

Chapter Three

Health

What's in this chapter?

Life expectancy

Low birth weight babies

Infant mortality

Teenage parents

Communicable diseases

Access to general practitioners

Mental health

and emotional wellbeing

Self-reported health status

Modifiable risk factors

Recreation and leisure



Introduction

This chapter presents a selection of indicators focusing on the physical and mental health of people in the 12 cities.

Why this is important

The overall physical and mental health of populations is associated with factors such as age, ethnicity, socio-economic status, employment, education and housing, as well as external factors such as living conditions and the environment. Living in a large urban area can impact on our health and sense of wellbeing through access to health services and recreational opportunities. These are key components to quality of life.

Key points

Several indicators and measures show an overall improvement in recent years: higher life expectancy and declines in the rates of infant mortality and low birth weight babies. The majority of residents in the 12 cities identify as being happy, rate their overall health as good and undertake physical activity at least two to four times a week.

There are differences between the cities. For example, North Shore residents have relatively higher life expectancy than residents in other cities. The rate of meningococcal disease among children is declining across the country. Across the 12 cities between 2001 and 2005, Rodney and Waitakere consistently had the lowest rate of general practitioners (GPs) per 100,000 of population.

Significant disparities in health and wellbeing do exist between different groups in the cities and nationally. For example, life expectancy declines markedly as the deprivation of the area of residence increases. There is a nine year difference in life expectancy for males at birth between the least deprived and the most deprived areas of New Zealand society. For women this difference is smaller, but is still more than six and a half years. Given the deprivation index levels in some of our cities, this is a concern.

While death rates for Maori from almost all major causes are continuing to decrease, Maori men and women experience an excess burden of mortality and morbidity throughout life, including higher rates of infant mortality and low birth weight babies. Maori are more likely to

smoke than non-Maori and the rate of live births among females aged 13 to 17 years is considerably higher among Maori and Pacific Islands females than other groups. The health of Pacific Islands people has improved over recent decades but they still experience a heavy burden of avoidable mortality and morbidity. For example, Pacific Islands people have higher rates of meningococcal disease.

Links to other indicators

In New Zealand, research and epidemiological studies consistently highlight the correlation between low socio-economic status (poverty) and poor health. In turn, low socio-economic status in New Zealand is connected to ethnicity. For example, the health status of Maori and Pacific Islands people is demonstrably poorer than for other New Zealanders.

Other elements that affect our health include individual lifestyle factors (smoking, exercise, alcohol consumption), social and community influences (whether we feel empowered to participate in decisions that affect our health and wellbeing) and the quality of our living and working conditions. Government and local authorities can make a positive impact on these factors through good provision of health, leisure and recreation services and programmes.



Life expectancy

3. Health



- Life expectancy has increased overall. Males still have a lower life expectancy than females.
- Life expectancy for Maori is lower than that for non-Maori.

What this is about

Life expectancy is a key indicator of the general health of the population. Improvements in overall life expectancy reflect improvements in social and economic conditions, lifestyle, access to health services and medical advances. This indicator uses estimated life expectancy at birth.

What did we find?

Between 1995 to 1997 and 2000 to 2002, estimated life expectancy at birth increased for both males and females

(79.7 years and 81.1 years respectively). Male life expectancy was lower than female life expectancy across New Zealand and all 12 cities.

There are some differences evident between the cities. Porirua had the lowest life expectancy for both males and females of the 12 cities for both time periods. Those living in the North Shore had the highest life expectancy of the cities at 83.6 years for females and 79.1 years for males. All cities saw an increase in life expectancy between the periods.

Estimated life expectancy at birth (1995 to 1997, 2000 to 2002)

| | 1995 to 1997 | | 2000 to 2002 | |
|-----------------|--------------|--------------|--------------|--------------|
| | Male years | Female years | Male years | Female years |
| Rodney | 76.0 | 80.7 | 78.5 | 82.5 |
| North Shore | 76.9 | 81.6 | 79.1 | 83.6 |
| Waitakere | 74.6 | 80.1 | 77.7 | 81.7 |
| Auckland | 74.8 | 80.1 | 77.7 | 82.4 |
| Manukau | 75.0 | 79.6 | 76.2 | 81.5 |
| Hamilton | 74.7 | 80.2 | 76.7 | 81.9 |
| Tauranga | 75.0 | 80.4 | 76.7 | 82.5 |
| Porirua | 72.2 | 77.2 | 73.2 | 79.7 |
| Hutt | 74.5 | 78.9 | 76.3 | 80.9 |
| Wellington | 75.4 | 81.2 | 78.0 | 82.5 |
| Christchurch | 74.8 | 80.2 | 77.1 | 82.0 |
| Dunedin | 74.3 | 79.9 | 76.6 | 81.3 |
| Total NZ | 74.4 | 76.3 | 79.7 | 81.1 |

Data source: Statistics New Zealand

A 2001 study by the Ministry of Health found a strong association between life expectancy and the level of deprivation in the area where people lived.¹ Life expectancy declined markedly as the deprivation of the area of residence increased.

Life expectancy for Maori was lower than that for non-Maori, with Maori males having a life expectancy of 69.0 years (compared

with 77.2 years for non-Maori) and Maori females 73.2 years (compared with 81.9 years for non-Maori).

While gaps still exist, recent research suggests that the death rates in New Zealand related to ethnic and socio-economic disparities may be diminishing in the periods 1996 to 1999 to 2001 to 2004.²

1 Ministry of Health. (2001). *Life expectancy and small area deprivation in New Zealand*. Wellington.

2 Blakely, T., Tobias, M., Atkinson, J., Yeh, L-C. & Huang, K. (2007). *Tracking Disparity: Trends in ethnic and socioeconomic inequalities in mortality, 1981-2004*. Ministry of Health. Wellington.

Low birth weight babies

- Between 2000 and 2003, the rate of low birth weight babies born in the 12 cities was lower than the rest of New Zealand.
- Maori have a higher rate of low birth weight babies than other ethnicities.

What this is about

Babies with a low birth weight (less than 2,500 grams) are at a greater risk of death within the first month of life. They also have an increased risk of illness, disability and general health problems later in life.

A baby's birth weight is affected by the overall health of the mother, as well as her environment and level of access to prenatal care. Prematurity, multiple pregnancy and restricted foetal growth are possible contributors to a baby's low weight at birth. Low birth weight is associated with foetal and neonatal mortality and morbidity, inhibited growth and cognitive development.³

This indicator measures the average annual number of low birth weight babies per 1,000 live births for the period 2000 to 2003.

What did we find?

There were 9,720 low birth weight babies born in the 12 cities in the period 2000 to 2003, or a rate of 63.5 per 1,000 live births, which was lower than for the rest of New Zealand at 64.2 per 1,000 live births.

Dunedin, Hutt and Porirua had the highest rates of low birth weight babies of the 12 cities, although they had some of the lowest actual numbers of low birth weight babies.

The rate of low birth weight babies is higher among Maori than other ethnicities and high rates were seen among Maori in Dunedin, Porirua and Manukau.

Rate of low birth weight babies per 1,000 live births, by ethnicity (2000 to 2003 combined)⁴

| | Maori | | Pacific Islands | | Other (including NZ European) | | Total | |
|------------------------|--------------|-------------|-----------------|-------------|-------------------------------|-------------|---------------|-------------|
| | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| Rodney | 41 | 52.1 | 10 | 52.4 | 245 | 68.1 | 296 | 63.3 |
| North Shore | 101 | 67.8 | 57 | 65.1 | 559 | 59.7 | 717 | 61.2 |
| Waitakere | 180 | 61.8 | 160 | 48.1 | 566 | 61.6 | 906 | 58.7 |
| Auckland | 263 | 76.9 | 294 | 46.9 | 1,201 | 65.2 | 1,758 | 62.6 |
| Manukau | 502 | 82.1 | 555 | 52.3 | 794 | 65.3 | 1,851 | 64.1 |
| Hamilton | 166 | 64.6 | 24 | 40.4 | 325 | 54.8 | 515 | 56.6 |
| Tauranga | 123 | 69.0 | 16 | 66.7 | 242 | 55.6 | 381 | 59.7 |
| Porirua | 97 | 83.1 | 91 | 62.2 | 151 | 69.5 | 339 | 70.6 |
| Hutt | 145 | 77.4 | 62 | 56.5 | 349 | 73.3 | 556 | 71.9 |
| Wellington | 80 | 58.7 | 47 | 47.1 | 568 | 63.9 | 695 | 61.8 |
| Christchurch | 187 | 69.4 | 66 | 66.9 | 1,034 | 66.5 | 1,287 | 66.9 |
| Dunedin | 57 | 90.0 | 22 | 79.4 | 340 | 70.1 | 419 | 72.7 |
| Total 12 cities | 1,942 | 72.4 | 1,404 | 52.1 | 6,374 | 64.2 | 9,720 | 63.5 |
| Rest of NZ | 2,586 | 73.0 | 323 | 51.3 | 4,679 | 61.1 | 7,588 | 64.2 |
| Total NZ | 4,528 | 72.8 | 1,727 | 52.0 | 11,053 | 62.8 | 17,308 | 63.8 |

Data source: New Zealand Health Information Service

Smoking is one of the most important preventable determinants of low birth weight babies.⁵ In all categories of low birth weight (including very and extremely low) Maori have a higher rate than non-Maori, but non-Maori have recorded the greatest rate increase over time.⁶ The rate of low birth weight babies among Maori may also be linked to socio-economic status, income levels and accessibility to affordable health care, education and housing.

The incidence of low birth weight babies has adverse social and economic consequences. It is estimated that the burden of heart disease and adult diabetes would be reduced by 44.0% and 66.0% respectively if both foetal and infant growth were optimised.⁷

3 World Health Organization and United Nations Children's Fund. (2004). *Low birth weight: Country, regional and global estimates*. UNICEF. New York.

4 As the data presented here for non-Maori and non-Pacific Islands babies is combined it is not possible to ascertain the proportion in the 'Other' category of low birth weight babies that were Asian.

5,6 Ministry of Health. *Food and Nutrition Guidelines for Healthy Pregnant Women - A Background Paper*. www.healthpac.govt.nz/moh.nsf/UnidPrint/MH2728?OpenDocument#Low%20birth%20weight Retrieved July 10, 2007.

7 National Research Centre for Growth and Development. www.growthcentre.ac.nz/ Retrieved July 11, 2007.

Infant mortality

3. Health

- The rate of mortality for Maori and Pacific Islands infants is considerably higher than the rate for the 'Other' ethnic category (which includes New Zealand European infants).

What this is about

Death in infancy is recognised internationally as a sensitive indicator of social and economic conditions and the adequacy of health services. An infant death is defined as a live-born infant dying before the first year of life is completed.⁸

The leading causes of infant mortality are congenital abnormalities and sudden infant death syndrome (SIDS).⁹

In 2001, New Zealand had one of the highest rates of infant mortality in the OECD.¹⁰

What did we find?

In the period 2000 to 2003 there was a total of 802 infant mortalities in the 12 cities, a rate of 5.2 per 1,000 live births. The rate for the rest of New Zealand was 5.9 per 1,000 live births. Manukau and Porirua had higher rates than the other cities at 6.8 and 6.2 per 1,000 live births respectively.

The rate of mortality for Maori and Pacific Islands infants was considerably higher than the rate for the 'Other' ethnic category (which includes New Zealand European infants).

Rate of infant mortality per 1,000 live births, by ethnicity (2000 to 2003 combined)

| | Maori | | Pacific Islands | | Other (including NZ European) | | Total | |
|------------------------|------------|------------|-----------------|------------|-------------------------------|------------|--------------|------------|
| | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| Rodney | 1 | 1.3 | 1 | 5.2 | 14 | 3.8 | 16 | 3.4 |
| North Shore | 16 | 10.7 | 8 | 9.1 | 34 | 3.6 | 58 | 4.9 |
| Waitakere | 16 | 5.5 | 21 | 6.3 | 40 | 4.4 | 77 | 5.0 |
| Auckland | 22 | 6.4 | 53 | 8.4 | 79 | 4.3 | 154 | 5.5 |
| Manukau | 63 | 10.3 | 92 | 8.7 | 42 | 3.5 | 197 | 6.8 |
| Hamilton | 20 | 7.8 | 2 | 3.4 | 19 | 3.2 | 41 | 4.5 |
| Tauranga | 16 | 9.0 | 0 | 0.0 | 18 | 4.1 | 34 | 5.3 |
| Porirua | 9 | 7.7 | 10 | 6.8 | 11 | 5.1 | 30 | 6.2 |
| Hutt | 20 | 10.7 | 9 | 8.2 | 13 | 2.7 | 42 | 5.4 |
| Wellington | 4 | 2.9 | 3 | 3.0 | 29 | 3.3 | 36 | 3.2 |
| Christchurch | 19 | 7.0 | 3 | 3.0 | 71 | 4.6 | 93 | 4.8 |
| Dunedin | 2 | 3.2 | 0 | 0.0 | 22 | 4.5 | 24 | 4.2 |
| Total 12 cities | 208 | 7.8 | 202 | 7.5 | 392 | 3.9 | 802 | 5.2 |
| Rest of NZ | 312 | 8.8 | 37 | 5.9 | 352 | 4.6 | 701 | 5.9 |
| Total NZ | 521 | 8.4 | 239 | 7.2 | 744 | 1.3 | 1,504 | 5.5 |

Data source: New Zealand Health Information Service

8,9 New Zealand Health Information Service. (2006). *Fetal and infant deaths 2002*. Wellington.

