
Long-term Projections & Scenarios under an Ageing Population

**April 26 2019 Presentation to
*Retirement Policy Research Centre***

Retirement Income Policy Summit

Matthew Bell

New Zealand Treasury

Projections versus forecasts

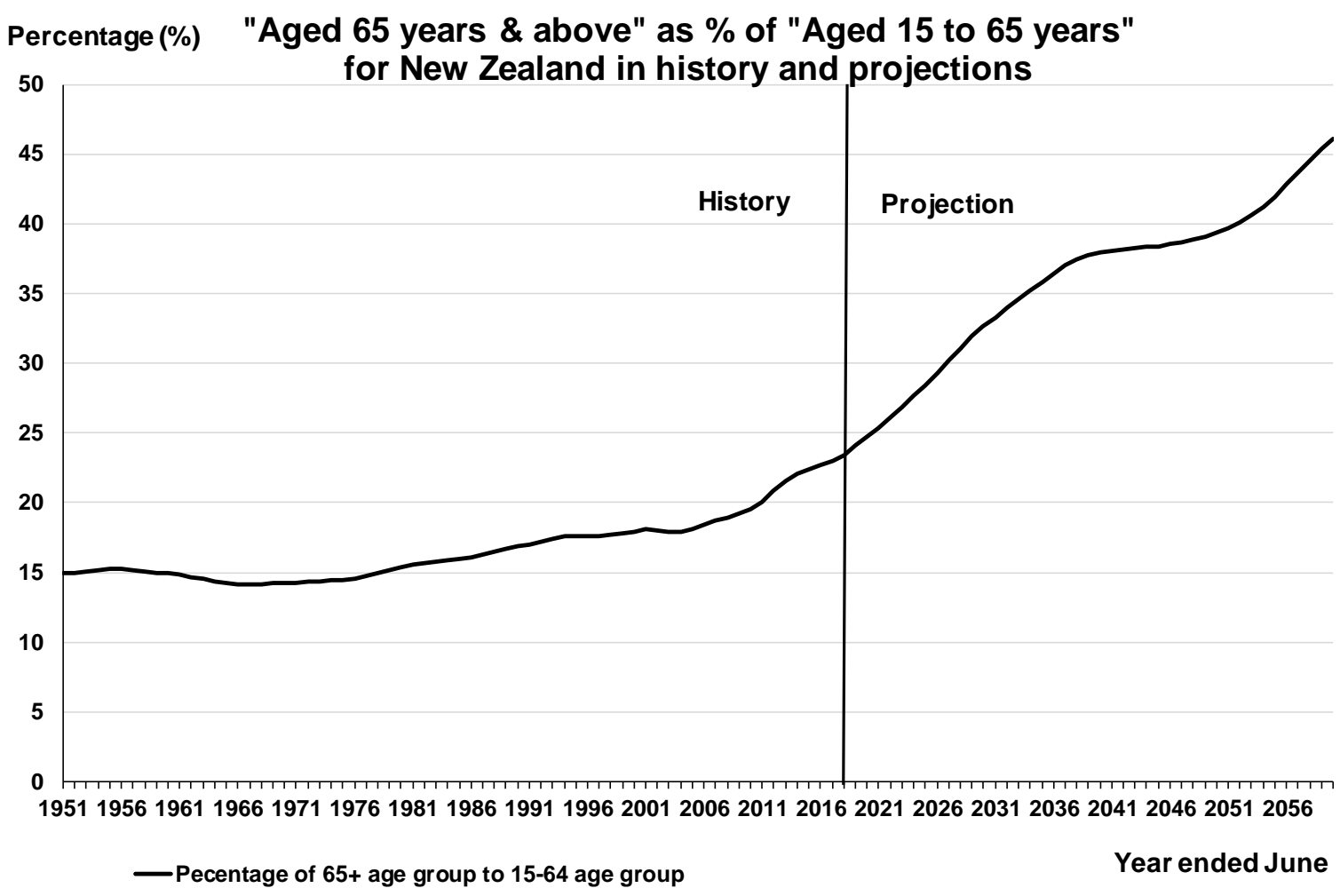
Projections and forecasts are not the same thing

Forecasts are a best attempt to predict the future, via comprehensive modelling & expert opinion

Projections are **potential paths**, using assumptions based on **historical averages** of growth or levels

Depend greatly on forecast base & assumptions used & often build in no response to unwanted outcomes

But one of the more predictable future outcomes is this – because a lot of these people are alive now



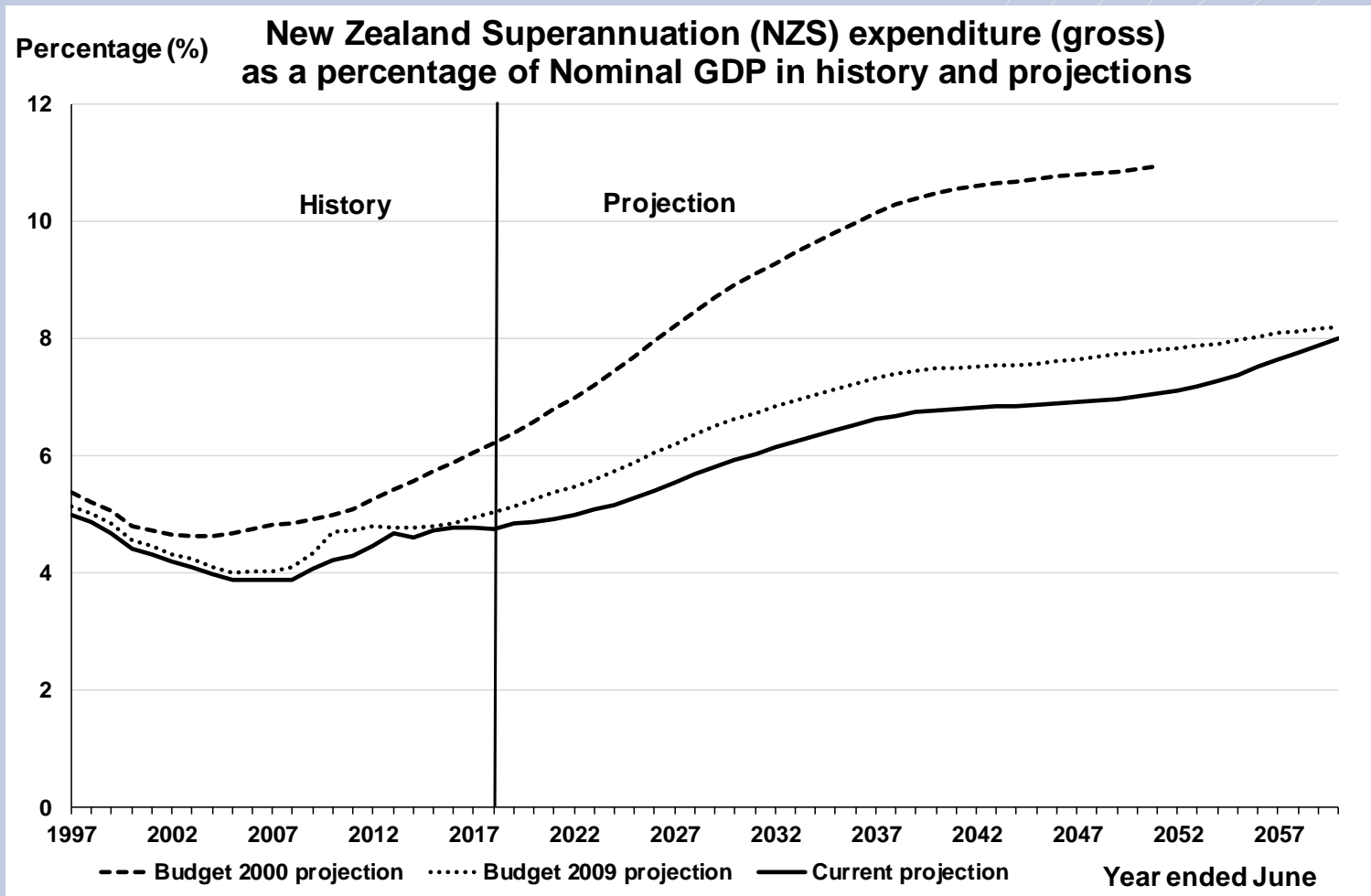
Why is this & what does it mean?

I think others plan to say more about demography so I will simply point out that the two big causes of this are reduced fertility and increased longevity

People living longer, healthier lives is a cause for celebration, but it brings with it some challenges

The sooner we act, both to reap benefits & mitigate problems, the better prepared NZ society, business and government will be for this demographic shift

The public pension, New Zealand Superannuation (NZS)



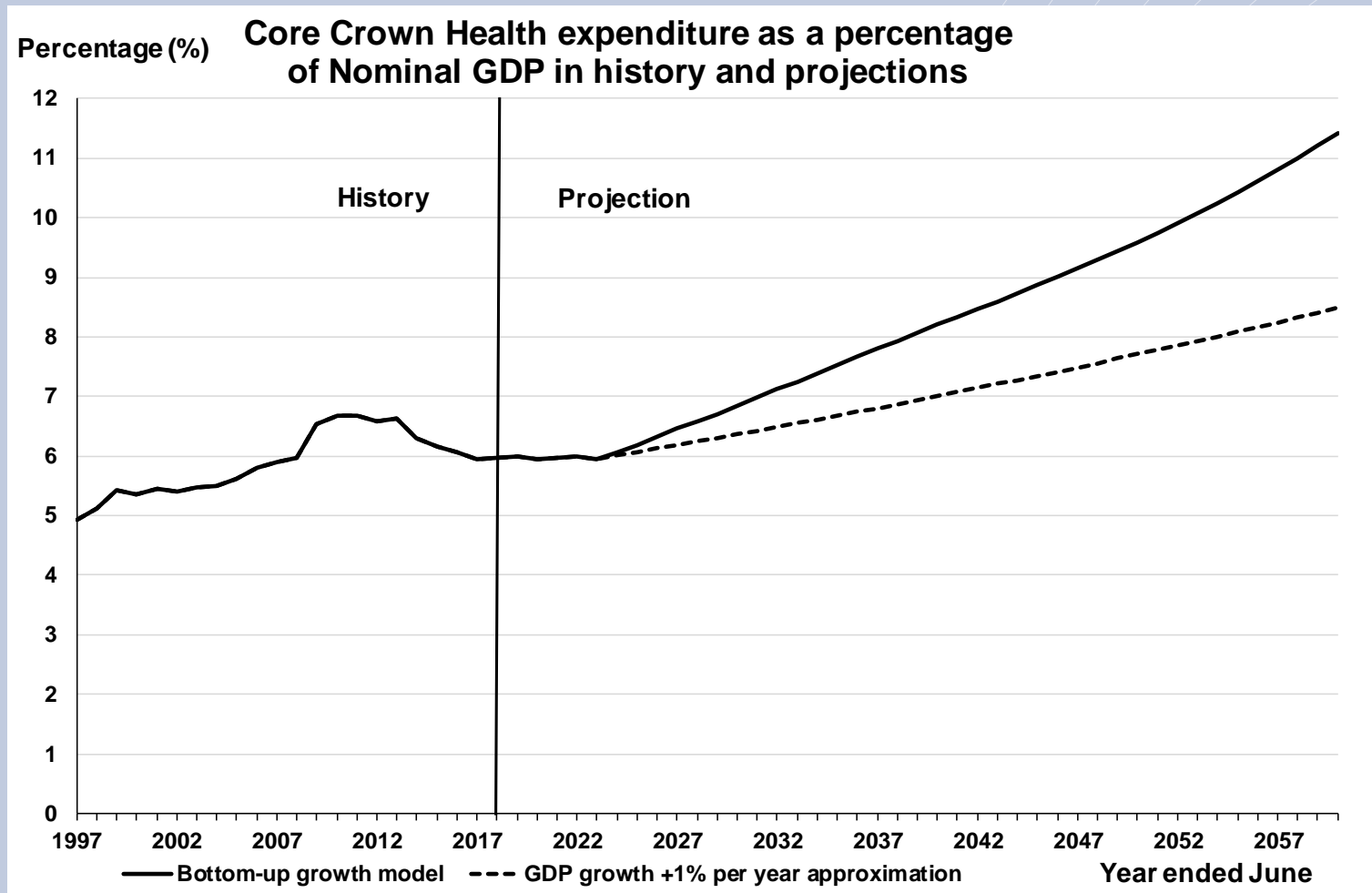
A picture is worth a 1,000 words - well 2 important messages anyway

With NZS recipients (~ 65+ popn) growing faster than the labour force (LF) & NZS rates linked to average wage growth, projected NZS to GDP steadily rises

That story hasn't changed since Treasury's first Long-Term Fiscal Statement in 2006 and even earlier

But projected rise has reduced, mainly due to higher GDP, in outturns & future expectations, & increased older age group LF participation is a major factor

The other major expense type that an ageing popn impacts - Health



Why does an ageing population drive up health expenses to GDP?

Link of ageing popn to NZS is clear. Health spending more complex & would rise even without ageing. As countries grow richer, spending on health lifts.

