The Health of New Zealand Adults 2011/12

Key findings of the New Zealand Health Survey

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Foreword

I am pleased to welcome this report about the health of adults in 2011/12, from the New Zealand Health Survey. Along with a report on child's health, this report is the first full set of statistics published from the survey since it became a continuous survey in 2011.

The survey provides us with a valuable data source about a range of health topics, using data collected from about 17,000 adults and children each year.

You'll find information in this report about cardiovascular disease and diabetes and related risk factors, including smoking, diet, physical activity and obesity. Information about mental health, oral health and access to health care are also included.

A major aim of our health system is to help New Zealanders live longer, healthier, more independent lives. The information in this report helps us to identify and measure trends and changes in the patterns of health in New Zealand. The report highlights some of the key issues facing the health of New Zealanders, and the challenges for the future. We can use these findings to help guide us as we plan for delivering effective health services to New Zealanders, and improving the health of New Zealanders.

This is only the first of many information releases from the survey. I look forward to further insights about the health of New Zealanders from future releases from the survey. Future releases will include regional results for the survey, which will be published next year.

I would like to thank all the people who have worked so hard on the survey. I am especially grateful to the many thousands of New Zealanders who gave their time to take part in the survey. The information they have provided is crucial in developing and monitoring public health policy in New Zealand.

I hope you will find this report useful and informative.

Kevin Woods
Director-General of Health
Ministry of Health

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This report was written by Kylie Mason and Niki Stefanogiannis, with statistical analyses carried out by Robert Templeton and Deepa Weerasekera. The authors are employed by Health and Disability Intelligence, Ministry of Health.

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Contents

Executive Summary

This report presents key findings about the health and wellbeing of New Zealand adults in 2011/12, which come from the New Zealand Health Survey.

The survey is a valuable source of information about people's health behaviours and lifestyles, their health status and their access to health care. In 2011/12 the survey included face-to-face interviews with more than 12,000 adults aged 15 years and over selected randomly from throughout New Zealand.

The companion report *The Health of New Zealand Children 2011/12* presents children's results from the survey.

At a glance

- **Improving trends:** reduced daily smoking, less psychological distress, fewer people unable to get an appointment at their usual medical centre within 24 hours, higher vegetable intake.
- **No change:** fruit intake, physically active.
- **Worsening trends:** obesity, diabetes, fewer dental visits.
- **Differences by population group:** generally poorer health and more unmet need for health care among Māori, Pacific peoples and people living in more socioeconomically deprived areas.

Health behaviours and health status

The smoking rate is decreasing – but not for everyone

The daily smoking rate has continued to fall, with fewer than one in five adults now smoking. In particular, the rate of daily smoking has fallen for youth (15–17 years) from 14% in 2006/07 to 6% in 2011/12.

However the smoking rate has not decreased for all population groups. In particular, Māori continue to have high smoking rates. Two in five Māori (41%) are current smokers, similar to the rate in 2006/07.

Smoking rates were strongly related to socioeconomic deprivation. People living in the most socioeconomically deprived areas were 2.5 times as likely to smoke as people in the least deprived areas.

The obesity rate continues to increase

A concerning trend is the steady rise in the obesity rate, which has continued to increase over the past 15 years, from 19% in 1997 to 28% in 2011/12. About one million adults are now obese in New Zealand. Obesity is a major risk factor for heart disease, type 2 diabetes and some types of cancer.

Eating a healthy diet and being physically active can help maintain a healthy body size. Compared with 2006/07, more people now eat the recommended three or more servings of vegetables each day (68%).

However, although the percentage of people eating the recommended two or more servings of fruit increased steadily from 1997 to 2006/07, there has been no change since then. There has also been no change in the percentage of people meeting the physical activity guidelines (54%) since 2006/07.

More people take medication for high blood pressure, high cholesterol

Compared with 2006/07, more people now take medication for high blood pressure (now 16% of adults) and high cholesterol (now 10%). The rate of diagnosed diabetes has also slowly increased over the past 15 years, with almost 200,000 adults (5%) now diagnosed. The reason for these increases over time may be that more people have these conditions, and/or that more people with the condition are being diagnosed and treated.

Additionally, chronic pain and arthritis each affect over half a million adults. However, most adults (89%) reported that they were in good health.

Contrasting mental health results for some ethnic groups

Compared with 2006/07, more people reported in 2011/12 that at some time in their lives they have been diagnosed with depression, bipolar disorder and/or anxiety disorder (increasing from 13% in 2006/07 to 16% in 2011/12). About 6% of adults had high levels of psychological (mental) distress in 2011/12, which was a lower percentage than in 2006/07 (7%).

While Māori and Pacific adults have higher rates of psychological distress (about 9–10%) than other adults, they have similar or lower rates of diagnosed mental disorder than other adults. These findings suggest people in these groups may be less likely to seek help and/or they face more barriers to accessing mental health services.

Access to health care services

Most adults were able to access primary health care when they needed to

However, about 27% of adults had an unmet need for primary health care in the past year. The main reasons were that they could not get an appointment at their usual medical centre within 24 hours (16% of adults) and that cost prevented them from using GP services when they had a medical problem (14%).

Women aged 25–44 years had particularly high rates of unmet need for primary health care, with two in five affected in the past year. Māori, Pacific adults and adults living in deprived areas generally were more likely to have had unmet need for primary health care in the past year.

Additionally, about 267,000 adults (8%) did not collect one or more prescription items in the previous year due to the cost.

On a positive note, while 16% of adults were unable to get an appointment at their usual medical centre within 24 hours in the previous year in 2011/12, this percentage has decreased since 2006/07 (when the rate was 18%). No other time trends were available about unmet need, as the 2011/12 survey was the first time the New Zealand Health Survey asked directly about most of the unmet need indicators.

The majority of people avoid going to a dental health care worker for regular check-ups

Regular dental checks are important for detecting and treating signs of oral disease early. However, more than one in two (55%) dentate adults (ie, people with natural teeth) only visit a dental health care worker when they have dental problems, or they never visit, which is an increase since 2006/07. Additionally, fewer people had had a dental visit in the past year in 2011/12 (49%) than in 2006/07 (52%).

Are these findings the same for everyone?

There were some notable differences in health status, health behaviours and access to health care by age group, ethnic group, and neighbourhood deprivation.

Different patterns by age group

Younger people aged 15–34 years had higher levels of several risk factors. More than one in four (28%) people aged 25–34 years smoke, and those aged 15–34 years are the least likely to eat the recommended amount of vegetables and fruit. The obesity rate has also increased sharply in the 15–24 year age group over the past five years, from 14% in 2006/07 to 20% in 2011/12.

Many long-term conditions are more common in the older age groups. People aged 75 years and over have high rates of arthritis (47%), ischaemic heart disease (29%) and chronic pain (28%). However, even though such conditions are widespread, four out of every five in this age group reported being in good health. Access to health services is also relatively good for older adults, who have low rates of unmet need.

Māori and Pacific adults tend to have poorer health and a higher level of unmet need for health care

Māori and Pacific adults generally experience disadvantage across all indicators of health status and access to health services.

Māori have higher rates of some risk factors, including smoking (41%). For some healthy behaviours, Māori have similar levels as other adults, including eating the recommended amount of vegetables and being physically active. Māori adults are more likely to have been diagnosed with certain health conditions, including ischaemic heart disease and stroke.

For Māori and Pacific adults, the obesity rate is high (44% and 62% respectively), although unchanged from 2006/07. The rate of diabetes is also relatively high among Māori (7%) and Pacific (10%) adults and among Asian men (8%), compared with the national average (5%). Obesity and diabetes are much more common in people living in more deprived areas, even when accounting for differences in age, sex and ethnic group.

Unmet need for health care is more common for Māori (39%) than the national average (27%). For Māori and Pacific, cost is a major barrier to accessing health services and to filling prescriptions, while a lack of transport is a further barrier to accessing services.

Socioeconomic deprivation strongly influences health and access to health care

Many health conditions are more common in people living in more socioeconomically deprived areas.

People living in the most deprived areas have higher levels of smoking (28%) and obesity (40%) than the national averages. They also have higher levels of psychological distress, ischaemic heart disease, diabetes and chronic pain. These higher rates are not explained by differences in the ethnic, age or sex structure of the population.

Unmet need for health care is also much more common in more deprived areas. One in three (34%) people living in more deprived areas had experienced one or more barriers to accessing primary health care in the past year. Cost and lack of transport are relatively common barriers to accessing care for these people. Unmet need for health care is of particular concern if it affects people who already have poorer health.

Looking ahead

Over the past five years, some aspects of health have improved in New Zealand. For example, the smoking rate continues to decline, which will have positive health outcomes in the future.

However, a number of challenges for future health remain. One notable challenge is that the obesity rate is steadily increasing over time. It is important to prevent any further increases in the obesity rate in order to reduce the burden of type 2 diabetes and other obesity-related conditions in the future.

Another key challenge is improving the health of Māori and Pacific adults, and adults living in more deprived areas, and improving their access to health services. Achieving these improvements will help close the gap between these groups and other people, and improve the overall level of health in the population.

The New Zealand Health Survey will continue to monitor the changes in the health of New Zealanders annually, including progress made towards addressing these challenges.

In brief – key survey results

The following table summarises the indicators presented in this report for adults aged 15 years and over.

Indicator	Percent (%)	Estimated number	Time trends since 2006/07
Excellent, very good or good self-rated health	89	3,154,000	≈ No change
Current smoking	18	650,000	≈ No change
Daily smoking	17	583,000	▼ Decrease
Vegetable intake (3+ servings per day)	68	2,417,000	▲ Increase
Fruit intake (2+ servings per day)	59	2,068,000	≈ No change
Physically active	54	1,905,000	≈ No change
Obesity	28	1,004,000	▲ Increase
High blood pressure (medicated)	16	558,000	▲ Increase
High cholesterol (medicated)	10	367,000	▲ Increase
Ischaemic heart disease (diagnosed)	5	193,000	≈ No change
Stroke (diagnosed)	2	62,000	≈ No change
Diagnosed common mental disorder (depression, bipolar disorder and/or anxiety disorder)	16	572,000	▲ Increase, particularly women
Psychological (mental) distress	6	198,000	▼ Decrease, particularly men
Diabetes (diagnosed)	5	193,000	≈ No change
Asthma (medicated)	11	389,000	≈ No change
Arthritis (diagnosed)	15	532,000	≈ No change
Chronic pain	16	571,000	≈ No change
Visited a GP in the past 12 months	78	2,771,000	▼ Decrease
Visited a practice nurse (without seeing a GP at the same visit) in the past 12 months	31	1,079,000	≈ No change
Visited an after-hours medical centre in the past 12 months	13	456,000	na
Experienced unmet need for primary health care in the past 12 months (any of following)	27	947,000	na
– Unable to get appointment at usual medical centre within 24 hours	16	507,000	▼Decrease
– Unmet need for GP services due to cost	14	487,000	na
– Unmet need for after-hours services due to cost	7	252,000	na
– Unmet need for GP services due to lack of transport	3	121,000	na
– Unmet need for after-hours services due to lack of transport	2	62,000	na
Unfilled prescription due to cost in the past 12 months	8	267,000	na
Had any teeth removed due to decay, abscess, infection or gum disease in the past 12 months	8	270,000	na
Visited a dental health care worker in the past 12 months[1]	49	1,584,000	▼ Decrease
Usually only visits a dental health care worker for dental problems (or never visits)[1]	55	1,778,000	▲ Increase

na = not available, as data not collected in 2006/07, or question wording has changed since then.

[1] Only among adults with natural teeth.

Notes: Percentages rounded to nearest whole number. For percentages accurate to one decimal place, see Appendices 2 and 3. Estimated numbers are rounded to the nearest 1000 people. Time trends are standardised for age.

Introduction

Welcome to *The Health of New Zealand Adults 2011/12*. This report gives a snapshot of adults' health and wellbeing in New Zealand in 2011/12, using data from the New Zealand Health Survey.

These results tell us about whether New Zealanders lead healthy lifestyles, how healthy they are, their use of primary health care services and whether they have difficulties accessing health care when they need it. You can find a summary and discussion of the key results of the survey at the end of this report.

This report will be useful for government departments, researchers, regional and community organisations, and the wider public.

What's in this report?

Overview of the report

This report presents key findings about the health of adults aged 15 years and over in 2011/12, which come from the New Zealand Health Survey (the '2011/12 New Zealand Health Survey'). The key findings cover the following topics:

- health status
- health behaviours and risk factors
- health conditions
- use of primary health care
- barriers to accessing health services
- oral health.

Results are presented to answer three guiding questions for each indicator.

- What is the current level in the population?
- How has it changed?
- Is it the same for everyone?

This report presents key statistical information through graphs and tables, with short comments about the noteworthy results. The report highlights areas where we are doing well and areas where we could improve.

Children's results from the survey are presented in the companion report, *The Health of New Zealand Children 2011/12* (Ministry of Health 2012a).

Indicators in this report

The indicators in this report (Table 1) present key measures of the health of New Zealanders from the New Zealand Health Survey. Health indicators can point to wider health concerns and focus attention on key issues.

We will update these indicators every year with results from the survey.

Table 1: Indicator topics included in this report

Report section	Indicator topic
Health status	Self-rated health
Health behaviours and risk factors*	Tobacco smoking
	Vegetable and fruit intake
	Physical activity
	Obesity
Cardiovascular health	High blood pressure
	High cholesterol
	Ischaemic heart disease
	Stroke
Mental health	Common mental disorder
	Psychological distress
Other health conditions	Diabetes
	Asthma
	Arthritis
	Chronic pain
Use of primary health care	General practitioners
	Practice nurses
	After-hours medical centres
Barriers to accessing health care	One or more barriers to accessing care
	Unable to get an appointment at usual medical centre within 24 hours
	Unmet need for GP services due to cost
	Unmet need for after-hours services due to cost
	Unfilled prescription due to cost
Oral health status and service use	Teeth removed
	Visited dental health care worker
	Usually visits dental health care worker for dental problems

* We will publish results on hazardous drinking in early 2013.

Data for all the key indicators in this report are available in Appendices 2 and 3, and in the online data tables. For some sections of the report, additional indicators related to the topic are also available in online data tables.

Trends over time are presented where possible

This report compares trends over time in the key indicators, where possible. Time trends are presented for the total population and for certain population groups, including Māori, Pacific and Asian adults.

Most time trends compare results from the 2006/07 and 2011/12 surveys and, where possible, the 1996/97 and 2002/03 surveys. For these comparisons, data from previous surveys were reanalysed to ensure the information presented is comparable.

Results are presented by population group

This report presents the indicators for the total population, as well as by population groups defined by sex, age, ethnic group and neighbourhood deprivation. This information helps us to identify any variation in the levels of each indicator by population group.

In particular, this information tells us about groups most affected by health inequalities. For example, Māori and Pacific peoples have poorer health status across a wide variety of measures, compared with other population groups in New Zealand. Socioeconomic status also broadly influences health status through a variety of mechanisms. Many studies have shown that lower socioeconomic status leads to poorer health outcomes.

It is important to monitor the health status of these groups and their patterns of service use. The information can then be used to develop appropriate programmes and policies and to drive improvements across the health and disability sector.

Background of the New Zealand Health Survey

The New Zealand Health Survey – past and present

In the past, the Ministry of Health repeated national population health surveys at regular intervals (including in 1996/97, 2002/03 and 2006/07). A wider survey programme also included surveys on specific subjects, including tobacco use, alcohol and drug use, nutrition, mental health and oral health.

From July 2011, the New Zealand Health Survey and the subject-specific surveys have been integrated into a single survey, which is in continuous operation.

Having an integrated, continuous survey means that survey content is more flexible and information can be updated more frequently. It also allows us to combine survey samples across multiple years, so that we can report information for smaller population groups (such as the areas of smaller district health boards) from time to time.

Core questionnaire and modules

The survey now has core questions that it asks every year. All the indicators in this report use data from these core questions.

The survey also includes a flexible programme of topic modules that change every 12 months (Table 2). In 2011/12 the module topics for adults and children included in-depth questions about health service use and patient experience. We will publish the results from these module topics in 2013.

Table 2: Summary of module topics for the New Zealand Health Survey for 2011/12 to 2015/16

Survey year	Adult module topic(s)	Child module topic(s)
2011/12	Health service use Patient experience Problem gambling Discrimination	Health service use Patient experience
2012/13	Alcohol use Tobacco use Drug use	Child development Food security Exposure to second-hand smoke
2013/14	Long-term conditions Health status Disability status Living standards Housing quality	Long-term conditions Health status Disability status Living standards Housing quality
2014/15	Sexual and reproductive health	To be determined
2015/16	Physical activity	Physical activity

Regular publication of survey results

From December 2012 we will regularly publish results from the New Zealand Health Survey. Information releases will include:

- annual reporting of key indicators for adults and children
- periodic reporting of results by region, district health board and sub-population
- subject-specific reports based on module information, which will vary from year to year
- technical information about the survey (such as methodology reports and questionnaires).

Technical details about the 2011/12 survey

The survey results refer to the usually resident population of all ages, who are living in permanent dwellings, aged-care facilities and student accommodation. The following people were not included in the survey: people living in institutions, such as for long-term hospital care, hospital- and dementia-level care in aged-care facilities, and in prisons; the homeless; short-term visitors; and tourists.

The 2011/12 survey included 12,370 adults aged 15 years and over and 4478 children aged 0–14 years selected randomly from throughout New Zealand. The adults were interviewed face-to-face in their own homes (for children, interviews were at home with their parent or caregiver). Data collection involved an interview, followed by measurements of height, weight and waist circumference.

Trained surveyors from CBG Health Research Ltd carried out the survey interviews. The adult survey had a response rate of 79%.

The results in this report refer to the sample selected from 1 July 2011 to 30 June 2012. These selected respondents completed survey interviews between July 2011 and August 2012.

Appendix 1 provides further information about the survey methodology. Detailed reports on the survey design and methodology are available online (Ministry of Health 2011, 2012b).

Definitions and statistical methods

Ethnicity

This report uses **total response ethnicity** to define ethnic groups. Total response ethnicity classifies a person in all the ethnic groups that they identify with. This means that people can appear in more than one ethnic group.

Neighbourhood deprivation (NZDep2006)

The New Zealand Index of Deprivation 2006 (NZDep2006) is used as a measure of socioeconomic deprivation in this report. The NZDep is an area-based index of deprivation that measures the level of socioeconomic deprivation for people in each small area (meshblock) (Salmond et al 2007).

The NZDep2006 was constructed from nine 2006 Census variables: income, benefit receipt, transport (access to car), household crowding, home ownership, employment status, qualifications, support (sole-parent families), and access to a telephone.

This report presents results by NZDep2006 quintiles 1–5. Each quintile contains about 20% of small areas in New Zealand. The two quintiles at opposite ends of the scale are:

- quintile 1, which represents people living in the **least** deprived 20% of small areas ('the least deprived areas')
- quintile 5, which represents people living in the **most** deprived 20% of small areas ('the most deprived areas').

95% confidence intervals

A confidence interval is a range around an estimate that tells us how precise it is. It indicates the level of uncertainty in a measurement that occurs due to taking a sample.

The results presented in this report have 95% confidence intervals. If we selected many samples, the 95% confidence interval would enclose the 'true' value for the population 95% of the time.

The sample size of the group influences the size of the confidence interval. When the sample size is small, the confidence interval is typically wider and the estimate is less precise.

The difference between two groups is statistically significant if their confidence intervals do not overlap. Sometimes, even when two confidence intervals overlap, the difference between these groups can be statistically significant. The text only reports differences that are statistically significant. If the text states there is a difference between two rates, we have carried out a statistical test (a '*t*-test') to confirm that the finding is statistically significant.

You can find 95% confidence intervals for all estimates in the data tables in Appendix 3 and in the online data tables.

Age standardisation is used in time trends

Age is an important determinant of health status. In this report, all time trend results have been age-standardised in the graphs so that populations can be compared over time. This means that changes in age-standardised rates over time are not due to changes in the population age structure (such as population ageing). If the text states there has been a change over time, this change is significant when we compare the age-standardised rates over time, and when we compare the unadjusted rates over time (unless stated otherwise).

For this report, age standardisation was performed by the direct method using the World Health Organization (WHO) world population age distribution (Ahmad et al 2000).

Adjusted rate ratios are used for comparisons between population groups

This report uses adjusted rate ratios to compare different population groups.

A rate ratio tells us how many times larger or smaller the rate is for the group of interest (eg, Māori) compared with the reference group (eg, non-Māori). A rate ratio **above** 1 means the indicator is **more** likely in the group of interest than in the reference group; a rate ratio **below** 1 means the indicator is **less** likely. An asterisk (*) indicates statistically significant rate ratios in the tables.

To analyse ethnic differences, we compared each ethnic group with all other people. This analysis helps to answer the question, 'Does each ethnic group differ from other New Zealanders for this outcome?'

This report presents adjusted rate ratios for the following comparisons:

- men and women
- Māori and non-Māori (for total, men, women)
- Pacific and non-Pacific (for total, men, women)
- Asian and non-Asian (for total, men, women)
- people living in the most and least deprived areas.

The adjusted rate ratios are **adjusted** for other demographic factors that may be influencing (confounding) the comparison, such as age, sex and ethnic group. This means that the comparisons take into account differences in the age, sex and/or ethnicity structure between the population groups.

- When comparing men and women (in the total, Māori, Pacific or Asian population), rate ratios are adjusted for age.
- For ethnic comparisons where data on men and women are combined, rate ratios are adjusted for age and sex.
- Ethnic rate ratios are not adjusted for neighbourhood deprivation in this report, as deprivation is one of the key mechanisms contributing to differences in health status between ethnic groups (that is, deprivation is on the causal pathway between ethnicity and health status).
- Deprivation comparisons are adjusted for age, sex and ethnic group. In this report, deprivation comparisons refer to the 'relative index of inequality', which can be interpreted in the same way as rate ratios (see page 11 and Appendix 1 for more details).

This approach is only one of several options for making comparisons. Other approaches, such as different ways of comparing ethnic groups and more complex analyses of ethnic differences by deprivation level, were not in the scope of this document. Further analyses could explore these differences in more depth.

Interpretation notes

This section gives some key points for interpreting survey results. For more details about the survey methodology, see Appendix 1 or the methodology report (Ministry of Health 2012b).

Results are representative of the total adult population

All results presented in this report are weighted so that they are representative of the total population aged 15 years and over.

Percentages refer to unadjusted values

Any percentages given in the text refer to the **unadjusted prevalence** – that is, the percentage of people affected in the population group of interest.

Statistical significance

All differences reported in the text are statistically significant unless noted otherwise.

Statistical significance is measured at the 5% significance level (that is, p-value less than 0.05). If needed, we carried out a statistical test (a t-test) to confirm that the finding was statistically significant.

Rounding

In the main body of this report, percentages are rounded to whole numbers, except for low percentages. Estimated numbers of people affected are rounded to the nearest 1000 people. Unrounded values were used during calculations.

Data tables in Appendices 2 and 3 and the online data tables give prevalence estimates to one decimal place.

Survey results show associations, not cause-and-effect relationships

This survey presents a picture of the health of New Zealand adults at one point in time. The survey can be used to look at associations between different factors, such as health status and neighbourhood deprivation. However, we cannot conclude that the survey results show cause-and-effect relationships between these factors, in part because we do not know which factor occurred first.

For example, if the survey finds that a particular condition is more common in people living in deprived areas, an association has been identified. This association does not necessarily mean the condition is caused by living in deprived areas.

Reliability of survey results

The survey results are likely to underestimate or overestimate some indicators due to the nature of self-reported information.

For example, many of the survey results assume that respondents can accurately recall previous events (such as a diagnosis by a doctor). Also, many indicators in this report are about **diagnosed** conditions, and not everyone with a particular condition will have had it diagnosed by a doctor. People may also over-report good behaviours or under-report risk behaviours based on what they consider socially desirable. The amount of error will vary by indicator, depending on a number of factors (including the age of the respondent).

Indicators about body size (such as obesity) are based on height and weight measurements taken by the interviewers, rather than self-reported information. These results are more reliable than self-reported information would have been.

What we present in this report

We based our comments in the report on the following information.

Population estimates

- This report presents the estimated number of people affected in the population, based on the survey estimate. These are rounded to the nearest 1000 people.

Time trends

- The graphs show age-standardised prevalences.
- Percentages in the text are unadjusted prevalences.
- Any changes over time reported in the text are statistically significant using both age-standardised and unadjusted prevalence estimates, unless noted in the text.

Age group comparisons

- The graphs show unadjusted prevalences.
- Any comparisons reported between age groups have been tested for statistical significance (using a *t*-test).

Sex comparisons

- Percentages noted in the text are unadjusted prevalences.
- Comparisons reported in the text are based on adjusted rate ratios, which adjust for age.

Ethnic comparisons

- The tables present unadjusted prevalences, the estimated number of people affected in the population in each group, and adjusted rate ratios. The rate ratios allow us to compare each ethnic group with other people in the population.
- Percentages in the text are unadjusted prevalences.
- Comparisons in the text are based on adjusted rate ratios, which adjust for age (and sex if appropriate).

Neighbourhood deprivation comparisons

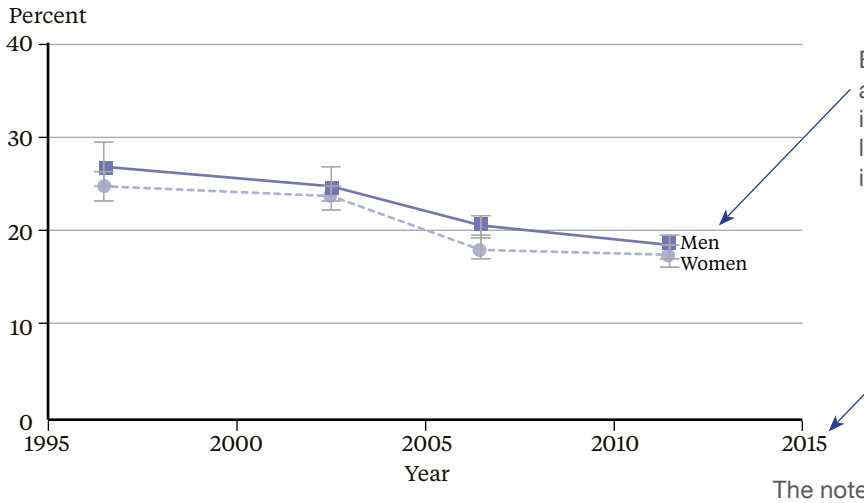
- Percentages in the text are unadjusted prevalences.
- The graphs show unadjusted prevalences.
- The text also compares people living in the most and least deprived areas, adjusting for age, sex and ethnic differences between these groups. These comparisons can be interpreted in the same way as adjusted rate ratios, but are based on the 'relative index of inequality', using data for all deprivation quintiles (see page 11 and Appendix 1 for more details).

Interpreting graphs

The following figure explains how to interpret the graphs in this report.

Figure X: Daily smoking, by sex, 1996/97–2011/12

The caption describes what the figure is about.



Estimates are given for men and women. 95% confidence intervals are given as vertical lines, showing the uncertainty in each estimate.

The x-axis tells us the year of the survey (1996/97, 2002/03, 2006/07, 2011/12).

Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (1996/97, 2002/03, 2006/07, 2011/12) (15 years and over)

The notes and source information provide important information, such as whether rates are age-standardised, the survey data presented, and the age of the people that the data relate to.

Interpreting the ethnicity data tables

The following diagram explains how to interpret the tables of results by ethnic group in this report.

These rows provide the percentage (%) – and the estimated number of people – in each group who are affected. Ethnic groups are total response, so people are included in every ethnic group they reported themselves as belonging to.

These rows compare each ethnic group with other people (eg, Pacific men vs non-Pacific men). These comparisons adjust for differences in age structure between groups (and differences in sex structure for the total column).

This column gives the estimated number of people affected, overall and in each ethnic group. The summed number across the ethnic groups may sum to more than the total number due to total response ethnicity. The estimated numbers are rounded to the nearest 1000 people.

Table X: Obesity, by ethnic group and sex

		Total	Men	Women	Estimated number
Percent (%)	Total NZ	28	28	29	1,004,000
	Māori	44	44	45	197,000
	Pacific	62	59	64	127,000
	Asian	16	16	16	59,000
	European/Other	26	26	26	724,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[1]	Māori	1.8*	1.8*	1.8*	
	Pacific	2.5*	2.4*	2.6*	
	Asian	0.5*	0.6*	0.5*	

Rate ratios above 1 show that the indicator is more likely in the group of interest than in the comparison group; rate ratios below 1 show the indicator is less likely. An asterisk (*) shows that the rate ratio is statistically significant.