10 New Zealand rated 21st of 24 OECD countries. See UNICEF. (2007). *Child poverty in perspective: An overview of child well-being in rich countries, Innocenti Report Card 7*. UNICEF Innocenti Research Centre. Florence.

Teenage parents

- There has been a steady increase in the rate of teen pregnancy in the 12 cities since 2003.
- The rate is lower in our cities than across the rest of New Zealand.

What this is about

Teenage parenthood is regarded as a significant disadvantage in a country that increasingly demands an extended education and in which delayed childbearing, smaller families, two-income households and careers for women are increasingly becoming the norm.¹¹ Women who become mothers at a young age are likely to have reduced educational attainment, limited opportunity to complete tertiary education and reduced participation in paid work.¹²

There are also several physical and mental health risks associated with teenage pregnancy. Some overseas research indicates that pregnant teens are at greater risk of health problems, including anaemia, hypertension, renal disease and depressive disorders.¹³ There are risks of serious health consequences for babies born to mothers still in their teens. Children of teenagers are more likely to have low birth weights and to suffer from associated health problems.¹⁴ Two measures are used to assess this indicator:

- Births to teenage mothers
- Teenage sole parents earning less than \$20,000 per year.

What did we find?

Births to teenage mothers

This measure looks at the rate of live births to females aged between 13 and 17 years, as a rate per 1,000 of all females aged between 13 and 17 years.

The rate of births to mothers aged between 13 and 17 years in New Zealand was 9.7 per 1,000 live births in 2006. This is an increase from the 8.8 per 1,000 live births in 2001.

There has been an increase in the rate seen in the 12 cities since 2001, with 8.3 per 1,000 live births to mothers between the ages of 13 and 17 years in 2006. This rate was lower than that seen in the rest of New Zealand (11.4 per 1,000 live births in 2006). Within the 12 cities, the rate of live births to teenage mothers was highest in Porirua (18.4 per 1,000 births in 2006) and lowest in North Shore (2.4 per 1,000 births).

Number and rate of live births per 1,000 to females aged 13 to 17 years (2001, 2006)

| | 2001 | | 2006 | |
|------------------------|--------------|------------|--------------|-------------|
| | Number | Rate | Number | Rate |
| Rodney | 15 | 5.7 | 22 | 6.4 |
| North Shore | 31 | 4.6 | 18 | 2.4 |
| Waitakere | 60 | 10.2 | 60 | 8.1 |
| Auckland | 62 | 5.7 | 74 | 5.6 |
| Manukau | 136 | 12.1 | 187 | 13.0 |
| Hamilton | 28 | 6.4 | 65 | 13.4 |
| Tauranga | 52 | 16.4 | 50 | 12.9 |
| Porirua | 39 | 21.3 | 39 | 18.4 |
| Hutt | 31 | 9.3 | 27 | 7.0 |
| Wellington | 19 | 4.0 | 19 | 3.5 |
| Christchurch | 62 | 5.8 | 99 | 8.5 |
| Dunedin | 15 | 3.8 | 21 | 5.3 |
| Total 12 cities | 550 | 7.9 | 681 | 8.3 |
| Rest of NZ | 619 | 9.7 | 804 | 11.4 |
| Total NZ | 1,169 | 8.8 | 1,485 | 9.7 |

Data source: Statistics New Zealand

11 UNICEF. (2001). *Innocenti report card. Issue No 3. July 2001*. Innocenti Research Centre: Florence.

12 Dilworth, K. (2000). *Literature Review (Teenage Pregnancy)*. Canadian Institute of Child Health. www.phac-aspc.gc.ca/dca/dea/publications/reduce_teen_pregnancy_section_2_e.html Retrieved 20 July 2007.

13 Combes-Orme, T. (1993). Health effects of adolescent pregnancy: Implications for social workers. *Families in Society. The Journal of Contemporary Human Services*. 74 (6).

14 Federal/Provincial/Territorial Advisory Committee on Population Health. (1999). *Statistical report on the health of Canadians*. Health Canada. Ottawa.

3. Health



This measure shows the percentage of births to females aged 13 to 17 years from 2001 to 2006.

The percentage of births to mothers aged between 13 and 17 years in New Zealand was 2.5% 2006. This is an increase from the 2.1% seen in 2001.

There has been an increase in the percentage in the 12 cities since 2001, with 2.0% in 2006. This was lower than that seen in the rest of New Zealand (3.2% in 2006). Within the 12 cities, the percentage of live births to teenage mothers was highest in Hamilton (3.4% in 2006) and lowest in North Shore and Wellington (both 0.7%).

Percentage of live births to females under 18 years (2001 to 2006)

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|------------------------|------------|------------|------------|------------|------------|------------|
| Rodney | 1.5 | 1.0 | 1.3 | 2.5 | 1.5 | 2.0 |
| North Shore | 1.3 | 0.7 | 0.4 | 0.8 | 0.7 | 0.7 |
| Waitakere | 2.0 | 2.3 | 2.2 | 1.7 | 1.9 | 1.8 |
| Auckland | 1.0 | 1.1 | 1.0 | 1.4 | 1.1 | 1.2 |
| Manukau | 2.4 | 2.3 | 2.5 | 2.4 | 2.7 | 2.9 |
| Hamilton | 2.1 | 2.7 | 1.7 | 2.8 | 3.2 | 3.4 |
| Tauranga | 2.7 | 3.4 | 2.2 | 3.4 | 3.0 | 3.1 |
| Porirua | 2.4 | 2.6 | 2.3 | 2.3 | 2.2 | 2.6 |
| Hutt | 3.3 | 2.7 | 3.3 | 1.8 | 3.0 | 3.0 |
| Wellington | 0.8 | 0.8 | 0.4 | 0.6 | 0.9 | 0.7 |
| Christchurch | 1.5 | 1.8 | 1.9 | 1.8 | 2.0 | 2.2 |
| Dunedin | 1.2 | 2.3 | 2.3 | 1.8 | 1.9 | 2.0 |
| Total 12 cities | 1.7 | 1.8 | 1.7 | 1.8 | 1.9 | 2.0 |
| Rest of NZ | 2.6 | 2.5 | 3.1 | 2.9 | 2.8 | 3.2 |
| Total NZ | 2.1 | 2.1 | 2.3 | 2.3 | 2.3 | 2.5 |

Data source: Statistics New Zealand

Teenage parents continued

Teenage sole parents earning less than \$20,000 per year

Socio-economic status is a key determinant of people's ability to access health care services for themselves and their children. This measure investigates the links between income and young parents. It shows the number of sole parents aged 15 to 19 years who earned less than \$20,000 per year as recorded in the 2006 Census. The table also shows this group as a percentage of all sole parents earning under \$20,000 per year.

There were 1,854 sole parents aged between 15 and 19 years earning under \$20,000 per year in New Zealand in 2006. This represented 3.8% of all sole parents earning under \$20,000 per year. The 12 cities (3.9%) had a higher percentage of teenage sole parents earning under \$20,000 per year than the rest of New Zealand (3.7%).

Of the 12 cities, Auckland (2.7%) had the lowest percentage of sole parents earning under \$20,000, while Porirua had the highest percentage with 6.5%.

Number and percentage of sole parents, aged 15 to 19 years, with personal income less than \$20,000 per year (2006)

| | 2006 | |
|------------------------|--------------|------------|
| | Number | % |
| Rodney | 27 | 4.0 |
| North Shore | 63 | 3.8 |
| Waitakere | 96 | 4.2 |
| Auckland | 111 | 2.7 |
| Manukau | 216 | 4.6 |
| Hamilton | 81 | 3.2 |
| Tauranga | 45 | 4.5 |
| Porirua | 48 | 6.5 |
| Hutt | 57 | 4.7 |
| Wellington | 48 | 4.5 |
| Christchurch | 144 | 3.6 |
| Dunedin | 36 | 3.1 |
| Total 12 cities | 972 | 3.9 |
| Rest of NZ | 861 | 3.7 |
| Total NZ | 1,854 | 3.8 |

Data source: Statistics New Zealand, Census 2006



Communicable diseases

3. Health

- The overall number of cases of meningococcal disease in New Zealand children has declined.
- Nationally there has been a small increase in the rate of notified cases of tuberculosis. The rate is higher for the rest of New Zealand than for the 12 cities.

What this is about

Meningococcal disease and tuberculosis are diseases that can be transmitted through poor and crowded living conditions and are preventable through education and increased awareness of the diseases and how they are transmitted. The severity of the diseases effects can be diminished through timely access to health services.

Notifiable diseases present a threat to public health. This is especially the case in large urban areas where people live in close proximity to each other. There are several notifiable diseases in New Zealand that general health practitioners must report to their local Medical Officer of Health and/or local authority. Two measures of notifiable disease are covered:

- Meningococcal disease in children
- Tuberculosis.

What did we find?

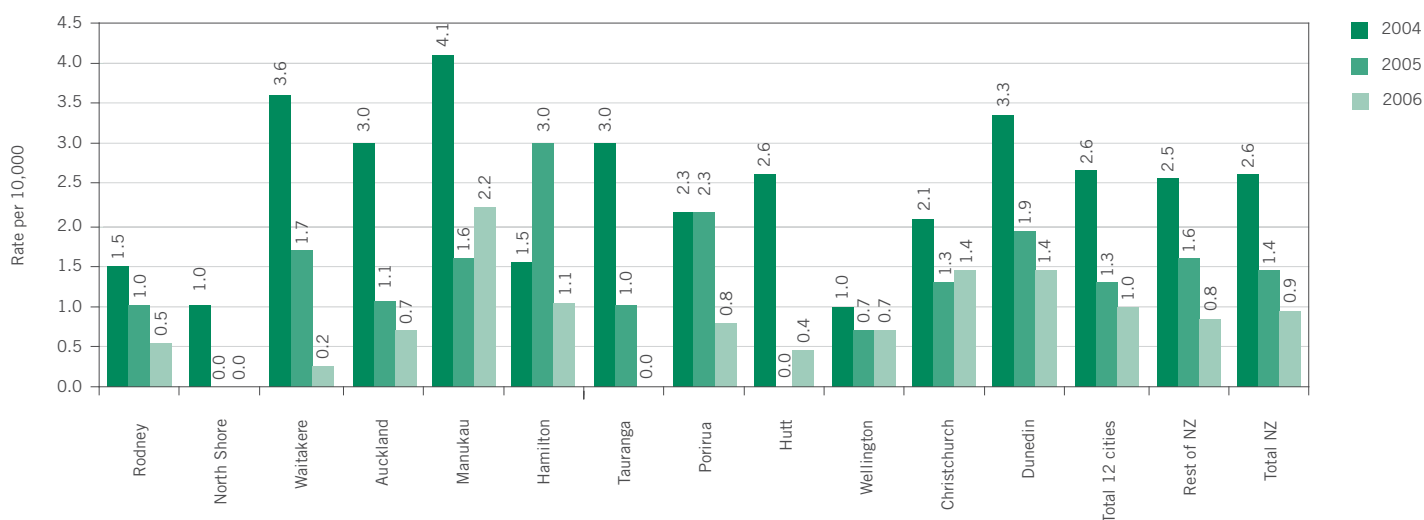
Meningococcal disease in children

Meningococcal disease can cause meningitis (inflammation of the brain lining) and septicaemia (blood poisoning). It is a notifiable disease and can result in severe disability or death.¹⁵ Cases of meningococcal disease in New Zealand since 1991 have been largely caused by the epidemic-strain of serogroup B meningococcal disease. In 2006, there were 160 cases of all serogroups, a rate of 4.3 per 100,000 population. Since the epidemic began in mid-1991 the total number of notified cases (all serogroups) was 6,023. The highest rates of disease occurred in children aged under five years and particularly those younger than one year.

The rate of meningococcal disease among children under the age of 15 declined consistently across the 12 cities and the rest of New Zealand between 2004 and 2006.

In 2006, Manukau had the highest rate of disease of the 12 cities, with 2.2 cases per 10,000 children. However, this is considerably lower than the rates recorded for Manukau in 2002 (7.5 per 10,000) and 2003 (9.3 per 10,000).

Rate of notified cases of meningococcal disease per 10,000 children aged 15 years and under (2004 to 2006)



Data source: Institute for Environmental Sciences and Research

15 Martin, D, Lopez, L, Sexton K. (2007). *The Epidemiology of meningococcal disease in New Zealand in 2006*. Report prepared for the Ministry of Health by the Institute of Environmental Science and Research Limited, Ministry of Health, Wellington.

