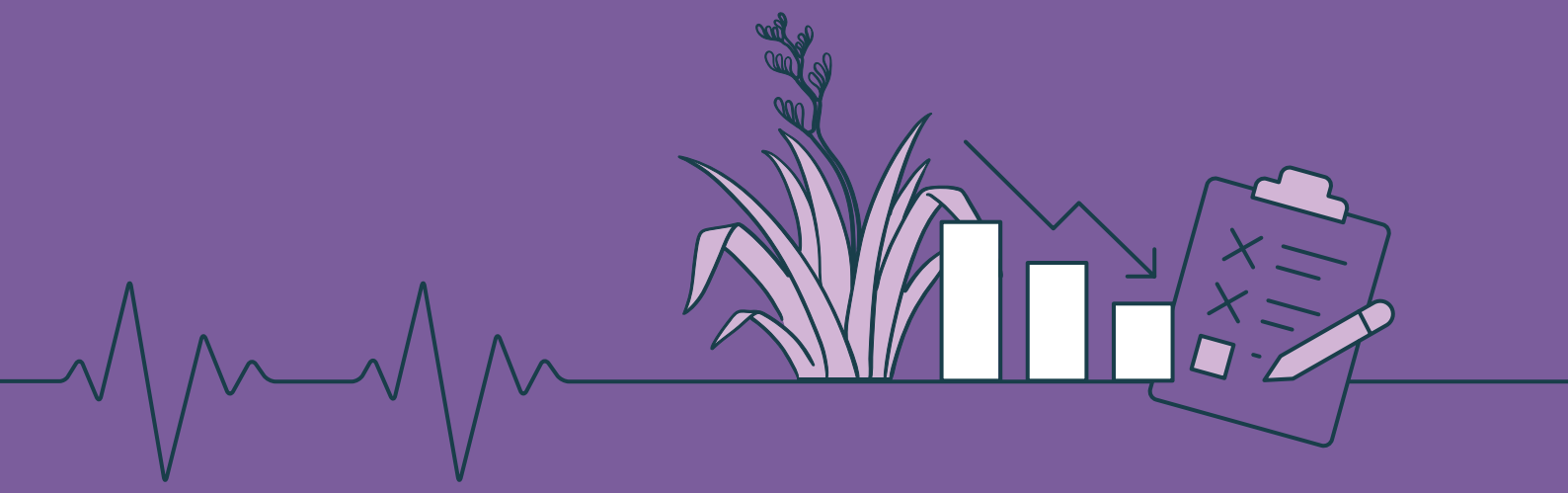
Managed decline:

The Health of New Zealand 2011 to 2024



Andrea Black
October 2025

Report for the Association of Salaried Medical Specialists

ASMS
TOI MATA HAUORA

About the author

Andrea Black is an economist and Chartered Accountant Fellow. She was formerly a Principal Policy Consultant for FrankAdvice and the economist for the New Zealand Council of Trade Unions. Andrea comes from a public service background which includes the Treasury and Inland Revenue.

Acknowledgements

The author would like to particularly acknowledge her colleague Virginia Mills for her contributions to this report and all the support of the ASMS policy team. She would also like to thank Dr Felicity Dumble, Public Health Specialist and Dr Bill Rosenberg, Visiting Scholar at Victoria University of Wellington for their critical peer review of this paper.

Suggested citation

Black, A. Managed Decline: The Health of New Zealand 2011 to 2024. Wellington. ASMS, 2025.

Contents

List of tables

List of figures

Foreword

Good health is an unassailable human right and yet in Aotearoa, it has been in a form of managed decline since 2011/12 – according to the Ministry of Health's own annual survey.

We are now in a world where excellent health is only for a small minority of the population, and we have 40% more of the population in fair health than we did in 2011/12.

Alongside this ASMS has found that psychological distress is increasing. Very high and high psychological distress has almost tripled in the same period.

And this comes at a cost.

To the individual and society, just since 2011/12, there is now an additional social cost of between $2.6 and $8.6 billion a year, depending on parameters.

Underinvestment in health alongside under investment in housing, welfare and education by successive governments may have improved the government's books, but the cost is being borne by the people of Aotearoa.

This shows up in the statistics around unmet need for health care – with people finding it increasingly difficult to access mental health care and see a general practitioner. This unmet need doesn't simply disappear. Instead, it shows up in other parts of the health system - like the emergency department - and results in people's health deteriorating.

Again, that is what this report shows.

Since 2016/17 unmet need for mental health services has doubled from 4.9% of the adult population to 10.7% in the most recent survey. Unmet need for a general practitioner due to wait time has increased from 11.6% of the adult population to 25.7% in 2023/24 while the percentage of the adult population that has visited an emergency department has increased from 13.6% of the adult population to 17.8% in 2023/24.

This is the lived experience of our members and the rest of the health workforce.

The small glimmer of relatively good news in this report is that relatively speaking, the percentage of the population that is in poor health has not substantially increased. However, the population has increased. This means the absolute number of those who are in poor health and in need of health services has also increased.

With an increasing proportion of the population in fair health – it is just a matter of time before this spills over to into poor health - with implications for health services, the workforce and society as a whole.

“Underinvestment in health alongside under investment in housing, welfare and education by successive governments may have improved the government's books, but the cost is being borne by the people of Aotearoa.”

Our report shows no improvement in outcomes for women, Māori, Pacific People and the Disabled – people for whom the health system is currently suboptimal.

This is reflected in the recent life expectancy statistics. For the first time in living memory our life expectancy – on average – has stalled. Although there have been some welcome increases for Māori, Māori life expectancy remains significantly below non-Māori life expectancy.

Our report shows no improvement in outcomes for women, Māori, Pacific People and the Disabled – people for whom the health system is currently suboptimal. It also shows that the decline in health is disproportionately impacting younger age groups of 15-64.

This age group represents our workforce. This age group is also the one that predominately cares for others and represents the future of Aotearoa.

ASMS members and the rest of the health workforce have been carrying this deterioration for too long. Unless we want a world where those in fair health outnumber those in excellent health by a factor of 3 – which is where we are heading without changes – we need government to invest in the underlying determinants of health such as housing, education and welfare.

The government must also act urgently to improve the health of the health system – so that we can attract and retain people to work in it and meet the very clear needs of New Zealanders that are currently going unmet.

Sarah Dalton
Executive Director
Toi Mata Hauora
Association of Salaried Medical Specialists

Managed Decline – The Health of New Zealand 2011 to 2024

I value these findings because they're part of a continuous survey, meaning we can monitor trends over time (Reti 2024)

Executive summary

> **"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity…the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition."** (World Health Organisation Constitution 2025)

There are very few people who would disagree with this definition by the World Health Organisation. From a New Zealand perspective, it aligns with ideals of a country of *milk and honey* and/or *the best country in the world to raise children*.

But how does Aotearoa New Zealand actually live up to it? In short – not well and getting worse.

New Zealand Health Survey[1]

Since 2011/12, the data from the New Zealand Health Survey (NZHS) (Ministry of Health 2024) shows that the health of people in Aotearoa New Zealand has been in a form of managed decline. That is, in the adult population there has been a:

- significant decline in self-reported *excellent health*[2] – 43% (from 20.2% to 11.5%),
- significant increase in self-reported *fair health* – 41% (from 8.3% to 11.7%)

But with little change in poor health (from 2.5% to 2.9%) and, within some age groups an improvement in this indicator. These changes have significant implications for the health system as those in fair health are objectively much more likely to be seeking services from the health system than those in self-reported *Excellent* or *Very Good health*.

1 This is discussed in much greater detail in Appendix 1; Methodology/Limitations

2 *Excellent Health* is the level that would best align to the WHO definition

What is self-rated health?

Self-rated health is used frequently in health research and is based on a person's own perception of their current health status on a scale of excellent, very good, good, fair and poor (MOH). Although self-rated health is subjective, it is a validated measure that has shown to be a good predictor of mortality (OECD, DeSalvo).

Poor and fair self-rated health are associated with chronic disease multimorbidity, depression, reduced functional capacity and more frequent use of health services (Palladino, 2016; OECD).

While the self-reported measures are inherently subjective, it has been found that these measures are correlated with problems with daily activities, fatigue and energy and being treated for a chronic health problem. (Pernerger, Gayet-Ageron and Others 2013) (Lazarevic and Quesnel-Vallee 2023) (Idler and Benyamini 1997)

Using Treasury's CBAx impact database (The Treasury 2024) this decline in physical health has an estimated annual monetised value of up to $3.6 billion per year, reflecting the annual loss of subjective wellbeing from the decline in physical health since 2011/12.

While the respective changes to excellent and fair health arose (largely) proportionately for women, Māori and Pacific Peoples, in each case, somewhat counterintuitively, it was the working age adult population under 65 years of age that faced steeper declines in health than those 65 and over.

That is:

- *Excellent Health* saw a 45% decline for those under 65 (from 21.3% to 11.8%) and a 25% decline for those 65 and over (from 13.7% to 10.2%).
- *Fair health* saw an increase of 54% for those under 65, while for those 65 and over it was broadly unchanged (12.1% to 12.3%).

Alongside the decline in overall health, there was also a substantial increase in psychological distress, particularly in the younger age groups and particularly since 2019/20. We have estimated this to have a monetised annual cost of up to $8.6 billion per year in loss of subjective wellbeing compared to 2011/12, if the increases in psychological distress continue.

A further driver of declining health could also be the increased prevalence of obesity (Figure 13). Since 2011/12 obesity has increased from 28.8% of the population to 33.8% in 2023/24. This is likely to contribute to the overall decreases in e*xcellent health* and increases in *fair health*.

Of note, daily smoking has declined from 16.4% to 6.9% over the same time period. However, vaping has increased meaning the total percentage of the adult population either vaping or smoking on a daily basis has increased to 16.8%, up from 14.8% in 2017 (Figure 14).

For gender and ethnicity, though, there has been a much smaller increase in *poor health* with a marginal decline for those 65 and over. We also note that health conditions recorded by the health survey have plateaued as a percentage of the population, as have those in receipt of a health-related benefit as a percentage of the labour force.

This indicates that for now, current policy settings for health and the determinants of health have generally neither improved nor worsened *poor health*, even though the *excellent* and *fair health* indicators are going in the wrong direction.

It is an open question as to whether a lid will be kept on poor health. Increasing numbers of people moving into the *fair health* category; the static nature of smoking and vaping; the increase in obesity; and the increase in psychological distress (which appears to have significantly increased over the Covid period and particularly for younger age groups but not decreased since then) may mean an increasing proportion of people with *poor health* in future.

Monetised impact

Social costs

Using the monetised values in the Treasury's CBAx impact database (The Treasury 2024), we have also attempted to provide a scale of the social cost of the decline in excellent health and the rise of fair health since 2011/12. As we have been using the change in prevalence from the NZHS (Ministry of Health 2024), this disregards any impact that would arise simply from a population change. The impact on the change in prevalence to the increased population, is however, included in any calculation as the calculations are based on the current population. Appendix 2: Monetising social impacts discusses the underlying methodology.

The annual monetised costs, assuming no further change, are found on page 13.

The potential social costs due to a decline in subjective wellbeing vary from a possible $3.6 billion when assessed as physical health alone to $8.6 billion per year (due to the increase in psychological distress from 2011/12 to 2023/24). This is also discussed in the Appendix 1: Methodology/limitations.

Economic Costs

The potential economic costs of reduced output as a result of more people leaving work due to ill health than was the case in 2011/12, and the increased cost of presenteeism[4] due to the increase in *fair* health, we have assessed at $1.9 billion and $1.68 billion respectively.

Fiscal Costs

Fiscal costs we have assessed as both increasing and - in some cases - decreasing.

The NZHS showed a slight decline in the prevalence - 0.5 percentage points (although potentially not in absolute terms) - of cardiovascular disease. This gave a relative potential decline in fiscal costs of $233 million per year compared to 2011/12. Diabetes, however, had a 0.9 percentage point increase - an additional annual fiscal cost of $216 million compared to 2011/12.

Ambulatory Sensitive Hospital (ASH) events – visits to hospital that timely primary care could have prevented – had an increased annual fiscal cost of $108 million for children aged 0-4 years and $70 million for those between 45 and 65 years. These numbers did not relate to prevalence and simply involved the cost of an additional almost 9,000 events between 2020 and 2024.

We have not calculated an additional fiscal cost for other conditions covered by the health survey, including arthritis, stroke, and gout as their prevalence has not materially changed between 2011/12 and 2023/24 and therefore additional costs would be close to zero. Similarly, we reviewed the health-related benefits, Job Seeker health condition and Supported living and again found little change in terms of the percentage of the population affected.

4 Presenteeism refers to the lost productivity that occurs when employees are not fully functioning in the workplace because of an illness, injury, or other condition. Even though the employee may be physically at work, they may not be able to fully perform their duties and are more likely to make mistakes on the job. (Investopedia 2025)

In particular, the baseline figures reflect stark and unacceptable inequities in health status between Māori and non-Māori, and between the most deprived and least deprived, which remain unaddressed.

Again, this is not to say that the absolute numbers of people involved have not increased simply due to population increase, but simply that there has been little or no increase as a percentage of the population since 2011/12. That is where prevalence of a condition has remained stable, population increases still mean more people in absolute terms are impacted and will be seeking care, increasing demand on the health system.

Unmet need

Alongside the decline in relative health has been an increase in unmet need.

This is particularly notable in mental health, given the substantial increase in high and very high psychological distress over this period. We have been unable to calculate a fiscal consequence from this, but we were able to assess that the government has saved almost $6 million per year due to a proportionate decline in the population that have had a GP visit from 2011/12 (78.3%) to 2023/24 (75.6%).

While we have not been able to calculate a direct monetary consequence from this unmet need, in many ways the calculation of decline in subjective wellbeing could be considered to be the monetary cost. This is because the capacity of the health system is relatively fixed – meaning that the decline in relative health shows up not so much in increased spending but in increased unmet need.

Unsurprisingly, any 'fiscal saving' from a reduced number of GP visits was more than outweighed by an increase in visits to the emergency department. In 2011/12, 13.6% of the adult population visited an emergency department, and by 2023/24 this increased 31% to 17.8%. Again, using the values from the Treasury CBAx impact database we assessed that this increase resulted in an additional fiscal cost of $199 million per year than if ED visits had stayed at the same level as in 2011/12.

Future state

Finally, as a thought exercise, we applied the same changes in self-reported health between 2011/12 and 2023/24 twelve years into the future to 2035/36.

This would mean that if current trends continue, just 6.6% of the adult population would have health that aligns with the WHO's definition, and the number of people in *fair health* would be double that of 2011/12. The monetised social cost of an increase in *fair health* would be an estimated annual $3.3 billion per year on top of the original estimate of $3.6 billion from 2011/12 to 2023/24.

Further, it is by no means clear that the levels of *poor health* would be able to be kept at the possible levels below given such an increase in those moving to *fair health*.

It is important to bear in mind that although we are analysing trends using 2011/12 as a baseline, that is not to say that 2011/12 was in anyway the high-water mark for optimal health or adequately addressing the determinants of health. In particular, the baseline figures reflect stark and unacceptable inequities in health status between Māori and non-Māori, and between the most deprived and least deprived, which remain unaddressed.

Table 1: Self-reported health – actual and potential changes over time

	2011/12 (Actual)	2023/24 (Actual)	Net Change	2035/36 (possible)	Net change (possible)
Excellent	20.2	11.5	8.7 ↓ (43%)	6.6	4.9 (43%)
Very Good	37.2	39.3	1.9 ↑	39.3	
Good	31.8	34.7	3.0 ↑	34.7	
Fair	8.3	11.7	3.4 ↑ (41%)	16.5	4.9 (41%)
Poor	2.5	2.9	0.4 ↑ (20%)	2.9	
Non-excellent health			8.7 ↑		4.9

In ASMS' view, a future where only 6.6% of the adult population reports a health status that meets the WHO definition, and where approximately 20% of the population is in fair or poor health, would not be a successful outcome for New Zealand.

To address and reverse the managed decline of Aotearoa New Zealand's health, we recommend that:

1) The determinants of ill health - both social and commercial are addressed. That is investment to improve housing, reduce poverty and increase the uptake of education alongside measures to improve nutrition and physical activity. A stronger commitment to address the harmful effects of tobacco, alcohol and unhealthy foods is also needed.

2) The reasons behind the increase in psychological distress, particularly among younger age groups, are understood and addressed.

3) Unmet need for both primary and secondary healthcare, including access to GP services and mental health care) is measured and reported on annually, to inform long term health system planning based on population need.

4) Ensure the health system is fit for purpose. As well as measuring, understanding and addressing the unmet need from the working age population for primary and secondary health care, ensure care continues for those over 65.

Finally, urgent measures are needed now to retain and expand New Zealand's medical and health workforce to meet the needs of an increasing population that is declining in health.

Table 2: Estimated annual costs due to decline in health since 2011/12

		Alternative calculation
Social Costs		
Physical Health	$3.6 billion	
Relates to fair and poor health only		$2.6 billion
Mental Health	$8.6 billion	
Relates to high and very high psychological distress		$6.9 billion
Economic Costs		
Lost wages[5]	$1.99 billion	
If 2022/23 is used as the comparator		$1.1 billion
Potential increased presenteeism[6]	$1.68 billion	
Fiscal Costs		
ED Visits	$199 million	
GP Visits	($5.1 million)	
Diabetes	$216 million	
Cardiovascular disease	($233 million)	
ASH events 0-4 and 45-64[7]	$178 million	

5 From no longer being in paid work due to sickness or injury

6 An imputed number based on the change in 'not good' health since 2011/12

7 This is a comparison to 2020 rather than 2011/12

Part 1: Results from the NZ Health Survey

Introduction

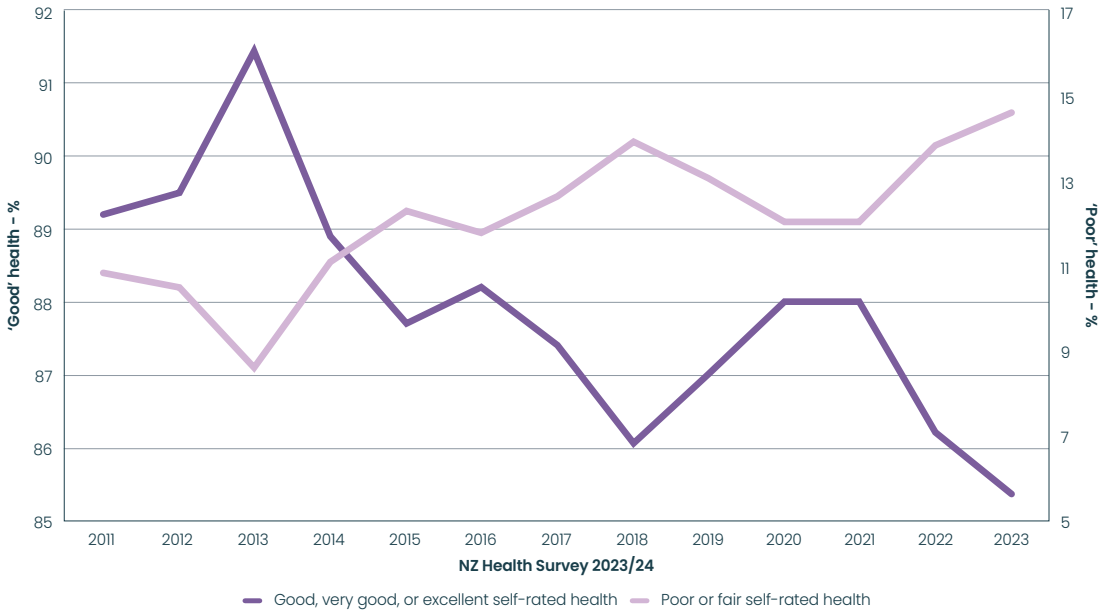
Every year the New Zealand Health Survey (Ministry of Health 2024) is commissioned by the Ministry of Health and surveys people in Aotearoa New Zealand on their view of their own health status.[8]

Every year the press release that accompanies the survey sets out that most New Zealanders are in 'good' health. In 2023/24, for example, the lead statistic was that 85.4% of adults and 96.5% of children were reported as having good health (Reti 2024).

