7.1 At a glance

Our population is getting older. The large group of *baby boomers*[A] while not old yet, will in the next decade, change the profile of the aged population in ways not currently experienced. The determinants of health at older ages are complex and the ageing population is likely to put increasing pressure on the health care system and on health funding.

Population structure

Currently, New Zealand is a young population with only one in nine people aged 65 years and over. This is set to change as the age structure of the population continues to undergo gradual but significant changes.

Under all projection scenarios, the number of New Zealanders aged 65 years and over is projected to exceed one million by the late 2020s, compared with half a million in 2006.

People aged 65 years and over are projected to outnumber those aged under 15 years in the mid-2020s. Māori and Pacific Island peoples will also experience dramatic increases in the numbers of older people aged 55 and over[1].

Health trends of older people

Key issues for the Waikato DHB in relation to the older population include increasing prevalence of dementia, exponential increase in expenditure on long-term disability supports (such as home care and aged residential care), and an increase in depression and suicide. The healthcare cost is around five times higher for those over the age of 65 than for those under 65 years.

Service networks

These are listed in Future Focus Section 14 Appendix (refer to Future Focus Section 14 Appendix).

[A] Baby Boomers – cohorts of 1945-1964. Over 1 million babies were born during this period.

Living and working conditions

Factors related to the living and working conditions of older people and the quality of life experienced include workforce participation and retirement, income, housing, transport, social networks, physical activity and well-being, and independent living. These topics and how they impact on older people are discussed in this section.

Overarching environment

Overviews of the four main national strategies that assist older people in New Zealand are presented in this section. Waikato DHB's strategies related to older people are also outlined.

Evidence based interventions

Most of the public health guidance available has been developed by the United Kingdom's National Institute of Clinical Excellence (NICE) and is designed to promote good health and prevent ill health. Broad in scope, public health advice has applicability to a wide range of population groups and settings. Where possible, this section of *Older Persons* has focused on public health guidance that has relevance to older people. Web addresses are provided although links may not be accessible within a PDF format.

7.2 Introduction

Concerns regarding the implications of an ageing population are high. The determinants of health at older ages are complex. While older people are generally healthier for longer, the rapid growth in the number and proportion of older people predicted between 2010 and 2040 and beyond will put increasing pressure on health funding and the health care system[2].

When discussing ageing it is important to recognise that old age is a period of life that can last up to 40 years, cover several cohorts, and more than one generation. People over the age of 85 are the fastest growing group in the older population and have the greatest potential to make high demands on government expenditure[3].

It is important to note that as a result of the poorer health status experienced by older

Māori, Pacific peoples and some people with known disabilities and their susceptibility to the onset of illness and disease at an earlier age[4] the age definition and eligibility for accessing services, screening and assessment, and age-related care can begin at 55 years[5].

This section of *Future Focus* provides a profile of older persons aged 65 years and over and where possible, relates to those living in the Waikato District Health Board area. This section includes an overview of the health trends and the wider social, cultural and economic factors influencing the health and wellbeing of older people. Recognised evidence-based intervention guidance related to support service planning for older people is also presented.

These are discussed under the following headings:

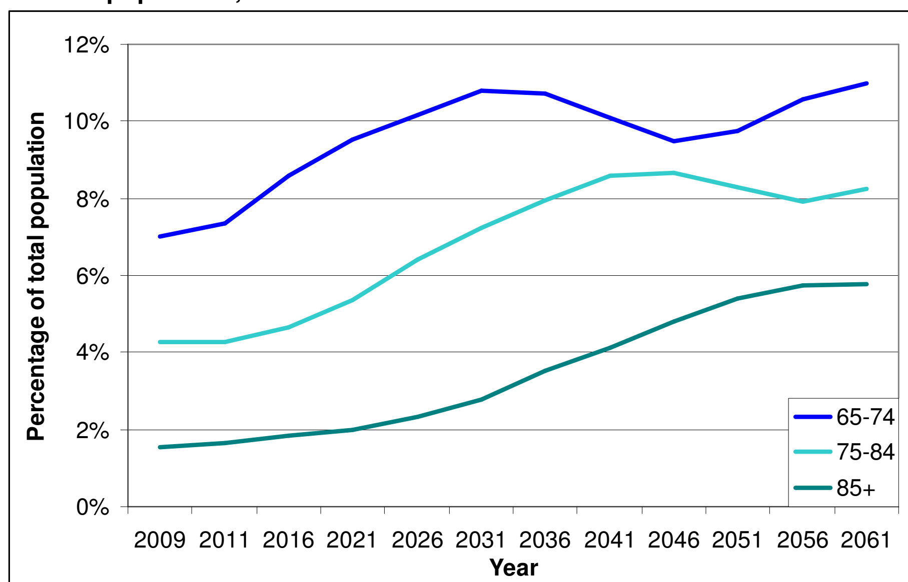
7.3 Population structure
7.4 Health trends of older people
7.5 Service Networks
7.6 Living and working conditions
7.7 Overarching environment
7.8 Evidence based interventions
7.9 References

7.3 Population structure

Comparatively, New Zealand is a young population with only 12.3% of its population aged 65 years and over. This equates to around one in nine people[6]. This is set to change. Projections from Statistics New Zealand suggest that between 2011 and 2021 the population aged 65 and over is expected to grow by 215,000 and between 2021 and 2031 by another 250,000. By 2051 there will be 1.18 million people aged 65 and over. This represents an increase of 165% since 1999. At that stage, older people are expected to make up 26% of the New Zealand population of 4.63 million[7].

Reflecting average longevity, the 85+ years old group is predicted to more than double by 2026 presenting a 118% growth rate (Figure 1).

Figure 1: Projected New Zealand population 65+ age groups as a percentage of the total population, 2009-2061



Request No: 000210
Source: Statistics New Zealand: Table builder - Projected Population of New Zealand by Age and Sex, 2009 (base) – 2061
Note: Projections are based on Series 5: Assuming medium fertility, medium mortality and long-run annual net migration of 10,000.

Māori, Pacific and Asian ethnic groups are growing faster than other ethnic groups in New Zealand. Fertility, immigration and intermarriage have contributed to around 80% growth of the Pacific population over the past two decades. Over the next 50 years the Pacific community is expected to grow naturally by approximately 3.3% a year; more than three times the total population growth rate of under 1%[8].

Increases in the proportion of Māori and Pacific older people in New Zealand will be particularly significant between 2001 and 2021. The Māori population 65 and over is expected to grow by 185% and the Pacific population by 178%. Currently, only 10% of the Māori population are over 55 years and 4% are over 65 years. Seven percent of Pacific peoples are over 55 years and only 3% are over 65 years. The Asian population in the 65+ age group is expected to grow by 400%[8].

The population distribution patterns shown in figures 2-5 highlights the relatively young population of Māori and Pacific ethnic groups i.e. birth to 19 years.

Figure 2: Population pyramid Māori

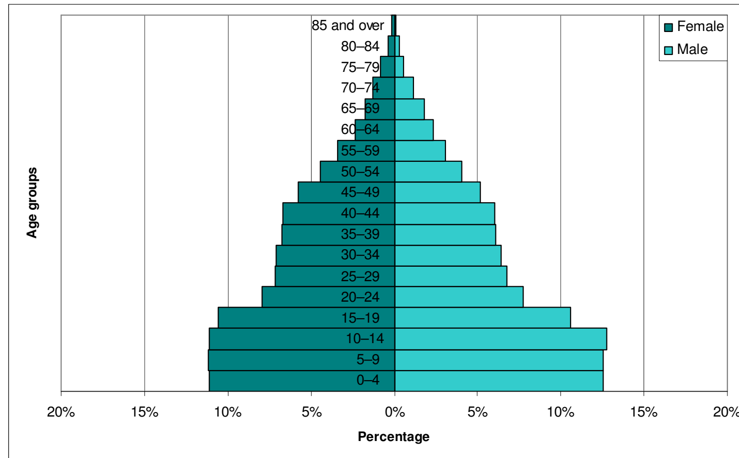


Figure 3: Population pyramid - Pacific

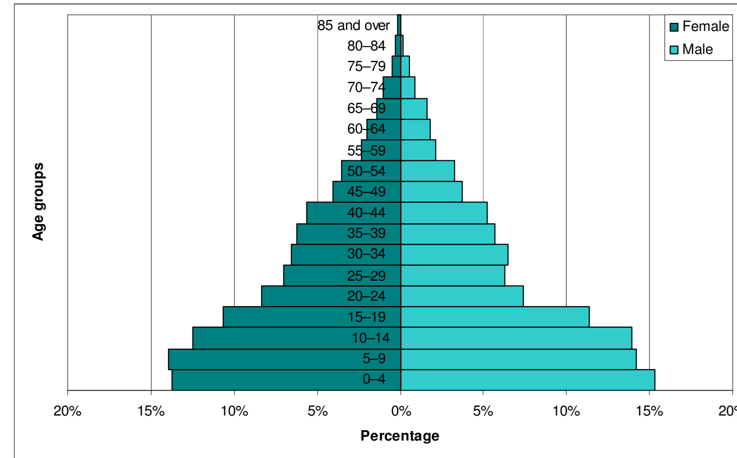


Figure 4: Population pyramid - Other

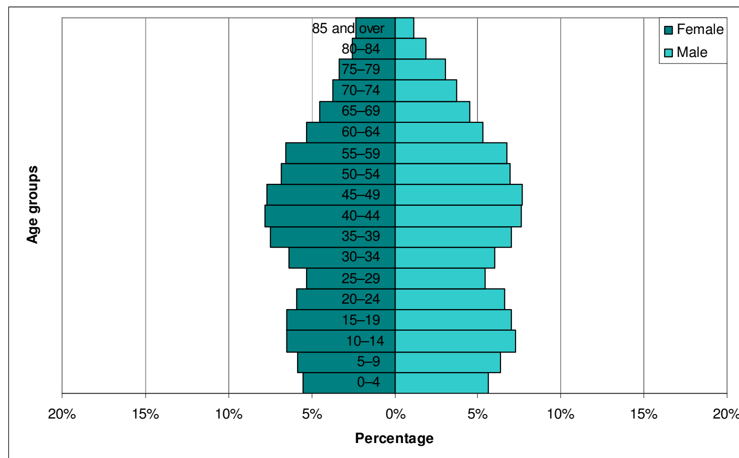
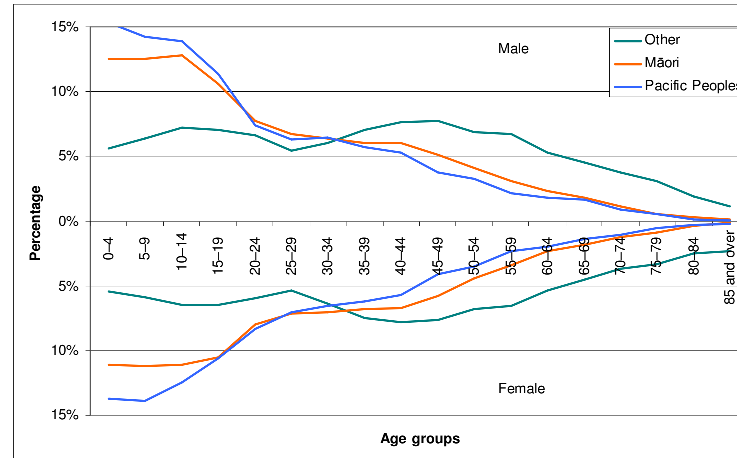


Figure 5: Population pyramid - Combined



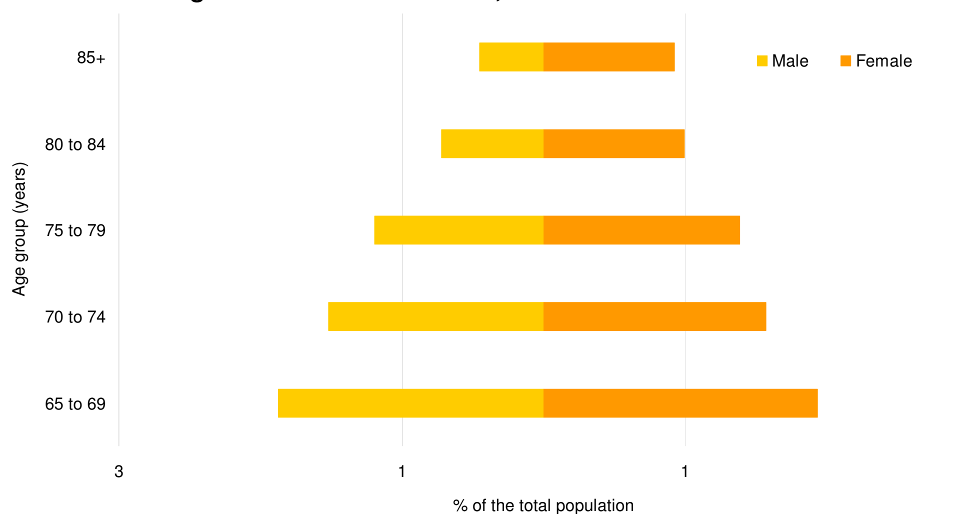
Source: Statistics New Zealand (http://www.stats.govt.nz/Census/about-2006-census/district-health-board-area-summary-tables.aspx - Table 2). Request number: 000302

Waikato District Health Board

Population projections give possible future scenarios for the size and composition of a population, based on different combinations of fertility, mortality and migration assumptions[9]. It is important to note that the following information is based on assumptions and may prove to be incorrect over time.

The proportion of the Waikato DHB population aged 65 years or older accounts for approximately 13% of Waikato DHB's total population (approximately 42,750 people) of which 6% are male and 7% are female (Figure 6). Within Waikato DHB's older population age bands (65 - 74 years, 75 - 84 years and 85 years or older) more than half are aged between 65 and 74 years of age (7%), and 75 - 84 years olds and 85+ years collectively account for the remaining 5% (4% and 1% respectively) (Figure 6).

Figure 6: Population distribution by 65+ age groups and gender, for the Waikato DHB region and for New Zealand, 2006.

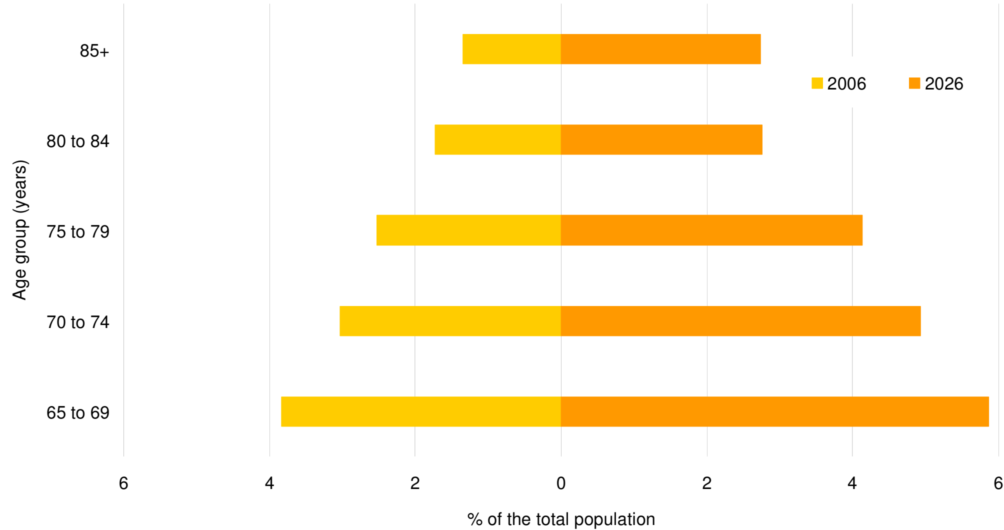


Source: Statistics New Zealand, Census 2006.
Request #: 000003

It is important to consider the impact of age structural transitions when creating health policies for the future as visually the population numbers shown in figure 6 above are static, whereas in real time they are dynamic. Over time the age groups will continue to move forward through the forthcoming age groups as shown in figure 7 below.

Figure 7 shows the projected increase, between the years 2006 and 2026, in the population aged 65 years or older as a proportion of the total Waikato DHB population. There is projected to be a total increase of approximately 8% for the 65 years or older age group.

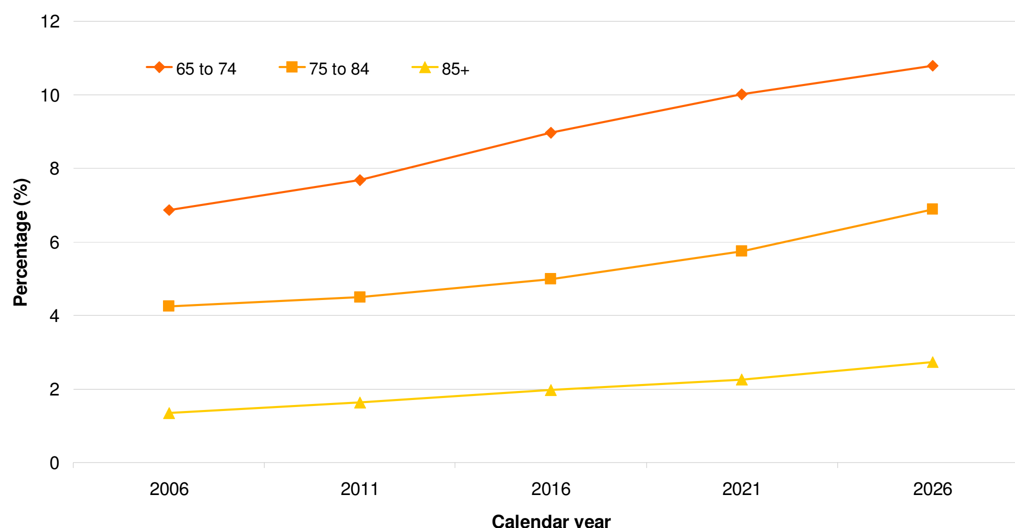
Figure 7: The population distribution comparing the older population between the years 2006 and 2026, the Waikato DHB region*, 2006 (base).