Communicable diseases continued

Rates of childhood meningococcal disease were highest amongst Pacific Islands children. The combined data for 2002 to 2004 shows the rate amongst Pacific Islands children was 26.3 per 10,000 children compared with rates of 17.8 per 10,000 for Maori and 4.1 per 10,000 for New Zealand European children.

In 2004, the Meningococcal B Immunisation Programme started. This was a nationwide vaccination campaign with a serogroup B meningococcal vaccine against the epidemic strain of the disease. Since the introduction of the vaccine (MeNZB™) the percentage of confirmed cases with the epidemic strain type has fallen significantly.¹⁶

Rate of meningococcal disease per 10,000 children aged 15 years and under, by ethnicity (2004 to 2006 combined)

| | NZ European | | Maori | | Pacific Islands | | Other | |
|------------------------|-------------|------------|------------|------------|-----------------|-------------|----------|------------|
| | Number | Rate | Number | Rate | Number | Rate | Number | Rate |
| Rodney | 4 | 2.6 | 0 | 0.0 | 1 | 18.8 | 1 | 8.7 |
| North Shore | 2 | 0.7 | 1 | 2.5 | 0 | 0.0 | 1 | 1.4 |
| Waitakere | 7 | 2.6 | 6 | 7.3 | 9 | 10.1 | 1 | 1.5 |
| Auckland | 8 | 2.0 | 5 | 5.5 | 21 | 12.4 | 1 | 0.5 |
| Manukau | 5 | 1.6 | 23 | 13.2 | 30 | 10.4 | 0 | 0.0 |
| Hamilton | 3 | 1.6 | 11 | 13.5 | 1 | 5.9 | 1 | 3.3 |
| Tauranga | 2 | 1.3 | 5 | 9.2 | 1 | 15.8 | 0 | 0.0 |
| Porirua | 1 | 1.3 | 4 | 10.7 | 2 | 4.2 | 0 | 0.0 |
| Hutt | 1 | 0.6 | 1 | 1.8 | 3 | 9.0 | 2 | 8.3 |
| Wellington | 3 | 1.3 | 3 | 8.7 | 0 | 0.0 | 1 | 1.8 |
| Christchurch | 17 | 3.2 | 6 | 7.4 | 7 | 24.4 | 0 | 0.0 |
| Dunedin | 7 | 3.7 | 6 | 71.7 | 1 | 11.9 | 0 | 0.0 |
| Total 12 cities | 60 | 2.0 | 71 | 9.3 | 76 | 10.2 | 8 | 1.2 |
| Rest of NZ | 72 | 2.3 | 115 | 9.7 | 12 | 7.6 | 1 | 0.4 |
| Total NZ | 132 | 2.1 | 186 | 9.5 | 88 | 9.8 | 9 | 1.0 |

Data source: Institute for Environmental Sciences and Research



¹⁶ Martin, D., Lopez, L., Sexton K. (2007). *The Epidemiology of meningococcal disease in New Zealand in 2006*. Report prepared for the Ministry of Health by the Institute of Environmental Science and Research Limited. Ministry of Health. Wellington.

3. Health



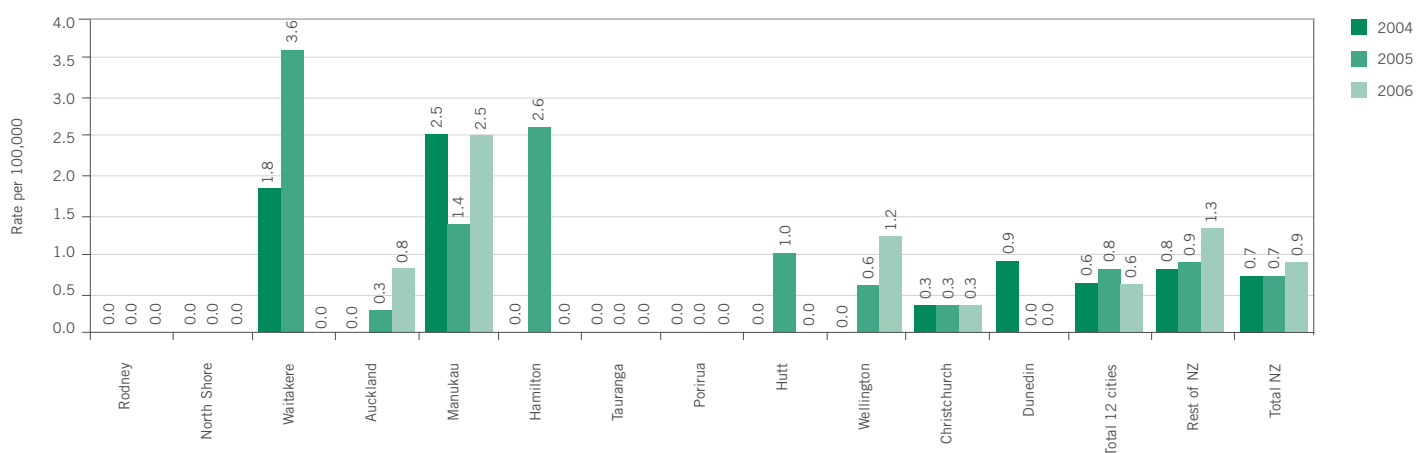
Tuberculosis

This measure shows the rate of tuberculosis (TB) per 100,000 of population for the period 2004 to 2006.

period was higher for the rest of New Zealand than for the 12 cities. While many cities had no recorded cases of TB over this period, Manukau had 18 cases.

Nationally, there was a small increase in the rate of notified cases per 100,000 people from 2004 to 2006. The rate over this

Rate of notified cases of tuberculosis per 100,000 population (2004 to 2006)



Data source: Institute for Environmental Sciences and Research

Nationally, Maori and Pacific Islands people had the majority of cases of TB. Maori living in the 12 cities had a lower incidence of TB than Maori living in the rest of New Zealand.

Number of notified cases of tuberculosis, by ethnicity (2004 to 2006 combined)

| | NZ European | Maori | Pacific Islands | Other | Total |
|------------------------|-------------|-----------|-----------------|-----------|-----------|
| Rodney | 0 | 0 | 0 | 0 | 0 |
| North Shore | 0 | 0 | 0 | 0 | 0 |
| Waitakere | 0 | 0 | 9 | 0 | 3 |
| Auckland | 0 | 0 | 1 | 3 | 4 |
| Manukau | 0 | 3 | 11 | 4 | 18 |
| Hamilton | 1 | 0 | 0 | 2 | 3 |
| Tauranga | 0 | 0 | 0 | 0 | 0 |
| Porirua | 0 | 0 | 0 | 0 | 0 |
| Hutt | 0 | 1 | 0 | 0 | 1 |
| Wellington | 0 | 0 | 0 | 3 | 3 |
| Christchurch | 0 | 0 | 0 | 3 | 3 |
| Dunedin | 0 | 1 | 0 | 0 | 1 |
| Total 12 cities | 1 | 5 | 21 | 15 | 42 |
| Rest of NZ | 3 | 26 | 11 | 7 | 47 |
| Total NZ | 4 | 31 | 32 | 22 | 89 |

Data source: Institute for Environmental Sciences and Research

Access to general practitioners

- Nationally, there has been a decline in the rate of general practitioners per 100,000 population.
- Auckland has the highest rate of general practitioners, while Rodney has the lowest.
- Most residents in the 12 cities do not experience any barriers when accessing general practitioners.

What this is about

General practitioners (GPs) are part of the front line of primary health care provision. Accessibility to a GP is an important issue in both treatment and prevention of poor health. The number of GPs per city may reflect accessibility to health services.

A lower rate of GPs per head of population may result in difficulty accessing primary health care and is associated with higher rates of hospitalisation. Two measures are used to examine access to general practitioners:

- Rate of general practitioners per 100,000 population
- Barriers to accessing a general practitioner.

What did we find?

Rate of general practitioners per 100,000 population

Nationally, there was a decline in the rate of GPs per 100,000 population from 2001 to 2005.¹⁷

The rates of GPs were consistently higher in the 12 cities than in the rest of New Zealand. In 2005 there were 76.8 GPs per 100,000 population in the 12 cities, compared with 64.3 per 100,000 in the rest of New Zealand.

Differences were apparent between the cities. Auckland had the highest rate (90.7 per 100,000) in 2005, while Rodney had the lowest rate (48.2 per 100,000).

There was a decline in the total number of GPs in New Zealand from 3,037 in 2001 to 2,924 in 2005. Nearly all of this decline (-113 GPs) was outside of the 12 cities. Manukau and North Shore had the largest increase in GP numbers (18 GPs each), while Dunedin (-13 GPs) and Porirua (-10 GPs) had the largest decrease.

Rate of GPs per 100,000 population (2001 to 2005)

| | 2001 | 2002 | 2003 | 2004 | 2005 |
|------------------------|-------------|-------------|-------------|-------------|-------------|
| Rodney | 66.2 | 65.4 | 63.0 | 55.4 | 48.2 |
| North Shore | 71.6 | 76.9 | 73.2 | 72.1 | 74.0 |
| Waitakere | 57.3 | 54.8 | 59.3 | 56.0 | 51.6 |
| Auckland | 100.8 | 88.4 | 96.4 | 96.0 | 90.7 |
| Manukau | 60.0 | 63.5 | 60.8 | 61.9 | 59.2 |
| Hamilton | 79.5 | 88.5 | 91.7 | 85.8 | 76.1 |
| Tauranga | 91.1 | 83.7 | 88.3 | 82.8 | 89.5 |
| Porirua | 74.7 | 80.2 | 83.5 | 85.0 | 53.5 |
| Hutt | 63.6 | 65.3 | 65.1 | 62.7 | 56.7 |
| Wellington | 98.8 | 81.3 | 87.2 | 82.7 | 92.4 |
| Christchurch | 104.2 | 98.8 | 95.9 | 93.6 | 94.9 |
| Dunedin | 94.7 | 84.8 | 97.4 | 97.6 | 81.7 |
| Total 12 cities | 83.5 | 79.5 | 81.7 | 79.7 | 76.8 |
| Rest of NZ | 72.0 | 67.4 | 66.6 | 67.2 | 64.3 |
| Total NZ | 78.3 | 74.1 | 75.0 | 74.2 | 71.3 |

Data source: Medical Council of New Zealand, New Zealand Health Information Service

¹⁷ Rates calculated using sub-national population estimates as at years ending 30 June.

3. Health

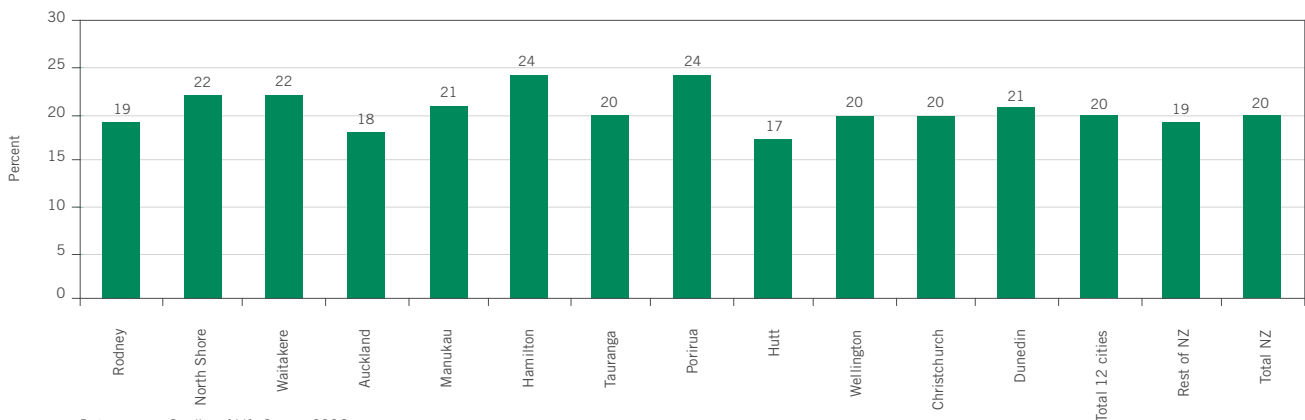


Barriers to accessing a general practitioner

This measure is based on 2006 Quality of Life Survey data. The majority (80.0%) of New Zealand residents experienced no barriers when going to visit their GP. Within the 12 cities, the residents more likely to state that they had wanted to go

to a GP but had not included those living in Hamilton and Porirua, those aged between 15 and 49 years, Maori or Pacific Islands people and females. Barriers were also present for those on an income between \$20,000 and \$40,000 per year.

Percentage of residents who stated that there had been a time in the previous 12 months when they wanted to go to a GP but did not (2006)



Data source: Quality of Life Survey 2006

The most frequently mentioned barrier for New Zealand residents (48.0%) was the cost of visiting a GP. Another frequently mentioned barrier (21.0%) was that the residents were too busy or could not take time off work. Similar barriers existed in the 12 cities. Those outside the 12 cities were less likely to have mentioned

cost or work issues as barriers when compared with the 12 cities combined and New Zealand overall.