On the face of it, this seems like good news. 85.4% is a large percentage of the adult population that is in 'good' health and something to be welcomed - as it regularly is by Ministerial press releases. What is not highlighted is that the corollary is that 14.6% of the population is not in 'good' health, or how or why health has been declining.

The graph below represents the change over time between 'good' and 'not good' (poor or fair) health.

Figure 1: Comparison between 'good' and 'not good' health



8 The underlying methodology of the NZHS and its limitations are discussed in Appendix 1: Methodology/limitations

In 2011/12, the numbers were 89.2% and 10.8% respectively, meaning that in the following twelve years there was an almost 4 percentage point decline in excellent/very good/good health, with an equivalent increase in fair/poor health.

The equivalent rise in fair/poor health is concerning as these are the individuals that could be expected to make much greater use of the health system and would, inherently, have a greater potential for increased presenteeism than those not in fair/poor health.

While the self-reported measures are inherently subjective, it has been found that such measures are correlated with problems with daily activities, fatigue and energy and being treated for a chronic health problem. (Pernerger, Gayet-Ageron and Others 2013); (Lazarevic and Quesnel-Vallee 2023); (Idler and Benyamini 1997); (Palladino 2016). This is discussed further in Appendix 2 on page 37.

What is self-rated health?

Self-rated health is used frequently in health research and is based on a person's own perception of their current health status on a scale of excellent, very good, good, fair and poor (MOH). Although self-rated health is subjective, it is a validated measure that has shown to be a good predictor of mortality (OECD, DeSalvo).

Poor and fair self-rated health are associated with chronic disease multimorbidity, depression, reduced functional capacity and more frequent use of health services (Palladino, 2016; OECD).

Drilling further into the figures, the outcomes are even less positive.

In the last twelve years, there has effectively been a downwards shift in the self-reported health status of New Zealanders, from excellent to fair, albeit with a relative plateauing of those in poor health.

That is, the percentage of the adult population in 2023/24 that is in *excellent health* – 11.5% - is now broadly the same as those in *fair health*. This can be compared with 2011/12 where adults in *excellent health* – 20.2% – were 2.5 times the number of adults in self-reported *fair health* – 8.3%.

Also, as the adult population increased over this period, this means that the absolute impact of the decline in health is higher in terms of the number of people impacted than would have been the case without an increase in population. This has implications for the demand for health services.

Health indicators such as our overweight and obesity numbers also suggest declining health. While the percentage of the population that is overweight has decreased since 2011/12, the percentage that is obese has increased meaning that the combined total is essentially unchanged since 2011/12. (Figure 13)

A similar outcome arises with the smoking versus vaping statistics. While daily smoking has declined since 2011/12, daily vaping has increased since 2017, to the point that, in 2023/24, the percentage of people smoking or vaping is unchanged compared to 2011/12. (Figure 14)

Change in self-reported *excellent health*

At its heart, the driver in the fall in *excellent/very good/ good health* of 3.8 percentage points was an 8.7 percentage point decline in excellent health spread over the other 4 categories. The potential limitation of this approach is discussed on page 38.

That is, while there was only a 3.8 percentage point change between the two categories of *excellent/very good/good and fair/poor*, there was in fact an 8.7 percentage point or 43% decline in those who reported *excellent health*.

Table 3: Self-reported health - percentage of adult population 15 years and over

	2011/12	2023/24	Net Change
Excellent	20.2	11.5	8.7 ↓ (43%)
Very Good	37.2	39.3	1.9 ↑
Good	31.8	34.7	3 ↑
Fair	8.3	11.7	3.4 ↑ (41%)
Poor	2.5	2.9	0.4 ↑ (16%)
Non-excellent health			8.7 ↑

What is driving the changes?

Examining the change in *excellent* health – we found the following things:

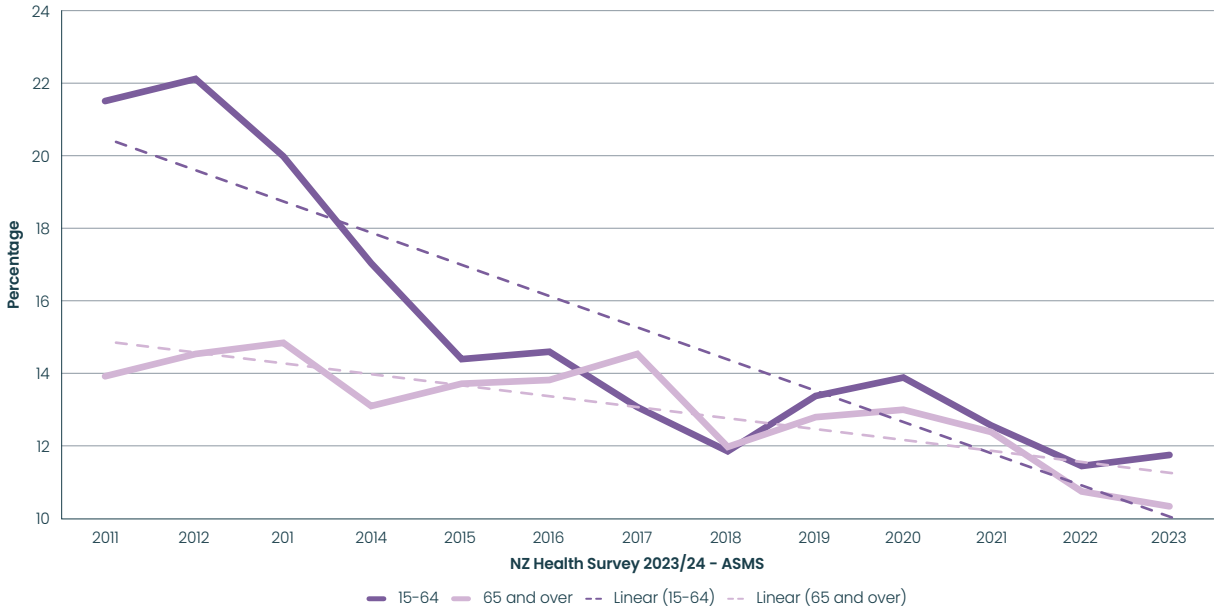
While there was a decline in *excellent* health for both Māori and non-Māori, its fall was broadly proportional to the original levels (Figure 15). For gender, we found that the fall was also broadly proportional to the 2011/12 levels, although with women having marginally disproportional excellent health in 2011/12 and men in 2023/24 (Figure 16).

There is also a gender and ethnicity dimension with poor or fair health that is clearer than with the decline of excellent health. Here it is clear that the increase in fair or poor health has disproportionately affected women, Māori and Pacific Peoples, with Māori and Pacific women being most affected (Figure 17, Figure 18, Figure 19, Figure 20).

Change in self-reported health by age

The major change, however, relates to age group. Self-reported *excellent health* for the under 65s has massively declined between 2011 and 2023 to the point it is at comparable levels to those aged 65 and over. Interestingly, most of the decline in *excellent health* has arisen in the younger age groups, with the largest decline occurring between 2011 and 2015.

Figure 2: Self-reported excellent health by age band 2011/12 to 2023/24



Similar outcomes arise when we look at the rise of *fair health*. There has been a rise in fair health for those under 65 to the point that the prevalence in this age group is comparable to that of those aged over 65.

Figure 3: Self-reported fair health by age band 2011/12 to 2023/24

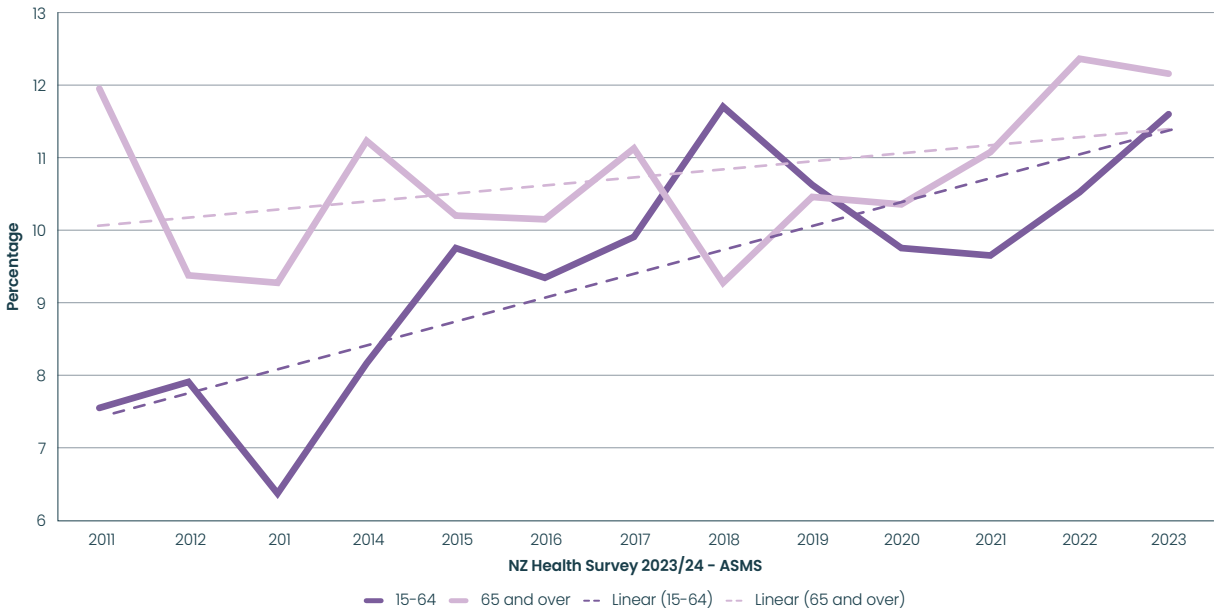


Table 4: Self-reported health - percentage of adult population aged 15-64

	2011/12	2023/24	Net Change
Excellent	21.3	11.8	9.6 ↓ (45%)
Very Good	37.7	39.2	1.5 ↑
Good	31.1	34.5	3.4 ↑
Fair	7.6	11.7	4.1 ↑ (54%)
Poor	2.2	2.8	0.6 ↑ (27%)
Non-excellent health			9.6 ↑

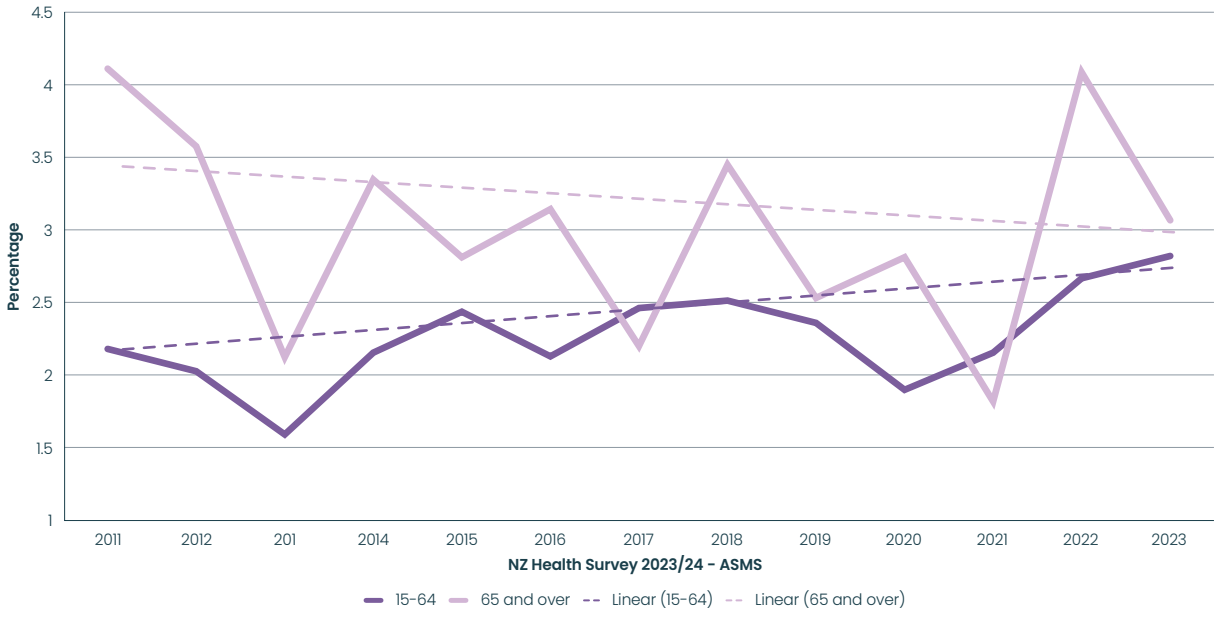
As can be seen from the table above, the rates for the 15-64 age group are broadly similar to the entire adult population, but with a slightly more extreme fall – 9.6 percentage points versus 8.7 for the entire population. The effect of which is that in 2023/24, excellent health for adults aged under 65 – 11.8 percentage points - is now broadly comparable to those 65 and over, with that age group facing very little change in the preceding 12 years.

As shown in the previous graphs, the largest driver of this is a fall in *excellent health* between 2011 and 2015, the majority of which arose from the 15-24 age group (Figure 21). It is unclear to us the reason for this drop over this period.

Poor health by age

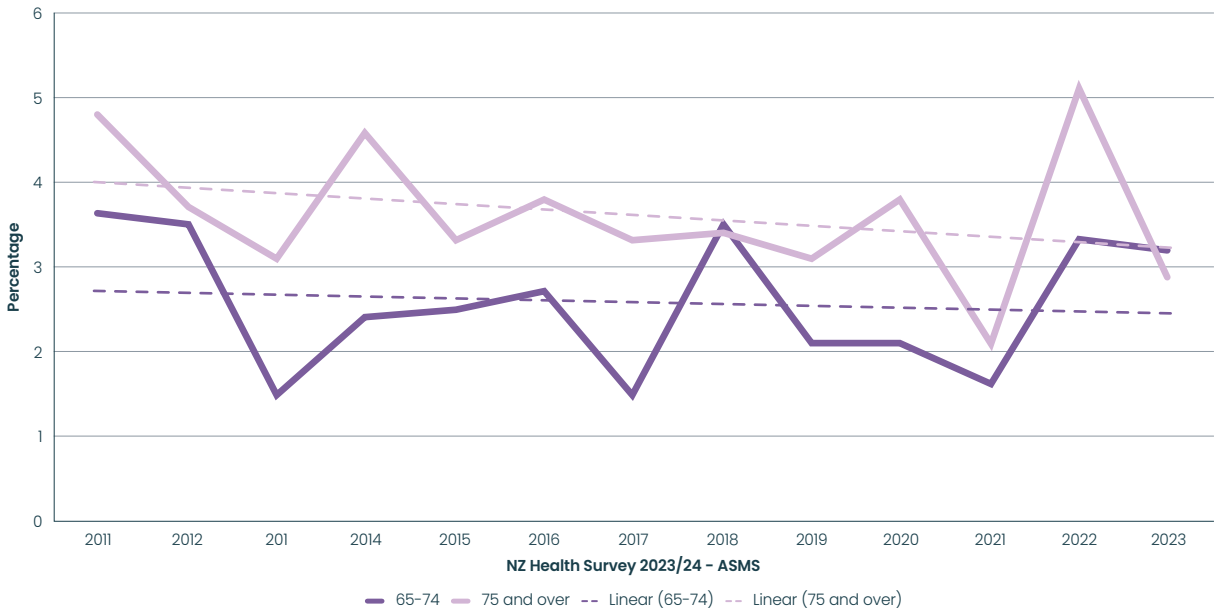
Poor health, for both age groups, has effectively plateaued although in 2023/24 the levels for the two sets of age groups are now effectively comparable. That is, 3.15 percentage points for those 65 and over and 2.8 percentage points for those under 65 years.