But ageing plays a role. 65+ age group was 14% of popn in 2013/14 & received 42% of health spend. Under 25s were 34% of popn & got 16% of spend

Also increased longevity will likely lengthen average time in rest home & other care

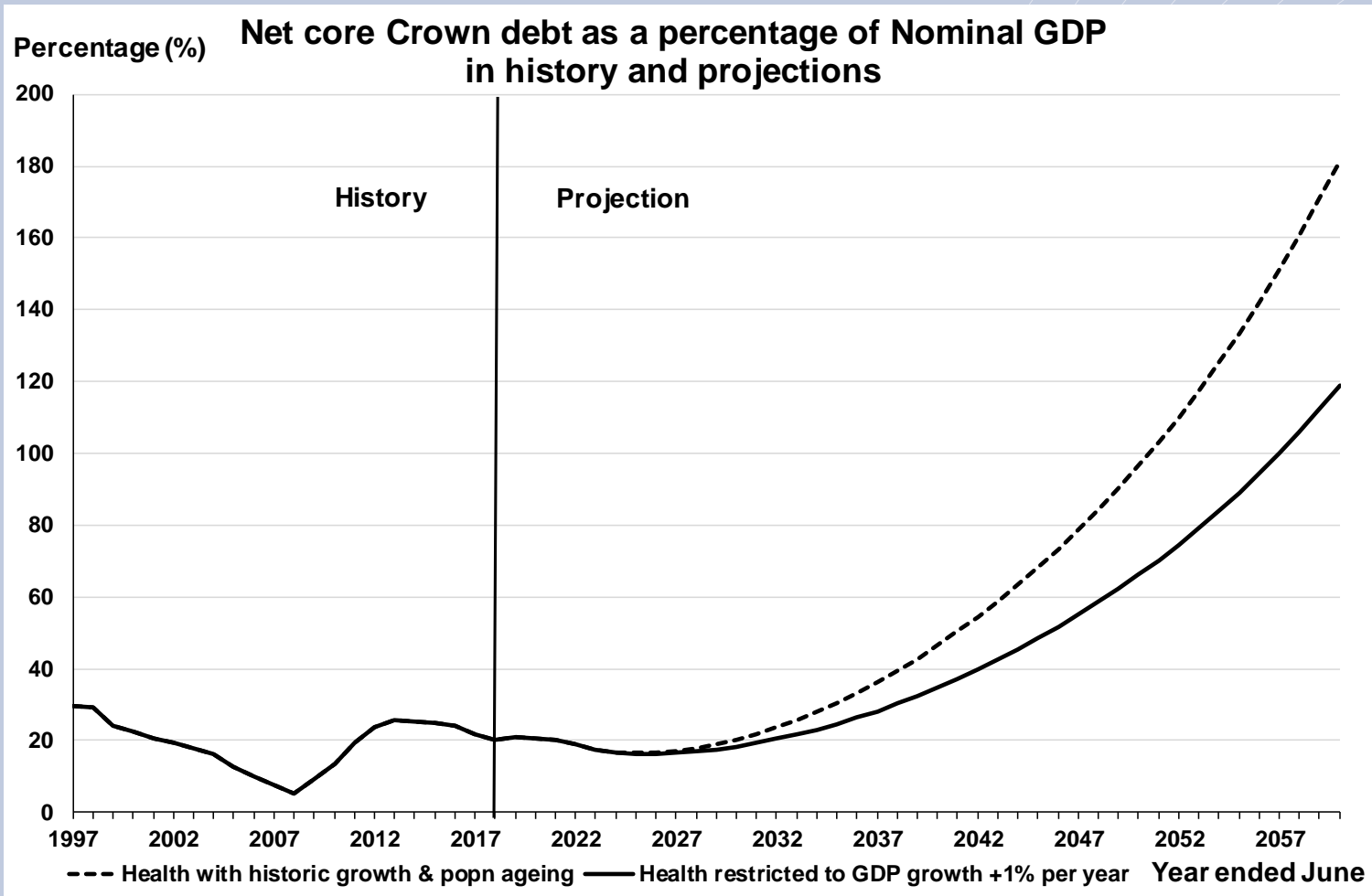
Even so, doesn't projection look exaggerated compared to history?

Health expenses, if annual average growth from 96/97 to 10/11 continued, would be 11.6% of GDP by 2060

The GFC led to slower increases in health spending but this is unlikely to endure. A 2013 OECD paper projects NZ's health spending to be 12.7% by 2060

Over last 2 decades health spending's annual average growth \approx GDP growth +1%. Applying this disregards ageing popn effect, but still reaches 8.5% by 2060 (similar to 8.8% OECD cost containment scenario)

Keeping health to GDP+1% & NZS unchanged, what's the big picture?



Is that really the future outlook?

Simple answer is “No”. If it were, interest costs would exceed NZS by 2060 in unrestrained health option!

It is not a prediction, it is a warning signal. Spending and/or tax settings, or both, will need to change

Unrestrained borrowing is not the answer

There are many options to avoid this, but the longer we delay potentially the more severe they become

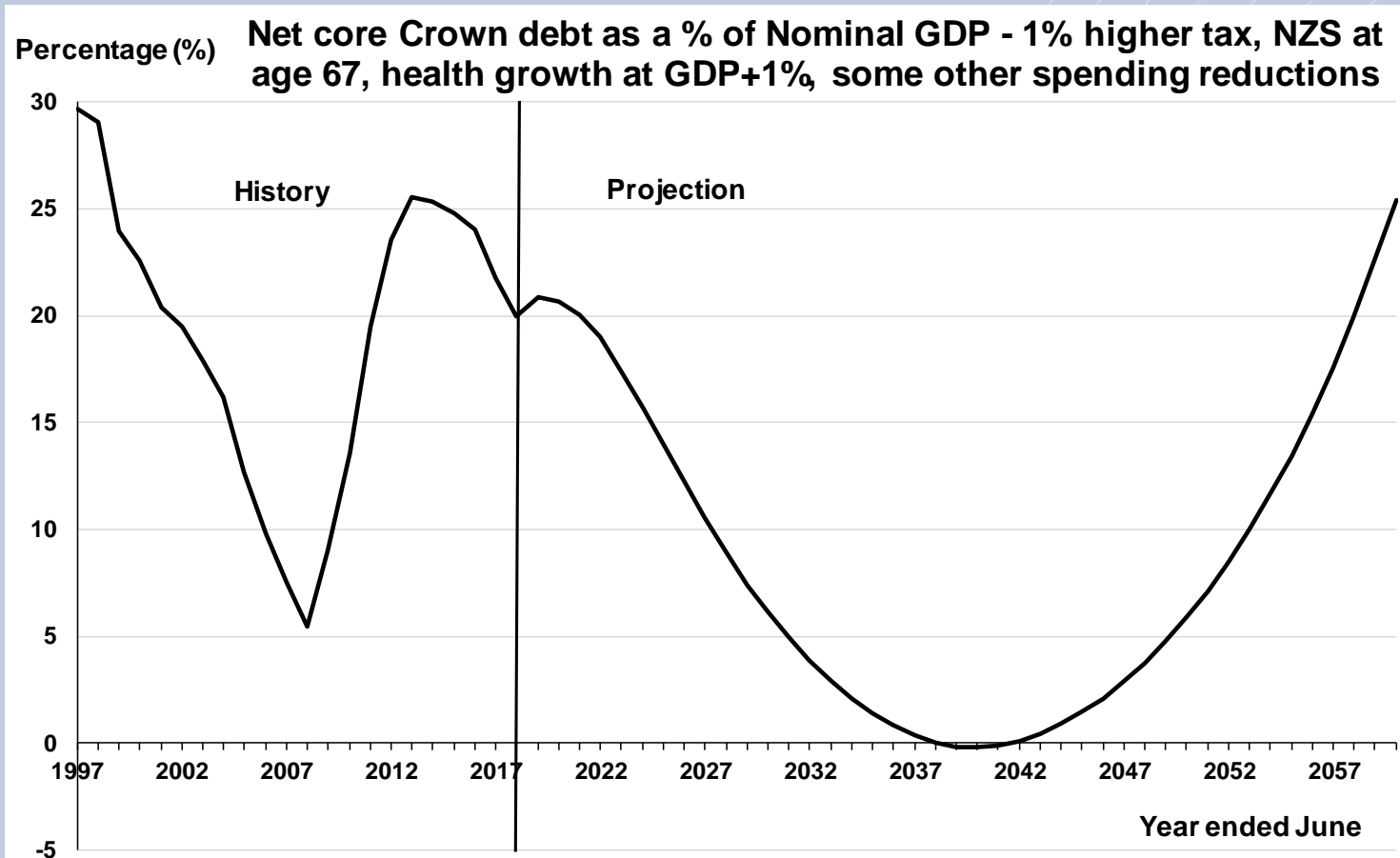
What changes could be made to keep the public accounts in order?

There are many options, & educating the public and politicians about these is one of the major reasons Treasury produces Long-Term Fiscal Statements

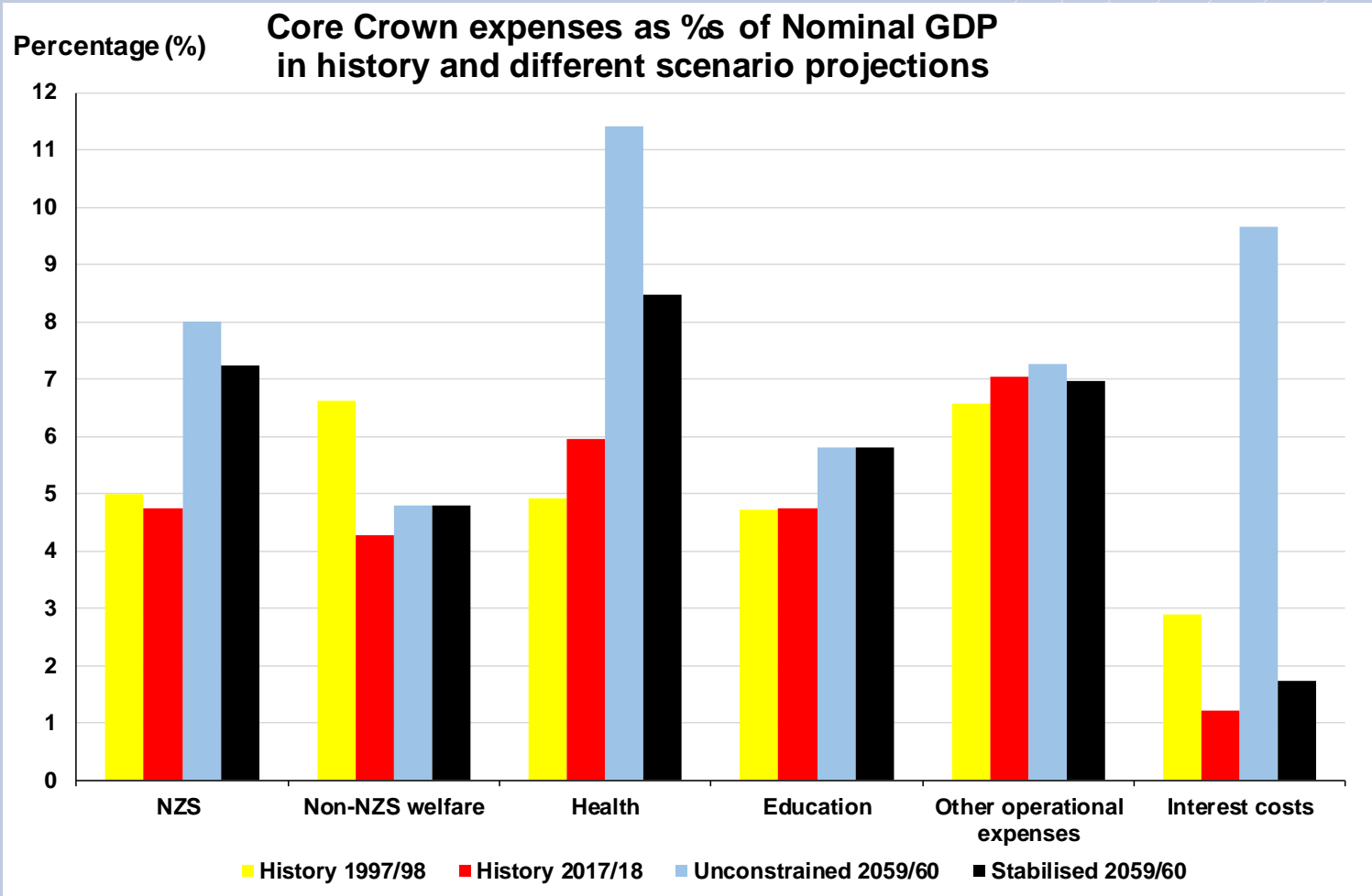
Here is one potential set of options – lift long-run tax to GDP by 1%, raise NZS eligibility age to 67 by 2027/28, restrict health growth to GDP+1% & reduce other spending so net debt \approx 20% of GDP.

This is illustrative only. It is not Treasury advice.

And how does that look?



What does it mean for expenses, as %s of GDP over time?



Some points, general & specific, about the last 2 graphs

Core Crown tax to GDP in the 4 times/scenarios are:
30.1% in 97/98; 27.9% in 17/18; 28.3% & 29.3%

Actual expense & revenue changes would allow net debt to GDP to follow a more level path than the parabola graph – that's just a modelling constraint

A big difference between the 2 scenarios is the size of interest costs – rising debt builds on itself this way, so keeping debt under control stops this accelerant

Closing messages

The options shown are not official Treasury advice, are illustrative only & are among many choices that society has to address fiscal pressures

Growing the economy via a more skilled, productive workforce using modern, efficient capital will also provide more income to cover higher expenses

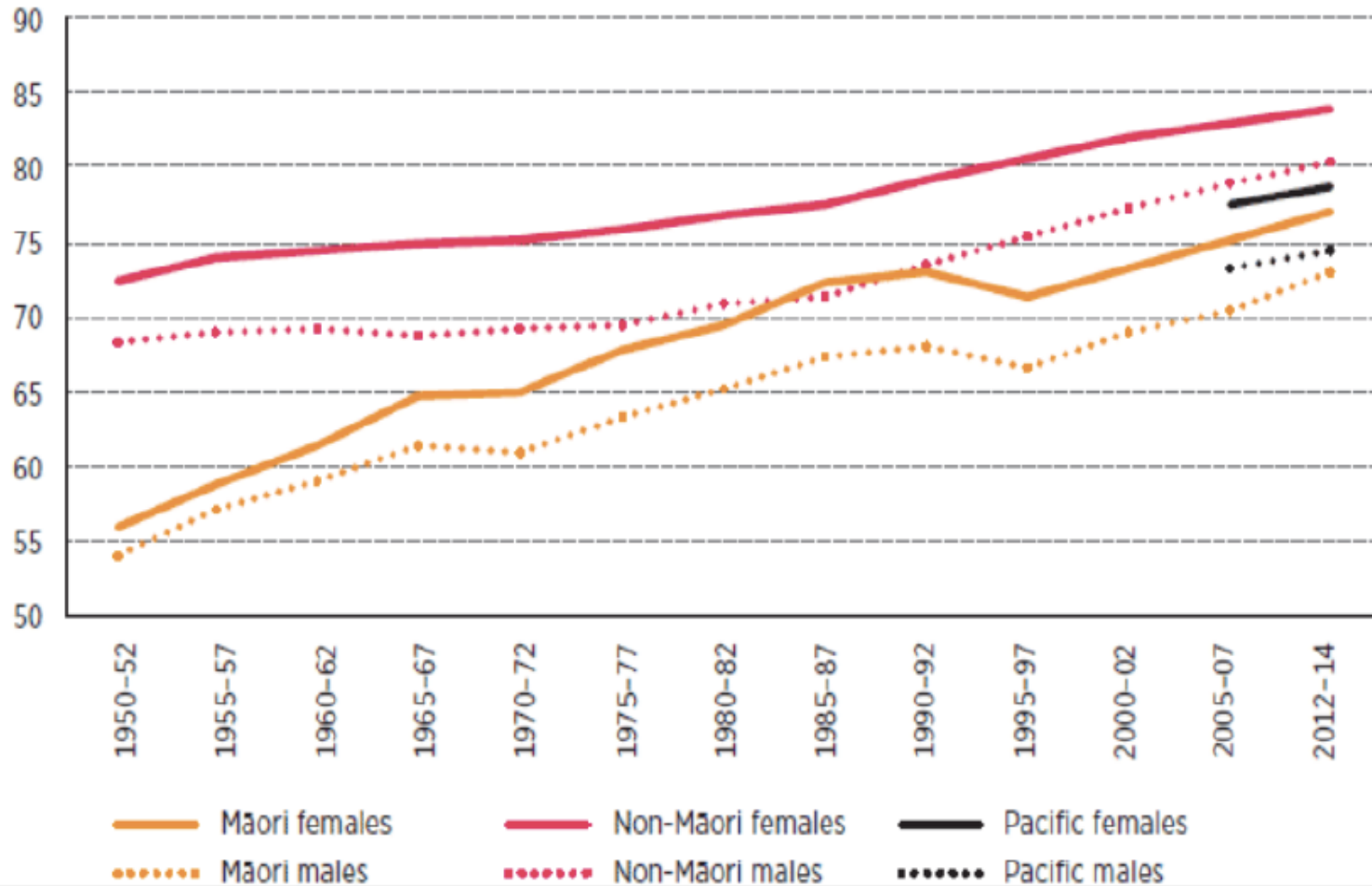
Living longer, healthier lives is a great outcome, but it brings both challenges & advantages. The sooner preparation for these begin, the better equipped we will be to reap the benefits & reduce the pressures