*The Waikato DHB region includes all of the Ruapehu District.
Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031, medium series. Request #: 000003

The three age bands (65 - 74 years, 75 - 84 years and 85 years or older) within the older person's population, displayed in Figure 8, below, shows the highest projected increases by 2026 to occur in the 85 years or older age group; a total increase of 104%.

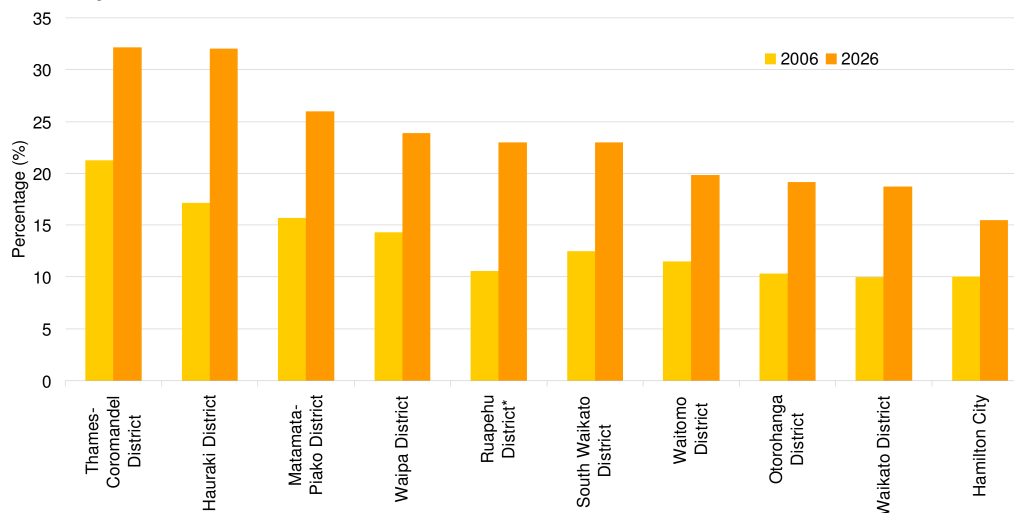
Figure 8: Waikato DHB's older age groups as a percentage of the total Waikato DHB* population, 2006 - 2026.



* The Waikato DHB region includes all of the Ruapehu District.
Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031, medium series. Request #: 000003

The highest projected increase in the older population by territorial authority, between the years 2006 and 2026, is likely to occur in Hauraki District with an anticipated change in percentage of 15%, from 17% in 2006 to 32% in 2026 (Figure 9).

Figure 9: The population distribution of the older age groups, as a percentage of the territorial authority population, in the Waikato DHB region, by territorial authority, 2006 and 2026.



* Ruapehu District includes the total population for Ruapehu District not just the part serviced by Waikato DHB.
Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031, medium series.
Request #: 000003

Future Focus Section 3 provides a more comprehensive account of the Waikato DHB population (refer to Future Focus Section 3 Population profile).

7.4 Health Priorities, key issues and health risks

Key considerations

In 2008, the life expectancy at birth in New Zealand was 80.2 years. The 2015 target is 82.8 years. Currently, New Zealand ranks 14th out of 31 OECD[B] countries; slipping from 10th place in 2000. Of concern, is the persistence of disparities across a range of risk factors and health outcomes for Māori and Pacific peoples compared with the total population. People living in high socioeconomic deprivation and in the bottom decile of income live 6-7 years less; and Māori on average have life expectancies of 8-9 years less than non-Māori. Differences are greater for men. The life expectancy for a male Māori is approximately one year above the global life expectancy of 69 years[10].

The Pacific population characterised by a high birth rate and low death rate, have on average, a longer life expectancy than Māori. Life expectancy at birth for Pacific males for the period 2000-02 was 71.5 years and for Pacific females, 76.7 years[11 12].

Health risks include driving behaviour, smoking, physical inactivity, obesity and binge drinking. In New Zealand, 28% of children and over 50% of adults are overweight or obese; and 50% of young males and 30% of young females have a hazardous drinking pattern[10]. Māori and Pacific peoples are over represented in these statistics[11].

Waikato DHB health priorities

The change in demographic distribution could have significant implications for effective management of services across the Waikato DHB region. The cost

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[B] OECD: Organisation for Economic Co-operation and Development

of health care for those aged 65 and over can be as much five times higher than for those under 65 years[6].

An estimated 90% of hospitalisations for the 65+ age group are considered unavoidable. The remaining hospitalisations are considered avoidable i.e. ambulatory sensitive[C], preventable or injury preventable[6].

Key issues for the Waikato DHB in relation to the older population include:

- Increasing prevalence of dementia
- Exponential increase in expenditure on long-term disability supports
- Increase in mental health issues like depression and suicide[13].

Increasing complexity of care will be required due to the:

- Increasing numbers of older people with complex needs who choose to remain at home rather than enter residential care.
- Presence of co-morbidities impacting on care[D].
- Increasing use of life-lengthening interventions at older age e.g. renal dialysis; cardiac stents.
- Increasing longevity of Māori with chronic health conditions.
- Communication needs of older migrants/refugees.

Health risks

Obesity

The World Health Organization now describes the prevalence of obesity as pandemic and has recognised obesity as being one of the five greatest risk factors for global mortality[14].

New Zealand is part of this obesity pandemic and our rates have been rising steadily since the 1990s. The 2006/07 New Zealand Health Survey found that one in three adults were overweight (36.3%) and one in four obese (26.5%). One in five children aged between 2 and 14 were overweight (20.9%) and one in twelve was obese (8.3%)[15]. Obese children are likely to be obese into

[C] Ambulatory sensitive are admissions to hospital that are potentially preventable through primary care interventions like outpatient services.

[D] Over 25% of all women over 75 have four or more chronic conditions and 60 per cent of women 75+ have three or more chronic term conditions.

adulthood. The prevalence of obesity was highest amongst the 55-64 year old age group (35.9%) followed by the 65-74 year old age bracket (32.8%). 20.8% of those aged 75+ were also obese[16]. In 2007 2% of males and 2.8% of females were classified as morbidly obese (BMI ≥40)[15].

Obesity, which is a major risk factor for many chronic diseases including Type 2 diabetes, is more prevalent amongst Māori, Pacific and South Asian communities[16]. Obesity also has significant socioeconomic implications with those affected more likely to be poor, less well educated and less likely to marry[14].

Diabetes

Diabetes is associated with increased mortality rates when compared to people who do not have diabetes. A recent study into the ethnic disparities in causes of death among diabetes patients in the Waikato region showed that Māori have nearly double the age adjusted mortality rates than non-Māori[17]. This study also found that Māori in general, have high prevalence of cardiovascular disease independent of social deprivation and are also at increased risk of first cardiovascular event in the presence of Type 2 diabetes[17].

Type 2 diabetes is the most common form of diabetes and affects around 270,000 people in New Zealand[18]. It is referred to as a lifelong condition that is associated with increased risk of cardiovascular disease, renal disease, peripheral vascular disease and blindness[19]. Diabetes New Zealand believes about a third of Type 2 diabetes cases go undiagnosed. Type 2 diabetes usually occurs in adulthood after the ages of 30-40 years although research is showing increasing numbers of teenagers and children are developing Type 2 diabetes. New estimates indicate 500 young people aged between 10 and 18 years have the disease that was, until a few years ago, virtually unknown to this age group[18]. Groups of people most likely to develop Type 2 diabetes include:

- Māori, Polynesians or Asians
- People who are overweight
- People who have a blood relative with Type 2 diabetes
- Women who have had a baby weighing more than 4kg (9lbs)

- People who don't exercise enough[18].

The Waikato Regional Diabetes Service (WRDS) provides specialist diabetes services including education and performs retinal screening for people living within the Waikato DHB region[19].

A recent Waikato study into how newly diagnosed patients with Type 2 diabetes in the Waikato get their diabetes education, found that diabetes is most commonly diagnosed in asymptomatic patients attending appointments with their general practitioners. Around 67% of non-Māori are identified through routine screening compared to only 43% of Māori. Information about the self-management of diabetes is usually delivered in primary care settings and how this information is synthesised by those affected by the disease is extremely important. This study found that patients from lower-socioeconomic backgrounds may be less receptive to education and less likely to implement behaviour changes. These groups are often the most at risk of developing complications of diabetes and finding appropriate education delivery methods is important in the self-management of the disease[19].

Tobacco use

Smoking has been identified as the major cause of preventable death in OECD countries. Smoking is the main cause of lung cancer and a prominent risk factor for chronic obstructive pulmonary disease, cardiovascular disease, upper aerodigestive cancers and many other cancers and chronic disease[20].

In New Zealand, it is estimated that smoking kills around 4500-5000 people per year and approximately 1500 of these deaths occur in middle age. Deaths from second-hand smoke exposure are also included in these figures. A large overall increase in mortality occurred up until the 1980s but by the mid-90s the numbers of deaths appear to be decreasing[20].

The estimated smoking rate in 2008 for people aged 15 and over was 21%; confirming a general downward trend since 1983. Māori females are more than twice as likely to be current smokers as females in the total population and both Māori and Pacific males are significantly more likely to be current smokers than males in the total population (Table 1). Those living in the most

deprived neighbourhood areas; NZDep2006 quintile 5, are more likely to be current smokers compared to those living in the least deprived neighbourhoods[20].

In 2008, smoking was most prevalent amongst those aged 25–34 years (28%), followed by the 15–24 age group (26%). People aged 55–64 years had a significantly lower smoking prevalence rate (17%) than younger age groups. Since the mid-1980s, people aged 55 years and over have experienced the greatest decline in smoking prevalence[16].

Table 1: Age-standardised prevalence (%) of cigarette smoking, by sex and ethnic group, 2008

	Percentage in each ethnic group who smoke cigarettes				
	European Other	**Māori**	**Pacific peoples**	**Asian**	**Total**
Males	23.8	41.5	35.0	21.5	25.7
Females	20.9	49.3	28.1	5.2	22.3
Total	22.3	45.7	31.4	13.1	23.9

Source: Ministry of Health (2009b)
Notes: (1) Rates are age-standardised using the WHO world standard population. (2) People who reported more than one ethnic group are counted once in each group reported.

It is interesting to consider how the growth of unhealthy lifestyles (obesity, diabetes) carried into old age will impact on health costs, demands and services in the future.

Conversely, changes in trends in age-specific illnesses like cardiovascular disease and cancer are likely to have a positive impact on the demand for future health and disability services. For example, decreased rates of smoking due to smoking cessation programmes have the potential to impact on the burden of disease in the future.

To achieve an increase in life expectancy for vulnerable population groups a commitment to reducing life expectancy disparities particularly amongst Māori

is needed (refer to Future Focus Section 5 Māori Health for more details on Māori health[E]).

7.4.1 Mortality and hospitalisation

Chronic disease disproportionately affects older people[21]. In the Waikato DHB region, the leading causes of mortality between 2003 and 2007 for those aged 65 and over were ischaemic heart disease (IHD), cerebrovascular disease (CVD) and chronic obstructive pulmonary disease (COPD)[22]. Figures 6 – 41 show hospitalisation and mortality rates of chronic disease by gender, age group and ethnicity. Key points are as follows:

- Males have higher COPD hospitalisation and mortality rates than females in almost all over 75 year age groups. The COPD hospitalisation and mortality rates are at least twice as high for Māori than for non-Māori in all age groups from as early as 35 years of age (Figures 10-13).

- The IHD hospitalisation and mortality rates are higher in males than females across all age groups (figures 14 and 16). Hospitalisation rates are slightly higher in Māori than non-Māori between 30 and 79 years of age (Figure 15). A similar pattern is reflected in mortality rates for Māori (Figure 17).

- Hospitalisation rates for heart failure are higher in males in all age brackets (Figure 18) but females have higher mortality rates above 80 years and older (Figure 20). Rates in Māori are almost three times higher than non-Māori for both heart failure hospitalisation and mortality rates in all age groups (Figures 19 and 21).

- Figure 22 shows that males have higher CVA hospitalisation rates than females in all age groups but women from 75 years have higher CVA mortality rates than males (Figure 24). The hospitalisation and mortality rates are higher for Māori than non-Māori up to the age of 84 years. This reverses for those aged 85+ when the rates become higher for non-Māori (Figures 23 and 25).

[E] Section 5 Māori Health is currently under development.

- The prostate cancer hospitalisation rates are higher in Māori than non-Māori particularly for those in the 55-59, 70-74, and 75-79 year age groups (Figure 26). Mortality rates are highest in Māori aged 80-84 years and in non-Māori from 85 years and older (Figure 29).
- Lung cancer hospitalisation rates are more prevalent in females up to the age of 59 years. From 60 years and older males have a higher hospitalisation rate peaking in the 80+ age group. A similar trend is evident in the mortality rates (Figures 20 and 32). Māori have significantly higher rates than non-Māori for both hospitalisation and mortality in all age groups except those aged 85 and over (Figures 31 and 33).

- Breast cancer hospitalisation rates are highest amongst women aged 60-69 years. Rates are higher for Māori across all age groups, in particular for those women aged 45-64 years and 85+ (Figure 34 and 35). Mortality rates for Māori women are particularly significant in the 40-49, 55-69, and 75-79 year old age brackets (Figure 37).

- Colon cancer hospitalisation rates are higher in males aged 80+ and mortality rates are higher in females aged 85+ (Figures 38 and 40). Hospitalisation rates are higher amongst non-Māori particularly for those aged 60+ (Figure 39). Similarly, the mortality rate is significantly higher in non-Māori particularly from 75 years and older.

- Renal failure hospitalisation rates are higher in males than females for all age groups over 65 years (Figure 42). Hospitalisation rates are at least twice as high for Māori in all age groups particularly to 85+ (Figure 43). Renal failure mortality rates are significantly higher in males aged 85+ (Figure 44). Māori are disproportionately represented in mortality rates up to the age of 84 years (Figure 45).

Figure 10: COPD hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

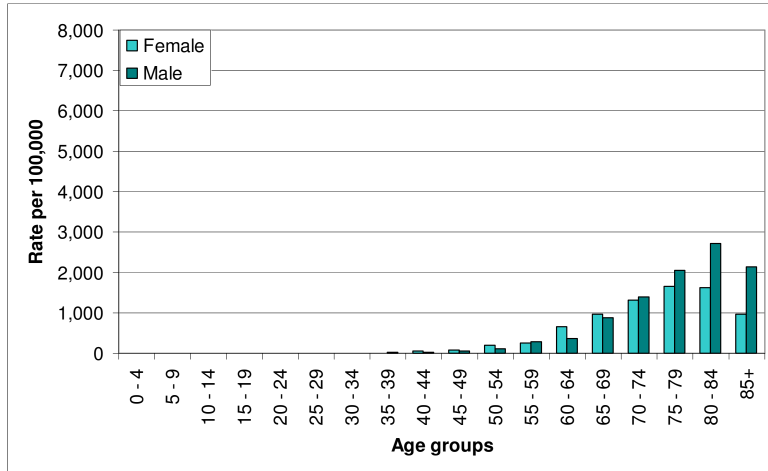


Figure 11: COPD hospitalisation rate, by ethnicity and age group, Waikato DHB, 2005-2009

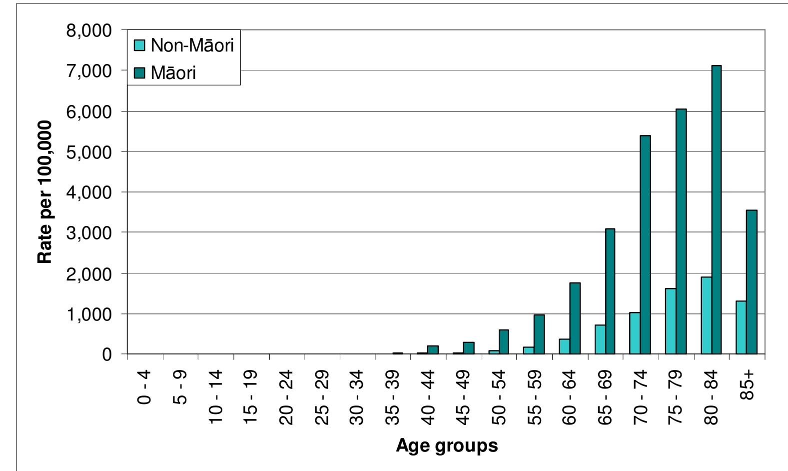


Figure 12: COPD mortality rate, by gender and age group, Waikato DHB, 2003-2007

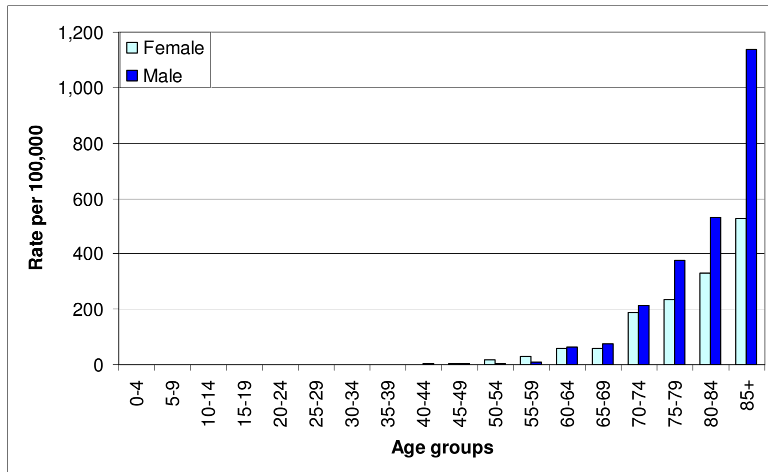


Figure 13: COPD mortality rate, by ethnicity and age group, Waikato DHB, 2003-2007