Figure 4: Self-reported poor health by age band from 2011/12 to 2023/24



Unpacking *poor* health a bit more, we see that poor health for over 65s has in fact marginally declined between 2011 and 2023. That is, fewer people over 65 are proportionally in poor health than was the case in 2011. This is particularly the case for those over 75.[9]

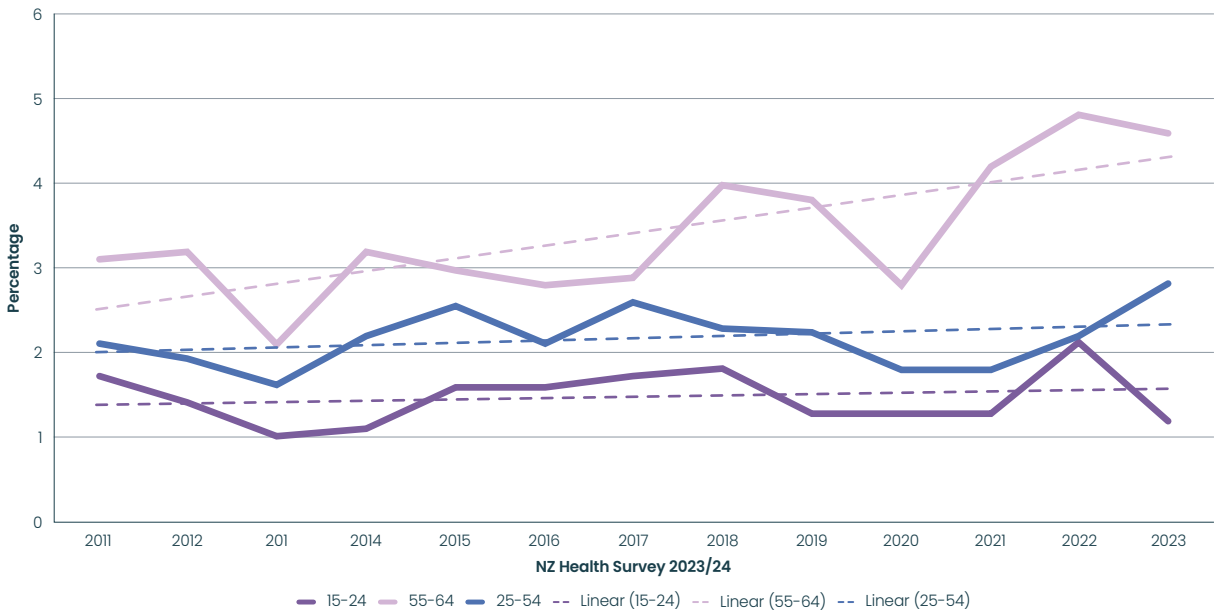
Figure 5: Self-reported poor health - 65 and over - 2011/12 to 2023/24



For those under 65, the greatest increase in reported poor health has been in the 55-64 age group. Although in both cases, for those under and over 65, the changes are relatively small.

9 Statistically this could have arisen simply by there being fewer people in 2023/24 over 75 compared to 2011/12, However this is not the case as the NZHS population data shows that in 2011/12 there were 258,000 people over 75 while in 2023/24 it was 387,000. Even allowing for the increased population there was a decrease by 1,000 people in this age group that were in poor health – from 12,000 to 1,000,

Figure 6: Self-reported poor health - under 65 - 2011/12 to 2023/24



Life Expectancy

The plateauing of poor and fair health for those over 65 is now seen in the most recent life expectancy statistics. While there have historically been quite large increases in life expectancy between measurement points, (Figure 22) the rates from 2012 indicate a plateauing of life expectancy (Figure 23).

We note that while there were disproportionate increases in life expectancy for Māori, substantial inequities persist, with Māori life expectancy continuing to be well below the average for New Zealand (Stats NZ 2025).

Psychological Distress

Another issue worth examining in this survey is the increase in psychological distress, particularly the increase in self-reported *high or very high psychological distress*. That is, the overall levels of *high or very high psychological distress* have almost tripled (4.6% v 13%) in the years between 2011/12 and 2023/24.

Table 5: Self-reported psychological distress experienced in the last 4 weeks - % of adult population

	2011/12	2023/24	Net Change
Low or no	83.9	67.8	16.1 ↓ (19.2%)
Moderate	11.4	19.1	7.7 ↑ (67.5%)
High	3.5	9.3	5.8 ↑ (165%)
Very high	1.1	3.7	2.6 ↑ (236%)
Moderate or higher psychological distress			16.1 ↑

Psychological distress by age group

In fact, in 2011/12 all age groups self-reported levels around 5% for high or very high psychological distress (Figure 24), but by 2023/24 this had risen to (Figure 25):

- over 20% for those between 15 and 34,
- 12.3% for those between 35 and 54 and
- almost 7% for those over 55.

Equivalent outcomes arise with the decline in low psychological distress. As shown in Figure 26 and Figure 27 in 2011/12, over 80% of the population reported low or no psychological distress, but this has declined to just over 53% for those aged 15-24.

While there had been a decline in these measures leading up to 2019/2020, the largest drop arose for those aged 15-44 between 2019/20 and 2021/22 and has since plateaued. This drop appears to correlate with the Covid period.

Unmet need for mental health services

Given high levels of psychological distress, the level of unmet need for mental health and addiction services needs examining.

While the NZ Health Survey doesn't record data on unmet need before 2016, it is clear that since then the disproportionate unmet need is from women, particularly in the younger age groups, and predominantly those between 15 and 34 years old. Māori women (Figure 28) and disabled women also have a disproportionate level of unmet need compared to their male counterparts (Figure 29).

Figure 7: Unmet need for mental health services by gender

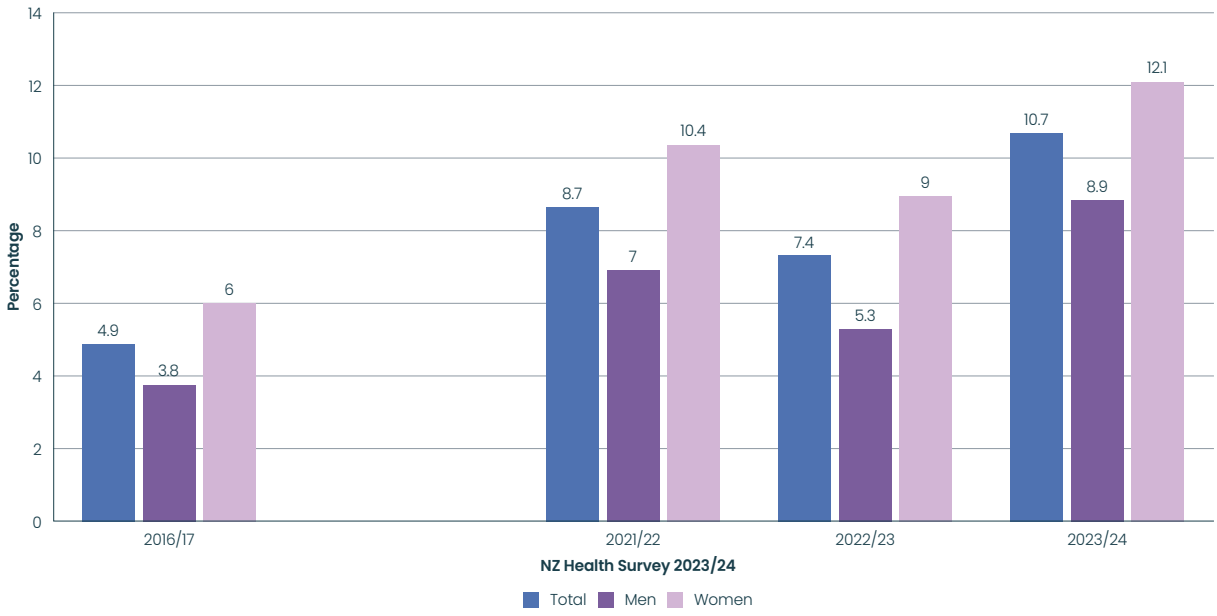
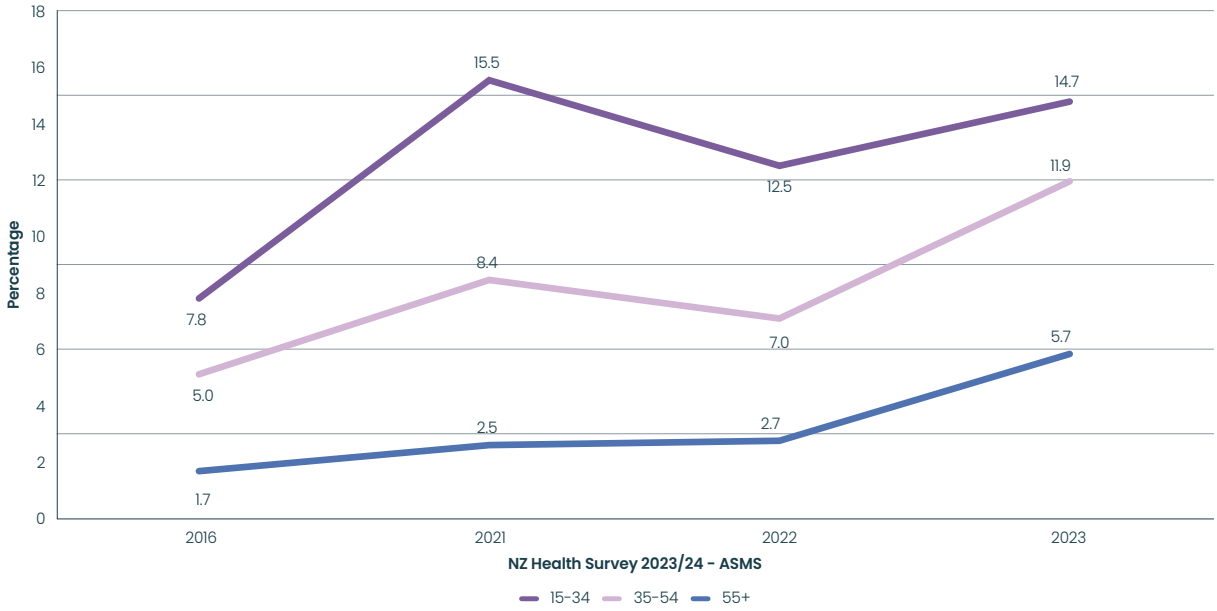


Figure 8: Unmet need for mental health services by age band



In many ways, these results are unsurprising. As the capacity in the health system is relatively fixed and has not significantly expanded to meet increasing demand, this means that with declining overall health the consequence is rising levels of unmet need. That is, the costs of declining health and unmet need are likely being borne by individuals and wider society rather than being shown as a fiscal cost, as shown in Part 2 of this paper.

Unmet need for GP due to wait time[10]

Similar trends arise for unmet need generally for GP services, with a structurally higher rate of unmet need for those under 65, but with equally increasing needs from older age groups.

While unmet need for a GP due to wait time is 25.7% overall, for women it is 30% and just over 20% for men. These broadly correspond to the results for Māori (Figure 30) and involve a more than doubling of unmet need for women since 2021/22.

10 Of all the criteria surveyed – this is the biggest obstacle

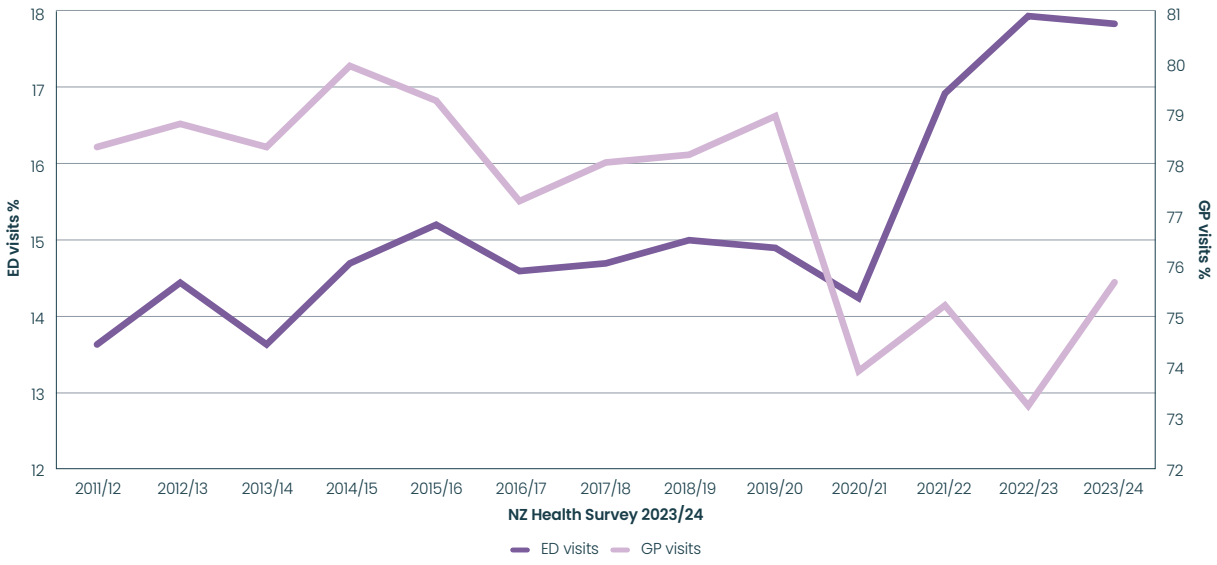
Figure 9: Unmet need for a general practitioner due to wait time - percentage of population

Emergency Department vs General Practitioner visits

Interestingly, over this period – consistent with the unmet need information – there was also an overall decrease in visits to a General Practitioner (Figure 31). Alongside this reduction in visits to a GP, there was an increase in visits to an Emergency Department (Figure 32). Both seem to drop off in the 2019/20 year, which would be correlated to a reduction in accidents and a reduced ability to access either form of care during the COVID lockdowns.

While there is a proportionate decline in GP visits by gender, and ethnicity, ED visits are more interesting. Somewhere in 2013/14, women rather than men became a more dominant user/visitor to the ED (Figure 33 and Figure 34).

Figure 10: Comparison ED and GP visits over the last 12 months



Part 2: Social, economic and fiscal costs of a decline in health

This section aims to take the information from the previous section and assess the social, economic and fiscal costs and benefits from the decline in health from 2011/12 to 2023/24. Alongside this data, we have also used other information from the Ministry of Health, Statistics New Zealand and the Ministry of Social Development.

The primary source for applying monetary values to outcomes – particularly in situations not involving a market transaction – is the impact database within the Treasury's CBAx tool. A more fulsome discussion of the database and the methodology behind applying monetary values to non-market transactions can be found in the two appendices.

Wherever possible, the analysis is based on the most conservative of options and the workings shown.

Social costs

Overall health

The New Zealand Health Survey (Ministry of Health 2024) has shown there has been a net shift from excellent to fair health between 2011/12 and 2023/24.

The Treasury CBAx impact data base (The Treasury 2024) gives a value of $337 for a change in wellbeing due to physical health on a scale of 0-100.

However, as the effective distances between ratings are not equidistant – ie the jump from good to fair is greater than the change from excellent to very good (Pernerger, Gayet-Ageron et. al, 2013) looked to recalibrate the self-ratings to a 'health thermometer' with a 0 to 100 scale. They found that excellent self-reported health was equivalent to a rating of 95.8; very good to 88.8; good to 76.6, with fair correlating to 49.7, and poor to 33.5.

As there has been a net decline from excellent, the change in ratings (ie from excellent to fair is 46.1 points on the health thermometer) is then multiplied by the population impacted by the change in prevalence and then multiplied by the Treasury impact value for a one-point change.

Table 6: Estimated annual monetised social costs of change in self-reported health of adults 15 and above from 2011/12 to 2023/24

	% Change 2011/12 and 2023/24	2023/24 Estimated adult Population[11]	Numbers impacted by change in prevalence[12]	Point change from *excellent*	Treasury impact value Physical health – scale 0-100	Monetised impact ($m)
		4,332,000			$337	
Excellent – 95.8	(8.7)		(376,884)			
Very Good – 88.8	2.1		90,972	7		$215
Good – 76.6	2.9		125,628	19.2		$813
Fair – 49.7	3.3		142,956	46.1		$2,221
Poor – 33.5	0.4		17,328	62.3		$364
			0			**$3,612**
Fair/Poor only						**$2,587**

This then gives an additional monetised cost per annum, to the extent this difference from 2011/12 continues, of between $2.6 and $3.6 billion depending on whether the change from excellent to very good or good self-reported health is considered relevant.

This cost is an attempt to place a monetary value on the effect of a reduction in wellbeing associated with a reduction in physical health for an individual. This could include an assessment of the value of a marginal reduction in ability to participate within the family, at work or wider society. This would include what is traditionally known as unpaid labour, such as parenting and household management, whose value is not formally incorporated in economic indicators such as Gross Domestic Product. Appendix 2 discusses more fully the background and methodology associated with monetising social costs.

Psychological distress

Using Treasury's impact low, medium and high values for subjective wellbeing to correlate to *moderate, high and very high psychological distress*, this change from 2011/12 gives an additional annual monetised effect of over $8 billion per year, representing the annual effective reduction in value to individuals' lives from the increase in self-reported distress compared to 2011/12.[13]

11 Populations per health status from the datasets accompanying the NZ Health Survey 2023/24

12 % change between 2011/12 and 2023/24 x adult population. That is the additional number of people at the current population impacted by the change in prevalence.

13 An alternative mechanism for calculating the monetised costs associated with the increase in psychological distress would have been to have used the impact value 184 or 185 for mental health with a scale of (0-100). However as with physical health the intervals between low and moderate and high and very high would not be equidistant. As we were unable to find any equivalent literature that would have mapped the Kessler scale to a health thermometer, we decided to use the more general WELLBY measure. This is discussed in Appendix 2.

Table 7: Estimated monetised social costs from self-reported psychological distress in adults 15 and over

	% Change 2011/12 and 2023/24	2023/24 Estimated adult Population[14]	Net incremental change	Treasury impact value Subjective wellbeing[15]	Monetised impact ($m)
		4,332,000			
Low	(16.1)		(697,452)		
Moderate	7.7		333,564	$5,212	$1,738.5
High	5.8		251,256	$15,636	$3,928.5
Very high	2.6		112,632	$26,060	$2,935
			0		**$8,602**
High/Very high only					**$6,863.5**

This gives an estimated annual additional social cost of between $6.8 and $8.6 billion, depending on whether the change from low to moderate distress warrants the imposition of a monetised cost.

Economic Costs

Other than a decline in the wellbeing of those with poorer physical and mental health since 2011/12, there are also other effects that could have a monetary cost.

These include lost output as a result of a reduced or impaired potential workforce. In all cases, the ultimate cost of lost output will exceed either the loss of wages and/or the payment of wages for low productivity work, however, for reasons of both conservatism and differing margins by industry, we have simply used the wage cost as a proxy for lost output.

We note that impacts on unpaid labour, such as parenting or household management, are already incorporated in the wellbeing measures. This is discussed on page 42.

Lost wages from no longer being in paid work due to sickness or injury

At its most extreme (other than death), a decline in health can mean an exit from the workforce. Stats NZ from the Household Labour Force Survey collects information from people who are unemployed or no longer in the labour force as to their reason for leaving their last job. Sickness and injury is one of the potential options.