How the realities of an ageing population inform the projections

**Ngaire Kerse, Joyce Cook Chair in Ageing Well
School of Population Health
University of Auckland**

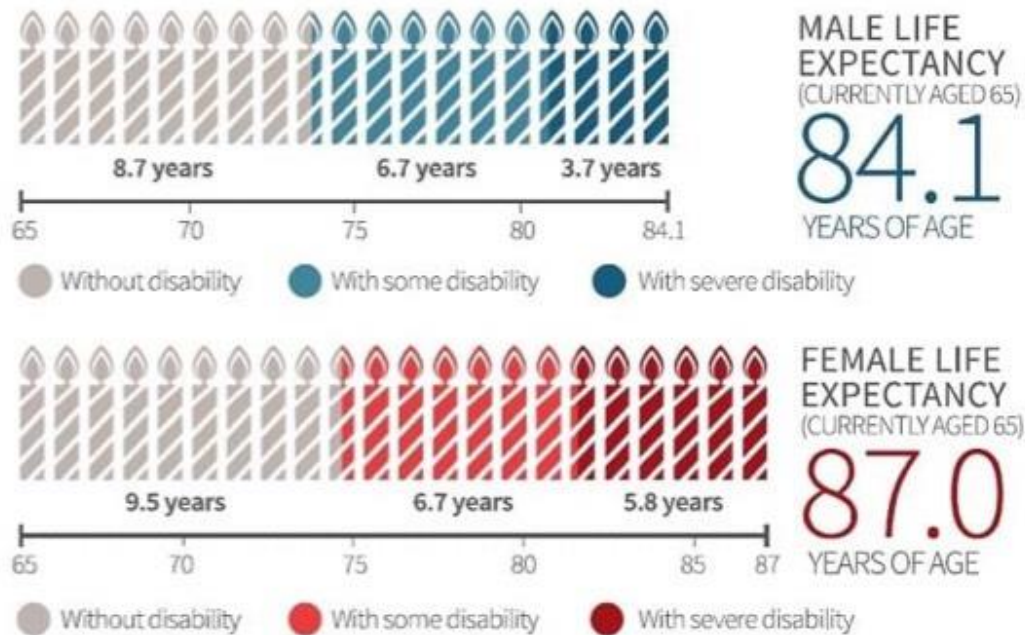
Life Expectancy and Inequities

Life expectancy at birth (years)



The growing need

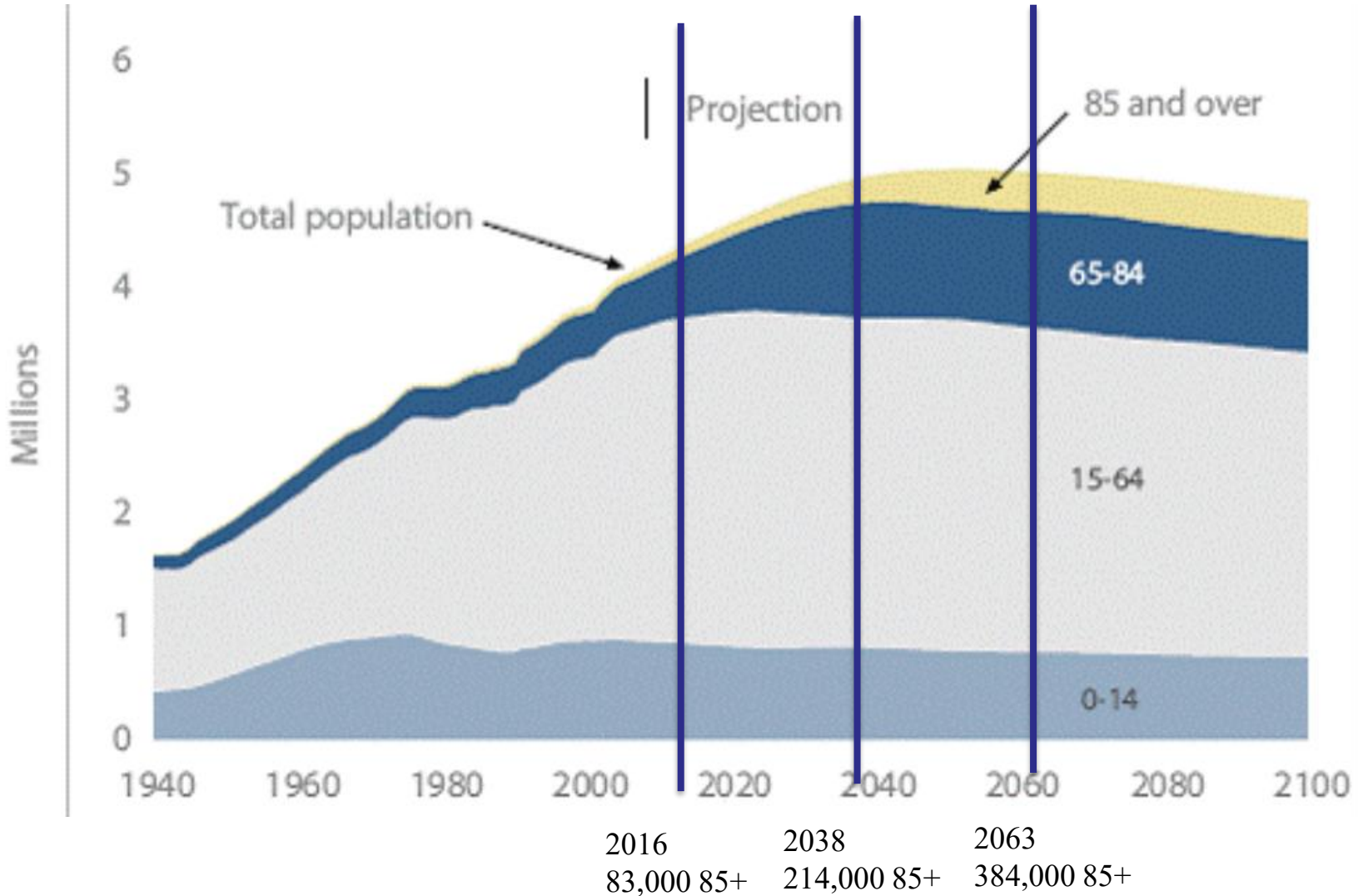
Approximately one-quarter of your retirement is expected to be "care years" where help may be needed with daily living activities.[^]



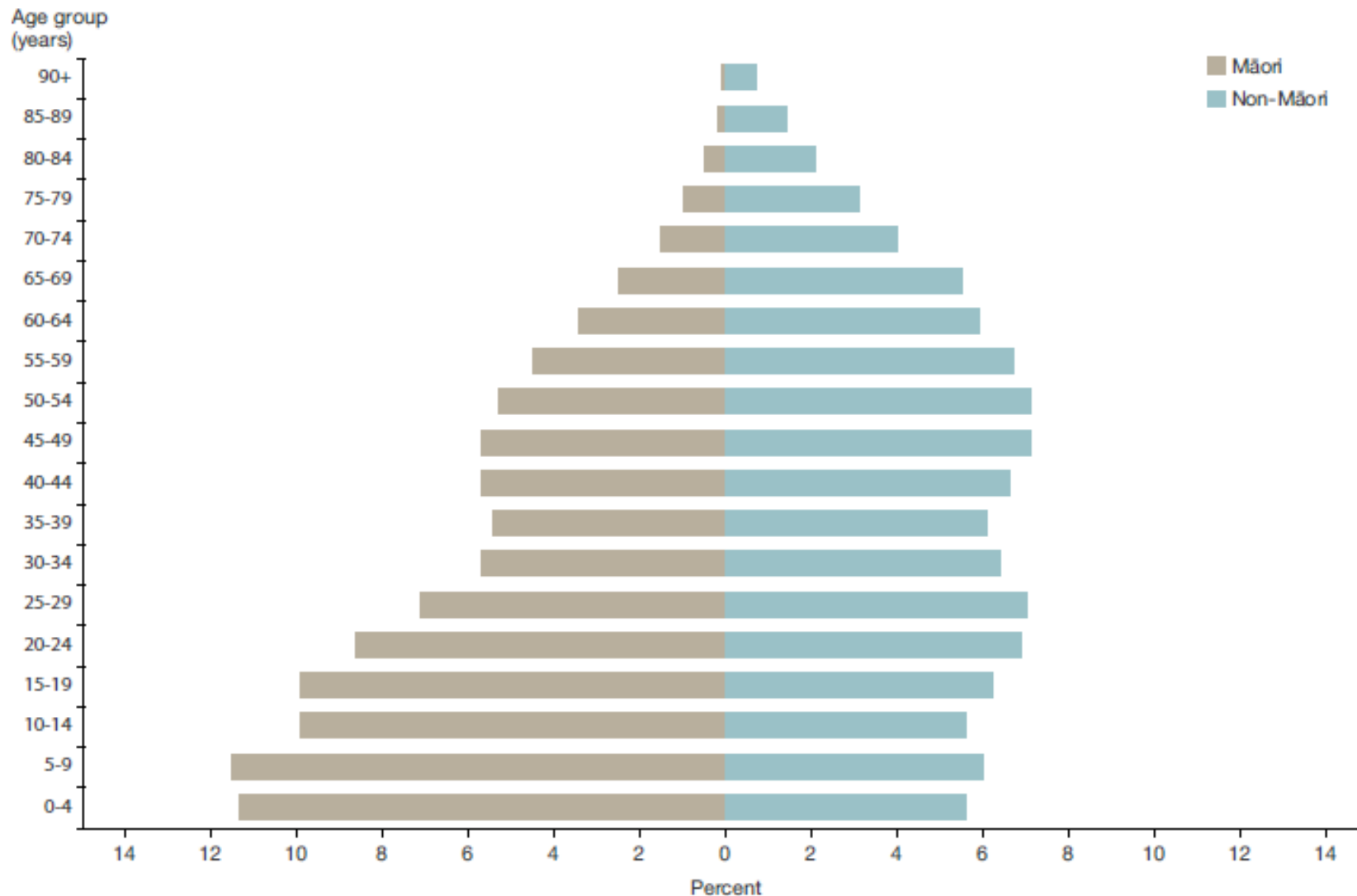
[^] Source: Australian Institute of Health and Welfare – Selected health expectancies at age 65, by sex, 2012

NZ population projection

Statistics New Zealand



Māori and Non-Māori

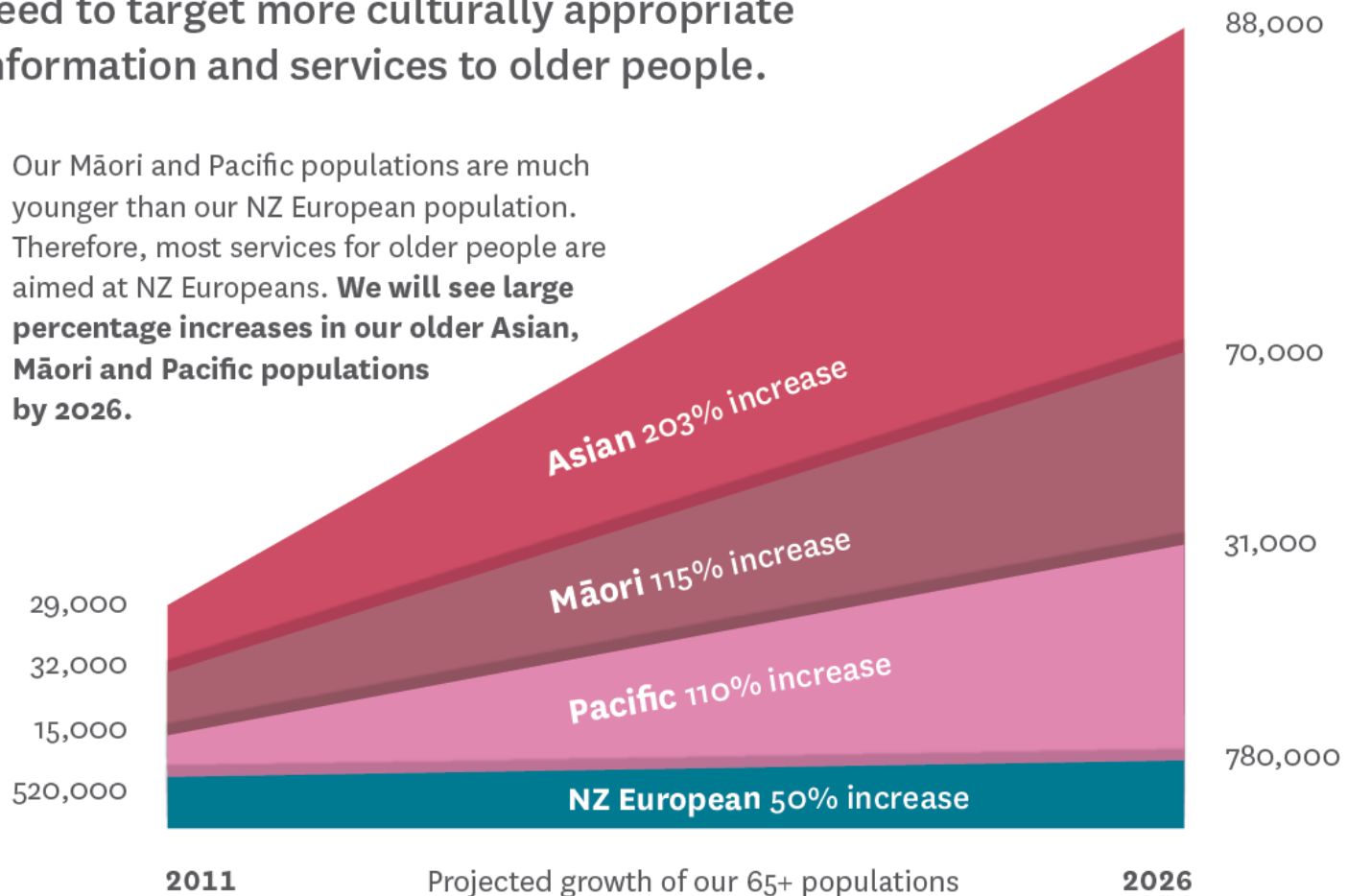


Source: Statistics New Zealand – Māori ethnic group population by age and sex at 2015

Diversity of older people

Our older population is becoming more culturally diverse, and organisations will need to target more culturally appropriate information and services to older people.