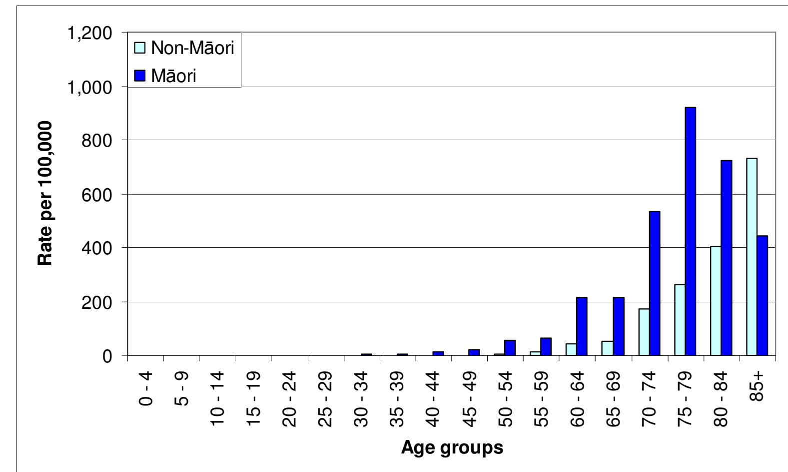


Figure 14: IHD hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

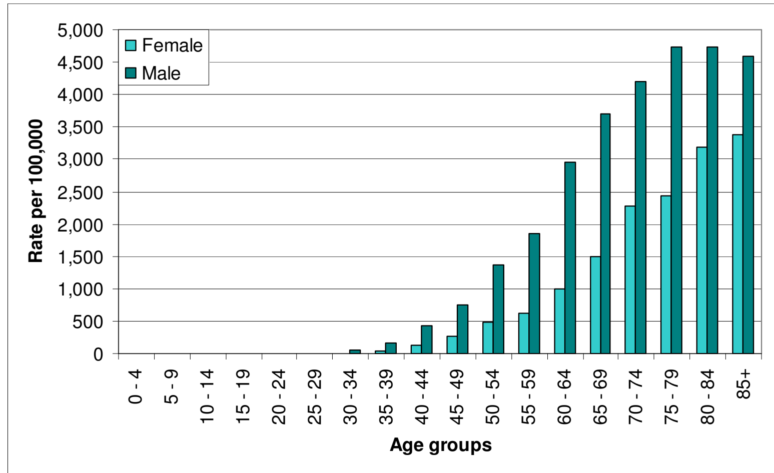


Figure 15: IHD hospitalisation rate, by ethnicity and age group, Waikato DHB, 2005-2009

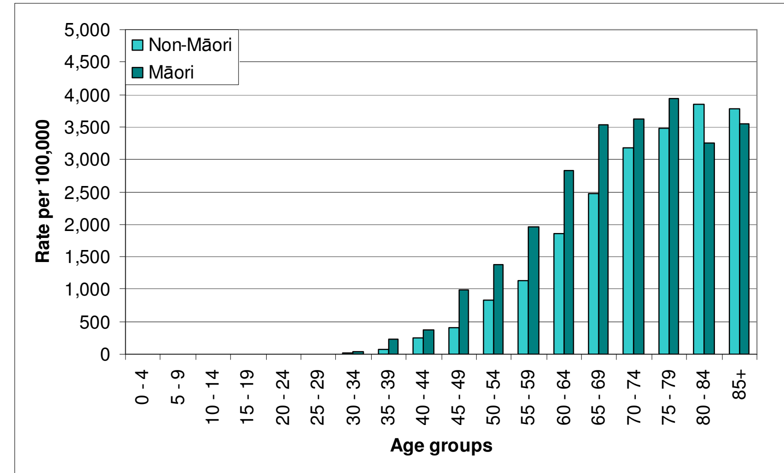


Figure 16: IHD mortality rate, by gender and age group, Waikato DHB, 2003-2007

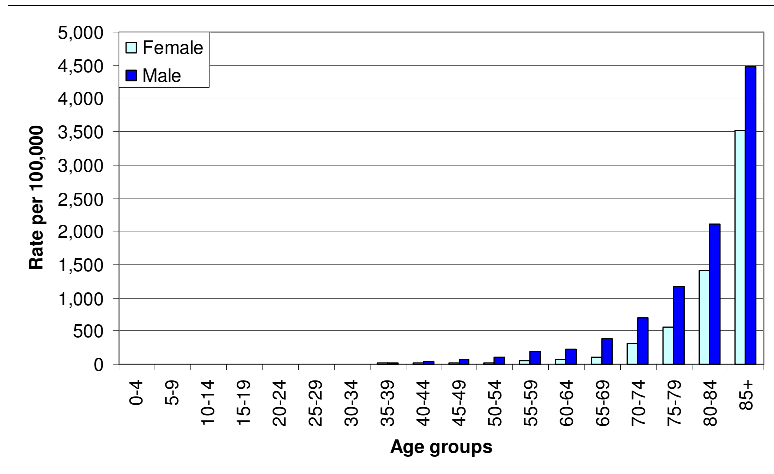


Figure 17: IHD mortality rate, by ethnicity and age group, Waikato DHB, 2003-2007

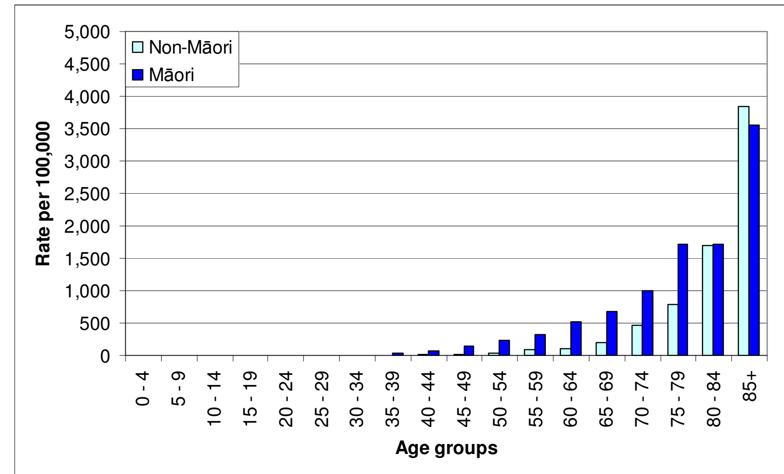


Figure 18: Heart failure hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

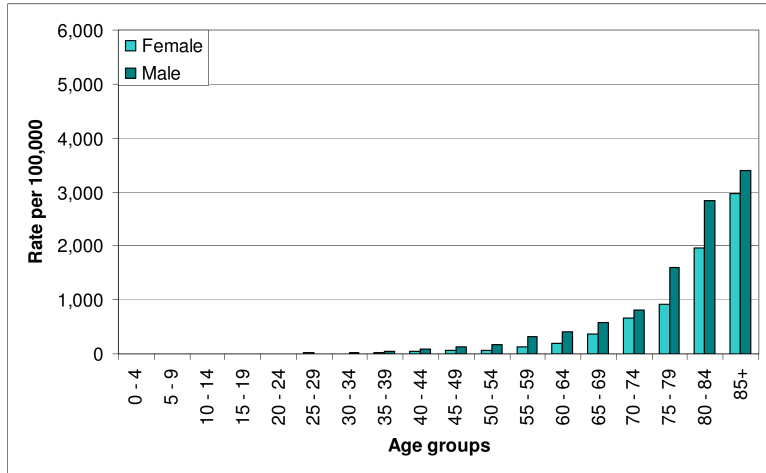


Figure 19: Heart failure hospitalisation rate, by ethnicity and age group, Waikato DHB, 2005-2009

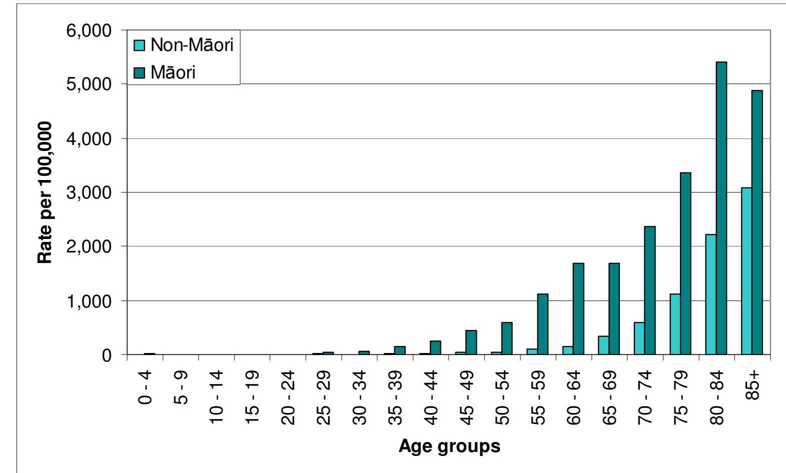


Figure 20: Heart failure mortality rate, by gender and age group, Waikato DHB, 2003-2007

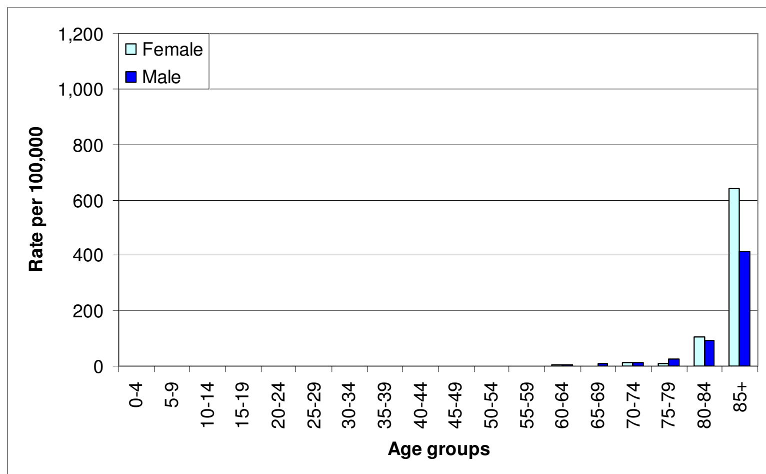


Figure 21: Heart failure mortality rate, by ethnicity and age group, Waikato DHB, 2003-2007

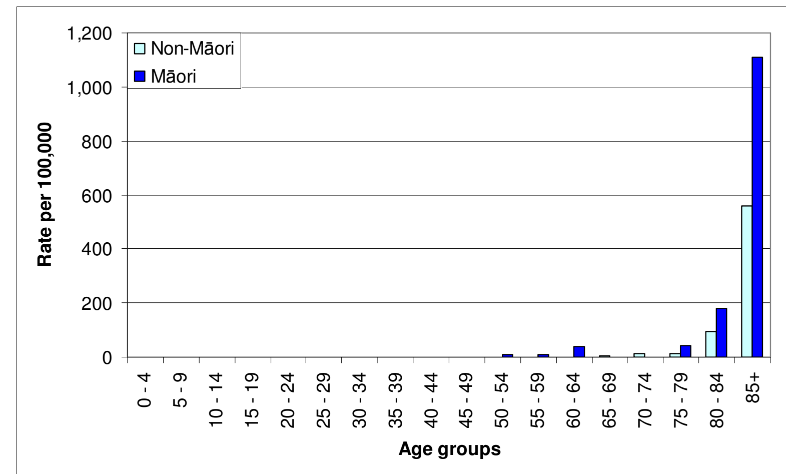


Figure 22: CVA hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

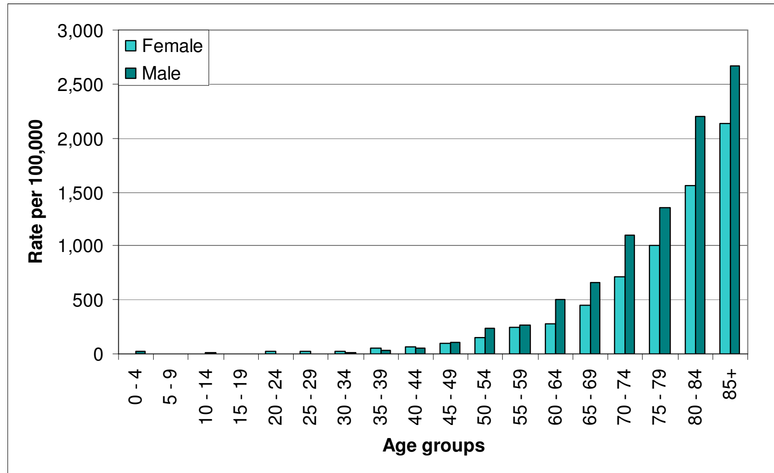


Figure 23: CVA hospitalisation rate, by ethnicity and age group, Waikato DHB, 2005-2009

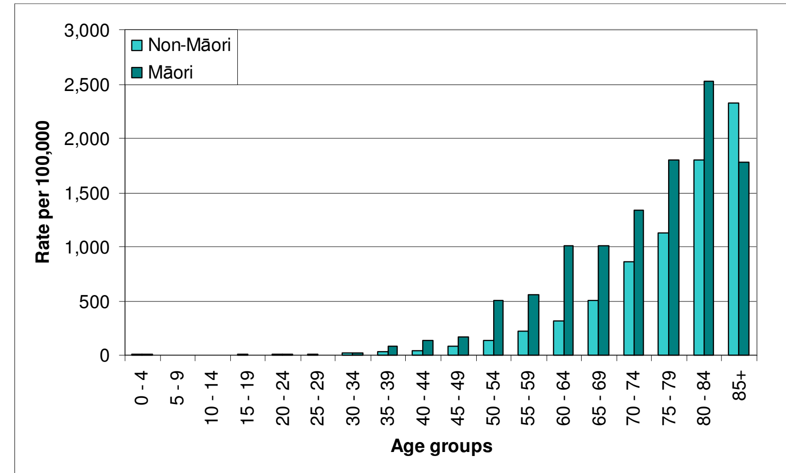


Figure 24: CVA mortality rate, by gender and age group, Waikato DHB, 2003-2007

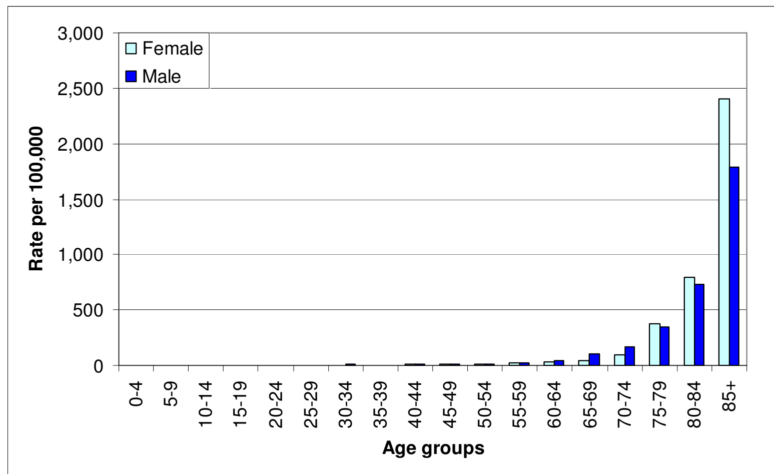


Figure 25: CVA mortality rate, by ethnicity and age group, Waikato DHB, 2003-2007

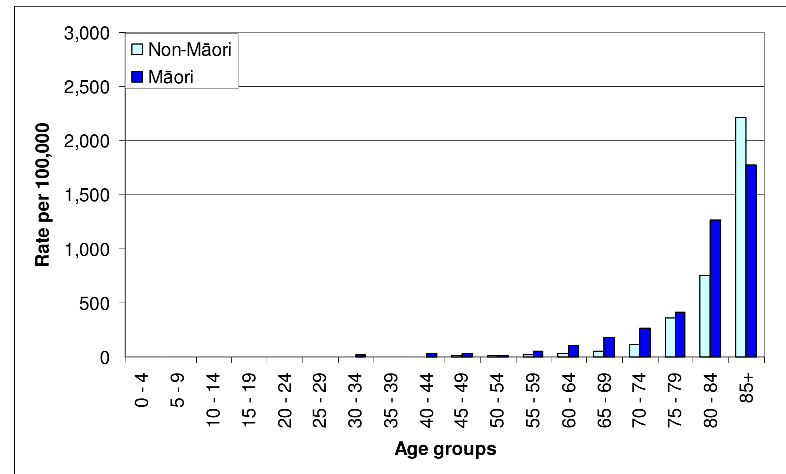


Figure 26: Prostate cancer hospitalisation rate (male only), by gender and age group, Waikato DHB, 2005-2009

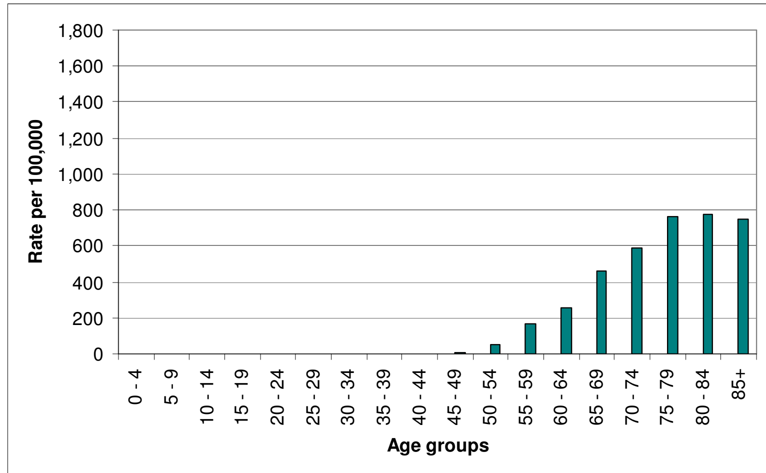


Figure 27: Prostate cancer hospitalisation rate (male only), by ethnicity and age group, Waikato DHB, 2005-2009