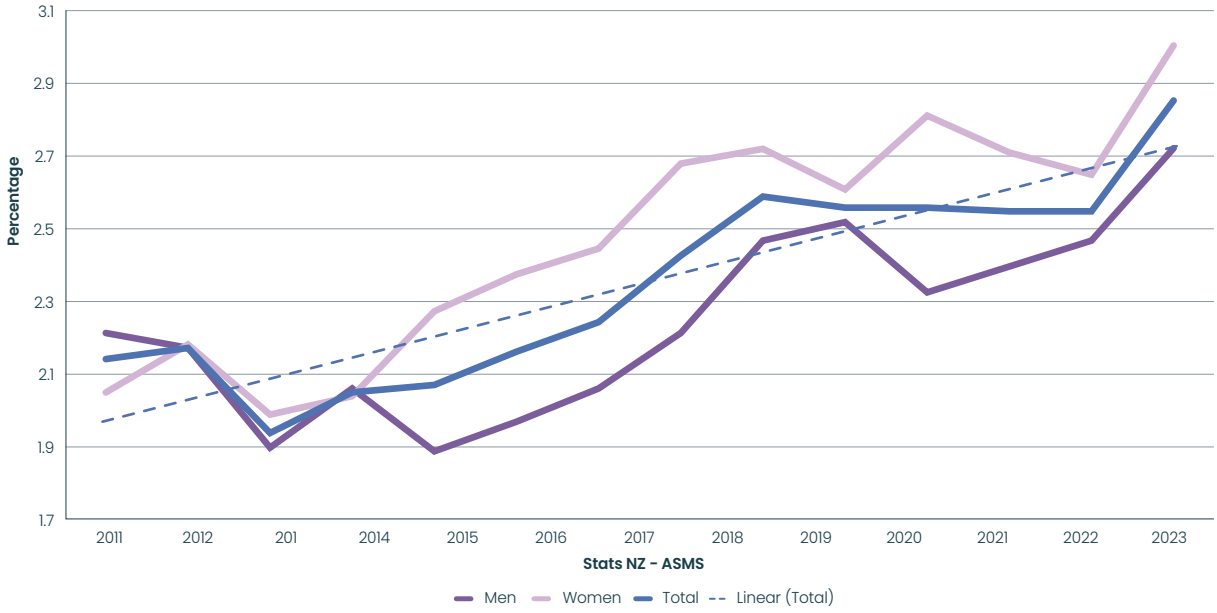
While the absolute numbers are relatively small in comparison to the total labour force, there has been overall a 33% increase (2.14% vs 2.89%) between 2011 and 2024 of those who left the workforce due to sickness or injury. In our view, as the numbers are relatively small, it is the trend that is most interesting and concerning.

For women, this becomes an increase of almost 50% (2.06% vs 3.01%).

14 From the dataset associated with the survey

15 WELLBY: One point change in life satisfaction (0-10 scale) low, midpoint and high values attributed to the relative decline in wellbeing from having the various degrees of psychological distress. Impacts 241-243. This is discussed in Appendix 2

Figure 11: Percentage of labour force left last job due to ill health or injury



The effect being that 22,000 more people are out of work due to sickness and injury than would have been the case if the 2011 rates had prevailed.

Using the average wage of $2,080 per week from the June 2025 QES from Stats NZ[16] gives a total additional loss of wages of $1.953 billion[17]. This follows the underlying assumption of the Treasury Working Paper *The Cost of Ill Health* (Holt 2010, p.18) that, "in the absence of ill health there would be a demand for these hours to be worked and the increase in the labour supply would not have impacted negatively on wages."[18]

However, as there was such a significant increase between 2022/23 and 2023/24 (from 2.55% to 2.86%), albeit with quite small numbers, should the 2022/23 results be he more realistic – then the estimated annual cost would only be $1.1 billion.

Change from 2011	**.717**
X	
2024 Total labour force	**3.071 million**
X	
average hourly wage	**$43.47a**
X	
Fulltime annual hours	**2,080**
=	**$1.991 billion**

16 Table reference QEM003AA

17 Compared to 2023 the value would be $1 billion as there was a substantial increase between 2023 and 2024. It is unclear whether 2023 or 2024 is the new baseline.

18 In this example as the additional number of people out of the workforce 22,000 is an extremely small percentage of the overall labour force, it is – in ASMS' view – a reasonable assumption. We also note that unemployment was much higher in 2011/12 than 2023/24.

Potential presenteeism[19]

(Umbrella Wellbeing 2025) found that at any one time the New Zealand worker was operating – on average – 33% below their best possible performance, giving a presenteeism cost of 6.25 days per month with an annual cost of $46.6 billion.

The research did not, however, provide any information on previous years and so any change from 2011/12 was not provided.

We can, however, attempt to make an estimate of the change based on the information in the NZ Health Survey (Ministry of Health 2024).

While Umbrella Wellbeing's survey was an average of all workers, to calculate a conservative change[20], we have used the percentage point decline in overall good health since 2011/12 - 3.8 - to impute a potential annual increased cost of presenteeism.

Estimated cost of presenteeism in 2024	**$46 billion**
/	
1+ Fall in excellent, very good, good health	**3.071 million**
=	
Estimated cost of presenteeism in 2011 (adjusted for 2024 population and in 2024 $)	**$44.3 billion**
Estimated additional annual presenteeism since 2011 due to a decline in overall health	**$1.68 billion**

Fiscal costs and benefits

There are a number of impacts within the New Zealand Health Survey (Ministry of Health 2024) that also have monetised values with the CBAx database. These include:

- Visits to an emergency department discussed on page 23
- Visits to a general practitioner discussed on page 22
- Diabetes
- Cardiovascular disease and
- Inpatient visits, which are relevant for an increase in Ambulatory Sensitive Hospitalisations (Figure 35)[21]

We note that the prevalence of certain cardiovascular health measures (ischaemic heart disease) appears to have slightly declined since 2011/12, giving a fiscal benefit. However, as heart failure has also increased over this period, this has reduced the potential impact. A fiscal benefit also arises from a decline in the number of GP visits.

19 Presenteeism refers to the lost productivity that occurs when employees are not fully functioning in the workplace because of an illness, injury, or other condition. Even though the employee may be physically at work, they may not be able to fully perform their duties and are more likely to make mistakes on the job. (Investopedia 2025)

20 This is an extremely conservative estimate as in practice it is likely that it is those in fair or poor health that will dominate in any presenteeism calculation that that population has increased by over 40%.

21 https://www.health.govt.nz/statistics-research/system-monitoring/planning-and-performance-data/ambulatory-sensitive-hospital-admissions-ash

Table 8: Estimated net fiscal costs from certain changes between 2011/12 and 2023/24

	% Change 2011/12 and 2023/24	2023/24 Estimated adult Population[22]	Net incremental change	Treasury impact value	Monetised impact ($m)
		4,332,000			
ED Visits	4.2[23]		181,944	$655[24]	$199 m
GP Visits	(2.7)[25]		(116,964)	$44[26]	($5.1 m)
Diabetes	0.9[27]		38,988	$5,541	$216 m
(Certain) cardio-vascular disease	-0.5[28]			$10,786	($233 m)

Table 9: Estimated fiscal cost from increase in ASH events between 2020 and 2024

	Change in rate	Change in number	Number of days	Treasury impact value	
ASH events – 0-4 years		5,352[29]	2.61	$7,727	$108 m
ASH events – 45-64 years		3,504[30]	2.61	$7,727	$70 m

It may seem counterintuitive that fiscal costs are so low given the 40% increase in fair health. However, as health spending is fairly fixed, the outcome of the increase in fair health is, in our view, reflected in the increase in unmet need – discussed on page 21 and 22 rather than any obvious increase in fiscal cost.

Other conditions

The prevalence of other conditions surveyed remained relatively flat since 2011/12. For this reason, we have not estimated a monetised cost of the change as it is likely to be close to zero.

However, as the adult population has increased between 2011/12 and 2023/24 – from 3,491,000 to 4,332,000 – there will still be an overall increase in cost, but simply through population increase on the broadly unchanged prevalence.

22 From dataset associated with the 2023/24 Health Survey

23 13.6% in 2011/12 and 17.8 in 2023/24

24 Emergency room visit – item 142

25 78.3% in 2011/12 and 75.6% in 2023/24

26 GP visit 10 minutes – publicly funded (patient copayment) Item 151

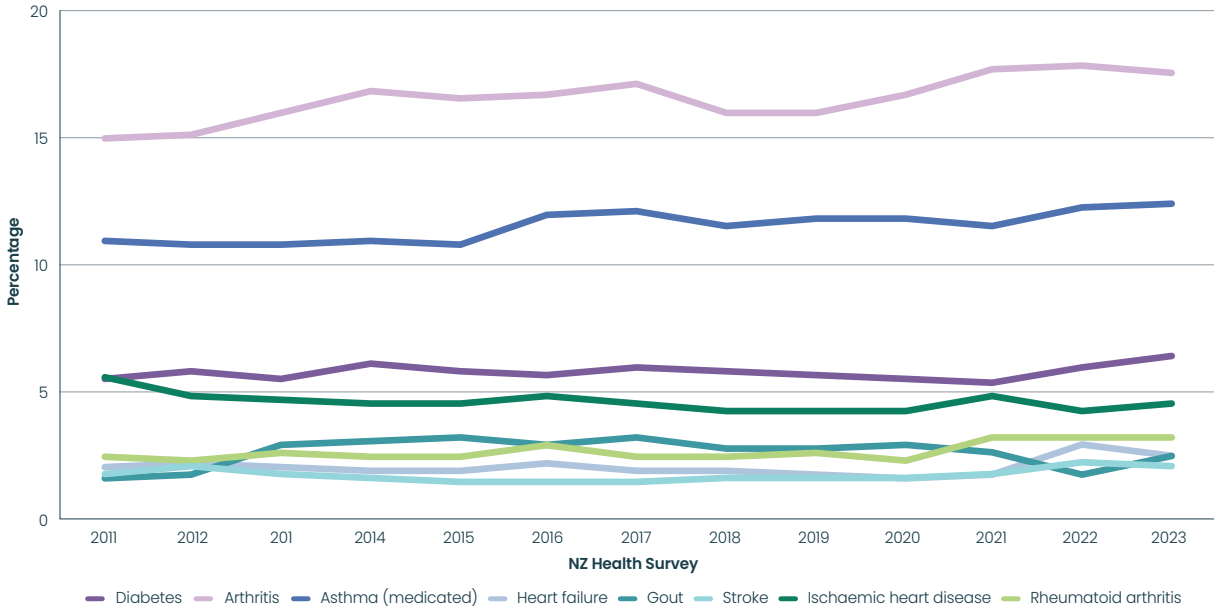
27 From 2011/12 to 2023/24. This is a net figure as while Ischaemic heart disease decreased, heart failure increased

28 From 2011/12 to 2023/24

29 From 2020 to 2024 Figure V from: https://www.health.govt.nz/statistics-research/system-monitoring/planning-and-performance-data/ambulatory-sensitive-hospital-admissions-ash

30 From 2020 to 2024 Figure V from: https://www.health.govt.nz/statistics-research/system-monitoring/planning-and-performance-data/ambulatory-sensitive-hospital-admissions-ash

Figure 12: Prevalence of diseases recorded in the NZ Health Survey 2023/24



Health related benefits

ASMS also examined the health-related benefits – Job Seeker – Health Condition or Disability and Supported Living Payment – from 2011 to 2024 (Ministry of Social Development 2025).

We found that while the absolute numbers had increased from 152,427 people in December 2011 to 197,394 in December 2024, (Figure 36) as a percentage of the labour force there, had been a marginal decline – or effectively no change – from 6.48% to 6.24%. (Figure 37.)

Thus, we are not including them in the fiscal costs of the proportionate decline in health over the last twelve years, as there has not been an equivalent proportionate decline.

This would also support the hypothesis that poor health – sufficient to access a health-related benefit – had been relatively static compared to the overall population. However, it could also be due to something inherent in the rules for accessing a benefit, such as the inability for partnered people to receive a benefit, that, meant that eligibility has been reduced.

Part 3: Projecting rates of decline to the next twelve years – thought experiment

Based on the direction of the health system and the pressures facing primary and secondary care, what could it mean if trends in *excellent, fair* and *poor* health continue?

This could mean that *fair or poor health* could go from half the level of *excellent health* in 2011 to above the level of *excellent health* in 2023/24 to over three times the level of *excellent health* in 2035/36. That is, the percentage of the population in *excellent health* would fall to just 6.5% of the population when it was 20.2% of the population in 2011/12.

Unfortunately, given the trajectory of obesity, smoking/vaping and psychological distress, this seems entirely likely. We also note that the current plateauing of life expectancy – on average – aligns with the plateauing of fair and poor health for those over 65, indicating that the current trends in self-reported health look very likely to continue.

Assuming no further increase in the population, this would give an additional estimated $3.3 billion per year in additional social costs through a further reduction in subjective wellbeing. There are likely to be equivalent additional economic and fiscal costs as well. This is on top of the $2.5 - $3.6 billion of annual social costs that have arisen since 2011/12 from the net decline in health.

We note that, implicitly, this thought experiment also effectively assumes that the current health system will be able to manage the continued decline of New Zealanders' fair health and not have it significantly spill into poor health.

ASMS has serious doubts given the current state of the health system that this will be possible. We are also concerned that the declines will disproportionately continue to impact the working age group of 15-65, particularly as this cohort is set to disproportionately decline in number.

Table 10: Thought experiment – possible self-reported health of adult population in 2035/36

	2023/24 % of population	2035/36 (possible)	Net change
Excellent	11.5	6.6	4.9 ↓ (43%)
Very Good	39.3	39.3	
Good	34.7	34.7	
'Good' health	85.5	80.6	4.9 ↓ (5.7%)
Fair	11.7	16.5	4.9 ↑ (41%)
Poor	2.9	2.9	
'Not good health'	14.5	19.4	4.9 ↓

Table 11: Estimated monetised impact of potential decline in self-reported health from 2023/24 to 2035/36

	Possible % change between 2023/24 and 2035/36	2023/24 Estimated adult Population[31]	Net incremental change	Weighting[32]	Treasury impact value Physical health – scale 0–100	Monetised impact ($m)
		4,332,000			$337	
Excellent	(4.9)		(212,268)			
Very Good	0		0	7		$0
Good	0		0	19.2		$0
Fair	4.9		212,268	46.1		$3,303 m
Poor	0			62.3		
Estimated potential cost of reduction in physical health in 023/24						**$3,303 m**

Conclusion

In 2024, Hon Shane Reti welcomed the 2023/24 Health Survey so that trends can be monitored over time. This is all the more important now that the census has been disestablished and is what we have attempted to do in this report.

The trends are far from comforting.

Unless, as a country, we want to live in a world where, in the next twelve years, only 6.6% of the population is in excellent health while over 20% are in fair or poor health, and the subsequent declines continue to disproportionately impact the working age group - we need to act.

To address and reverse the managed decline of New Zealand's health, we recommend that:

1) The determinants of ill health - both social and commercial are addressed. That is investment to improve housing, reduce poverty and increase the uptake of education alongside measures to improve nutrition and physical activity. A stronger commitment to address the harmful effects of tobacco, alcohol and unhealthy foods is also needed.
2) The reasons behind the increase in psychological distress, particularly among younger age groups is understood and addressed.
3) Unmet need for both primary and secondary healthcare, including access to GP services and mental health care), is measured and reported on annually, to inform long term health system planning based on population need.
4) Ensure the health system is fit for purpose. As well as measuring, understanding and addressing the unmet need from the working age population for primary and secondary health care, ensure care continues for those over 65.

Finally, urgent measures are needed now to retain and expand New Zealand's medical and health workforce to meet the needs of an increasing population that is declining in health.

31 For conservatism we have used the 2023/24 population for this estimate.

32 As this table represents the monetised cost of the decline in physical health, each decline is treated as an additional step down and an increase in the monetised cost. In substance there will have been a degree of moving backwards and forwards within the categories, but this table represents the net effect.

Appendix 1: Methodology/Limitations

New Zealand Health Survey 2023/24

The base document for this paper is the New Zealand Health Survey 2023/24, whose methodology can be found here. https://www.health.govt.nz/publications/methodology-report-202324-new-zealand-health-survey

The results from the survey arise from a series of interviews with households that were representatively chosen. This means that, with some exceptions the results are the subjective view of the interviewee.

For example, self-reported health, which this report discusses, comes from the following question (Ministry of Health 2024):

Adult respondents (aged 15+ years) are categorised as having excellent health if they answered 'excellent' to the following question.

Question: A4.01
In general, would you say your health is ... ?

Excellent / Very good / Good / Fair / Poor

Subjective responses

Therefore, one limitation of this report is the extent that individuals' perceptions over time have changed for a particular state of health. However, the Health Status Report 2023 (Te Whatu Ora 2024)[33] makes the following observation:

> **"How individuals assess their own health provides a holistic overview of both physical and mental health. Adding such a perspective on quality of life complements life expectancy and mortality indicators that only measure survival. Further, despite its subjective nature, self-rated health has proved to be a good predictor of future healthcare needs and mortality."** (Palladino 2016)

This is consistent with the literature on self-reported health (Pernerger, Gayet-Ageron, et al 2013; Lazarevic and Quesnel-Vallee 2023; Idler and Benyamini 1997) and thus in our view is that this limitation does not unduly impact the analysis of this report.

While the responses are inherently subjective (Pernerger, Gayet-Ageron and Others 2013) found the following correlation of health problems to self-reported health. While this was not a New Zealand study, in our view, it is very likely to also apply in New Zealand.

Table 12: Percentage of health problems compared to self-rated health (Pernerger, Gayet-Ageron and Others 2013)

Respondent charachteristic	Self-rated health					*P* value for linear trend
	Excellent	Very good	Good	Fair	Poor	
Problem with mobility (EQ-5D)	0.4	1.7	8.5	50	87.5	\0.001
Problem with autonomy (EQ-5D)	0	0.1	1.7	18.5	50	\0.001
Problem with daily activities (EQ-5D)	0.4	0.4	9.3	65.1	87.5	\0.001
Problem with pain or discomfort (EQ-5D)	7.6	28.8	64.8	94.5	100	\0.001
Problem with anxiety or depression (EQ-5D)	9.4	21.2	41.8	64.8	93.8	\0.001
Problem with sleep*	5.7	24.8	45.4	81.5	66.7	\0.001
Problem with memory or concentration*	5.7	18.2	50.4	63	100	\0.001
Problem with fatigue/energy*	5.7	36.7	70	96.4	100	\0.001
Problem with vision/hearing*	5.9	16.5	36.4	65.4	100	\0.001
Problem in contacts with others*	0	4.1	7.1	25.7	50	\0.001
Doctor visit in the past 6 months	47.9	60.7	80.7	98.1	100	\0.001
Hospitalized in the past 6 months	2.7	5.1	10.2	24	28.6	\0.001
Treated for chronic health problem	7.2	19	48.7	92.5	93.8	\0.001
Treated for acute health problem	1.4	5.8	14.6	47	68.8	\0.001

* Only available for a subset of the respondents

Ranges

Another potential limitation relates to the use of midpoints in undertaking our analysis. The New Zealand Health Survey (Ministry of Health 2024) reports its results with confidence intervals. For example, *excellent health* in 2011/12, while it had a midpoint of 20.2, which is what this analysis has used, applying a confidence interval of 95% the potential range was actually 18.8 to 21.8. For 2023/24 the midpoint was 11.5 with a range of 10.7 to 12.3.