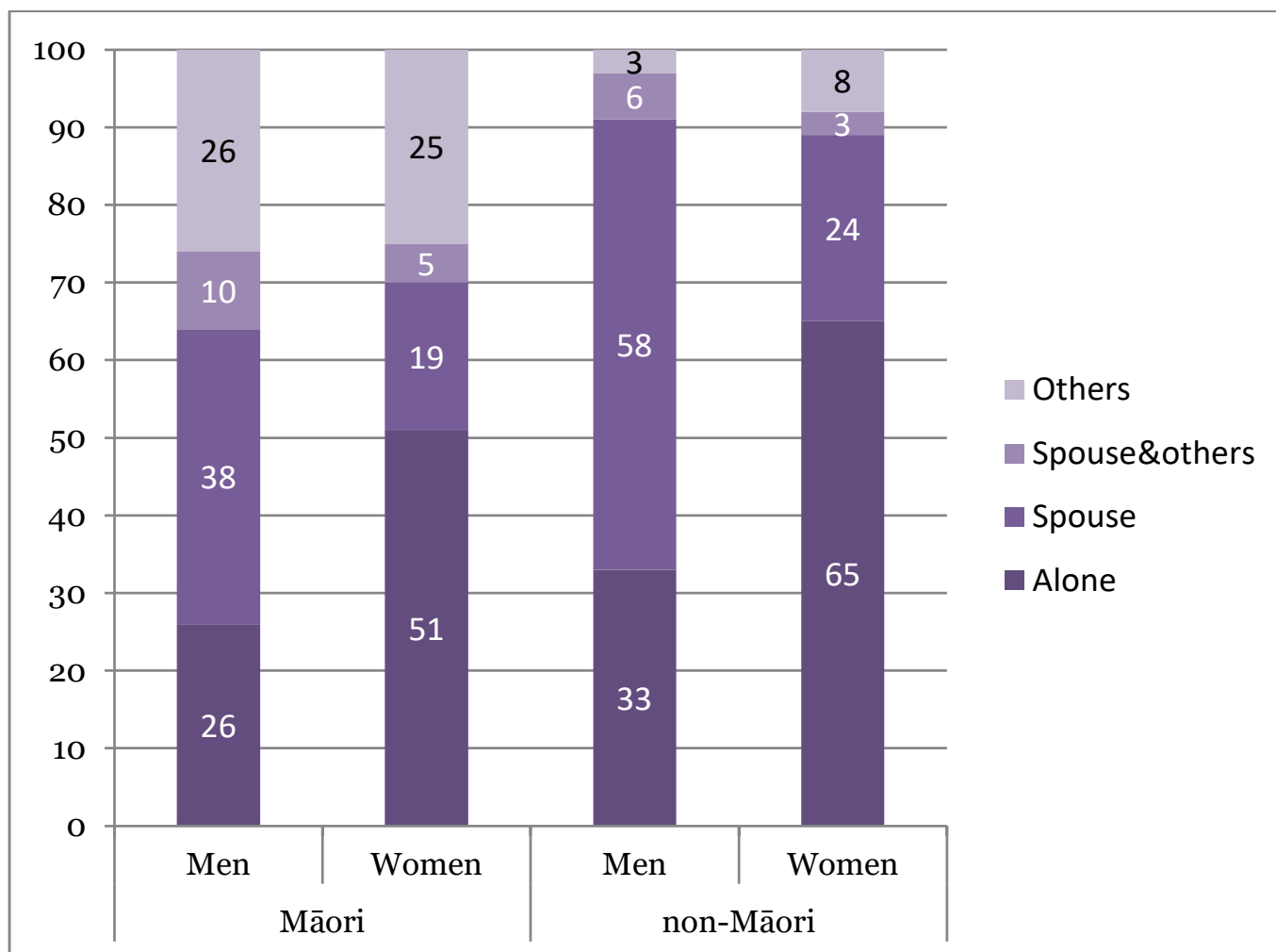
- ▶ Our Māori and Pacific populations are much younger than our NZ European population. Therefore, most services for older people are aimed at NZ Europeans. **We will see large percentage increases in our older Asian, Māori and Pacific populations by 2026.**



Source: Statistics New Zealand population projections



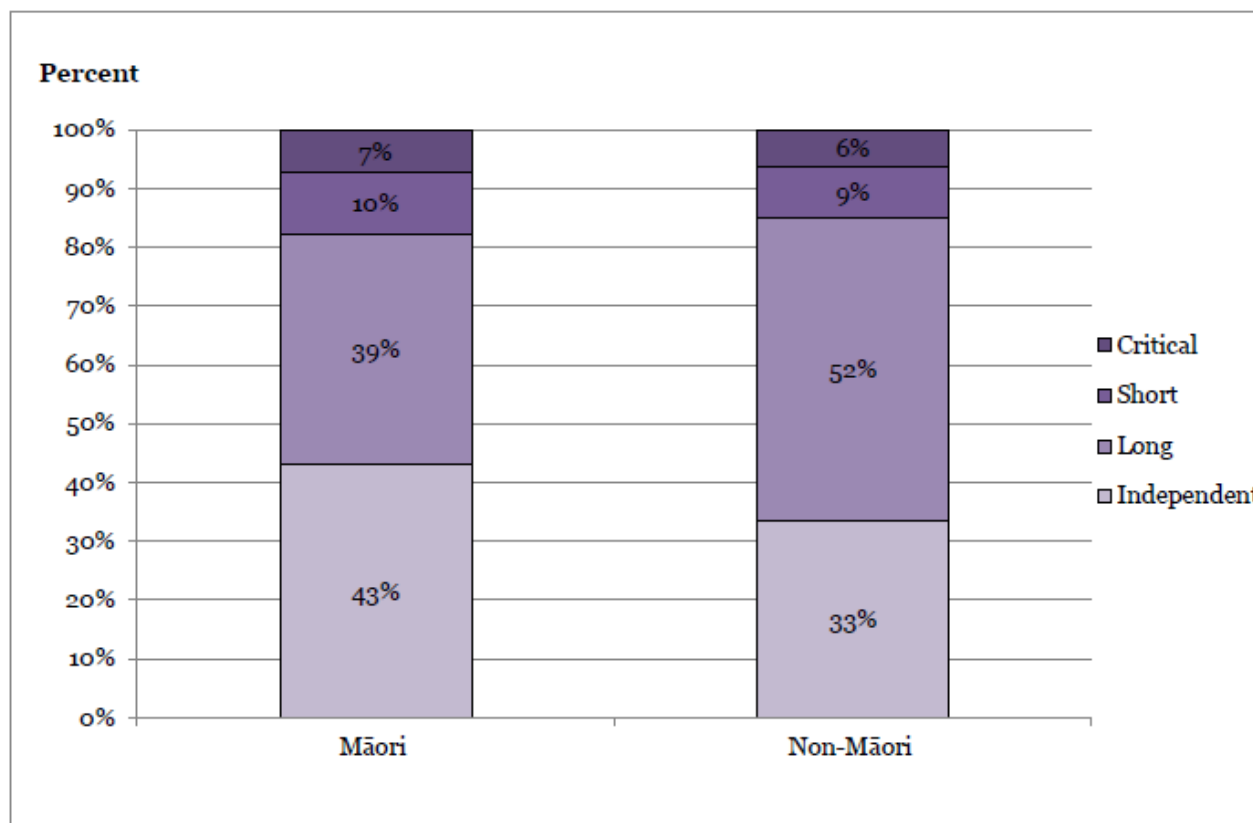
Figure 2 Living arrangement, by sex and ethnic group.



Source: LiLACS NZ first wave of data collection

Note: living with spouse included partners

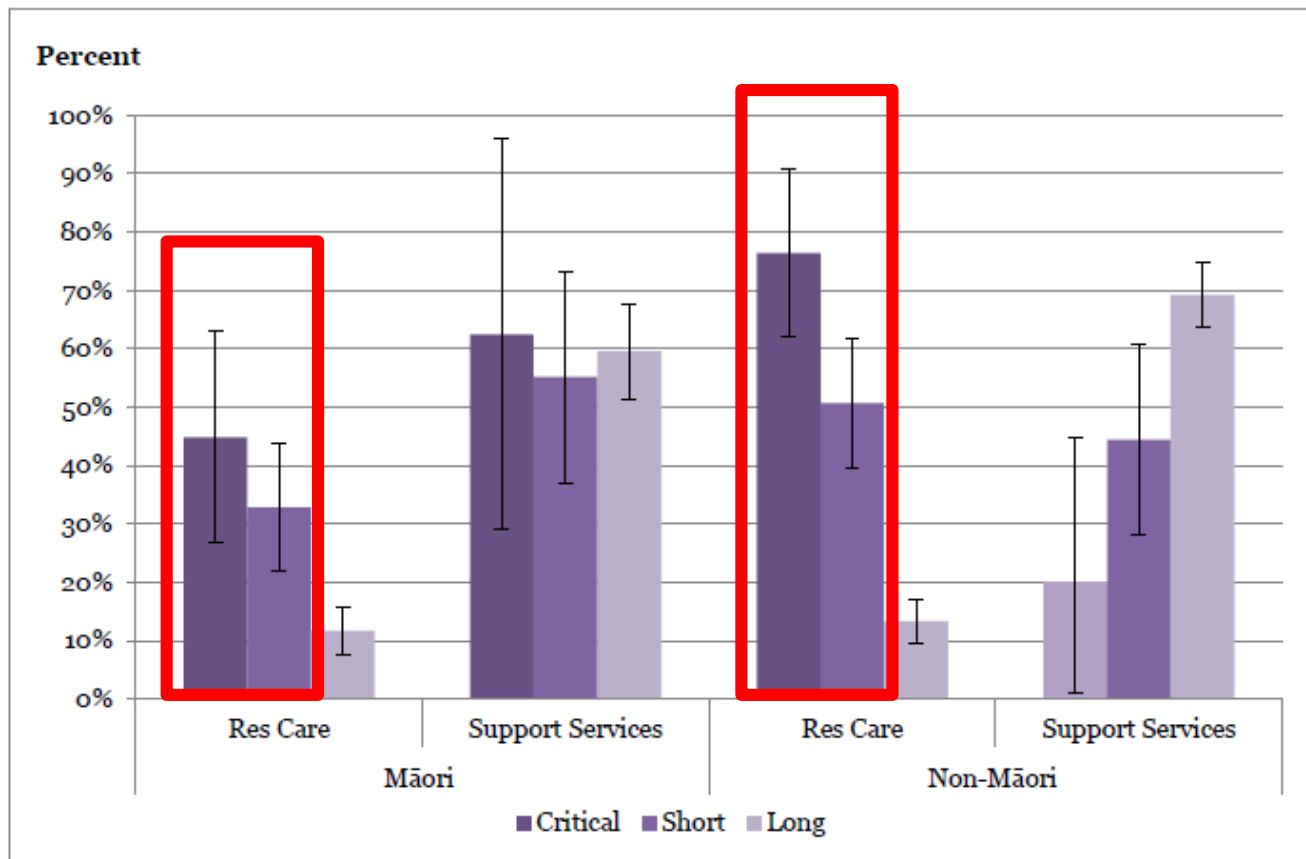
Figure 1: Intervals of care need for Māori and non-Māori in advanced age



Source: LiLACS NZ

Note: Percentage of LiLACS NZ participants coded to each category. 'Critical' (assistance needed on a 24 hour basis or several times a day), 'Short' (daily assistance needed), 'Long' (assistance expected to be needed weekly), and 'Independent' (those not requiring any assistance on a weekly basis).