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Interpreting the neighbourhood deprivation results

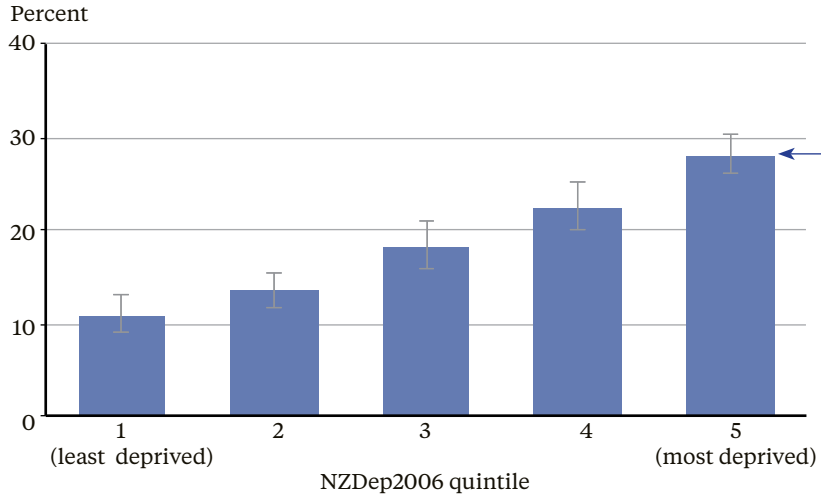
The following diagram explains how to interpret the results by neighbourhood deprivation in this report.

Smoking is more common in more deprived neighbourhoods

There was a strong relationship between smoking and neighbourhood deprivation. Current smoking was much more common among people living in the most deprived areas (28%) than among people in the least deprived areas (11%).

The percentages presented in this paragraph are for people living in the least deprived and most deprived quintiles (quintiles 1 and 5), based on NZDep2006.

Figure Y: Current smoking, by neighbourhood deprivation



This graph presents the unadjusted rates (prevalence estimates) for people living in each NZDep2006 deprivation quintile.

Source: 2011/12 New Zealand Health Survey (15 years and over)

The relationship between smoking and deprivation remained strong after adjusting for differences in age, sex and ethnic group. People in the most deprived areas were 2.5 times as likely to be current smokers as people in the least deprived areas, after adjustment.

The ratio reported in this section gives a comparison by neighbourhood deprivation, after adjusting for age, sex and ethnic differences. This ratio can be interpreted in the same way as adjusted rate ratios in this report, although it is actually a 'relative index of inequality'. It uses adjusted data from all deprivation quintiles to create a best fit line, and then compares the estimated values for people at the minimum and maximum points on this deprivation scale (instead of simply comparing people living in quintiles 1 and 5).

Where you can find more survey results and information

You can find more information and results from the survey, including data tables, online at www.health.govt.nz.

- **A summary of key findings** is in the 'Summary and Conclusions' section at the end of this report.
- **Children's results** from the survey are available in the companion report *The Health of New Zealand Children 2011/12* (Ministry of Health 2012a).
- **Brief summaries of results for Māori and Pacific peoples** will be made available online.
- **Selected data tables** are available in Appendix 3. More extensive data tables are online.
- **Technical information** about the survey is in Appendix 1. Detailed reports about the survey methodology (Ministry of Health 2012b) and the survey questionnaires are online.
- **Regional results** from the survey will be available online in early 2013.
- **Further survey results** will be available online when they are published.
- **Survey datasets** (microdata) will be available to researchers through Statistics New Zealand by mid 2013.

Glossary

Term	Description
95% confidence interval	Indicates the level of uncertainty of the value, due to taking a sample of the population. If we selected multiple samples, the 95% confidence interval is the range that would enclose the 'true' population value 95% of the time.
Adjusted rate ratio	The ratio of two rates. It shows whether the outcome of interest is more likely (adjusted rate ratio greater than 1) or less likely (adjusted rate ratio less than 1) in the group of interest, compared with the reference group.
Adjusting	A statistical procedure used to control for any differences in age, sex and ethnic structures of populations being compared.
Age standardisation	A statistical procedure that standardises the age structures of different population groups so that they are comparable.
Confounding	Interference by a third variable that distorts the association between two variables. For example, age confounds the relationship between ethnicity and health outcomes as some ethnic groups have a more youthful population.
Diagnosed	Having a health condition identified by a doctor.
Least deprived	People living in NZDep2006 quintile 1 (the 20% least socioeconomically deprived small areas in New Zealand).
Most deprived	People living in NZDep2006 quintile 5 (the 20% most socioeconomically deprived small areas in New Zealand).
Neighbourhood deprivation	An area-based measure of socioeconomic position or deprivation. In this report, neighbourhood deprivation refers to the NZDep2006.
NZDep2006	The New Zealand Index of Deprivation 2006. This is an area-based measure of neighbourhood socioeconomic deprivation.
Prevalence	A measure of the level of disease or outcome of interest in the population, at one point in time. Also referred to as a **rate** in this report.
Rate	In this report, a **prevalence** estimate.
Rate ratio	A comparison of two rates; for example, comparing men and women.
Significant	In this report, **statistically significant**; that is, the result is unlikely to happen by chance. In this report, statistical significance is reported at the 5% significance level (ie, *p*-value less than 0.05). Where appropriate, statistical testing (using a *t*-test) was carried out to determine significance.
Standardising	A statistical procedure that adjusts for differences between the populations being compared.
Statistically significant	Refers to results that are statistically significant at the 5% significance level (*p*-value less than 0.05).
Total response ethnicity	A method of reporting ethnicity where people who reported more than one ethnic group are counted once in each group they reported. This means that the total number of responses for all ethnic groups can be greater than the total number of people who stated their ethnicities.

Section 1: Health Status

This section focuses on how New Zealanders perceive or rate their own health.

Key findings

- **Most adults report being in good health**
  - Most adults (89%) reported that they were in good health (that is, they rated their own health as excellent, very good or good).
  - Māori adults were less likely to report being in good health in 2011/12 than they were in 2006/07. There were no changes for other groups since 2006/07.
  - While older adults (75+ years) were less likely to report being in good health than younger people, four in five (82%) older adults reported that they were in good health.
  - Some population groups were less likely to report being in good health, including Māori adults, Pacific adults and adults living in more deprived areas.

Table 3: Summary of self-rated health status for adults aged 15 years and over, 2011/12

Indicator	Percent	Estimated number	Time trends since 2006/07
Excellent, very good or good self-rated health	89	3,154,000	≈ No change

1.1 Self-rated health

The majority of adults (89%) report that they are in good health.

Self-rated health is a widely used indicator of health. It measures people's perception of their own physical and mental wellbeing. Having fair or poor self-rated health is a strong predictor of future use of health services and mortality.

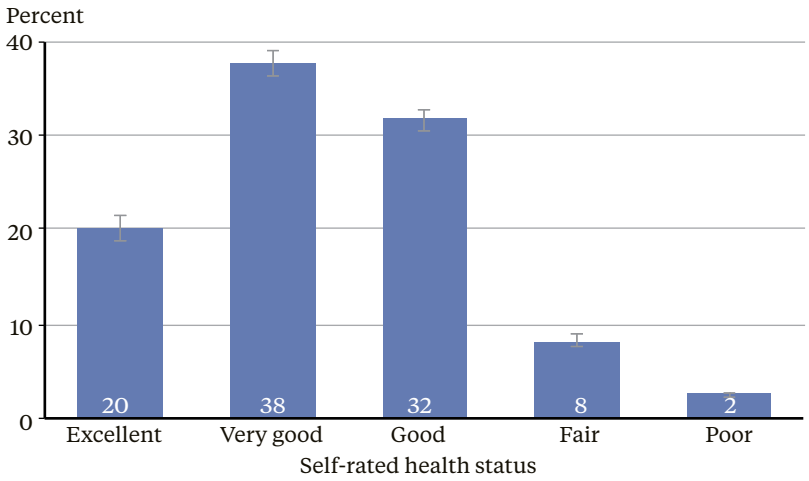
The survey asked an internationally used question: 'How would you rate your health? Excellent, very good, good, fair or poor?'

In this report, **being in good health** means having excellent, very good or good self-rated health.

Most adults report being in good health

Most people (89%) rated their health as good or better (that is, good, very good or excellent). About 11% of people had fair or poor health (Figure 1).

Figure 1: Self-rated health for adults



Note: Due to rounding, numbers may not add to 100%.

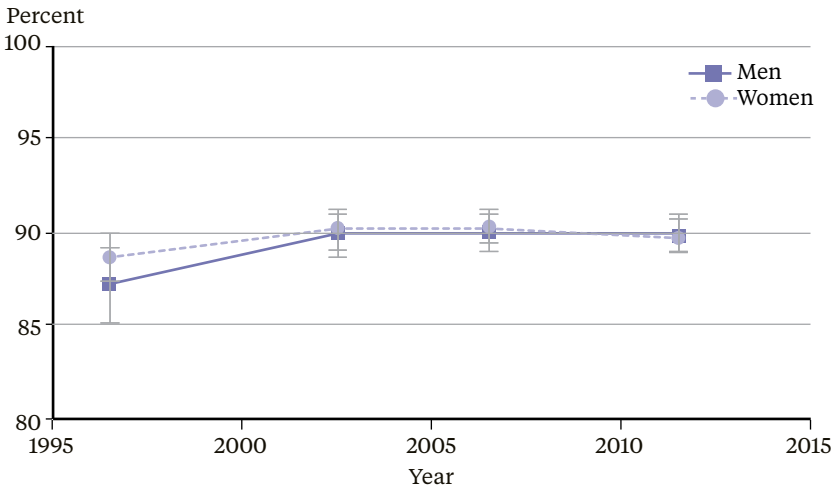
Source: 2011/12 New Zealand Health Survey (15 years and over)

In 2011/12 men were just as likely as women to report being in good health.

Self-rated good health has not changed since 2002/03 – for men or women

Since 2002/03 the percentage of men or women reporting that they were in good health has not changed (Figure 2).

Figure 2: Excellent, very good or good self-rated health, by sex, 1996/97–2011/12



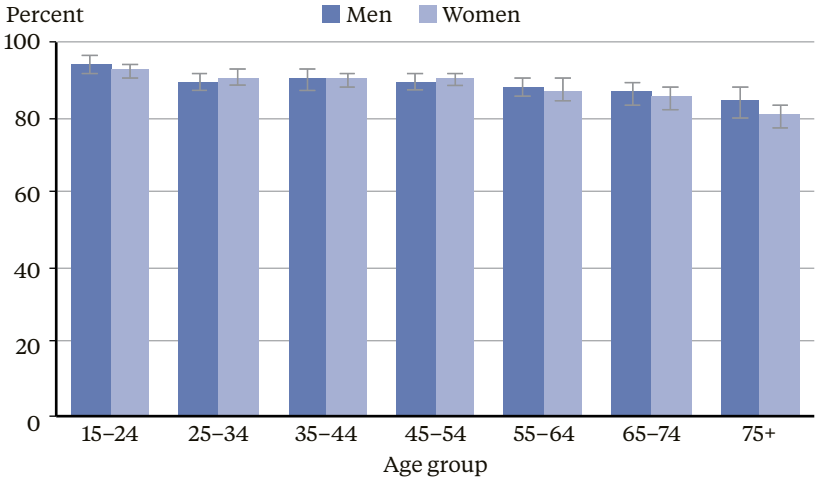
Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (1996/97, 2002/03, 2006/07, 2011/12) (15 years and over)

Most older people report that they are in good health

Younger people were more likely than older people to report being in good health (Figure 3). However, most adults aged 75 years and over (82%) reported having excellent, very good or good health (and therefore 18% had fair or poor self-rated health).

Figure 3: Excellent, very good or good self-rated health, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori and Pacific adults are less likely to report being in good health

In all ethnic groups, the majority of people reported being in good health, although Māori and Pacific adults were less likely to do so (Table 4). About 84% of Māori adults reported being in excellent, very good or good health (and therefore 16% had fair or poor self-rated health).

Table 4: Excellent, very good or good self-rated health, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	89	90	89	3,154,000
	Māori	84	83	84	371,000
	Pacific	86	85	87	176,000
	Asian	89	92	87	335,000
	European/Other	90	90	90	2,506,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	0.9*	0.9*	0.9*	
	Pacific	0.9*	0.9*	0.9*	
	Asian	1.0	1.0	1.0	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

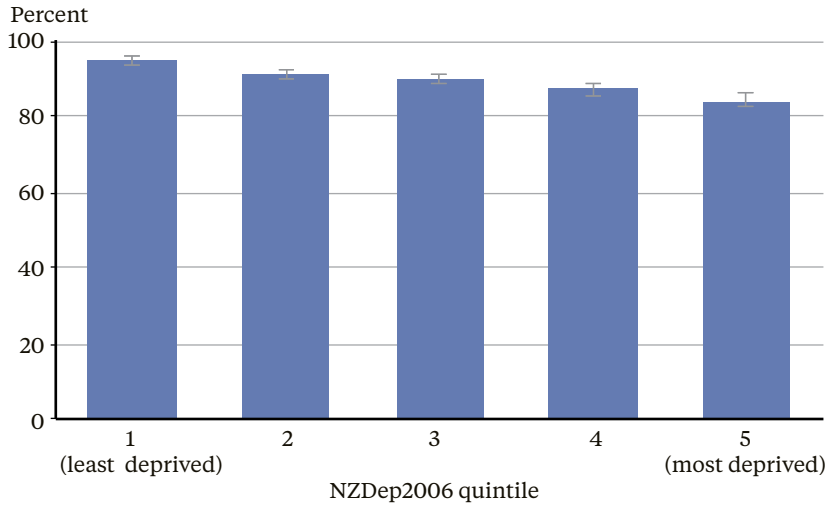
Māori adults were less likely to report being in good health in 2011/12 than they were in 2006/07. There were no changes for other groups since 2006/07.

People living in the most deprived areas are less likely to be in good health

Higher levels of neighbourhood deprivation were linked with worse self-rated health.

People living in the most deprived areas were less likely to report being in good health (84%) than people living in the least deprived areas (95%) (Figure 4).

Figure 4: Excellent, very good or good self-rated health, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

After adjusting for differences in age, sex and ethnic groups, people in the least deprived areas were 1.1 times as likely to report being in good health as people in the most deprived areas.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables. Data for the following indicators are also available in the online data tables:

- fair or poor self-rated health
- individual self-rated health categories (excellent, very good, good, fair, poor).

What was the survey question?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- How would you rate your health? Excellent, very good, good, fair, poor?

Section 2: Health Behaviours and Risk Factors

A range of factors can affect a person's health and wellbeing. Some of these, including smoking, hazardous drinking and obesity, can increase the risk of poor health. Others, such as eating a diet high in vegetables and fruit and being physically active, can have a positive effect on health.

This section focuses on selected health behaviours and risk factors that have a major influence on our health – namely, smoking, vegetable and fruit intake, physical activity and obesity.

Key findings

- **Smoking rates continue to decrease – but not for everyone**
  - Fewer than one in five adults were current smokers (ie they smoke at least monthly), with most smoking daily.
  - The daily smoking rate has fallen since 2006/07 (from 18% to 17%), particularly among youth aged 15–17 years (from 14% to 6%).
  - However, smoking rates for Māori have not changed since 2006/07 and remain high, with 41% of Māori adults still current smokers.
- **Obesity levels keep increasing, with about 1 million adults now obese**
  - Almost three in ten adults were obese in 2011/12. The obesity rate has steadily increased since 1997.
  - There were higher obesity rates among Māori (44%) and Pacific (62%) adults, although there has been no change in these rates since 2006/07.
- **Younger men are more likely to have unhealthy behaviours**
  - Men younger than 35 years were generally more likely to smoke and were less likely to eat the recommended amount of vegetables and fruit.
- **Neighbourhood deprivation is strongly related to health behaviours and risk factors**
  - All health behaviours and risk factors were strongly influenced by neighbourhood deprivation. In particular, people living in the most deprived areas had higher rates of smoking and obesity than those in the least deprived areas. The influence of neighbourhood deprivation was reflected in the higher rates of some of the health behaviours in the Māori and Pacific populations.

Table 5: Summary of health behaviours and risk factors for adults aged 15 years and over, 2011/12

Indicator	Percent	Estimated number	Time trends since 2006/07
Current smoking	18	650,000	≈ No change
Daily smoking	17	583,000	▼ Decrease
Vegetable intake (3+/day)	68	2,417,000	▲ Increase
Fruit intake (2+/day)	59	2,068,000	≈ No change
Physically active	54	1,905,000	≈ No change
Obesity	28	1,004,000	▲ Increase

Results on hazardous drinking will be published by mid 2013.

2.1 Tobacco smoking

The daily smoking rate continues to fall, as it has done since 1996/97.

Smoking harms nearly every organ and system in the body. It is the main cause of lung cancer and respiratory conditions such as emphysema and chronic bronchitis. Smoking is also a major cause of heart disease, stroke and other cancers.

Current smoking means smoking at least monthly and having ever smoked more than 100 cigarettes. To compare changes in the smoking rate over time, this report focuses on daily smoking as data on this behaviour are available from 1996/97 onwards.

One in five people smokes, with similar rates for men and women

In 2011/12 fewer than one in five (18%) adults were current smokers, which is about 650,000 people. Most current smokers smoked daily (17% of all adults).

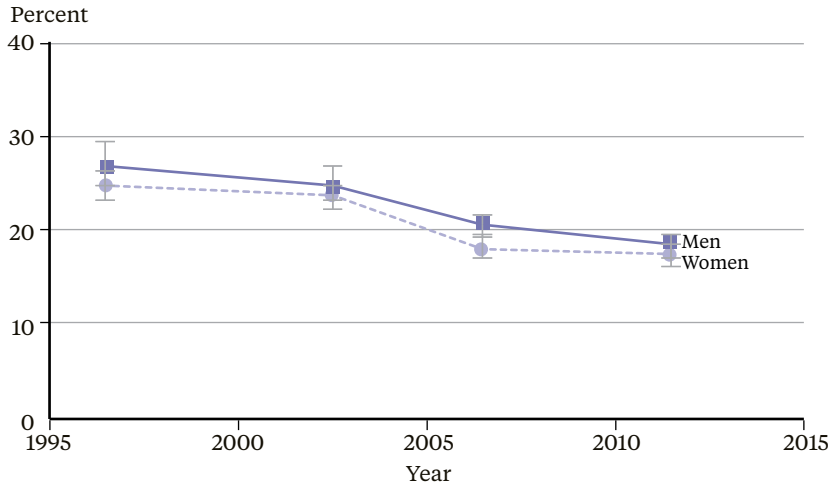
The rate of current smoking was 19% for men and 18% for women. There was no difference in the rates for men and women after adjusting for age.

The daily smoking rate continues to decrease

The daily smoking rate decreased from 2006/07 to 2011/12 for adults, continuing the downward trend from previous years. In 1996/97, 25% of adults smoked daily, compared with 18% in 2006/07 and 17% in 2011/12.

The decrease in the daily smoking rate since 2006/07 was significant for men but not for women (Figure 5).

Figure 5: Daily smoking, by sex, 1996/97–2011/12



Note: Rates are age-standardised to the WHO world population.

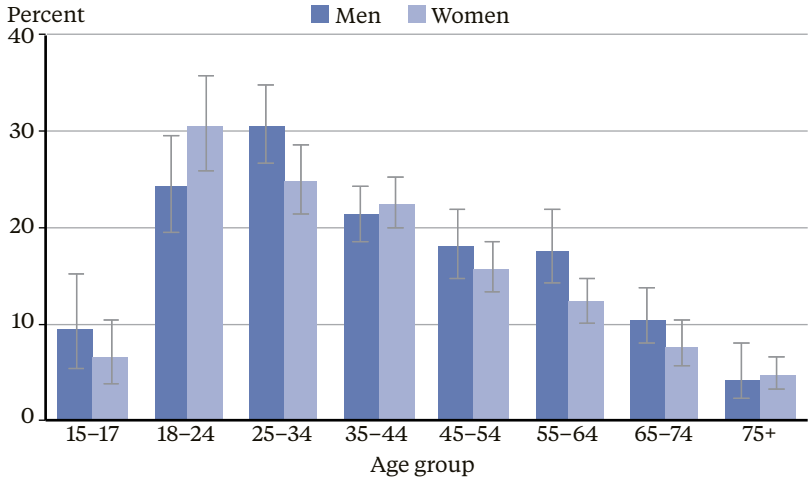
Source: New Zealand Health Surveys (1996/97, 2002/03, 2006/07, 2011/12) (15 years and over)

Similarly, the rate of current smoking dropped from 20% in 2006/07 to 18% in 2011/12, although this decrease was not significant after standardising for age.

Smoking is most common among adults aged 18–34 years

Younger adults were more likely to be current smokers, particularly women aged 18–24 years and men aged 25–34 years. Smoking rates were lower among those aged 15–17 years and in the older age groups (Figure 6).

Figure 6: Current smoking, by age group and sex

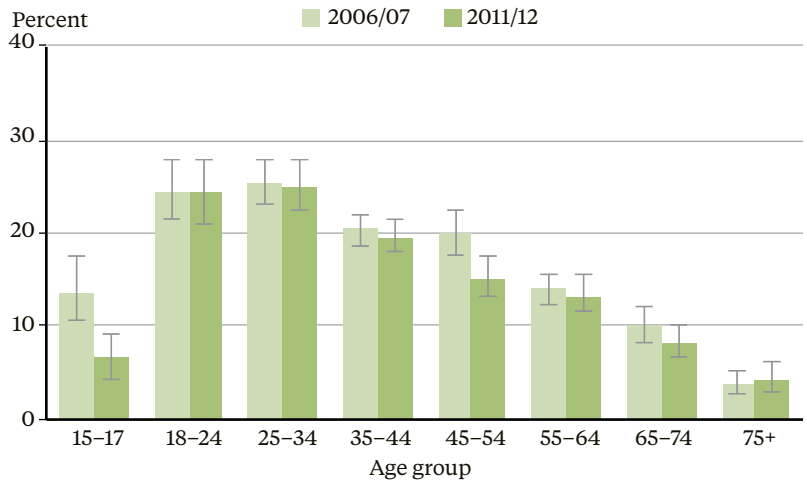


Source: 2011/12 New Zealand Health Survey (15 years and over)

The youth smoking rate has fallen

Since 2006/07 the rate of daily smoking among those aged 15–17 years has dropped from 14% to 6% (Figure 7). There was also a decrease in the 45–54 year age group over this time.

Figure 7: Daily smoking, by age group, 2006/07 and 2011/12



Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

The trends in current smoking since 2006/07 were similar to the trends in daily smoking for all age groups.

Higher smoking rates persist among Māori adults

Māori had much higher rates of current smoking than other people, with two in five Māori adults smoking (41%). Adjusting for age, Māori men were 2.1 times as likely to be current smokers as non-Māori men, and Māori women were 2.9 times as likely as non-Māori women (Table 6).

Pacific adults also had higher smoking rates, with one in four (26%) smoking. Pacific adults were 1.3 times as likely to be current smokers as non-Pacific adults, adjusting for age and sex.

Asian women were less likely to smoke than other women.

Table 6: Current smoking, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	18	19	18	650,000
	Māori	41	38	44	182,000
	Pacific	26	28	25	54,000
	Asian	10	18	3	37,000
	European/Other	17	17	16	464,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	2.4*	2.1*	2.9*	
	Pacific	1.3*	1.3*	1.3*	
	Asian	0.4*	0.8	0.1*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

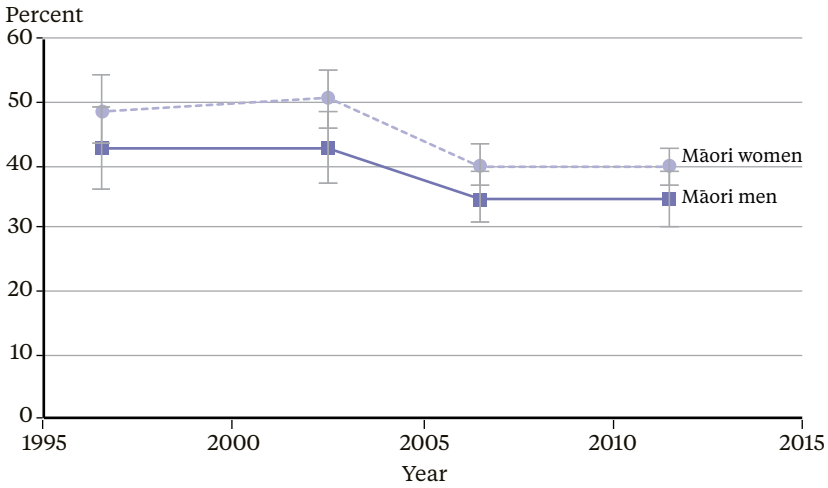
1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

While the daily smoking rate dropped for Māori men and women between 2002/03 and 2006/07, there has been little change in the smoking rates (either daily or current smoking) since then (Figure 8).

Figure 8: Daily smoking among Māori men and women, 1996/97–2011/12



Note: Rates are age-standardised to the WHO world population.

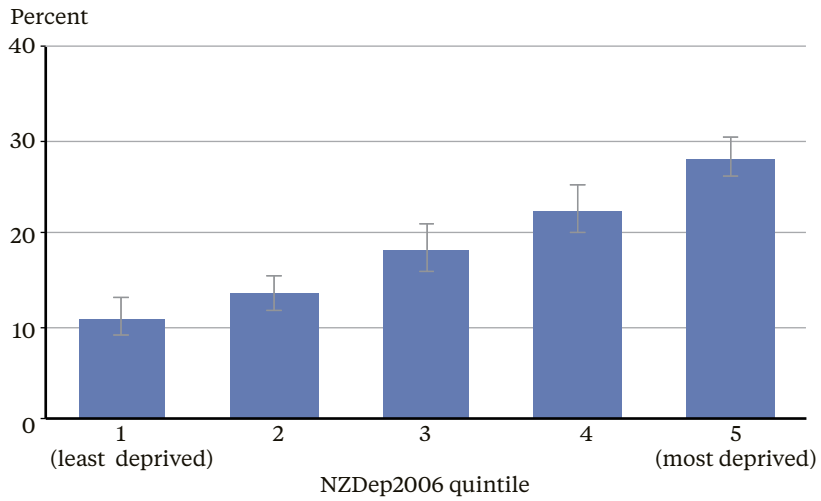
Source: New Zealand Health Surveys (1996/97, 2002/03, 2006/07, 2011/12) (15 years and over)

There have been almost no significant changes in the rate of daily smoking or current smoking since 2006/07 for Pacific or Asian adults. The exception was a drop in the current smoking rate for Asian women, after standardising for age.

Smoking is more common in more deprived neighbourhoods

There was a strong relationship between smoking and neighbourhood deprivation. Current smoking was much more common among people living in the most deprived areas (28%) than among people in the least deprived areas (11%) (Figure 9).

Figure 9: Current smoking, by neighbourhood deprivation



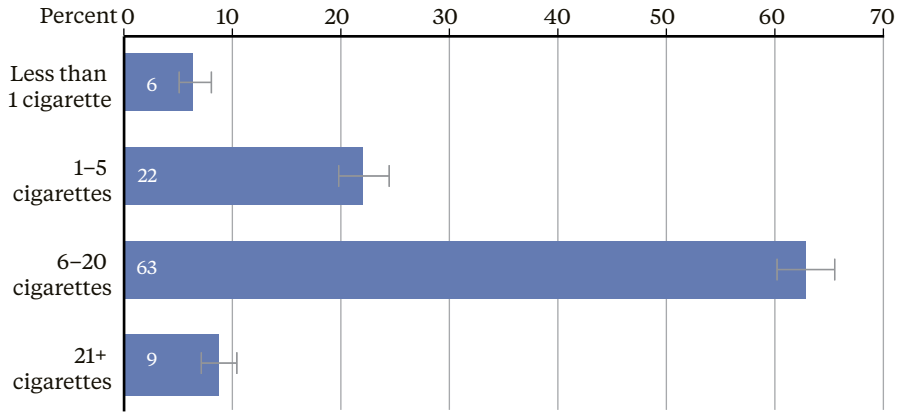
Source: 2011/12 New Zealand Health Survey (15 years and over)

The relationship between smoking and deprivation remained strong after adjusting for differences in age, sex and ethnic group. People in the most deprived areas were 2.5 times as likely to be current smokers as people in the least deprived areas, after adjustment.

Most smokers smoke 6 to 20 cigarettes each day

Among current smokers, the majority (63%) smoked 6–20 cigarettes each day (Figure 10). A further 9% smoked 21 or more cigarettes each day. There has been no significant change in these rates since 2006/07.

Figure 10: Number of cigarettes smoked per day, among current smokers



Source: 2011/12 New Zealand Health Survey (15 years and over)

New Zealand smoking rate is the 10th lowest in OECD

New Zealand had the 10th lowest daily smoking rate among the 34 member countries of the Organisation for Economic Co-operation and Development (OECD) in 2009 (OECD 2011). Based on the data from the earlier 2006/07 survey, the New Zealand daily smoking rate (18%) was lower than the OECD average (22%) but higher than the Australian rate (17%).

Where can you go for more information?

You can find the data for current smoking and daily smoking in Appendix 3 and in the online data tables. Data for the following indicators are also available in the online data tables:

- number of cigarettes smoked each day (among current smokers).

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever smoked cigarettes or tobacco at all, even just a few puffs? Please include pipes and cigars.
- Have you ever smoked a total of more than 100 cigarettes in your whole life?
- How often do you now smoke? You don't smoke now; at least once a day; at least once a week; at least once a month; less often than once a month.
- On average, how many cigarettes do you smoke a day? Less than 1 per day; 1–5 per day; 6–10 per day; 11–15 per day; 16–20 per day; 21–25 per day; 26–30 per day; 31 or more a day.