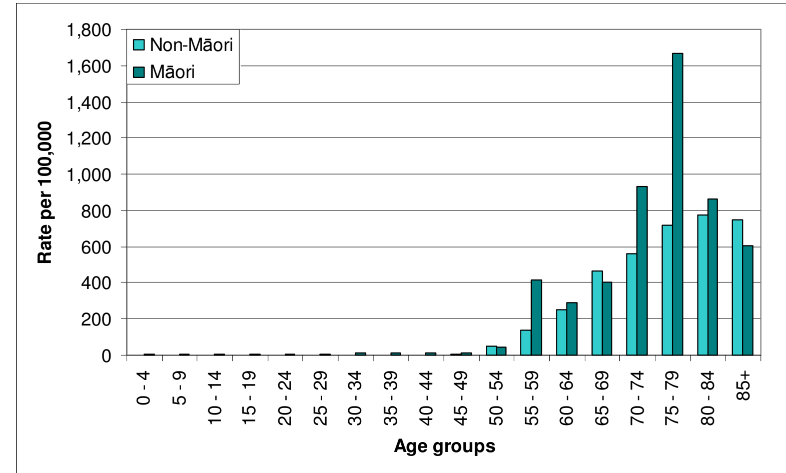


Figure 28: Prostate cancer mortality rate (male only), by gender and age group, Waikato DHB, 2003-2007

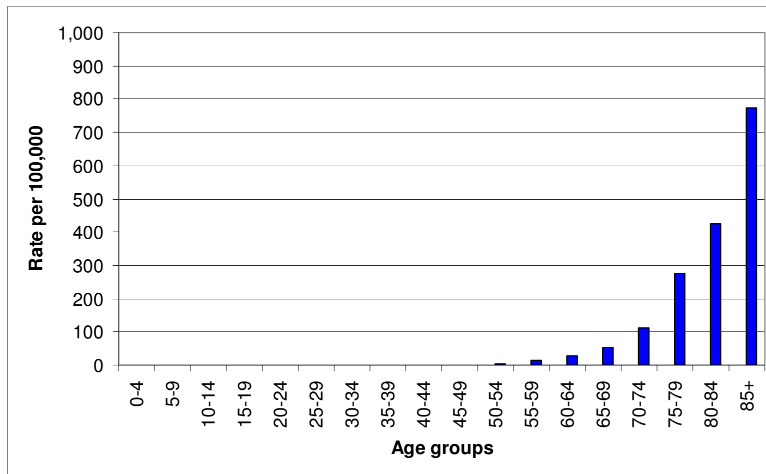


Figure 29: Prostate cancer mortality rate (male only), by ethnicity and age group, Waikato DHB, 2003-2007

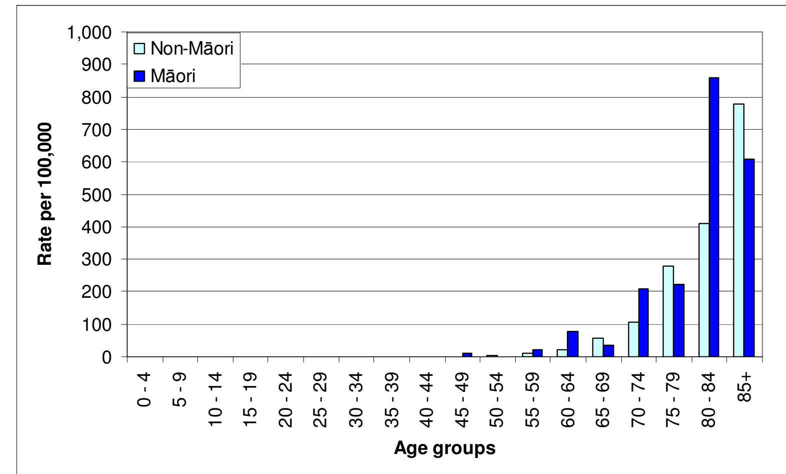


Figure 30: Lung cancer hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

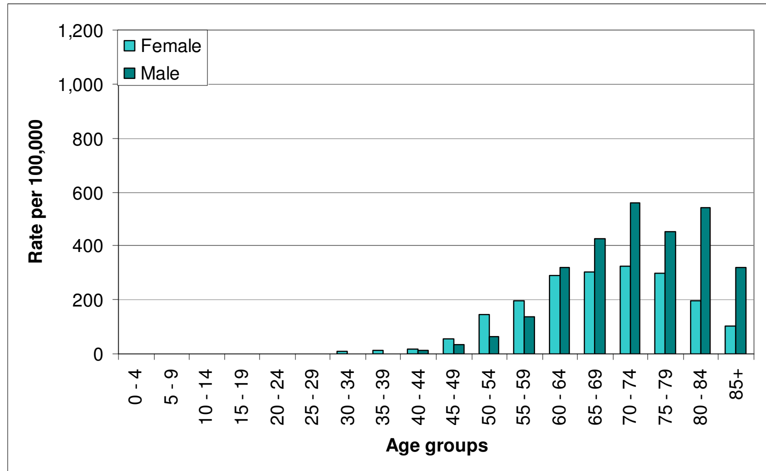


Figure 31: Lung cancer hospitalisation rate, by ethnicity and age group, Waikato DHB, 2005-2009

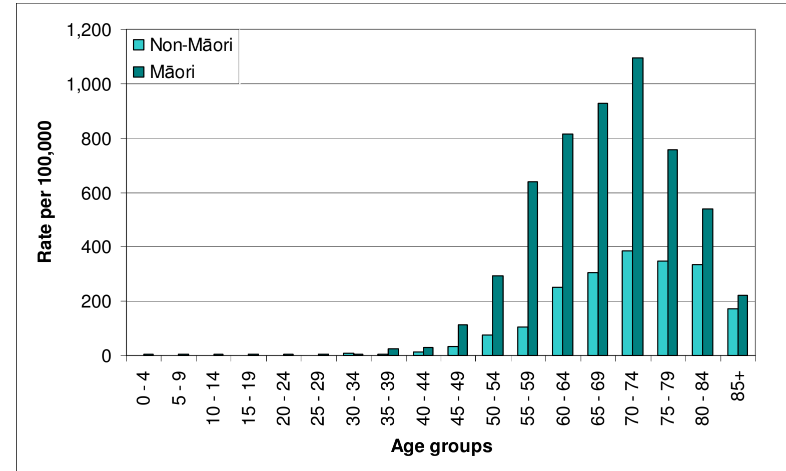


Figure 32: Lung cancer mortality rate, by gender and age group, Waikato DHB, 2003-2007

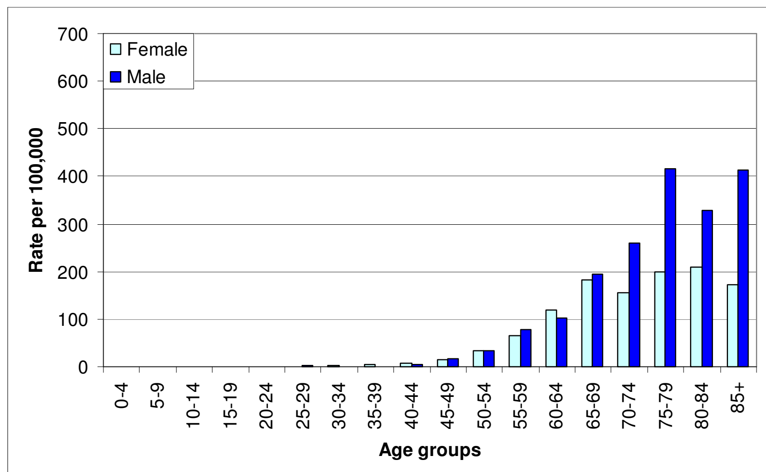


Figure 33: Lung cancer mortality rate, by ethnicity and age group, Waikato DHB, 2003-2007

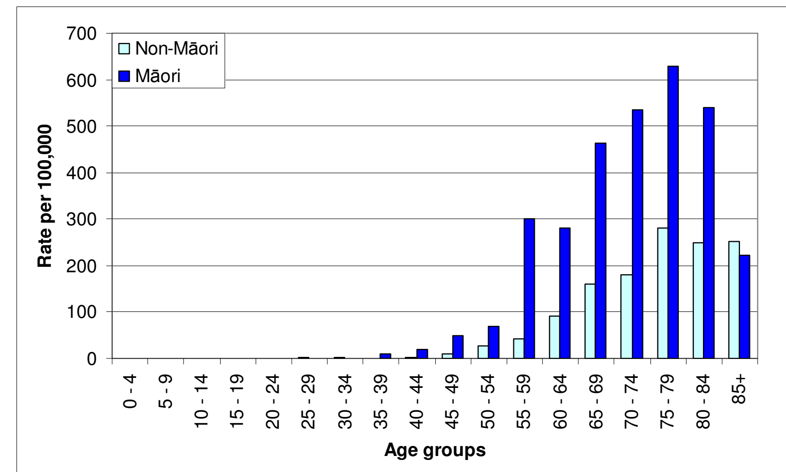


Figure 34: Breast cancer hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

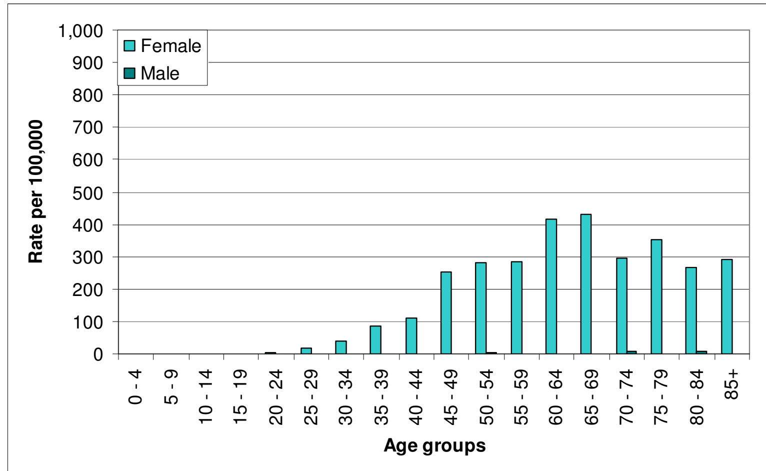


Figure 35: Breast cancer hospitalisation rate (females only), by ethnicity and age group, Waikato DHB, 2005-2009

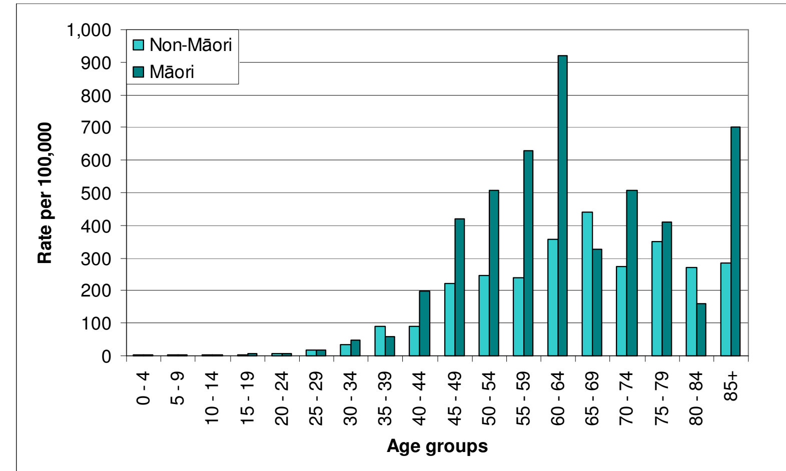


Figure 36: Breast cancer mortality rate, by gender and age group, Waikato DHB, 2003-2007

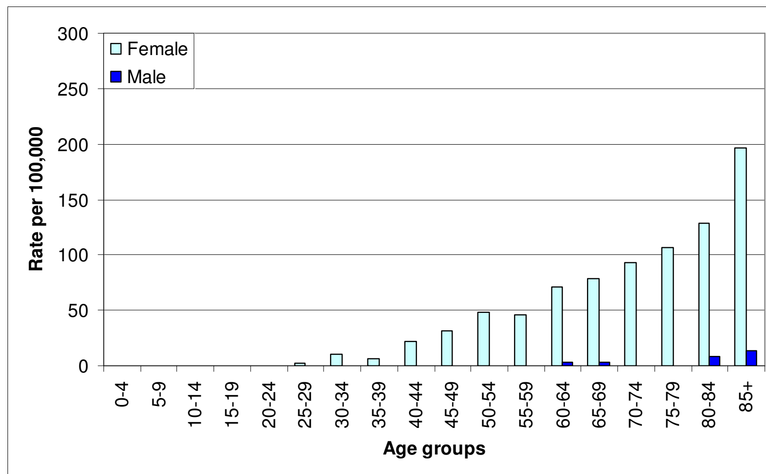


Figure 37: Breast cancer mortality rate (female only), by ethnicity and age group, Waikato DHB, 2003-2007

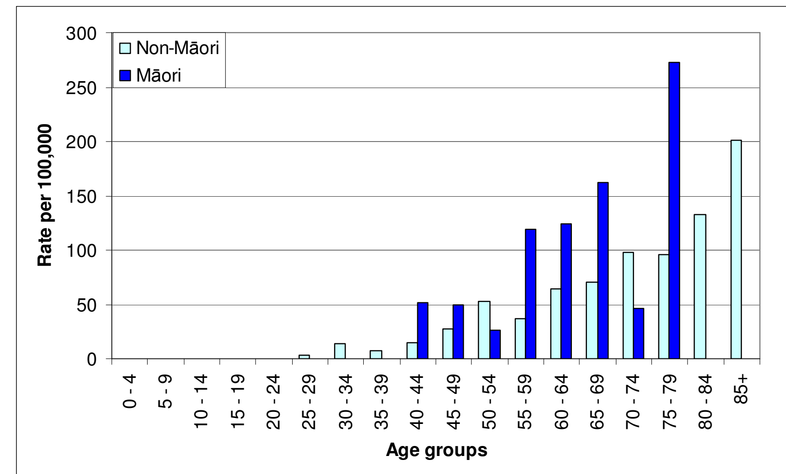


Figure 38: Colon cancer hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

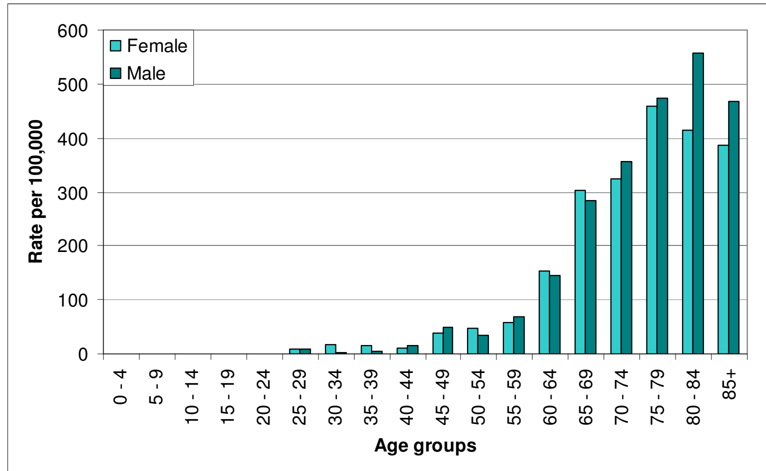


Figure 39: Colon cancer hospitalisation rate, by ethnicity and age group, Waikato DHB, 2005-2009

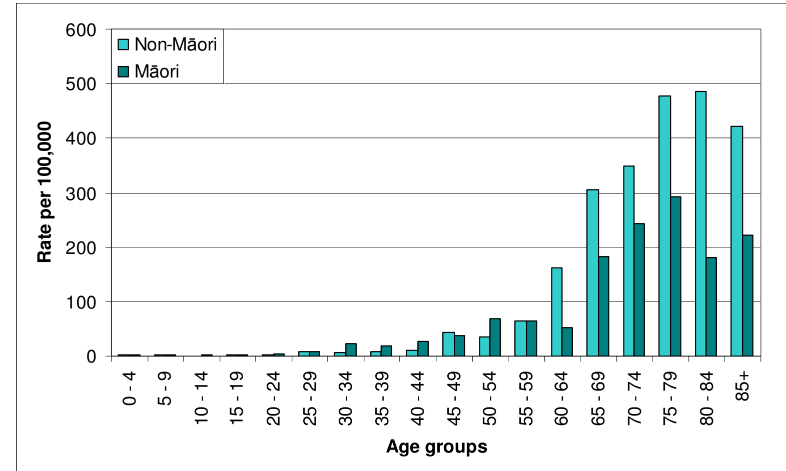


Figure 40: Colon cancer mortality rate, by gender and age group, Waikato DHB, 2003-2007

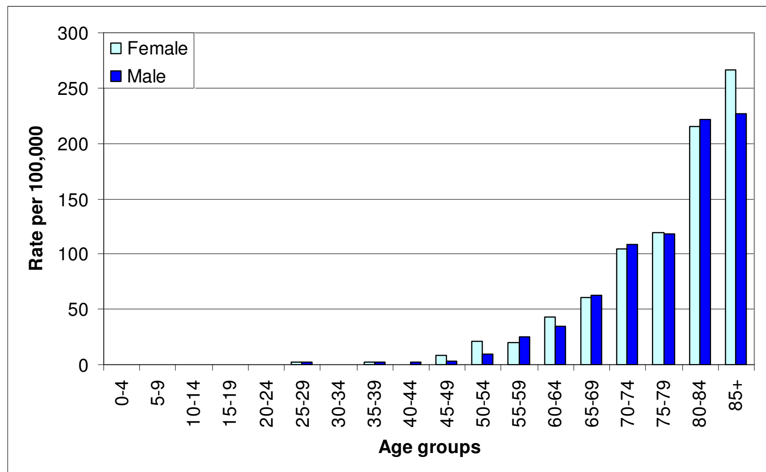


Figure 41: Colon cancer mortality rate, by ethnicity and age group, Waikato DHB, 2003-2007

