerations

Many people with intellectual disability convicted of imprisonable offences are diverted to the provisions of the Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003[27], and their care is delivered in designated secure or supervised facilities rather than in prison. As there is no data available in the IDI on people with intellectual disability cared for outside prison, this indicator is likely to underestimate the actual number of people with intellectual disability in compulsory care/custody.

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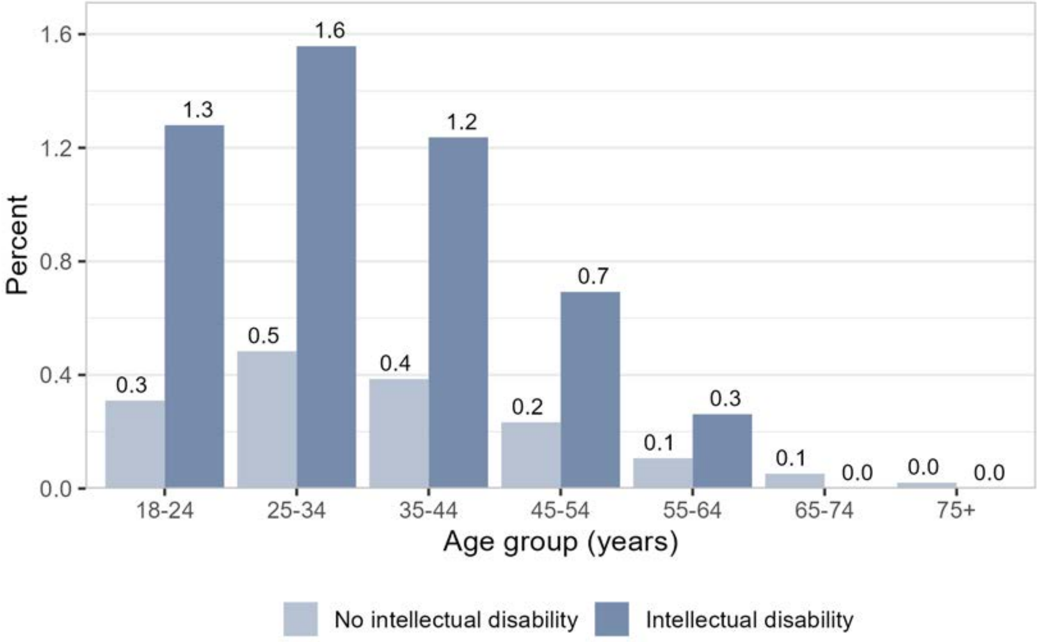
[27] https://www.legislation.govt.nz/act/public/2003/0116/latest/DLM224585.html

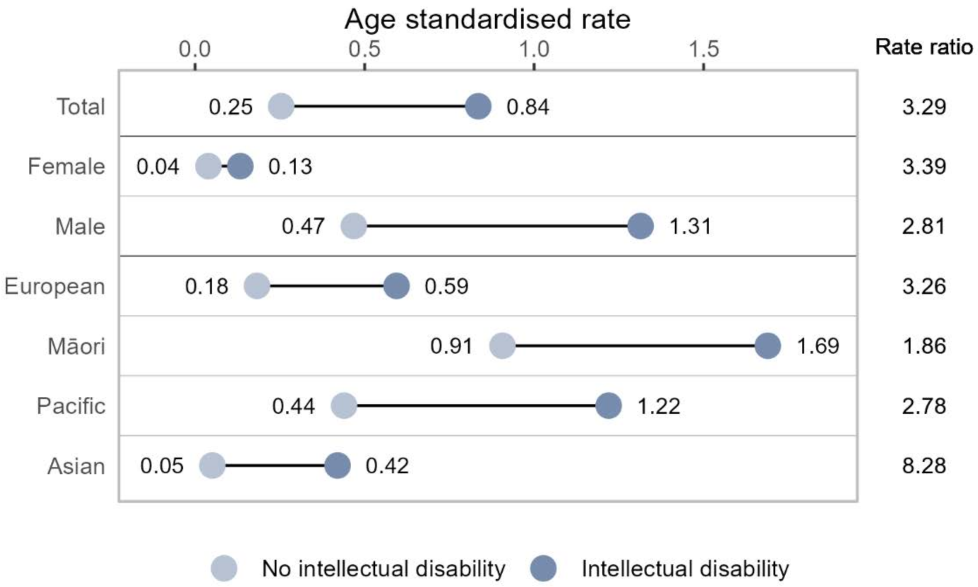
Incarcerations follow a pattern similar to convictions, with people of all age groups being more likely to be incarcerated except for the older age groups (Figure 107). Adjusted by age (Figure 108), people with intellectual disability are more than three times more likely to be incarcerated than people without intellectual disability. Across all gender and ethnic groups, the likelihood of incarcerations increases for people with intellectual disability compared to people without intellectual disability.

Figure 107 – Imprisonment rate by age group, as at 30 June 2018



Source: Department of Corrections – Sentencing and remand data in the IDI.
Definition: Incarceration is defined as being imprisoned as at 30 June 2018. This includes both people who have been sentenced and those on remand until their trial are completed.

Figure 108 – Imprisonment rate, age-standardised rates for the adult population aged 18 years and over, by sex and by ethnicity, as at 30 June 2018



Source: Department of Corrections – Sentencing and remand data in the IDI.

Definition: Incarceration is defined as being imprisoned as at 30 June 2018. This includes both people who have been sentenced and those on remand until their trials are completed.

11 Discussion

11.1 Conclusion

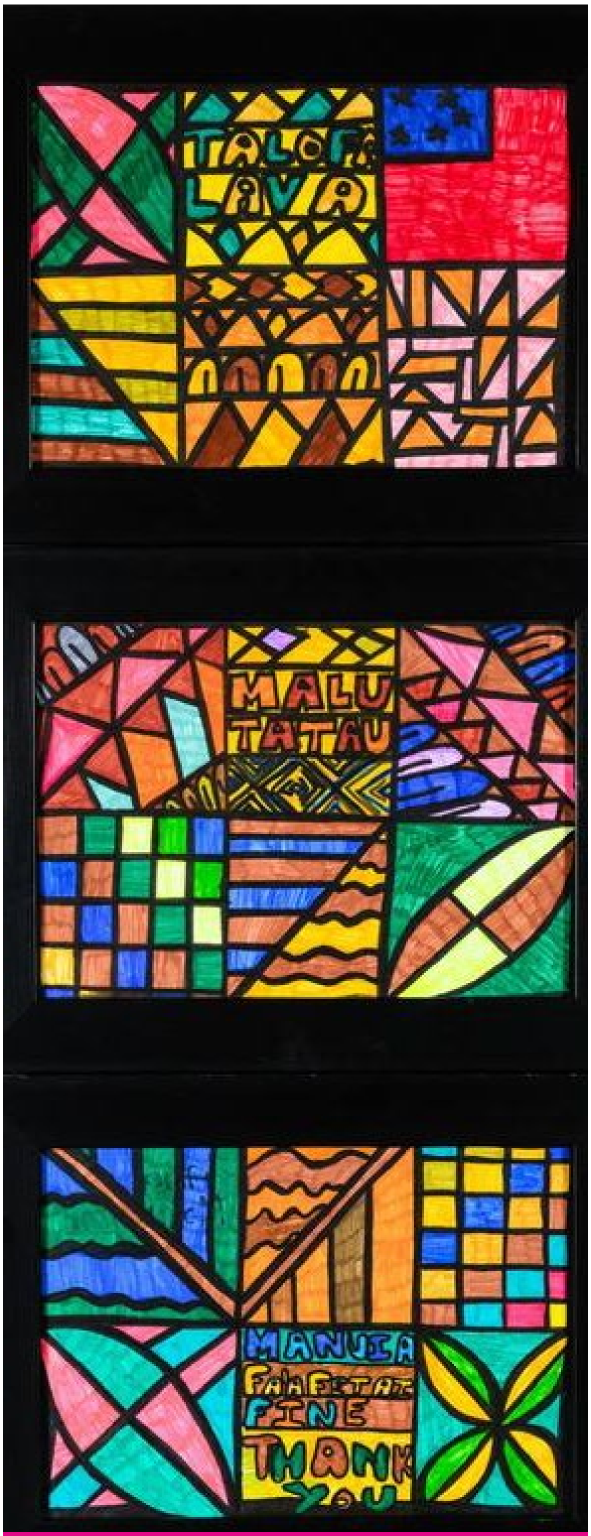
This study has demonstrated the possibility of generating a broad range of monitoring indicators that describe the lives of people with intellectual disability in Aotearoa using already collected administrative and population survey data.

Using administrative data and Census data in the IDI, this study has estimated that around 1.0 percent of the population lived with intellectual disability in 2018, although data limitations mean this is likely to be an underestimate.

The study has identified a population of intellectually disabled children and adults in Aotearoa, representing 0.8 percent of the total New Zealand population, and has generated a broad range of social and economic indicators derived from population surveys and administrative data. This data provides insights into the lives of people with intellectual disability and provides a tool to monitor policy efforts to improve the outcomes of the intellectually disabled population.

People with intellectual disability and their whānau show poorer outcomes than others across a wide range of social and economic indicators, and for populations already at higher risk of disadvantage, intellectual disability acts as an additional risk factor. Societal impediments to accessibility and policy settings play a critical role in this.

A web application has been developed to complement this report, allowing researchers, advocates, people with intellectual disability and their families, and the general public to access detailed data on the lives of people with intellectual disability in an interactive way.