Current smoking was defined as smoking at least monthly, weekly or daily, and having smoked more than 100 cigarettes in the person's lifetime. The 100-cigarette threshold limits the indicator to only people with established tobacco use. This indicator was available from the 2006/07 and 2011/12 New Zealand Health Surveys.

Daily smoking was defined as smoking every day, and having smoked more than 100 cigarettes in the person's lifetime. This indicator was available from the 1996/97, 2002/03, 2006/07 and 2011/12 New Zealand Health Surveys.

2.2 Vegetable and fruit intake

Compared with their intake in 2006/07, more men are eating the recommended amount of vegetables and fruit each day, but fewer women are eating the recommended amount of fruit.

Vegetables and fruit are an important part of a healthy diet. Eating enough vegetables and fruit can help protect against major diseases like heart disease, stroke, high blood pressure and some cancers.

The Ministry of Health recommends that adults eat at least three servings of vegetables and at least two servings of fruit each day.

Women are more likely than men to eat the recommended amount of vegetables and fruit

Seven in ten adults (68%) reported eating at least three servings of vegetables each day. Women were more likely (72%) to eat the daily recommended amount of vegetables than men (64%).

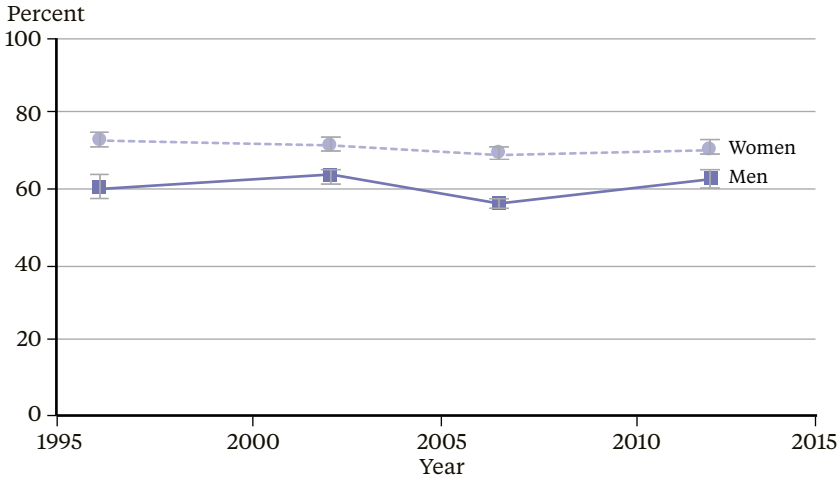
People were less likely to meet the fruit guidelines than the vegetable guidelines. Six in ten adults (59%) ate at least two servings of fruit each day. As with vegetables, more women met the recommended fruit guidelines (64%) than men (53%).

Compared with 2006/07, more men are meeting the guidelines for vegetables and fruit, but fewer women are meeting fruit guidelines

The percentage of adults who eat at least three servings of vegetables each day increased from 64% in 2006/07 to 68% in 2011/12 (Figure 11).

This increase was significant for men but not women.

Figure 11: Ate recommended number of servings of vegetables (3+ per day), by sex, 1997–2011/12



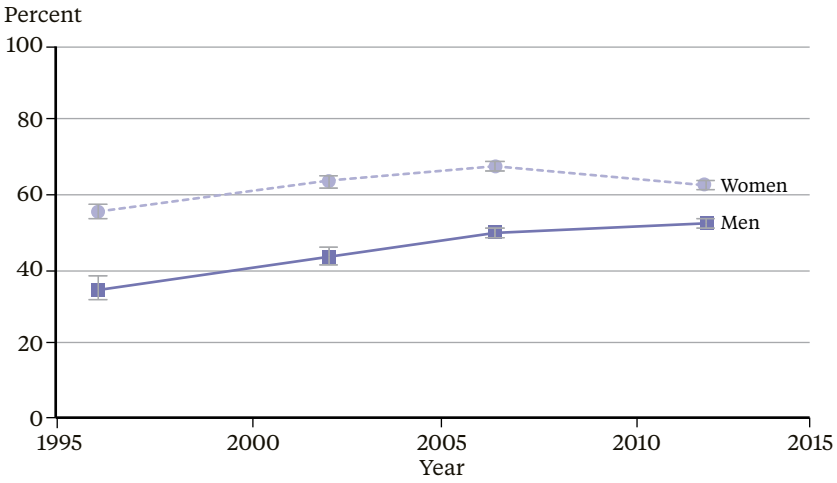
Note: Rates are age-standardised to the WHO world population.

Source: 1997 National Nutrition Survey, New Zealand Health Surveys (2002/03, 2006/07, 2011/12) (15 years and over)

After a steady increase from 1997 to 2006/07, there was no overall change in the percentage of adults eating at least two servings of fruit each day from 2006/07 to 2011/12. However, there were different trends for men and women (Figure 12).

For men, the percentage meeting the daily fruit intake had increased since 2006/07, after standardising for age. However, fewer women were meeting the recommended daily fruit intake in 2011/12 than in 2006/07.

Figure 12: Ate recommended number of servings of fruit (2+ per day), by sex, 1997–2011/12



Note: Rates are age-standardised to the WHO world population.

Source: 1997 National Nutrition Survey, New Zealand Health Surveys (2002/03, 2006/07, 2011/12) (15 years and over)

Older age groups are more likely than younger groups to eat the recommended amount of vegetables and fruit

For vegetables, the percentage of men and women eating the recommended daily amount generally increased with age (Figure 13).

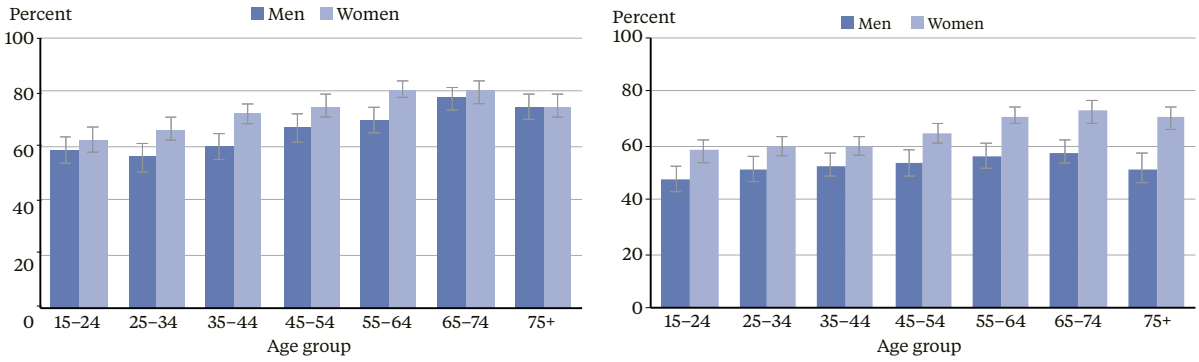
Women aged 55 years and older were more likely to meet the recommended daily intake of vegetables, and of fruit, than younger men and women.

For men, there were no major trends by age in meeting the daily recommended fruit guidelines. Less than 60% of men in all age groups ate at least two servings of fruit each day.

Figure 13: Ate recommended daily intake of vegetables (A) and fruit (B), by age group and sex

A Vegetables (3+ servings per day)

B Fruit (2+ servings per day)



Source: 2011/12 New Zealand Health Survey (15 years and over)

Vegetable and fruit intake varies by ethnic group

Pacific and Asian adults were less likely than other people to eat the recommended amount of vegetables in 2011/12 (Table 7). Māori men had a similar vegetable intake to non-Māori men.

Table 7: Ate recommended daily intake of vegetables (3+ per day), by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	68	64	72	2,417,000
	Māori	64	61	67	285,000
	Pacific	46	44	47	93,000
	Asian	54	53	55	202,000
	European/Other	72	67	76	2,004,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.0	1.0	0.9*	
	Pacific	0.7*	0.7*	0.7*	
	Asian	0.8*	0.8*	0.8*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

For fruit, Māori adults were less likely to eat at least two servings each day than non-Māori adults (Table 8). There were no significant differences for Pacific and Asian adults.

Table 8: Ate recommended daily intake of fruit (2+ per day), by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	59	53	64	2,068,000
	Māori	49	47	52	219,000
	Pacific	54	50	58	111,000
	Asian	56	52	59	209,000
	European/Other	60	53	67	1,674,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	0.8*	0.9*	0.8*	
	Pacific	0.9	1.0	0.9	
	Asian	1.0	1.0	0.9	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

More Māori and Asian men are eating 3+ servings of vegetables than in 2006/07

The percentage of Māori men and Asian men meeting the vegetable intake guidelines increased from 2006/07 to 2011/12. These trends were similar to those for men in the total population.

There were no significant changes in the percentages of Māori women, Asian women and Pacific men and women meeting the vegetable guidelines from 2006/07 to 2011/12.

Fewer Māori and Pacific women are eating 2+ servings of fruit each day than in 2006/07

In 2011/12 fewer Māori and Pacific women ate the recommended amount of fruit than in 2006/07, in contrast to the increasing trend from 1997 to 2006/07. These trends were similar to those among women in the total population.

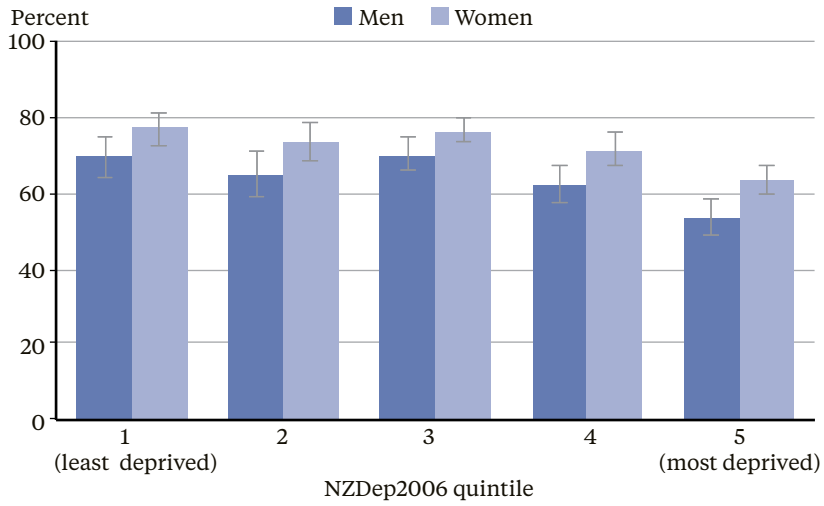
There were no changes in fruit intake for Asian women, or for men of Māori, Pacific or Asian ethnicity, from 2006/07.

People living in more deprived areas are less likely to eat the recommended amount of vegetables and fruit

There was a clear relationship between higher levels of neighbourhood deprivation and lower vegetable and fruit intake.

People in the most deprived areas were less likely to eat the recommended three or more servings of vegetables each day (59%) than people in the least deprived areas (73%) (Figure 14).

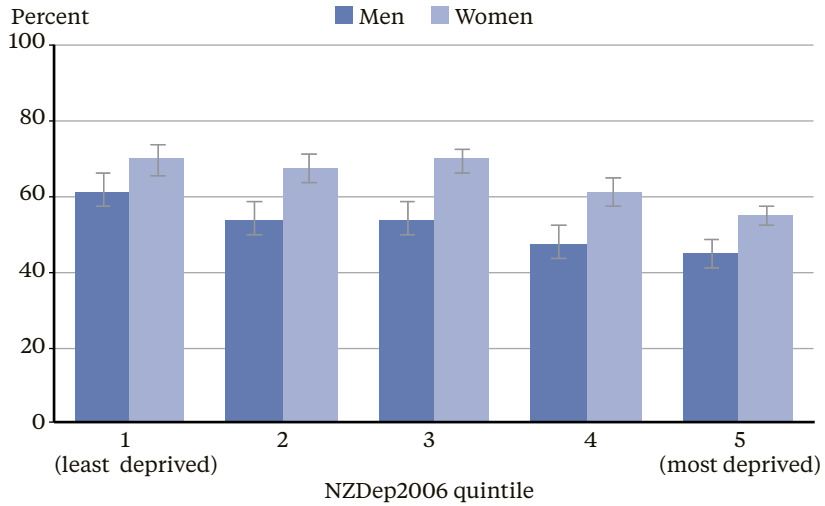
Figure 14: Ate recommended daily intake of vegetables (3+ per day), by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Similarly, people living in the most deprived areas were less likely to eat the recommended two or more servings of fruit each day (50%) than people in the least deprived areas (65%) (Figure 15).

Figure 15: Ate recommended daily intake of fruit (2+ per day), by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in the least deprived areas were 1.1 times as likely to eat the recommended amount of vegetables, and 1.3 times as likely to eat the recommended amount of fruit, as people in the most deprived areas, adjusting for age, sex and ethnic group.

Where can you go for more information?

You can find the data for the above indicators in Appendix 3 and in the online data tables. Data for the following indicator are also available in the online data tables:

- meets the recommended three or more servings of vegetables and two or more servings of fruit each day.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- On average, how many servings of fruit do you eat per day? Please include all fresh, frozen, canned and stewed fruit. Do not include fruit juice or dried fruit. A serving = 1 medium piece or 2 small pieces of fruit or ½ cup of stewed fruit. For example, 1 apple and 2 small apricots = 2 servings.
- On average, how many servings of vegetables do you eat per day? Please include all fresh, frozen and canned vegetables. Do not include vegetable juices. A serving = 1 medium potato/kumara or ½ cup cooked vegetables or 1 cup of salad vegetables. For example, 2 medium potatoes + ½ cup of peas = 3 servings.

2.3 Physical activity

Just over half of all adults are physically active.

People who are less likely to be physically active include women, older adults, Pacific and Asian adults and people living in more deprived areas.

Physical activity has a range of health benefits, including preventing and managing long-term conditions like heart disease, cancer, osteoporosis, diabetes, obesity, high blood pressure and depression.

The Ministry of Health recommends that adults do at least 30 minutes of moderate-intensity physical activity (such as brisk walking or equivalent vigorous activity) at least five days a week. Doing more than this amount of daily activity (or at a higher intensity) can give additional health benefits and help people lose weight.

In this report, being **physically active** is defined as meeting the above recommendations.

Just over half of all adults are physically active

About 54% of adults were physically active in 2011/12. Men were more likely to meet the physical activity recommendations (57%) than women (51%).

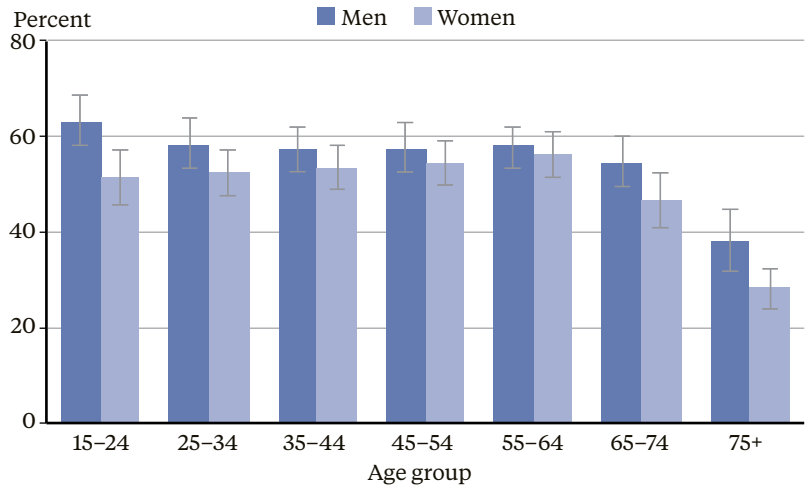
Since 2002/03 there has been no change in the percentage of people who are physically active.

Older adults are less likely to be physically active

The percentage of men who were physically active was similar across age groups from 15–74 years, at about 55–65%.

Older adults aged 75 years and over were less likely to meet physical activity recommendations, for both men (38%) and women (28%) (Figure 16).

Figure 16: Physically active, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Pacific and Asian adults are less likely to be physically active

Pacific women were less likely to meet the recommendations for physical activity (40%) than women in the total population (Table 9).

Fewer than half of Asian men and women (39%) met the physical activity recommendations. The percentage of Asian men meeting the physical activity guidelines has decreased since 2006/07, after standardising for age.

Māori adults had similar levels of being physically active as other adults.

Table 9: Physically active, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	54	57	51	1,905,000
	Māori	57	61	54	254,000
	Pacific	46	53	40	95,000
	Asian	39	39	39	147,000
	European/Other	56	59	52	1,555,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.0	1.0	1.0	
	Pacific	0.8*	0.9	0.8*	
	Asian	0.7*	0.6*	0.7*	

*Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

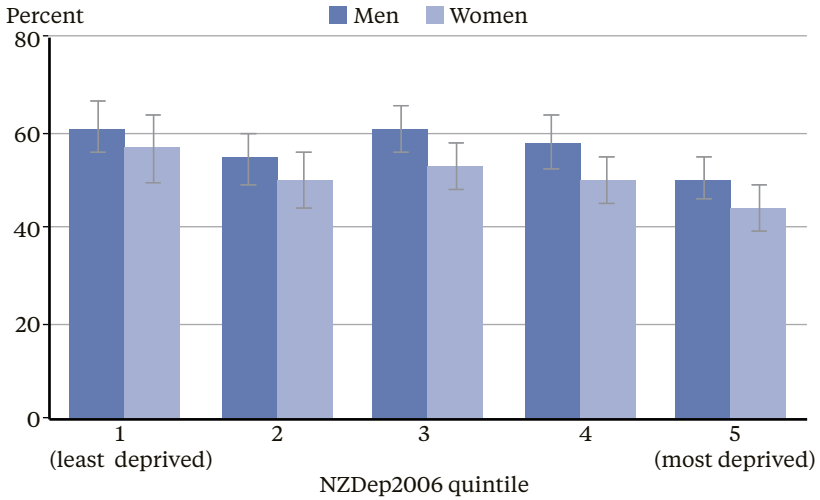
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in more deprived areas are less likely to be physically active

Fewer people were physically active in the most deprived areas (47%) than in the least deprived areas (59%). This pattern was the same for both men and women (Figure 17).

Figure 17: Physically active, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

People in the least deprived areas were 1.2 times as likely to be physically active as those in the most deprived areas, after adjusting for sex, age and ethnic differences.

One in eight adults did less than 30 minutes of exercise in the past seven days

About 12% of adults reported that they did little or no physical activity in the past seven days (less than 30 minutes of exercise in total over the past week). This is about 440,000 adults.

Older adults aged 75 years and over were much more likely to have done little or no physical activity in the past seven days (34%) than adults aged 15–24 years (9%). Women were more likely than men to have done little or no exercise in the past seven days, after standardising for age.

People of Māori, Pacific and Asian ethnicity were more likely to have done little or no physical activity in the past seven days than people of non-Māori, non-Pacific and non-Asian ethnicity respectively, accounting for differences in age and sex.

Doing little or no physical activity was related to neighbourhood deprivation. People living in the most deprived areas were 2.1 times as likely to have done little or no physical activity as people in the least deprived areas, after adjusting for age, sex and ethnic group.

Where can you go for more information?

You can find the data for the indicator 'physically active' in Appendix 3 and in the online data tables. Data for the following indicator are also available in the online data tables:

- Little or no physical activity (less than 30 minutes in total) in the past seven days.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over how many days in the last seven days they had done brisk walking, moderate activity and vigorous activity, and how many hours and minutes they had done per day for each of those activities. Examples of moderate and vigorous activity were given to respondents. These questions are together known as the New Zealand Physical Activity Questionnaire Short Form, and were also included in the 2002/03 and 2006/07 surveys.

Physical activity was calculated as time spent brisk walking + time spent doing moderate exercise + (2 x time spent doing vigorous activity); that is, one minute of vigorous activity was equated with two minutes of moderate-intensity activity.

This report uses the following definition:

- **physically active** – at least 30 minutes of moderate-intensity (or equivalent) physical activity per day on five or more days of the last week.

2.4 Obesity

Obesity rates have increased since 2006/07. About one million adults are now obese.

A healthy body size is important for good health and wellbeing. Being obese increases a person's risk of developing heart disease, type 2 diabetes and some types of cancer. Eating a healthy diet and getting regular physical activity can help maintain a healthy body size.

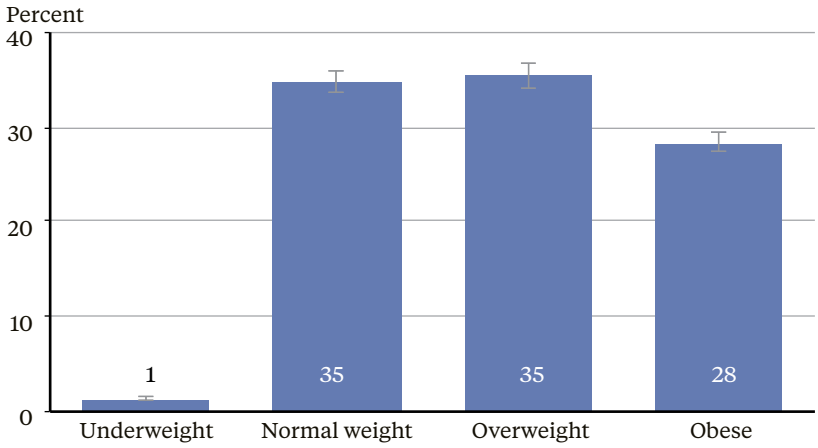
Obesity is defined as a body mass index (BMI) of 30 or more (calculated by dividing a person's weight in kilograms by the square of their height in metres). Survey interviewers measured respondents' height and weight, from which BMI could be calculated.

Obesity affects almost three in ten adults in New Zealand

In 2011/12 almost three in ten adults (28%) were obese – about one million New Zealand adults. The obesity rate was similar for men (28%) and women (29%).

A further 35% of adults were overweight (but not obese) (Figure 18). This means that two in three adults (64%) were either obese or overweight. One in three adults had a normal weight.

Figure 18: Body size of adults



Notes: Based on BMI (body mass index) using measured height and weight. Due to rounding, individual figures may not sum to 100%.

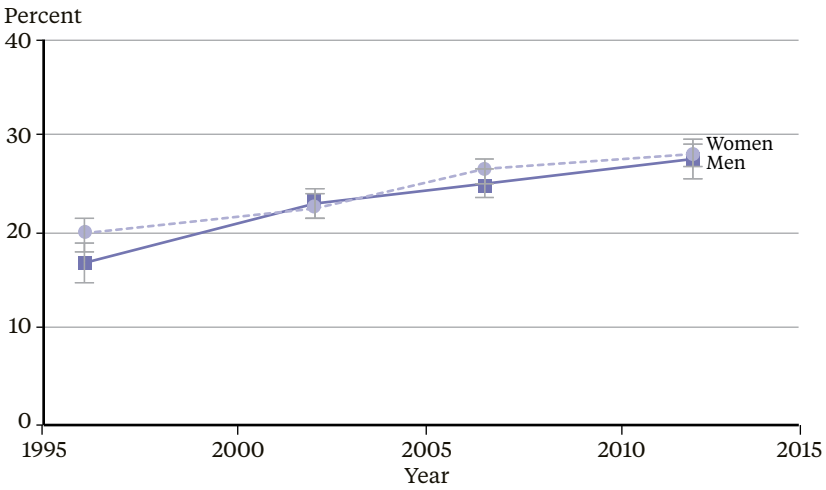
Source: 2011/12 New Zealand Health Survey (15 years and over)

Obesity rate continues to climb

In the past 15 years, the obesity rate has increased substantially. In 1997, 19% of adults were obese; this increased to 26% of adults in 2006/07 and 28% of adults in 2011/12.

The increase in the obesity rate has been similar for men and women over this period (Figure 19).

Figure 19: Obesity, by sex, 1997–2011/12



Note: Rates are age-standardised to the WHO world population.

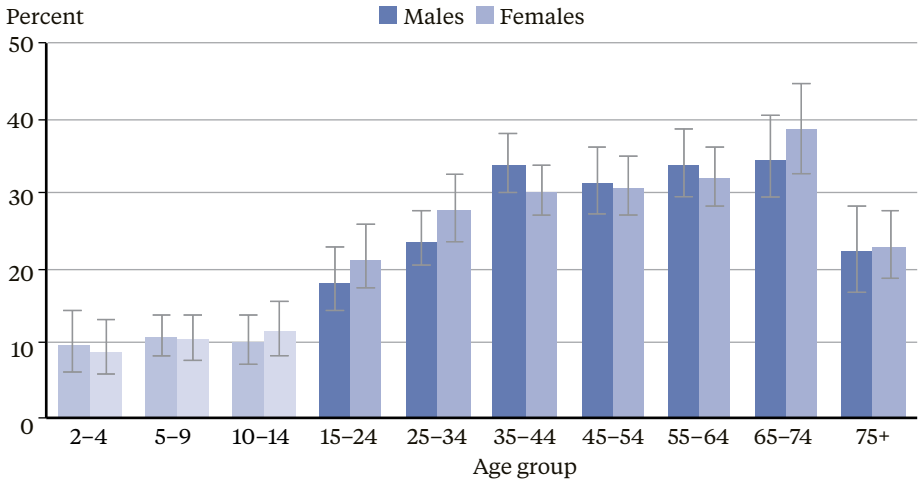
Source: 1997 National Nutrition Survey, New Zealand Health Surveys (2002/03, 2006/07, 2011/12) (15 years and over)

All age groups are affected by obesity

About one in three adults aged 35–74 years were obese. For women, the highest rate was among those aged 65–74 years (38%) (Figure 20).

The proportion of people who were obese increased substantially between the age groups of 10–14 years (11%) and 15–24 years (20%).

Figure 20: Obesity, by age group and sex, among children, adolescents and adults



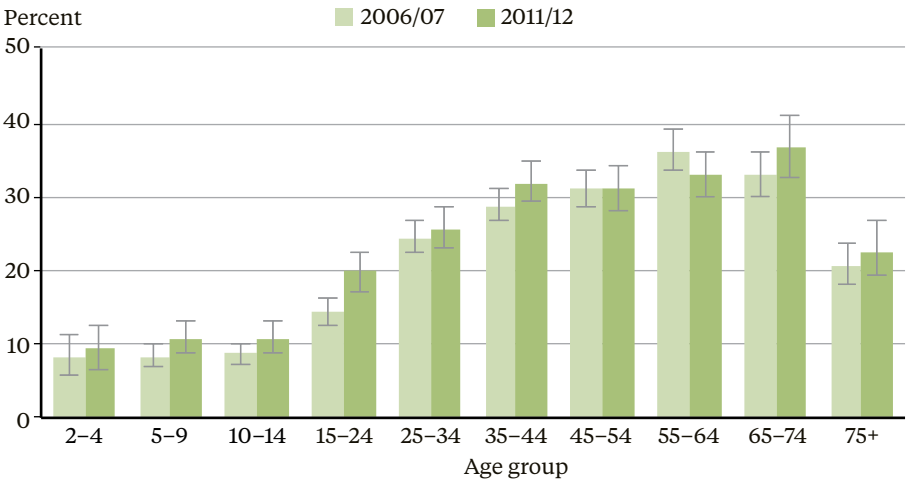
Source: 2011/12 New Zealand Health Survey (2 years and over)

Obesity rate among young adults has increased since 2006/07

Obesity has become more common among young adults since 2006/07. The obesity rate in those aged 15–24 years increased from 14% in 2006/07 to 20% in 2011/12 (Figure 21).

There were no other significant changes by age group from 2006/07 to 2011/12.

Figure 21: Obesity, by age group, among children, adolescents and adults, 2006/07 and 2011/12



Source: New Zealand Health Surveys (2006/07, 2011/12) (2 years and over)

Māori and Pacific obesity rates remain high but unchanged since 2006/07

Two in five Māori adults (44%) were obese (Table 10). Adjusting for age and sex, Māori were almost twice as likely to be obese as non-Māori adults.

The obesity rate was also high among Pacific adults (62%). Pacific adults were 2.5 times as likely to be obese as non-Pacific adults, after adjusting for age and sex differences.

One in four (26%) people of European/Other ethnicity was obese, while Asian adults had a lower rate of obesity (16%) than other people.

The obesity rates for Māori and Pacific have not increased since 2006/07. However, the obesity rate has increased for Asian adults from 11% in 2006/07 to 16% in 2011/12.

Table 10: Obesity, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	28	28	29	1,004,000
	Māori	44	44	45	197,000
	Pacific	62	59	64	127,000
	Asian	16	16	16	59,000
	European/Other	26	26	26	724,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.8*	1.8*	1.8*	
	Pacific	2.5*	2.4*	2.6*	
	Asian	0.5*	0.6*	0.5*	

*Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

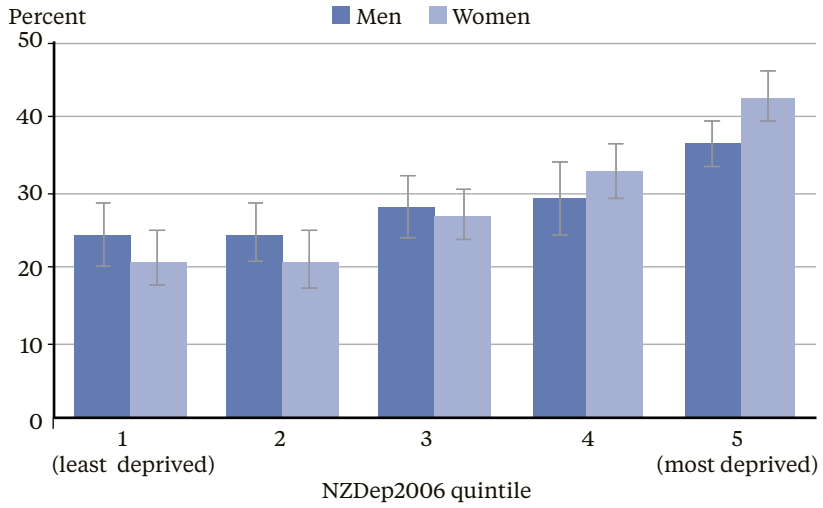
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Obesity is more common in areas of high deprivation

There was a clear association between neighbourhood deprivation and obesity in adults. The obesity rate was much higher among people living in the most deprived areas (40%) than among people living in the least deprived areas (23%) (Figure 22).