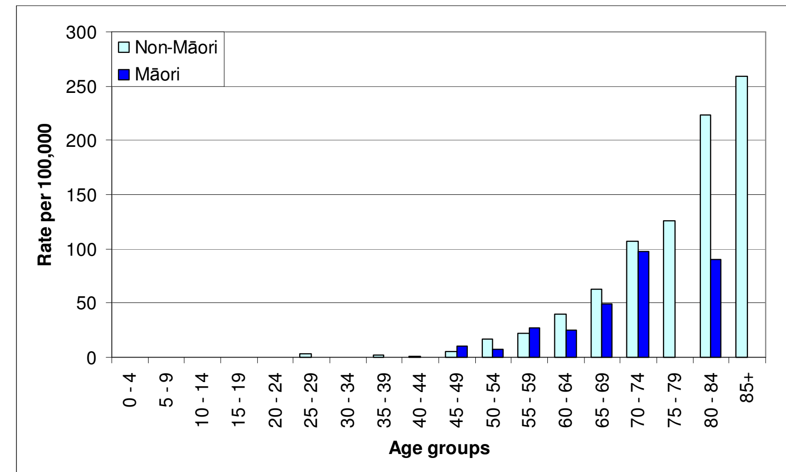


Figure 42: Renal failure hospitalisation rate, by gender and age group, Waikato DHB, 2005-2009

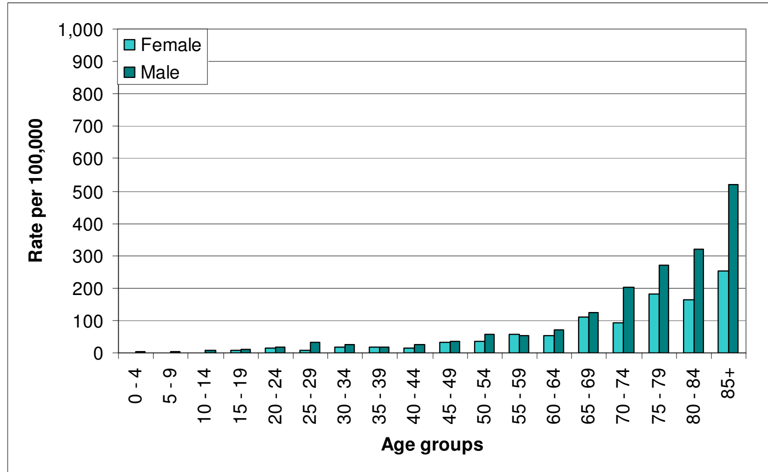


Figure 43: Renal failure hospitalisation rate, by ethnicity and age group, Waikato DHB, 2005-2009

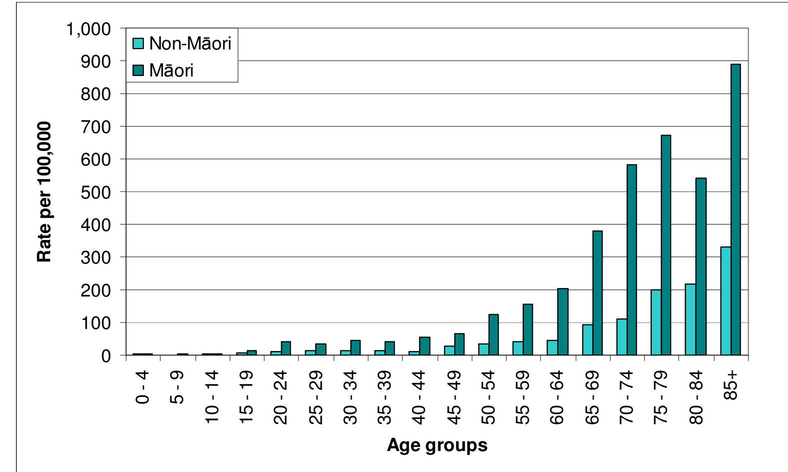


Figure 44: Renal failure mortality rate, by gender and age group, Waikato DHB, 2003-2007

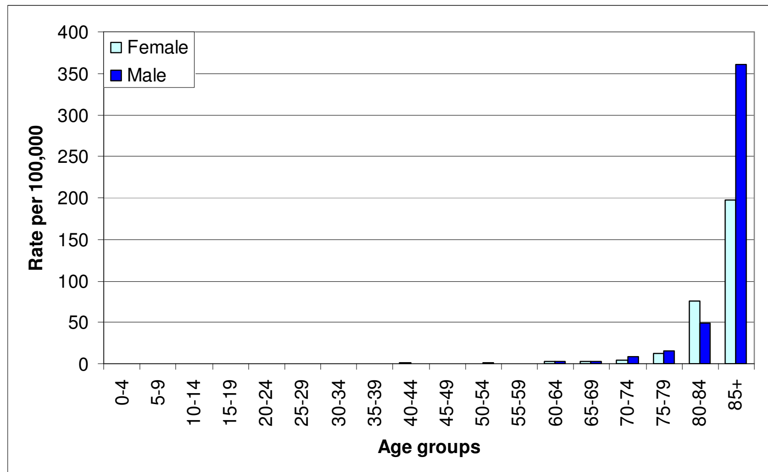
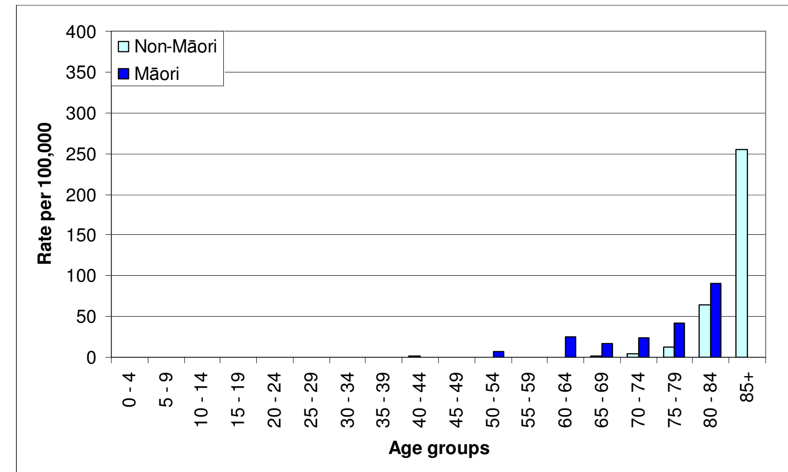


Figure 45: Renal failure mortality rate, by ethnicity and age group, Waikato DHB, 2003-2007



7.4.2 Dementia

Prevalence of dementia

In 2008, an estimated 40,746 people were living with dementia in New Zealand. Approximately 12,333 new cases are being diagnosed each year. Increased numbers correspond with the size of the cohort.

It is predicted that by 2026, around 74,821 New Zealanders will be living with dementia. Of these, 5.8% will be Māori, 8.3% Asian, 2.9% Pacific and the remaining 84.9% will be European. By 2050, 2.7% of the population (146,699 people) are predicted to have dementia. There is higher prevalence in females, 60.2% than in males, 39.8%[23].

In the Waikato DHB region during 2009, 3,906 people were living with dementia. The 65-74 and the 85-89 year age brackets have the highest prevalence rates currently and in all population predictions to 2016[23].

Risk factors for dementia

Older age, family history and cardiovascular risk factors such as high blood pressure and smoking are some of the identified risk factors for dementia. As well as Alzheimer's disease, other common forms of dementia are vascular dementia, dementia with Lewy bodies and fronto-temporal dementia.

Age-standardised mortality for people with dementia is twice that of people without dementia. Currently, around 32 per 100,000 people in New Zealand die each year as a result of dementia. Of those over the age of 75 years with dementia, 70% die within five years. On average, people with dementia have a life expectancy of 7-10 years after diagnosis[23]. The general decline in overall health and wellbeing and increased frailty predisposes to other medical conditions resulting in a shortened life.

The cost of dementia

The total financial cost of dementia in 2008 for New Zealand was estimated at $712.9 million. Of this, 61.1% ($435.7m) was absorbed in health system

expenditure[F] and 38.9% ($277.2m) was for other financial costs such as productivity losses[23].

In 2008, productivity losses due to lower employment participation cost around $124.7 million. Rates of absenteeism cost around $2.3 million and loss of human capital as a result of premature mortality was estimated at around $5.5 million. The cost of respite and support services were around $30.9 million and the cost of mobility aids and home modification were $3.1 million. Other costs like welfare transfers, government expenditures and taxation revenues forgone were around $81.3 million[23].

There is also a cost associated with the loss of general wellbeing and quality of life. In 2008, 27,449 years of healthy life was calculated as lost due to dementia in New Zealand[24]. Volunteer carers also participate less in the workforce and there is a cost associated with this. The opportunity cost of carers' informal care was valued at $29.3 million[23]. The distribution of these costs is borne largely by the government (62.6%), individuals (30.6%) and others in society (6.8%)[23].

Waikato DHB's budgeted cost of care for the 2008-09 year was nearly $5million[13].

Depression and suicide

Depression is the most common mental health problem in later life and many older people experience psychological or emotional distress associated with loneliness and isolation. Loneliness impacts on health and in rates of depression[25]. Older people with limited social networks and with few neighbourhood friends are more likely to have lower scores for both mental and physical health on the SF-36 measurement scale[G26]. Also, those with poor self-rated health are twice as likely to be both socially and emotionally lonely as those with very good self-rated health. This group of older people

[F] Hospital costs totalled $100.9 million (23.2%) in 2008.

[G] SF-36 is a multi-purpose, short-form health survey with only 36 questions. The SF-36 has been used in surveys of general and specific populations, for comparing the relative burden of diseases across different sub-groups and in differentiating the health benefits produced by health care treatments.

are also at a greater risk of nursing home placement and have higher rates of depression generally[25].

As table 2 shows in the Waikato DHB region there were 104 depression related hospitalisations in the 65+ year plus age bracket in 2009.

Table 2: Number of depression related hospitalisations by age group, within the Waikato District Health Board Region for 2009

Age group	*Number of Hospitalisations*
0-14 years	6
15-24 years	100
25-44 years	233
45-64 years	204
65+ years	***104***
Total	***647***

Source: Waikato DHB Hospitalisations database (costpro).

The suicide risk in older people is often overlooked. Older people who attempt suicide usually have a strong intent to die and are more likely to make attempts that are fatal. Depression and suicide risk needs to be treated as seriously in older people as it does within the younger cohort[27].

Older people have often experienced a number of major losses which often act as precipitating events. These include:

- Loss of health.
- Loss of mobility, cognitive functioning and ability for self-care.
- Loss of role/job (retirement).
- Loss of means for self-support.
- Loss of home or cherished possessions e.g. going into a rest home.
- Loss of loved ones, including whanau, family, friends and pets[27].

In 2003, the number of suicide death rates for males in the 75-79 year age group had more than doubled from the year 2000. Males aged 80-84 years

had the highest suicide rate in New Zealand followed by males aged 75-79 years (table 3)[28].

Table 3: Suicide death rates, by five-year age group and sex, 2000 and 2003.

Age group	2000				2003			
	Males		Females		Males		Females	
	Number	Rate	Number	Rate	Number	Rate	Number	Rate
5-9	0	–	0	–	0	–	0	–
10-14	3	–	1	–	4	–	1	–
15-19	31	22.0	11	8.3	35	23.1	16	11.1
20-24	50	38.3	4	–	29	20.5	15	10.9
25-29	58	45.0	13	9.5	35	28.4	11	8.6
30-34	47	34.3	8	5.4	44	31.1	11	7.1
35-39	40	26.8	11	7.0	37	25.2	23	14.6
40-44	25	17.6	6	4.1	44	28.7	7	4.3
45-49	23	18.1	7	5.4	34	24.9	13	9.2
50-54	25	21.0	6	5.1	28	22.8	13	10.4
55-59	21	23.0	5	–	21	19.7	4	–
60-64	11	14.8	5	–	18	21.3	6	6.9
65-69	12	18.9	2	–	8	12.1	4	–
70-74	13	22.9	0	–	11	19.2	6	9.5
75-79	**5**	**–**	**0**	**–**	**14**	**31.4**	**3**	**–**
80-84	**6**	**27.0**	**3**	**–**	**9**	**34.2**	**5**	**–**
85+	5	–	1	–	3	–	3	–
Total	**375**	**19.9**	**83**	**4.3**	**374**	**19.0**	**141**	**6.9**

Source: New Zealand Health Information Service.

Note: "–" indicates that the rate was suppressed as there were five or fewer deaths in this age group.

The majority of older people are neither depressed nor suicidal and an older person's suicidality can be part of a delirium or the early stages of a dementia[29].

Elder Abuse

The abuse, neglect and financial exploitation of older people have come into sharper focus in the last decade. Elder abuse and neglect is identified in the New Zealand Positive Ageing Strategy 2001 as goal number 5; *older people feel safe and secure and can 'age in place'* with a supporting outcome statement that older people are *able to live in a safe and secure environment*

and receive the necessary support when they can no longer live independently[30].

Funding to improve and expand Elder Abuse and/or Neglect Prevention (EANP) was made available in the 2005 budget and administered by the Ministry of Social Development.

The Age Concern New Zealand network has 34 councils throughout New Zealand and is dedicated to enhancing the quality of life for older people. Age Concern has built up the most comprehensive picture of elder abuse and neglect in New Zealand. While the prevalence of elder abuse is difficult to determine as no population studies have been conducted in New Zealand the estimated rates are thought to be between 2-5%. This would indicate that between 9,000 and 23,000 older people in New Zealand may be experiencing some form of abuse.

Between July 1998 and June 2001, 2441 cases of elder abuse were referred to Age Concern. Data from this period showed that 56% presented for psychological abuse, 46% for financial and material abuse, 22% for physical abuse, 18% for active and passive neglect and 3% for sexual abuse[31]. Often more than one type of abuse is experienced. More women experience abuse than men and are likely to either live alone, be in residential care, be European and aged between 70 and 84 years. The majority of alleged abusers are family members with sons and daughters in the highest category of abusers[32]. Common themes amongst abusers have been identified as acting on their own self interests, showing a general lack of empathy for the older person and failing or being unwilling to recognise the needs of the neglected person.

There is little information of elder abuse in New Zealand residential settings. Most visible types of abuse and neglect are reported and known of but many other incidents are unidentified and unreported. It is thought that residential abuse may be a problem of significant proportion[33].

7.4.3 Residential services

Currently, there are 54 Age-related Residential Care (ARC) facilities in the Waikato DHB region and most of these are centred in Hamilton city and immediate surrounds[13].

Only about 5% (2760) of the Waikato DHB's population aged 65 and over live in ARC facilities. Of these 2760, 907 receive hospital level care, 1637 receive rest home level care, and 216 receive care in secure dementia units[13]. The percentage of people aged 85 years and over living in residential care has decreased from 29% in 2004 to 18.5% in 2009. The implication of this decrease suggests there are increasing numbers of older frail people with complex co-morbidities remaining in the community. The percentage of Māori living in residential care has increased slightly from 4.2% in 2004 to 5.2% in 2009[34].

7.4.4 Home based support services

Since 2003, around 11% of the Waikato DHB population aged 65+ received home based support services funded by the Waikato DHB. Both the numbers and average age of people receiving household management showed an increase in volume each year from 2003. The number of hours delivered also increased e.g. 39,526 hours for personal care home support in 2003 to 201,790 hours in 2007[6].

7.4.5 Ageing in Place

Ageing in Place has been defined by the New Zealand Positive Ageing Strategy as a person's ability to *make choices in later life about where to live and receive the support to do so*[35]. The majority of older people live in their own homes. The place in which they age has a special significance for them and the majority want to remain *in place* for as long as possible[36].

It has been argued that generations born in New Zealand between 1920 and 1945 have entered old age with a higher standard of living than succeeding generations in that they have benefited under a strong welfare state of universal family allowances, free education and access to affordable housing[37].

There are a number of factors that influence an older person's ability to remain independent. These include personal health, level of mobility, income, safety and security, and access to social or community-based services and support.

Older people with high support needs are likely to require more intensive services to continue remaining at home. Only about 15% of New Zealanders aged 85 and over live in the community independent of all service provision[38].

For Māori, the impact of a lifetime of disparity has affected their ability to reach old age. The material disadvantage is around three or four times higher than that of non-Māori. The majority of older Māori are under 75 years of age. The onset of illness and disability is around five years earlier than for non-Māori and the severity of health problems are greater.

A health study conducted by Population Health, Waikato District Health Board in 2007-2008 found that kaumatua living in the rural sector particularly those living in Ruapehu (part), Waitomo and Waikato, did not receive the same support kaumatua received in the city areas. This involved delays in important follow-up referrals and hospital discharge plans and a general lack of communication with kaumatua and their whanau. Lack of access to services i.e. transport, and a lack of early intervention support for kaumatua like housing and budgeting services before reaching hardship, contributed to poorer health outcomes and the ability of many to age in place[39].

Older Pacific people are held in high regard and their care and comfort is extremely important to Pacific families[11]. However, increases in cross-cultural marriage create new family links and also tensions as new expectations and patterns of behaviour are brought into Pacific family structures. There is rapid urbanisation of the Pacific population and 97% now live in cities. Where quality of life is affected by illness[H], traditional patterns of care for the Pacific elderly may be under pressure as a result of demography and employment demands[8].

[H] High vulnerability to diabetes has the potential to affect the quality of life of older Pacific people[8]

7.5 Service Networks

Health services related to older people include services at the primary, secondary and tertiary level. The majority of services for older people are provided at the tertiary level. Refer to *Future Focus Section 14 Appendix* for a list of current health services Future Focus Section 14 Appendix.