A higher percentage of residents living in Waitakere (63.0%) and North Shore (62.0%) mentioned cost as a barrier compared with residents in the other cities.

Mental health and emotional wellbeing

- The rate of death by suicide is lower in the 12 cities than the rest of New Zealand, while rates of hospitalisation for attempted suicide are higher in the 12 cities.
- The majority of residents in our cities are satisfied with their life in general.
- One in ten residents in our cities have experienced some form of stress in the previous 12 months either most or all of the time.

What this is about

The term 'mental health' has long been considered to mean more than the absence of mental illness. It is a broad term and has been described in the New Zealand context as that which nurtures spirituality, family, psychological/mental and emotional wellbeing, religion, physiology, environment, social responsibility and self.¹⁸

Mental health problems are psychological and emotional reactions and behaviours that are outside the usual range experienced by people in their daily lives. These reactions and behaviours cause distress to those experiencing them and to others (such as bereavement reactions, anxiety, anxiety over life events and problems associated with substance abuse).¹⁹

This can be distinct from 'mental illness' and 'mental disorders', which cover a broad range of clinically diagnosed problems and include mood disorders, schizophrenia and other psychotic disorders, anxiety disorders, substance abuse disorders, conduct disorders, dementias and personality disorders.

Mental disorders are common in New Zealand with 46.6% of the population predicted to have a disorder at some time in their lives. According to the New Zealand Mental Health Survey (2006), 39.5% of New Zealanders have already experienced a mental disorder, with 20.7% having a disorder in the past 12 months.²⁰

Mental health and emotional wellbeing is difficult to measure. The measures used to assess this indicator are:

- Rate of death by suicide
- Rate of hospitalisations for intentional self-harm
- Residents' rating of how happy they are
- Residents' satisfaction with their own lives in general
- Residents' rating of experiencing negative stress over the past 12 months
- Number and rate per 10,000 of gambler and significant other clients to the national Gambling Hotline
- Alcohol
- Other drugs.

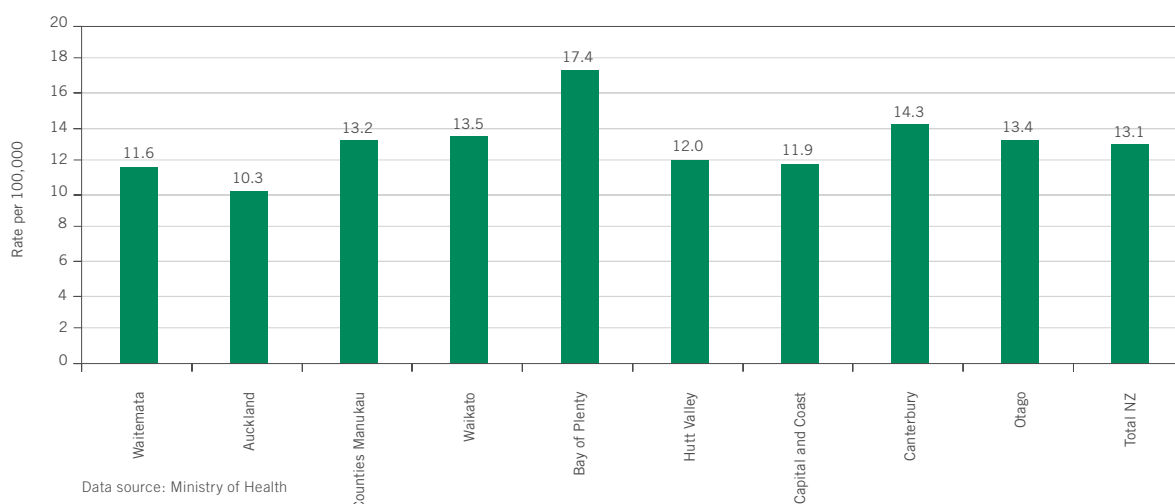
What did we find?

Rate of death by suicide

This measure shows the number of deaths from suicide as a rate per 100,000 of the total population from 2002 to 2004.²¹ Because suicide is, in statistical terms, an uncommon event and rates can vary immensely from year to year, it is useful to look at the total pattern of suicide rates over several years.

Nationally, the rate of death by suicide was 13.1 per 100,000.²² There was a wide range in the numbers of suicides across the District Health Boards (DHBs), with Bay of Plenty DHB having the highest rate (17.4 per 100,000) and Auckland DHB having the lowest rate (10.3 per 100,000).

Age-standardised suicide death rates per 100,000 population, by district health board (2002 to 2004 combined)



18,19 Ellis, P. & Collings, S. (Eds.). (1997). *Ministry of Health. Mental health in New Zealand from a public health perspective.* www.moh.govt.nz/moh.nsf/pagesmh/1058?Open Retrieved 15 June 2007.

20 Oakley Browne, M.A., Wells, J.E. & Scott, K.M (Eds.). (2006). *Te Rau Hinengaro: The New Zealand mental health survey.* Ministry of Health. Wellington.

21 Deaths from the years 2002 to 2004 were summed to provide sufficient numbers to calculate robust results and to protect confidentiality.

22 Note that the rates per 100,000 are age-standardised to the World Health Organisation standard population.

3. Health



Nationally, males accounted for 75.2% of all suicides between 2002 and 2004. This pattern is also seen in the DHBs containing the 12 cities.

Suicide deaths and age-standardised rates per 100,000, by district health board and sex (2002 to 2004 combined)

| | Male | | Female | |
|-------------------|--------------|-------------|------------|------------|
| | Number | Rate | Number | Rate |
| Waitemata | 117 | 18.6 | 33 | 5.2 |
| Auckland | 80 | 13.5 | 46 | 7.4 |
| Counties Manukau | 95 | 18.4 | 46 | 8.3 |
| Waikato | 98 | 22.6 | 21 | 4.7 |
| Bay of Plenty | 69 | 28.0 | 20 | 7.6 |
| Hutt Valley | 33 | 17.9 | 11 | 6.5 |
| Capital and Coast | 72 | 19.7 | 19 | 4.9 |
| Canterbury | 145 | 22.3 | 45 | 6.7 |
| Otago | 47 | 18.7 | 21 | 8.5 |
| Total NZ | 1,103 | 20.1 | 363 | 6.6 |

Data source: Ministry of Health

Nationally, the average rate of suicide for Maori was higher than that for non-Maori with the Maori male and female rates 26.9 and 7.9 per 100,000 respectively compared to 18.4 and 5.9 deaths per 100,000 for non-Maori males and females respectively.²³

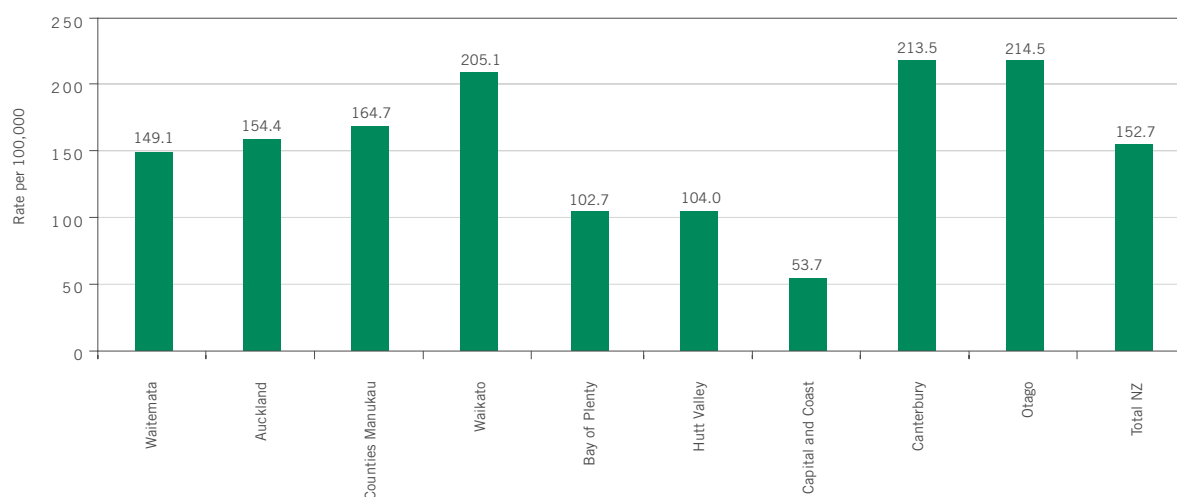
Nationally in 2004, those females aged 15 to 19 years had the highest suicide rates among females and males over 85 years had the highest rate among all males.

Rate of hospitalisations for intentional self-harm

This measure shows the number of hospitalisations for attempted suicide as a rate per 100,000 of the total population from 2002 to 2004. The rate of hospitalisations for attempted suicide was higher in the 12 cities (242.4 per 100,000) compared with total New Zealand (210.2 per 100,000) and the rest of New Zealand (170.1 per 100,000).

Nationally, the rate of hospitalisations for intentional self-harm was 152.7 per 100,000.²⁴ There was a wide range in the numbers of hospitalisations across the DHBs, with Otago DHB having the highest rate (214.5 per 100,000) and Capital and Coast DHB having the lowest rate (53.7 per 100,000).

Age-standardised intentional self-harm hospitalisations per 100,000 population, by district health board (2005)



Data source: Ministry of Health

23 Ministry of Health. (2006). Public Health Intelligence Monitoring Report No.11 – Suicide Facts 2004-2005 data. Wellington.

24 Note that the rates per 100,000 are age-standardised to the World Health Organisation standard population.

Mental health and emotional wellbeing continued

In 2005, there were more females hospitalised for intentional self-harm nationally (3,358) than males (1,575). This pattern is also seen in the DHBs containing the 12 cities.

Nationally, the hospitalisation rate for Maori was nearly one and a half times the non-Maori rate (206.4 per 100,000 compared with 142.5 per 100,000).

In 2005, females aged 15 to 19 years had the highest hospitalisation rates across New Zealand among all females and males aged between 20 and 24 years had the highest rate among all males.

Intentional self-harm hospitalisations and age-standardised rates per 100,000, by district health board and sex (2005)

| | Male | | Female | |
|-------------------|--------------|--------------|--------------|--------------|
| | Number | Rate | Number | Rate |
| Waitemata | 187 | 98.3 | 409 | 198.6 |
| Auckland | 200 | 109.9 | 363 | 197.6 |
| Counties Manukau | 200 | 120.1 | 365 | 207.9 |
| Waikato | 163 | 131.0 | 368 | 276.3 |
| Bay of Plenty | 58 | 80.9 | 91 | 123.3 |
| Hutt Valley | 33 | 65.3 | 81 | 141.9 |
| Capital and Coast | 27 | 23.8 | 97 | 81.6 |
| Canterbury | 217 | 119.7 | 584 | 304.8 |
| Otago | 95 | 137.9 | 198 | 285.9 |
| Total NZ | 1,575 | 100.5 | 3,358 | 203.1 |

Data source: Ministry of Health

Residents' rating of how happy they are

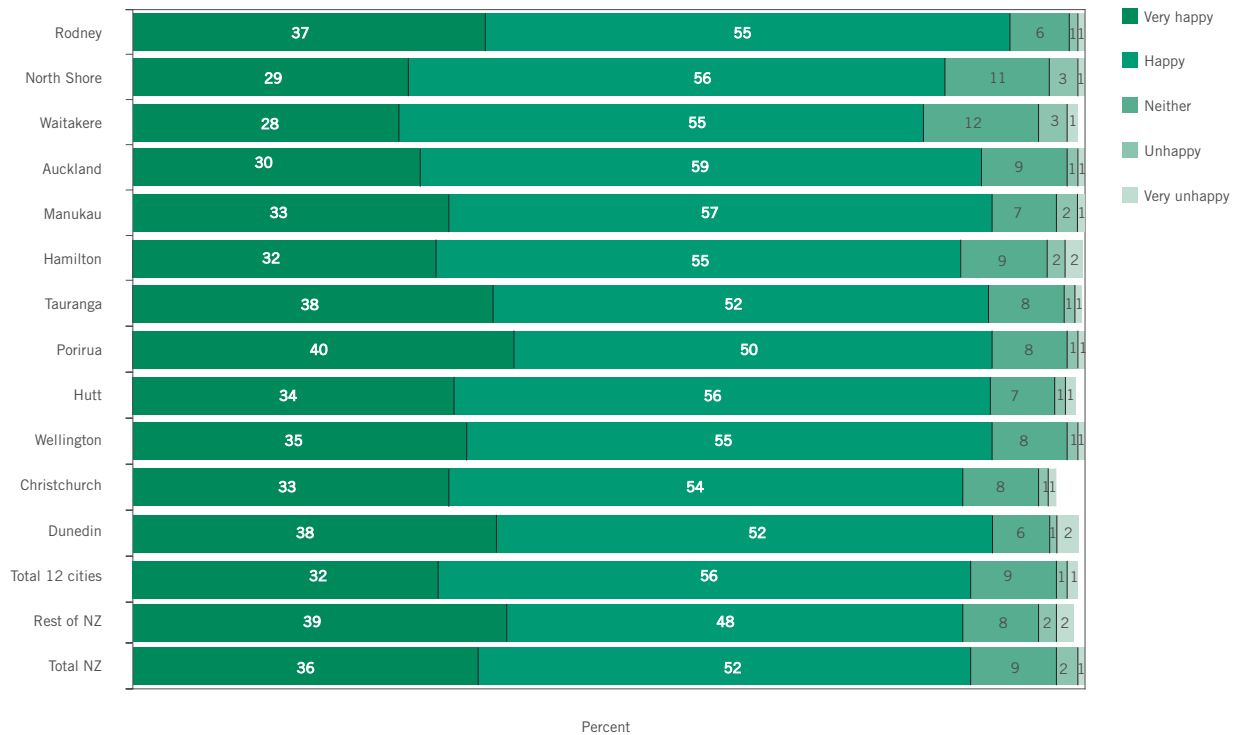
This measure is based on 2006 Quality of Life Survey data. Nationally, 88.0% of New Zealand residents felt they had a positive emotional wellbeing, responding with a rating of either 'very happy' (36.0%) or 'happy' (52.0%). No differences were seen between the 12 cities ratings and those in the rest of New Zealand.