Ana Malu – Mitamita I lau Gagana, maua'a lou fa'asinomaga

11.1.1 Māori as tangata whenua

The Māori population is diverse and there is a large variation of outcomes within it. Nevertheless, relative to the non-Māori population in New Zealand, Māori experience on average lower levels of income, living standards and health, and are more likely to have contact with the justice system. As this report has shown, people with intellectual disability have poorer health and socioeconomic outcomes than people without it. Māori with intellectual disability are therefore likely to experience the impacts of the intersecting forms of disadvantage.

In addition, the estimated rate of intellectual disability for the Māori population shown in this report is higher than that for non-Māori, which is consistent with the results of New Zealand Disability Surveys. The data also shows that across a wide range of indicators Māori with intellectual disability are particularly likely to have poorer outcomes than others. To better meet the needs of Māori families living with disability, the literature stresses the need for policies to include a Māori worldview of wellbeing and disability (Huhana & Wilson, 2017).

Māori have been shown to experience inequitable access to the requirements for good health and wellbeing, inequitable access to health and disability services, and differential quality of health and disability care (Ingham, et al., 2022), exacerbating outcomes for Māori with disability.

Māori data is collected, analysed, shared and used by organisations such as IHC. This places a responsibility on IHC to ensure Māori have access to and an understanding of what is in this report and how it may be used to support the achievement range of Māori needs and aspirations.

This report includes life expectancy data for Māori that was not evident in the 2011 Health and Well Being Report. Reliable Māori data is essential to inform government policy and decision-making to ensure equity in relation to Te Tiriti.

11.1.2 Health

People with intellectual disability experience a variety of poor health outcomes compared with people without intellectual disability. The intellectually disabled die at a much younger age than the non-intellectually disabled, although this gap has closed somewhat since the previous study 10 years ago. This gap in life expectancy is particularly pronounced for females.

Living with intellectual disability increases the risk of chronic illness, and people with intellectual disability are also more likely, to live with mental illness. People with intellectual disability are overrepresented in emergency department attendances and in potentially avoidable hospitalisations, even though they have very high enrolment rates in primary health care organisations and are more likely than others to be enrolled for Care Plus primary health services.

The data shows that those in the intellectually disabled population are high users of health services but on average have poorer outcomes than the non-intellectually disabled population. Overall, the annual secondary health care cost per person for people with intellectual disability is five times higher than that for people without intellectual disability.

11.1.3 Knowledge and skills

Education and training are crucial to enabling people’s full participation in society through work and volunteering. Most intellectually disabled children participate in early childhood education and schooling. Although participation in formal education is high and many attain qualifications, the likelihood of not holding any qualification is much higher among people with intellectual disability than it is for the non-intellectually disabled.

11.1.4 Work, care and volunteering

Having a child with intellectual disability affects parents’ choices regarding care and employment. Children with intellectual disability are more likely to have at least one parent not in full-time employment and less likely to have all parents in some paid work than are their non-intellectually disabled peers.

Adults with intellectual disability experience multiple barriers to participation in society through work and volunteering, having much lower rates of paid and unpaid work. The rate of young people with intellectual disability not in employment, education or training is much higher than that for non-intellectually disabled youth.

The majority of adults with intellectual disability receive income-tested benefits that provide important protection against poverty. However the incomes of intellectually disabled adults are low relative to the non-intellectually disabled, limiting their choices.

11.1.5 Income, consumption and wealth

Given that intellectual disability affects work opportunities for the intellectually disabled and their families, it affects their personal and household incomes. Children with intellectual disability are more likely to live in low-income households, and the average equivalised disposable household income is lower for children with intellectual disability than it is for children without intellectual disability.

There is a large income disparity between intellectually disabled and non-disabled adults, especially the older working-age population. While people in their 20s and 30s may be able to live with working parents who provide financial support, this may be less possible as they get older, exacerbating the differences in household income.

With low employment rates and high benefit receipt, people with intellectual disability are generally reliant on government financial support. Consequently, the average total annual personal income of people with intellectual disability does not vary significantly by gender or ethnic group.

People with intellectual disability are more likely than others to live in areas of high deprivation, to experience digital exclusion and to not participate in international travel.

11.1.6 Housing

People with intellectual disability have on average less stable housing situations than others, experiencing more mobility. They are also more likely to live in mouldy and damp homes an in an overcrowded house. A lack of appropriate support may make it difficult for young people with intellectual disability to make the transition to living in the community with their peers, and many live with their parents as adults, or in institutional settings.

11.1.7 Family and friends

Adults with intellectual disability are much more likely to live with a birth parent than adults without intellectual disability. However, intellectually disabled children are less likely to live with a birth parent than non-intellectually disabled and are also more likely to live in a sole parent family. Adults with intellectual disability are less likely than others to get married or be in a civil union, and the likelihood of divorce or dissolution is higher than it is for others if they do. There is little data about friendships in New Zealand, and we were unable to develop indicators for this important area of intellectually disabled peoples' lives.

11.1.8 Safety

Police victimisation data shows that compared with others intellectually disabled are more likely to be victims of crime than non-intellectually disabled, and children with intellectual disability are more likely to witness family violence.

Children with intellectual disability are also more likely than their non-intellectually disabled peers to be placed in care by Oranga Tamariki, and parents with intellectual disability are more likely to have their children placed in care. This may reflect a lack of support for both parents of intellectually disabled children and parents who themselves have intellectual disability.

The rate of criminal convictions and incarceration is higher for adults with intellectual disability than it is for non-intellectually-disabled adults, possibly reflecting the difficulty people with intellectual disability may have in negotiating the criminal justice system. There is evidence that people with intellectual disability are no more likely to commit crime than other people.

11.2 Limitations of the study

While this study has drawn on a wealth of detailed survey and administrative data, it is limited in several ways. We are heavily reliant on the information that is collected by government agencies to identify the population of people with intellectual disability and can largely only describe people's lives on the basis of interactions with those agencies. This means that the people with intellectual disability who we identify may have quite different outcomes from those of people with intellectual disability we are not able to identify.

It also means that we may miss important parts of the life stories of people with intellectual disability. In particular, we are missing data on people's social connections, their subjective wellbeing, their leisure activities, their cultural connections and feelings of belonging, their engagement with society and the control they have over their lives.

In addition, there are areas where the data is stronger than others, meaning there is a risk of misinterpretation if these differences are not taken into account. As much as possibl we have highlighted deficiencies in the data through the report, but their impacts are not always obvious or easy to interpret.

While a key driver of this study was the desire to update the Ministry of Health's 2011 report on the health outcomes of people with intellectual disability, we have been cautious in making firm comparisons between the results of this study and the earlier study. This is because the studies' data and definitions have changed. While care has been taken to minimise these changes, some differences were unavoidable.

11.3 Future developments

This report constitutes the first effort to produce a comprehensive set of monitoring indicators that report on the lives of people with intellectual disability. The study was limited in scope by the data available in the IDI and by project resources. This first study has focused on the use of Census and administrative data and on the production of a report with a similar format to the 2011 Ministry of Health report.

11.3.1 Health and disability surveys

Beyond Census and administrative data, there are two surveys of special interest to this project: the New Zealand Health Survey and the Stats NZ Disability Survey. The New Zealand Health Survey collects data about 14,000 adults and 5,000 children every year. Even though this is a large sample size, at the 1.0 percent rate identified in this report it would only include around 140 intellectually disabled adults and 50 children in any given year. This means that any information from this survey would have to be derived by combining surveys across several years.

The 2013 Disability Survey had a sample of 20,000, including adults and children. It provides the most robust source of data to measure the prevalence of disability in New Zealand. It also provides information on social, wellbeing and economic outcomes, support needs, access to support and unmet needs. It also includes information on barriers to and enablers of participation in important aspects of life for disabled people. However, the intellectually disabled subsample within the survey is not large enough for most outcome measurements. Nevertheless, the disability survey results can be an important source of information for this project in enabling us to understand the undercount of the IDI intellectually disabled population. We believe this work would be most valuable if it were undertaken when the 2023 disability data is available in the IDI, most likely in 2024.