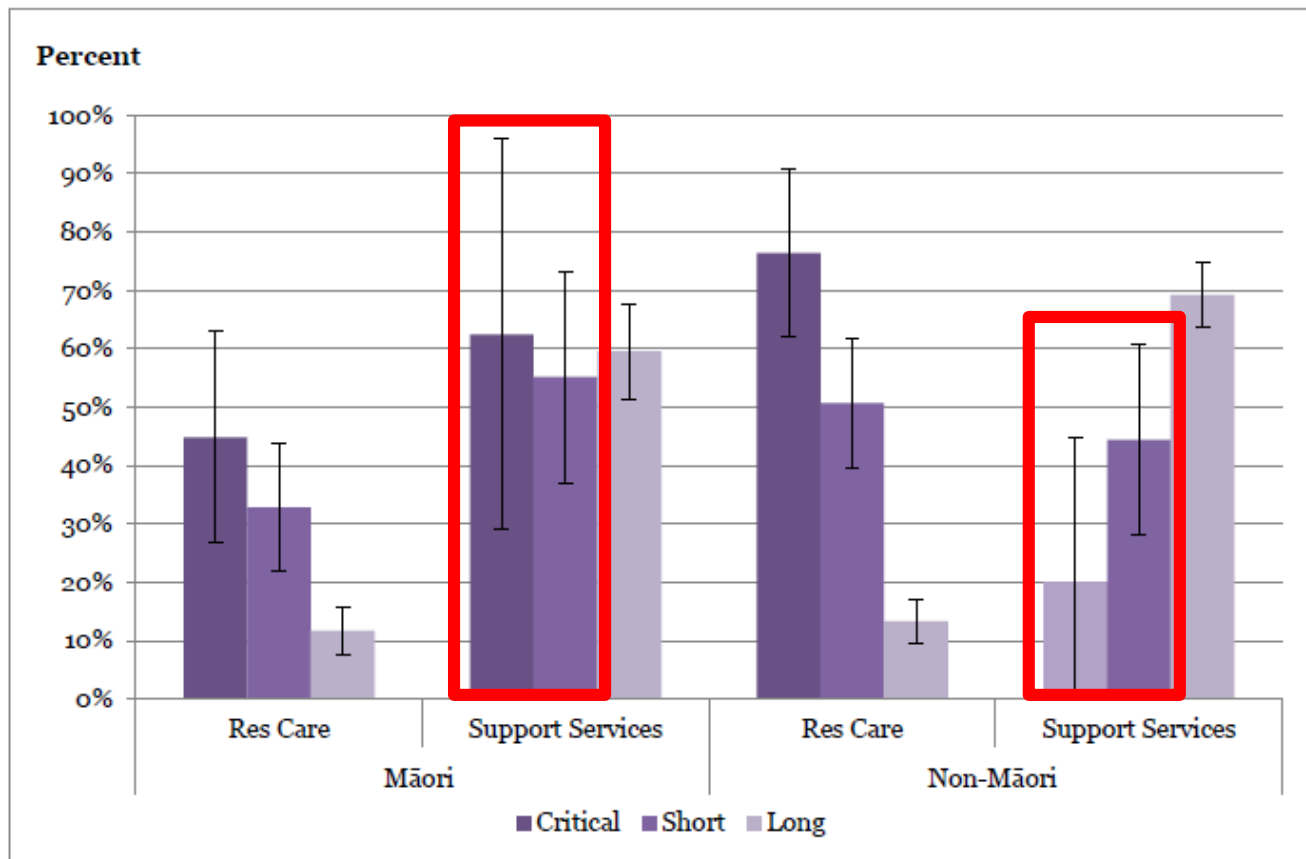
Figure 2: Proportion of LiLACS NZ participants with each interval of care need and their receipt of support services and residential care



Source: LiLACS NZ

Note: *Res Care - living in residential care at the time of the baseline interview

Figure 2: Proportion of LiLACS NZ participants with each interval of care need and their receipt of support services and residential care



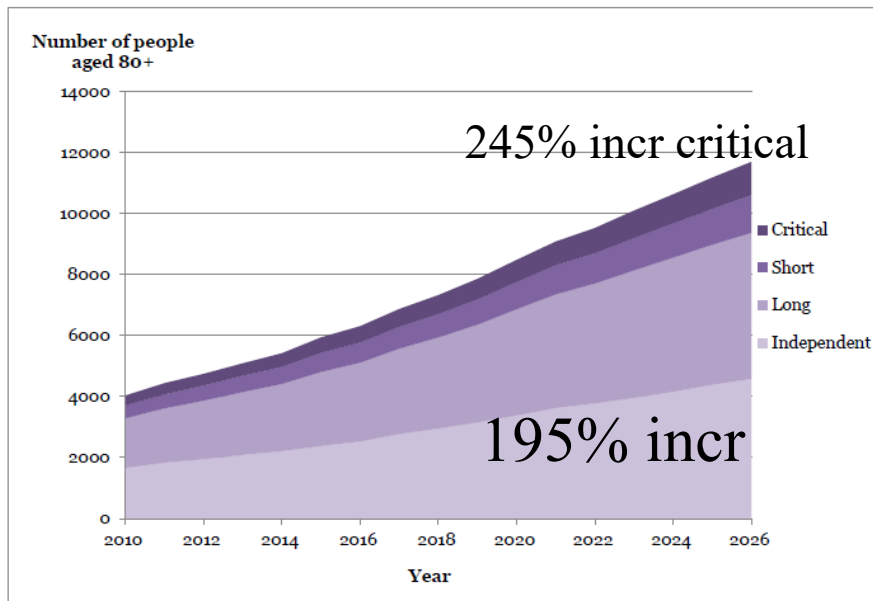
Source: LiLACS NZ

Note: *Res Care - living in residential care at the time of the baseline interview

Estimated increase in population disability

Māori

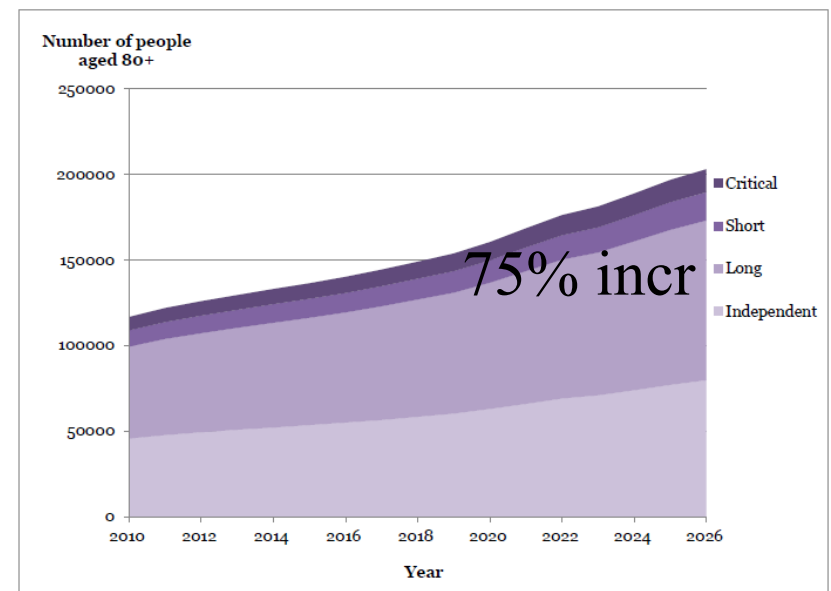
Figure 3: 2026 projections of Māori aged 80+ with critical, short or long interval care needs, as well as those who are expected to be independent



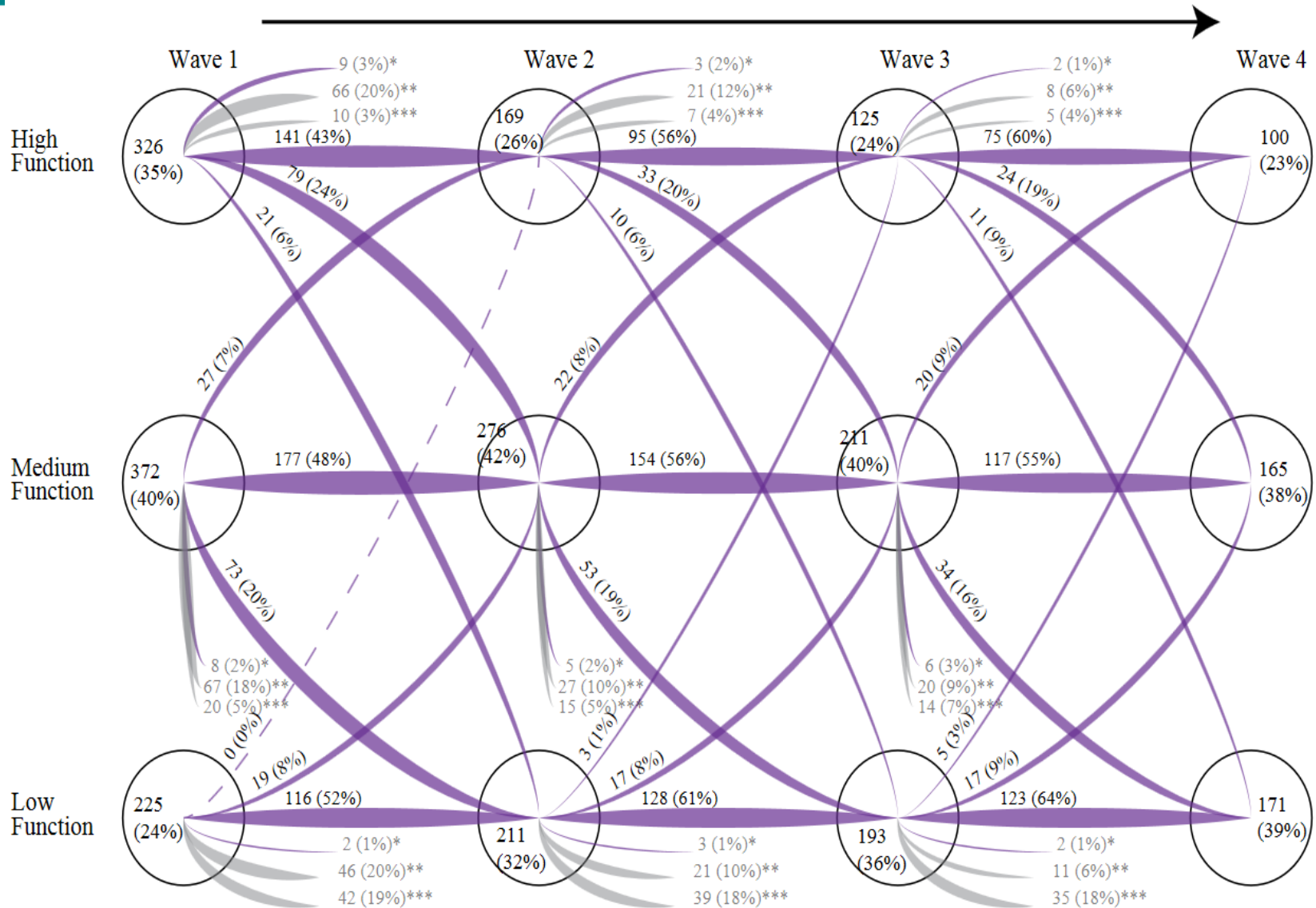
Source: LiLACS NZ 2010–11, Statistics NZ population projections 2011

Non-Māori

Figure 4: 2026 projections of non-Māori aged 80+ with critical, short or long interval care needs, as well as those who are expected to be independent



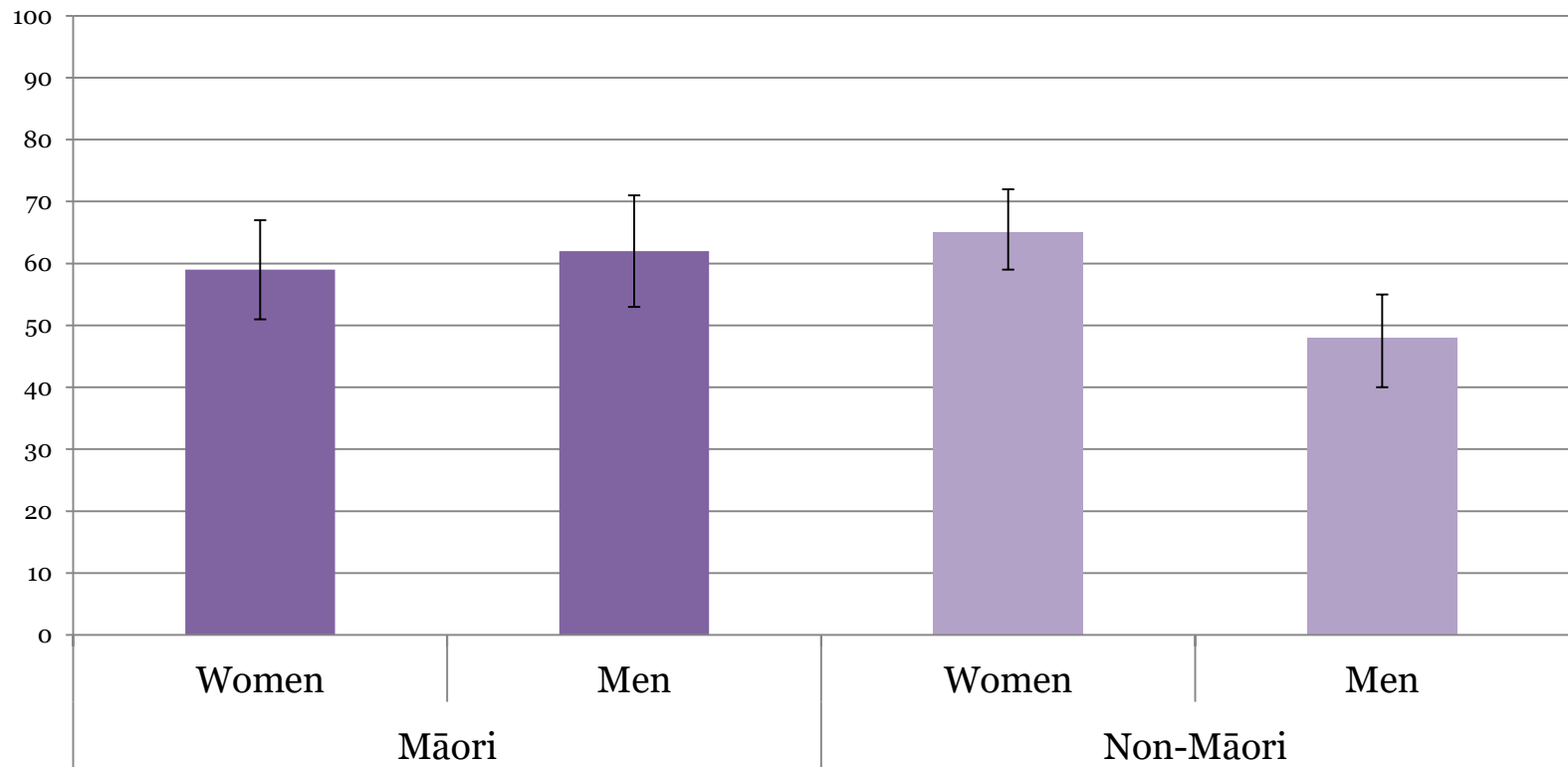
Source: LiLACS NZ 2010–11, Statistics NZ population projections 2011