However, differences were apparent across the 12 cities, with those living in Rodney having the highest rating of happiness (92.0%), while Waitakere (83.0%) and North Shore (85.0%) residents had the lowest ratings of happiness.

Across age groups at the national level, the majority (between 87.0% and 89.0%) rated their happiness positively. For the 12 cities, those aged 25 to 49 years were less likely to have rated their happiness positively (87.0%) than other age groups. There were no noticeable differences in ratings of happiness between ethnicities.

3. Health

Residents' rating of their happiness (2006)



Data source: Quality of Life Survey 2006

Recent research suggests that the characteristics of cities themselves may also have an influence on wellbeing. That is, in addition to there being characteristics of individuals that influence ratings of happiness and wellbeing, differences have also been found between cities themselves.²⁵

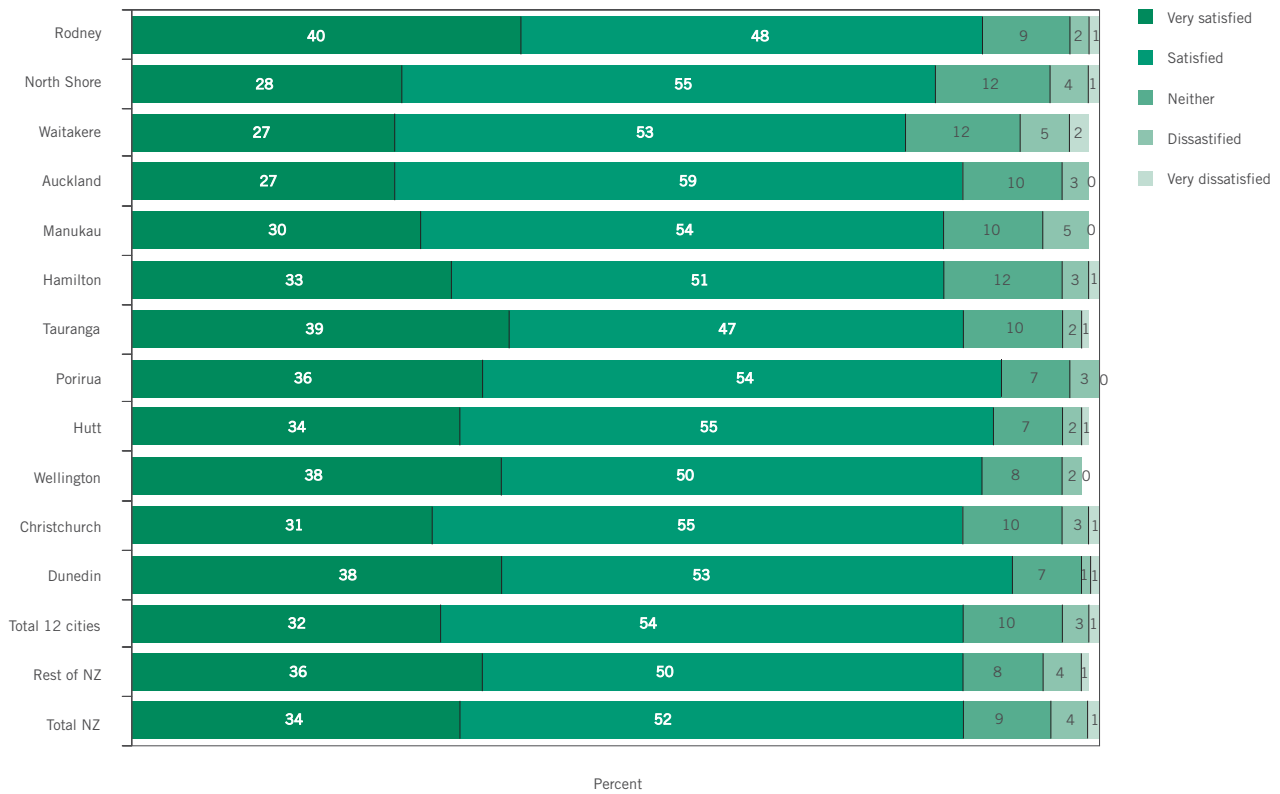
Residents' satisfaction with their own lives in general

This measure is based on 2006 Quality of Life Survey data. The majority (86.0%) of New Zealand residents felt they were satisfied with their life in general. Of the 12 cities, Dunedin had the highest percentage of residents who rated their satisfaction with life positively, while Waitakere and North Shore residents had the lowest percentage of life satisfaction.

25 Morrison, P.S. (2006). *Subjective wellbeing and the city*. School of Geography, Environment and Earth Sciences, Victoria University of Wellington.

Mental health and emotional wellbeing continued

Residents' rating of life satisfaction (2006)



Data source: Quality of Life Survey 2006

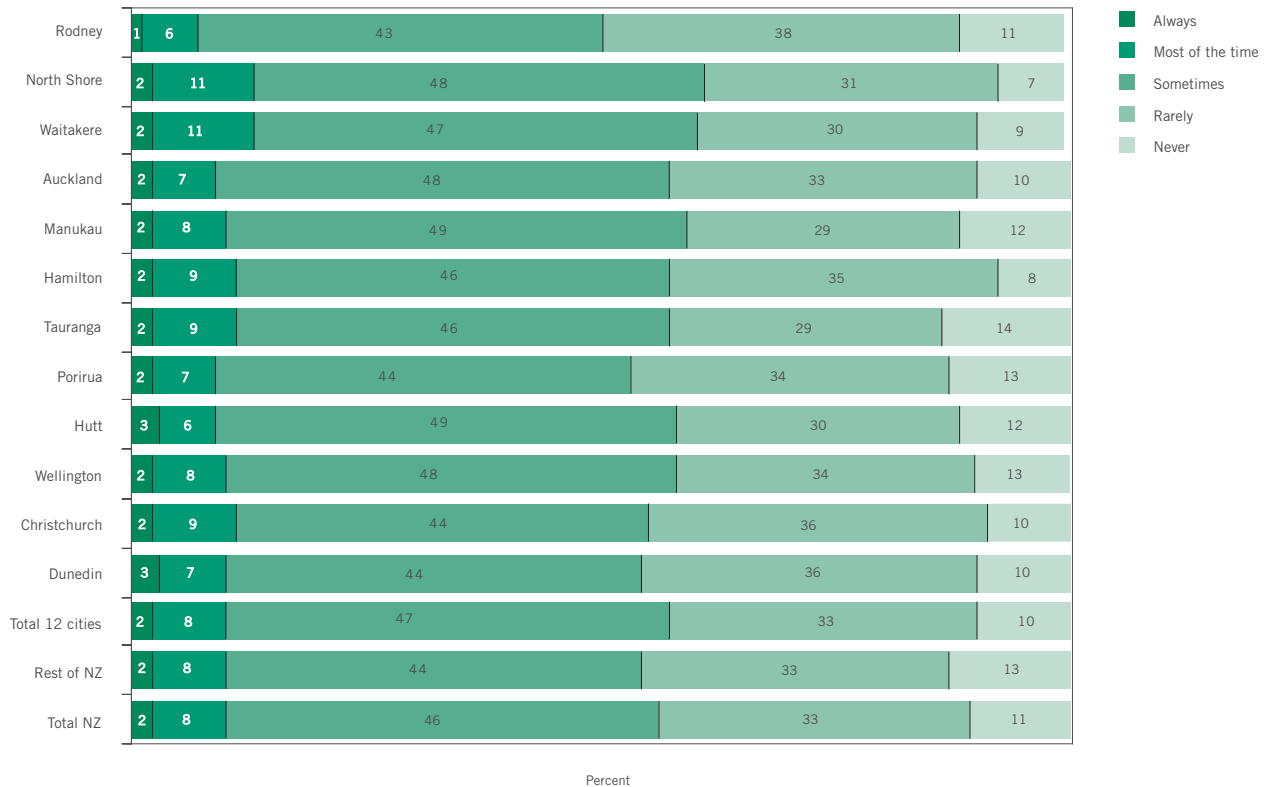
Residents' rating of experiencing negative stress over the last 12 months

This measure is based on 2006 Quality of Life Survey data. Ten percent of New Zealand residents indicated they had experienced stress in the previous 12 months which had had a negative effect on them most or all of the time. The same percentages were found in the 12 cities and the rest of New Zealand.

Residents of North Shore (13.0%) and Waitakere (13.0%) were more likely to have reported experiencing negative stress. Rodney and Porirua residents had the lowest reported experience of negative stress (8.0%).

3. Health

Residents' frequency of experiencing negative stress (2006)



Data source: Quality of Life Survey 2006

Number and rate per 10,000 of gambler and significant other clients to the national Gambling Hotline

Addictions are an important mental health issue that have flow-on effects on all aspects of an individual's life, from their relationships with family and friends to their ability to find or maintain work.

There was a decline in the overall number of gambler and significant other new clients received by the Gambling Hotline between 2004 and 2006.

The rate of new clients per 10,000 population was higher for the 12 cities (8.4 in 2006) than the rest of New Zealand (5.9 in 2006). Geographically, Auckland was the source of the highest rate of new clients in 2006. Of the 12 cities, Rodney had the lowest rate (3.4 per 10,000) in 2006.

Mental health and emotional wellbeing continued

Number and rate per 10,000 of new client calls to the gambling hotline, by origin of contact (2004 to 2006)

| | 2004 | | 2005 | | 2006 | |
|------------------------|-------------------|-------------|-------------------|------------|-------------------|------------|
| | Number of clients | Rate | Number of clients | Rate | Number of clients | Rate |
| Rodney | 42 | 4.8 | 23 | 2.6 | 31 | 3.4 |
| North Shore | 151 | 7.2 | 96 | 4.5 | 101 | 4.7 |
| Waitakere | 157 | 8.3 | 98 | 5.1 | 71 | 3.6 |
| Auckland | 624 | 14.8 | 401 | 9.4 | 388 | 9.0 |
| Manukau | 253 | 7.8 | 188 | 5.6 | 205 | 6.0 |
| Hamilton | 118 | 9.1 | 97 | 7.4 | 83 | 6.2 |
| Tauranga | 129 | 12.7 | 76 | 7.3 | 80 | 7.5 |
| Porirua | 39 | 7.7 | 36 | 7.1 | 20 | 3.9 |
| Hutt | 81 | 8.1 | 76 | 7.6 | 52 | 5.2 |
| Wellington | 286 | 15.7 | 158 | 7.5 | 140 | 7.8 |
| Christchurch | 501 | 14.6 | 85 | 6.9 | 65 | 5.3 |
| Dunedin | 112 | 9.2 | 85 | 6.9 | 65 | 5.3 |
| Total 12 cities | 2,493 | 13.9 | 1,600 | 8.9 | 1,517 | 8.4 |
| Rest of NZ | 1,448 | 6.4 | 961 | 4.2 | 912 | 3.9 |
| Total NZ | 3,941 | 9.7 | 2,561 | 6.2 | 2,429 | 5.9 |

Data source: Ministry of Health

Alcohol

Abuse and misuse of alcohol can cause long term damage to the body and in some cases death. Alcohol is also a significant risk factor for some types of cancer, high blood pressure, haemorrhagic strokes and cardiac conditions such as cardiomyopathy.²⁶ Alcohol also has effects beyond the direct medical consequences. It contributes to death and injury on the roads, drowning, suicide, violent offending, some mental health disorders and sexual health problems.²⁷ Information on alcohol addiction and misuse was not available for the 12 cities.

Figures from the Ministry of Health indicate that from 1988 to 1996 between 130 to 150 deaths each year were associated with alcohol-related conditions.²⁸ In addition, alcohol-related hospitalisations are estimated to cost New Zealand more than \$74 million each year.