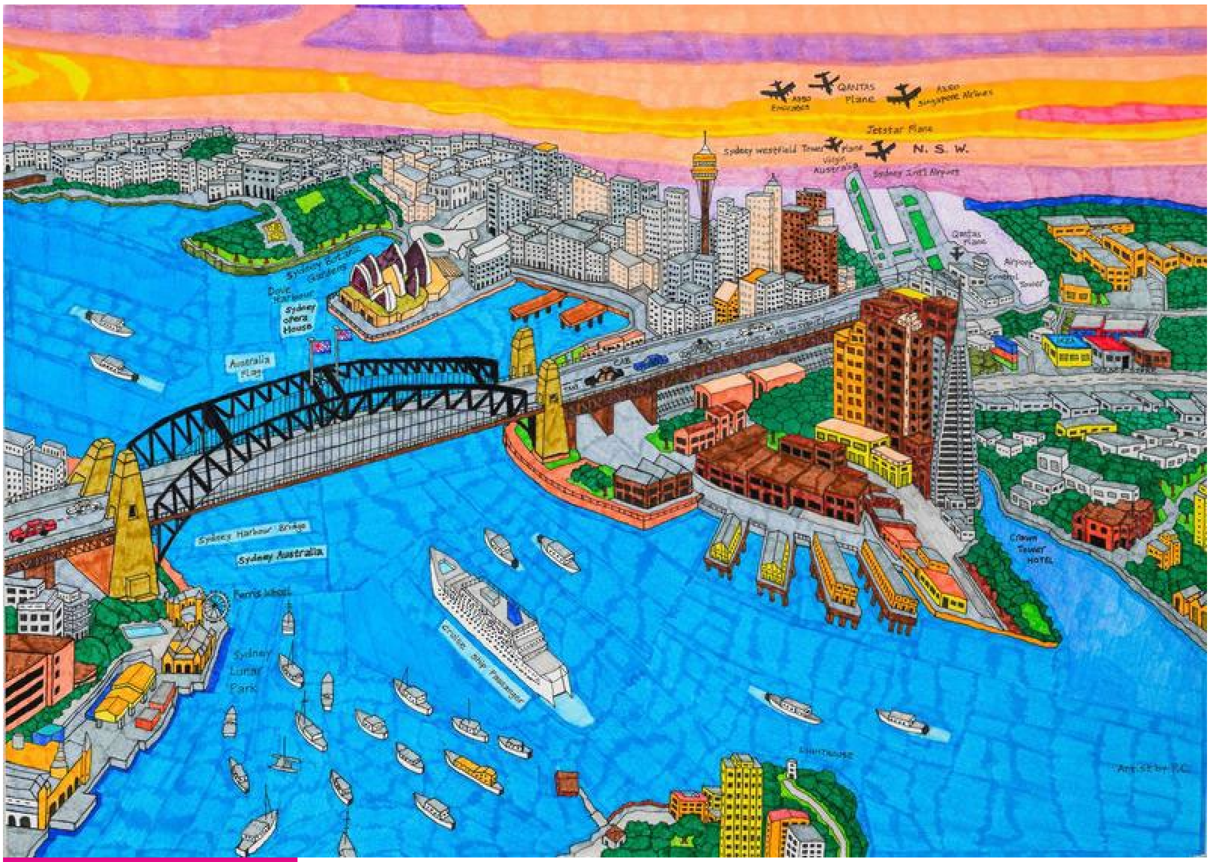
11.3.2 Other surveys

Other surveys could offer the opportunity to bring other information of interest, for example, subjective wellbeing measures like 'overall life satisfaction' and self-reported measures of discrimination or criminal victimisation. The size of the intellectually disabled population limits what can be done with survey data, but a limited number of indicators from survey data may be possible by pooling data from several surveys to achieve the necessary sample size.

11.3.3 Monitoring change and furthering knowledge

This report provides a good baseline from which we can monitor changes and the effects of policy efforts to reduce inequities. A comprehensive update of all indicators every five years when new Census data is available would provide a powerful tool to monitor change. In between Census updates, analytical effort could focus on furthering New Zealand-specific research on intellectual disability. For example, the study dataset could be analysed using multivariate statistics to better understand the correlation between variables or to control for the context in order to explore causality. The study data provides a valuable resource for future research.

While this report is based on data in the IDI, ideally future work would develop indicators of wellbeing across a range of dimensions in consultation with people with intellectual disability and their family/whānau. Ideally these indicators would include a mix of objective and subjective wellbeing measures. Objective measures provide important information, but they do not give information on the subjective values and meanings attached to particular states and situations.



Peter Chou – Sydney

Andrew Parker – Flying Through the Storm

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Appendix 1 – Additional maps of intellectual disability prevalence

Figure 109 – Prevalence of intellectual disability by district health board area, 2018

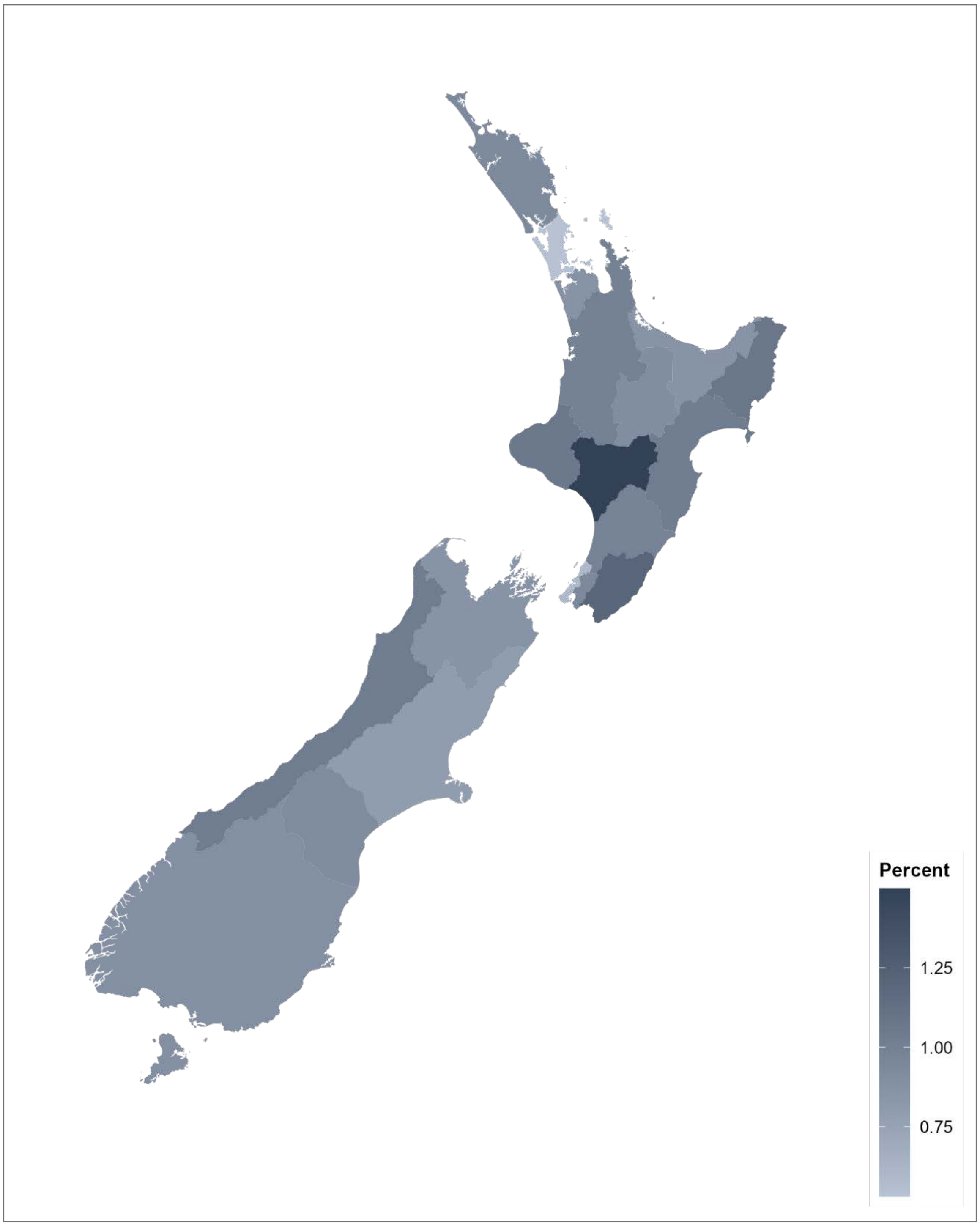
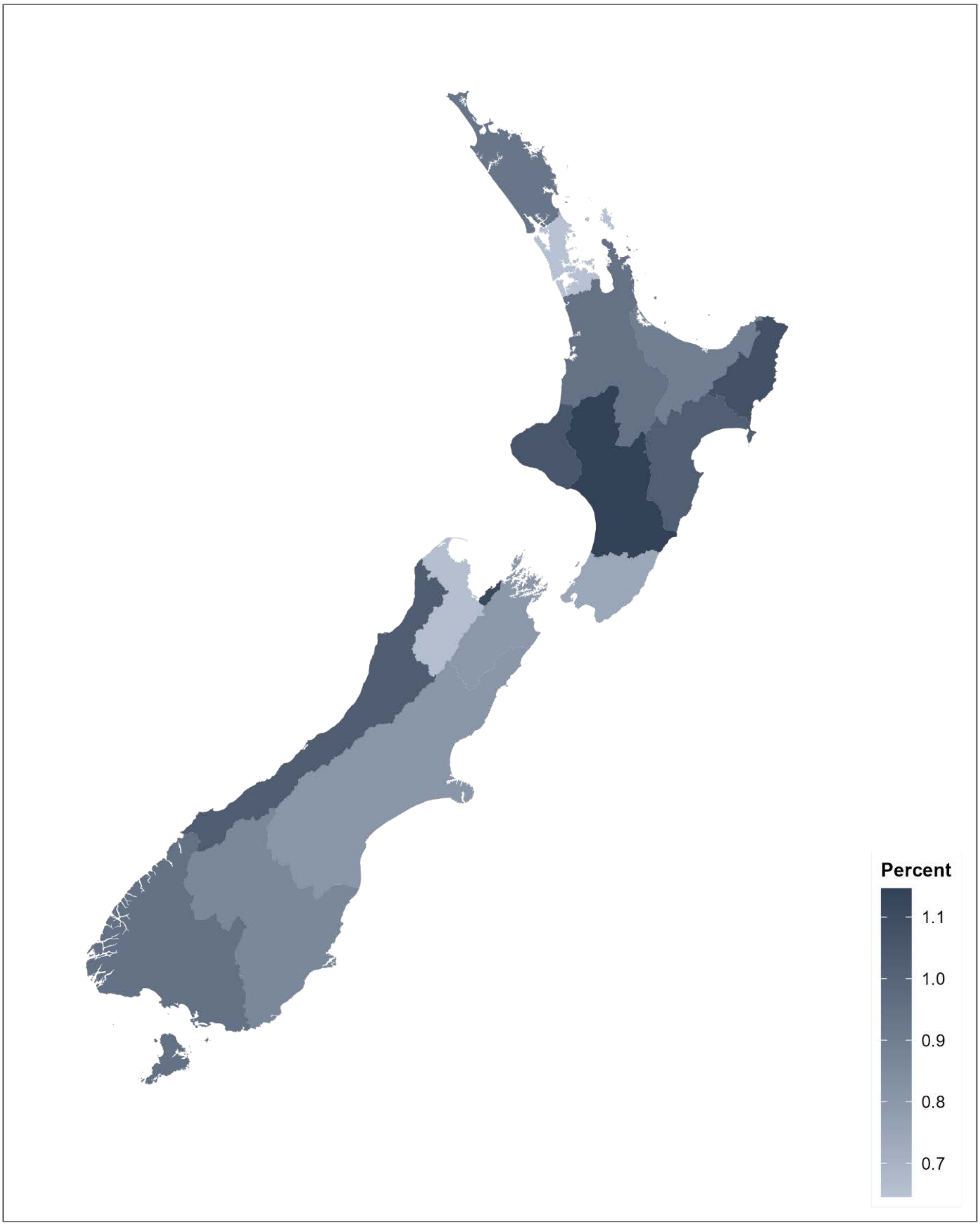