Figure 22: Obesity, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

The relationship between obesity and deprivation remained strong after adjusting for age, sex and ethnic group. People living in the most deprived areas were 1.6 times as likely to be obese as those in the least deprived areas, after adjustment.

New Zealand obesity rates are among the highest in the OECD

New Zealand adults had the third-highest obesity rate in the OECD in 2009, when comparing with countries that also measured height and weight to estimate obesity.

The New Zealand obesity rate (26% in 2006/07) was lower than the United States (34% in 2008) and Mexico (30% in 2006). However, New Zealand had a higher rate than Australia (25%) and the OECD average of 17% (OECD 2011).

Increase in average BMI

The BMI of the average New Zealand adult has increased over the past 15 years, from 26.1 in 1997 to 27.7 in 2011/12.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables. Data for the following indicators are also available in the online data tables:

- overweight
- normal weight
- underweight
- overweight or obese
- mean BMI.

How did we measure obesity?

Obesity is measured using the body mass index. BMI is calculated by dividing weight in kilograms by the square of height in metres (kg/m^2). In the New Zealand Health Survey, BMI was calculated for survey respondents using measured height and weight.

For adults aged 18 years and over, **obesity** is defined as a BMI of 30 or over, **overweight** is a BMI of 25.0–29.9, **normal range** is a BMI of 18.5–24.9 and **underweight** is a BMI of less than 18.5. These categories are based on the World Health Organization's BMI cut-off points for adults aged 18 years and over (WHO 2007).

For survey respondents aged 2–17 years, the age- and sex-specific BMI cut-off points developed by the International Obesity Taskforce (IOTF) were used to classify underweight, normal range, overweight and obesity (Cole et al 2000; Cole et al 2007). These BMI cut-offs were designed to coincide with the adult cut-offs at 18 years.

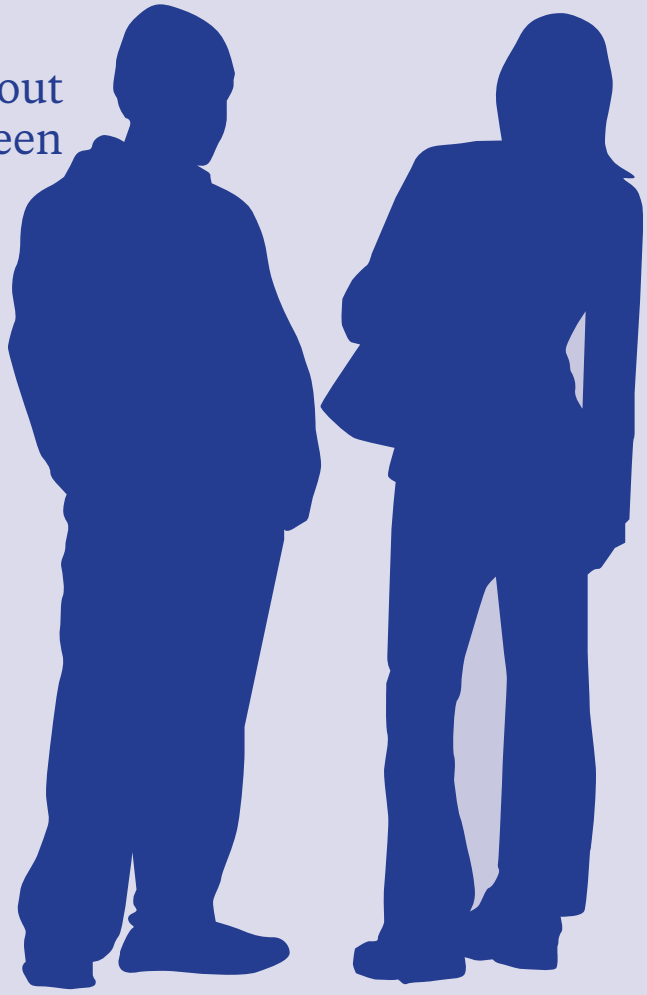
These BMI cut-off points identify populations at increased risk of health conditions associated with excess body fat. For all populations, the risk of these health conditions begins at a BMI in the normal range (below 25) and increases with increasing BMI.

Section 3: Cardiovascular Health

Cardiovascular disease is the leading cause of death in New Zealand. It has an impact on our lives and wellbeing, as well as on the delivery of health services.

This section focuses on two conditions that affect cardiovascular health: high blood pressure and high cholesterol. It also looks at two main types of cardiovascular disease: ischaemic heart disease and stroke.

These indicators rely on self-reported information about whether respondents have been diagnosed by a doctor with any of these conditions, and whether they are taking medication for them (where appropriate).



Key findings

- **Taking medication for high blood pressure and high cholesterol is becoming more common**
  - Compared with 2006/07, a higher proportion of people now take medication for high blood pressure (from 14% in 2006/07 to 16% in 2011/12) and for high cholesterol (from 8% in 2006/07 to 10% in 2011/12). Over the same period the rates of ischaemic heart disease and stroke have not changed.

    Changes over time may be due to changes in: (1) the number of people who have these conditions; (2) the number of people with the condition being diagnosed and treated; and/or (3) the ways these conditions are treated.
- **Cardiovascular disease mainly affects older adults**
  - The rates of diagnosed ischaemic heart disease and stroke increased with age, affecting mainly adults aged 55 years and over. The rates of medicated high blood pressure and high cholesterol showed similar patterns.
- **Māori and Pacific peoples have higher rates for some risk factors and diseases**
  - Māori had higher rates of medicated high blood pressure, ischaemic heart disease and stroke than other adults. Pacific adults were also more likely to be taking medication for high blood pressure and high cholesterol than other adults.
- **People living in more deprived areas have higher rates of heart disease and stroke**
  - Cardiovascular disease and related risk factors were more common in more deprived neighbourhoods. The exception was the proportion of people taking medication for high cholesterol, which was similar across deprivation levels.

Table 11: Summary of cardiovascular health indicators for adults aged 15 years and over, 2011/12

Indicator	Percent	Estimated number	Time trends since 2006/07
High blood pressure (medicated)	16	558,000	▲ Increase
High cholesterol (medicated)	10	367,000	▲ Increase
Ischaemic heart disease (diagnosed)	5	193,000	≈ No change
Stroke (diagnosed)	2	62,000	≈ No change

3.1 High blood pressure

One in six adults was taking medication for high blood pressure in 2011/12, which is a higher proportion than in 2006/07.

High blood pressure (also called hypertension) can damage the heart and kidneys. It can also lead to ischaemic heart disease, stroke and kidney (renal) failure. This condition occurs when the pressure in blood vessels is higher than normal, making the heart work harder to pump blood around the body.

High blood pressure can be caused by lifestyle factors, such as obesity, high salt intake, high alcohol intake and lack of physical activity.

In this report, the definition of **high blood pressure** only includes people who reported that at some time in their life a doctor told them they have high blood pressure and that they were taking medication for this condition.

This measure is likely to underestimate the true number of people with high blood pressure. It does not include people treated with exercise and diet only, and those who have not yet been diagnosed with high blood pressure. This measure may also be influenced by difficulties in accessing primary health care services and/or medication. Also, any changes over time may have been influenced by changes in treatment practices.

Over half a million adults take medication for high blood pressure

In 2011/12 one in six adults (16%) was taking medication for high blood pressure, which is about 558,000 adults.

Women were more likely to be taking medication for high blood pressure (17%) than men (14%).

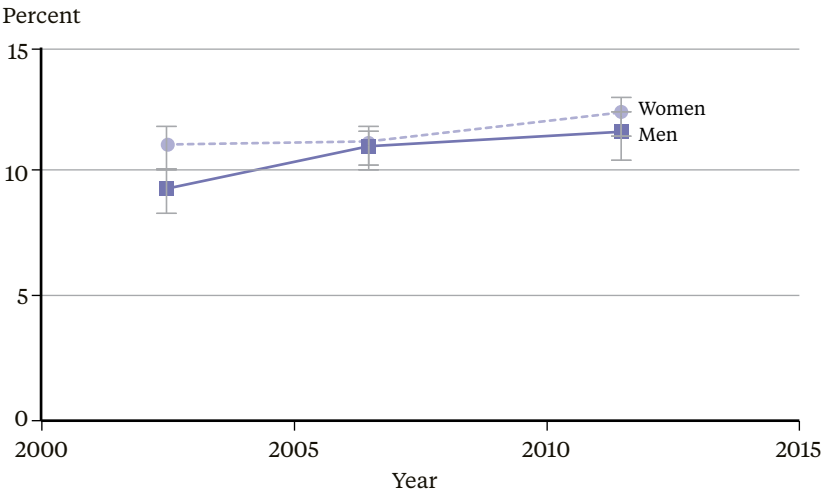
The rate of medicated high blood pressure has increased since 2006/07

More adults were taking medication for high blood pressure in 2011/12 (16%) than in 2006/07 (14%).

Trends differed by sex (Figure 23). For women, the rate of medicated high blood pressure was relatively constant from 2002/03 to 2006/07, and then increased from 2006/07 to 2011/12.

For men, the rate increased from 2002/03 to 2006/07, but has remained relatively stable since then.

Figure 23: Medicated high blood pressure, by sex, 2002/03–2011/12



Note: Rates are age-standardised to the WHO world population.

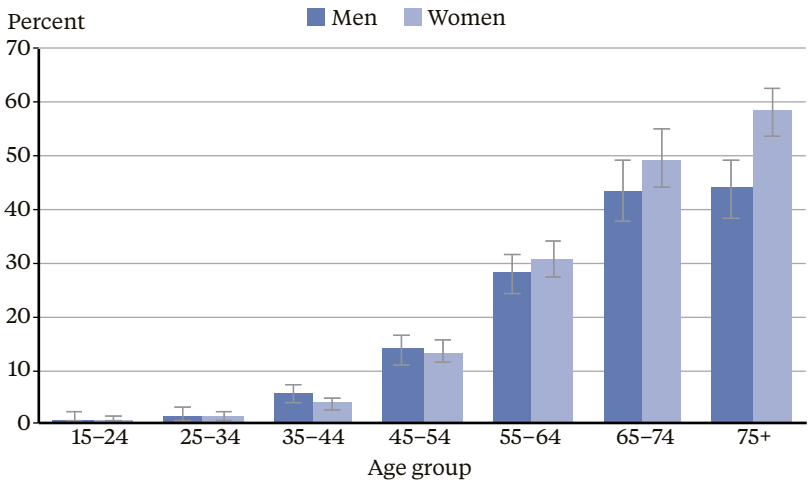
Source: New Zealand Health Surveys (2002/03, 2006/07, 2011/12) (15 years and over)

Half of people aged 65+ are taking medication for high blood pressure

The rate of medicated high blood pressure increased with age. About half of adults aged 65 years and over took medication for high blood pressure.

Among people aged 75 years and older, women were more likely than men to be taking medication for high blood pressure. In other age groups, men and women had similar rates (Figure 24).

Figure 24: Medicated high blood pressure, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori and Pacific adults are more likely to be taking medication for high blood pressure

About 13% of Māori adults were taking medication for high blood pressure (Table 12). After adjusting for age and sex differences, Māori adults were 1.3 times as likely as non-Māori to be taking medication for high blood pressure.

About 11% of Pacific adults were taking medication for high blood pressure. This rate was 1.4 times as high as the rate for non-Pacific adults, after adjusting for age and sex differences.

Table 12: Medicated high blood pressure, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	16	14	17	558,000
	Māori	13	13	13	59,000
	Pacific	11	11	12	23,000
	Asian	10	10	11	39,000
	European/Other	17	15	18	464,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.3*	1.4*	1.3*	
	Pacific	1.4*	1.5*	1.3*	
	Asian	1.1	1.1	1.1	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

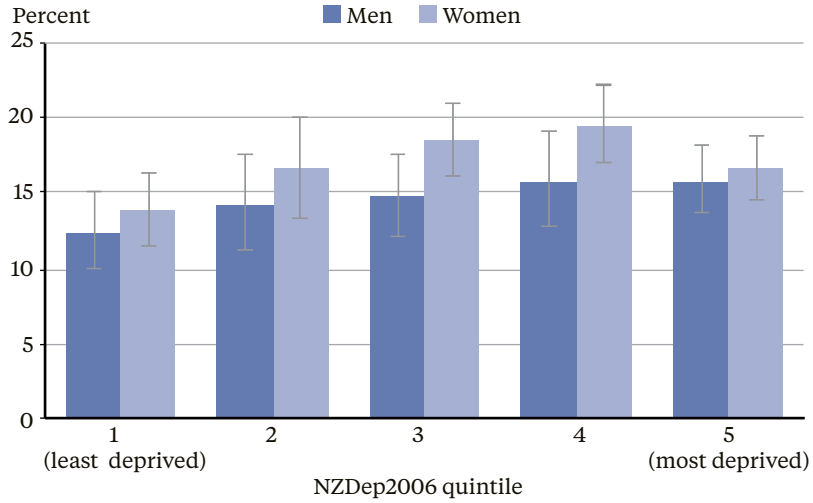
Source: 2011/12 New Zealand Health Survey (15 years and over)

The percentage of Māori taking medication for high blood pressure has increased from 10% in 2006/07 to 13% in 2011/12. However, after standardising for age, the rate of medicated high blood pressure for Māori, Pacific and Asian adults has not changed since 2006/07.

People living in more deprived areas are more likely to be taking medication for high blood pressure

Among people living in the most deprived areas, 16% were taking medication for high blood pressure, compared with 13% of people in the least deprived areas (Figure 25).

Figure 25: Medicated high blood pressure, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

People in the most deprived areas were 1.4 times as likely to have medicated high blood pressure as people in the least deprived areas, after adjusting for age, sex and ethnic differences.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been told by a doctor that you have high blood pressure? (For women: please do not include high blood pressure you may have had during pregnancy).
- If answered yes, are you currently taking pills regularly for high blood pressure?

This indicator, **medicated high blood pressure**, reports on people currently taking medication for high blood pressure.

This definition will underestimate the true prevalence of high blood pressure. Not all people with high blood pressure will have been diagnosed or will remember being diagnosed, and not all people diagnosed with high blood pressure will currently be taking medication for it.

From July 2012, New Zealand Health Survey interviews will include blood pressure measurements for adult survey respondents.

3.2 High cholesterol

One in ten adults was taking medication for high cholesterol in 2011/12, which is more than in 2006/07.

High cholesterol increases the risk of developing ischaemic heart disease and stroke. The main cause of high cholesterol levels is a diet high in saturated fat, although obesity, low physical activity levels and genetics can also play a role.

The definition of **high cholesterol** in this report only includes people currently taking medication for this condition.

This measure is likely to underestimate the true number of people with high cholesterol in the population. Not all people with high cholesterol will be taking medication for the condition, and people may not be aware that they have high cholesterol levels unless they have had blood tests. Some people may not be taking medication because they find it difficult to access primary health care services and/or medication. Also, changes over time may have been influenced by changes in treatment practices.

More people take medication for high cholesterol than in 2006/07

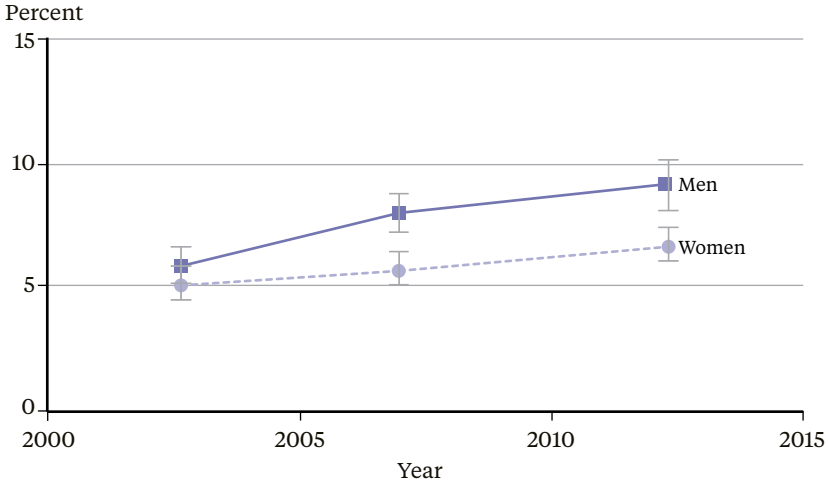
In 2011/12 one in ten adults (10%) was currently taking medication for high cholesterol – about 367,000 people.

Men were more likely to be taking medication for high cholesterol (12%) than women (9%).

The proportion of people taking medication for high cholesterol has steadily increased over the past ten years. In 2002/03, 6% of adults were taking medication for high cholesterol. This increased to 8% of adults in 2006/07 and 10% in 2011/12.

By sex, the increase from 2006/07 to 2011/12 was significant for women but not for men, after standardising for age (Figure 26).

Figure 26: Medicated high cholesterol, by sex, 2002/03–2011/12



Note: Rates are age-standardised to the WHO world population.

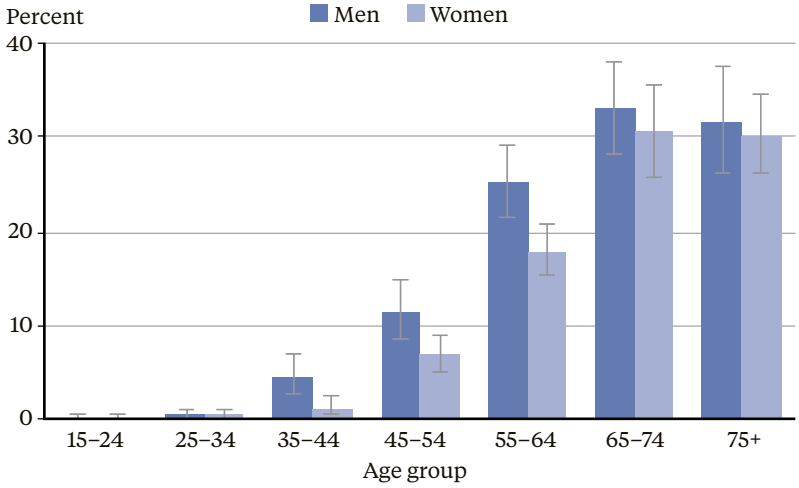
Source: New Zealand Health Surveys (2002/03, 2006/07, 2011/12) (15 years and over)

Nearly one in three people aged 65 years and over takes medication for high cholesterol

Almost one in three people aged 65 and over was taking cholesterol medication in 2011/12. People aged 55 years and over were much more likely to be taking medication for high cholesterol than younger people.

Among people aged 35–64 years, men were more likely than women to have medicated high cholesterol (Figure 27).

Figure 27: Medicated high cholesterol, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Pacific adults are more likely to take medication for high cholesterol

About 8% of Māori adults were taking medication for high cholesterol, as were 7% of Pacific adults and 7% of Asian adults (Table 13).

After adjusting for age and sex, Pacific adults were more likely to be taking medication for high cholesterol than non-Pacific adults. The rates for Māori and Asian adults did not differ from those for other adults, after adjusting for age and sex.

Table 13: Medicated high cholesterol, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	10	12	9	367,000
	Māori	8	9	8	36,000
	Pacific	7	8	7	15,000
	Asian	7	9	5	26,000
	European/Other	11	12	10	308,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.1	1.1	1.2	
	Pacific	1.2*	1.2	1.3	
	Asian	1.1	1.2	0.9	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

After standardising for age, higher proportions of Māori women and Pacific men were taking medication for high cholesterol in 2011/12 compared with 2006/07. There were no other changes by ethnic group over time.

Rates of medicated high cholesterol are similar for people living in high and low deprivation areas

There were similar proportions of people taking medication for high cholesterol in the most deprived areas (11%) and in the least deprived areas (10%). After adjusting for differences in age, sex and ethnic group, there were still no differences by neighbourhood deprivation.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been told by a doctor that you have high cholesterol levels in your blood?
- If yes, are you currently taking pills regularly for high cholesterol?

These questions therefore mean that the definition of **high cholesterol** in this report only includes people currently taking medication for this condition. This definition is likely to underestimate the true number of people with high cholesterol in the population. Not all people diagnosed with high cholesterol will be taking medication or will remember being diagnosed. Some people may not be taking medication because they find it difficult to access primary health care services and medication. People may also not be aware that they have high cholesterol levels unless they have had blood tests. Also, any changes over time may have been influenced by changes in treatment practices.

3.3 Ischaemic heart disease

One in twenty adults (almost 200,000 people) has been diagnosed with ischaemic heart disease.

Ischaemic heart disease is the most common form of heart disease and is a serious health condition. In this condition, the blood vessels that supply blood and oxygen to the heart become narrow or blocked. Ischaemic heart disease can cause heart attack and angina (typically temporary chest pain when doing exercise), and can lead to heart failure.

A range of lifestyle factors can cause ischaemic heart disease. These include high cholesterol, high blood pressure, tobacco smoking, being overweight or obese, physical inactivity, poorly controlled diabetes and unhealthy diet.

In this report, a person is defined as having **ischaemic heart disease** if they have been admitted to a hospital with a heart attack at some time in their life or if they have been diagnosed with angina by a doctor. The survey results may underestimate the true number of people with ischaemic heart disease, as people may not be aware they have this condition.

One in twenty adults has ischaemic heart disease

One in twenty adults (5.5%) has been diagnosed with ischaemic heart disease, which is about 193,000 adults.

Men had a higher rate of ischaemic heart disease (6.9%) than women (4.1%). Men were 1.9 times as likely as women to have been diagnosed with ischaemic heart disease, after adjusting for age.

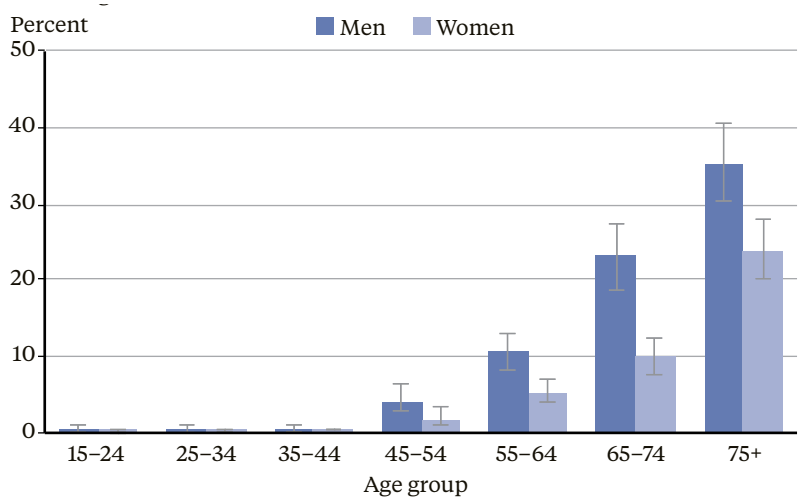
The percentage of men or women with ischaemic heart disease has not changed since 2006/07.

Almost one in three people aged 75+ has been diagnosed with ischaemic heart disease

Older people were much more likely to have ischaemic heart disease than younger age groups. Almost 30% of people aged 75 years and older had been diagnosed with the disease.

For people aged 45 years and over, men were more likely than women to have been diagnosed with ischaemic heart disease (Figure 28).

Figure 28: Diagnosed ischaemic heart disease, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori adults are more likely to have been diagnosed with ischaemic heart disease

About 5.1% of Māori adults had been diagnosed with ischaemic heart disease (Table 14). After adjusting for age and sex, Māori adults were 1.8 times as likely to have diagnosed ischaemic heart disease as non-Māori adults.

About 1.7% of Pacific adults had been diagnosed with ischaemic heart disease, as had 1.9% of Asian adults. There were no significant differences for Pacific and Asian adults compared with other adults, after adjusting for age and sex.

Table 14: Diagnosed ischaemic heart disease, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	5.5	6.9	4.1	193,000
	Māori	5.1	5.4	4.8	23,000
	Pacific	1.7	2.0	1.5	3,000
	Asian	1.9	2.8	1.0	7,000
	European/Other	6.0	7.6	4.5	167,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.8*	1.4*	2.5*	
	Pacific	0.8	0.8	0.9	
	Asian	0.7	0.8	0.5	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

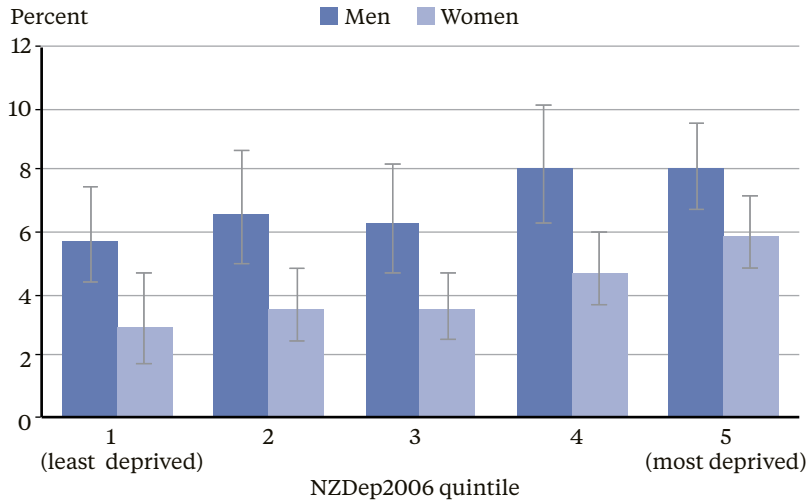
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Rates of ischaemic heart disease are higher in more deprived areas

About 6.9% of people living in the most deprived areas had been diagnosed with ischaemic heart disease, compared with 4.4% of people in the least deprived areas (Figure 29).

Figure 29: Diagnosed ischaemic heart disease, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in the most deprived areas were 1.9 times as likely to have been diagnosed with ischaemic heart disease as people in the least deprived areas, after adjusting for age, sex and ethnic group.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been admitted to hospital with a heart attack?
- Have you ever been told by a doctor that you have angina? (Angina is typically chest pain when you walk or do exercise.)

3.4 Stroke

About 62,000 adults have had a stroke and survived.

A stroke happens when the blood supply to the brain is interrupted, which can cause permanent damage. This interruption is usually caused by blood clots. A less frequent cause is bleeding in the brain.

After a stroke, many people recover well. However, some people may be permanently disabled or die as a result of the stroke.

A range of lifestyle factors can cause stroke. These include high blood pressure, high blood cholesterol, tobacco smoking, high alcohol consumption, being overweight or obese, physical inactivity and diabetes.

In this report, a person is defined as having a **stroke** if a doctor has told them at some time in their life that they have had a stroke (not including mini-strokes). The survey results may not represent the true number of people who have had a stroke. For example, if people who have had a serious stroke are living in a hospital or medical facility, they will not be included in the survey sample.

About 1.8% of adults have had a stroke during their lifetime

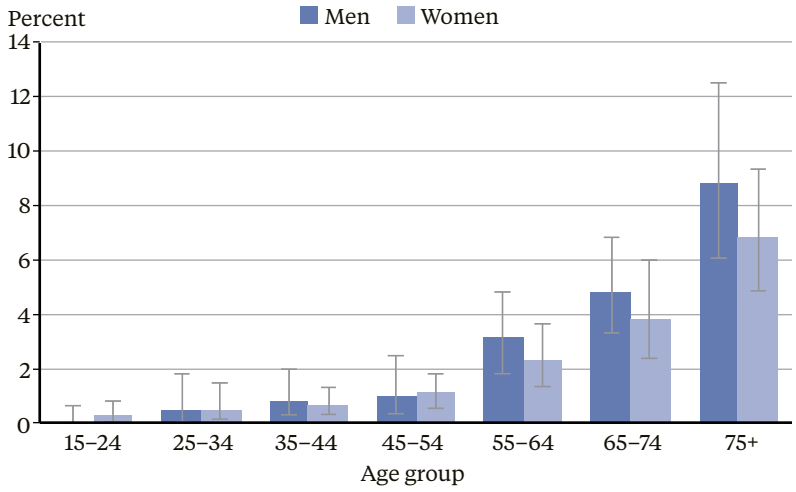
About 62,000 adults (1.8%) reported that they had had a stroke at some time in their life. Men (1.9%) and women (1.7%) had similar rates of ever having had a stroke.

Overall the proportion of people who have ever had a stroke has not changed since 2006/07.