7.6 Living and working conditions

There are a number of factors relating to living and working conditions that impact on older people. These include workforce participation and retirement; income, housing, transportation, social networks, physical activity and well-being, and independent living.

7.6.1 Workforce participation and retirement

Workforce participation has increased steadily since the age of eligibility for New Zealand Superannuation began rising in 1992[40] and compulsory retirement was abolished under the Human Rights Act 1993[41]. At the 2006 census, those aged 65+ made up 3.9% of the total work force compared with 1.4% in 1986[42].

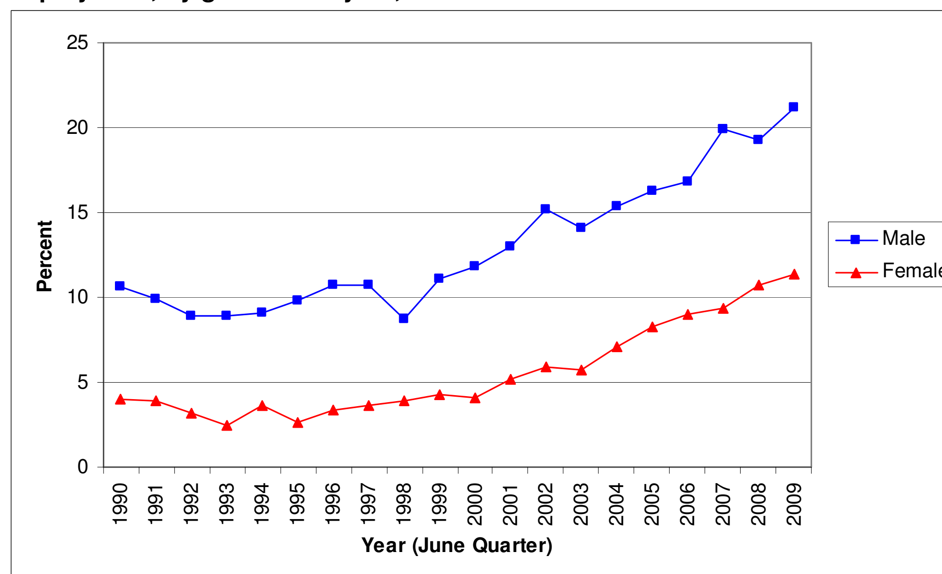
Paid employment provides much of the resources used in creating a standard of living and employment is linked to higher levels of satisfaction than unemployment.

Work in later life is valued and this is reflected in the New Zealand Positive Ageing Strategy that recognises employment as one of its ten goals[35].

New Zealand has one of the highest labour participation rates for older people among OECD countries. In 2006, 82,545 people aged 65 plus were participating in the workforce. This represents an increase of 31,800 people since 2001[42]. Japan has the highest percentage of older people in the labour force (20%) followed by New Zealand on 17%. Australia has less than 10% of its older population in the labour force. New Zealand also has a relatively high number of older females in the labour force (12%). This is just behind Japan and the United States on 13% each[42].

According to Statistics New Zealand, 22% of 65-69 year olds and 3% of 85+ are employed and people over 65 are twice as likely to be self-employed or be an employer of others, than younger workers (44.5% compared to 19.8%)[43]. Older men are more likely to be employed than older women. In June 2006, 16.5% of older men were employed compared with 8.7% of older women. However, the growth in employment rates for older women over the last 20 years has been much more dramatic than for older men (Figure 46).

Figure 46: Proportion of the population aged 65 years and over in paid employment, by gender and year, June 1990 - June 2009



Source: Statistics New Zealand - Table Builder (Key Labour Force Measures by Qualification, Age and Sex)

In June 2006, older Māori had higher employment rates for 1 hour or more per week than older European; 19.4% and 12.1% respectively. Older Pacific peoples had the lowest employment rate of 8.9%. Most Pacific peoples work in occupations or industries that are subject to major technological change. Processing and manufacturing, which contain the main share of Pacific men and women, are the most vulnerable to externally driven change and as such are faced with greater potential unemployment than other industries[8].

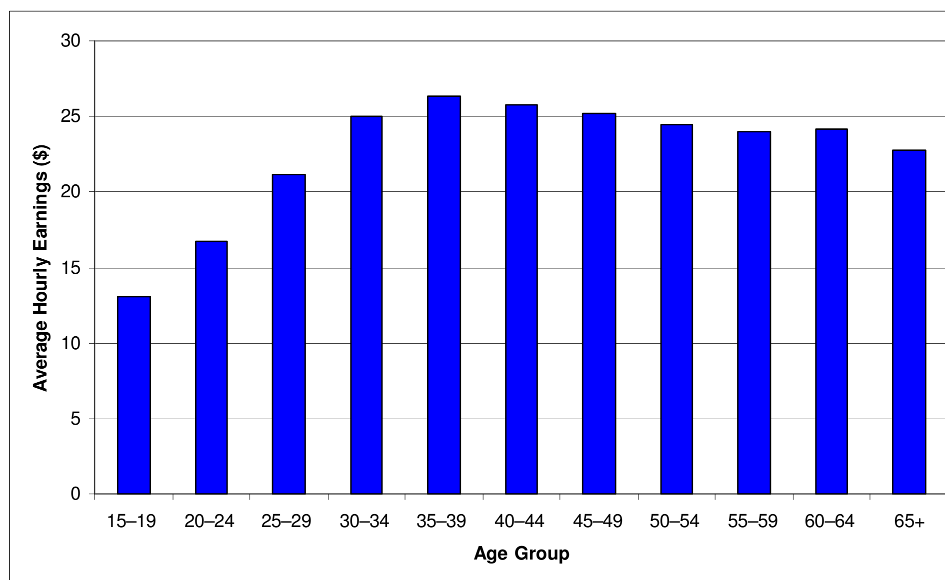
Older people with higher education qualifications were more likely to be employed than those with no qualifications; 18.3% and 8.6% respectively[44].

In June 2006, the average hourly wage for older employees was $20.05 an hour. The average hourly earnings for all employees, 15 years and over is

$20.04 (Figure 47). Average hourly earnings were not greatly affected by the number of hours worked[44].

An EEO Trust Work & Age Survey report (2006) showed that quality part-time work and flexible working hours were the two main work conditions influencing the decisions of older people to remain in work[45].

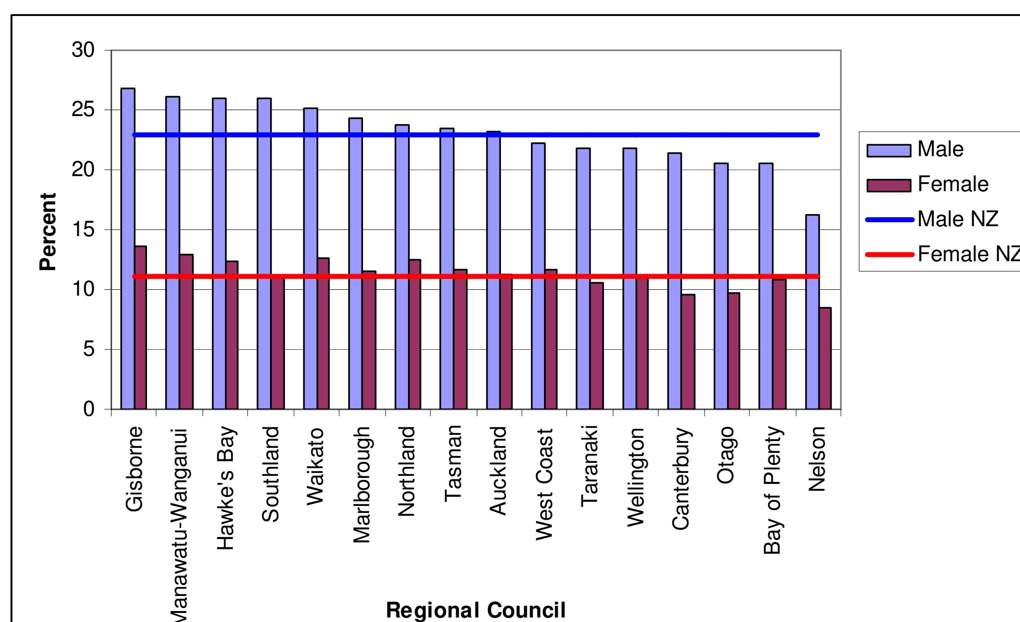
Figure 47: Average hourly earnings of the working population aged 65 years and over and selected younger age groups, June 2009



Source: Statistics New Zealand - New Zealand Income Survey: June 2009 quarter – Tables (Table 10)

In the Waikato region at the 2006 census, the labour force participation rates for both men and women over the age of 65 were well above the national average (Figure 48)[42].

Figure 48: Labour Force Participation by Regional Council Area and Gender Population Aged 65 years and over 2006 Census



Source: Statistics New Zealand - Table Builder (Work and Labour Force Status and Ethnic Group (Grouped Total Responses) by Age Group and Sex, for the Census Usually Resident Population Count Aged 15 Years and Over, 2001 and 2006)

7.6.2 Living standards

Income that provides basic necessities and enables participation is vital to an older person's health and wellbeing. As people age, income is increasingly made up of superannuation, self-employment and investment rather than salaries and wages[46].

The New Zealand Living Standards Survey 2004 found that 8% of older New Zealanders were living in hardship described as either *severe*, *significant* or *some* compared with 21% of those working aged 18-64 years. Single older women were more likely to experience hardship (12%) than older couples (5%)[44]. Although living alone is becoming increasing common in New Zealand society, the number of women living without a partner is increasing much more rapidly than for men due largely to their greater longevity[47].

Ministry of Social Development research found that the average living standards of older New Zealanders are higher than those of the population as a whole and that there has been little change for older people since 2000.

Older single women suffer a greater degree of hardship than older single men[44]. Older women are less likely to enjoy supplementary income to the same extent as men due to lower average incomes and time out of the workforce to raise children. Women are also more likely to experience more years with a disability at the end of their lives than men as a result of increased life expectancy[48].

New Zealand research has found that if older people do not have an adequate income they are more likely to forego health expenditure such as visits to the dentist, new glasses or a hearing aid. In addition, they are more likely to experience fuel poverty[49][I] and forego expenditure on home heating, essential food and clothing[50]. Inadequate income and low satisfaction with *Economic Standard of Living* was also associated with a lack of saving for retirement[50].

Pacific peoples are over represented at the lower end of the socioeconomic spectrum with around 42% living in decile 10. Socioeconomic disadvantage is closely linked with hardship and poor health outcomes[11].

With reference to retirement income, New Zealand currently has the flat-pension Superannuation scheme and *KiwiSaver*. The New Zealand Superannuation (NZS) scheme is not sustainable. About 4% of New Zealand's gross domestic product is spent on New Zealand Superannuation[51] and baby boomers have already started applying for NZS. In the Waikato region at the 2006 census, almost 38,000 people were receiving New Zealand Superannuation at an annual cost in excess of $9 billion[46].

The Hamilton office of Work and Income New Zealand (WINZ) identified a number of trends with older people. These include:

- An increasing number of people transferring from invalid or sickness benefits to NZS.

[I] Fuel poverty is defined as households spending more than 10% of their income on fuel use to heat the home to an adequate standard of warmth. This already affects between 10 and 15% of all households in New Zealand and older people are particularly vulnerable.

- A growing number of people receiving a disability allowance because of medical related costs. Health care costs not being picked up by the District Health Boards are being paid by WINZ.

- An increasing number of people with private health insurance are reaching the age of 65-70 years and find they can no longer sustain such a cost. They may choose for example, to give up some of their cover like GP visits and prescriptions but keep *operations*.

- An increasing number of older people are applying for a special needs grant e.g. to cover the costs of an unexpected emergency, dental treatment, or food.

- An increasing number of older people are asking for food grants. A contributing factor may be the increasing number of people transferring from employment to pension rather than from benefit to pension.

- Requests for additional allowances are subject to income and asset testing[52].

KiwiSaver was introduced on 1 July 2007 as a new approach to retirement savings. *KiwiSaver* is very different to the flat-pension NZS paid to anyone of qualifying age (65 years) and residency. The NZS features are not present in *KiwiSaver. KiwiSaver*, a predominantly workplace saving scheme, will inadvertently introduce a range of inequalities based on gender, ethnicity, education, income, membership, level of member and employer contributions, taxpayer incentives, capped tax on funds earned, and variations in fund manager performance. Over time, these *KiwiSaver* features will increase future inequality and lead to diverging living standards for the older people[53].

7.6.3 Housing

Housing is the primary determinant of an adequate standard of living. Good quality housing that is affordable and safe is an important factor in older people maintaining independence and the ability to age positively. The majority of older people wish to live in their own homes for as long as possible and most do so. Older New Zealanders have a strong attachment to their homes driven by both comfort and practicality. Home ownership at older

ages has been shown to be associated with higher living standards and is therefore related to positive ageing in terms of general wellbeing[44].

The agenda around ageing in place encourages people to remain in their homes and communities and with adequate support services in place, the risk of mortality and entry into residential care can be reduced.

Home ownership is relatively high among older New Zealanders. In 2006, a little over 76% of older people owned or partly owned their own homes. This was much higher than for the population group aged 15-64 years that had a home ownership rate of 49%[44]. Older people are more likely to be mortgage free but as most are on 'fixed incomes', many are asset rich and income poor. Overall, home ownership rates are declining in New Zealand and private renting is growing. Between 1991 and 2001 the rate of home ownership fell from 74% to 68%[54].

Around 35% of New Zealand's housing stock was built before World War II. Insulation was not required in houses built before 1978. This suggests that many homes may be in need of repair and refurbishment, cold and damp and not meeting the World Health Organisation (1984) recommendation of 18^0c as the minimum indoor winter temperature for sedentary people. There is now a considerable body of evidence linking poor quality housing with poor health outcomes. The most common health hazards associated with poor housing are dampness and cold i.e. the damper the house the greater likelihood that the occupants are ill. Older people, children and those with pre-existing respiratory illnesses are the most vulnerable to cold damp housing conditions[55].

In her 2004 research, Professor Howden-Chapman found that in excess of 1600 deaths in New Zealand in winter occurred from respiratory and circulatory problems associated with cold housing i.e. 16^0c or below[55].

Research has found that housing tenure is linked directly to cardiovascular and all-cause mortality and as such older people in rented accommodation are more likely to have higher rates of mortality than owner-occupiers. Māori and Pacific superannuitants are at a greater health risk than pakeha superannuitants[55].

The majority of older people live in the community with only a small proportion living in institutions. Many older people either enter residential homes or fail to leave hospital primarily because of housing problems[55].

Healthy housing projects in the Waikato region

Around 62% of the Waikato region's housing stock was built before 1980. Some districts have higher proportions of pre-1980 houses than others e.g. 85% of the housing stock in the south Waikato district and 84% of Waitomo district's housing stock is pre 1980. Only 52% of Hamilton city's housing stock was built before 1980[56].

Initiatives to insulate and install heating within substandard houses began in the Waikato in 2001 with the start of the Housing New Zealand Corporation (HNZC) nationwide Healthy Housing programme. The government's *Warm Up New Zealand* Heat Smart Programme was announced in July 2009 and the $323m economic stimulus package, was designed to be carried out over a four year period.

The Waikato DHB approved funding of $1m over a two year period (2008-2010) for retrofitting homes in the Waikato DHB region through their Healthy Homes Programme. Funding was allocated to areas and population groups of highest need e.g. Hamilton, South Waikato, Waitomo and Ruapehu (part) and to those living in low socio-economic areas, older persons, Māori and Pacific peoples.

By July 2009, 9,249 homes in the Waikato region were known to have received publicly funded insulation retrofits. Of these, 10% were built pre-1980 and 7% pre-2000[56].

To date, a relatively high number of insulations have occurred in areas where high proportions of older people reside. The highest percentage of publicly funded insulations took place in Te Kauwhata (39%) which has a relatively high proportion of older residents (22%). Whangamata has the highest proportion of older residents in the region (28%) but only had eight known retrofits[56] (Table 4).

Table 4: Insulation retrofits in 20 towns with higher proportions of people over 65 years old

Urban Area	Population		Houses insulated	
	Total population	% of population who are 65+ years	Number insulated	% of pre-2000 houses insulated
Whangamata	3561	28%	8	0%
Matamata	6315	24%	121	5%
Thames	7701	24%	388	13%
Ngatea	1167	23%	22	6%
Te Aroha	3768	23%	57	4%
Te Kauwhata	1191	22%	90	39%
Waihi	4500	22%	129	7%
Paeroa	3969	21%	219	14%
Tairua	1263	20%	6	1%
Morrinsville	6603	18%	111	5%
Te Awamutu	10902	18%	273	8%
Cambridge	13344	18%	131	3%
Putaruru	3783	18%	61	4%
Whitianga	3768	18%	4	0%
Coromandel	1473	17%	10	3%
Tirau	729	16%	5	2%
Piopio	462	16%	4	2%
Pauanui Beach	735	15%	2	0%
Raglan	2634	15%	68	5%
Taupo	23493	14%	223	2%
Waikato Total	396,441	12%	9249	7%

Source: Environment Waikato and Waikato District Health Board -Warm Home Clear Air Needs Assessment (2010)

Housing for older people

The proportion of older people renting privately decreases with age while the proportion renting from local authorities and from trusts increases with age. Local authorities differ in their policies towards housing for older people. Within the Waikato region Thames Coromandel District Council has divested itself of its housing stock while other councils are committed to upgrading and/or expanding their current housing stock. Only two local authorities, in the Waikato region, Hamilton city and Hauraki have a current *Positive Ageing/Older Persons' Strategy*.