Figure 110 – Prevalence of intellectual disability by regional council area, 2018



Appendix 2 – Descriptive data tables

Table 6 – Descriptions of the populations with and without intellectual disability by characteristic

Characteristic	Intellectual disability	No intellectual disability	Intellectual disability (% of total)	No intellectual disability (% of total)	Rate of intellectual disability (%)
Sex					
Female	15,474	2,400,099	39.99	50.33	0.64
Male	23,217	2,376,270	60.01	49.67	0.98
Age (five-year groups)					
00-04	597	297,042	1.54	6.26	0.20
05-09	2,931	322,059	7.57	6.74	0.91
10-14	3,810	310,059	9.85	6.46	1.23
15-19	3,948	306,357	10.20	6.38	1.29
20-24	3,414	331,314	8.82	6.92	1.03
25-29	3,216	357,696	8.31	7.48	0.90
30-34	2,754	329,484	7.12	6.90	0.84
35-39	2,418	303,726	6.25	6.36	0.80
40-44	2,436	294,573	6.30	6.17	0.83
45-49	2,859	324,471	7.39	6.79	0.88
50-54	2,775	311,028	7.17	6.51	0.89
55-59	2,637	307,602	6.81	6.44	0.86
60-64	1,947	262,443	5.03	5.50	0.74
65-69	1,371	228,957	3.54	4.80	0.60
70-74	873	187,014	2.26	3.93	0.47
75-79	432	132,714	1.12	2.79	0.33
80-84	180	86,064	0.47	1.81	0.21
85-89	69	53,751	0.18	1.13	0.13
90-94	21	23,511	0.05	0.50	0.09
95+	9	6,510	0.02	0.14	0.14
Sex by 10-year age group					
Female 00-14	2,598	452,223	6.72	9.49	0.57
Female 15-24	2,772	307,278	7.17	6.43	0.90
Female 25-34	2,424	339,486	6.27	7.11	0.71
Female 35-44	1,953	302,478	5.05	6.34	0.65
Female 45-54	2,355	324,690	6.09	6.80	0.73
Female 55-64	2,010	290,988	5.20	6.10	0.69
Female 65-74	990	213,051	2.56	4.48	0.46
Female 75+	372	169,899	0.96	3.58	0.22
Male 00-14	4,734	476,931	12.24	9.97	0.99

Characteristic	Intellectual disability	No intellectual disability	Intellectual disability (% of total)	No intellectual disability (% of total)	Rate of intellectual disability (%)
Male 15-24	4,590	330,390	11.87	6.88	1.39
Male 25-34	3,546	347,694	9.17	7.26	1.02
Male 35-44	2,898	295,821	7.49	6.18	0.98
Male 45-54	3,279	310,806	8.48	6.49	1.05
Male 55-64	2,571	279,060	6.65	5.84	0.92
Male 65-74	1,254	202,917	3.24	4.26	0.62
Male 75+	339	132,651	0.88	2.79	0.26
European ethnicity					
No	11,376	1,463,112	29.40	30.64	0.78
Yes	27,312	3,294,684	70.60	68.97	0.83
Māori ethnicity					
No	28,353	3,974,442	73.28	83.29	0.71
Yes	10,338	783,351	26.72	16.32	1.32
Pacific ethnicity					
No	34,920	4,352,283	90.26	91.13	0.80
Yes	3,768	405,510	9.74	8.48	0.93
Asian ethnicity					
No	36,654	4,040,289	94.74	84.51	0.91
Yes	2,034	717,504	5.26	15.10	0.28
MELAA ethnicity					
No	38,358	4,682,070	99.15	98.02	0.82
Yes	330	75,723	0.85	1.59	0.44
Other ethnicity					
No	38,247	4,696,893	98.85	98.33	0.81
Yes	444	60,900	1.15	1.28	0.73
Family type					
Couple no children	1,395	935,856	3.61	19.72	0.15
Couple with children	9,993	1,888,878	25.83	39.66	0.53
Not in a family nucleus	17,826	1,106,448	46.07	22.98	1.61
One parent with children	6,591	483,660	17.03	10.07	1.36
Missing	2,886	361,524	7.46	7.57	0.80
Territorial authority					
Ashburton District	219	33,531	0.57	0.70	0.65
Auckland	10,338	1,600,575	26.71	33.57	0.65
Buller District	117	9,462	0.30	0.20	1.24
Carterton District	75	9,264	0.19	0.19	0.81
Central Hawke's Bay District	84	14,220	0.22	0.30	0.59
Central Otago District	126	21,366	0.33	0.45	0.59
Chatham Islands Territory	S	306	S	0.01	

Characteristic	Intellectual disability	No intellectual disability	Intellectual disability (% of total)	No intellectual disability (% of total)	Rate of intellectual disability (%)
Christchurch City	3,417	374,901	8.83	7.84	0.91
Clutha District	150	17,280	0.39	0.36	0.87
Dunedin City	1,398	124,938	3.61	2.61	1.12
Far North District	546	65,526	1.41	1.37	0.83
Gisborne District	522	48,696	1.35	1.02	1.07
Gore District	111	12,555	0.29	0.26	0.88
Grey District	138	13,404	0.36	0.28	1.03
Hamilton City	1,824	164,286	4.71	3.43	1.11
Hastings District	846	82,104	2.19	1.72	1.03
Hauraki District	219	20,169	0.57	0.42	1.09
Horowhenua District	483	33,966	1.25	0.71	1.42
Hurunui District	57	12,594	0.15	0.26	0.45
Invercargill City	681	54,648	1.76	1.14	1.25
Kaikōura District	21	3,909	0.05	0.08	0.54
Kaipara District	189	23,151	0.49	0.48	0.82
Kāpiti Coast District	375	54,069	0.97	1.13	0.69
Kawerau District	93	7,365	0.24	0.15	1.26
Lower Hutt City	1,008	105,825	2.60	2.21	0.95
Mackenzie District	18	4,605	0.05	0.10	0.39
Manawatū District	228	30,273	0.59	0.63	0.75
Marlborough District	375	46,953	0.97	0.98	0.80
Masterton District	381	26,016	0.98	0.54	1.46
Matamata-Piako District	258	34,572	0.67	0.72	0.75
Napier City	708	63,411	1.83	1.32	1.12
Nelson City	576	51,585	1.49	1.08	1.12
New Plymouth District	846	81,666	2.19	1.71	1.04
Ōpōtiki District	81	9,273	0.21	0.19	0.87
Ōtorohanga District	81	9,918	0.21	0.21	0.82
Palmerston North City	825	85,329	2.13	1.78	0.97
Porirua City	543	57,372	1.40	1.20	0.95
Queenstown-Lakes District	60	40,179	0.16	0.85	0.15
Rangitikei District	162	15,000	0.42	0.31	1.08
Rotorua District	750	74,070	1.94	1.55	1.01
Ruapehu District	132	12,342	0.34	0.26	1.07
Selwyn District	252	59,703	0.65	1.25	0.42
South Taranaki District	315	28,092	0.81	0.59	1.12
South Waikato District	336	24,534	0.87	0.51	1.37
South Wairarapa District	96	10,689	0.25	0.22	0.90
Southland District	135	30,423	0.35	0.64	0.44