Stroke mainly affects older adults

About 8% of people aged 75 years and over reported having had a stroke, which is the highest rate of any age group (Figure 30). However, stroke can occur at any age.

Figure 30: Diagnosed stroke, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori adults are more likely to have experienced a stroke

About 2.1% of Māori adults reported that they had experienced a stroke at some time in their life (Table 15). Māori adults were 1.3 times as likely to have ever had a stroke as non-Māori adults, after adjusting for age and sex. In particular, Māori women had a much higher rate of stroke than non-Māori women (2.3 times as high), after adjusting for age.

There were no differences in reported stroke rates for Pacific and Asian adults compared with other people.

Table 15: Diagnosed stroke, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	1.8	1.9	1.7	62,000
	Māori	2.1	2.1	2.2	9,000
	Pacific	0.6	0.6	0.6	1,000
	Asian	1.1	1.3	0.8	4,000
	European/Other	1.8	1.9	1.8	51,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.3*	1.1	2.3*	
	Pacific	0.9	1.0	0.7	
	Asian	1.0	1.0	0.7	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

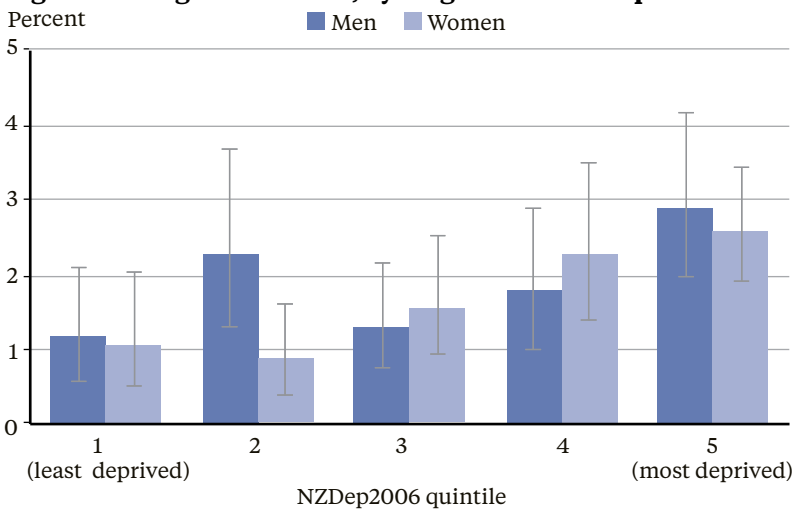
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in more deprived areas are more likely to have had a stroke

About 2.7% of people living in the most deprived areas had experienced a stroke, compared with 1.1% of people living in the least deprived areas (Figure 31).

Figure 31: Diagnosed stroke, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

Women living in the most deprived areas were 4.4 times as likely to have had a stroke as women living in the least deprived areas, after adjusting for age and ethnic group. For men, there was no difference by neighbourhood deprivation after adjustment.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What was the survey question?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been told by a doctor that you have had a stroke? Please do not include 'mini-stroke' or transient ischaemic attack (or TIA).

This indicator excludes transient ischaemic attacks (also called 'mini-strokes') as these have similar symptoms to a stroke, but most people fully recover within a few minutes or an hour.

This indicator may not represent the true number of people who have had a stroke, as people who have had a serious stroke and are living in a hospital or other medical facility are not included in the survey sample.

Section 4: Mental Health

We cannot take our mental health for granted. Mental illness can take a huge toll on individuals and their families, on society and on the economy.

This section reports on two indicators relating to mental health.

The first indicator focuses on people who report that they have been diagnosed with a common mental disorder (depression, bipolar disorder and/or anxiety disorder) at some time in their life.

The second indicator focuses on psychological distress, which is strongly associated with having a mental (depressive or anxiety) disorder in the previous month and in the previous year.

Key findings

- **Mental disorder is common in New Zealand**
  - More than half a million adults (16%) have been diagnosed with depression, bipolar disorder and/or anxiety disorder in their lifetime. This included 14% of adults who have ever been diagnosed with depression, 6% with anxiety disorder and 1% with bipolar disorder.

- **Almost 200,000 adults have high levels of psychological distress**
  - About 6% of adults (almost 200,000 adults) had experienced psychological (mental) distress in the past four weeks. That is, there was a high or very high probability that they had an anxiety or depressive disorder.

- **Rates of psychological distress are higher in women and younger people**
  - Women had higher rates of diagnosed mental health conditions and psychological distress than men. While older people were more likely to have been diagnosed with a mental health condition in their lifetime, younger people were more likely to be experiencing psychological distress.

- **Rates of psychological distress are higher for Māori and Pacific adults**
  - Māori and Pacific adults had much higher rates of psychological distress than other people. However, people in these ethnic groups had similar or lower rates of diagnosed common mental disorder than other people.

- **Deprivation is strongly related to psychological distress**
  - Psychological distress was over three times as common in areas of high deprivation as it was in areas of low deprivation.

Table 16: Summary of mental health indicators for adults aged 15 years and over, 2011/12

Indicator	Percent	Estimated number	Time trends since 2006/07
Diagnosed common mental disorder (depression, bipolar disorder and/or anxiety disorder)	16	572,000	▲ Increase, particularly women
Psychological (mental) distress	6	198,000	▼ Decrease, particularly men

4.1 Diagnosed with a common mental disorder

Over half a million adults (16%) have been diagnosed with depression, bipolar disorder and/or anxiety disorder at some time in their life. The rates are higher among women.

Good mental health is an essential part of overall good health and wellbeing. Mental health conditions ('mental disorders') can have a large impact on a person's life. They can affect people's ability to perform everyday tasks, have healthy relationships and cope with anger or stress.

In this report, the definition of **common mental disorders** includes people who report that at some time in their life a doctor has told them they have depression, bipolar disorder and/or anxiety disorder (including generalised anxiety disorder, phobias, post-traumatic stress disorder and obsessive-compulsive disorder). It does not include substance use disorder or other mental disorders.

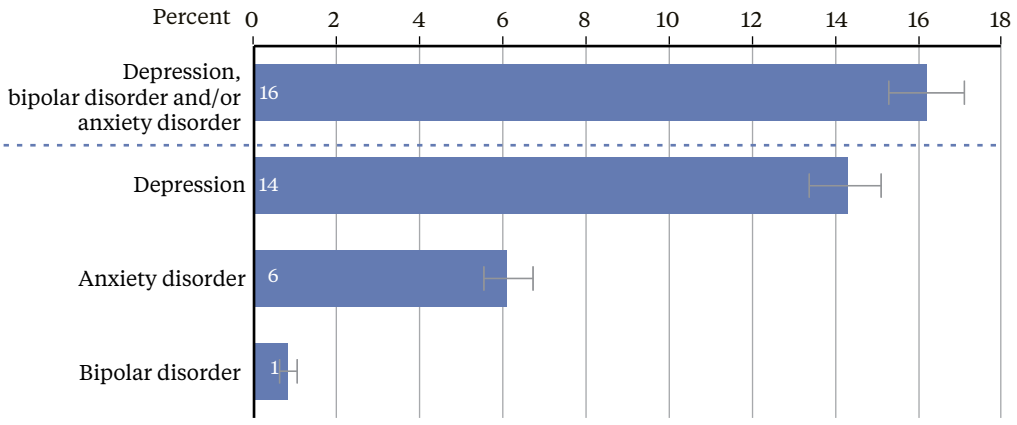
Changes over time may be due to changes in the level of mental illness in the community and/or changes in the number of people presenting for diagnosis and treatment.

One in seven adults has been diagnosed with a common mental disorder in their lifetime

One in seven adults (16%) reported that they had been diagnosed with a common mental disorder (depression, anxiety disorder and/or bipolar disorder) in their lifetime. This is over half a million (about 572,000) adults.

The most commonly diagnosed mental disorder of the three in the survey was depression, which affected 14% of adults (Figure 32). About 6% of adults had ever been diagnosed with anxiety disorder and 1% with bipolar disorder.

Figure 32: Diagnosed common mental disorder, by type



Note: Respondents could choose multiple responses.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Women are more likely to have been diagnosed with a common mental disorder

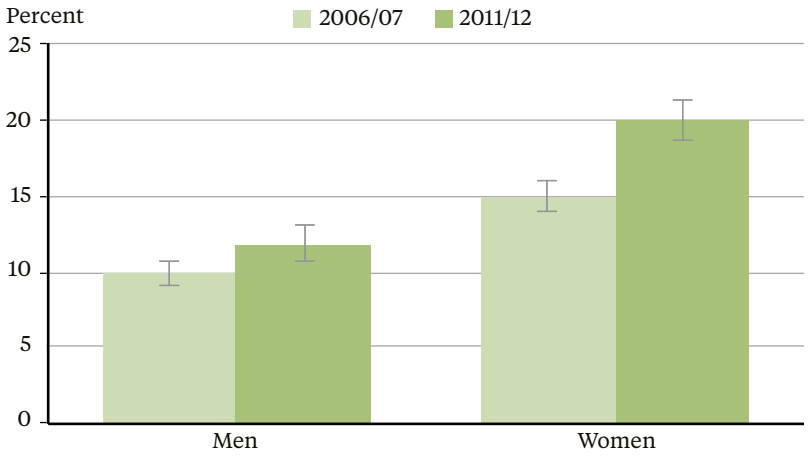
Women were more likely to have been diagnosed with a common mental disorder in their lifetime (20%) than men (12%). Women were 1.7 times as likely as men to have been diagnosed with a common mental disorder, after adjusting for age differences.

More people in 2011/12 reported being diagnosed in their lifetime with a common mental disorder, compared with 2006/07

In 2011/12 more people had been diagnosed in their lifetime with a common mental disorder (16%) than in 2006/07 (13%).

This increase was seen for men and women (Figure 33).

Figure 33: Diagnosed depression, bipolar disorder and/or anxiety disorder, by sex, 2006/07 and 2011/12



Note: Rates are age-standardised to the WHO world population.

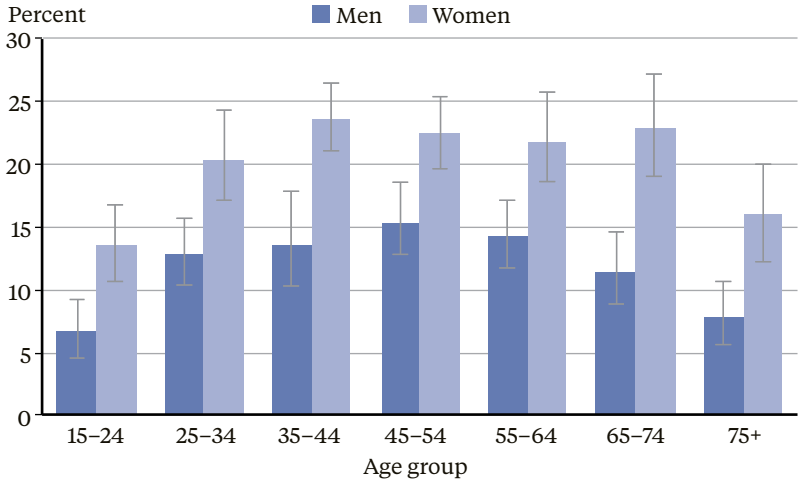
Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

Women aged 35–64 years have higher rates of diagnosed common mental disorders

Women were more likely than men to have been diagnosed with depression, bipolar disorder and/or anxiety disorder in all age groups. In particular, one in five women aged 25–74 years had been diagnosed with a common mental disorder (Figure 34).

For men, rates of common mental disorders were highest in those aged 25–64 years.

Figure 34: Diagnosed depression, bipolar disorder and/or anxiety disorder, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Pacific and Asian adults have lower rates of diagnosed common mental disorder

About 7% of Pacific adults had been diagnosed with common mental disorder (Table 17). Asian adults also had low rates of diagnosed common mental disorder (4%). Pacific and Asian adults were much less likely to have been diagnosed with a common mental disorder than non-Pacific and non-Asian adults respectively, after adjusting for age and sex.

Table 17: Diagnosed depression, bipolar disorder and/or anxiety disorder, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	16	12	20	572,000
	Māori	16	11	20	70,000
	Pacific	7	5	8	14,000
	Asian	4	2	7	16,000
	European/Other	19	14	23	517,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.0	1.0	1.0	
	Pacific	0.4*	0.5*	0.4*	
	Asian	0.2*	0.1*	0.3*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

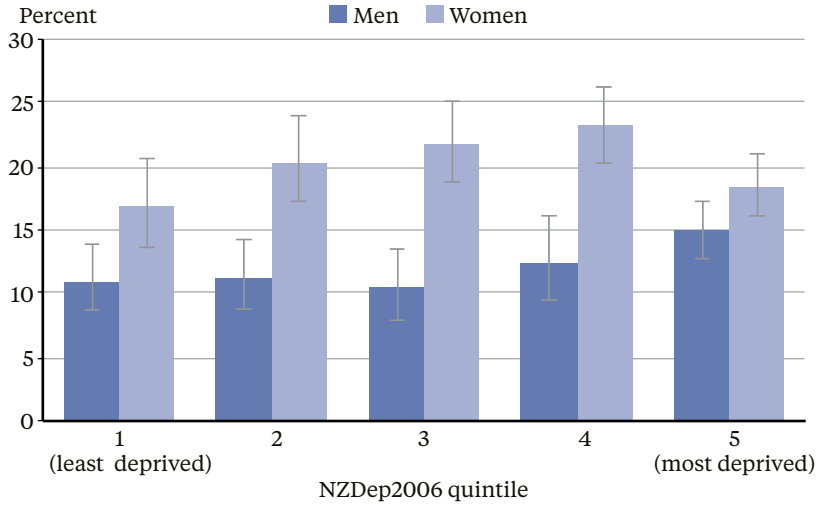
The percentage of Māori adults who had ever been diagnosed with a common mental disorder increased from 12% in 2006/07 to 16% in 2011/12.

By contrast, the percentage of Asian men diagnosed with common mental disorder decreased from 2006/07 to 2011/12, and did not change for Pacific adults.

People living in deprived areas are more likely to have been diagnosed with common mental disorders

The rates of diagnosed common mental disorders were similar for people living in the least deprived areas (14%) and the most deprived areas (17%) (Figure 35).

Figure 35: Diagnosed depression, bipolar disorder and/or anxiety disorder, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

However, after adjusting for differences in age, sex and ethnic group, people living in the most deprived areas were 1.7 times as likely to have ever been diagnosed with a common mental disorder as people in the least deprived areas.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables. Data for the following indicators are also available in the online data tables:

- diagnosed mood disorder (depression and/or bipolar disorder)
- diagnosed depression
- diagnosed anxiety disorder
- diagnosed bipolar disorder.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been told by a doctor that you have depression?
- Have you ever been told by a doctor that you have bipolar disorder, which is sometimes called manic depression?
- Have you ever been told by a doctor that you have anxiety disorder? This includes panic attacks, phobia, post-traumatic stress disorder, and obsessive compulsive disorder.

4.2 Psychological distress

About 6% of adults have experienced psychological distress in the past four weeks. Psychological distress is much more common in more deprived areas.

Psychological (mental) distress refers to a person's experience of symptoms such as anxiety, confused emotions, depression or rage.

Psychological distress is measured with the 10-question Kessler Psychological Distress Scale (K10) (Kessler et al 2003). A K10 score of 12 or more is strongly associated with having a mental (depressive or anxiety) disorder in the previous month and in the previous year.

In this report, **psychological distress** means having high or very high levels of psychological distress on the K10 scale (ie, a score of 12 or more). Where people have these levels of psychological distress, there is a high or very high probability that they also have an anxiety or depressive disorder.

Almost 6% of adults experience psychological distress

While the majority of adults had no or low levels of psychological distress, 5.6% of adults had experienced high or very high levels of psychological distress, which is about 198,000 adults.

Women were more likely to have experienced psychological distress (6.6%) than men (4.5%).

The rate of psychological distress for men has fallen

Overall, the rate of psychological distress in adults has dropped from 6.6% in 2006/07 to 5.6% in 2011/12.

The decrease in levels of psychological distress was significant for men, but not for women (Figure 36).

Figure 36: Psychological distress, by sex, 2006/07 and 2011/12

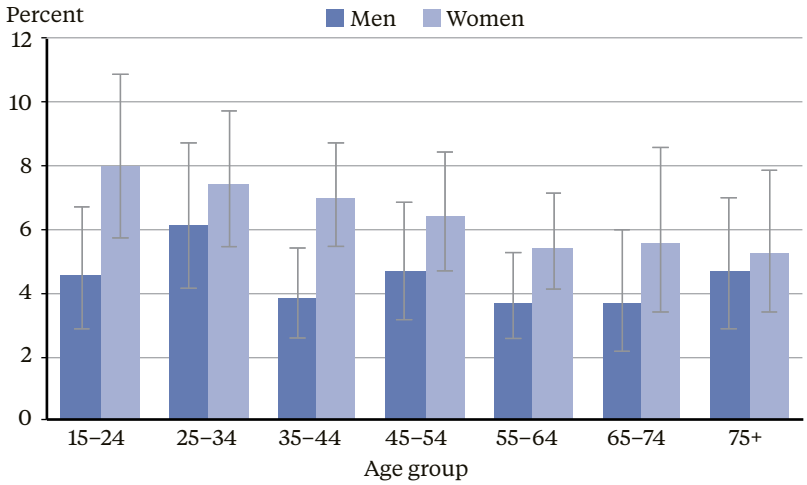
Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

Younger women are more likely to experience psychological distress

Younger women (aged 15–34 years) were more likely to experience psychological distress than other age groups (Figure 37). In the age groups 15–24 and 35–44 years, women were significantly more likely than men to experience psychological distress.

Figure 37: Psychological distress, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Psychological distress is more common among Māori and Pacific adults

Māori and Pacific adults had higher rates of psychological distress than other adults.

About 6% of Māori men and 11% of Māori women experience psychological distress (Table 18). After adjusting for age and sex, Māori were 1.7 times as likely to experience psychological distress as non-Māori adults.

Similarly, for Pacific adults, 9% of men and 11% of women experienced psychological distress. Pacific adults were 1.8 times as likely as non-Pacific adults to experience psychological distress.

Table 18: Psychological distress, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	5.6	4.5	6.6	198,000
	Māori	9.1	6.5	11.5	40,000
	Pacific	10.1	8.9	11.0	21,000
	Asian	6.5	3.5	9.1	24,000
	European/Other	4.9	4.1	5.8	137,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.7*	1.5*	1.9*	
	Pacific	1.8*	2.1*	1.6*	
	Asian	1.1	0.7	1.4	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

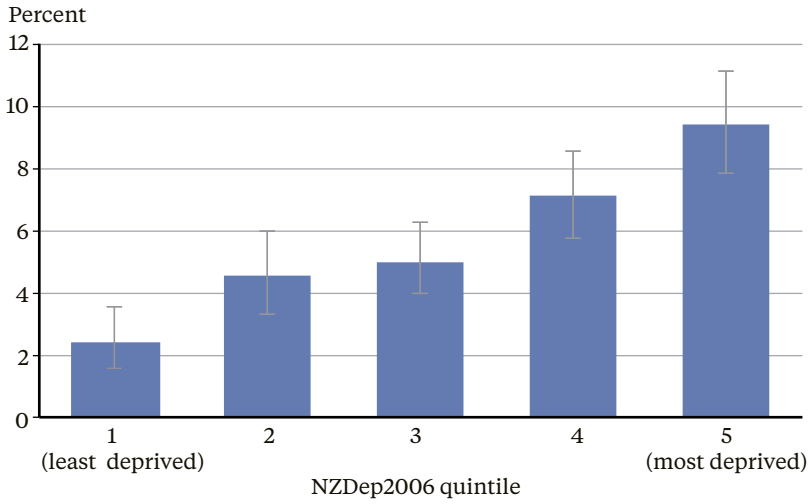
Source: 2011/12 New Zealand Health Survey (15 years and over)

The rate of psychological distress for Māori, Pacific or Asian men and women has not changed since 2006/07.

Levels of psychological distress are higher in more deprived areas

There was a clear relationship between psychological distress and neighbourhood deprivation. About 9.4% of people living in the most deprived areas experienced psychological distress, compared with 2.4% of people living in the least deprived areas (Figure 38).

Figure 38: Psychological distress, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

The relationship stayed strong after adjusting for differences in age, sex and ethnic group. People living in the most deprived areas were 3.5 times as likely to be experiencing psychological distress as those in the least deprived areas, after adjustment.

Psychological distress rates for Māori and Pacific adults contrast with diagnosis rates

Rates of psychological distress were much higher among Māori adults (9%) and Pacific adults (10%) than the national average (6%). Despite this, the percentage of Māori who were diagnosed with a common mental disorder in their lifetime was the same as the national average (16%), and the percentage of Pacific adults with this diagnosis was much lower (7%).

These findings suggest that Māori and Pacific adults may differ from the rest of the population in how and when they seek help and/or in their access to mental health services.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

How did we measure psychological distress?

In the 2011/12 New Zealand Health Survey, people aged 15 years and over were asked the 10-question Kessler scale (K10) (Kessler et al 2003). This is a set of questions used internationally to measure psychological distress and serious mental illness.

Psychological distress refers to a K10 score of 12 points or more. For people experiencing psychological distress, there is a high or very high probability that they have an anxiety or depressive disorder. Studies have shown that a high score on the K10 (12 points or more) is strongly associated with having a mental disorder in the previous month and in the previous year.

Section 5: Other Health Conditions

This section focuses on other selected health conditions, including diabetes, arthritis, asthma and chronic pain. These indicators rely on self-reported information about whether respondents have ever been diagnosed by a doctor with any of these conditions.

Key findings

- **Arthritis, asthma and chronic pain each affect more than one in ten New Zealand adults**
  - More than half a million adults (15%) have been diagnosed with arthritis, while about 390,000 adults (11%) take medication for asthma and 570,000 adults (16%) report having chronic pain. There have been no changes in the prevalence of these conditions in the adult population since 2006/07.
- **Diabetes rate is slowly increasing over time**
  - Almost 200,000 adults (5.5%) have been diagnosed with diabetes. The prevalence of diabetes has gradually increased over the past 15 years. Diabetes disproportionately affects Pacific adults, among whom one in ten has been diagnosed with this condition.
- **Older people generally are more likely to have health conditions**
  - Older adults had higher rates of diabetes, arthritis and chronic pain. The exception was medicated asthma, for which rates were similar across all ages.
- **More Māori have health conditions**
  - Māori adults consistently had higher rates of all the reported health conditions (diabetes, asthma, arthritis and chronic pain) than other adults.
- **People living in more deprived areas are more likely to have health conditions**
  - People living in more deprived areas were more likely to have diabetes, arthritis and/or chronic pain than people in less deprived areas.

Table 19: Summary of other health conditions for adults aged 15 years and over, 2011/12

Indicator	Percent	Estimated number	Time trends since 2006/07
Diabetes (diagnosed)	5	193,000	≈ No change
Asthma (medicated)	11	389,000	≈ No change
Arthritis (diagnosed)	15	532,000	≈ No change
Chronic pain	16	571,000	≈ No change

5.1 Diabetes

Almost 200,000 adults have been diagnosed with diabetes. The prevalence of diabetes has gradually increased over the past 15 years.

Diabetes is a disease where the body cannot control its blood sugar levels properly – either because the body does not make enough (or any) insulin or because cells have become resistant to insulin.

There are two main types of diabetes.

- **Type 1 diabetes** is less common and generally develops in childhood. People with type 1 diabetes need to inject insulin to live.
- **Type 2 diabetes** is more common and usually develops in adulthood, often as a result of being overweight or obese. Type 2 diabetes can be controlled through weight loss and regular physical activity and, in some cases, medication and/or insulin.

Diabetes can lead to a range of other health conditions, including heart disease, stroke, blindness, kidney disease, nerve damage and/or amputation of a foot or lower leg.

The definition of **diabetes** in this report includes people who reported a doctor had told them at some time in their life that they have diabetes. This measure is likely to underestimate the true number of people with diabetes, as some people may not be aware that they have this condition.

Almost 200,000 people reported they have been diagnosed with diabetes

Overall, 5.5% of adults had been told by a doctor that they had diabetes – about 193,000 adults.

The rate of diagnosed diabetes was 6.0% for men and 5.0% for women. Adjusting for age, men were 1.2 times as likely to have been diagnosed with diabetes as women.

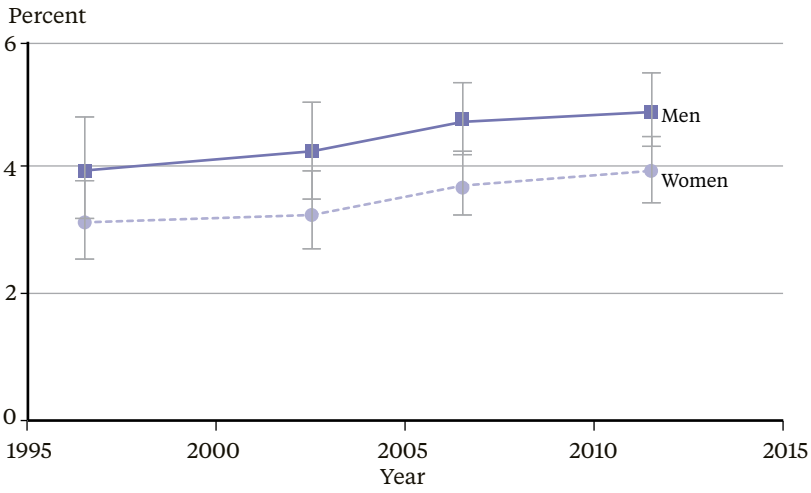
Among those people who have been diagnosed, most have type 2 diabetes. About 5.0% of adults (176,000 people) are estimated to have been diagnosed with type 2 diabetes (as they were diagnosed with diabetes when they were older than 25 years).

Rate of diagnosed diabetes is slowly increasing over time

The rate of diagnosed diabetes has slowly but steadily increased over time, from 3.8% in 1996/97 to 5.5% in 2011/12. After standardising for age, this change was significant for women but not for men.

Since 2006/07 there has been no statistically significant change in the rate of diagnosed diabetes (Figure 39).

Figure 39: Diagnosed diabetes, by sex, 1996/97–2011/12



Notes: Rates are age-standardised to the WHO world population.

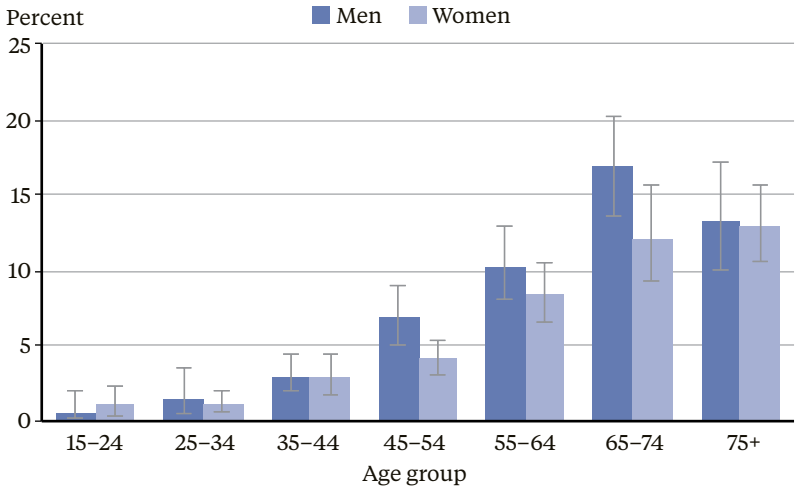
Source: New Zealand Health Surveys (1996/97, 2002/03, 2006/07, 2011/12) (15 years and over)

More than one in ten people aged 65 years and over has diagnosed diabetes

In 2011/12 people aged 55 years and over were much more likely to have been diagnosed with diabetes than people younger than 45 years.

More than one in ten adults aged 65 years and over had been diagnosed with diabetes (Figure 40).

Figure 40: Diagnosed diabetes, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Pacific, Māori and Asian adults are more likely to have been diagnosed with diabetes

Pacific adults were disproportionately affected by diabetes, with about 10% of Pacific adults having been diagnosed with diabetes (Table 20). This rate was 3.4 times as high as the rate for non-Pacific adults, after adjusting for age and sex differences.

Diabetes rates were also higher in Māori (7%). Māori adults were about 2.1 times as likely to have been diagnosed with diabetes as non-Māori, after adjustment. Asian men also had a higher rate of diagnosed diabetes (8.4%) than other adults.

Table 20: Diagnosed diabetes, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	5.5	6.0	5.0	193,000
	Māori	7.3	7.9	6.8	33,000
	Pacific	10.2	10.6	9.9	21,000
	Asian	6.2	8.4	4.2	23,000
	European/Other	4.7	4.9	4.5	130,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	2.1*	2.0*	2.1*	
	Pacific	3.4*	3.3*	3.5*	
	Asian	1.7*	2.2*	1.2	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

The percentage of Māori with diagnosed diabetes was not significantly different between 2002/03 (6.2%) and 2011/12 (7.3%). While there was an increase from 2006/07 (5.8%) to 2011/12, this change was not significant after standardising for age.

For Pacific adults, the rate of diagnosed diabetes has steadily increased from 6.3% in 2002/03 to 9.8% in 2006/07 and 10.2% in 2011/12. The change from 2006/07 to 2011/12 was not statistically significant.