This means that the actual change between the two time periods could have been anything from 11.1 (21.8-10.7) to 8.1 (18.8 – 12.3). For simplicity, and because the midpoints tend to be the numbers used in official communications, we have used 8.7 as the change between the two periods, which coincidentally is closer to the lowest possible option of 8.1.

Where the range is most likely to be an issue is when the changes are not large and/or when the original number was quite small. This is the case with reference to *poor health*.

In 2011/12, the midpoint for adults self-reporting *poor health* was 2.5 with a 95% confidence interval of 2.2 to 2.9. In 2023/24, the equivalent midpoint was 2.9 with a range of 2.5-3.3. Given the ranges, therefore, it is entirely possible that there was in fact no actual change in self-reported poor health for adults between 2011/12 and 2023/24 as the 2023/24 midpoint falls within the 2011/12 range – albeit at the top.

While, for consistency, we have shown an increase in poor health of 0.4 rather than potentially 0, to address issues of range, in our narration we have referred to poor health as broadly plateauing rather than slightly increasing.

It is also potentially an issue with *very good* and *good health*. The midpoints for very *good health* are 2011, 37.2, with a range of 35.6-38.8, and 2023, 39.3, with a range of 37.9 – 40.7. While the midpoints are on the outer edges of the ranges, they are still very close. For this reason, other than noting the change from *excellent* health, our analysis has focussed on *excellent* and *fair* health.[34]

Prevalence

The nature of the New Zealand Health Survey (Ministry of Health 2024) is to report data on a percentage of population basis. While this is useful for comparing changes of time – as a percentage of the population – it does mean that with an increasing population it is possible that percentages could remain static or decline but absolute numbers of people affected could increase.

While not related to the Health Survey itself, the data and graphs relating to Heath related benefits on page 32 outlines this well. The number of people on health-related benefits has increased between 2011 and 2024, but as a percentage of the population, it has plateaued or declined.

The report, following the approach of the Health Survey, is also focussing on the prevalence or percentage of the population rather than the absolute increase or decrease in numbers due to the increase in population.

What this means is that our approach is to look at the additional cost (or benefit) from any change in prevalence since 2011/12 and its impact, given there is an increased population. That is for example **if**:

- The population increased from 1 million people[35] to 5 million people from 2011/12 to 2023/24
- Item X went from occurring 50% of the time in 2011/12 to occurring 75% of the time in 2023/24. That is, the prevalence increased by 25% (75%-50%)

With no change in prevalence, we would expect Item X to occur 500,000 times in 2011/12 and 2.5 million times in 2023/24.

Adding in the change of prevalence, this means there were 500,000 cases of Item X in 2011/12 and 3.75 million cases in 2023/24.

This means that 1.25 million cases arose simply because of the change in prevalence 25% on an increased population of 1 million to 5 million.

34 Good health has midpoints in 2011/12 and 2023/24 respectively of 31.8 and 34.7, with respective ranges of 30.6-33 and 33.2-36.1

35 Of course, 1 million was not the population in 2011/12 – it is being used here for ease of explaining the methodology

Impacts Database - CBAx

The impacts database within the Treasury CBAx tool (The Treasury 2024) has been used in this report for calculating monetary values for market or non-market transactions. The Treasury describes it this way:

CBAx contains a database of New Zealand specific publicly available data that you can use to value impacts. An impact value provides a numerical value in relation to one or more impacts of an initiative. In some situations, a value may be a cost, in others it could be a benefit or a saving. Examples include the costs of an emergency department visit, the cost of the Jobseeker Support benefit and increased income for individuals. Agencies have derived the values using a variety of non-market valuation methodologies. The values are adjusted to reflect a common time period.

The impacts database is used as part of cost benefit analysis to derive a social return on investment (SROI) for ranking investment decisions. One of its objectives being "to take a long-term and broad view of societal impacts and costs". Technically, with a full use of this tool, this would mean that the impacts – such as those calculated in this report – would be compared against a cost or investment that would look to reduce those impacts.

In a full CBAx assessment, only the expected reduction of impacts would be compared to the potential cost or investment, it would also be projected over the relevant years and then discounted using the Treasury discount rates.

As this report is not analysing a particular possible investment and is focussing simply on the nominal annual cost of a change in health since 2011/12, the other pieces of the CBAx tool have not been used.

Appendix 2: Monetising Social Impacts

The largest monetised costs in this paper arise from a decline in wellbeing associated with a decline in overall physical health and a rise in psychological distress. To put a monetary value to the decline in overall health, this paper has used values associated with the wellbeing impacts of physical health. For the rise in psychological distress, the values associated with subjective wellbeing/life satisfaction (WELLBY) have been used.

Both can be found in the impacts database of the Treasury's CBAx tool, discussed in the previous appendix.

In New Zealand, the Treasury, through its CBAx impacts database (The Treasury 2024) has provided what it considers to be the most appropriate and up to date values of loss of wellbeing associated with:

- Physical health
- Mental health
- Subjective wellbeing/Life Satisfaction
- Quality adjusted life year and
- Value of Statistical life

The value associated with physical health originates from work commissioned by Kāinga Ora and the different gradations of WELLBY (Wellbeing Adjusted Life Year) originates from work by the UK Treasury, which measures change in life satisfaction.

These measures are comparable in nature to other measures often used in health economics such as QALY – Quality Adjusted Life Year, DALY – Disability Adjusted Life Year and/or VoSL – value of statistical life.

In all cases, they are attempts to put a monetary value on what is inherently a non-market transaction, such as wellbeing, health and/or life expectancy. That is, while wellbeing, health and/or life expectancy have intrinsic benefits to the individual and by extension the community and society, they don't have a market based monetary value.

While there are many ways of calculating these measures, the focus tends to have a high degree of subjectivity in terms of willingness to pay to offset an outcome. For example:

- VoSL is not the value of an actual life, but rather the aggregate amount a group of people is willing to pay to reduce their individual risks of death by small amounts (Viscusi and Aldy 2003)
- QALY is how much money a society, government, or individual is willing to pay for one additional year of life in perfect health (Claxton, Martin and Others 2015)
- DALY is effectively the inverse – how much money individuals or society is willing to pay to avoid losing one year of healthy life.

Embedded in the calculations will inherently be some aspects of traditional economic or fiscal benefits, such as an increased ability to undertake paid work, higher productivity and/or increased taxes and lower health costs. For this reason, this paper has identified social, economic and fiscal costs separately and not attempted to add them up as there is likely to be a degree of double counting.

The two measures used in this paper are discussed below.

Basis of physical health impact

The originating paper (Smith 2020) describes its valuation estimates of non-market effects, including physical and mental health, as:

> ***…the compensating surplus for each welfare improving non-market outcome, which is the portion of household income that an individual would be willing to forego in exchange for the outcome in question, and the equivalent surplus for each welfare reducing non-market outcome, which is the portion of household income that an individual would need to receive to be rendered willing to adopt the outcome in question. These measures are directly comparable to values calculated through willingness to pay or similar approaches, including the "value of statistical life" currently used in the New Zealand Treasury CBAx cost-benefit tool.***

It was part of a number of wellbeing impacts associated with housing and non-housing outcomes. The Treasury has subsequently taken these values and updated them for current prices. This is why the table below shows a value of $243 for physical health, while the impact database uses $337.

Table 13: Summary of valuation estimates (Smith and Davies 2020)

Wellbeing outcomes		Wellbeing Valuation: Other Outcomes for Kāinga Ora Tenants			
		NZGSS General Population Coefficients (M^0 = $26,200)		NZGSS Kāinga Ora Tenant Proximity Group Coefficients (M^0 = $26,200)	
		Fujiwara Estimate	Smith and Davies Estimate	Fujiwara Estimate	Smith and Davies Estimate
Housing Outcomes					
Good Condition	House Condition: Minor Problems	-$2,173	-$6,776	(-$4,462)	(-$12,458)
	House Condition: Some Problems	-$4,044	-$11,521	(-$4,180)	(-$11,830)
	House Condition: Very Bad/Extreme Problems	-$6,638	-$16,654	(-$7,561)	(-$18,123)
None	House Mould: Some	-$2,164	-$6,749	(-$306)	(-$1,041)
	House Mould: Very Bad	-$3,353	-$9,878	-	-
No Cold	House Cold: Sometimes	-$3,591	-$10,458	-$7,621	-$18,213
	House Cold: Often/Always	-$5,429	-$14,457	-$7,961	-$18,707
Non-housing Outcomes					
Unemployment		-$6,493	-$16,407	-$4,837	-$13,258
Victim of Discrimination		-$5,517	-$14,627	-$6,761	-$16,860
Victim of a Crime		-$2,863	-$8,637	-$6,480	-$16,386
Member of a Volunteering Group		$2,140	$6,683	-$5,250	-$15,186
Physical Health (0-100 Scale)		$243	$831	-$68	-$235
Mental Health (0-100 Scale)		$1,151	$3,767	$1,113	$3,650
Drugs or Alcohol Problem in Neighbourhood		-$1,463	-$4,719	(-$2,465)	(-$7,578)
Cultural Expression (0-5 Scale)		$2,962	$8,891	$4,077	$11,596
Lonely (0-5 Scale)		-$2,350	-$7,267	(-$1,668)	(-$5,328)

Valuations in parentheses are not statistically significant.

M^0 is the reference income at which values are calculated.

Positive values are compensating surplus, negative values are equivalent surplus.

The values in table 1 for the Kainga Ora tenant proximity group are based on a smaller sample size.

Basis of WELLBY: Life Satisfaction

The basis for these values is the UK Treasury's Green Book, which gives a value of GBP 13,000 to WELLBY with a range of GBP 10,000 to GBP 16,000 (Measure Up). The Green Book is the UK's central government guidance on appraisal and evaluation (H M Treasury 2021).

WELLBY is best discussed in the 2024 article *The WELLBY: a new measure of social value and progress.* (Frijters, et al. 2024)

WELLBY is short for Wellbeing adjusted life year. It is defined as:

> ***...one point of self-reported life satisfaction measured on a 0-10 Likert scale for one individual for one year.***

> ***The term WELLBY was coined by Frijters et al (2020) and has now been officially adopted by HM Treasury in the UK and the New Zealand Treasury as a policy analysis tool for both ex-ante appraisal and ex-post evaluations of public policies.***

> ***Importantly, the use of WELLBYs is not constrained to public policy: they can be a helpful tool to measure the impacts of private and third-sector organisations too...***

In terms of its value:

> ***How much is 1.0 WELLBYs worth? In the UK, 1.0 WELLBYs is currently valued between GBP 10,000 (lower bound) and GBP 16,000 (upper bound), with a proposed central value of GBP 13,000, all in 2019 prices (HM Treasury, 2021). The lower bound is inspired by Frijters and Krekel (2021) and is obtained by pegging the WELLBY to the monetary value of a Quality-Adjusted Life-Year (QALY), i.e. a year of full mental and physical health, an established measure in health economics, which UK Government values at GBP 70,000 (likewise in 2019 prices). As full health is associated with a life-satisfaction score of 8 on a 0-to-10 Likert scale, and individuals who tend to be indifferent between life and death report a life-satisfaction score between 1 and 2, the lower bound can be calculated as GBP 70,000/(8-1) = GBP 10,000 (taking here a score of 1 as being indifferent between life and death, cf. HM Treasury, 2021).The upper bound is inspired by Fujiwara (2021) and is obtained by calculating the marginal rate of substitution between life satisfaction and income (using a coefficient of 1.96 for log income and average earnings of GBP 30,673 in the UK in 2019).***

Examples of subjective wellbeing in other health related papers

As mentioned previously, comparable measures such as VoSL, QALY and DALY are regularly used in discussions of health outcomes. In all cases where a value is used, it always greatly exceeds the other, more traditional values calculated of economic and fiscal costs of the types outlined in this paper.

Value of Statistical Life (VoSL)

The seminal paper by Reid et al. (2022) indicated that there was a social, economic and fiscal cost of health inequalities between Māori and non-Māori of at least NZD$863.3 million.

Of this total $828 million related to the lower life expectancy for Māori v non-Māori using the Value of Statistical Life as the basis of the calculation.

Even with an incomplete assessment of costs, we show that inequities in health for Māori adults are extremely costly, at over NZ$ 863 million per year. It is important to note that <5% of this cost is borne by the health system [fiscal costs]. The vast majority of the cost relates to years of life lost through premature death, a cost borne by society and with the greatest impact on Indigenous people.

Disability Adjusted Life Year

The Public Health Agency within the Ministry of Health commissioned NZIER to estimate the costs of alcohol harm to New Zealand since 2009 (NZIER 2024). In that report, they found:

- $9.1b estimated total cost of alcohol harm based on disability-adjusted life years
- $4.8b associated with disability-adjusted life years from Fetal Alcohol Spectrum Disorder (FASD)
- $1.2 b associated with disability-adjusted life years from alcohol use disorder
- $281m - intimate partner violence (for alcohol use disorder alone)
- $74m - child maltreatment (for hazardous drinking alone),
- $2.1b in societal cost of road crashes where alcohol was a factor
- $4b in lost productivity associated with alcohol use, including FASD, crimes and workplace absenteeism
- $810m, predominantly in health and ACC spending.

As with this paper, they noted the potential for overlap between categories, but as with Reid et al. (2022), the costs are predominately borne by individuals, whanau and society as a whole rather than imposing additional fiscal costs in the form of health spending.

Quality adjusted life year

In 2020, the Stroke Foundation commissioned NZIER to assess the social and economic costs of stroke in New Zealand. They found there to be a very conservative value for the cost of stroke in 2020 to be approximately of $1.1 billion and up to $1.3 billion.

While this paper used quality adjusted life years to assess the reduction in quality of life following a stroke, in this case, they found that reduction in quality of life and premature death involves only a third of the total cost of strokes, with the economic and fiscal/health care costs dominating (NZIER 2020).

Table 14: Total discounted costs of one year of strokes in New Zealand ($ millions)

	Section of report	2018 Total	2020 Total
Ambulance call-outs	4.1.1	$4.30	$6.10
ED visits	4.1.2	$3.90	$5.50
1st year inpatient cost	4.2	$265.80	$377.70
Medication cost	5.1	$20.50	$37.40
General practitioner care cost	5.1	$5.80	$10.60
Recurrent stroke	5.2	$44.80	$63.60
Aged residential care (65+)	6	$42.00	$69.60
Residential care (<65)	7	$9.20	$14.40
Support services	8	$19.30	$27.40
Community rehabilitation	9	$8.00	$11.40
Lost productivity	10	$86.80	$125.50
Informal caregiving	11	$41.70	$59.30
Caregiving lost by stroke		$4.40	$6.20
SUB TOTAL	**12.1**	**$556.70**	**$814.80**
Premature death	12.2	$71.90	$103.60
Quality of life	12.2	$296.60	$384.10
TOTAL	**13**	**$925.10**	**$1,302.50**

* Because annual costs of hospitalisation are based on actual annual hospitalisation (2014), this cost includes initial stroke and recurrent stroke hospitalisation

Source: NZIER

Unpaid labour

As seen from the discussion of WELLBY, one example of the type of things likely to be factored into any subjective assessment of the value of better health is the ability to undertake unpaid labour. This can include caring responsibilities for the young or the old, community service and/or simply household management.

Unpaid labour was specifically addressed in the IPPR report - Waiting for Prosperity: Modelling the economic benefits of reducing waiting lists in the NHS (IPPR 2023) - which formed the basis of the recent ASMS paper *The costs of waiting* (Keene 2025). In the IPPR (2023) report, they modelled the impact on paid and unpaid labour of the waiting lists in the United Kingdom.

As with other analysis they found that the impact on unpaid labour was three times that of paid labour, consistent with the effective ratio of social costs to economic and fiscal costs found in this paper.