Characteristic	Intellectual disability	No intellectual disability	Intellectual disability (% of total)	No intellectual disability (% of total)	Rate of intellectual disability (%)
Stratford District	108	9,663	0.28	0.20	1.12
Tararua District	150	18,240	0.39	0.38	0.82
Tasman District	345	52,575	0.89	1.10	0.66
Taupō District	255	37,620	0.66	0.79	0.68
Tauranga City	1,218	140,490	3.15	2.94	0.87
Thames-Coromandel District	237	29,925	0.61	0.63	0.79
Timaru District	474	46,794	1.22	0.98	1.01
Upper Hutt City	393	43,380	1.02	0.91	0.91
Waikato District	603	75,477	1.56	1.58	0.80
Waimakariri District	372	59,520	0.96	1.25	0.63
Waimate District	51	7,809	0.13	0.16	0.65
Waipa District	486	53,637	1.26	1.12	0.91
Wairoa District	81	8,199	0.21	0.17	0.99
Waitaki District	210	22,281	0.54	0.47	0.94
Waitomo District	63	9,492	0.16	0.20	0.66
Wellington City	915	201,375	2.36	4.23	0.45
Western Bay of Plenty District	354	51,399	0.91	1.08	0.69
Westland District	69	8,271	0.18	0.17	0.83
Whakatāne District	351	36,483	0.91	0.76	0.96
Whanganui District	789	46,566	2.04	0.97	1.69
Whangarei District	942	91,437	2.43	1.91	1.03
Missing	42	21,627	0.11	0.46	0.19
District health board					
Auckland	2,517	474,480	6.51	9.96	0.53
Bay of Plenty	2,100	245,013	5.43	5.13	0.86
Canterbury	4,335	544,458	11.21	11.40	0.80
Capital and Coast	1,776	303,612	4.59	6.37	0.58
Counties Manukau	4,797	552,867	12.40	11.57	0.87
Hawke's Bay	1,722	167,937	4.45	3.51	1.03
Hutt Valley	1,401	149,208	3.62	3.12	0.94
Lakes	1,005	111,690	2.60	2.34	0.90
MidCentral	1,740	177,009	4.50	3.70	0.98
Nelson Marlborough	1,293	151,110	3.34	3.16	0.86
Northland	1,677	180,117	4.33	3.77	0.93
South Canterbury	543	59,205	1.40	1.24	0.92
Southern	2,871	323,673	7.42	6.77	0.89
Tairāwhiti	522	48,696	1.35	1.02	1.07
Taranaki	1,266	119,418	3.27	2.49	1.06
Waikato	4,074	410,064	10.53	8.57	0.99

Characteristic	Intellectual disability	No intellectual disability	Intellectual disability (% of total)	No intellectual disability (% of total)	Rate of intellectual disability (%)
Wairarapa	552	45,969	1.43	0.96	1.20
Waitematā	3,150	593,241	8.14	12.46	0.53
West Coast	321	31,140	0.83	0.65	1.03
Whanganui	984	65,829	2.54	1.37	1.49
Missing	42	21,627	0.11	0.46	0.19
Region					
Auckland Region	10,338	1,600,575	26.72	33.57	0.65
Bay of Plenty Region	2,829	315,555	7.31	6.60	0.90
Canterbury Region	4,887	604,983	12.63	12.67	0.81
Gisborne Region	522	48,696	1.35	1.02	1.07
Hawke's Bay Region	1,722	168,036	4.45	3.51	1.02
Manawatu-Whanganui Region	2,769	241,863	7.16	5.05	1.14
Marlborough Region	375	46,953	0.97	0.98	0.80
Nelson Region	576	51,582	1.49	1.08	1.12
Northland Region	1,677	180,114	4.33	3.77	0.93
Otago Region	1,935	224,424	5.00	4.70	0.86
Southland Region	927	97,629	2.40	2.04	0.95
Taranaki Region	1,269	119,286	3.28	2.49	1.06
Tasman Region	345	52,575	0.89	1.10	0.66
Waikato Region	4,377	463,032	11.31	9.68	0.95
Wellington Region	3,783	507,996	9.78	10.64	0.74
West Coast Region	318	31,140	0.82	0.65	1.02
Missing	42	21,627	0.11	0.46	0.19
Urban/rural classification					
Rural settlement	891	144,825	2.30	3.04	0.62
Rural other	3,309	595,350	8.55	12.50	0.56
Small urban area	4,353	493,752	11.25	10.33	0.88
Medium urban area	4,026	400,779	10.41	8.37	1.00
Large urban area	7,554	674,007	19.52	14.07	1.12
Major urban area	18,516	2,446,005	47.86	51.24	0.76
Missing	42	21,627	0.11	0.46	0.19
Identified as having ADHD					
No	35,577	4,756,494	91.95	99.65	0.75
Yes	3,114	19,875	8.05	0.35	15.67
Identified as having ASD					
No	32,601	4,753,050	84.25	99.64	0.69
Yes	6,093	23,319	15.75	0.36	26.13
Identified as having cerebral palsy					

Characteristic	Intellectual disability	No intellectual disability	Intellectual disability (% of total)	No intellectual disability (% of total)	Rate of intellectual disability (%)
No	35,991	4,770,303	93.02	99.93	0.75
Yes	2,700	6,069	6.98	0.07	44.49
Identified as having developmental delay					
No	31,641	4,740,633	81.79	99.39	0.67
Yes	7,047	35,739	18.21	0.61	19.72
Identified as having Down syndrome					
No	36,243	4,773,276	93.68	99.99	0.76
Yes	2,445	3,093	6.32	0.01	79.05
Identified as having foetal alcohol syndrome					
No	38,541	4,775,859	99.61	99.99	0.81
Yes	150	513	0.39	0.01	29.24
Identified as having Fragile X					
No	38,514	4,776,120	99.54	100.00	0.81
Yes	177	252	0.46	0.00	70.24
Identified as having Klinefelter's syndrome					
No	38,610	4,776,099	99.79	100.00	0.81
Yes	81	273	0.21	0.00	29.67
Identified as having spina bifida					
No	38,538	4,774,920	99.60	99.97	0.81
Yes	153	1,452	0.40	0.03	10.54
Linked to Census					
No	2,886	361,524	7.46	7.57	0.80
Yes	35,805	4,414,848	92.54	92.43	0.81
Receiving residential care subsidy					
No	38,247	4,758,204	98.84	99.63	0.80
Yes	447	18,168	1.16	0.37	2.46
Receiving residential support subsidy					
No	32,493	4,767,114	83.99	99.94	0.68
Yes	6,195	9,255	16.01	0.06	66.94

Appendix 3 – Indicator definitions

Table 7 – Definitions and data sources for all indicators by domain

Indicator	Age group	Data source	Definition
Health			
Life expectancy at birth	All ages	Ministry of Health mortality data.	Life expectancy at birth indicates the total number of years a person could expect to live, based on the mortality rates of the population at each age in a given year. This was calculated using the abridged Chiang II life table method (Chiang 1978, 1984).
Coronary heart disease care or treatment	All ages	Ministry of Health Publicly funded and privately funded hospital discharges (NMDS), Pharmaceutical Collection Code from Social Wellbeing Agency.[28] Definitions library and University of Otago.	Percentage of people who have received care or treatment for coronary heart disease. Defined as receiving public hospital treatment for coronary heart disease between 1 January 1998 and 30 June 2018, and/or multiple prescriptions for anti-angina medicine between 1 July 2001 and 30 June 2018.
Chronic obstructive pulmonary disease care or treatment	All ages	Ministry of Health Publicly funded and privately funded hospital discharges (NMDS).	Percentage of people who received public hospital care for COPD between 1 January 1998 and 30 June 2018.
Diabetes disease care or treatment	All ages	Ministry of Health Publicly and privately funded hospital discharges (NMDS), Pharmaceutical Collection, National Non-Admitted Patient Collection Code from Social Wellbeing Agency. definitions library.	Percentage of people ever treated for diabetes. Diabetes disease care or treatment is defined as receiving one or more of the following: public or private hospital treatment for diabetes (excluding diabetes arising from pregnancy) between 1 January 1998 and 30 June 2018; two or more diabetes-related prescribed medicines (e.g., insulin, oral hypoglycaemics) from 1 July 2001 to 30 June 2018; and services at a diabetes clinic between 1 July 2006 and 30 June 2018.

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[28] https://github.com/nz-social-wellbeing-agency/definitions_library

Indicator	Age group	Data source	Definition
Cancer care or treatment	All ages	Ministry of Health Cancer registrations, National Non-Admitted Patient Collection Code from Social Wellbeing Agency definitions library.	Percentage of people treated for cancer in the two years to 30 June 2018. Cancer care or treatment is defined as having been added to the New Zealand Cancer Registry or had treatment for cancer in an outpatient setting.
Public hospital care for injury	All ages	Ministry of Health Publicly funded hospital discharges (NMDS)	Average number of public hospital discharges for injury in the year to 30 June 2018. Defined as medical or surgical treatment for intentional and unintentional injury (excluding the complications of hospital treatment).
Dental treatment hospitalisations	All ages	Ministry of Health Publicly funded hospital discharges (NMDS).	Number of public hospitalisations for dental treatment between 1 July 2007 and 30 June 2008. Includes dental extractions, dental restorations and other oral and dental disorders. Includes ICD-10 codes K00-K03, K05-K08, K12, K13, K098, K099, S024-S026, S032.
Mood disorder care or treatment	All ages	Ministry of Health publicly funded hospital discharges (NMDS), Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD), Laboratory Claims Collection.	Percentage of people treated for mood disorder. Defined as their receiving one or more of the following between 1 July 2017 and 30 June 2018: public inpatient hospitalisation with a mood disorder diagnosis; secondary mental health and addiction service with a mood disorder; prescription medicines for treating a mood disorder; three or more laboratory tests for lithium.
Psychotic disorder care or treatment	All ages	Ministry of Health publicly funded hospital discharges (NMDS), Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD).	Percentage of people treated for psychotic disorder. This is defined as their receiving one or more of the following between 1 July 2017 and 30 June 2018: public inpatient hospitalisation with a diagnosis of psychotic disorder; secondary mental health and addiction service with a psychotic disorder; prescription medicines for treating a psychotic disorder.
Dementia care or treatment	All ages	Ministry of Health publicly and privately funded hospital discharges (NMDS),	Percentage of people receiving dementia care or treatment between 1 July 2017 and 30 June 2018. This is defined as their having a public inpatient hospitalisation with a diagnosis of dementia; secondary mental health and addiction service