A 2007 report from the Ministry of Health showed different drinking patterns across different age groups. People aged 18 to 24 years did not consume alcohol as frequently as people aged 55 to 66 years but the former were more likely to consume large amounts of alcohol during a typical drinking occasion.²⁹ Males were more likely to drink alcohol four or more times a week on average and to consume larger amounts of alcohol than females.³⁰ Non-Maori were more likely to consume alcohol more frequently than Maori. However, Maori were more likely to consume a larger amount of alcohol during a typical drinking occasion.³¹

Other drugs

Other drugs present in society that can have a negative health effect include cannabis and drugs administered through injection. Long term sustained and heavy cannabis use puts users at risk of developing respiratory diseases including the possibility of cancers, subtle cognitive impairment, psychotic symptoms among vulnerable individuals and drug dependency.³² Drug users who administer through injection are at risk of overdose and of contracting blood-borne diseases and of participating in crime to support their drug dependence. Nationally, about 45.0% of all identified injecting drug users are infected with hepatitis C.³³

There has been recent media and public attention around the increased production and availability of methamphetamine (commonly known as 'P') in New Zealand. Methamphetamine is often smoked and is a highly addictive substance. Users quickly develop a tolerance to the drug and in the long term increased doses are required to achieve the same high. This increases the risks of over-dose. Some long term effects of methamphetamine include anxiety, tension and depression, a violent or aggressive personality, psychosis, memory loss, susceptibility to infection and disease and malnutrition.³⁴

Information on drug addiction and misuse was not available for the 12 cities.

26,27,28 Ministry of Health. (2007). *Alcohol in New Zealand*.

29,30,31 Ministry of Health. (2007). *Alcohol Use in New Zealand: Analysis of the 2004 New Zealand Health Behaviours Survey – Alcohol Use*.

32,33 Ministry of Health. (2001). *DHB Toolkit: Minimising Alcohol and Other Drug Related Harm*.

34 New Zealand Drug Foundation. (2007). *Methamphetamine/Amphetamines*.

Self-reported health status

3. Health

- Tauranga residents rate their health most positively.
- Those living in Auckland and Waitakere rate their health the least positively.

What this is about

Self-reported health is a global measure of health. It is subjective and complements the findings from more objective and direct health outcome measures.

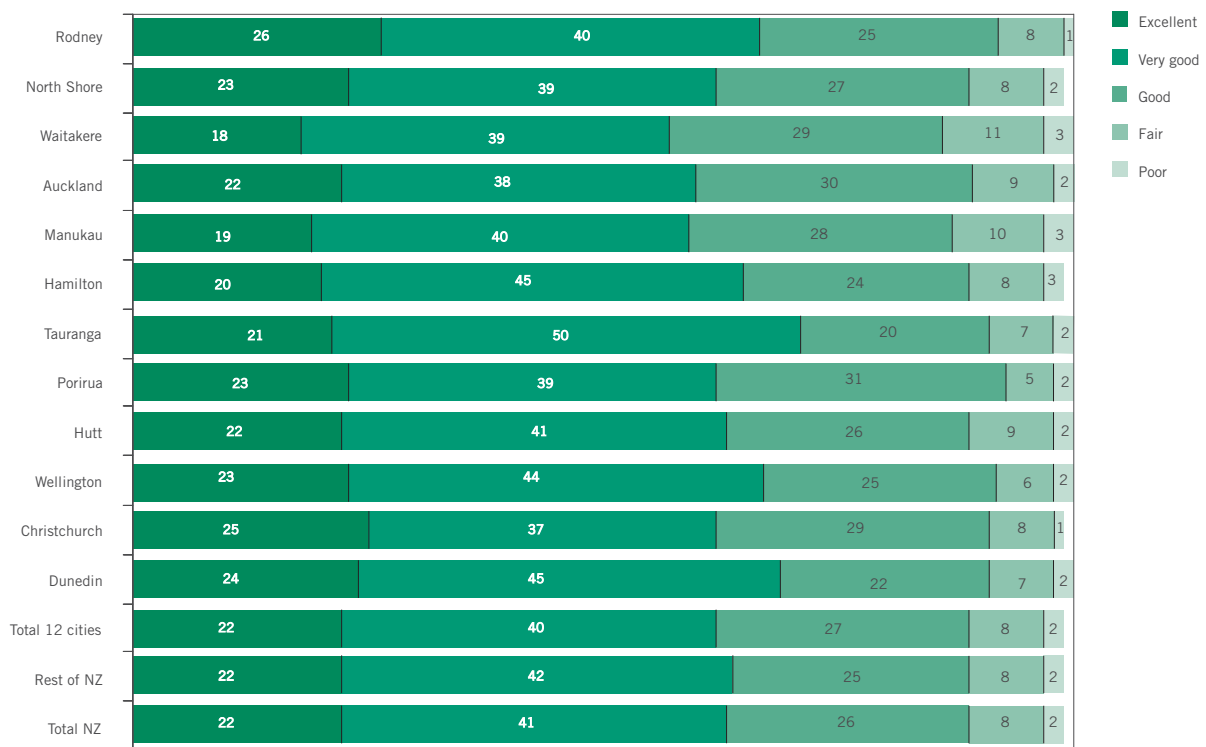
What did we find?

This indicator is based on 2006 Quality of Life Survey data. The majority (90.0%) of New Zealand residents viewed their health positively and similar rates were found in the 12 cities combined and the rest of New Zealand.

There were differences between our cities, with Tauranga residents (71.0%) rating their health most positively, while Auckland (60.0%) and Waitakere (57.0%) residents rated their health the least positively.

Nationally, those aged between 15 to 24 years were more likely to rate their overall health positively (66.0%) compared with other age groups. New Zealand Europeans rated their overall health more positively (65.0%) than other ethnic groups at both the national and 12 cities level. Pacific Islands and Asian/Indian residents rated their overall health lower than other ethnic groups both nationally (55.0% and 49.0% respectively) and at the 12 cities level (57.0% and 47.0% respectively).

Residents' rating of own health (2006)



Data source: Quality of Life Survey 2006

Modifiable risk factors

- More residents living outside the 12 cities undertake physical activity on five or more days a week than those in the 12 cities.
- The most prevalent type of diabetes is Type Two, which affects approximately 220,000 people in New Zealand and accounts for the majority of all diabetes cases.
- A fifth of adults over the age of 15 are obese and the level is increasing.

What this is about

The World Health Organisation (WHO) has identified the lack of physical activity as one of the biggest contributors to the global burden of disease. Physical inactivity has been labelled second only to smoking as a modifiable risk factor for poor health.³⁵ Poor dental health is also a modifiable risk factor that can have negative health impacts. Measures used to assess this indicator are:

- Frequency of physical activity
- Participation in sports clubs
- Percentage of population who smoke cigarettes
- Type Two diabetes
- Obesity
- Percentage of year eight children without dental caries.

What did we find?

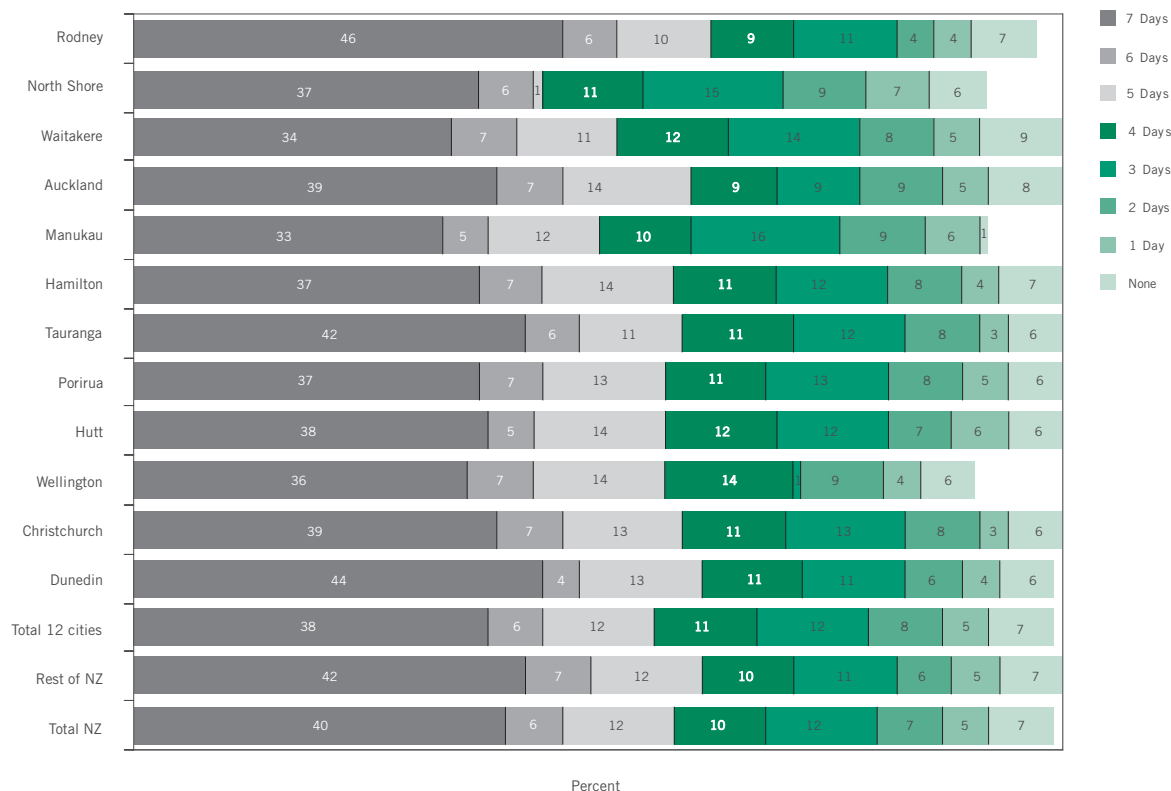
Physical activity

This measure is from the Quality of Life Survey 2006 and shows the frequency of physical activity by residents aged 15 years and over.³⁶

Nationally, 40.0% of New Zealand residents were physically active every day. More residents living outside the 12 cities undertook physical activity on five or more days a week (61.0%) than those in the 12 cities combined (56.0%).

Rodney had the highest percentage of residents (63.0%) undertaking physical activity five or more times a week, while Manukau had the lowest (50.0%). Manukau also had the highest percentage of residents who did no physical activity during a week (10.0%).

Residents' frequency of doing physical activity (2006)



Data source: Quality of Life Survey 2006

35 Ministry of Health. (2003). *DHB toolkit: physical activity*.

36 Residents were asked about all their physical activities (including any physical tasks they might do at work, doing housework or playing sports) and on how many of the last seven days they were active. Active was defined as doing 15 minutes or more of vigorous activity (i.e. activity that makes people breathe a lot harder than normal e.g. running), or 30 minutes or more of moderate exercise (e.g. brisk walking).

3. Health



Nationally and at the 12 cities level, Maori and New Zealand Europeans were more likely to have undertaken physical activity on five or more days a week. Asian/Indian and Pacific Islands residents were less likely to do so. In the 12 cities, those aged 65 years and older were more likely to have undertaken physical activity on five or more days a week than other age groups.

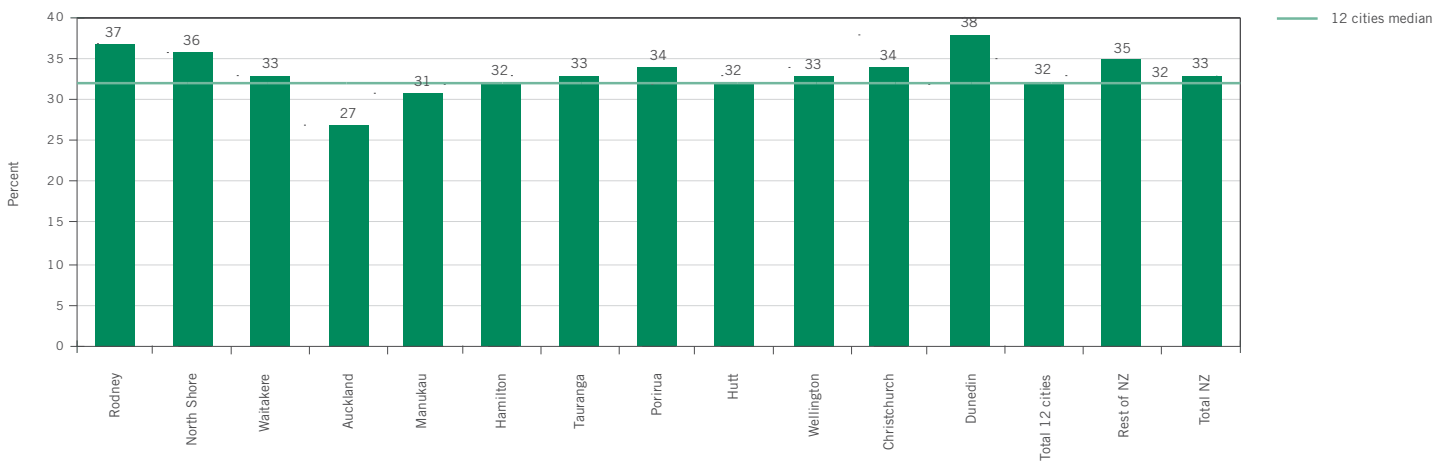
Participation in sports clubs

This measure is based on 2006 Quality of Life Survey data. Nationally, 33.0% of residents belonged to a sports club.