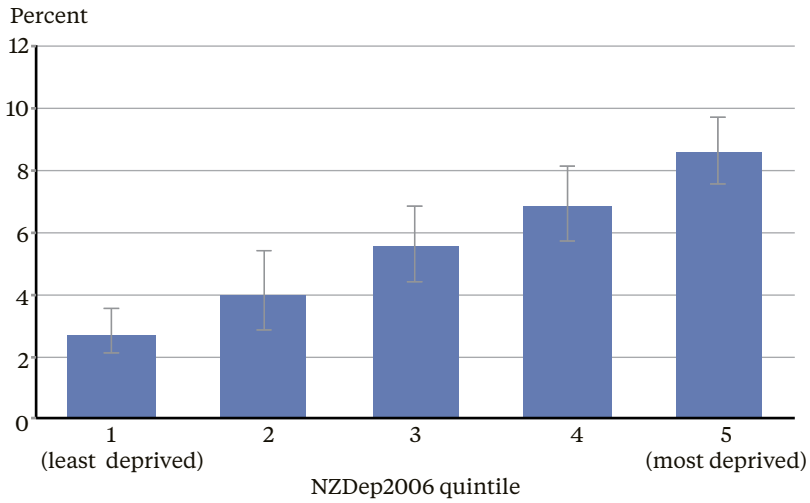
The rate of diabetes for Asian adults has not changed significantly since 2002/03.

Diabetes rates are much higher in more deprived areas

There was a clear association between diabetes and neighbourhood deprivation.

The rate of diabetes was 8.6% for people living in the most deprived areas, compared with 2.7% for people in the least deprived areas (Figure 41).

Figure 41: Diagnosed diabetes, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

The relationship between diabetes and deprivation stayed strong after adjusting for differences in age, sex and ethnic group. People living in the most deprived areas were 3.1 times as likely to have diagnosed diabetes as those in the least deprived areas, after adjustment.

Nutrition survey shows undiagnosed and poorly controlled diabetes is common

The 2008/09 New Zealand Adult Nutrition Survey found relatively high levels of undiagnosed and poorly controlled diabetes in New Zealand adults.

For every three people who had been diagnosed with diabetes, another person had **undiagnosed** diabetes. In other words, about a quarter of all diabetes cases were undiagnosed (indicated by a survey blood test showing HbA1c levels of 6.5% or higher) (University of Otago and Ministry of Health 2011).

Undiagnosed diabetes was much more common among Pacific adults. In this group, half of all cases of diabetes were undiagnosed (Ministry of Health 2012c).

Moreover, among adults who had been diagnosed with diabetes, only half had good diabetes control (indicated by HbA1c levels lower than 7.0%).

These findings suggest there is considerable scope to improve the diagnosis and treatment of diabetes.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables. Data for the following indicator are also available in the online data tables:

- likely type 2 diabetes.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been told by a doctor that you have diabetes? (If female: please do not include diabetes during pregnancy).
- How old were you when you were first told by a doctor that you had diabetes?

This measure is likely to underestimate the true number of people with diabetes because some people may not be aware that they have this condition.

People were defined as having type 2 diabetes if they reported that a doctor first told them they had diabetes when they were aged over 25 years.

5.2 Asthma

One in nine adults takes medication for asthma, with higher rates among Māori adults.

People with asthma have over-sensitive airways that react to triggers that do not affect other people. A person's asthma triggers cause their airways to tighten, partially close up, swell inside and make more mucus. This makes it hard for the person to breathe in and even harder to breathe out. Most asthma attacks are short-lived, lasting minutes to hours, with complete recovery after the attack.

Asthma can be triggered by allergens, cold and flu symptoms, and weather changes such as cold, dry air. Some medicines, physical activities, smoke, chemicals and gases can also cause asthma.

This report focuses on **medicated asthma** – that is, people who reported that at some time in their life a doctor told them they have asthma and that they currently take medication (inhalers, aerosols or tablets) for it. Medication can be taken daily to prevent symptoms, or only when needed to relieve symptoms. This definition excludes people who may have been diagnosed with asthma in the past, but who no longer experience symptoms.

One in nine adults is affected by asthma

One in nine adults (11%) had been diagnosed with asthma and were taking medication for this condition. This is about 389,000 adults.

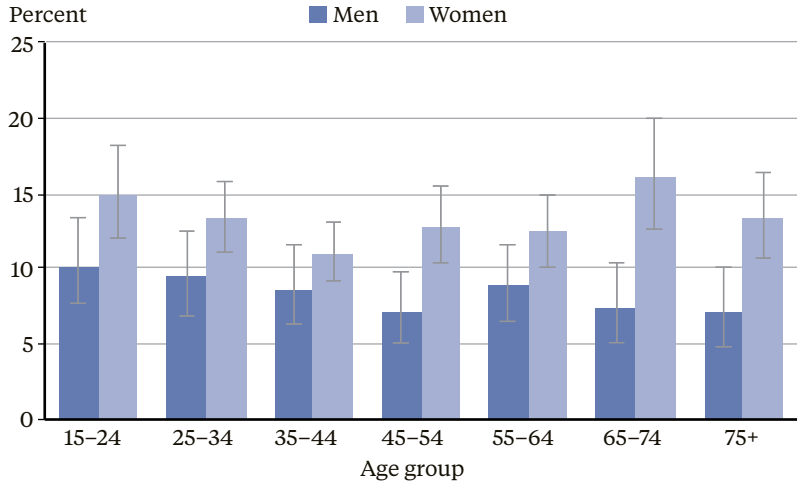
Women were more likely to be taking medication for asthma (13%) than men (9%).

The proportion of adults taking medication for asthma has not changed since 2006/07.

Levels of asthma are similar across age groups

In 2011/12 the proportion of adults taking medication for asthma was relatively stable across all age groups, for men and women. For all age groups except 35–44 years, women were significantly more likely than men to have medicated asthma (Figure 42).

Figure 42: Medicated asthma, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Asthma rates are higher for Māori adults

Asthma rates were higher for Māori men and women than for other adults. One in five Māori women (20%) were taking medication for asthma, as were 13% of Māori men (Table 21). After adjusting for age and sex, Māori adults were about 1.6 times as likely as non-Māori adults to be taking medication for asthma.

Table 21: Medicated asthma, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	11	9	13	389,000
	Māori	17	13	20	74,000
	Pacific	9	7	12	19,000
	Asian	4	6	3	17,000
	European/Other	11	9	14	317,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.6*	1.6*	1.7*	
	Pacific	0.8	0.7	0.8	
	Asian	0.4*	0.6*	0.2*	

*Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

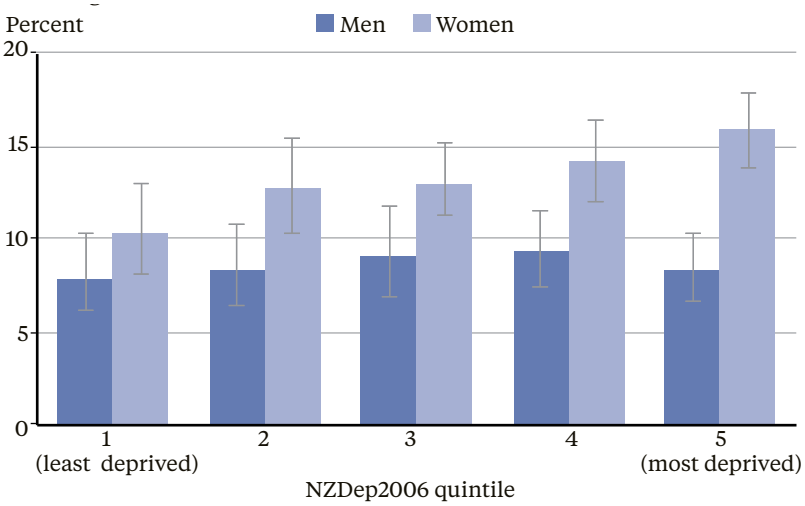
Source: 2011/12 New Zealand Health Survey (15 years and over)

For Māori, Pacific and Asian ethnic groups, the proportion of adults taking medication for asthma has not changed since 2006/07.

Asthma rates are higher for women in more deprived areas

Women living in the most deprived areas were more likely to be taking medication for asthma (16%) than women in the least deprived areas (10%) (Figure 43). There was no pattern by neighbourhood deprivation for men.

Figure 43: Medicated asthma, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Women living in the most deprived areas were 1.5 times as likely to be taking medication for asthma as women in the least deprived areas, after adjusting for age and ethnic group.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been told by a doctor that you have asthma?
- What treatments do you now have for asthma? No treatment; inhalers; medicine, tablets or pills; other (respondents could choose multiple responses).

5.3 Arthritis

Over half a million adults (15%) have been diagnosed with arthritis.

Arthritis involves inflammation (pain, heat, redness and swelling) of the joints. Chronic (long-term) arthritis can result in long-lasting pain and deformity, and is a major cause of disability in older people.

There are many different kinds of arthritis and they can affect people of any age. The most common kind of arthritis is osteoarthritis. Rheumatoid arthritis and gout are also common.

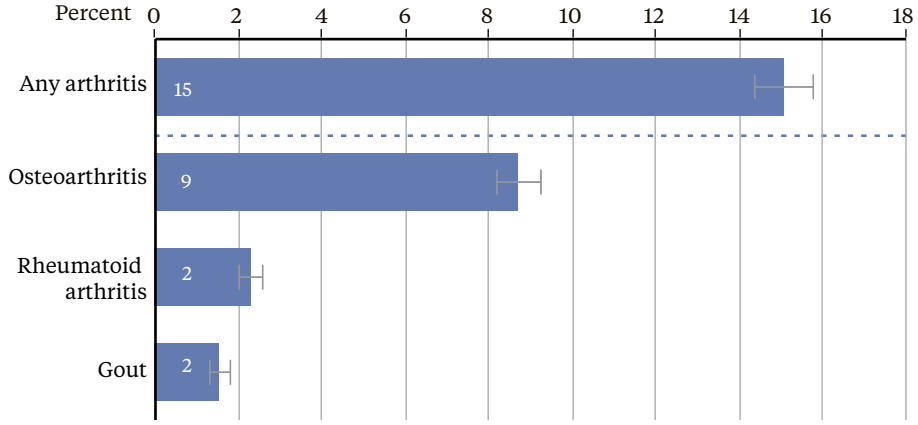
In this report, the definition of **arthritis** includes people who reported a doctor has told them at some time in their life that they have any type of arthritis, including osteoarthritis, rheumatoid arthritis, gout, lupus and psoriatic arthritis.

One in seven adults is affected by arthritis

One in seven adults (15%) had been diagnosed with arthritis, which is about 532,000 adults (Figure 44). Women had higher rates of arthritis (17%) than men (13%).

The most common form of arthritis was osteoarthritis, which affected 9% of adults.

Figure 44: Diagnosed arthritis, by type



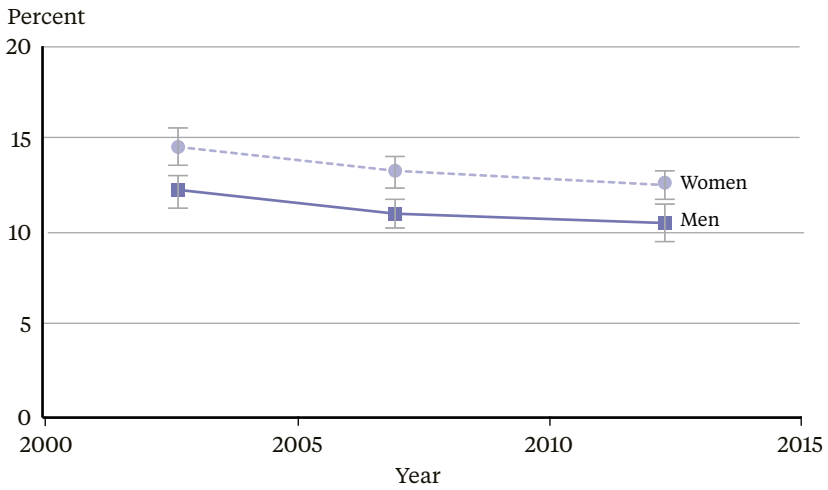
Note: Respondents could choose multiple responses.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Rate of arthritis is slowly declining over time

The rate of arthritis has decreased steadily since 2002/03, after standardising for age (Figure 45). However, the rate has not significantly changed since 2006/07.

Figure 45: Diagnosed arthritis, by sex, 2002/03–2011/12



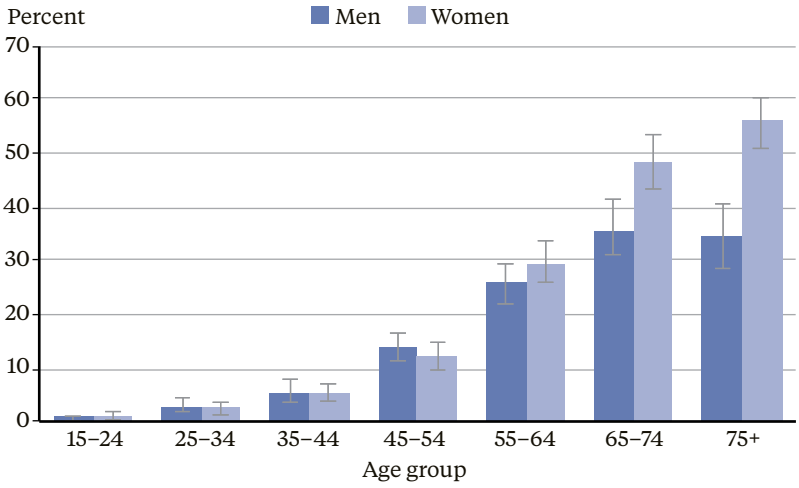
Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (2002/03, 2006/07, 2011/12) (15 years and over)

Half of all women aged 65+ years have arthritis

In 2011/12 arthritis was much more common in older age groups, particularly in people aged 55 years and older. About half of all women aged 65 years and over had been diagnosed with arthritis, as had one-third of men in this age group (Figure 46).

Figure 46: Diagnosed arthritis, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Higher rates of arthritis in Māori men

About 11% of Māori adults had been diagnosed with arthritis, as well as 7% of Pacific adults and 7% of Asian adults (Table 22).

Adjusting for age and sex differences, Māori men were 1.4 times as likely to have been diagnosed with arthritis as non-Māori men. By contrast, Asian adults were less likely to have arthritis than non-Asian adults, after adjustment.

Table 22: Diagnosed arthritis, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	15	13	17	532,000
	Māori	11	12	11	51,000
	Pacific	7	6	7	14,000
	Asian	7	6	8	27,000
	European/Other	17	14	19	467,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.2*	1.4*	1.0	
	Pacific	0.8	0.9	0.8	
	Asian	0.8*	0.7	0.8	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

The rate of arthritis did not change from 2006/07 for any ethnic group, after standardising for age.

Arthritis is linked with neighbourhood deprivation

There were similar levels of arthritis among people living in the least deprived areas (14%) and the most deprived areas (16%).

However, after adjusting for differences in age, sex and ethnic group, people living in the most deprived areas were 1.4 times as likely to have arthritis as those in the least deprived areas.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables. Data for the following indicators are also available in the online data tables:

- diagnosed osteoarthritis
- diagnosed rheumatoid arthritis
- diagnosed gout.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Have you ever been told by a doctor you have arthritis? Please include gout, lupus and psoriatic arthritis.
- What kind of arthritis was that? Rheumatoid; osteoarthritis; gout; psoriatic; systemic lupus erythematosus (SLE); other (respondents could choose multiple responses).

5.4 Chronic pain

One in six adults experiences chronic pain.

Chronic pain is pain that has lasted a long time (at least six months). It is usually not improved by simple pain treatment and can affect the person almost every day, with varying levels of intensity. Chronic pain can be debilitating and affect a person's ability to carry out their usual activities.

Chronic pain can include back pain, headaches, arthritis and nerve (neuropathic) pain.

In this report, the definition of **chronic pain** includes people who reported that they experienced chronic pain (defined as pain that is present almost every day and has lasted, or is expected to last, more than six months).

One in six adults experiences chronic pain

One in six adults (16%) reported that they experience chronic pain, which is about 571,000 adults.

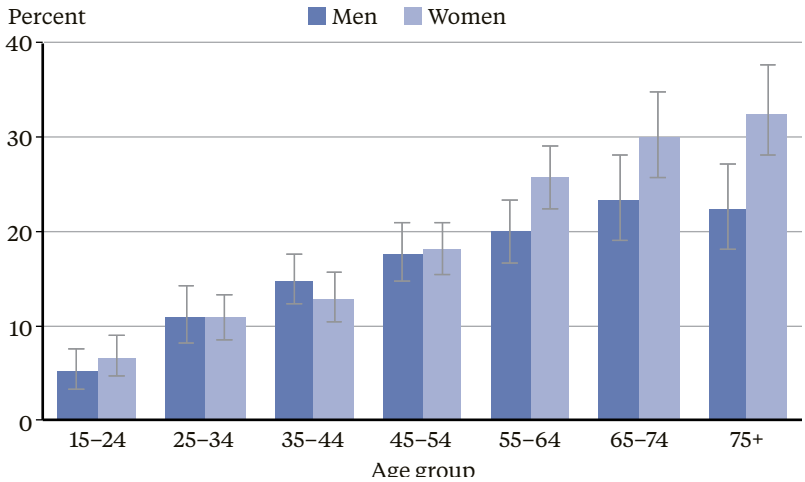
Women were more likely to report chronic pain (17%) than men (15%).

The percentage of men or women affected by chronic pain had not changed since 2006/07.

Over one in five older adults (65+ years) has chronic pain

Chronic pain was more common among older people, with about 25–30% of adults aged 65 years and over experiencing chronic pain (Figure 47). About 6% of people aged 15–24 years reported chronic pain.

Figure 47: Chronic pain, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori have higher rates of chronic pain

Almost one in five Māori adults (18%) reported chronic pain (Table 23). This rate was 1.3 times as high as the rate for non-Māori adults, after adjusting for age and sex.

Table 23: Chronic pain, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	16	15	17	571,000
	Māori	18	18	18	78,000
	Pacific	14	13	14	28,000
	Asian	10	7	12	37,000
	European/Other	17	15	18	469,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.3*	1.4*	1.2*	
	Pacific	1.1	1.1	1.1	
	Asian	0.7*	0.6*	0.8	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

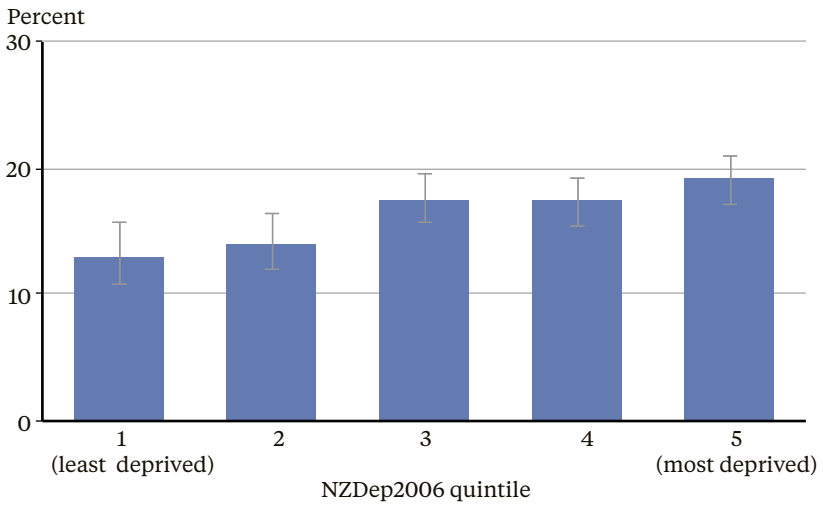
Source: 2011/12 New Zealand Health Survey (15 years and over)

Chronic pain is more common in more deprived areas

The rate of chronic pain was higher for people living in the most deprived areas (19%) than for people in the least deprived areas (13%) (Figure 48).

Adjusting for age, sex and ethnic group, people living in the most deprived areas were 1.7 times as likely to report chronic pain as those in the least deprived areas.

Figure 48: Chronic pain, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What was the survey question?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

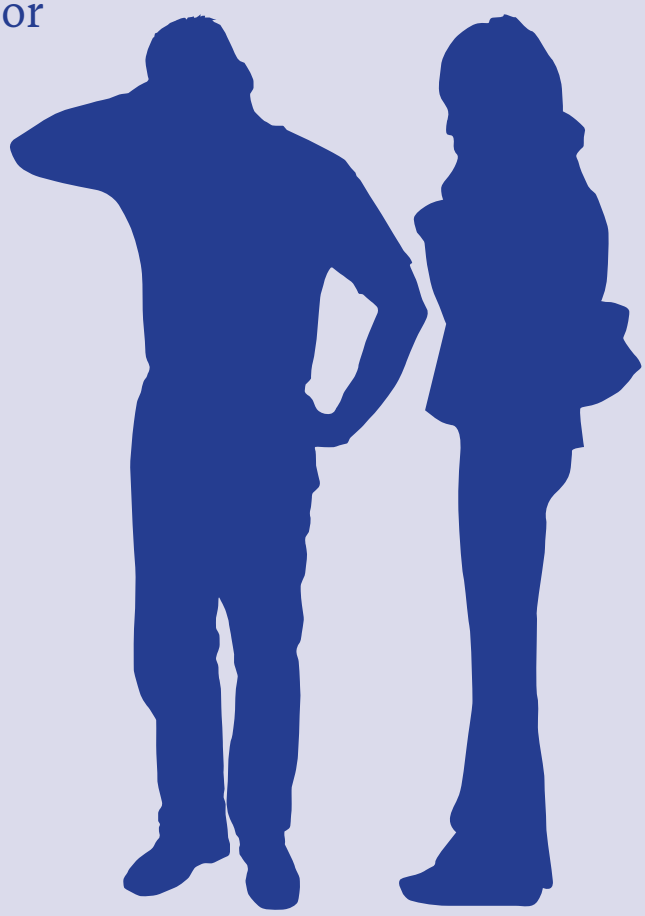
- Do you experience chronic pain? This is pain that is present almost every day, but the intensity of the pain may vary. Please only include pain that has lasted, or is expected to last, for more than six months.

Section 6: Use of Primary Health Care

Primary health care is the professional health care that people receive in the community, and is usually people's first point of contact with the health care system.

General practitioners (GPs) and practice nurses are a central component of primary health care services in New Zealand. Their work includes preventing, diagnosing and treating health problems.

This section focuses on adults who reported that they had visited a GP, practice nurse or after-hours medical centre in the past year.



Key findings

- **Three in four adults have visited a GP in the past year**
  - The majority of adults (78%) had visited a GP in the last 12 months, although this rate was lower than in 2006/07. In 2011/12 the average cost of a GP visit was $32.
  - One in three adults (31%) had visited a practice nurse without seeing a GP at the same time in the past year, which is similar to the rate in 2006/07. The average cost for a visit to a practice nurse was $10.
  - One in eight adults (13%) had visited an after-hours medical centre in the past year. The average cost for a visit to an after-hours medical centre was $56.

- **Most older adults have visited a GP in the past year**
  - Over 90% of people aged 65 years and over had visited a GP in the past year. In contrast, older adults were much less likely than younger people to have visited an after-hours medical centre in the past year.

- **Use of primary health care in the past year is generally consistent across ethnic groups and levels of neighbourhood deprivation**
  - The proportion of Māori and Pacific adults who had visited a GP in the past year was similar to the national average. Similarly there were no differences in GP visits by neighbourhood deprivation. Asian adults were less likely than other adults to have visited a GP, practice nurse or after-hours medical centre in the past year.

Table 24: Summary of primary health care use for adults aged 15 years and over, 2011/12

Indicator (in past 12 months)	Percent	Estimated number	Time trends since 2006/07
Visited a GP	78	2,771,000	▼ Decrease
Visited a practice nurse (without seeing a GP at the same visit)	31	1,079,000	≈ No change
Visited an after-hours medical centre	13	456,000	Not collected in 2006/07

6.1 Visited a GP in the past 12 months

Most people (78%) have visited a GP in the past 12 months. Over 90% of older adults (aged 65+ years) have done so.

General practitioners (GPs), or family doctors, are the first point of contact with the health care system for most people. GPs usually work in general practices or medical centres, alongside practice nurses and other health professionals.

Along with practice nurses, GPs are an integral part of primary health care in New Zealand. Their work includes preventing, diagnosing and treating health problems. GPs, along with nurses and other health professionals who are suitably qualified, can also refer people to specialist health services if needed.

This indicator focuses on people who reported that they had visited a GP at their usual medical centre, or somewhere else, in the past 12 months.

The majority of adults visit a GP at least once a year

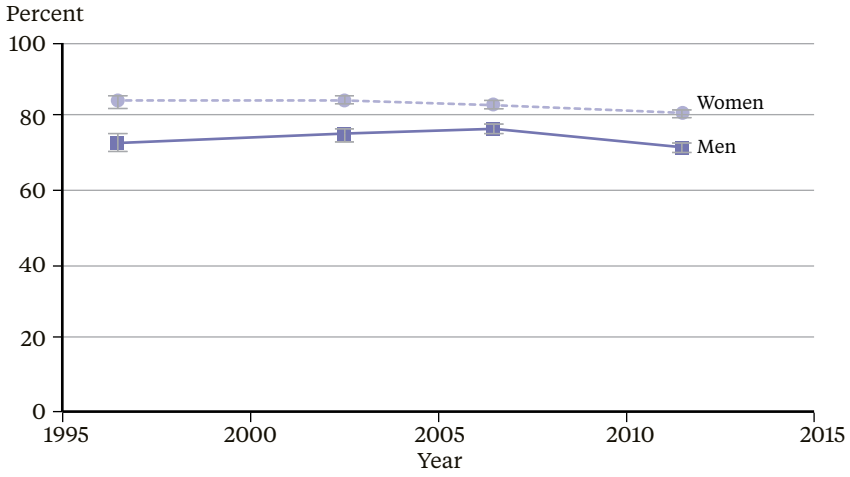
In 2011/12 three in four adults (78%) had visited a GP in the past 12 months, which is almost 2.8 million adults.

Women were more likely to have visited a GP in the past 12 months (83%) than men (74%).

The number of people visiting a GP has fallen since 2006/07

The percentage of adults who reported that they have visited a GP in the past 12 months fell from 81% in 2006/07 to 78% in 2011/12 (Figure 49).

Figure 49: Visited a GP in the past 12 months, by sex, 1996/97–2011/12



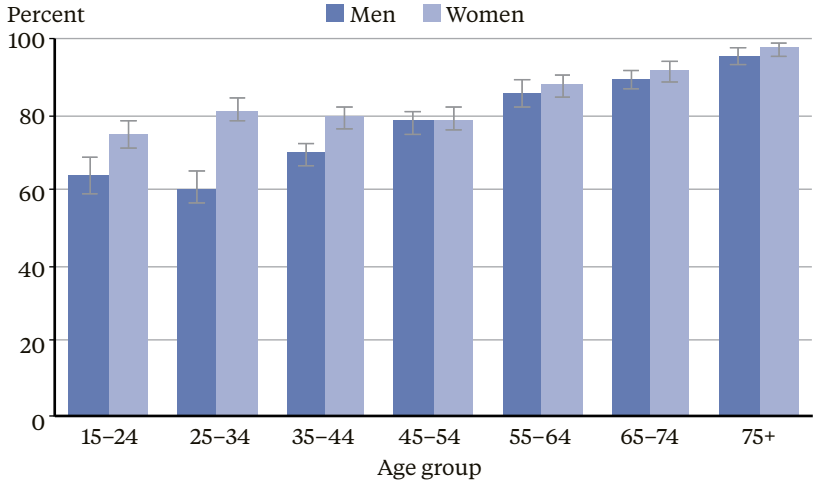
Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (1996/97, 2002/03, 2006/07, 2011/12) (15 years and over)

Younger people are less likely to have visited a GP

Younger people (particularly men aged 15–44 years) were less likely than other people to have visited a GP in the past 12 months (Figure 50). Over 90% of adults aged 65 years and over had visited a GP in the past year.

Figure 50: Visited a GP in the past 12 months, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Asian adults are less likely to have visited a GP in the past 12 months

The proportion of Asian adults who had visited a GP in the past year (71%) was lower than for other adults (Table 25). There were no differences for Māori and Pacific adults compared with other people.