Indicator	Age group	Data source	Definition
		Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD), interRAI.	with dementia; prescription medicine for treating dementia; or people recorded as having dementia in the interRAI database.
Any mental disorder treatment	All ages	National Minimum Dataset, Mental Health Information National Collection, Pharmaceutical Collection, Programme for the Integration of Mental Health Data (PRIMHD), Laboratory Claims Collection.	Percentage of people receiving care or treatment for any mental health condition between 1 July 2017 and 30 June 2018. Conditions include mood disorders, psychotic disorders, dementia, eating disorders, substance use disorders, ADHD, anxiety disorders, personality disorders and autism.
Enrolled in a primary health organisation (PHO)	All ages	Primary Health Organisation (PHO) Enrolment Register.	Percentage of people enrolled in a PHO as at 30 June 2018.
Enrolled in Care Plus primary health services	All ages	Primary Health Organisation (PHO) Enrolment Register.	Percentage of people enrolled for Care Plus primary health services as at 30 June 2018.
General practice consultations	All ages	Primary Health Organisation (PHO) Enrolment Register.	Percentage of people who consulted a PHO general practice in the three months to 30 June 2018.
Dispensed pharmaceuticals	All ages	Pharmaceutical Collection.	Average number of different pharmaceutical types dispensed per person, year to 30 June 2018.
Emergency department attendance	All ages	National Non-Admitted Patient Collection.	Average number of public hospital emergency department attendances in the year to 30 June 2018.
Potentially avoidable hospitalisations	All ages	Ministry of Health Publicly funded hospital discharges (National Minimum Dataset – NMDS).	Mean number of potentially avoidable hospitalisations per 100 people in the year to 30 June 2018, based on the Ministry of Health official definition.[29] The measures include respiratory conditions, gastroenteritis, skin

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[29] https://www.health.govt.nz/publication/indicator-potentially-avoidable-hospitalisations-child-and-youth-wellbeing-strategy-brief-report

Indicator	Age group	Data source	Definition
			infections vaccine preventable illnesses and injuries.
Secondary health care costs	All ages	Ministry of Health Publicly funded hospital discharges (NMDS), National Non-Admitted Patient Collection (NNPAC), Programme for the Integration of Mental Health Data (PRIMHD).	Mean estimated secondary health care costs from publicly funded hospitalisations, outpatient care and provision of secondary mental health services in the year to 30 June 2018, excluding GST. Excludes costs of disability support services funded by the Ministry of Health and DHBs, such as residential care, carer support, respite care and home support (help with housework and personal care).
Cigarette smoking rate and cessation rate	15 and over	2018 Census of Population and Dwellings	Percentage of people who smoke cigarettes regularly (that is, one or more a day). Percentage of people who have ever smoked regularly who have quit smoking.
Knowledge and skills			
Early Childhood Education participation	5 to 14	Ministry of Education Early Childhood Education (ECE) participation.	Percentage of children whose parents reported that they attended ECE before starting school.
School enrolment		Ministry of Education Primary and secondary school data.	Percentage of children enrolled in a school.
Ongoing Resourcing Scheme (ORS) support		Ministry of Education interventions data.	Percentage of people supported by the ORS.
Specialist school enrolment	5 to 17	Ministry of Education Primary and secondary school data.	Percentage of children enrolled in a Specialist school (including health schools).
Driver licensing rate (18+ population)	18 and over	NZ Transport Agency Driver Licence and Motor Vehicle Registers data.	Percentage of adults with a driver licence (learners', restricted or full).
Highest qualification	18 and over	2018 Census of Population and Dwellings, Administrative Population Census (APC).	Highest qualification reported by the Census respondents in 2013, supplemented by Ministry of Education administrative data post-2013. A) Percentage of people with no qualification. B) Percentage of people with at least a Level 2 qualification.
Work, care and volunteering			

Indicator	Age group	Data source	Definition
Parents as carers	0 to 14	2018 Census of Population and Dwellings.	Percentage of children who have at least one parent who is not in full-time employment at the date of the Census.
Parental employment participation	0 to 14	2018 Census of Population and Dwellings.	Percentage of children with all parents in the household in paid employment at the date of the Census 2018
Employment participation	18 to 64	Administrative Population Census (APC), sourced from Inland Revenue tax data.	Percentage of people in paid employment as at 30 June 2018. People were considered to be employed if they had PAYE wage and salary income in May or June 2018, or if they had self-employment income in the tax year to March 2018.
Volunteering outside the home	15 and over	2018 Census of Population and Dwellings.	Percentage of people who participated in unpaid activities outside the home in the four weeks to 6 March 2018. Activities could include looking after a child in another household, looking after someone who is ill or with a disability in another household, or other helping or voluntary work for or through any organisation, group or marae.
Benefit receipt	18 to 64	Ministry of Social Development benefits data.	Percentage of people receiving an income-tested benefit as at 30 June 2018.
Youth not in employment, education or training	15 to 24	Administrative Population Census (APC), sourced from Inland Revenue tax data, and Ministry of Education school, tertiary and Industry Training Organisation enrolments data.	Youth not in employment, education or training as at 30 June 2018. People were considered to be employed if they had PAYE wage and salary income in May or June 2018, or if they had self-employment income in the tax year to March 2018. They were considered in education or training if they were enrolled in formal education.
Income, consumption and wealth			
Total annual income	18 and over	Administrative Population Census (APC), sourced from Inland Revenue tax and Working for Families data, and Ministry of Social Development benefits data.	Average total before tax personal income for the year ending 31 March 2018.
Equivalised disposable household income	0 to 14 /15 and over	2018 Census of Population and Dwellings, Administrative Population Census	A) Average equivalised disposable household income for the year ending 31 March 2018. Income sourced from APC, taxes from IR, and household structure for equivalisation from Census. Equivalised using the Modified OECD

Indicator	Age group	Data source	Definition
		(APC), and Inland Revenue tax data.	scale. Measure is before housing costs, as housing cost data is unavailable. B) Percentage of people with equivalised disposable household income less than 50 percent of the median.
Neighbourhood deprivation (NZDep)	0 to 14 /15 and over	Core data – Address notifications.	Percentage of people living in most deprived decile.
Internet access	All ages	2018 Census of Population and Dwellings.	Percentage of people living in a household with access to the internet.
International travel	All ages	New Zealand Customs Service International Travel and Migration data.	Mean number of international trips in the five years to 30 June 2018.
Housing			
Transience	All ages	Core data – Address notifications.	Average number of addresses recorded in the IDI from any source between 1 July 2013 and 30 June 2018.
Housing quality – mouldy or damp	All ages	2018 Census of Population and Dwellings.	Percentage of people reporting living in a mouldy or damp home.
Household crowding	All ages	2018 Census of Population and Dwellings.	Percentage of people living in a crowded home as at 6 March 2018. This is defined as needing additional bedrooms, based on the number and ages of people living in the household, according to the Canadian National Occupancy Standard.
Family and friends			
Living with a birth parent	0 to 17 /18 to 34	2018 Census of Population and Dwellings and Department of Internal Affairs – Life event data.	Percentage of people born in New Zealand living in the same household at the 2018 Census date with a person who is named as a parent on the person's birth registration. Birth parents reliably identifiable for about the past 40 years.
Living in a sole parent family	0 to 14	2018 Census of Population and Dwellings.	Percentage of people living in a family with only one parent as at the date of the 2018 Census.
Born to teenage parents	0 to 44	Department of Internal Affairs – Life event data.	Percentage of people born in New Zealand with a parent under 20 years of age identified in the birth registration data.
Marriages or civil unions	18 to 44	Department of Internal Affairs – Life event data.	Percentage of people who are identified as having been registered as married or with a civil union in the registration data. Data is reliable for the past 20 years or so.

Indicator	Age group	Data source	Definition
Divorces and dissolutions	18 to 44	Department of Internal Affairs – Life event data.	Percentage of people who were identified as having married or had a civil union who have had a divorce or dissolution of their civil union.
Parenting	18 to 54	Department of Internal Affairs – Life event data.	Percentage of people who are identified as having had a child in the birth registration data. Data is reliable for the past 40 years or so.
Safety			
Victims of crime	0 to 14 /15 and over	New Zealand Police Recorded crime victims data.	Average number of victimisations recorded by Police per 100 people.
Children exposed to family violence	0 to 14	Oranga Tamariki Child, Youth and Family data.	Percentage of children reported by Police as being present when attending a family violence call.
Children placed in care by Oranga Tamariki	0 to 14	Oranga Tamariki Child, Youth and Family data.	Percentage of children who were placed in care by Oranga Tamariki between 2001 and 30 June 2018.
Having a child placed in care by Oranga Tamariki	15 to 64	Oranga Tamariki Child, Youth and Family data.	Percentage of parents who had a child placed in care by Oranga Tamariki between 2001 and 30 June 2018.
Convictions	18 and over	Ministry of Justice – Court charges data	Mean number of criminal convictions in the five years to 30 June 2018.
Incarceration	18 and over	Department of Corrections – Sentencing and remand data	Incarceration is defined as being imprisoned as at 30 June 2018.This includes both people who have been sentenced and those on remand until their trial is completed.