Residents in our cities were less likely to belong to a sports club than those in the rest of New Zealand and nationally. Dunedin had the highest sports club participation (38.0%) while Auckland had the lowest rate (27.0%).

Across New Zealand and in the 12 cities, those most likely to belong to a sports club were residents aged between 15 to 24 years, Maori, males and those with a household income over \$100,000.

Percentage of residents belonging to a sports club (2006)



Data source: Quality of Life Survey 2006

Modifiable risk factors continued

Percentage of population who smoke cigarettes

This measure shows the number and percentage of the population aged over 15 years who currently smoke or who are ex-smokers of cigarettes.

Nationally, 18.9% of the population over 15 years smoke cigarettes.³⁷ A larger percentage of people in the rest of New Zealand smoke (21.3%) compared to those in the 12 cities (17.0%). Differences are apparent between the 12 cities with North Shore having the lowest percentage of smokers (13.5%), while Porirua had the highest percentage (23.2%).

There is a large percentage of New Zealand's population that are ex-smokers (20.2%). This is higher than the 12 cities total of 18.7% but lower than the rest of New Zealand at 22.1%. Of the 12 cities, Rodney had the highest percentage of ex-smokers (24.3%).

Smoking has numerous negative health effects and is one of the major causes of preventable death in New Zealand. The World Health Organisation states that tobacco is a known or probable cause of some 25 different diseases. For some diseases, such as lung cancer, bronchitis and emphysema, smoking is the major cause. Not only does smoking impact on the health of the individual who chooses to smoke but it can also negatively affect the health of others through passive or second hand smoke. It also has a significant financial impact on the country's health system, diverting health dollars from the treatment of other conditions.

While the prevalence of smoking has decreased since the 1970's there is still a significant number of New Zealanders who smoke.³⁸ Maori (46.0%) and Pacific Islands people (36.0%) had high rates of prevalence compared to Asian people (12.0%) and New Zealand European/Other ethnic groups (20.0%).³⁹

Number and percentage of population who smoke cigarettes for population over 15 years (2006)

| | Number of smokers | Smokers % | Number of ex-smokers | Ex-smokers % | Total population over 15 years ⁴⁰ |
|------------------------|-------------------|-------------|----------------------|--------------|--|
| Rodney | 11,052 | 15.8 | 17,016 | 24.3 | 69,939 |
| North Shore | 22,266 | 13.5 | 32,883 | 19.9 | 164,838 |
| Waitakere | 26,886 | 18.9 | 25,437 | 17.9 | 142,281 |
| Auckland | 48,705 | 14.8 | 54,294 | 16.5 | 328,563 |
| Manukau | 46,917 | 19.3 | 33,882 | 14.0 | 242,637 |
| Hamilton | 15,189 | 18.5 | 19,455 | 23.7 | 82,050 |
| Tauranga | 18,876 | 18.7 | 18,099 | 17.9 | 100,998 |
| Porirua | 8,298 | 23.2 | 6,585 | 18.4 | 35,811 |
| Hutt | 16,233 | 21.5 | 15,192 | 20.2 | 75,354 |
| Wellington | 21,144 | 14.3 | 28,737 | 19.5 | 147,690 |
| Christchurch | 49,515 | 17.5 | 58,716 | 20.8 | 282,765 |
| Dunedin | 16,752 | 17.0 | 20,274 | 20.5 | 98,709 |
| Total 12 cities | 301,833 | 17.0 | 330,570 | 18.7 | 1,771,635 |
| Rest of NZ | 295,959 | 21.3 | 306,723 | 22.1 | 1,388,736 |
| Total NZ | 597,792 | 18.9 | 637,293 | 20.2 | 3,160,371 |

Data source: Statistics New Zealand, Census 2006

³⁷ Cigarette smoking refers to the active smoking of one or more manufactured or hand-rolled tobacco cigarettes, from purchased or home-grown tobacco, per day, by people aged 15 years and over. The term 'smoking' refers to active smoking behaviour, i.e. the intentional inhalation of tobacco smoke. Smoking does not refer to or include passive smoking (the unintentional inhalation of tobacco smoke). Cigarette smoking does not include the smoking of tobacco in cigars, pipes and cigarillos, the smoking of any other substances, herbal cigarettes or marijuana, e.g. or the consumption of tobacco products by other means, such as chewing.

^{38,39} Ministry of Health. (2006). *Tobacco Trends 2006: Monitoring tobacco use in New Zealand*.

⁴⁰ Total includes counts for 'never smoked regularly' and 'not elsewhere included' categories not shown here.

3. Health



Type Two diabetes

Type Two diabetes is a condition associated with lifestyle and in many cases can be prevented through appropriate levels of physical exercise and healthy diets. It is a significant cause of ill health and premature death in New Zealand. The negative health effects of Type Two diabetes can include blindness, kidney failure, heart disease, neuropathy, lower limb amputations and impotence in men.

Diabetes is a chronic condition that arises when the pancreas does not make enough insulin, or when the body cannot effectively use the insulin that is produced. Insulin enables the cells to take in glucose from the blood and use it for energy.⁴¹ There are three types of diabetes: Type One, Type Two and gestational. The most prevalent type of diabetes is Type Two, which affects approximately 220,000 people in New Zealand and accounts for 80.0 to 90.0% of all diabetes cases.⁴² Type Two diabetes occurs when the body is unable to use the insulin the pancreas produces. Information on Type Two diabetes was not available for the 12 cities.

Those with a higher risk of developing Type Two diabetes are likely to be those with a family history of the condition, people over 40 years and those who are overweight or inactive. There is a higher prevalence amongst Maori, Pacific Islands and Asian residents.

There is evidence that the principal driver of the Type Two diabetes epidemic seen in New Zealand is the current high levels of obesity, although other factors such as declining levels of physical activity also have an effect.⁴³

Obesity

Obesity can be defined as abnormal or excessive fat accumulation that may impair health.⁴⁴ It is caused by an energy imbalance between calories consumed and energy expended.⁴⁵ Obesity is defined as an individual having a Body Mass Index (BMI) greater than 30 for New Zealand European and 'Other' ethnicities, or greater than 32 for Maori and Pacific Islands people.

The World Health Organisation's (WHO) latest projections indicate that in 2005 at least 400 million adults were obese worldwide and this number is continuing to grow. It is projected that by 2015 more than 700 million adults will be obese.⁴⁶

Where obesity and overweight were once considered a problem only in high-income countries, they are now dramatically on the rise in low and middle-income countries, particularly in urban settings.⁴⁷

Obesity can lead to serious health consequences and is an increased risk factor for chronic diseases such as heart disease and stroke, diabetes, osteoarthritis and some forms of cancer. Obesity-related health complications also place a significant financial burden on the public health system.⁴⁸

In New Zealand in 2003, 21.0% of adults over the age of 15 were obese. This was an increase from the 17.0% recorded in 1997.⁴⁹ Obesity is more prevalent among the Pacific Islands and Maori ethnic groups. Age-standardised prevalence was highest among Pacific Islands females (48.0%) and males (38.0%) compared with Maori (28.0% for females, 29.0% for males) and New Zealand European and 'Other' ethnicities (20.0% for females, 18.0% for males).⁵⁰ Information on obesity was not available for the 12 cities.

Percentage of year eight children without dental caries

A dental carie, also described as tooth decay, is an infectious disease which damages the structures of the teeth. Diseases of the teeth and gums are among the most common of all health problems and are experienced by most New Zealanders at some stage of their life.⁵¹ These problems can cause pain and discomfort and tooth loss.⁵² While access to dental services is free to all people under the age of 18, there can be ongoing financial cost to the individual and the community associated with treating tooth decay.

The percentage of year eight children without dental caries remained stable across New Zealand between 2003 and 2005.

Differences were apparent between the DHB areas that encompass the 12 cities.⁵³ Many DHBs had a decrease in the percentage of children without dental caries from 2003 to 2005. Hutt Valley DHB and Capital and Coast DHB had the highest percentage of children without dental caries while Bay of Plenty DHB consistently had among the lowest percentage of year eight children without dental caries.

41 Diabetes New Zealand Incorporated. (2006). *Diabetes fact sheet 2006*.

42 Diabetes New Zealand Incorporated. (2006). *Diabetes fact sheet 2006*. This figure includes estimates for diagnosed (105,000) and undiagnosed (115,000) people.

43 Hu, F.B., Manson, J.E., Stampfer, M.J., et al. (2001). Diet, lifestyle and the risk of type 2 diabetes in women. *New England Journal of Medicine* 345:790-797.

44,45,46,47 World Health Organisation. (2006). *Obesity and overweight fact sheet*.

48 Swinburn, B., Ashton, T., Gillespie, J., Cox, B., Menon, A., Simmons, D. & Birkbeck, J. (1997). Health care costs of obesity in New Zealand *International Journal of Obesity and Related Metabolic Disorders*; 21(10): 891-6.

49 Ministry of Health. (2004). *Tracking the obesity epidemic: New Zealand 1977-2003*.

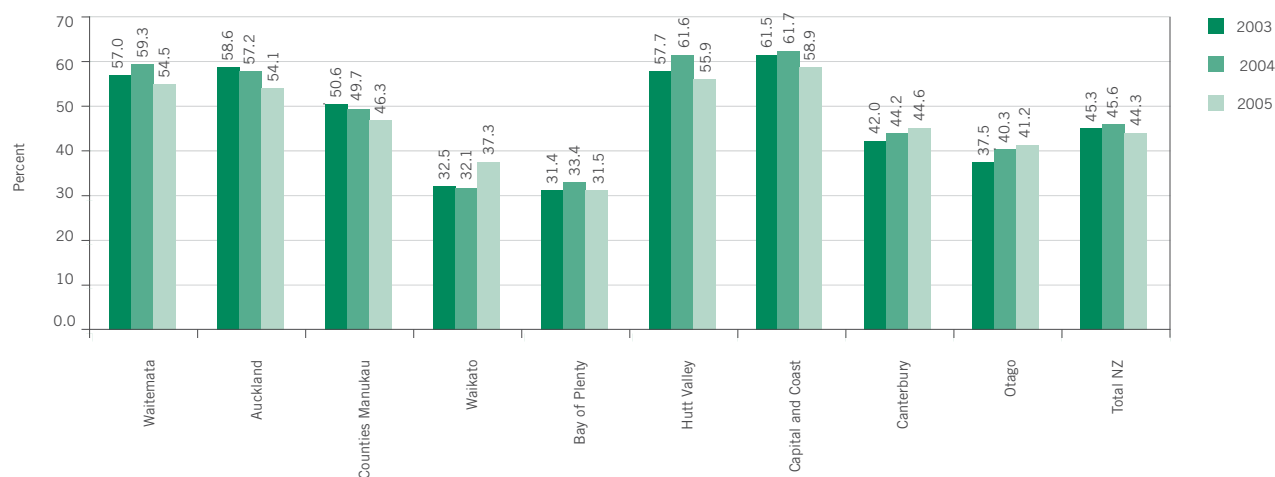
50 Ministry of Social Development. (2006). *The social report*.

51,52 Ministry of Health. (2004). *DHB toolkit: Improve oral health*.

53 Data was not available at the individual 12 city level.

Modifiable risk factors continued

Percentage of year eight children without dental caries, by district health board (2003 to 2005)



Data source: Ministry of Health

One possible explanation for the differences between the DHBs may relate to the proportion of the population with access to a fluoridated water supply. In 2005 there was a difference between year eight students with access to fluoridated and non-fluoridated water supplies. Nationally, those in fluoridated areas were more likely to be caries free (47.9%) than those living in non-fluoridated areas (40.4%).

Although the patterns were similar for some DHBs (e.g. Hutt Valley DHB, Otago DHB) for other DHBs (e.g. Canterbury DHB, Waikato DHB and Waitemata DHB) the opposite was the case, with higher percentages of children without caries living in areas without fluoridation.