Table 25: Visited a GP in the past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	78	74	83	2,771,000
	Māori	75	71	79	335,000
	Pacific	75	70	80	154,000
	Asian	71	66	76	267,000
	European/Other	80	76	84	2,229,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.0	1.0	1.0	
	Pacific	1.0	1.0	1.0	
	Asian	0.9*	0.9	0.9*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

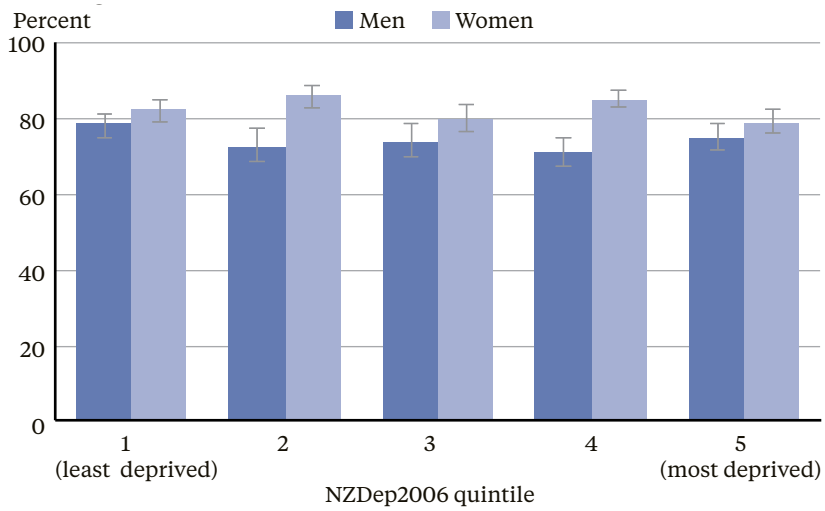
Source: 2011/12 New Zealand Health Survey (15 years and over)

The proportion of Māori adults who had visited a GP in the past 12 months dropped from 2006/07, similar to the total population. The proportion of Pacific and Asian adults who had a GP visit did not change significantly from 2006/07.

Similar proportions of adults in more and less deprived areas had visited a GP

The proportion of adults who had visited a GP in the past 12 months was similar whether they were living in the most deprived areas (77%) or the least deprived areas (80%) (Figure 51).

Figure 51: Visited a GP in the past 12 months, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

After adjusting for age, sex and ethnic group, people living in the most deprived and least deprived areas did not differ in the proportion who had visited a GP in the past year.

Cost of last visit

In 2011/12 the average reported cost of the last GP visit at a GP clinic, medical centre or family practice was $32. (This average did not include the cost of GP visits in other settings.)

Where can you go for more information?

You can find the data for the indicator of 'visited a GP in the past 12 months' in Appendix 3 and in the online data tables. Data for the following indicator are also available in the online data tables:

- average cost of last visit to a GP at a GP clinic, medical centre or family practice.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- These next questions are about seeing general practitioners (GPs) or family doctors. This can be at your usual medical centre or somewhere else.
  - In the past 12 months, have you seen a GP, or been visited by a GP, about your own health? By health, I mean your mental and emotional health as well as your physical health.
  - Thinking back to the last time you saw a GP about your own health, what type of medical centre was it? A GP clinic, medical centre or family practice; a student health service; an after-hours or an Accident and Medical Centre – not an Emergency Department at a public hospital; other.
  - Thinking about your last visit to a GP, what were you charged for that visit?

The average cost presented is for people's last visit to a GP, medical centre or family doctor (but not student health or after-hours centres). This analysis is among people who had visited a GP in the last 12 months and their last visit was at a GP clinic, medical centre or family centre.

6.2 Visited a practice nurse in the past 12 months

One-third of adults have visited a practice nurse in the past year without seeing a GP at the same visit. These results are similar to rates in 2006/07.

Practice nurses (also called **primary health care nurses**) are registered nurses with knowledge and expertise in primary health care practice. They are a key part of the primary health care team.

Practice nurses focus on health promotion, disease prevention, wellness, first-point-of-contact care and disease management across the lifespan. They run screening and preventative programmes, such as immunisation and cervical screening. They also care for patients with long-term conditions like diabetes and asthma, and have an important role around care coordination for patients and their families.

This indicator focuses on people who reported that they had visited a practice nurse in the past 12 months without seeing a GP at the same visit.

One in three adults has seen a practice nurse in the past year

In 2011/12 about one in three adults (31%) reported that they had visited a practice nurse in the past 12 months without seeing a GP at the same visit. This is over one million adults.

Women were more likely to have visited a practice nurse in the past 12 months (36%) than men (25%).

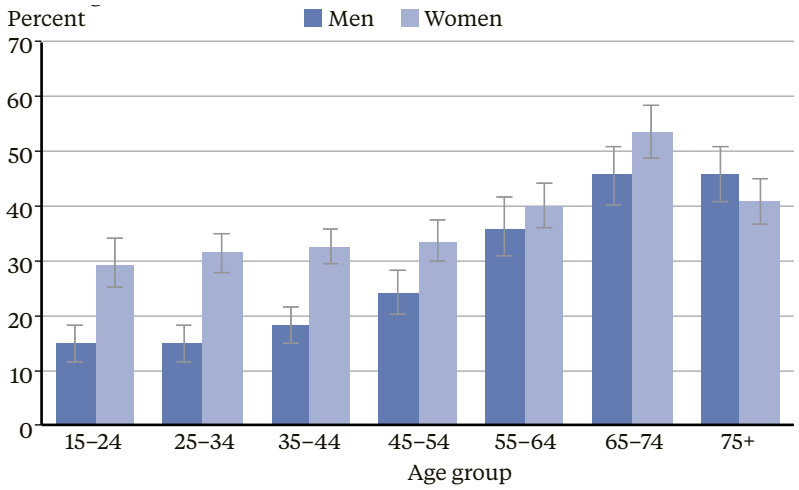
The percentage of adults who had visited a practice nurse in the past 12 months increased from 29% in 2006/07 to 31% of adults in 2011/12. After standardising for age, this change was not significant.

Older people are more likely to have seen a practice nurse

The percentage of men and women who had visited a practice nurse in the past 12 months increased with age. Over 40% of those aged 65 years and older had visited a practice nurse in the past year.

Women in all age groups, except 55–64 and 75+ years, were more likely than men in the same age group to have visited a practice nurse in the past year (Figure 52).

Figure 52: Visited a practice nurse without seeing a GP at the same visit in the past 12 months, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Pacific and Asian adults were less likely to have visited a practice nurse in the past 12 months

About 20% of Pacific adults and 19% of Asian adults had visited a practice nurse in the past 12 months (Table 26). After adjusting for age and sex, both these groups were less likely than other adults to have visited a practice nurse in the past 12 months.

Māori adults were more likely than non-Māori adults to have visited a practice nurse in the past year, adjusting for age and sex.

Table 26: Visited a practice nurse without seeing a GP at the same visit in the past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	31	25	36	1,079,000
	Māori	30	20	39	133,000
	Pacific	20	14	25	42,000
	Asian	19	13	24	70,000
	European/Other	33	27	38	907,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.1*	0.9	1.2*	
	Pacific	0.8*	0.7	0.8*	
	Asian	0.7*	0.6*	0.7*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

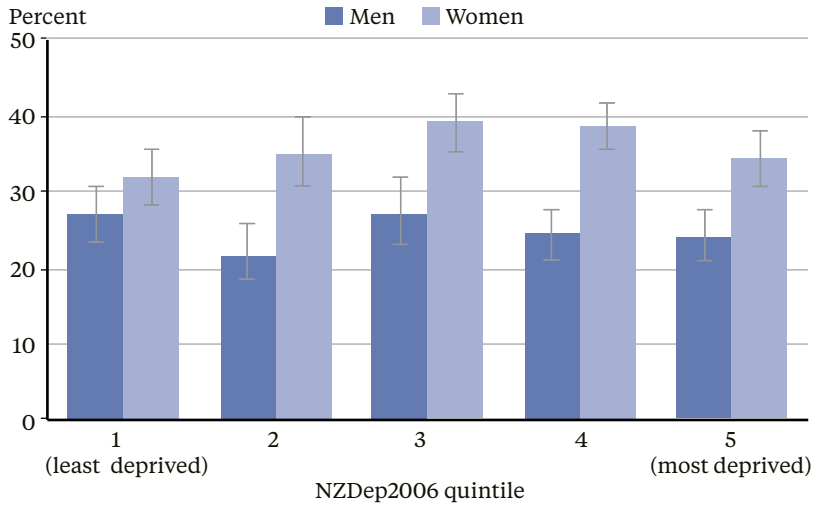
Source: 2011/12 New Zealand Health Survey (15 years and over)

Since 2006/07 there has been an increase in the proportion of Asian women who had visited a practice nurse in the past year. There were no changes since 2006/07 for Māori or Pacific adults.

The proportion of people who have visited a practice nurse is similar across more and less deprived areas

Adults living in the most deprived areas were about as likely to have visited a practice nurse in the past 12 months (30%) as those living in the least deprived areas (29%) (Figure 53).

Figure 53: Visited a practice nurse without seeing a GP at the same visit in the past 12 months, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Women living in the most deprived areas were 1.2 times as likely to have visited a practice nurse in the past year as women in the least deprived areas, after adjusting for age and ethnic group. There were no differences by deprivation for men, after adjustment.

Cost of last visit

The average cost of the last visit to a practice nurse (without seeing a GP at the same time) was $10.

Where can you go for more information?

You can find the data for the indicator of 'visited a practice nurse in the past 12 months without seeing a GP at the same visit' in Appendix 3 and in the online data tables. Data for the following indicators are available in the online data tables:

- visits to a GP or practice nurse in the past 12 months
- average cost of last visit to a practice nurse.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- The next few questions are about nurses who work at GP clinics and medical centres. These nurses are sometimes called Practice Nurses or Primary Health Care Nurses. This does not include nurses that may have visited you at home, nurses you may have seen in a hospital, or midwives and dental nurses.
  - In the past 12 months, have you seen a Practice Nurse without seeing a GP at the same visit or appointment?
  - What were you charged the last time you saw the Practice Nurse without seeing a GP at the same visit?

6.3 Visited an after-hours medical centre in the past 12 months

One in eight adults (13%) had visited an after-hours medical centre in the past year.

Younger adults were more likely to have visited an after-hours medical centre in the previous year than older adults.

After-hours medical centres provide health care outside of normal primary care hours. Their hours of service include nights, weekends and public holidays, when most GP clinics and medical centres are closed. People need to be able to access health care at the right time, before a condition becomes severe and/or results in a hospital admission.

This indicator focuses on people who reported that they had visited an after-hours medical centre in the past 12 months.

One in eight adults has visited an after-hours medical centre in the past year

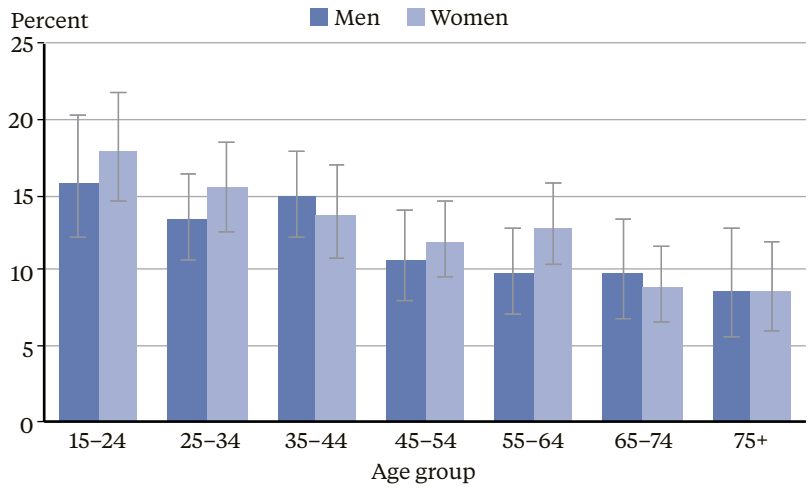
In 2011/12 one in eight adults (13%) had visited an after-hours medical centre in the past 12 months, which is about 456,000 adults.

There was no significant difference in the rates for men (12%) and women (13%).

Younger adults are more likely to have visited after-hours than older adults

One in six adults aged 15–24 years (17%) had visited an after-hours medical centre in the past 12 months, which is a higher rate than for older adults (Figure 54).

Figure 54: Visited an after-hours medical centre in the past 12 months, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Asian adults are much less likely to have visited after-hours in the past 12 months

The proportion of Asian adults who had visited an after-hours medical centre in the past year (8%) was much lower than that for other people (Table 27).

Table 27: Visited an after-hours medical centre in the past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	13	12	13	456,000
	Māori	13	13	14	59,000
	Pacific	13	15	12	28,000
	Asian	8	8	9	32,000
	European/Other	14	13	14	376,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.0	1.0	1.0	
	Pacific	0.9	1.1	0.8	
	Asian	0.6*	0.6*	0.6*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

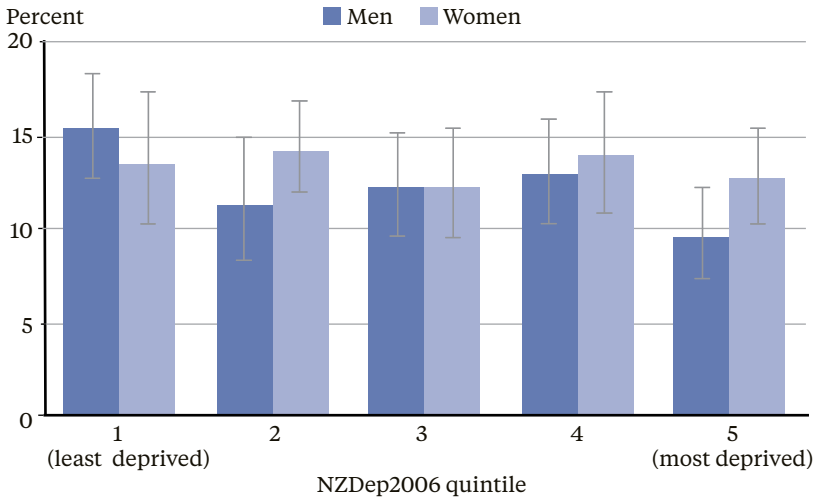
Source: 2011/12 New Zealand Health Survey (15 years and over)

Among men, those in the least deprived areas are more likely to have visited after-hours

Men living in the least deprived areas were more likely to have visited an after-hours medical centre in the past 12 months (15%) than men living in the most deprived areas (10%) (Figure 55).

About the same percentage of women in each quintile of neighbourhood deprivation had visited an after-hours medical centre in the past year.

Figure 55: Visited an after-hours medical centre in the past 12 months, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Men living in the least deprived areas were 1.5 times as likely to have visited an after-hours medical centre in the past 12 months as men living in the most deprived areas, adjusting for age and ethnic group. Rates did not differ for women based on neighbourhood deprivation, after adjustment.

Cost of last visit

The average cost of the last visit to an after-hours medical centre was $56.

Where can you go for more information?

You can find the data for the indicator of 'visited an after-hours medical centre in the past 12 months' in Appendix 3 and in the online data tables. Data for the following indicator are available in the online data tables:

- average cost of last visit to an after-hours medical centre.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- The next section is on after-hours medical care, such as during evenings, weekends or holidays when most GP clinics or medical centres are closed.
  - In the past 12 months, how many times did you go to an after-hours medical centre about your own health? Do not include visits to an emergency department at a public hospital – we will ask about those later.
  - What were you charged for your last after-hours visit?

Where people reported that they had visited a GP at an after-hours medical centre in the past year, they were asked the following question about cost in place of the previous question:

- Thinking about your last visit to a GP, what were you charged for that visit?

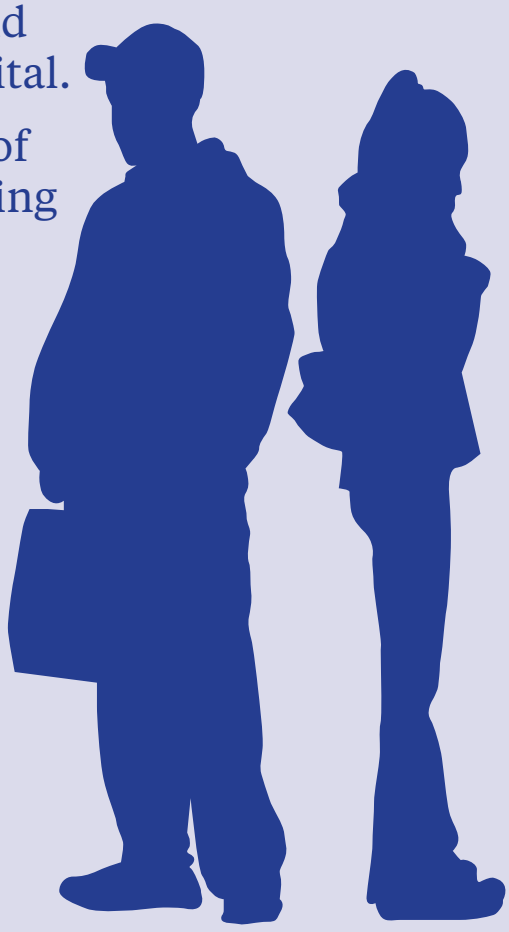
No time trends are available for this indicator, as this is the first time that these questions have been included in the New Zealand Health Survey questionnaire.

Section 7: Barriers to Accessing Health Care

Primary health care services, such as GP clinics and medical centres, are the first (and main) place for meeting New Zealanders' health needs.

People need to be able to access primary health care so that they can get treatment for a health condition before it becomes more severe. If someone delays seeking medical help, the condition may worsen and the person may need to go to hospital.

This section focuses on a number of indicators about barriers to accessing health care in New Zealand. Only limited time trends were possible for unmet need indicators, as the 2011/12 survey was the first time the New Zealand Health Survey asked directly about most of the unmet need indicators.



Key findings

- **Most adults were able to access primary health care when they needed to**

  However, about 27% of adults had an unmet need for primary health care at some time in the past year.

  The most common causes of this unmet need were that people were unable to get an appointment at their usual medical centre within 24 hours (16%), did not use GP services when they had a medical problem due to cost (14%) and did not use after-hours services when they needed to due to cost (7%).

- **The proportion of people unable to get an appointment within 24 hours has fallen**

  While 16% of adults reported that they could not get an appointment at their usual medical centre within 24 hours, this percentage was lower than in 2006/07 (when the rate was 18%).

- **Many prescriptions are left unfilled due to cost**

  About 267,000 adults (8%) did not collect one or more prescription items in the past 12 months due to the cost.

- **Women aged 25–44 years are much more likely to have experienced unmet need**

  Women – particularly younger women – had much higher levels of unmet need than men. People aged 65 years and over were less likely to have experienced unmet need.

- **Māori and Pacific adults and people living in more deprived areas are more likely to have experienced unmet need**

  Levels of unmet need for primary health care were generally higher among adults of Māori or Pacific ethnicity, and adults living in the more deprived areas.

Table 28: Summary of barriers to health care for adults aged 15 years and over, 2011/12

Indicator (in past 12 months)	Percent	Estimated number	Time trends since 2006/07
Experienced unmet need for primary health care[1]	27	947,000	Not collected in 2006/07
Unable to get appointment at usual medical centre within 24 hours	16	507,000	▼ Decrease
Unmet need for GP services due to cost	14	487,000	Not collected in 2006/07
Unmet need for after-hours services due to cost	7	252,000	Not collected in 2006/07
Unfilled prescription due to cost	8	267,000	Not collected in 2006/07

[1] Experienced any of the following at some time in the past 12 months: unable to get an appointment at their usual medical centre within 24 hours, unmet need for GP services due to cost or lack of transport, unmet need for after-hours services due to cost or lack of transport.

7.1 Unmet need for primary health care

Most adults were able to access primary health care when they needed to.

Barriers to accessing health care can occur for a number of reasons. For example, a person may be unable to get an appointment soon enough, may not have enough money to pay for an appointment at a medical centre or may not have the transport to get there.

This indicator gives a broad picture of adults who reported that they had experienced **unmet need for primary health care** in the past 12 months. These people experienced one or more of the following in the past year:

- unable to get an appointment at their usual medical centre within 24 hours
- unmet need for GP services due to cost
- unmet need for after-hours services due to cost
- unmet need for GP services due to lack of transport
- unmet need for after-hours services due to lack of transport.

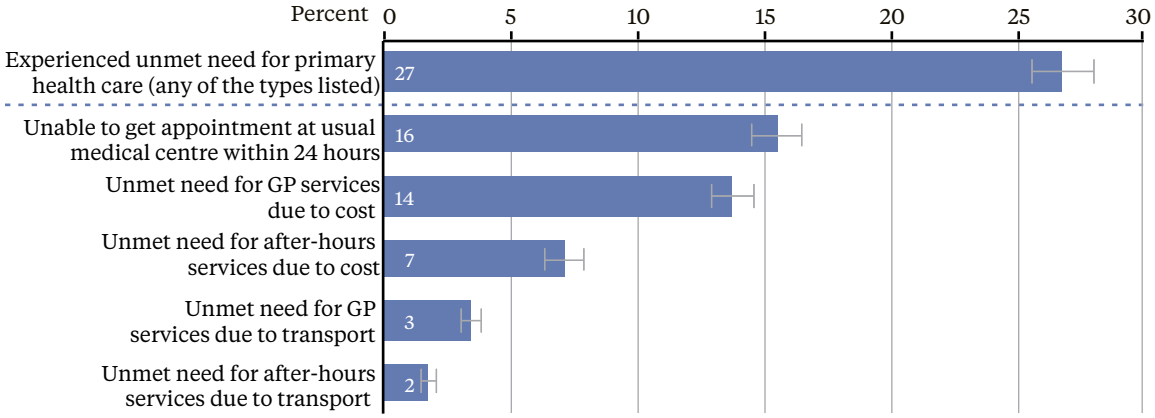
Some of the more common types of unmet need are discussed in more detail later in this section. Time trends were not available for most of the specific indicators of unmet need as the 2011/12 survey was the first time the New Zealand Health Survey asked directly about them.

Most adults were able to access primary health care when they needed to

However, one in four adults (27%) had experienced unmet need for primary health care in the past 12 months. This is almost one million adults.

The most common reasons for this unmet need were being unable to get an appointment within 24 hours (16% of adults), unmet need for GP services due to cost (14%) and unmet need for after-hours services due to cost (7%) (Figure 56). Lack of transport was a less common reason for unmet need for primary health care.

Figure 56: Unmet need for primary health care in the past 12 months, by type



Note: Respondents could report multiple types of unmet need.

Source: 2011/12 New Zealand Health Survey (15 years and over)

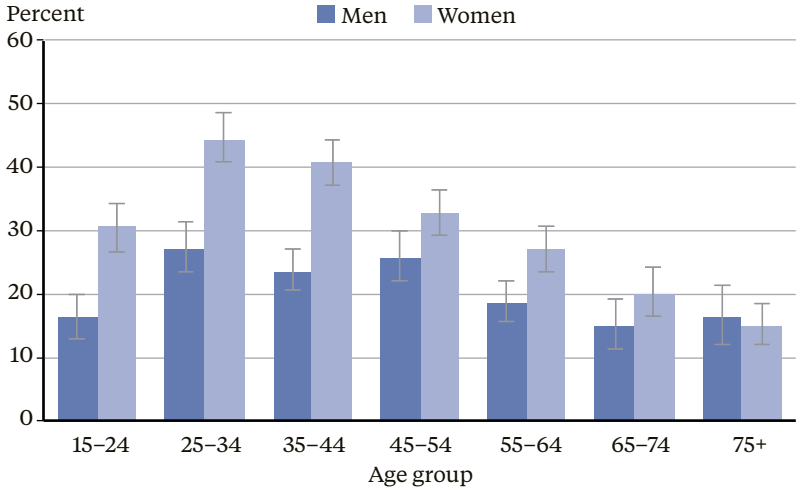
Women were more likely to have experienced unmet need in the past year (32%) than men (21%).

Two in five women aged 25–44 years experienced unmet need for primary health care

Among people aged 15–64 years, women were more likely than men to report unmet need for primary health care in the past 12 months.

Women aged 25–44 years had a particularly high rate of unmet need, with about two in five affected (Figure 57).

Figure 57: Experienced unmet need for primary health care in the past 12 months, by age group and sex



Note: Unmet need includes any of the following in the past 12 months: being unable to get an appointment at their usual medical centre within 24 hours; unmet need for GP services due to cost and/or lack of transport; unmet need for after-hours services due to cost and/or lack of transport.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori adults were more likely to have experienced unmet need in the past year

Two in five (39%) Māori adults had experienced unmet need for primary health care in the past 12 months (Table 29). This rate was 1.5 times as high as the rate for non-Māori adults, after adjusting for differences in age and sex.

Table 29: Experienced unmet need for primary health care in the past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	27	21	32	947,000
	Māori	39	31	47	173,000
	Pacific	31	23	37	63,000
	Asian	22	16	28	83,000
	European/Other	26	21	31	725,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.5*	1.5*	1.5*	
	Pacific	1.1	1.1	1.1	
	Asian	0.7*	0.7*	0.7*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group. Unmet need includes any of the following in the past 12 months: being unable to get an appointment at their usual medical centre within 24 hours; unmet need for GP services due to cost and/or lack of transport; unmet need for after-hours services due to cost and/or lack of transport.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

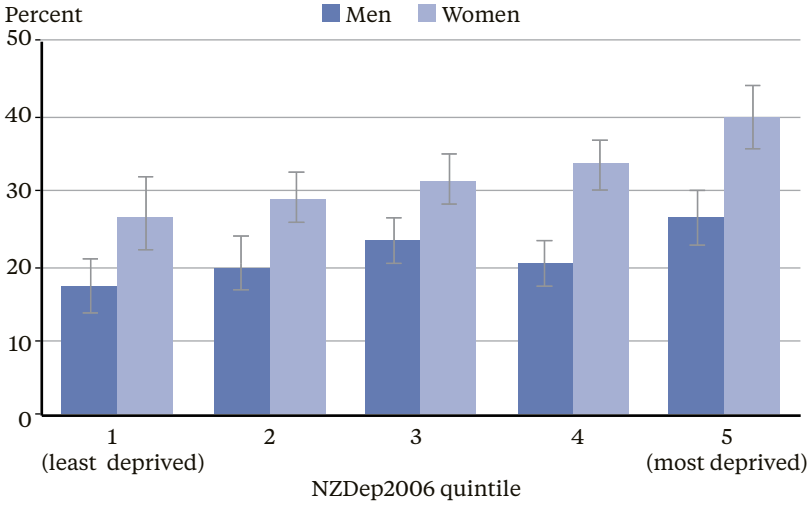
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Rates of unmet need were higher in deprived areas

Adults living in the most deprived areas had higher rates of unmet need in the past year (34%) than those living in the least deprived areas (22%). This pattern was seen for both men and women (Figure 58).

Figure 58: Experienced unmet need for primary health care in the past 12 months, by neighbourhood deprivation and sex



Note: Unmet need includes any of the following in the past 12 months: being unable to get an appointment at their usual medical centre within 24 hours; unmet need for GP services due to cost and/or lack of transport; unmet need for after-hours services due to cost and/or lack of transport.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Adjusting for differences in age, sex and ethnic group, people living in the most deprived areas were 1.4 times as likely to have experienced unmet need as people in the least deprived areas.

Where can you go for more information?

You can find the data for following indicators in Appendix 3 and in the online data tables:

- unmet need for primary health care
- unable to get an appointment at their usual medical centre within 24 hours of wanting one
- unmet need for GP services due to the cost
- unmet need for after-hours services due to the cost.

Data for the following indicators are available in the online data tables:

- unmet need for GP services due to lack of transport
- unmet need for after-hours services due to lack of transport.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- In the past 12 months, has there been a time when you wanted to see a GP, nurse or other health care worker at your usual medical centre within the next 24 hours, but they were unable to see you?
- In the past 12 months, was there a time when you had a medical problem but did not visit a GP because of cost?
- In the past 12 months, was there a time when you had a medical problem but did not visit a GP because you had no transport to get there?
- In the past 12 months, was there a time when you had a medical problem outside regular office hours but did not visit an after-hours medical centre because of cost?
- In the past 12 months, was there a time when you had a medical problem outside regular office hours but did not visit an after-hours medical centre because you had no transport to get there?

The broad indicator of 'unmet need for primary health care' reports whether people had experienced one or more of the above more detailed indicators in the past 12 months. This overall measure may be an underestimate of all barriers if people experience some other barriers that are not captured here.

7.2 Unable to get appointment at usual medical centre within 24 hours

The proportion of people unable to get an appointment at their usual medical centre within 24 hours has fallen since 2006/07.

Timely access to health care is critical. If a person cannot get an appointment promptly when they ask for one, they face an important barrier to health care.

This indicator focuses on whether people reported an experience in the past 12 months when they wanted to see a GP, nurse or other health care worker at their usual medical centre within 24 hours but could not get an appointment. Possible reasons for this unmet need included that there were no appointments available, that the times offered did not suit, or that the appointment was with a doctor they didn't want to see.

One in seven adults could not get an appointment at their usual medical centre within 24 hours

One in seven adults (16%) reported that they were unable to get an appointment at their usual medical centre within 24 hours at some time in the past 12 months. This is about half a million adults.

More women (18%) than men (13%) were unable to get an appointment within 24 hours at some time in the past 12 months. Adjusting for age, women were 1.4 times as likely as men to have been unable to get an appointment within 24 hours.

The proportion of people unable to get an appointment within 24 hours has fallen

Fewer people reported that they were unable to get an appointment at their usual medical centre within 24 hours in 2011/12 (16%) than in 2006/07 (18%).

The rates decreased for both men and women over this period (Figure 59).