Appendix 4 – Outcomes data tables

Table 8 – Age-standardised rates by domain and indicator for the populations with and without intellectual disability, standardised to the New Zealand estimated resident population

Domain and indicator	Measure	Age range	Intellectual disability		No intellectual disability		Rate ratio
			ASR	95% CI	ASR	95% CI	
Health							
Coronary heart disease (CHD) care or treatment, January 1998 to June 2018	Percent	All ages	7.01	(6.67,7.35)	3.21	(3.20,3.23)	2.18
Chronic obstructive pulmonary disease care or treatment, January 1998 to June 2018	Percent	All ages	8.78	(8.41,9.16)	5.51	(5.49,5.53)	1.59
Diabetes care or treatment, ever treated	Percent	All ages	10.85	(10.45,11.26)	6.34	(6.31,6.36)	1.71
Cancer care and treatment, two years to 30 June 2018	Percent	All ages	4.33	(4.08,4.58)	4.04	(4.02,4.06)	1.07*
Public hospital care for injury, year to 30 June 2018	Discharges per 100 people	All ages	4.73	(4.46,5.00)	1.93	(1.92,1.94)	2.45
Dental treatment public hospital discharges, year to 30 June 2018	Discharges per 100 people	All ages	2.17	(2.01,2.32)	0.22	(0.22,0.22)	9.88
Mood disorder care or treatment, year to 30 June 2018	Percent	All ages	9.16	(8.83,9.48)	3.05	(3.03,3.06)	3.00
Pyschotic disorder care or treatment, year to 30 June 2018	Percent	All ages	3.78	(3.58,3.98)	0.24	(0.23,0.24)	15.84
Dementia care or treatment, year to 30 June 2018	Percent	All ages	2.21	(1.96,2.47)	0.61	(0.60,0.62)	3.63
Treated for any mental health condition, year to 30 June 2018	Percent	All ages	48.81	(48.04,49.58)	18.09	(18.05,18.13)	2.70
Enrolled in a primary health organisation (PHO), June 2018	Percent	All ages	97.65	(96.51,98.79)	94.02	(93.93,94.10)	1.04
Enrolled for Care Plus primary health services, June 2018	Percent	All ages	8.11	(7.78,8.44)	3.44	(3.43,3.46)	2.36
Consulted general practice in the three months to 30 June 2018	Percent	All ages	81.69	(80.63,82.75)	68.50	(68.42,68.57)	1.19
Public hospital emergency department attendance, year to 30 June 2018	Discharges per 100 people	All ages	61.08	(60.14,62.03)	22.90	(22.85,22.94)	2.67
Potentially avoidable hospitalisations (public hospital), year to 30 June 2018	Discharges per 100 people	All ages	18.09	(17.54,18.63)	5.00	(4.98,5.02)	3.62
Average secondary health care costs per person, year to 30 June 2018	Thousands of dollars	All ages	6.82	(6.82,6.82)	1.41	(1.41,1.41)	4.86
Number of different pharmaceuticals prescribed, year to 30 June 2018	Number	All ages	6.81	(6.78,6.84)	4.32	(4.32,4.32)	1.58

Domain and indicator	Measure	Age range	Intellectual disability		No intellectual disability		Rate ratio
			ASR	95% CI	ASR	95% CI	
Cigarette smoking rate as at 2018 Census	Percent	15 and over	16.44	(15.95,16.92)	13.15	(13.11,13.19)	1.94
Cigarette smoking cessation rate as at 2018 Census	Percent	15 and over	12.11	(11.60,12.61)	21.98	(21.94,22.03)	1.55
Knowledge and skills							
Prior participation in early learning, 2018	Percent	5 to 14	94.11	(92.45,95.78)	94.88	(94.64,95.11)	0.99+
Specialist school enrolment, 2018	Percent	5 to 17	25.12	(24.38,25.87)	0.86	(0.84,0.88)	29.33
Holding a driver's license, June 2018	Percent	18 and over	31.31	(30.59,32.02)	88.49	(88.39,88.59)	0.35
No qualification, June 2018	Percent	18 and over	57.10	(55.99,58.21)	12.46	(12.42,12.50)	4.58
Highest qualification at least NCEA Level 2 or equivalent, June 2018	Percent	18 and over	29.48	(28.70,30.27)	75.95	(75.85,76.05)	0.39
Work, care and volunteering							
Parents as carers - At least one parent in the household not in full-time work as at 2018 Census	Percent	Under 15	74.14	(70.95,77.33)	62.62	(62.44,62.80)	1.18
Parental employment participation - All parents in the household in paid employment as at 2018 Census	Percent	Under 15	47.99	(45.66,50.33)	64.14	(63.96,64.32)	0.75
Employment participation, as at 30 June 2018	Percent	18 to 64	20.85	(20.29,21.40)	77.85	(77.75,77.95)	0.27
Volunteering outside the home - unpaid activities outside the home in the four weeks to 6 March 2018	Percent	15 and over	9.61	(9.24,9.98)	23.59	(23.54,23.64)	0.41
Benefit receipt, as at 30 June 2018	Percent	18 to 64	83.38	(82.26,84.51)	10.18	(10.14,10.22)	8.19
Youth not in education, employment or training, as at 30 June 2018	Percent	15 to 24	41.38	(39.86,42.89)	12.84	(12.76,12.93)	3.22
Youth studying and not working, as at 30 June 2018	Percent	15 to 24	41.93	(40.49,43.36)	27.20	(27.07,27.33)	1.54
Youth working and studying, as at 30 June 2018	Percent	15 to 24	3.55	(3.12,3.98)	24.69	(24.57,24.81)	0.14
Youth working and not studying, as at 30 June 2018	Percent	15 to 24	13.15	(12.29,14.00)	35.27	(35.12,35.42)	0.37
Income, consumption and wealth							
Average total annual personal income, year ending 31 March 2018	Thousands of dollars	18 to 64	32.35	(32.34,32.35)	51.70	(51.70,51.70)	0.63
Average equivalised disposable household income, year ending 31 March 2018	Thousands of dollars	Under 15	33.45	(33.44,33.46)	40.54	(40.54,40.55)	0.83
		15 and over	37.18	(37.17,37.18)	47.60	(47.60,47.60)	0.78
Living in a low-income household - Equiv disposable household income < 50% of median year ending 31 March 2018	Percent	Under 15	12.53	(11.29,13.76)	11.24	(11.17,11.32)	1.11*
	Percent	15 and over	5.76	(5.30,6.22)	9.27	(9.24,9.31)	0.62

Domain and indicator	Measure	Age range	Intellectual disability		No intellectual disability		Rate ratio
			ASR	95% CI	ASR	95% CI	
Living in most deprived NZDep decile, June 2018	Percent	Under 15	23.89	(22.35,25.43)	14.71	(14.63,14.79)	1.62
		15 and over	20.06	(19.52,20.60)	10.32	(10.28,10.35)	1.94
Living in a household with access to the internet as at 2018 Census	Percent	All ages	68.90	(67.63,70.18)	90.96	(90.86,91.05)	0.76
Any international travel, 5 years to 30 June 2018	Percent	All ages	35.58	(33.52,37.64)	25.46	(25.35,25.58)	1.40
Housing							
Average number of addresses recorded, 1 July 2013 to 30 June 2018	Number	All ages	4.26	(4.23,4.29)	3.25	(3.25,3.25)	1.31
House is mouldy or damp as at 2018 Census	Percent	All ages	35.28	(34.37,36.20)	28.95	(28.90,29.01)	1.22
House is crowded as at 2018 Census	Percent	All ages	14.87	(14.30,15.43)	10.81	(10.78,10.84)	1.38
Family and friends							
Living in the same household as a registered birth parent as at 2018 Census	Percent	Under 18	83.56	(80.87,86.26)	94.20	(93.98,94.42)	0.89
		18 to 34	57.13	(55.28,58.98)	36.92	(36.74,37.09)	1.55
Living in a sole parent household - in a family with only one parent as at 2018 Census	Percent	Under 15	35.58	(33.52,37.64)	25.46	(25.35,25.58)	1.40
Born to at least one teen parent (under 20 years old)	Percent	Under 45	11.40	(10.90,11.89)	8.76	(8.72,8.81)	1.30
Ever been registered as married or in a civil union	Percent	18 to 44	5.55	(5.19,5.92)	21.87	(21.80,21.93)	0.25
Had a divorce or dissolution, if ever had a marriage or civil union	Percent	18 to 44	28.48	(23.71,33.26)	12.39	(11.86,12.91)	2.30
Ever been registered as a parent on a birth certificate	Percent	18 to 54	16.20	(15.67,16.73)	44.18	(44.10,44.27)	0.37
Safety							
Average number of victimisations recorded in New Zealand Police data, to June 2018	Victimisations per 100 people	Under 15	2.22	(1.87,2.56)	0.68	(0.67,0.70)	3.25
		15 and over	4.95	(4.71,5.19)	2.93	(2.92,2.95)	1.69
Children exposed to violence, to June 2018	Percent	Under 15	18.11	(16.88,19.35)	9.75	(9.69,9.81)	1.86
Children placed in care by Oranga Tamariki, to June 2018	Percent	Under 15	9.20	(8.38,10.02)	1.20	(1.18,1.22)	7.68
Adult with a child who has been placed in care, to June 2018	Percent	15 to 64	12.13	(11.18,13.08)	0.82	(0.81,0.84)	14.73
Convicted of a crime, 5 years to June 2018	Percent	18 and over	7.71	(7.40,8.01)	4.95	(4.93,4.98)	1.56
Currently incarcerated (sentenced or on remand), June 2018	Percent	18 and over	0.84	(0.73,0.94)	0.25	(0.25,0.26)	3.29

Note: All rate ratios are statistically significantly different from 1 unless otherwise indicated. A * indicates a rate ratio statistically significantly different from 1 at the 5 percent level, while a + indicates a non-statistically significant result.