Appendix 3: Supplementary Information

Figure 13: Overweight or Obese

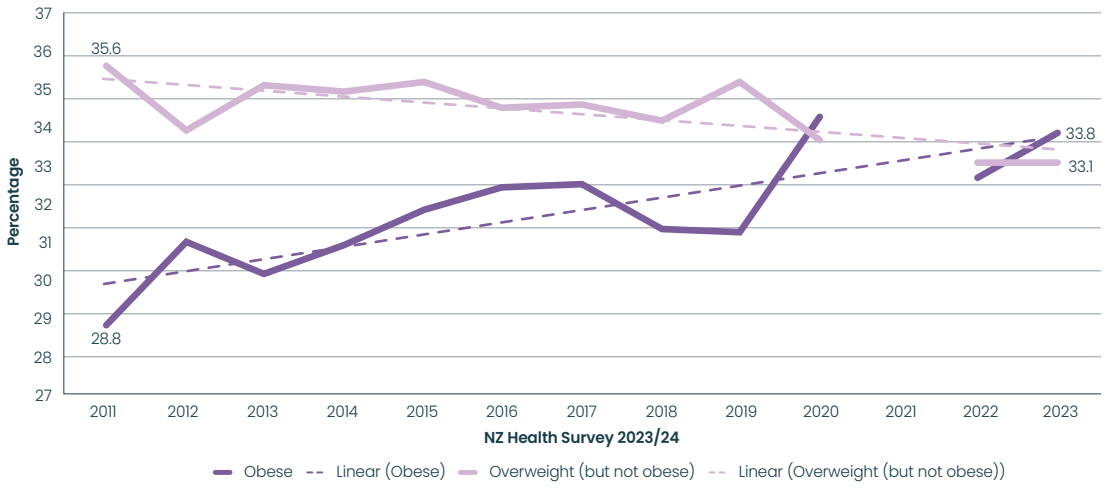


Figure 14: Smoking and Vaping

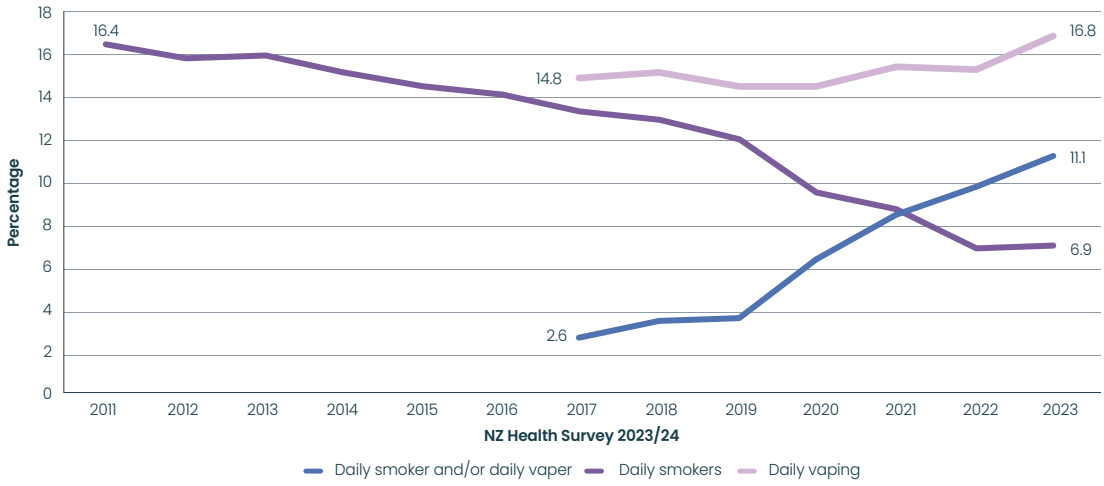


Figure 15: Excellent self-reported health – Māori v non-Māori 2011/12 to 2023/24

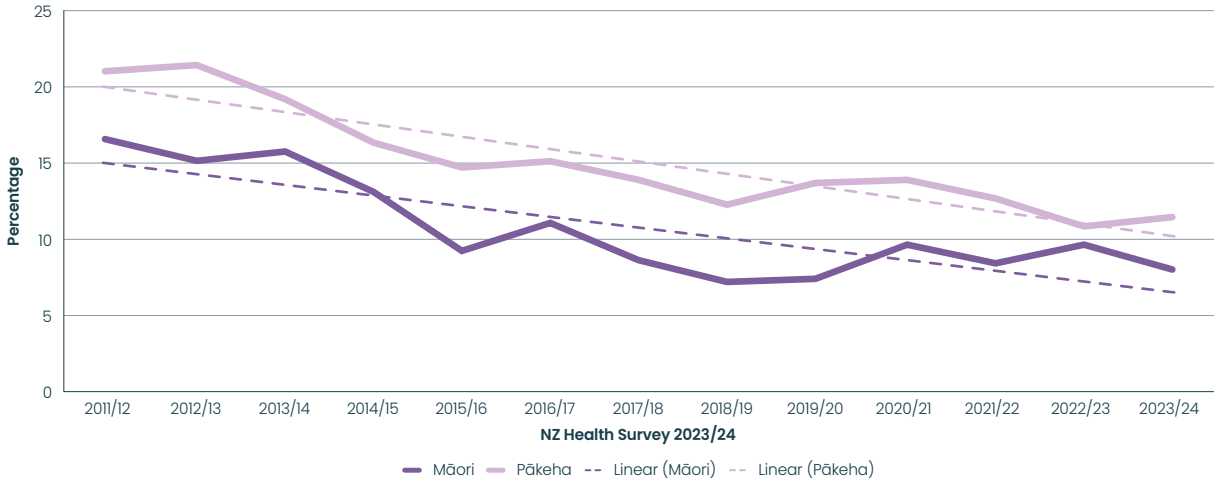


Figure 16: Excellent self-reported health – Men v Women 2011/12 to 2023/24

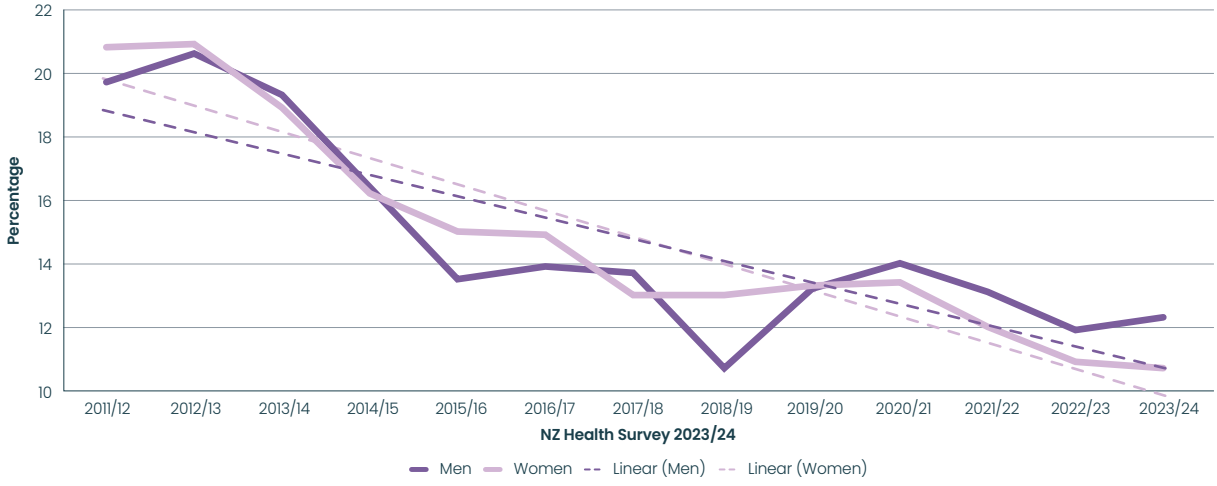


Figure 17: Fair/Poor self-reported health by gender 2011/12 to 2023/24

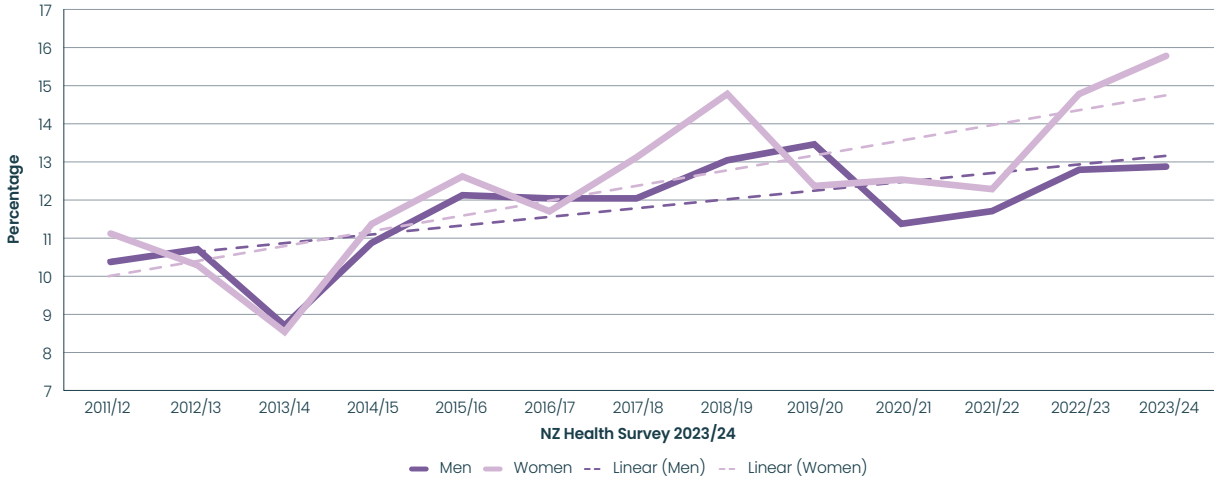


Figure 18: Fair/Poor self-reported health by ethnicity 2011/12 to 2023/24

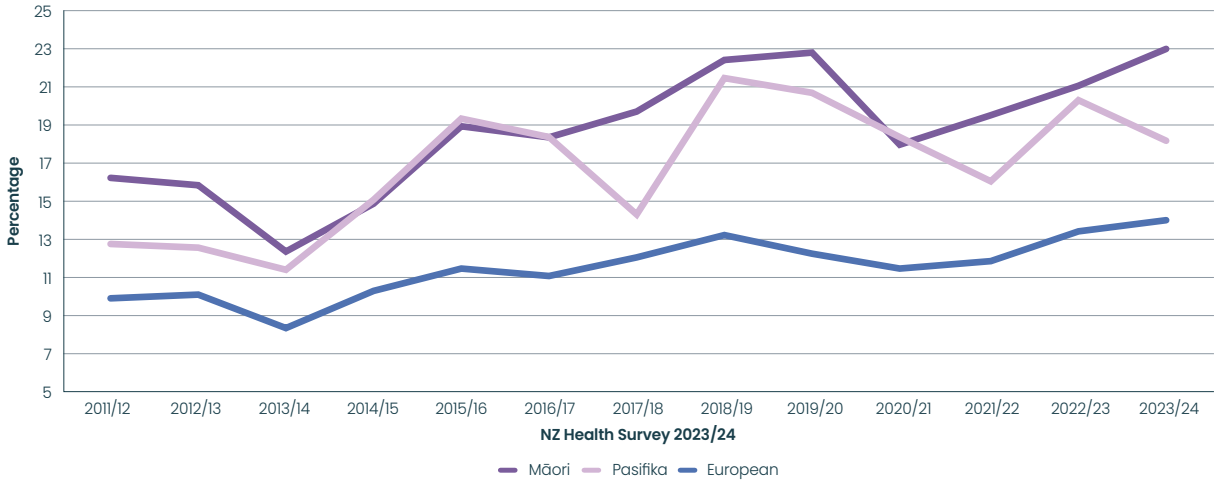


Figure 19: Fair/Poor self-reported Māori health by gender 2011/12 to 2023/24

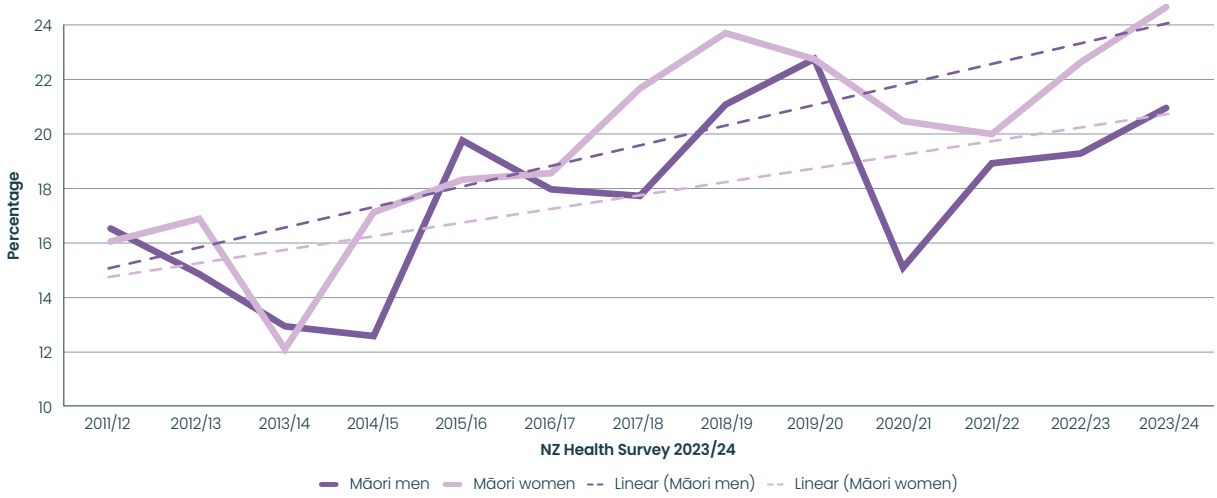


Figure 20: Fair/Poor self-reported Pacific Peoples health by gender 2011/12 to 2023/24