*no functional data in the subsequent wave
 **dropped out
 ***died

Stayed the same or improved

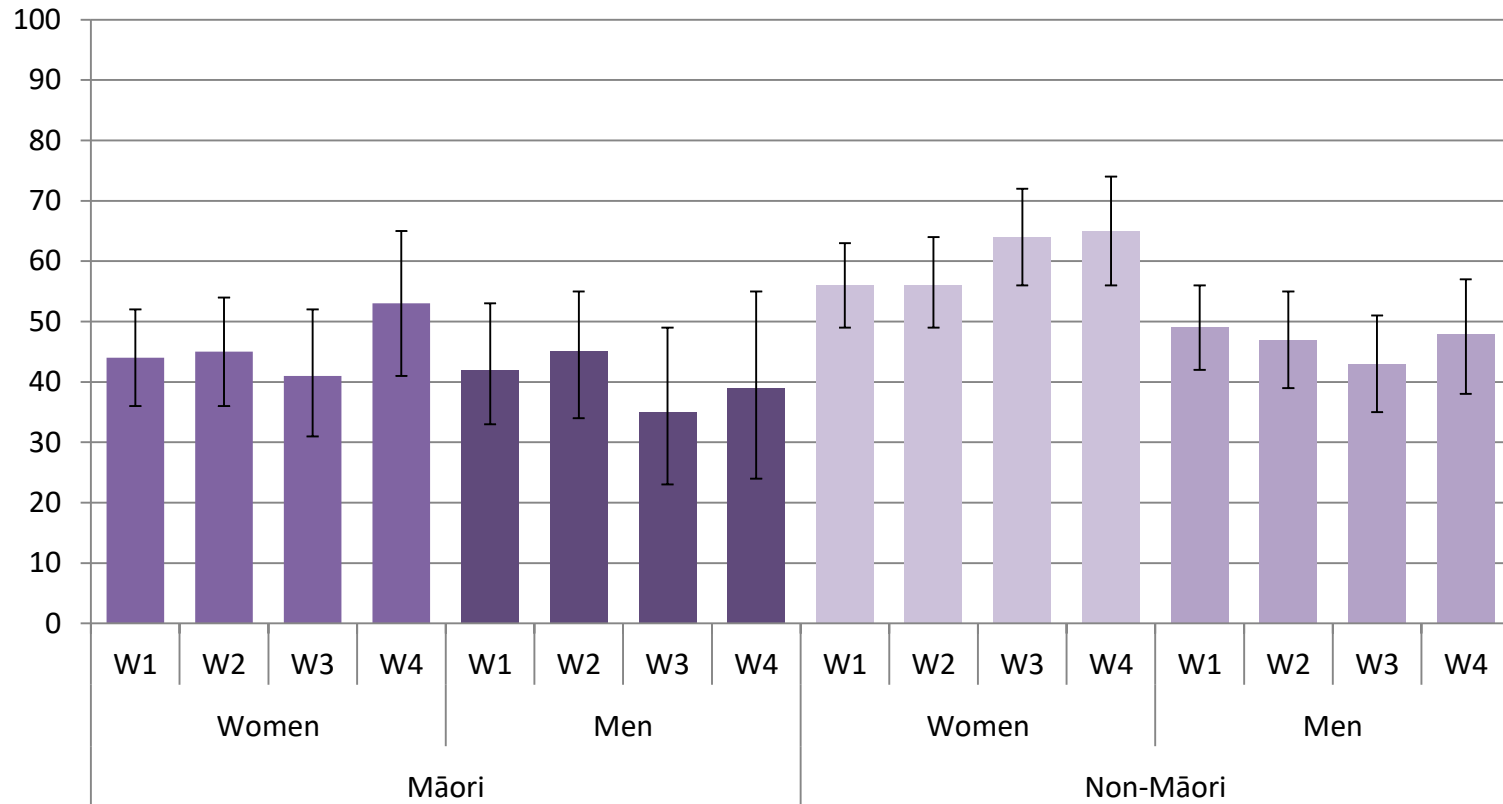
Percent



Women did better than men, Māori did better than non-Māori
No impact on HRQOL

Receiving support services

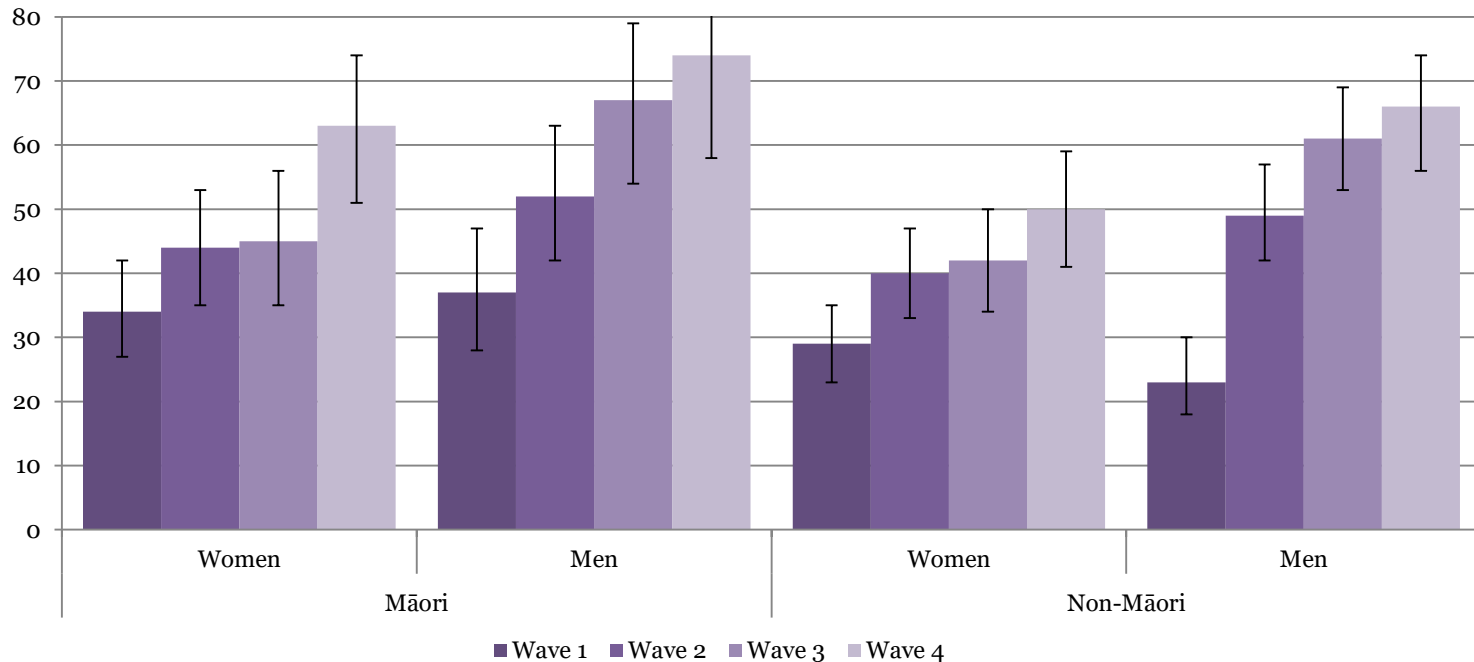
Percent



Kerse, N., Lapsley, H., et al. (2016). *Health, Independence and Caregiving in Advanced Age: Findings from LiLACS NZ*. Auckland: School of Population Health, The University of Auckland.