Table 9 – Age-standardised rates by domain and indicator for the populations with and without intellectual disability, standardised to the WHO population

Domain and indicator	Measure	Age range	Intellectual disability		No intellectual disability		Rate ratio
			ASR	95% CI	ASR	95% CI	
Health							
Coronary heart disease (CHD) care or treatment, Jan 1998 to June 2018	Percent	All ages	5.24	(5.02,5.47)	2.17	(2.16,2.18)	2.41
Chronic obstructive pulmonary disease care or treatment, Jan 1998 to June 2018	Percent	All ages	7.25	(6.97,7.53)	4.29	(4.27,4.31)	1.69
Diabetes care or treatment, ever treated	Percent	All ages	8.60	(8.31,8.89)	4.74	(4.73,4.76)	1.81
Cancer care and treatment, 2 years to 30 June 2018	Percent	All ages	3.87	(3.66,4.07)	3.46	(3.45,3.48)	1.12
Public hospital care for injury, year to 30 June 2018	Discharges per 100 people	All ages	4.40	(4.17,4.63)	1.83	(1.82,1.84)	2.41
Dental treatment public hospital discharges, year to 30 June 2018	Discharges per 100 people	All ages	2.44	(2.26,2.61)	0.27	(0.27,0.28)	9.00
Mood disorder care or treatment, year to 30 June 2018	Percent	All ages	8.20	(7.92,8.48)	2.62	(2.61,2.63)	3.13
Pyschotic disorder care or treatment, year to 30 June 2018	Percent	All ages	3.48	(3.30,3.66)	0.22	(0.22,0.23)	15.53
Dementia care or treatment, year to 30 June 2018	Percent	All ages	1.24	(1.12,1.37)	0.29	(0.28,0.29)	4.33
Treated for any mental health condition, year to 30 June 2018	Percent	All ages	46.09	(45.40,46.79)	15.68	(15.65,15.72)	2.94
Enrolled in a primary health organisation, June 2018	Percent	All ages	98.00	(96.85,99.16)	93.79	(93.70,93.88)	1.04
Enrolled for Care Plus primary health services, June 2018	Percent	All ages	6.75	(6.50,7.01)	2.37	(2.36,2.38)	2.85
Consulted general practice in the three months to 30 June 2018	Percent	All ages	80.30	(79.24,81.36)	65.81	(65.73,65.88)	1.22
Public hospital emergency department attendance, year to 30 June 2018	Discharges per 100 people	All ages	60.45	(59.48,61.42)	22.38	(22.34,22.43)	2.70
Potentially avoidable hospitalisations (public hospital), year to 30 June 2018	Discharges per 100 people	All ages	18.69	(18.09,19.29)	4.94	(4.92,4.97)	3.78
Average secondary health care costs per person, year to 30 June 2018	Thousands of dollars	All ages	6.59	(6.59,6.59)	1.22	(1.22,1.22)	5.40
Number of different pharmaceuticals prescribed, year to 30 June 2018	Number	All ages	6.17	(6.14,6.20)	3.83	(3.83,3.83)	1.61
Cigarette smoking rate as at 2018 Census	Percent	15 and over	16.65	(16.18,17.13)	13.75	(13.71,13.79)	1.21
Cigarette smoking cessation rate as at 2018 Census	Percent	15 and over	10.43	(10.04,10.82)	19.55	(19.51,19.60)	0.53
Knowledge and skills							

Domain and indicator	Measure	Age range	Intellectual disability		No intellectual disability		Rate ratio
			ASR	95% CI	ASR	95% CI	
Prior participation in early learning, 2018	Percent	5 to 14	94.08	(92.42,95.75)	94.86	(94.62,95.10)	0.99
Specialist school enrolment, 2018	Percent	5 to 17	25.12	(24.38,25.86)	0.86	(0.84,0.88)	29.36
Holding a driver's licence, June 2018	Percent	18 and over	30.08	(29.45,30.71)	87.84	(87.73,87.94)	0.34
No qualification, June 2018	Percent	18 and over	53.11	(52.16,54.07)	10.01	(9.98,10.05)	5.30
Highest qualification at least NCEA Level 2 or equivalent, June 2018	Percent	18 and over	32.62	(31.74,33.50)	79.74	(79.62,79.85)	0.41
Work, care and volunteering							
Parents as carers - At least one parent in the household not in full-time work as at 2018 Census	Percent	Under 15	74.25	(70.96,77.54)	62.78	(62.60,62.96)	1.18
Parental employment participation - All parents in the household in paid employment as at 2018 Census	Percent	Under 15	47.76	(45.37,50.15)	63.89	(63.71,64.07)	0.75
Employment participation, as at 30 June 2018	Percent	18 to 64	21.19	(20.61,21.77)	77.03	(76.92,77.14)	0.28
Volunteering outside the home - unpaid activities outside the home in the four weeks to 6 March 2018	Percent	15 and over	9.97	(9.60,10.34)	22.38	(22.33,22.43)	0.45
Benefit receipt, as at 30 June 2018	Percent	18 to 64	82.95	(81.79,84.11)	10.09	(10.05,10.13)	8.22
Youth not in education, employment or training, as at 30 June 2018	Percent	15 to 24	40.36	(38.88,41.83)	12.71	(12.62,12.80)	3.18
Youth studying and not working, as at 30 June 2018	Percent	15 to 24	43.29	(41.81,44.76)	28.09	(27.95,28.22)	1.54
Youth working and studying, as at 30 June 2018	Percent	15 to 24	3.59	(3.15,4.02)	24.84	(24.72,24.97)	0.14
Youth working and not studying, as at 30 June 2018	Percent	15 to 24	12.77	(11.94,13.60)	34.36	(34.22,34.50)	0.37
Income, consumption and wealth							
Average total annual personal income, year ending 31 March 2018	Thousands of dollars	18 to 64	31.98	(31.98,31.99)	49.25	(49.25,49.25)	0.65
Average equivalised disposable household income, year ending 31 March 2018	Thousands of dollars	Under 15	33.40	(33.39,33.40)	40.52	(40.52,40.52)	0.82
		15 and over	38.37	(38.36,38.37)	47.46	(47.46,47.46)	0.81
Living in a low-income household - Equiv disposable household income < 50% of median year ending 31 March 2018	Percent	Under 15	12.55	(11.28,13.82)	11.24	(11.16,11.31)	1.12
	Percent	15 and over	5.69	(5.34,6.03)	9.53	(9.50,9.57)	0.60
Living in most deprived NZDep decile, June 2018	Percent	Under 15	23.90	(22.31,25.49)	14.72	(14.64,14.80)	1.62
		15 and over	20.66	(20.14,21.19)	10.77	(10.74,10.81)	1.92

Domain and indicator	Measure	Age range	Intellectual disability		No intellectual disability		Rate ratio
			ASR	95% CI	ASR	95% CI	
Living in a household with access to the internet as at 2018 Census	Percent	All ages	73.44	(72.14,74.74)	92.20	(92.09,92.30)	0.80
Any international travel, five years to 30 June 2018	Percent	All ages	24.87	(24.28,25.46)	62.57	(62.49,62.64)	0.40
Housing							
Average number of addresses recorded, 1 July 2013 to 30 June 2018	Number	All ages	4.32	(4.30,4.35)	3.25	(3.25,3.25)	1.33
House is mouldy or damp as at 2018 Census	Percent	All ages	36.96	(36.01,37.90)	31.08	(31.02,31.15)	1.19
House is crowded as at 2018 Census	Percent	All ages	16.08	(15.49,16.67)	12.23	(12.20,12.27)	1.31
Family and friends							
Living in the same household as a registered birth parent as at 2018 Census	Percent	Under 18	83.68	(80.90,86.45)	94.25	(94.04,94.47)	0.89
		18 and over	58.00	(56.09,59.92)	38.72	(38.53,38.91)	1.50
Living in a sole parent household - in a family with only one parent as at 2018 Census	Percent	Under 15	35.46	(33.35,37.58)	25.40	(25.28,25.51)	1.40
Born to at least one teen parent (under 20 years old)	Percent	All ages	11.18	(10.68,11.67)	8.58	(8.53,8.62)	1.30
Ever been registered as married or in a civil union	Percent	18 and over	5.35	(5.00,5.70)	21.05	(20.99,21.11)	0.25
Had a divorce or dissolution, if ever had a marriage or civil union	Percent	18 and over	28.54	(23.59,33.48)	12.23	(11.63,12.83)	2.33
Ever been registered as a parent on a birth certificate	Percent	18 and over	15.49	(14.97,16.01)	41.71	(41.64,41.79)	0.37
Safety							
Average number of victimisations recorded in New Zealand Police data, to June 2018	Victimisations per 100 people	Under 15	2.19	(1.84,2.54)	0.68	(0.66,0.69)	3.24
		15 and over	5.61	(5.34,5.87)	3.25	(3.23,3.27)	1.73
Children exposed to violence, to June 2018	Percent	Under 15	18.09	(16.82,19.35)	9.77	(9.71,9.84)	1.85
Children placed in care by Oranga Tamariki, to June 2018	Percent	Under 15	9.15	(8.31,9.99)	1.19	(1.17,1.21)	7.69
Adult with a child who has been placed in care, to June 2018	Percent	15 to 64	12.73	(11.71,13.75)	0.87	(0.85,0.89)	14.64
Convicted of a crime, five years to June 2018	Percent	18 and over	8.83	(8.47,9.19)	5.63	(5.60,5.66)	1.57
Currently incarcerated (sentenced or on remand), June 2018	Percent	18 and over	0.97	(0.85,1.08)	0.29	(0.28,0.29)	3.35

Note: All rate ratios are statistically significantly different from 1 unless otherwise indicated. A * indicates a rate ratio statistically significantly different from 1 at the 5 percent level, while a + indicates a non-statistically significant result.

Kelving Lott – Twilight

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