The majority of local councils within the Waikato DHB region provide housing for older people at discounted rates. Hamilton City council has 400 units available at discounted rents for people aged 60 plus who meet the council's age and financial means testing criteria. Hamilton city acknowledges that

while it provides a caring landlord function it does not provide any kind of social service other than referrals to agencies like Age Concern, Mental Health and Disability Support Link when needed. The majority of the housing stock comprises one-bedroom units located in 25 complexes throughout the city in four key locations usually close to bus routes and shopping centres[57].

The majority of Hamilton city's housing stock is pre-1986. Fifteen complexes (259 units) have ceiling insulation but no wall insulation. A further seven complexes (95 units) were built with full insulation (ceiling and walls) and the remaining two complexes are part of an upgrade programme with one complex recently retrofitted and the other expected to be retrofitted in the next 12 months. Wherever possible, council has installed level access showers and easier external access like ramps to accommodate those in wheelchairs or with walking frames. Council acknowledges that some of the earlier built units are difficult to reconfigure and would therefore be unsuitable for disabled tenants[58].

Hauraki District Council provides a number of subsidised pensioner units across its district. Ngatea has 12 units, Paeroa has 24 units, and Waihi has 21 units[59]. The age of the housing stock is thought to be the late 1960s and as such has limited insulation. Some refurbishment has occurred and one unit has been completely renovated including a new kitchen, bathroom and insulation. An increasing trend has been inquiries about whether or not the pensioner units can accommodate mobility scooters. In response Council has been able to erect a shed in their Paeroa location specifically for mobility scooters which includes a concrete path and pad and power points for recharging batteries[60].

Waipa District Council provides 125 pensioner units; Cambridge has 66, Te Awamutu, 46 and Kihikihi, 13. The housing stock comprises of mostly one bedroom units or bedsits. The age of the housing stock varies from bedsits built in the late 1960s to new units built in 1994. Many of the older units have been retrofitted and all but one has level access showers instead of baths. There are plans to rebuild some of the earlier units. Waipa District Council has an entry criterion for those 60 years of age and over and rents are not subsidised by the rate-payer.

Otorohanga, Matamata-Piako and the South Waikato District Councils also provide pensioner housing accompanied by qualifying tenancy criteria and rates relief but do not have specific policies for older people. Council staff report that the majority of their current housing stock have been upgraded and retrofitted or have upgrades planned. An identified emerging trend is access issues related to mobility scooters i.e. difficulty for tenants to access units in mobility scooters and difficulties recharging scooter batteries e.g. location of power points[61].

Thames-Coromandel District Council has divested its pensioner housing in Thames, Whitianga and Coromandel which is now being managed by independent trusts. Council has retained ownership of the land on which pensioner units are located leasing the land at a low rate back to the trusts and acting as guarantors. Council has a rates relief policy but has not developed a policy for older people[62].

Almost all local authorities providing subsidised pensioner housing across the region are faced with the limitations of their older housing stock i.e. less than optimal insulation and fewer opportunities for reconfiguration to support reducing agility and mobility e.g. level access showers and external ramps.

The challenges for local authorities are whether or not to demolish and redevelop pensioner housing; retrofit as resources and funding allows, or consider other options such as the development of residential housing or villages and investment through the private sector. As the first of the baby boomers started applying for the New Zealand Superannuation in 2010 these challenges have become more pressing.

7.6.4 Transport

Transport is critical to participation in society and the ability to use some form of transport to get from *A* to *B* is vital to keeping healthy. The New Zealand Positive Ageing Strategy includes the goal of *Affordable and Accessible Transport for Older People* which lies within the overall aim of improving the opportunities for older people to participate in the community in the ways they choose[63].

Older people prefer private transport and the vast majority of those entering retirement years have access to a car. In August 2006, 136,315 people aged 75 years and over had a driver licence. This represents around 57% of that population group. Older men were more likely to have a licence than older women; 76% and 45% respectively. The proportion of older people with a driver licence decreased dramatically with age (table 5)[44].

Table 5: The number and proportion of people aged 75 years and over with a driver licence, by age group and sex, August 2006

Age group	75-79		80-84		85-89		90+	
	Number	**%**	**Number**	**%**	**Number**	**%**	**Number**	**%**
Males	42,449	88.8	21,656	71.2	7,733	56.6	1,711	32.2
Females	36,728	65.2	19,009	42.9	6,706	25.3	1,131	7.8
Total	**79,177**	**76.0**	**40,665**	**54.4**	**14,439**	**36.0**	**2,842**	**14.4**

Source: Land Transport New Zealand (2007) unpublished analysis

Older people have a high preference for and dependence on private transport. When older people give up driving either voluntarily or due to a failed driving test, it has considerable impact on their lives, particularly their independence, contact with friends, spontaneous trips and pleasure outings. Research into transport patterns shows that the majority of older people have patterns of regular trips for shopping, church and club meetings or recreational activities like bowls or cards. Shopping, attending medical and/or specialist appointments and seeing friends and family are the activities that generate the most dependence on transport. Main transport modes for older people include getting lifts with friends, acquaintances and family; public transport, taxis, walking and community transport[63].

In December 2006, the mandatory on-road driving test that was needed to re-licence at age 80 and two yearly afterwards, was removed although the medical certificate of fitness to drive remains[64]. *Safe with Age* road safety awareness and road rules refresher courses for persons aged 55 were coordinated by Land Transport New Zealand throughout the country and despite enormous popularity were discontinued in August 2009 due to a change of funding policy[65].

Community transport

Community transport is often described as a door-to-door service offered by community or voluntary groups. Community based transport initiatives are growing and currently there are at least 11 initiatives at different stages of development within the Waikato region. Current transport initiatives are based in Te Kuiti, Thames, Tokoroa, Putaruru, Te Awamutu, Te Aroha, Te Kauwhata, Morrinsville, Franklin, Ngaruawahia and Huntly[66]. A lack of public transport options has been the main driver behind the development of these initiatives[67].

The community transport initiative recently developed in Huntly has been named *Waka Tautoko* which when translated means *support to better health*. *Waka Tautoko* is a collaborative community project supported by the Raukura Hauora O Tainui, Waahi Whanui Trust and Waikato Tainui. The aims of this initiative are to:

- provide transport for those who are unable to attend essential hospital services and appointments like dialysis treatment at Waikato Hospital,
- deliver *kai at the right price* i.e. boxes of fruit and vegetables to kaumatua and those in the low socio-economic bracket in the north Waikato community, and
- provide a local coordinated transport service for kaumatua who require access to GPs, pharmacies, supermarkets and general shopping[68].

The Huntly van is a six-seater and operates six days a week. The service area is getting wider and bookings are now essential. By January 2011 a total of 1228 bookings were made; 1070 to attend appointments at Waikato Hospital. Table 6 below shows the number of bookings for Waka Tautoko service to January 2011. Data shows that 38% of people booking the Waka Tautoko transport service are aged 65 and over (Table 7).

Table 6: Number of bookings for Waka Tautoko transport service between February 2010 and January 2011

Month	Waikato Hospital	Other	Total
Feb- 10	59	7	66
Mar-10	88	22	110
Apr-10	75	8	83
May-10	103	16	119
Jun-10	111	5	116
Jul-10	108	19	127
Aug-10	83	7	90
Sep-10	76	18	94
Oct-10	77	9	86
Nov-10	100	14	114
Dec-10	106	13	119
Jan-11	84	20	104
Total	**1070**	**158**	**1228**

Source: Waka Tautoko booking spreadsheet (as at 04/02/2011). Request No: 000288

NOTE: Some users of the service may make multiple bookings in the same month. Waikato Hospital bookings are identified by those appointments that are located at Waikato Hospital. Other bookings may be at clinics within Hamilton or Huntly.

Table 7: Numbers and percentage of those aged 65+ booking the Waka Tautoko transport service between February 2010 and January 2011

	Bookings for 65+			Total number of bookings			65+
Month	**Waikato Hospital**	**Other**	**Grand Total**	**Waikato Hospital**	**Other**	**Grand Total**	**Percent**
Feb 2010	28	1	29	59	7	66	44%
March 2010	45	5	50	88	22	110	45%
April 2010	33	2	35	75	8	83	42%
May 2010	29	1	30	103	16	119	25%
June 2010	36	3	39	111	5	116	34%
July 2010	39	8	47	105	17	122	39%
August 2010	30	2	32	82	8	90	36%
Sept 2010	43	4	47	76	17	93	51%
Oct 2010	31	1	32	77	9	86	37%
Nov 2010	43	0	43	103	11	114	38%
Dec 2010	49	1	50	106	13	119	42%
Jan 2011	34	1	35	84	20	104	34%
Grand Total	**440**	**29**	**469**	**1069**	**153**	**1222**	**38%**

Source: Waka Tautoko booking spreadsheet (as at 04/02/2011). Request No: 000297

NOTE: Some users of the service may make multiple bookings in the same month. Waikato Hospital bookings are identified by those appointments that are located at Waikato Hospital. Other bookings may be at clinics within Hamilton or Huntly.

National Travel Assistance

National Travel Assistance (NTA) was introduced nationally by the Ministry of Health in January 2006 to assist people accessing specialist appointments or having to travel frequently and long distances. NTA provides travel assistance at 28c per kilometre and accommodation costs of $100 per night for all of New Zealand for eligible clients. Waikato DHB provides access to NTA support.

Lack of appropriate transport and its impact on service accessibility is a significant issue for Waikato DHB as over 60% of the region's population lives outside Hamilton. There are high *did-not-attend* rates (DNA) in the region and improving access to health services through transport is a Waikato DHB priority[69]. Waikato DHB now has service agreements with 24 community and private transport providers across the region. These services are offered in 21 locations across the Waikato DHB region. These health transport services assist people attend their specialist appointments or treatments at Waikato Hospital at either no cost or by *koha*. As yet, Waikato DHB has not been able to associate improved transport arrangements with decreased DNAs.

Community transport initiatives in general are not without concerns. One of the issues is ageing drivers and the need for sustainability i.e. ensuring the viability of a service that relies on volunteers who are often retired. Many of the community vans are old, do not have air conditioning and are not suitable for those with disabilities e.g. wheelchair accessible. Van drivers are mainly volunteers but as their time commitments increase there is a call for them to be compensated for their work.

BUSIT and GOLDCARD

Environment Waikato offers a 60+ BUSIT card that provides subsidised transport for those aged 60 years and over. BUSIT cards can be used on services within Hamilton city and outlying areas including Raglan, Huntly, Paeroa, Mangakino, Tokoroa and Taupo.

The SuperGold Card is a free discount and concession card available to NZ residents aged 65 years and over and those under 65 years receiving a NZ Superannuation or the Veteran's Pension. Over 520,000 people were eligible for a SuperGold Card when launched in August 2007 and this number grows by approximately 35,000 each year. It is automatically sent to all eligible New Zealanders.

Currently, about 4,000 older people are eligible for free travel and off-peak public transport services in the region. The New Zealand Household Travel Survey shows that older people make around 8 million trips per year on buses and trains and do most of their public transport travel during off-peak hours[70].

To conclude, it is important that future transport planning and systems focus more closely on understanding the mobility and accessibility needs of a rapidly growing group of people living well and actively into their 80s and that this large segment of the population is not being ignored through the promotion of traditional solutions like cars.

7.6.5 Social networks and well-being

Social isolation in older people is recognised as an issue that affects health and wellbeing. Those over the age of 80 are at risk of multiple exclusion[J] and older women are at particular risk[71]. Poor health, living alone, and the reliance on benefits are key factors that impact on wellbeing.

Research indicates that social contacts decline as people age and corresponding isolation can occur. However, New Zealand research suggests that it is the quality of the social contact rather than the number of social contacts that influences satisfaction and an overall sense of wellbeing for older people. The decline in the number of social contacts need not be a problem for older people providing the quality of those contacts is maintained. Older peoples' participation in community organisations also contributes to an overall sense of wellbeing and belonging because participants usually share a common interest and are involved in a common goal[72].

[J] Social exclusion categories include age (80+), family type, health, mobility, housing tenure, income, area, telephone.

Hearing Loss

Nationally, about 30% of people over the age of 65 and half of those over the age of 75[73] are thought to have some degree of non-noise hearing loss. New Zealand has a slightly higher prevalence of hearing loss than other western countries; approximately 1.5% higher in the rates found in New Zealand compared with the United States where similar methodologies were employed. The higher propensity towards hearing loss of Māori and Pacific peoples was cited as a factor[74].

The World Health Organisation identifies untreated hearing loss as a significant public health issue. Research suggests that untreated hearing loss in older people contributes to poor communication, reduced sensory input, depression, anger and severely reduced overall psychological health and this contributes to a lower quality of life, withdrawal and social isolation[74].

Partners of those with a hearing impairment also report difficulties. Communication is a two-way process and the emotional effects of poor or missed communication often results in frustration and anxiety. A recent Australian study described the experiences of spouses of older people with hearing impairment as impacting on almost all areas of everyday life from television viewing and telephone usage to general conversation and hearing safety alarms. Female spouses of males with a hearing impairment were more likely to experience greater feelings of frustration and distress over their partners hearing impairment and were more likely to report more difficulties than male spouses[75].

Oticon New Zealand report that people may take between seven and ten years to do something about their hearing once they know they have an issue[74]. Audiology Services, Waikato DHB, report that some people feel embarrassment at having to use a hearing aid and this may be a barrier to seeking early treatment. Research clearly shows that when hearing loss is addressed early on (with hearing aids) the stimulation of the hearing pathway in the brain helps to maintain a person's quality of hearing. Conversely, the longer the hearing loss is left without treatment (hearing aids) the more significant the weakening of the hearing pathway is and the more difficulty a person will have discriminating speech even with a hearing aid later on[76].

From January 2011, the costs of hearing aids for people with a mix of injury and non-injury related hearing loss will be shared between ACC and the Ministry of Health. People will be assessed in 10% bands for injury and non-injury-related hearing loss and funded accordingly. ACC costs for hearing loss claims have risen significantly since 2000 and costs are projected to increase to $80million by 2014. The changes to ACC entitlements are being offset by increased funding and support from the Ministry of Health[77].

The National Council on Aging[K] (1999) reported that areas most improved by the use of hearing aids were an improved social life e.g. the ability to join in groups; relationships at home and at work, an overall improvement in self-confidence, independence and physical health and personal safety[74].

Table 8: DHB Area and Age Group by Hearing and Seeing Disability For Adults with Disability Resident in Private Households

DHB Areas	Age Group	Hearing	Seeing	Total
Midland DHBs	15-44	6,100	1,400	37,600
	45-64	14,500	3,200	55,600
	65-74	3,700	1,100	22,900
	75 and over	4,000	..S	22,000
Total		28,400	6,600	138,100
New Zealand	15-44	19,000	5,500	141,200
	45-64	46,800	9,400	207,100
	65-74	15,600	2,700	85,400
	75 and over	19,800	6,800	105,600
Total		101,200	24,400	539,200

Request No: 000218
Source: Statistics New Zealand (2006 Household Disability Survey)

Notes:
Hearing – includes people who have difficulty hearing or cannot hear what is said in a conversation with one other person and/or a conversation with at least three other people.
Seeing – includes people who have difficulty seeing or cannot see ordinary newsprint and/or the face of someone from across a room, even when wearing corrective lenses.
DHB Areas - Midland DHBs: Waikato, Lakes, BOP, Tairawhiti, Taranaki.
..S Suppressed. Suppression is applied where sampling error is too high for estimates to be of any practical use.

[K] The National Council on Aging is a non-profit service and advocacy organisation based in Washington DC.

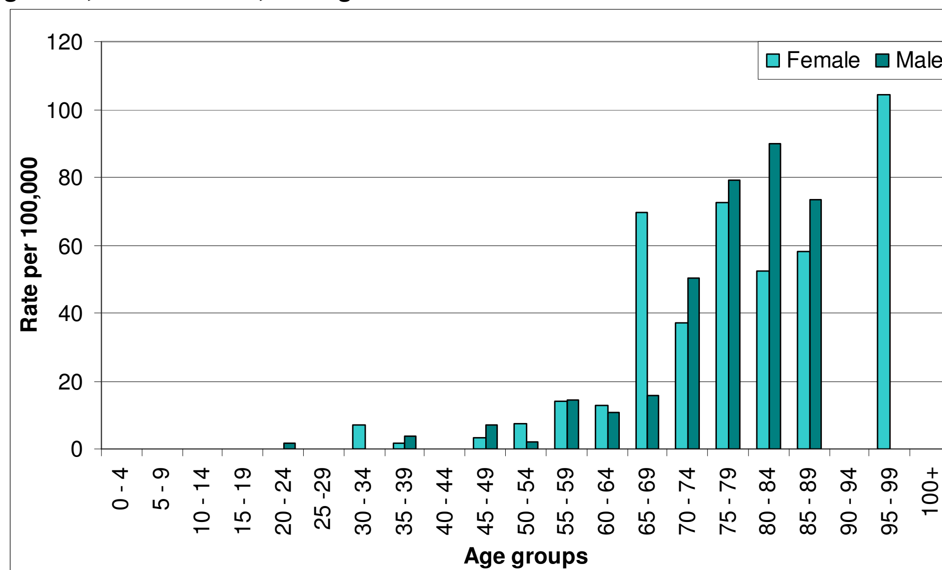
Vision Loss

Around 81,000 New Zealand adults are legally blind or have a slight impairment that cannot be corrected by glasses or contact lenses. Early detection through regular eye examination can minimise the degree of vision loss.

Macular degeneration is one of the most common causes of low vision and visual impairment in older people and occurs when the centre part of the retina becomes damaged. Steps taken to prevent age-related macular degeneration include avoiding smoking, eating fish and green leafy vegetables, taking dietary supplements and antioxidants, and having regular eye examinations particularly if there is a family history[78].

The rates of hospitalisation of macular degeneration increase dramatically after 65 years of age for both males and females although more prominent in females particularly in the 30-34, 65-69 and 95+ age groups (Figure 49).