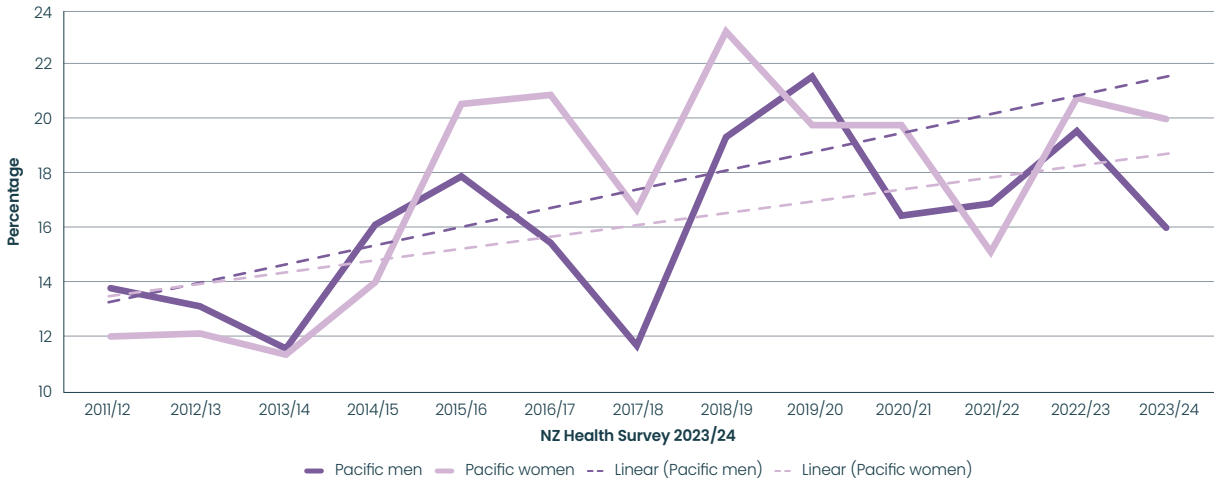


Figure 21: Excellent self-reported health by certain under 55 age groups

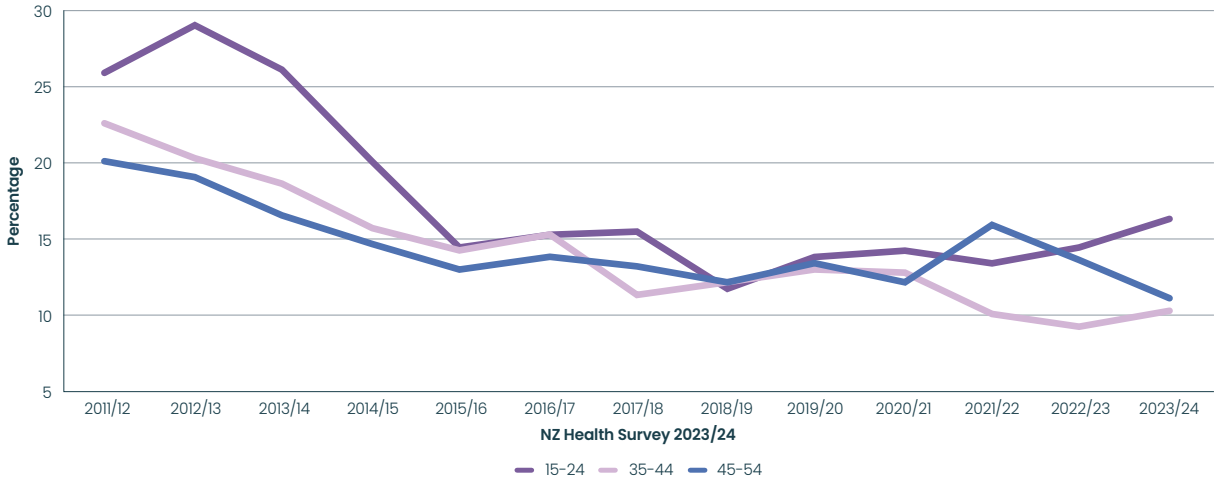


Figure 22: Life expectancy at birth by gender 1950-2024

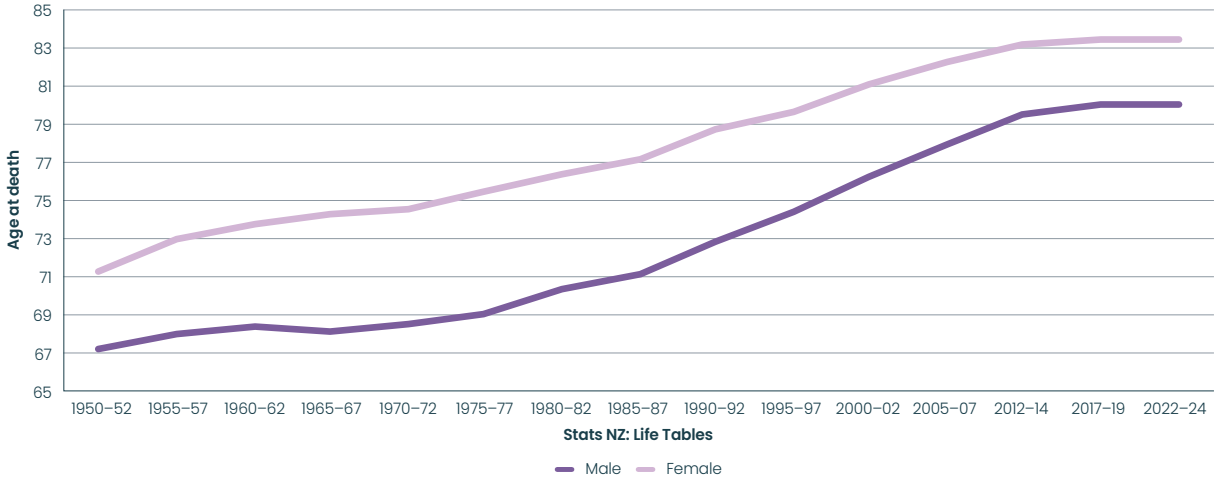


Figure 23: Life expectancy at birth by gender 2012-2024

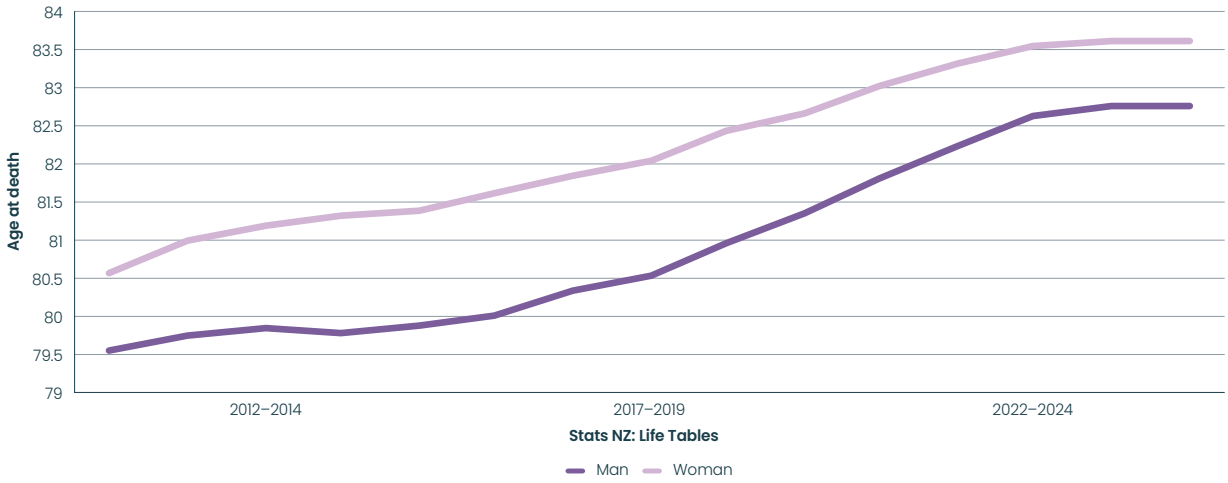


Figure 24: High or Very high psychological distress in last 4 weeks by age band

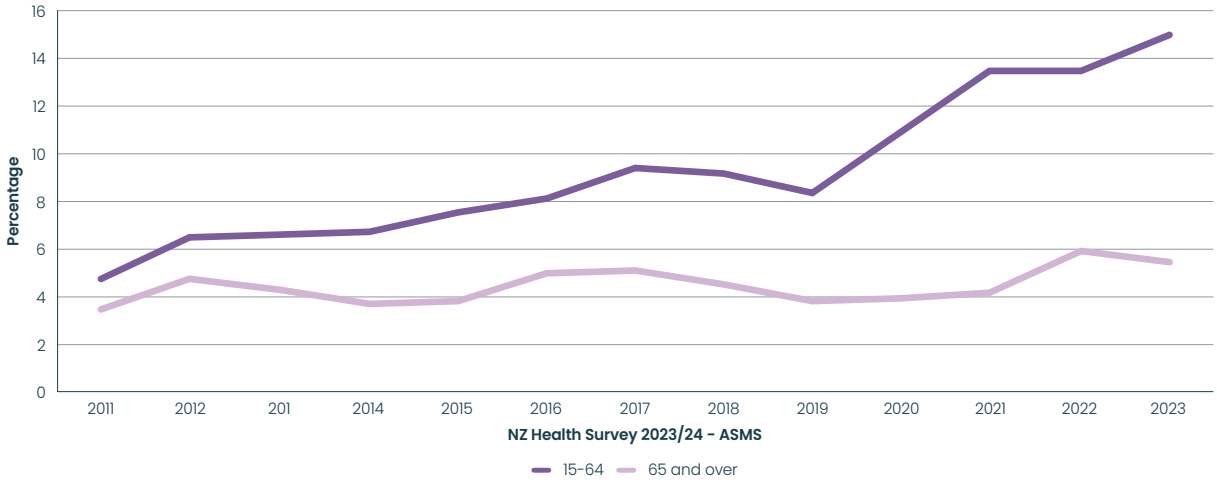


Figure 25: High or Very high psychological distress in last 4 weeks by age band (2)

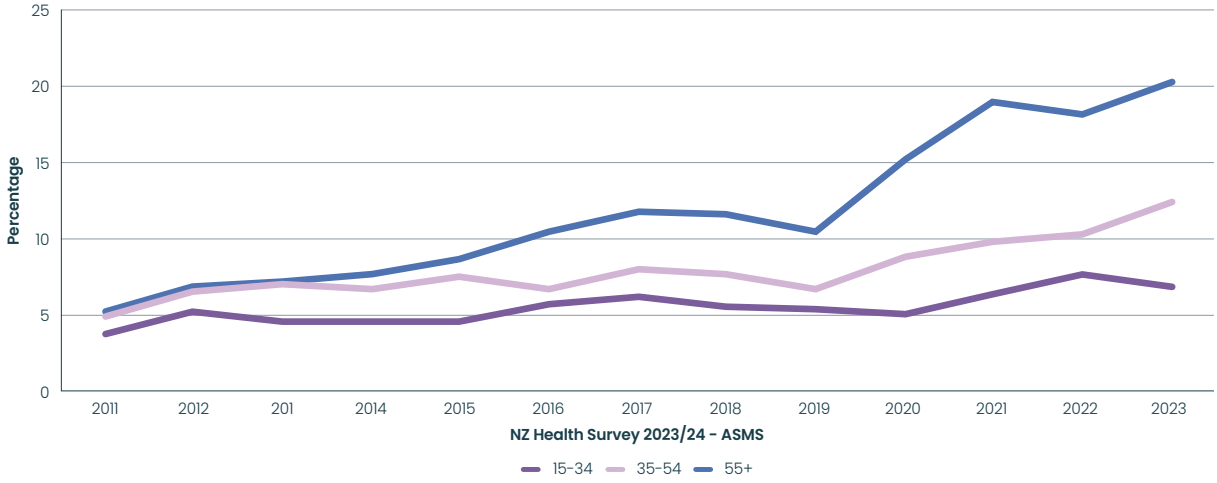


Figure 26: Low psychological distress in last 4 weeks by age band

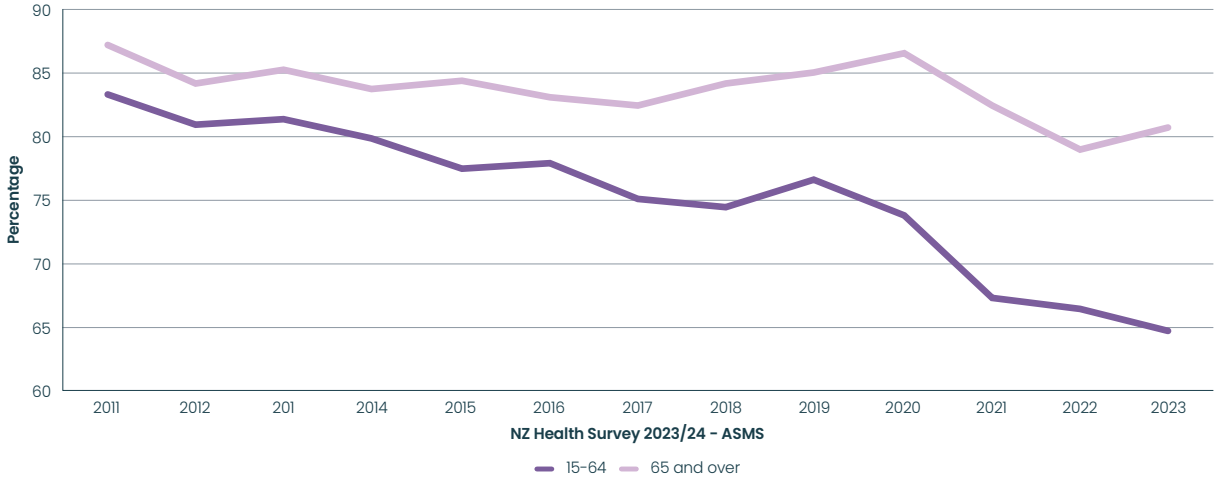


Figure 27: Low or no psychological distress in last 4 weeks by age band under 55 years

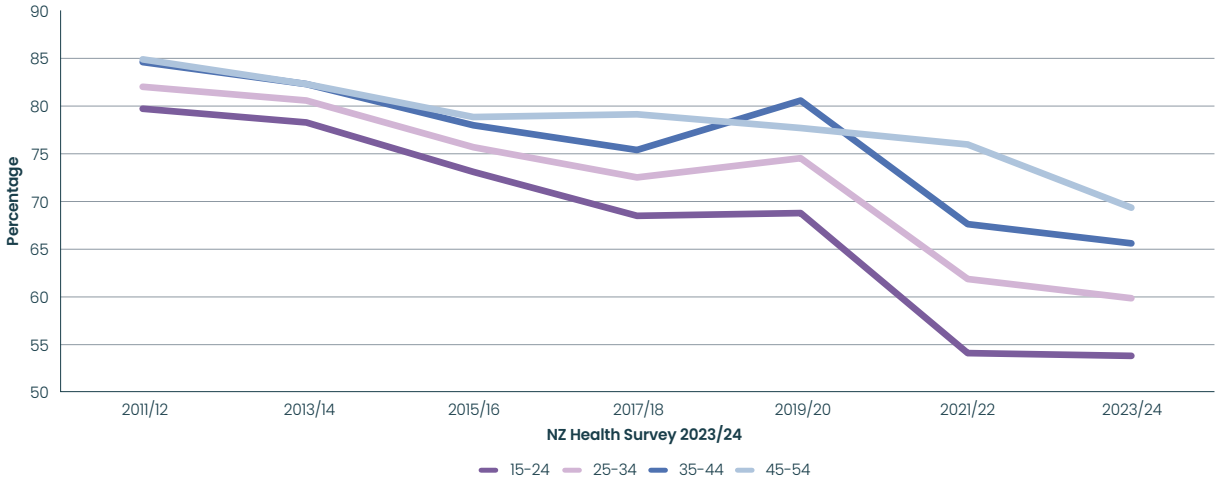


Figure 28: Māori unmet need for mental health services by gender

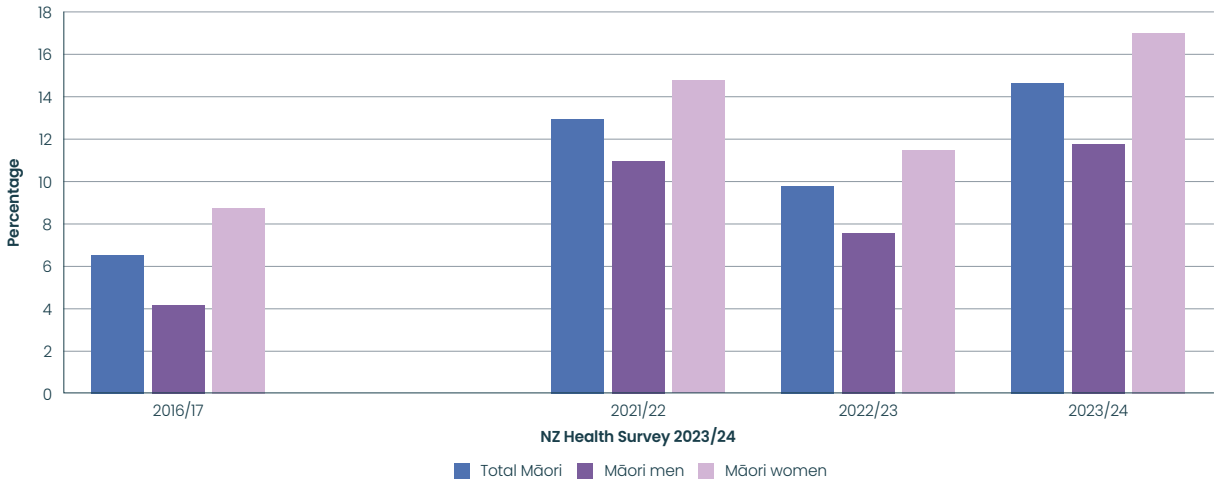


Figure 29: Disabled v non-Disabled unmet need for mental health services

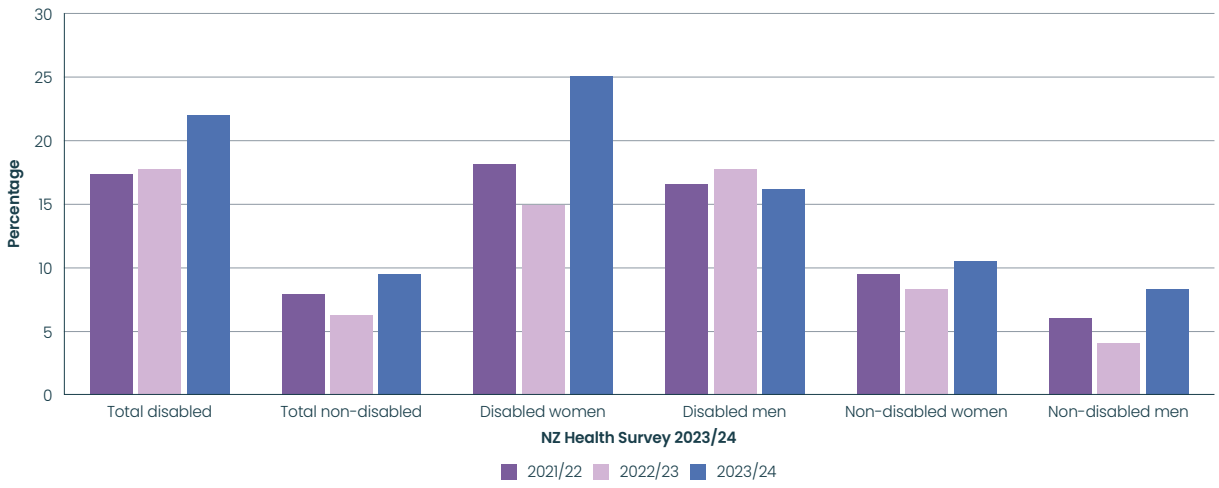


Figure 30: Māori unmet need for general practitioner by gender

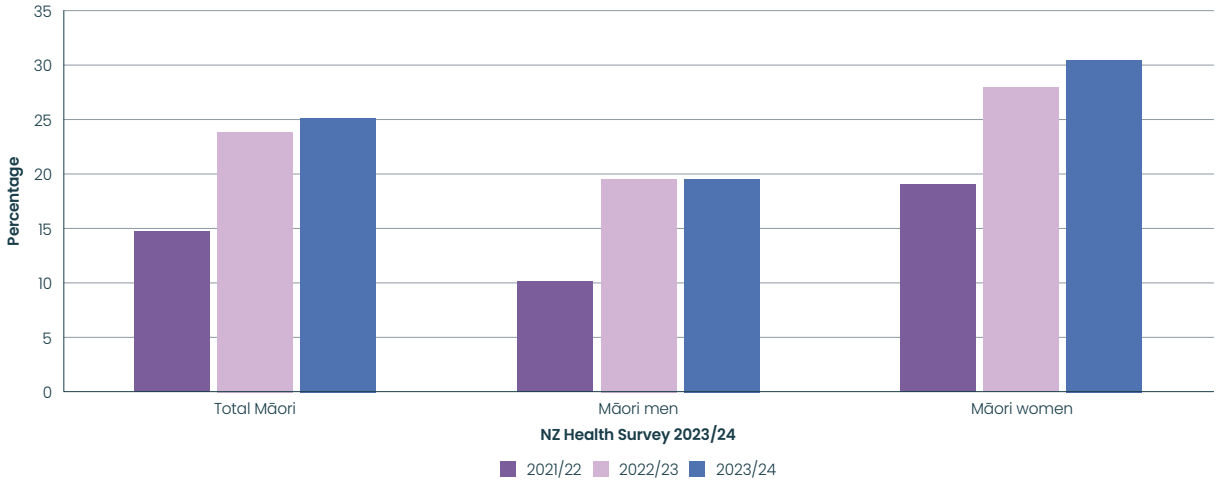


Figure 31: Visited General Practitioner in past 12 months by gender

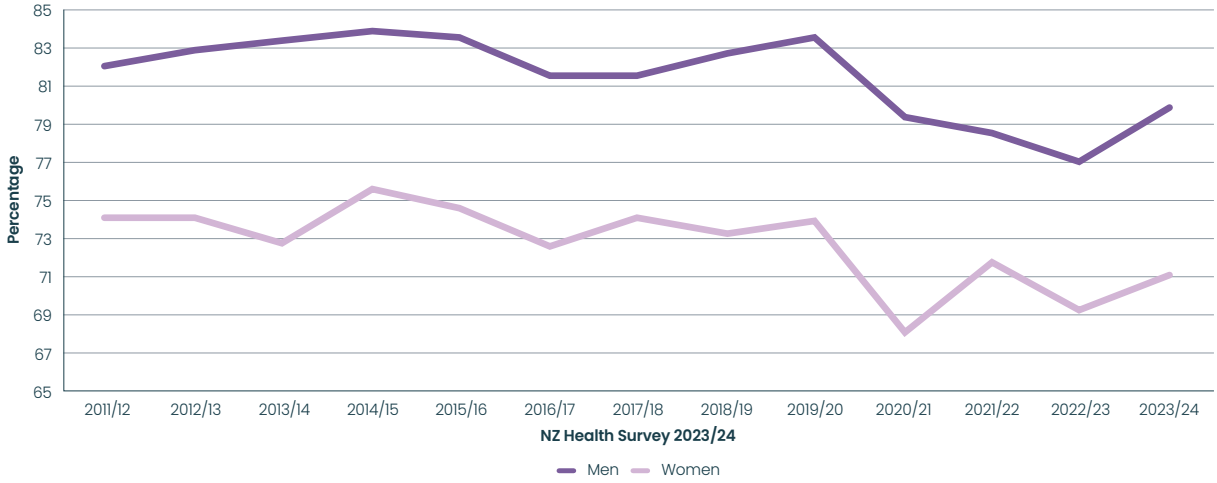


Figure 32: Visit to Emergency Department at least once in last 12 months by gender

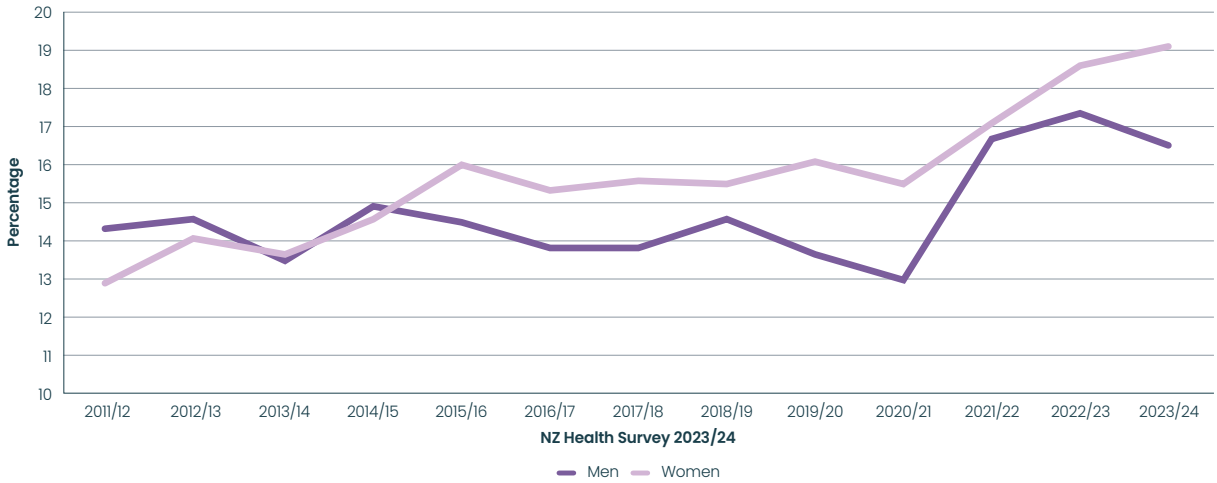


Figure 33: Visit to Emergency Department by European or other ethnicity by gender at least once in last 12 months