Number and percentage of dental caries for year eight children, by fluoridated and non-fluoridated water source for district health boards (2005)

| District Health Board | Total | | Fluoridated | | Non-fluoridated | |
|-----------------------|---------------|---------------|---------------|---------------|-----------------|---------------|
| | Number | caries free % | Number | caries free % | Number | caries free % |
| Waitemata | 5,149 | 54.5 | 4,495 | 54.1 | 654 | 56.9 |
| Auckland | 4,143 | 54.1 | 3,954 | 54.5 | 189 | 45.5 |
| Counties Manukau | 5,831 | 46.3 | 4,907 | 45.9 | 924 | 48.8 |
| Waikato | 4,809 | 37.3 | 2,308 | 35.9 | 2,501 | 38.6 |
| Bay of Plenty | 3,010 | 31.5 | 296 | 32.8 | 2,714 | 31.3 |
| Hutt Valley | 1,053 | 55.9 | 1,016 | 56.5 | 37 | 40.5 |
| Capital and Coast | 1,872 | 58.9 | 1,861 | 58.9 | 11 | 54.5 |
| Canterbury | 4,436 | 44.6 | 17 | 29.4 | 4,419 | 44.7 |
| Otago | 2,273 | 41.2 | 1,180 | 44.9 | 1,093 | 37.1 |
| Total NZ | 48,711 | 44.3 | 25,217 | 47.9 | 23,494 | 40.4 |

Data source: Ministry of Health

Inequalities exist in the oral health of New Zealand children, especially among Maori and Pacific Islands children and those from low socio-economic status families.⁵⁴ These inequalities may stem from groups not accessing services for reasons such

as the perceived cost or need, a lack of knowledge about service availability and the acceptability and accessibility of dental services.⁵⁵



Recreation and leisure

3. Health

- Sport or other physical activity is the most frequently mentioned free time activity across New Zealand.
- A larger percentage of residents living outside the 12 cities rate their leisure time positively than those living in the 12 cities.
- On the whole residents in our cities are not experiencing barriers to leisure activities.

What this is about

Recreation and leisure have an important impact on quality of life as they provide the opportunity to gain respite from everyday stresses. The health benefits that can be gained through recreation and leisure activities can be both physical and mental. The nature of activities individuals undertake in their leisure time can vary greatly depending on their personal circumstances and the opportunities available to them in the area they live. Measures for this indicator include:

- Residents' three most frequently mentioned free time activities
- Residents' satisfaction with leisure time
- Residents' experience of barriers to leisure activities.

What did we find?

Residents' three most frequently mentioned free time activities

In the 2004 Quality of Life Survey, residents were asked to describe the three main things they did in their free time. Nationally, taking part in sports or other physical activity with friends or on their own (39.0%) were the most commonly reported activities. The next most commonly reported activities were socialising with friends in cafes and bars, visiting friends and/or eating out (27.0%) and gardening and lawn mowing (24.0%).

Taking part in sports or other physical activity with friends or on one's own was also the most commonly reported free time activity for residents in our cities, however a much smaller percentage of people (32.0%) mentioned this.

Although there were differences between our cities, activities involving physical activity were consistently in the top three most frequently reported activities. Over half (53.0%) of Christchurch residents mentioned this compared with 27.0% in Manukau.



Recreation and leisure continued

Three most frequently mentioned free time activities and percentage response (2004)

| | Most frequent activity | Second most frequent activity | Third most frequent activity |
|------------------------|--|--|--|
| Rodney | Taking part in sports or other physical activity (not specified with whom) (34.0%) | Taking part in sports or other physical activity with friends or on own (26.0%) | Gardening/lawn mowing (26.0%) |
| North Shore | Taking part in sports or other physical activity with friends or on own (33.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (28.0%) | Taking part in sports or other physical activity (not specified with whom) (25.0%) |
| Waitakere | Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%) | Taking part in sports or other physical activity (not specified with whom) (26.0%) | Taking part in sports or other physical activity with friends or on own (24.0%) |
| Auckland | Socialising with friends in cafes, bars etc/visiting friends/eating out (34.0%) | Taking part in sports or other physical activity with friends or on own (28.0%) | Watching TV/Videos/DVDs (24.0%) |
| Manukau | Taking part in sports or other physical activity (not specified with whom) (27.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (26.0%) | Taking part in sports or other physical activity with friends or on own (24.0%) Watching TV/Videos/DVDs (24.0%) |
| Hamilton | Taking part in sports or other physical activity (not specified with whom) (35.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (35.0%) | Reading (25.0%) |
| Tauranga | Taking part in sports or other physical activity (not specified with whom) (37.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%) | Gardening/lawn mowing (25.0%) |
| Porirua | Taking part in sports or other physical activity (not specified with whom) (28.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (25.0%) | Family or child focused activities (23.0%) |
| Hutt | Taking part in sports or other physical activity with friends or on own (33.0%) | Reading (27.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (23.0%) |
| Wellington | Socialising with friends in cafes, bars etc/visiting friends/eating out (32.0%) | Reading (32.0%) | Taking part in sports or other physical activity (not specified with whom) (29.0%) |
| Christchurch | Taking part in sports or other physical activity with friends or on own (53.0%) | Gardening/lawn mowing (27.0%) | Taking part in sports or other physical activity with a organised club (25.0%) |
| Dunedin | Taking part in sports or other physical activity with friends or on own (49.0%) | Taking part in sports or other physical activity with a organised club (28.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%) |
| Total 12 cities | Taking part in sports or other physical activity with friends or on own (32.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (28.0%) | Reading (24.0%) |
| Rest of NZ | Taking part in sports or other physical activity with friends or on own (46.0%) | Gardening/lawn mowing (29.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (25.0%) |
| Total NZ | Taking part in sports or other physical activity with friends or on own (39.0%) | Socialising with friends in cafes, bars etc/visiting friends/eating out (27.0%) | Gardening/lawn mowing (24.0%) |

Data source: Quality of Life Survey 2004

3. Health



Satisfaction with leisure time

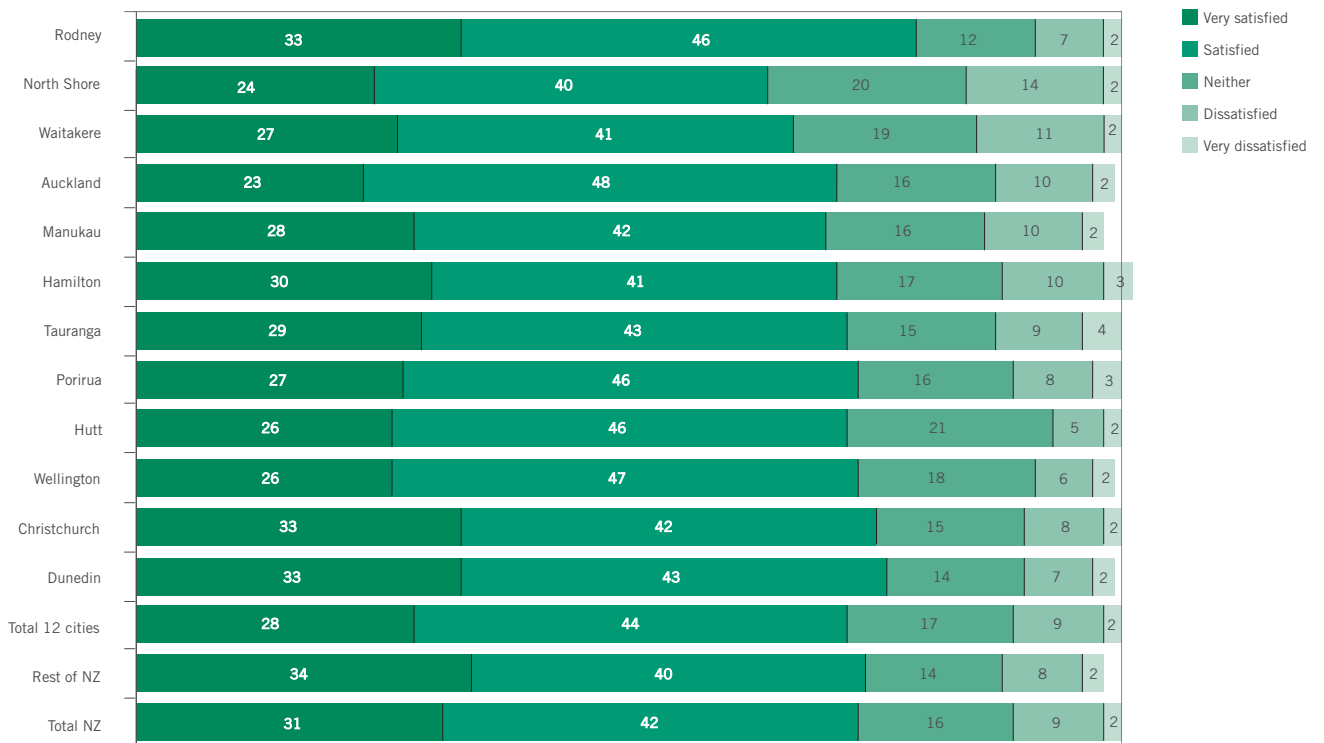
This measure looks at residents' satisfaction with their leisure time as reported in the 2006 Quality of Life Survey.

Nationally, 73.0% of New Zealand residents felt positive about their leisure time, stating that they were either 'very satisfied' (31.0%) or 'satisfied' (42.0%). Residents living outside the 12

cities were more likely to rate their leisure as satisfying (74.0%) than those living in the 12 cities (72.0%).

There were also differences between our cities. Rodney residents were more likely to express satisfaction (79.0%) with their leisure time than North Shore residents (64.0%).

Residents' satisfaction with leisure time (2006)



Percent

Data source: Quality of Life Survey 2006

Recreation and leisure continued

Barriers to leisure activities

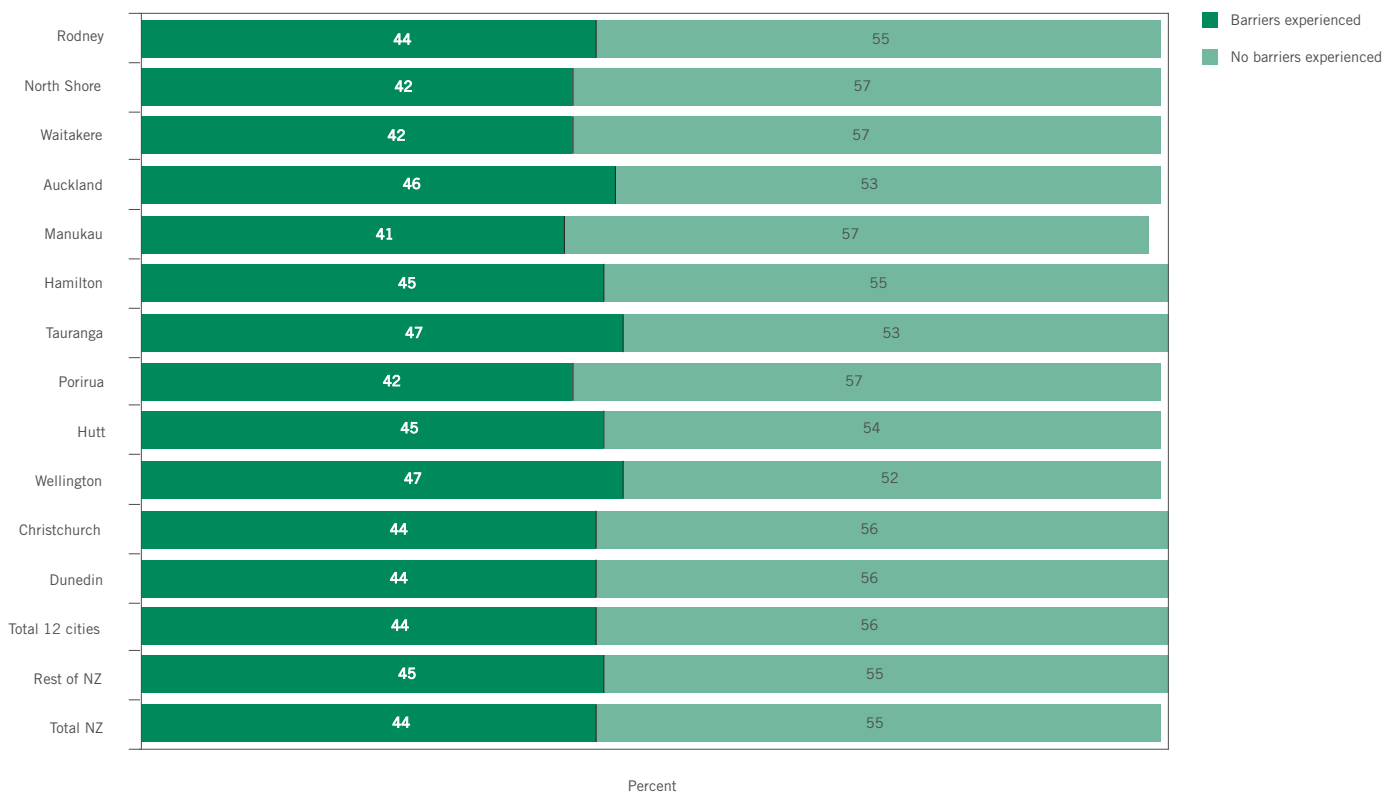
This measure looks at whether or not residents experienced barriers to participating in leisure activities in their city in the previous 12 months, using 2004 Quality of Life Survey data.

Nationally, 55.0% of New Zealand residents said that they had not experienced barriers that made it difficult for them to take part in the free time activities. There were no notable differences

between residents of the 12 cities (44.0%) and those living in the rest of the New Zealand (45.0%).

Those living in Tauranga and Wellington were more likely to have experienced barriers to leisure activities (both 47.0%), than those from Manukau (41.0%).

Residents' experience of barriers to leisure activities (2004)



Data source: Quality of Life Survey 2004