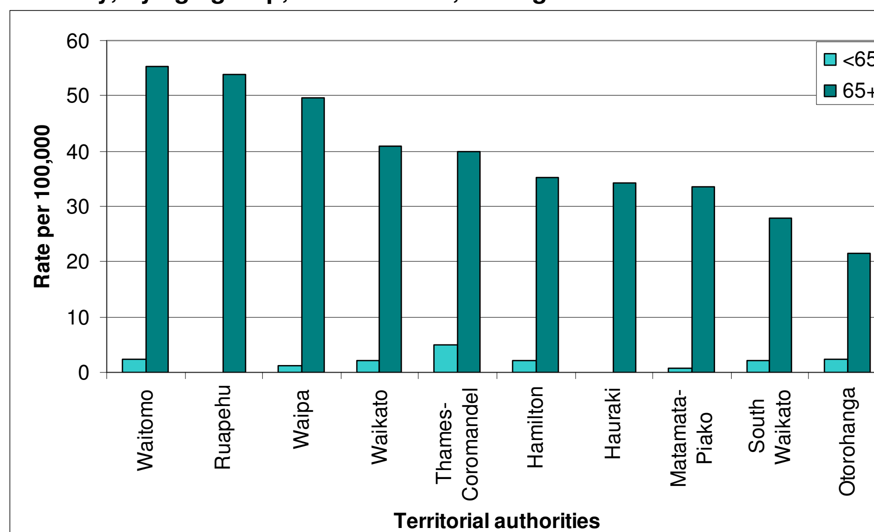
Figure 49: Rate of hospitalisation of macular degeneration, by age group, by gender, Waikato DHB, average 2005-2009



Request No: 000218
Source: Costpro – Waikato DHB hospitalisation database (ICD10 code = H35.3); Statistics New Zealand – Table builder (Age by Sex for 1996, 2001 and 2006 Censuses (2006 only))

Rates of hospitalisation of macular degeneration are shown to be higher in some TAs like Waitomo, Ruapehu and Waipa compared with South Waikato and Otorohanga (Figure 50).

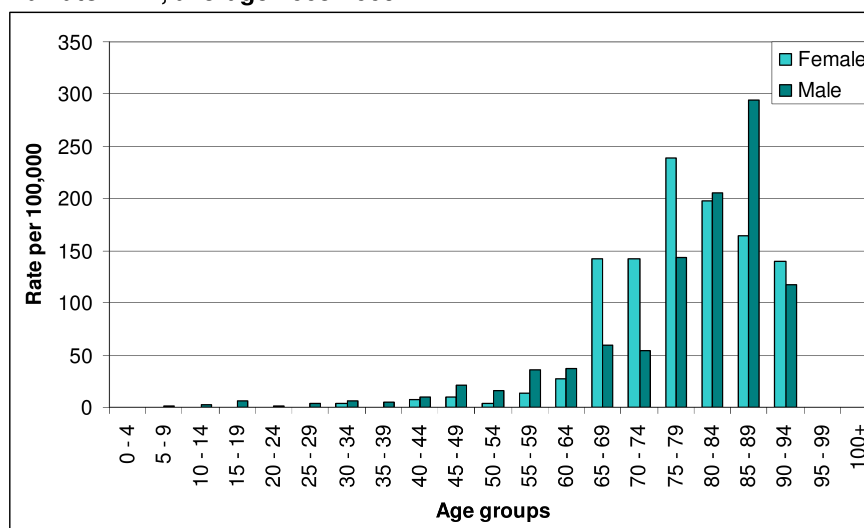
Figure 50: Rate of hospitalisation of macular degeneration, by territorial authority, by age group, Waikato DHB, average 2005-2009



Request No: 000218
Source: Costpro – Waikato DHB hospitalisation database (ICD10 code = H35.3); Statistics New Zealand – Table builder (Age by Sex for 1996, 2001 and 2006 Censuses (2006 only))

Glaucoma can cause low vision in older people. If untreated, glaucoma can cause loss of sight in just a few years. Glaucoma New Zealand reports that 10% of people over 70 years will have glaucoma[78]. Rates of hospitalisation of glaucoma increase dramatically after 65 and are generally more prevalent in females. However, hospitalisation rates for males aged 85-89 years increased significantly in the 2005-09 period (Figure 51).

Figure 51: Rate of hospitalisation of glaucoma, by age group, by gender, Waikato DHB, average 2005-2009

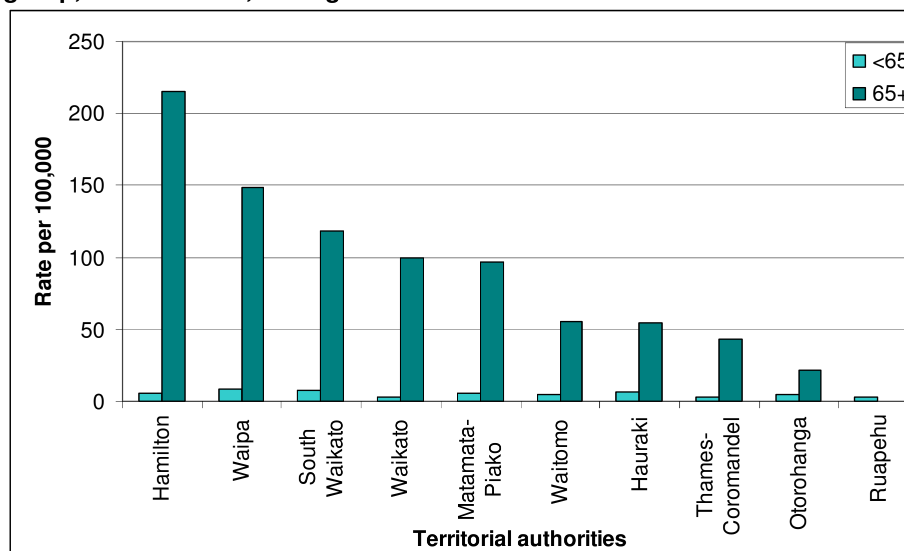


Request No: 000218

Source: Costpro – Waikato DHB hospitalisation database (ICD10 code = H40-H42); Statistics New Zealand – Table builder (Age by Sex for 1996, 2001 and 2006 Censuses (2006 only))

Rates of hospitalisations of glaucoma vary within the TAs across the region as shown in figure 52.

Figure 52: Rate of hospitalisation of glaucoma, by territorial authority, by age group, Waikato DHB, average 2005-2009



Request No: 000218
Source: Costpro – Waikato DHB hospitalisation database (ICD10 code = H40-H42); Statistics New Zealand – Table builder (Age by Sex for 1996, 2001 and 2006 Censuses (2006 only))

Reduced vision is one of the most distressing and difficult complications of diabetes. Currently, more than 200,000 people in New Zealand have diabetes.

Research shows that low vision adversely affects quality of life. There is greater need for community and/or family support, and earlier entry into institutional care is imminent. Low vision is also associated with safety concerns like being unable to read names and directions on medicines, reading important mail like demands for payment e.g. electricity bills or checking oven settings and temperatures to avoid fires.

Currently, eye examinations for those over the age of 65 are not free. Inability to afford eye care can be debilitating and can result in an older person becoming housebound or having to make a premature move into residential care[78].

Falls in the elderly

Falls are common in people 65 years and older and the leading cause of injury in this age group. Pre-existing medical conditions such as osteoporosis and diabetes can increase the likelihood of serious injury, hospitalisation and extended rehabilitation. The occurrence of a fall has also been described as the "gateway" for declining confidence in older people and the beginning of a downward spiral in their involvement, health and general wellbeing.

There are multiple causal pathways for a fall and subsequent admission including polypharmacy, BP[L] management, confusion, loss of balance, and visual impairment resulting in medication errors and tripping. The physical environment can contribute through factors such as loose floor rugs or absent handrails. A reduction in falls would require a multidisciplinary approach including the involvement of the individual, primary care, and the allied health workforce[79].

Physical activity

Improving the physical activity levels of older people can have significant health, economic and social benefits. Health benefits can include a reduction in high blood pressure, cancer, diabetes and obesity. Research indicates that a 10% increase in participation in physical activity corresponds to 600 fewer cardiovascular disease-related deaths per year. Walking or cycling can assist in the reduction of fuel emissions and pollution. The social benefits of group exercise can be very significant for older people increasing opportunities for friendships and combating loneliness and social isolation. Commitment to exercise can also provide a sense of involvement, personal commitment and life purpose. Physically active older people report greater life satisfaction, quality of life and psychological benefits like reduced dependence on others, the ability to complete everyday tasks with ease and a general reduction in stress and anxiety[80].

Sport Waikato provides many opportunities for older people to be physically active. Throughout the region *Tai Chi*, *Sports 4 Seniors*, walking groups, *Upright & Active*, *Sit and be Fit* classes and many more activities are offered to and well attended by older people.

[L] BP – blood pressure

These activities aim to improve overall strength, fitness and balance and promote social interaction and fun. Strength, flexibility, balance and reaction time are considered the most readily modified risk factor for falls which are the leading cause of injury for people aged 65 and over.

Evaluation data of the region's *Upright and Active* programme in 2009 suggests that regular participation in the classes have significantly improved strength and balance. Of the people re-tested (n=107), 83% reported feeling stronger as a result of attending classes weekly and from doing strength and balance classes at home. Ninety-two percent reported noticing an improvement in their balance which made walking up stairs easier and reduced dependence on walkers and walking frames. Coping with daily activities such as shopping, gardening, getting dressed and pottering around were other reported benefits[81].

Participants in the *Sports 4 Seniors* programme in Hamilton reported that sports were a good way to get kaumatua moving, that it helped with asthma and arthritis, general balance and confidence[82].

7.7 Overarching environment

Changes in the age structure of the population and the consequent impact on all aspects of society need to be considered during policy planning and development. There are four main government strategies that assist older people in New Zealand. They are:

- New Zealand Positive Ageing Strategy
- Health of Older People Strategy
- New Zealand Transport Strategy
- New Zealand Housing Strategy

The Waikato DHB also has a number of strategies that assist older people and these include AgeWISE and Mauriora ki nga Kaumatua 2009-2012 Strategies.

7.7.1 The New Zealand Positive Ageing Strategy (2001)

The New Zealand Positive Ageing Strategy (the Strategy) was launched by the Minister for Senior Citizens in 2001 and demonstrates the government's

commitment to older people and positive ageing. Ten goals were developed to support the vision of the Strategy. Goals include:

- Income — *secure and adequate income for older people*
- Health — *equitable, timely, affordable and accessible health services for older people*
- Housing — *affordable and appropriate housing options for older people*
- Transport — *affordable and accessible transport options for older people*
- Ageing in Place — *older people feel safe and secure and can 'age in place' in the community*
- Cultural Diversity — *a range of culturally appropriate services allows choices for older people*
- Rural — *older people living in rural communities are not disadvantaged when accessing services*
- Attitudes — *people of all ages have positive attitudes to ageing and older people*
- Employment — *elimination of ageism and the promotion of flexible working options*
- Opportunities — *increasing opportunities for personal growth and community participation*[35]

The Strategy provides a framework for central and local government agencies to plan for an ageing population. Since the launch of the New Zealand Positive Ageing Strategy in 2001 many policies and programmes have been developed by central and local government to improve the lives of older people.

The Strategy's Annual Report and Action Plan 2007-2010 is coordinated and published by the Office for Senior Citizens (OSC) of the Ministry of Social Development. The OSC supports the Minister for Senior Citizens' advocacy role to promote positive ageing and provides the Minister with advice on older people's policy issues.

7.7.2 The Health of the Older People Strategy (2002)

Good health has two core dimensions; how long people live and the quality of their lives. The primary aim of the Health of the Older People Strategy which was launched in 2002 was to develop an integrated approach to health and disability support services that are responsive to older peoples' varied and changing needs. The Health of Older People Strategy is a key health action in the New Zealand Positive Ageing Strategy Action Plan and has been guided by the aims and principles of the New Zealand Health Strategy, the New Zealand Disability Strategy and the Māori Health Strategy; He Korowai Oranga (cited in Health of Older People Strategy, 2002). The Health of the Older People Strategy directs government's position to keep people at home as long as possible.

Key elements of the integrated approach are:

- Services are older-person focused
- The wellness model is promoted
- Services are coordinated and responsive to needs
- Family, whanau and carer needs are also considered, where appropriate
- There is information sharing and a smooth transition between services
- Planning and funding arrangements support integration.

Prior to the development of the Health of Older People Strategy, health and disability support programmes were planned, funded and provided in a piecemeal fashion that resulted in service gaps and overlaps in some areas and inconsistent access criteria. This resulted in confusion for many older people and carers trying to identify their health and disability support options. For the frail older people the way in which health and disability services are provided is a key component of their quality of life[83].

7.7.3 The New Zealand Transport Strategy 2008

The New Zealand Transport Strategy (NZTS) is a government strategy that sets out a plan for the transport sector in New Zealand to 2040. It is a non-statutory document that will be given effect to by statutory documents such as the Government Policy Statement on Land Transport funding (GPS).

The NZTS is underpinned by the principles of environmental sustainability, economic development, safety and personal security, access and mobility and protecting and promoting public health. The objectives of *access and mobility* are particularly relevant to older people and consistent with the goals of the positive ageing strategy i.e. goal four affordable and accessible transport options for older people.

7.7.4 The New Zealand Housing Strategy

The New Zealand Housing Strategy (NZHS) provides a framework and direction for government activity in the housing sector to 2015. The strategy's programme of action is divided into seven areas, each representing the diverse needs of particular population groups including older people.

Affordable and appropriate housing is important for the well being of older people and the NZHS recognises that the ageing population is one factor in driving changing housing needs. As older people wish to *age in place* housing interventions for older people need to be developed with services that support older people wherever they live.

A housing work programme for older people consistent with goal three *affordable and appropriate housing options for older people* of the Positive Ageing Strategy has been developed by Housing New Zealand Corporation[84].

7.7.5 Waikato DHB Strategies

The AgeWISE Strategy

AgeWISE is the Waikato District Health Board model for integrated services for older people. The AgeWISE Strategy was developed to meet Waikato DHB's objectives in the Health of Older People Strategy. It is a 10-year strategy that aims to ensure integrated health services for older people through a district-wide approach. The core principles of the AgeWISE Strategy are:

- Focus on the Older Person
- Local community action
- A responsive and flexible model
- Culturally appropriate
- Building on from what we have

- Service integration
- Prevention and health promotion focus.

The key role of the AgeWISE Advisory Group is to:

- Advise the Waikato DHB in relation to the Health of Older People regarding:
  - Strategic direction
  - System and service linkages
  - Gaps in service provision
  - The merit of projects, suggestions for health services for older people in relation to the AgeWISE Strategy
  - Best value of any funding allocation to services for older people
  - Addressing health inequalities for older people[2].

Mauriora ki nga kaumatua 2009-2012

The change in the composition of the Māori population will have a significant impact on the health and wellbeing of the Māori community and place greater demand on health services and funding. Mauriora ki nga Kaumatua 2009-2012 provides direction for the Waikato DHB to better meet the needs of Kaumatua. It links to the National Māori Health Strategy 2001 *Korowai Oranga* and the Waikato DHB Māori Health Strategic Plan 2009-2014 *He Hurahi Oranga.*

The four key strategic directions: Māori participation, Māori health workforce development, development of culturally effective health services, and Māori provider development; link to the seven core AgeWISE principles listed under 7.7.5 (Waikato DHB Strategies) above[4].

7.8 Evidence based interventions

Population Health has adopted World Health Organization Guidelines, National Institute of Clinical Excellence (NICE) guidance, Public Health Agency of Canada Guidelines and NZ Guidelines Group as source benchmarks for *Future Focus* public health guidance (i.e. 'Evidence based interventions').

Population Health recognises the limitations that evidence from these sources may have in reflecting the needs of New Zealand populations, settings and cultural values. With this in mind, this guidance will be supplemented with material from the New Zealand Public Health Advisory Committee and Te Rōpū Rangahau Hauora a Eru Pōmare (University of Otago) where possible and appropriate.

Many of the guidelines recommended here offer broad public health advice and will be of interest to a wide range of readers from both medical and non-medical backgrounds working with older people in a variety of settings.

The NZ Guidelines Group has developed a guideline for the assessment and management of people at risk of suicide and within this document have a few pages dedicated to the older people. Specific information can be found by accessing the NZ Guidelines Group website http://www.nzgg.org.nz/guidelines/0005/ACF50E.pdf.

NICE public health guidance *PH2 Four commonly used methods to increase physical activity* aims to help practitioners deliver effective interventions that will increase people's physical activity levels and therefore benefit their health. Details of this public health guidance can be found on www.guidance.nice.org.uk/PH2

NICE public health guidance *PH6 Behaviour Change* is aimed at those responsible for helping people to change their behaviour to improve their heath. This includes policy makers and those working in local authorities, the community and voluntary sectors. The web address is www.guidance.nice.org.uk/PH6.

NICE public health guidance *PH9 Community Engagement* aims to support those working with and involving community decisions on health improvements that affect them. PH9 is for people working both in and out of the health sector who have either a direct or indirect role in and responsibility for community engagement. Details of this document can be found on www.guidance.nice.org.uk/PH9.

NICE public health guidance *PH16 Mental wellbeing and older people.* This guidance is for those involved in promoting the mental wellbeing of older people and focuses on practical support for everyday activities based on occupational therapy principles and methods. It also has applicability for those working with older people and their carers to agree on what kind of support is needed. Details of PH16 can be found on www.nice.org.uk/PH16.

NICE also have a number of published clinical guidelines that could also be of interest to those involved in supporting people with dementia and makes recommendations for the identification, treatment and care of people with dementia and the support of carers (www.nice.org.uk/CG042).

The assessment and prevention of falls in older people is provided in NICE Clinical Guideline 21 *Falls* www.nice.org.uk/CG021NICEguideline .

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