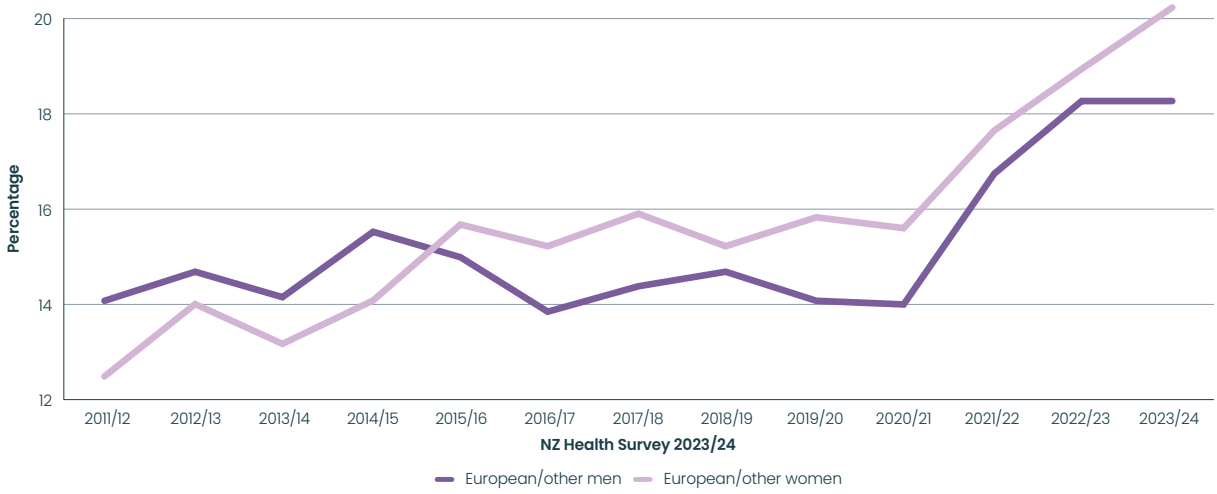


Figure 34: Visit to Emergency Department by Māori at least once in last 12 months by gender

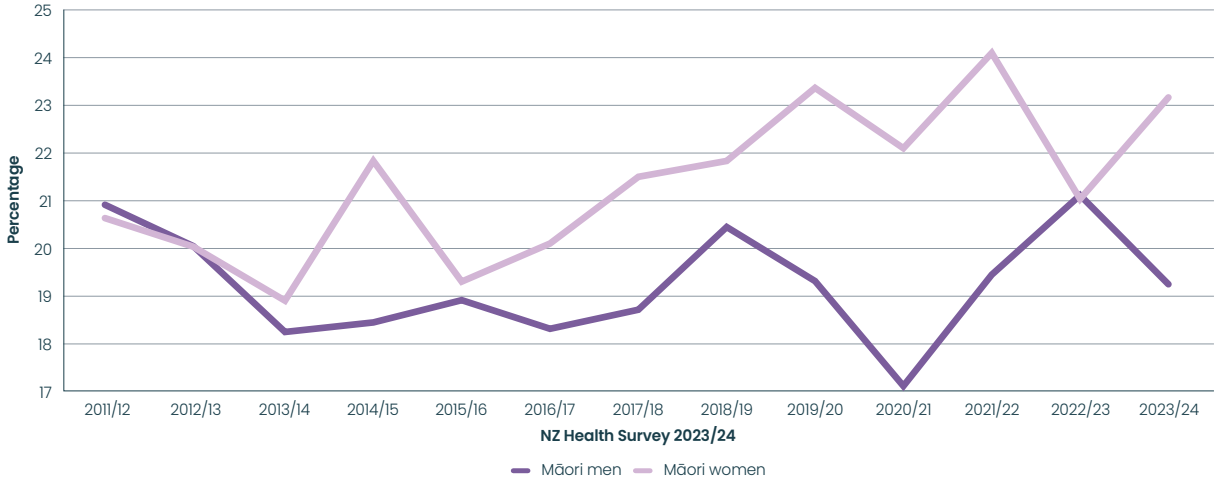


Figure 35: Ambulatory sensitive events 0-4 years and 45-64 years 2020-2024

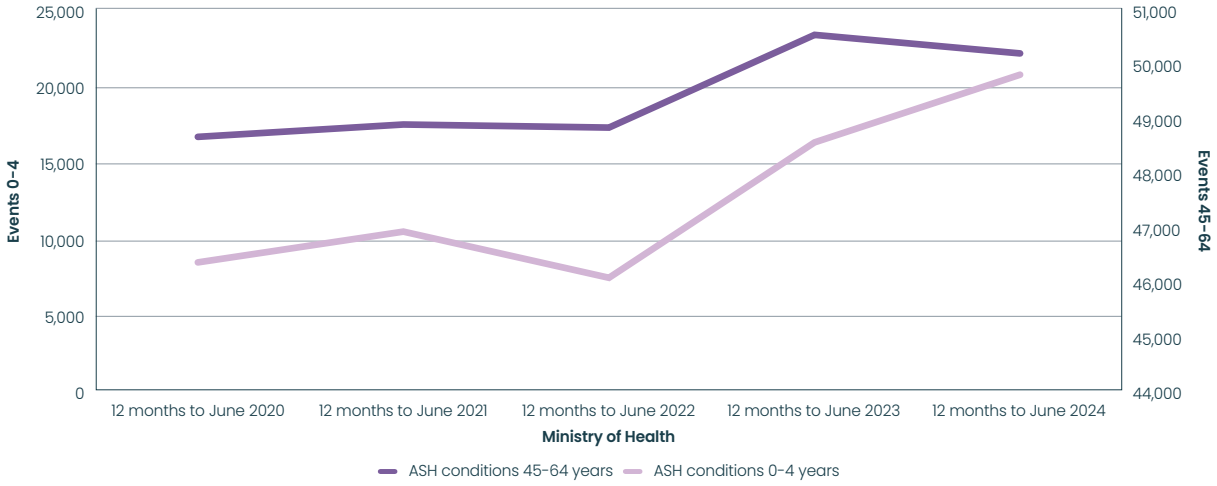


Figure 36: Health related welfare benefits by type and number 2011-2024

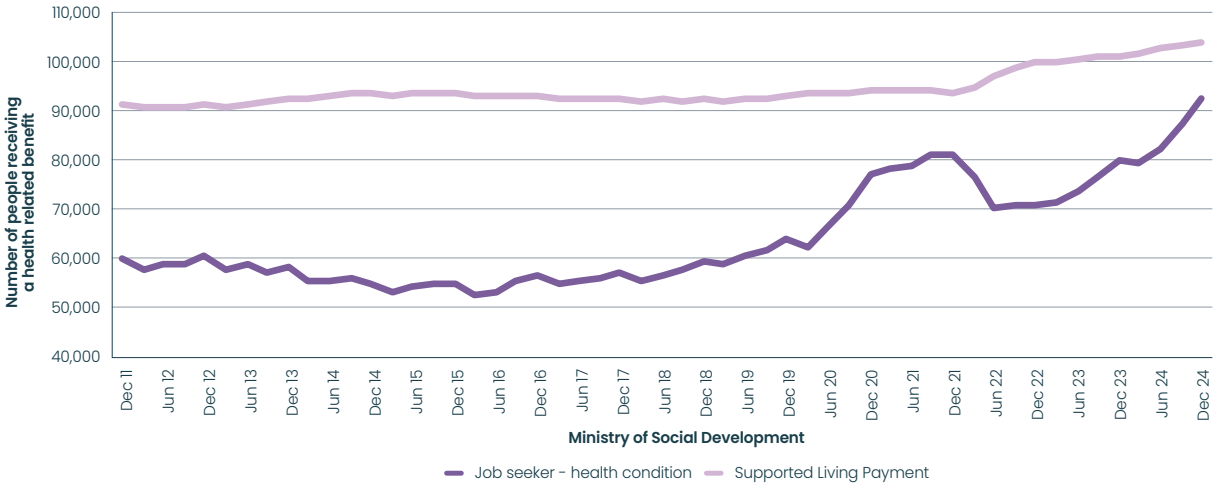
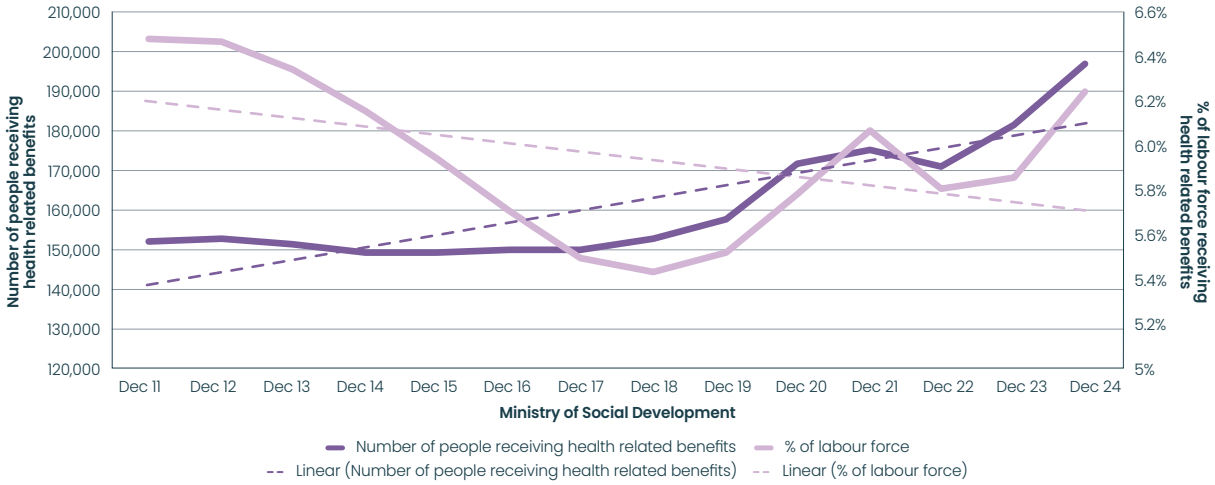


Figure 37: Health related welfare benefits – total and percentage of labour force



References

Claxton, Karl, Steve Martin, and Others. 2015. "Methods for the estimation of the National Institute for Health and Care Excellence cost-effectiveness threshold." *National Library of Medicine: National Center for Biotechnology Information* 1-503.

DeSalvo KB, Bloser N, Reynolds K, He J, Muntner P. 2006. "Mortality prediction with a single general self-rated health question. A meta-analysis." J Gen Intern Med.

FrankAdvice. 2024. "The social, economic and fiscal costs of the current settings for adult oral health : Adult oral health in Aotearoa: The costs of inaction?"

Frijters, Paul, Christian Krekel, Raul Sanchis, and Ziggi Ivan Santini. 2024. "The WELLBY: a new measure of social value and progress." *Nature*.

Frontier Economics Ltd. 2010. "Estimating the cost of health inequalities." London.

Gauld, Robin, Jerram Bateman, and Nick Bowden. 2024. "Quantifying and understanding the impact of unmet need on New Zealand general practice." *Centre of Health Systems and Technology (CHeST)*.

H M Treasury. 2021. *Wellbeing Guidance for Appraisal: Supplementary Green Book Guidance.* Social Impacts Task Force. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005388/Wellbeing_guidance_for_appraisal_-_supplementary_Green_Book_guidance.pdf.

Hirvonen, Johanna, Ulla Tuominen, Seppo Seitsalo, and Others. 2009. "The effect of waiting time on health related quality of life, pain and physical function in patients awaiting primary total hip replacement: A randomized trial." *Value in Health* 942-947.

Holt, Healther. 2010. "Cost of Ill Health." *The Treasury.* November . https://www.treasury.govt.nz/sites/default/files/2010-11/twp10-04.pdf.

Idler, Ellen L, and Yael Benyamini. 1997. "Self-Rated Health and Mortality: A review of Twenty-Seven Community Studies." *Journal of Health and Social Behavior.* Vol.38 No.1 pp 21-37.

Institute for Health Metrics and Evaluation. 2024. *Global Burden of Disease 2021: Findings from the GBD 2021 Study.* Seattle, Washington: IMHE.

Investopedia. Accessed August 28, 2025. https://www.investopedia.com/terms/p/presenteeism.asp.

IPPR. 2023. "Waiting for prosperity: Modelling the economic benefits of reducing elective waiting lists in the NHS." 3 April. https://www.ippr.org/articles/waiting-for-prosperity.

Jackson, Gary, and Martin Tobias. 2001. *Australian and New Zealand Journal of Public Health* 212-221.

Keene, Lyndon. 2025. *The Costs of Waiting.* Association of Salaried Medical Specialists.

Lazarevic, Patrick, and Amelie Quesnel-Vallee. 2023. "Rating Health and Rating Change: How Canadians rate their health and its changes." *Journal of Aging and Health* 535-542.

Masters, Rebecca, Elspeth Anwar, Brendan Collins, and Others. 2017. "Return on investment of public health interventions: a systematic review." *Epiodemiol Community Health* 827-834.

Measure Up. *How to measure wellbeing using the WELLBY approach.* https://measure-up.org/how-to-measure-wellbeing-using-the-wellby-approach/.

Ministry of Health. 2024. 19 November. https://www.health.govt.nz/publications/annual-update-of-key-results-202324-new-zealand-health-survey.

Ministry of Health. 2024. "Questionnaires and Content Guide 2023/24: New Zealand Health Survey." 19 Novermber . https://www.health.govt.nz/publications/questionnaires-and-content-guide-202324-new-zealand-health-survey.

Ministry of Social Development. 2025. *Benefit Fact Sheets.* https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/benefit/index.html.

Mutz J, Lewis C M. 2022. "Cross-classification between self-rated health and health status: longitudinal analyses of all-cause morality and leading causes of death in the Uk." *Sci Rep 12*

NZIER. 2024. "Cost of alcohol harms in New Zealand: Updating the evidence with recent research. A report for the Ministry of Health." https://www.health.govt.nz/publications/costs-of-alcohol-harms-in-new-zealand-updating-the-evidence-with-recent-research.

NZIER. 2022. "The cost of long-term conditions in New Zealand." NZIER report for the Ministry of Health.

NZIER. 2021. "Wellbeing and productivity at work." NZIER report for Xero.

NZIER. 2020. *The social and economic costs of stroke in New Zealand - 2020 update.* NZIER report for the Stroke Foundation.

OECD. 2023. *Health at a Glance: OECD Indicators,* OECD Publishing, Paris

OECD. 2020. *Unmet needs for health care: Comparing approaches and results from international surveys.* OECD.

Organisation, World Health. https://www.who.int/about/governance/constitution.

Owen, Leslie, Antony Morgan, Alastair Fischer, and Others. 2011. "The cost-effectiveness of public health interventions." *Journal of Public Health* 37-45.

Palladino, R., Tayu Lee, J., Ashworth, M., Triassi, M. & Millett, C. 2016. "Associations between multimorbidity, healthcare utilisation and health status." *Age Ageing* 45, 431-435.

Pernerger, Thomas, Angele Gayet-Ageron, and Others. 2013. "Self-rated health: analysis of distances and transitions between response options." *National Library of Medicine.* 22 December. https://pubmed.ncbi.nlm.nih.gov/23615958/.

Public Health Advisory Committee. 2025. *Determining our Future - Social, Cultural, Economic and Commercial Determinants of Wellbeing in Aotearoa New Zealand: Actions to improve our health and wellbeing.* Wellington: Ministry of Health.

Rashbrooke, Max. 2022. "Lightening the Load." *Association of Salaried Medical Specialists.* 23 November. https://asms.org.nz/lightening-the-load/.

Reid, Papaarangi, Sarah-Jane Paine, Braden Te Ao, Esther J Willing, and Others. 2022. "Estimiating the economic costs of Indigenous health inequities in New Zealand: a retrospective cohort analysis." *BMJ Open.*

Reti, Shane Hon. 2024. *Beehive*. November. https://www.beehive.govt.nz/release/health-survey-results-help-drive-change.

Smith, Conal and Davies, Caitlin. 2020. *Valuing Wellbeing Outcomes: Cost-wellbeing analysis of housing outcomes in the New Zealand General Social Survey.* Kotata Insight.

Stats NZ. 2025. *Māori have highest increases in life expectancy.* 30 July. https://www.stats.govt.nz/news/maori-have-highest-increases-in-life-expectancy/.

Te Whatu Ora. 2024. *Aotearoa New Zealand Health Status Report 2023.* February. https://www.tewhatuora.govt.nz/assets/Publications/Health-status-reports/HNZ-TWO-Health-Status-Report_FULL.pdf.

The Treasury. 2024. 23 December. https://www.treasury.govt.nz/information-and-services/public-sector-leadership/investment-management/investment-planning/treasurys-cbax-tool.

The Treasury. 2024. "Fiscal incidence in New Zealand: The effects of taxes and benefits on household incomes in tax year 2018/19."

The Treasury. 2021. "Demographic, Economic and Fiscal Assumptions and Logic in the 2021 Long-term Fiscal Model."

Thomas, Chris, Jamie O'Halloran, Henry Parkes, and Others. 2024. *Our Greatest Asset: The final report of the IPPR Commission on Health and Prosperity*. IPPR.

Tuominen, Ulla, Harri Sintonen, Johanna Hirvonen, and Others. 2010. "Is longer waiting time for total knee replacement associated with health outcomes and medication costs? Randomized clinical trial." *Value in Health* 998-1004.

Umbrella Wellbeing. 2025. "Presenteeism at Work." https://umbrella.org.nz/umbrellawellbeingreport-2025/.

Viscusi, W Kip, and Joseph E Aldy. 2003. "The Value of a Statistical Life: A Critical Review of Market Estiamtes Throughout the World." Journal of Risk and Uncertainty 5-76.

World Health Organisation Constitution. 2025. https://www.who.int/about/governance/constitution.

ASMS

TOI MATA HAUORA