Informal care - daughters > sons

Percent

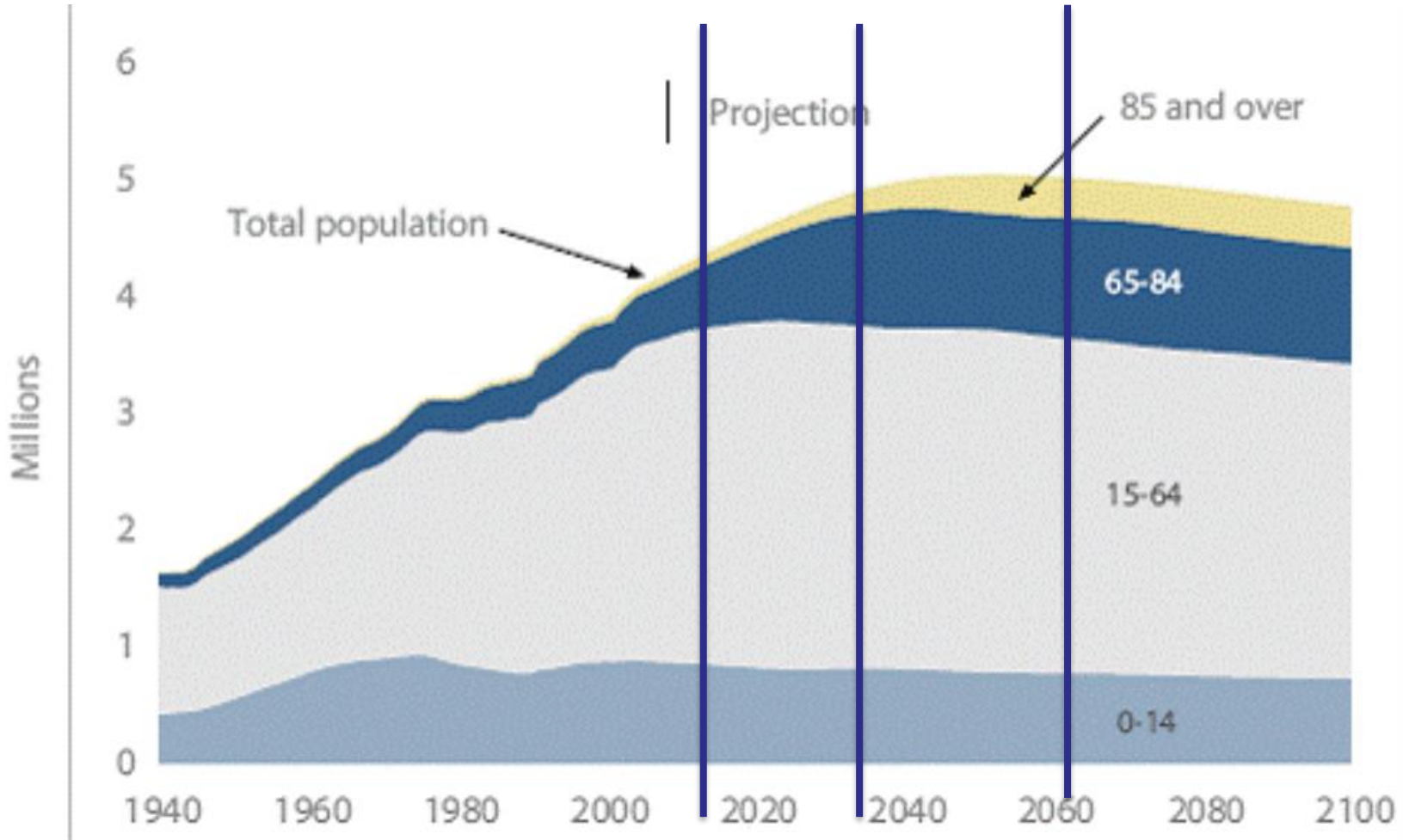


Closely associated with level of function

More women, more Māori received informal care

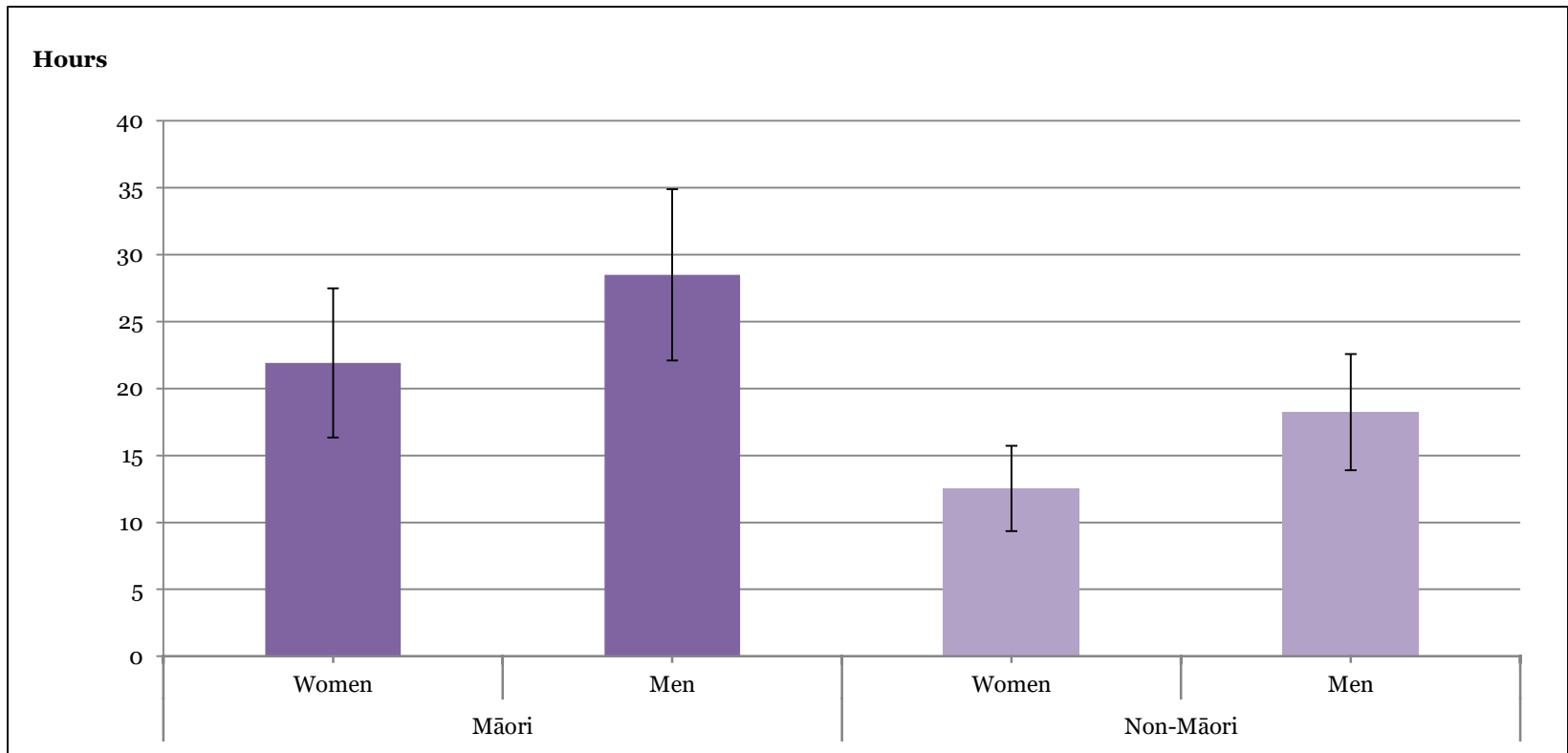
Support ratio 50-74/85+

Statistics New Zealand

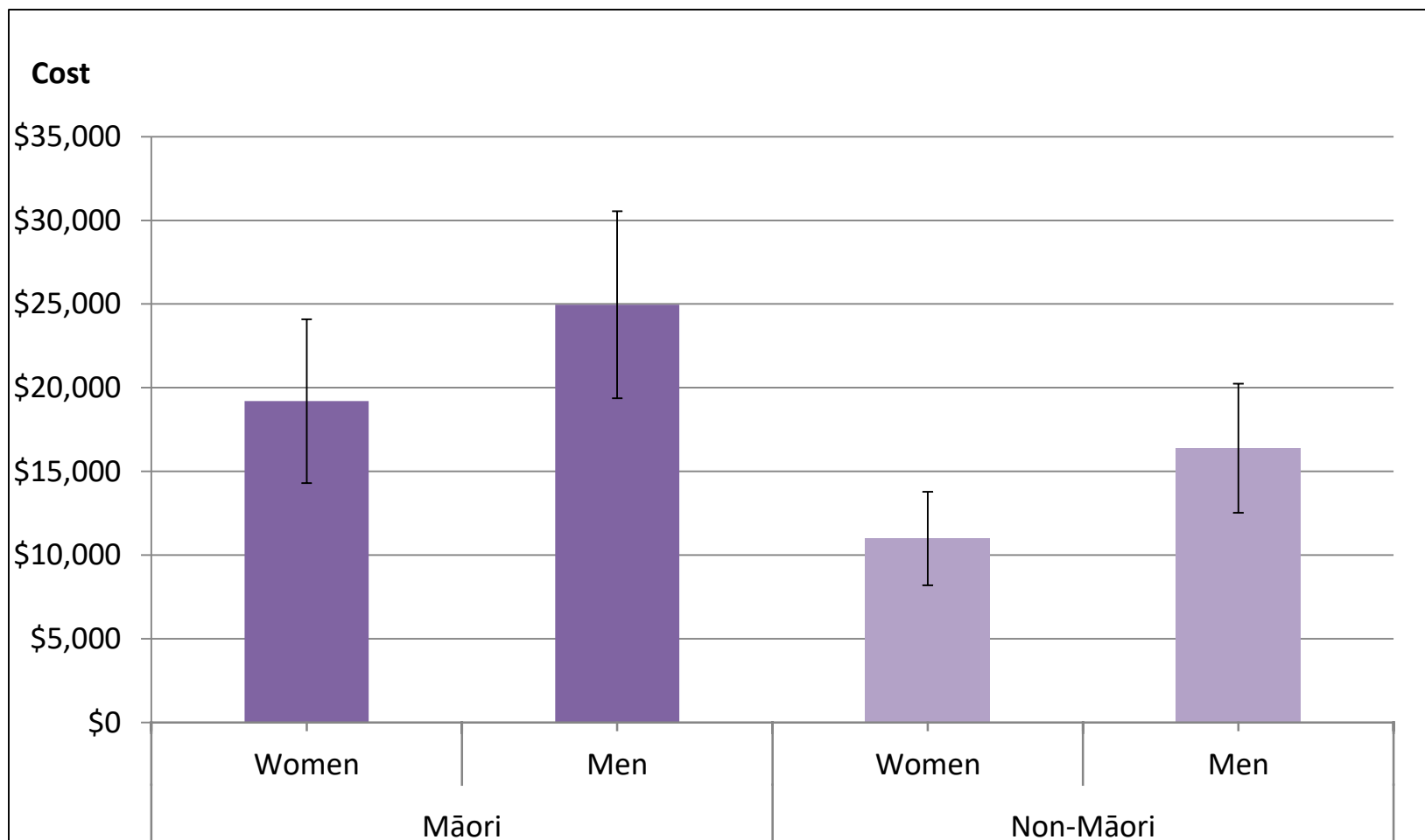


Year	2016	2033	2063
total	15:1	8.8:1	4.9:1
Women	7:1	4.6:1	2.4:1

Hours of care/ week given to:



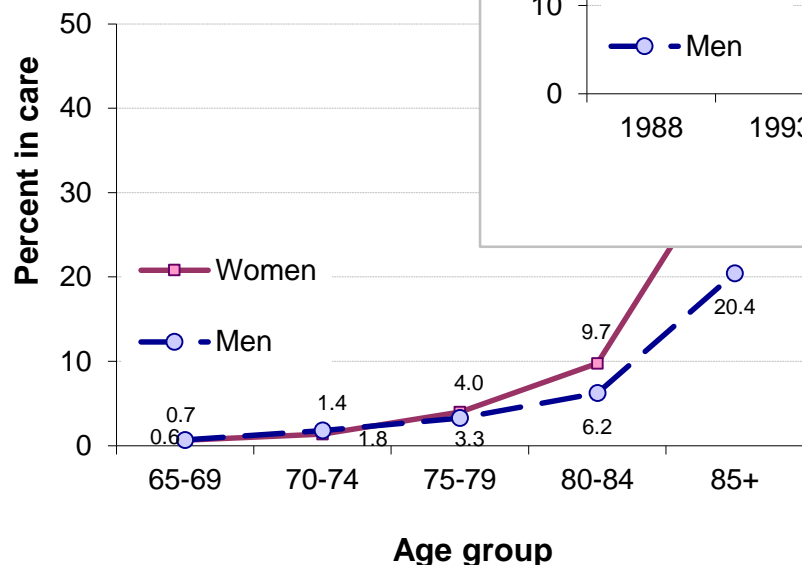
Average yearly cost



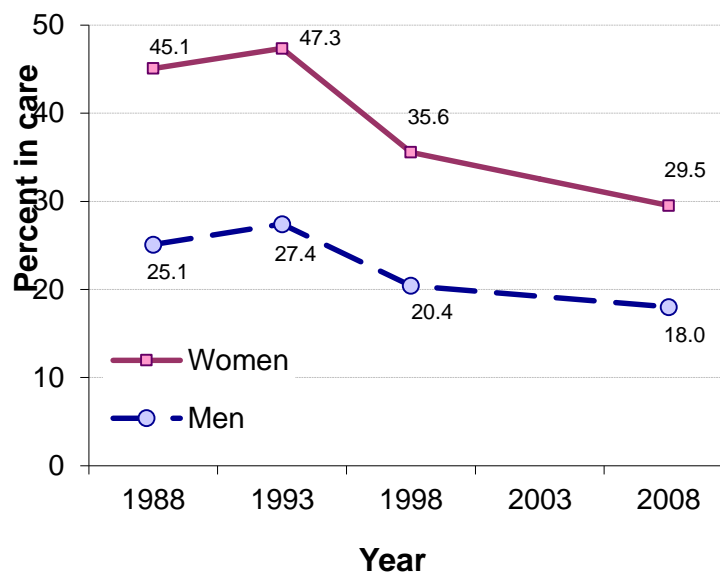
The alternative Residential

ns

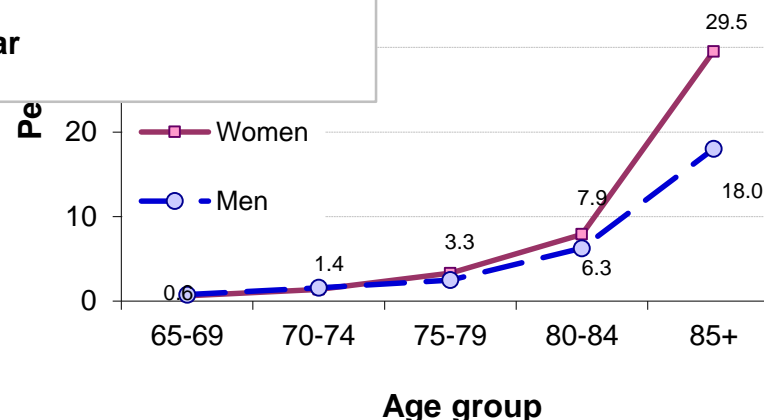
Older people in residential care, Auckland



Trends in proportions of people aged 85+ in residential care

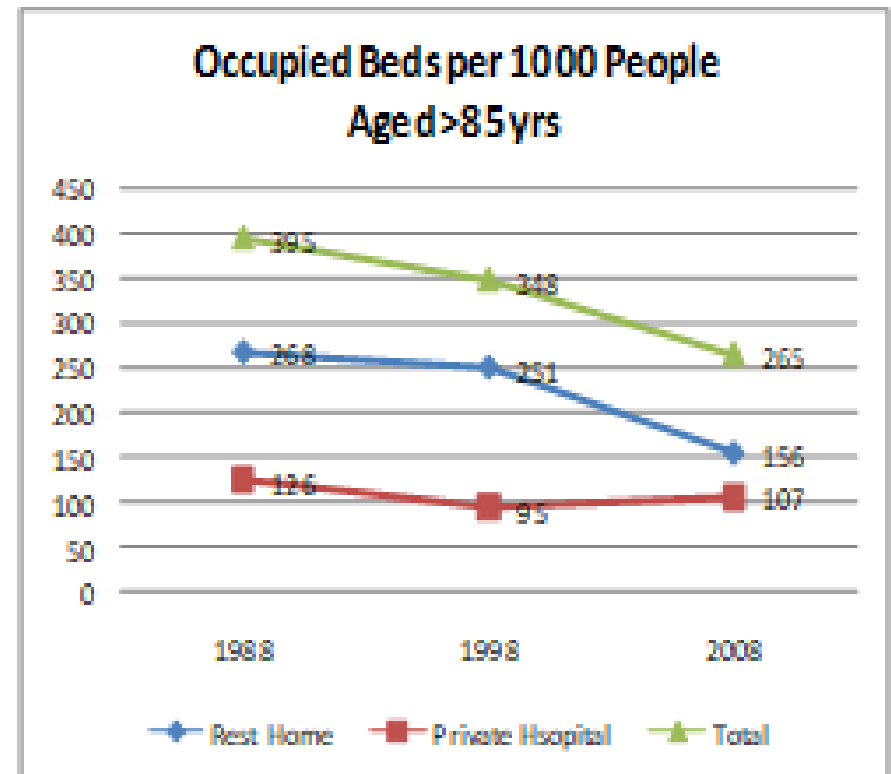
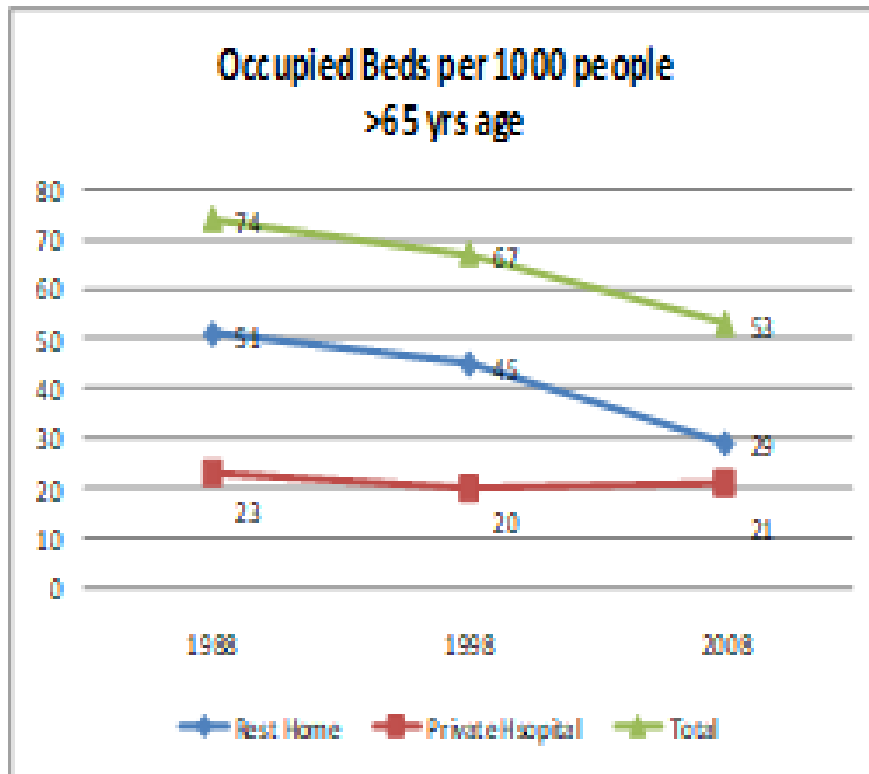


Older people in residential care, Auckland, 2008*



Broad, J. B., Boyd, M., Kerse, N., et al 2011. Residential aged care in Auckland, New Zealand 1988-2008; do real trends over time match predictions? . *Age Ageing*, 40, 487-494.

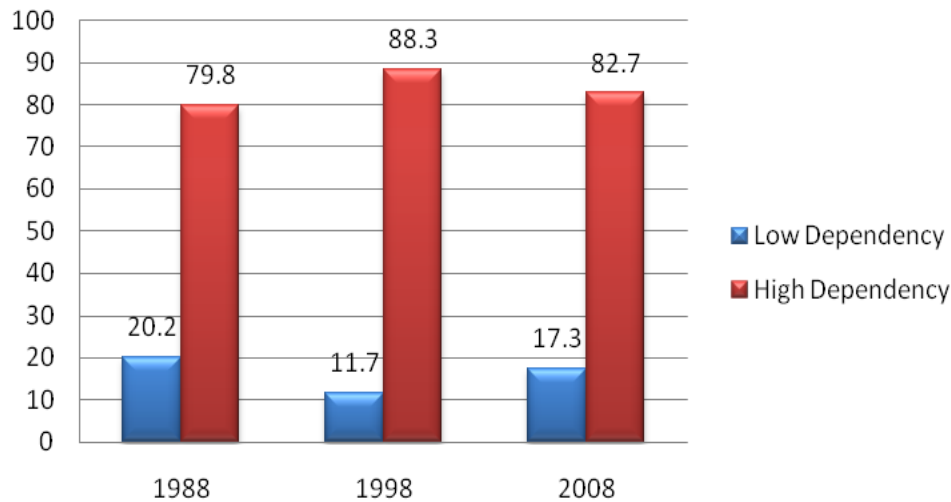
Residential care – the beds



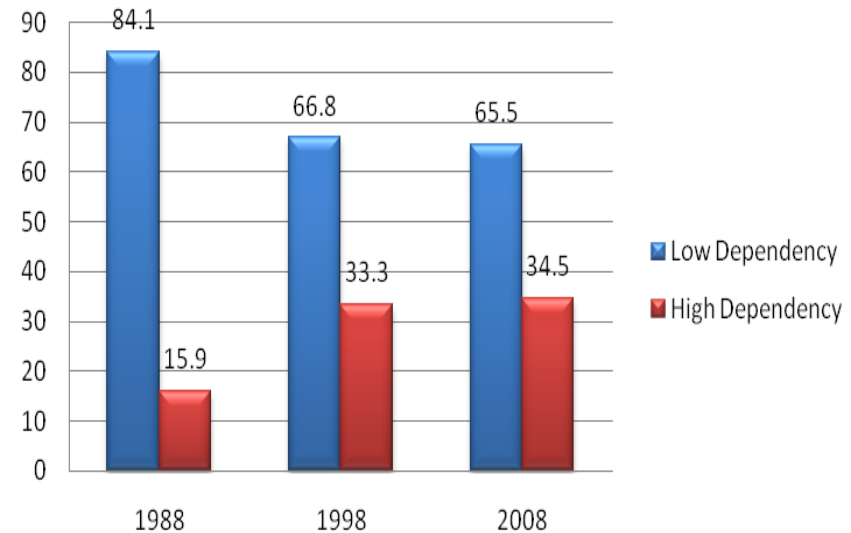
How low can we go?

The people in the beds

Private Hospital



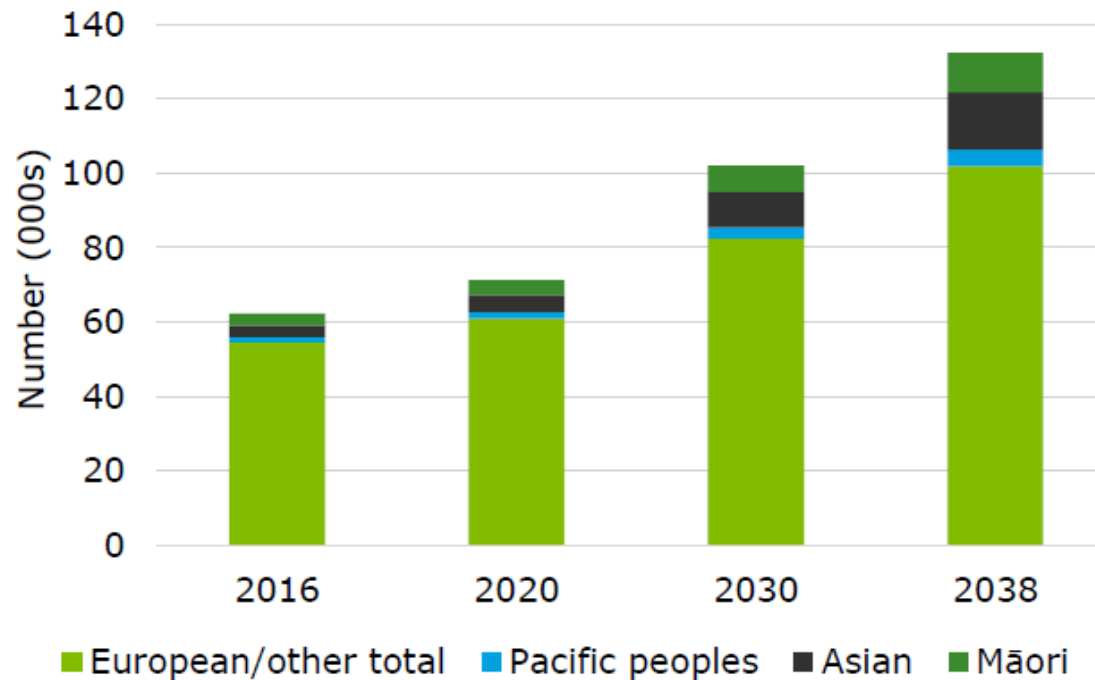
Rest Home Dependency



Boyd, M., Broad, J. B., Kerse, N., et al 2011 Twenty-year trends in dependency in residential aged care in Auckland, New Zealand: a descriptive study. *JAMDA*, 12(7), 535-540

Dementia epidemiology NZ

Chart c: Prevalence projections by ethnicity, 2016 to 2038



Source: Deloitte Access Economics calculations

CMDHB memory service

360 patients newly diagnosed with dementia by CMDHB memory service between 2013 and 2016.

142 NZ European	(mean age: 79.2, SD 7.4)
43 Māori	(mean age: 70.2, SD 7.6)
126 Pacific	(mean age: 74.3, SD 7.6)
49 other ethnicities	(mean age: 78.0, SD 8.5)

Difference adjusted for gender and dementia type:
Māori 8 years younger than NZ Europeans
Pacific 5 years younger than NZ Europeans

Cullum et al, 2018

Will we be more healthy?

30% reduction in prevalence of dementia 1988- 2011 (*CFASII 2017 Lancet*)

8.8% of 65+ (65,800 NZ 2016)

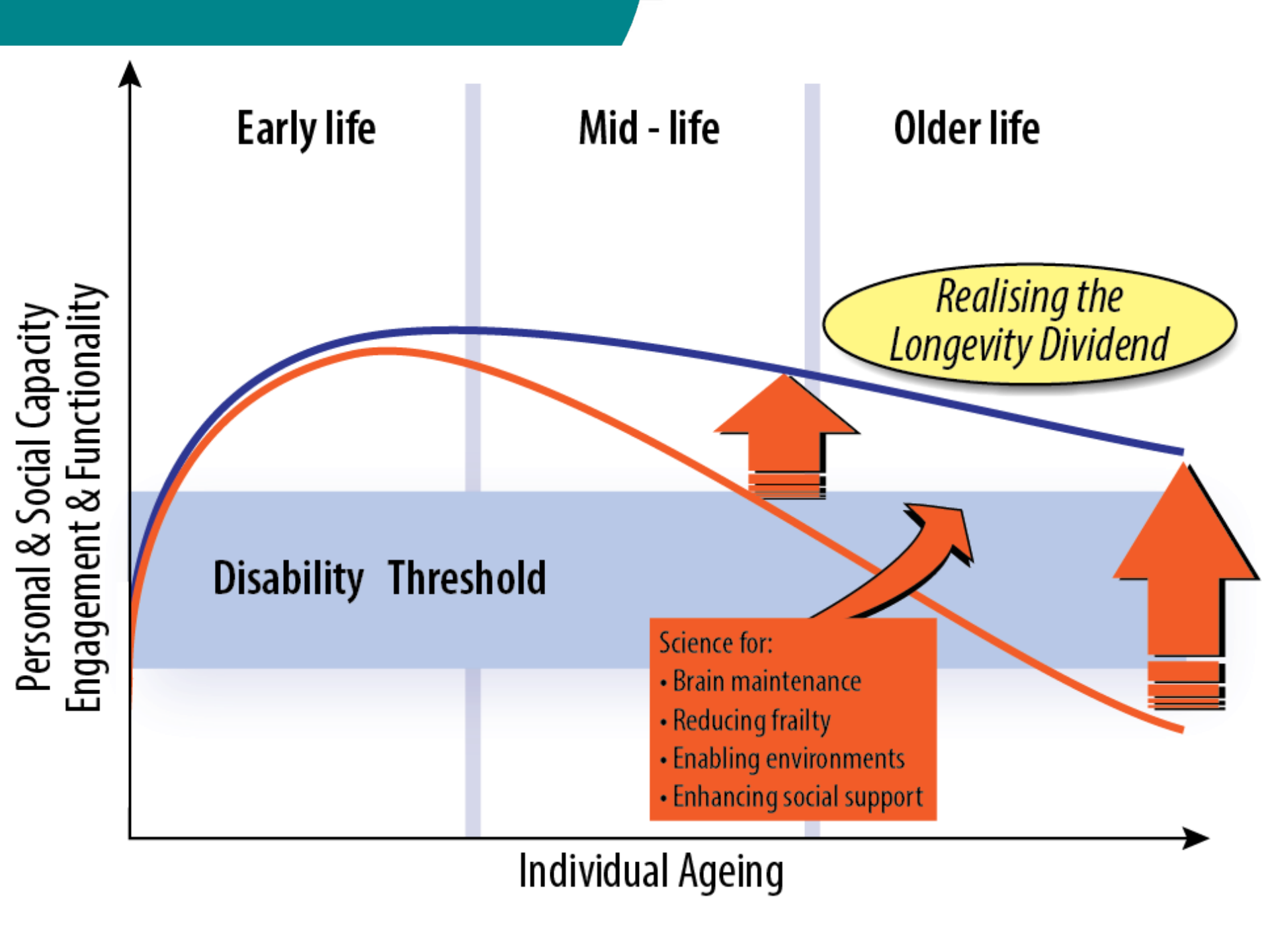
6.8% of 65+ (88,630 NZ 2038)


Severe disability may decrease and moderate disability increase

Disability in care will increase

Absolute numbers of 85+ with disability will increase

Most nations investing in prevention in midlife.





LILAC study: Life and living in
advanced age, the cohort study
Te Puāwaitanga O Ngā Tapuwae
Kia ora Tonu



Funders



New Zealand
Ministry of Health
Manatū Hauora



OAKLEY MENTAL HEALTH
Research Foundation





n.kerse@auckland.ac.nz

<https://www.fmhs.auckland.ac.nz/en/faculty/lilacs.html>

make a donation at

<https://www.givingtoauckland.org.nz/en/FundPages/lilacs.html>

The New Zealand Retirement Income Eco-system

**Judith A. Davey, Senior Associate
Institute for Governance and Policy
Studies. Victoria University of Wellington**

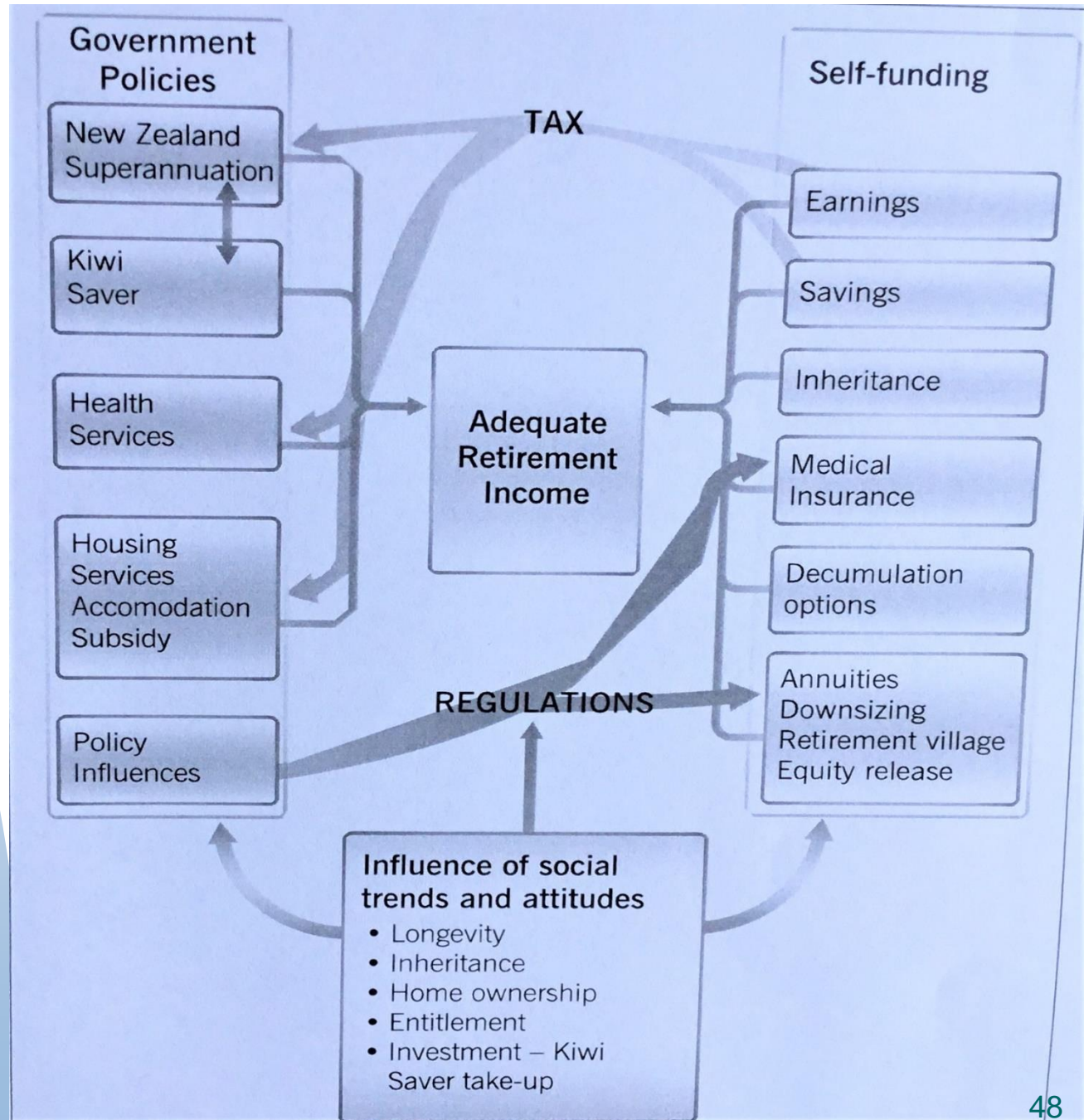
The 2016 Review of Retirement Income Policy recognised the wider implications of an ageing population, and suggested -

“the retirement income framework is an ecosystem, meaning ‘a complex network’ or ‘interdependent system’. The all-dominating subject of age of eligibility (for NZS) cannot be addressed without also acknowledging the interdependencies: the ageing workforce, the role of Kiwi Saver, decumulation options, and more.”

Retirement Income Eco-system –

What contributes to adequate retirement income?

Source: Davey & Stephens (2018) Policy Quarterly, Vol.14. 3.



Retirement Income Eco-system - What contributes to adequate retirement income?

Govt. Policies

- NZ Super (NZSF)
- KiwiSaver
- Health services
- Housing services

Social Trends and Attitudes

Longevity
Home ownership
Views on inheritance
Views on savings
Entitlement

Self-funding options

- Earnings
- Savings
- Inheritance
- Medical insurance
- Decumulation
 - ◆ Downsizing
 - ◆ Retirement village
 - ◆ Equity release

Kiwi Saver (KS)

- The pros and cons of compulsion.
- Flexibility in contribution rates and timing.
- Impact of contribution gaps and early withdrawals.
- Options for the use of mature lump sums.
- And, looking further into the future - how will NZS and KS interact? Will KS put pressure on NZS? Could a two-tier system emerge with NZS as a “safety net”?

Other government spending on retirement incomes

- Health Services - free hospital treatment, subsidies for GP consultations and residential care
- Accommodation Supplement
- Winter Energy Payment
- Super Gold Card
- Total Mobility Scheme
- Disability Allowances
- Targeted rent and rates rebates and some subsidies for hearing and other aides.

Decumulation/Self-Funding

- People contribute to retirement incomes from own resources – from earnings, savings and investments and by running down these assets.
- Given the need to supplement NZS to achieve an adequate income in retirement and the growing pressure on government support, **decumulation may become a more important part of the policy mix.**
- Influence of social trends and attitudes.

How to decumulate

- Invest KS lump sums and other savings, use returns for current needs, leave the capital for a “rainy-day”, or bequest.
- Draw down capital and interest regularly, based on a target income.
- Trade-down on housing or move into a retirement village.
- Commercial equity release schemes, mainly reverse mortgages.
- Commercial annuities.

Retirement Income Eco-system

Govt. Policies

- NZ Super (NZSF)
- KiwiSaver
- Health services
- Housing services

Self-funding options

- Earnings
- Savings
- Inheritance
- Medical insurance
- Decumulation
 - ◆ Downsizing
 - ◆ Retirement village
 - ◆ Equity release

Social Trends and Attitudes

Entitlement and expectations

Home ownership

Inheritance

Extending working life

Longevity