Figure 59: Unable to get an appointment at usual medical centre within 24 hours in past 12 months, by sex, 2006/07 and 2011/12

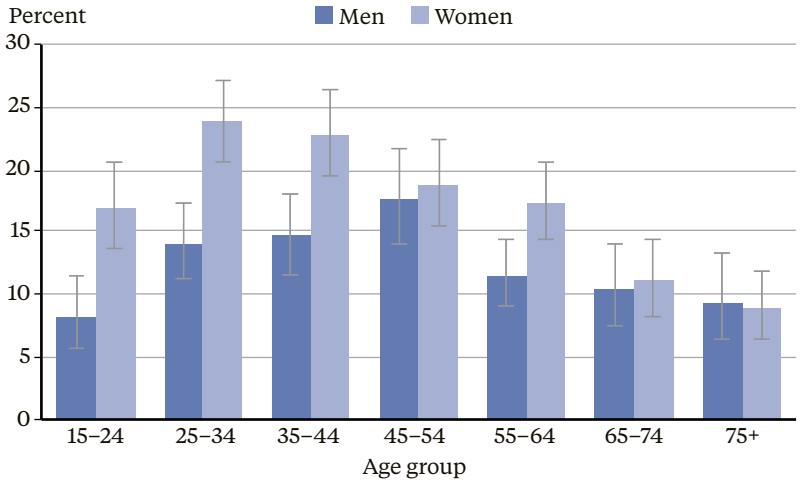
Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

Many women aged 25–44 years were unable to get an appointment within 24 hours

Almost one in four women aged 25–44 years was unable to get an appointment at their usual medical centre within 24 hours, at some time in the past 12 months (Figure 60).

Figure 60: Unable to get an appointment at usual medical centre within 24 hours in past 12 months, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

One in four Māori women was unable to get an appointment within 24 hours in the past year

Māori women were more likely (24%) than other women to have been unable to get an appointment within 24 hours at some time in the past 12 months (Table 30).

Table 30: Unable to get an appointment at usual medical centre within 24 hours in past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	16	13	18	507,000
	Māori	20	16	24	81,000
	Pacific	15	12	18	29,000
	Asian	15	11	17	47,000
	European/Other	15	13	17	395,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.3*	1.3	1.3*	
	Pacific	0.9	1.0	0.9	
	Asian	0.9	0.8	0.9	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

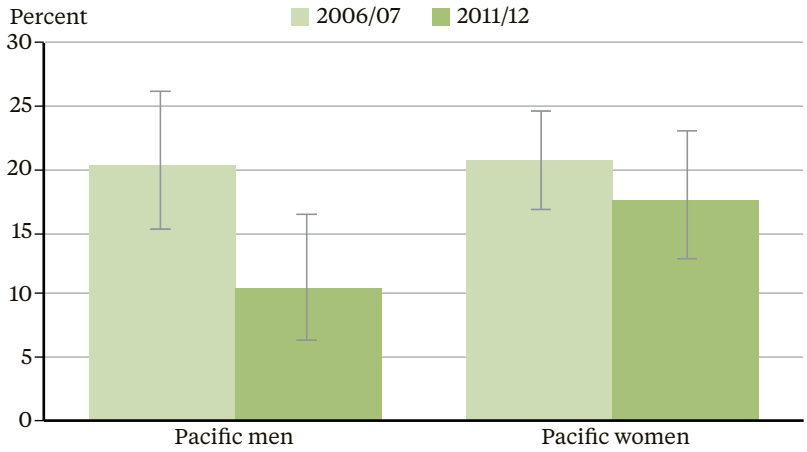
1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Since 2006/07 the proportion of Pacific men unable to get an appointment within 24 hours has fallen (Figure 61). There were no other changes by ethnic group over this time.

Figure 61: Unable to get an appointment at usual medical centre within 24 hours in past 12 months, Pacific men and women, 2006/07 and 2011/12



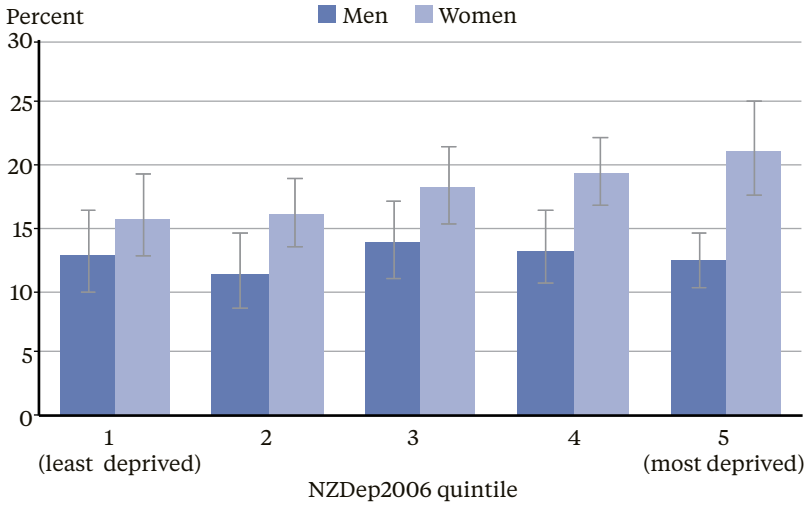
Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

One in five women in the most deprived areas was unable to get an appointment within 24 hours

In the past 12 months, 21% of women living in the most deprived areas could not get an appointment within 24 hours, compared with 16% of women in the least deprived areas (Figure 62).

Figure 62: Unable to get an appointment at usual medical centre within 24 hours in past 12 months, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Women living in the most deprived areas were 1.4 times as likely to have been unable to get an appointment within 24 hours as women in the least deprived areas, adjusting for age and ethnic group. There was no difference by deprivation level for men after adjustment.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What was the survey question?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- In the past 12 months, has there been a time when you wanted to see a GP, nurse or other health care worker at your usual medical centre within the next 24 hours, but they were unable to see you?

7.3 Unmet need for GP services due to cost

One in seven adults did not visit a GP when they had a medical problem due to the cost, at some time in the past year.

A general practice or medical clinic is often the first place people go to when they are unwell and need help, except in emergencies.

All New Zealanders are eligible for reduced health care costs when they go to their regular practice. However, cost may still be a barrier to accessing primary health care.

This indicator focuses on whether there was a time in the past 12 months when people had a medical problem but did not visit a GP because of cost. Time trends are not reported because the wording of this question has changed since 2006/07.

Cost prevented one in seven adults from visiting a GP when they had a medical problem

In 2011/12 one in seven adults (14%) reported that at some time in the last 12 months they had a medical problem but did not visit a GP because of cost. This is about 487,000 adults.

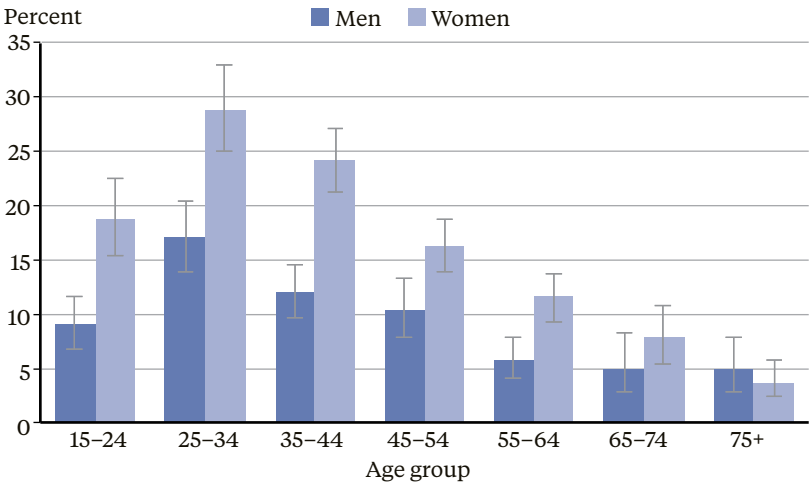
Women were almost twice as likely to have been unable to see a GP due to cost at some time in the past 12 months (17%) as men (10%).

Women 25–44 years were more likely to be affected

About 25% of women aged 25–44 years reported that they did not visit a GP due to cost at some time in the past 12 months. This proportion is much higher than for other groups (Figure 63).

In contrast, cost was much less likely to be a barrier for older people. Less than 10% of those aged 65+ years reported that this reason had prevented them from visiting a GP at some time in the past 12 months.

Figure 63: Unmet need for GP services due to cost in the past 12 months, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori have higher rates of unmet GP need due to cost

Māori adults had high rates of unmet need for GP services due to cost in the past year (16% for Māori men and 29% for Māori women, Table 31). Overall, Māori adults were 1.6 times as likely to have been unable to visit a GP at some time in the past 12 months due to cost as non-Māori adults, adjusting for age and sex.

Pacific men had higher rates of unmet GP need due to cost in the past year than non-Pacific men, adjusting for age and sex. There were no differences between Pacific women and other women.

Table 31: Unmet need for GP services due to cost in the past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	14	10	17	487,000
	Māori	23	16	29	101,000
	Pacific	17	15	19	35,000
	Asian	11	9	12	39,000
	European/Other	13	9	17	366,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.6*	1.5*	1.6*	
	Pacific	1.1	1.4*	0.9	
	Asian	0.6*	0.7	0.6*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

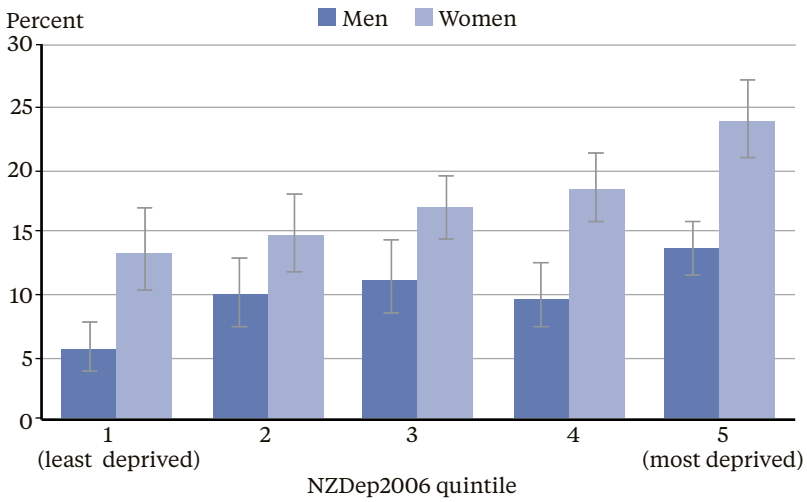
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

One in five adults in the most deprived areas did not visit a GP due to the cost

Cost prevented one in five (19%) adults living in the most deprived areas from visiting their GP at some time in the past 12 months, compared with 9% of adults in the least deprived areas (Figure 64).

Figure 64: Unmet need for GP services due to cost in the past 12 months, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

People in the most deprived areas were 1.8 times as likely to have had unmet need for GP services due to cost in the past year as people in the least deprived areas, after adjusting for differences in age, sex and ethnic group.

Another reason for not visiting a GP is having no transport to get there

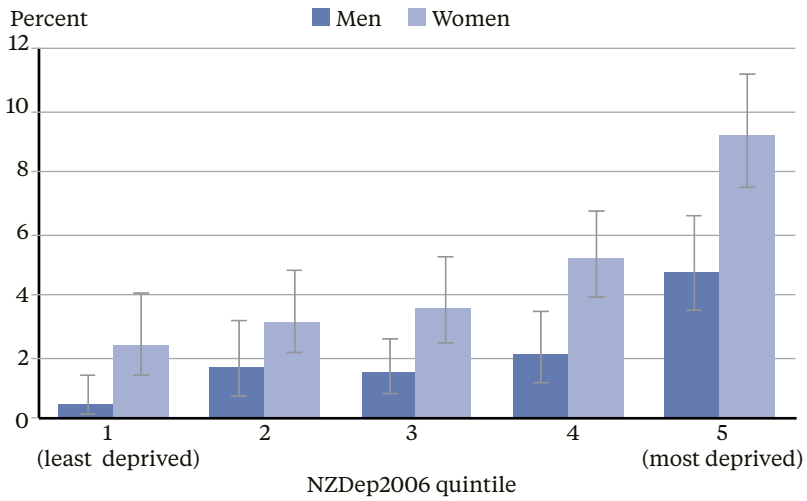
Having no transport to get to a GP is another potential reason why people may not visit a GP when they have a medical need.

A lack of transport had prevented about 3.4% of adults from visiting a GP when they needed to at some time in the past 12 months, which is about 121,000 adults. Women had higher rates (4.8%) than men (2.0%).

Of particular note were the high rates among Māori (8.6%) and Pacific adults (8.9%). These rates were 2–3 times as high as the rates for non-Māori and non-Pacific adults respectively, adjusting for age and sex differences.

Unmet GP need due to transport was strongly related to deprivation. Rates were much higher for people living in the most deprived areas (7.2%) than for those in the least deprived areas (1.4%) (Figure 65).

Figure 65: Unmet need for GP services due to lack of transport in the past 12 months, by neighbourhood deprivation and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in the most deprived areas were 3.4 times as likely to have found lack of transport prevented them from visiting a GP at some time in the past year as those in the least deprived areas, after adjusting for age, sex and ethnic differences.

Where can you go for more information?

You can find the data for the indicator 'unmet need for GP services due to cost' in Appendix 3 and in the online data tables. Data for the following indicator are also available in the online data tables:

- unmet need for GP services due to lack of transport.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- In the past 12 months, was there a time when you had a medical problem but did not visit a GP because of cost?
- In the past 12 months, was there a time when you had a medical problem but did not visit a GP because you had no transport to get there?

The wording for these questions has changed since the 2006/07 New Zealand Health Survey. The questions now ask directly about any unmet need for GP services due to cost and due to transport in the previous year. Due to this change in question wording, it was not possible to reliably report time trends for these indicators.

7.4 Unmet need for after-hours services due to cost

About 252,000 adults (7%) were unable to visit an after-hours medical centre at some time in the past 12 months due to cost.

After-hours medical centres provide health care outside of normal primary care hours. Their hours include nights, weekends and public holidays, when most GP clinics and medical centres are closed.

One barrier to visiting after-hours medical centres is the cost. In New Zealand, medical care provided after regular office hours is normally more expensive than that during office hours.

This indicator focuses on whether people report an experience in the past 12 months when they had a medical problem outside regular office hours but did not visit an after-hours medical centre because of cost. It was not possible to present time trends as this is the first time the New Zealand Health Survey has asked this question.

About 7% of adults did not visit an after-hours service when they needed to due to cost in the past 12 months

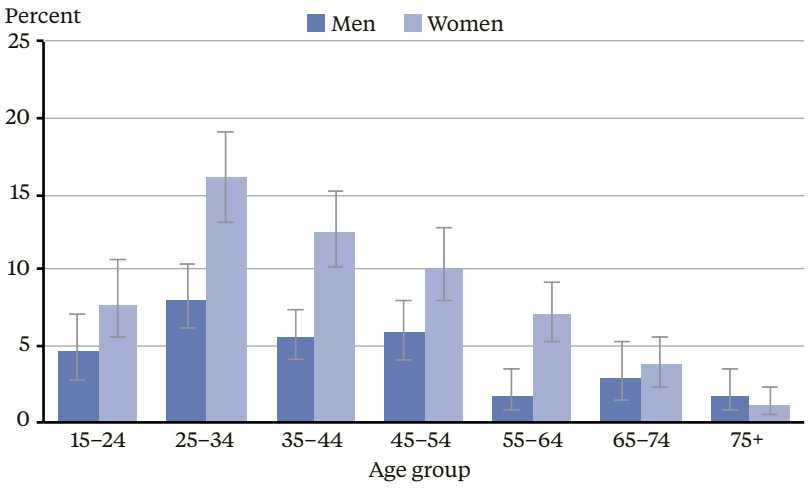
In 2011/12, 7% of adults reported that they had a medical problem outside of regular office hours but did not visit an after-hours medical centre because of the cost, at some time in the past 12 months. This is about 252,000 adults.

Women were much more likely to have experienced cost as a barrier to accessing after-hours services (9%) than men (5%).

Women aged 25–34 years were more likely to have been unable to visit after-hours services due to cost

Cost was more likely to have prevented women aged 25–34 years (16%) from visiting after-hours services when they had a medical problem, than other people (Figure 66).

Figure 66: Unmet need for after-hours services due to cost in the past 12 months, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Cost was more likely to have prevented Māori from using after-hours services

About 11% of Māori men and 18% of Māori women did not visit an after-hours service when they needed to at some time in the past 12 months, due to cost (Table 32). Overall, Māori adults were over twice as likely to have experienced this unmet need in the past year as non-Māori adults, after adjusting for age and sex.

Pacific adults also had higher rates of unmet need for an after-hours service due to cost.

Table 32: Unmet need for after-hours services due to cost in the past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	7	5	9	252,000
	Māori	14	11	18	63,000
	Pacific	10	7	13	21,000
	Asian	6	4	8	23,000
	European/Other	6	4	8	173,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	2.1*	2.4*	1.9*	
	Pacific	1.3*	1.3	1.3	
	Asian	0.7*	0.7	0.7	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

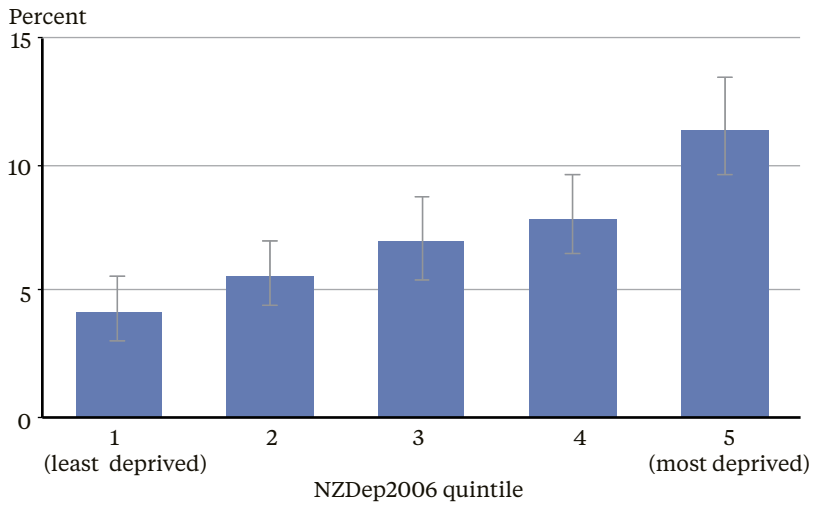
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

One in nine adults living in deprived areas was unable to visit after-hours services due to cost

Cost had prevented 11% of adults living in the most deprived areas from visiting after-hours services when they needed to at some time in the past 12 months, compared with 4% of adults in the least deprived areas (Figure 67).

Figure 67: Unmet need for after-hours services due to cost in the past 12 months, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

After adjusting for age, sex and ethnic differences, people living in the most deprived areas were 2.4 times as likely to have had unmet need for after-hours services due to cost as people in the least deprived areas.

Lack of transport is another reason for not using after-hours services

Having no transport to get to an after-hours medical centre is another potential reason why people may not use its services when they have a medical need.

About 1.8% of adults did not visit after-hours services when they needed to due to a lack of transport at some time in the past 12 months. This is about 62,000 adults. Women had higher rates (2.4%) than men (1.1%).

This type of unmet need was much more common among Māori (4.6%) than other adults. Adjusting for age and sex, Māori adults were 3.2 times as likely as non-Māori to have been prevented from using after-hours services because they had no transport at some time in the past year.

There were also higher rates for Pacific adults (2.8%). Pacific adults were 1.5 times as likely as non-Pacific adults to experienced unmet need for after-hours care in the past year due to a lack of transport, after adjusting for age and sex.

Lack of transport was much more likely to be a barrier to accessing after-hours services for people living in the most deprived areas (3.7%) than for those in the least deprived areas (0.9%). People living in the most deprived areas were 3.6 times as likely to have experienced unmet need for after-hours care due to transport as those in the least deprived areas, adjusting for age, sex and ethnic group.

Where can you go for more information?

You can find the data for the indicator 'unmet need for after-hours services due to cost' in Appendix 3 and in the online data tables. Data for the following indicator are also available in the online data tables:

- unmet need for after-hours services due to lack of transport.

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- In the past 12 months, was there a time when you had a medical problem outside regular office hours but did not visit an after-hours medical centre because of cost?
- In the past 12 months, was there a time when you had a medical problem outside regular office hours but did not visit an after-hours medical centre because you had no transport to get there?

This is the first time that these questions have been included in the New Zealand Health Survey, so it was not possible to report time trends.

7.5 Unfilled prescriptions due to cost

Cost prevented about 267,000 adults from collecting one or more prescription items in the past 12 months.

Cost was a greater barrier for some ethnic groups and adults living in deprived areas.

Medication plays an important role in treating health problems. Prescription medicines can relieve pain, cure illnesses, help control many medical conditions and lower the complications associated with them. Medication can also help prevent health conditions from worsening and can help keep people out of hospital.

One barrier to accessing prescription medicines is cost. In New Zealand, most prescription medicines are subsidised so that people only need to pay a relatively small amount for each prescription (in 2011/12 this cost was $3).

This indicator focuses on whether people reported that at some time in the past 12 months they had a prescription for themselves but did not collect one or more items because of cost. It was not possible to present reliable time trends because the wording of the question has changed since 2006/07.

About 8% of adults did not fill a prescription due to cost in past 12 months

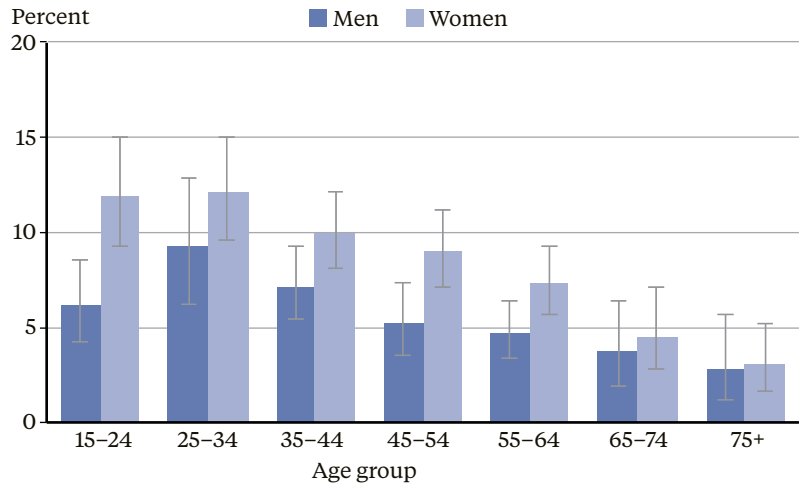
In 2011/12, 8% of adults reported that cost had prevented them from collecting a prescription at some time in the past 12 months. This is about 267,000 adults.

Cost was more likely to prevent women from collecting a prescription item (9%) than it was for men (6%).

Cost was a greater barrier to filling prescriptions for younger women

One in eight (about 12%) women aged 15–34 years did not fill a prescription due to the cost in the past year (Figure 68). These rates are higher than the rates for other people.

Figure 68: Unfilled prescription due to cost in the past 12 months, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori and Pacific adults were more likely to have not collected a prescription due to the cost in the past year

About 18% of Māori adults had not filled a prescription at some time in the past 12 months due to the cost (Table 33). Māori adults were 2.8 times as likely to have found the cost to be a barrier to filling a prescription as non-Māori adults, after adjusting for age and sex differences.

Among Pacific adults, 13% had not collected a prescription due to the cost at some time in the past 12 months. This rate was 1.6 times as high as the rate for non-Pacific adults, after adjusting for age and sex.

The cost barrier was greater for women in both these ethnic groups: 21% of Māori women and 16% of Pacific women had not collected prescriptions in the past 12 months due to the cost.

Table 33: Unfilled prescription due to cost in the past 12 months, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	8	6	9	267,000
	Māori	18	15	21	81,000
	Pacific	13	10	16	27,000
	Asian	5	5	6	20,000
	European/Other	6	5	7	170,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	2.8*	3.0*	2.6*	
	Pacific	1.6*	1.6*	1.6*	
	Asian	0.6*	0.7	0.5*	

*Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

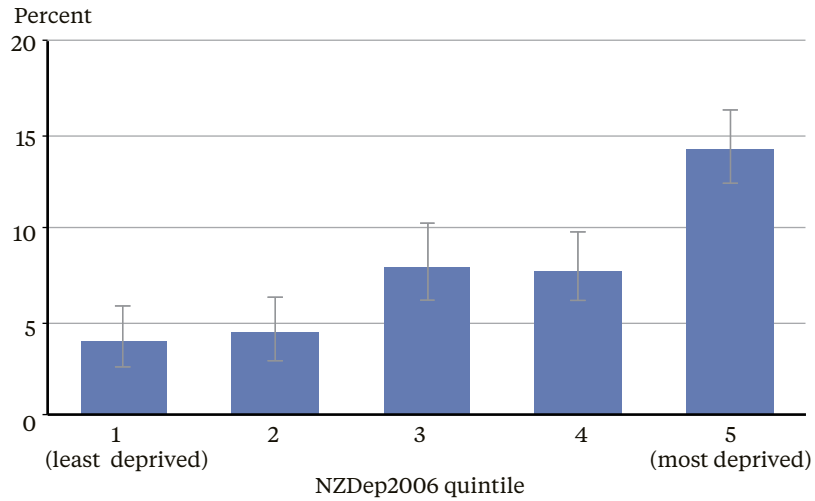
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

Not filling prescriptions due to cost was much more common in deprived areas

In the past 12 months, 14% of people living in the most deprived areas had not filled a prescription due to the cost, compared with 4% of people in the least deprived areas (Figure 69).

Figure 69: Unfilled prescription due to cost in the past 12 months, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in the most deprived areas were 3.2 times as likely to have not filled a prescription due to cost as people in the least deprived areas, after adjusting for differences in the age, sex and ethnic group.

Where can you go for more information?

You can find the data for the above indicator in Appendix 3 and in the online data tables.

What was the survey question?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- In the past 12 months, was there a time when you got a prescription for yourself but did not collect one or more prescription items from the pharmacy or chemist because of cost?

This is the first time that the New Zealand Health Survey has asked directly about any unfilled prescriptions due to cost in the previous year. For this reason, it was not possible to report time trends.

Section 8: Oral Health Status and Service Use

Good oral health is important for good health and wellbeing more generally. Poor oral health is a common cause of discomfort, pain, disability and poor self-image.

Regular dental visits can help keep teeth and gums healthy. At these visits, the dental health care worker can identify oral health problems early or take action to prevent them. To maintain oral health, the Ministry of Health also recommends that people brush their teeth at least twice a day with fluoride toothpaste.

This section focuses on three key indicators relating to oral health status and the use of dental services.

For more information on oral health, see *Our Oral Health* (Ministry of Health 2010), which presents key findings from the 2009 New Zealand Oral Health Survey.

Key findings

- **About 270,000 adults have had a tooth removed in the past year**
  - About 8% of adults (270,000 adults) had a tooth removed in the past year due to decay, gum disease, abscess or infection.

- **Less than one in two adults has had a dental visit in the past year**
  - Among adults with natural teeth (dentate adults), less than half (49%) had visited a dental health care worker in the past 12 months. This rate has dropped since 2006/07 (when it was 52%).
  - More than half of dentate adults reported that they only visit a dental health care worker when they have a dental problem (or never), rather than for regular check-ups. This rate has increased since 2006/07.

- **Māori, Pacific and Asian adults are less likely to have visited a dental health care worker in the past year**
  - People of Māori, Pacific and/or Asian ethnicity were less likely than other people to have visited a dental health care worker in the past year. They were also more likely to only visit when they have dental problems, or never visit.

- **Living in deprived areas is clearly linked to dental visiting patterns and poorer oral health**
  - Compared with people in less deprived areas, people living in more deprived areas were much more likely to only visit a dental health care worker when they had dental problems, or never visit. They were also more likely to have had a tooth removed in the past year due to decay, gum disease, abscess or infection.

Table 34: Summary of oral health care and status for adults aged 15 years and over, 2011/12

Indicator	Percent	Estimated number	Time trend since 2006/07
Had any teeth removed due to decay, abscess, infection or gum disease in the past 12 months	8	270,000	Not collected in 2006/07
Visited a dental health care worker in the past 12 months (dentate adults only)	49	1,584,000	▼ Decrease
Usually only visit a dental health care worker for a toothache (or never) (dentate adults only)	55	1,778,000	▲ Increase

8.1 Had a tooth removed in past 12 months

Over quarter of a million adults have had a tooth removed in the past year due to decay, infection, an abscess or gum infection.

Conditions that can cause poor oral health include tooth decay, abscesses, infections in the mouth, and gum disease. A tooth may be removed (extracted) if it cannot be repaired, or if the person would prefer to have the tooth removed rather than treated (due to the treatment cost or another reason). Tooth loss affects quality of life and is related to poorer health more generally.

A poor diet, not brushing teeth at least twice a day and cigarette smoking can contribute to poor oral health. Studies also suggest that people living in areas without fluoridated water have poorer oral health than those living in areas with fluoridated water.

In this report, people who had a **tooth removed** includes people who reported that a dental health care worker had removed at least one of their teeth in the past 12 months because of tooth decay, an abscess, infection or gum disease. It does not include people who have lost teeth for other reasons such as injury, crowded mouth or orthodontics.

About 8% of adults have had a tooth removed in the last year due to poor oral health

Overall, about 8% of adults aged 15 years and over had a tooth removed in the past 12 months due to decay, infection, abscess or gum disease. This is about 270,000 adults.

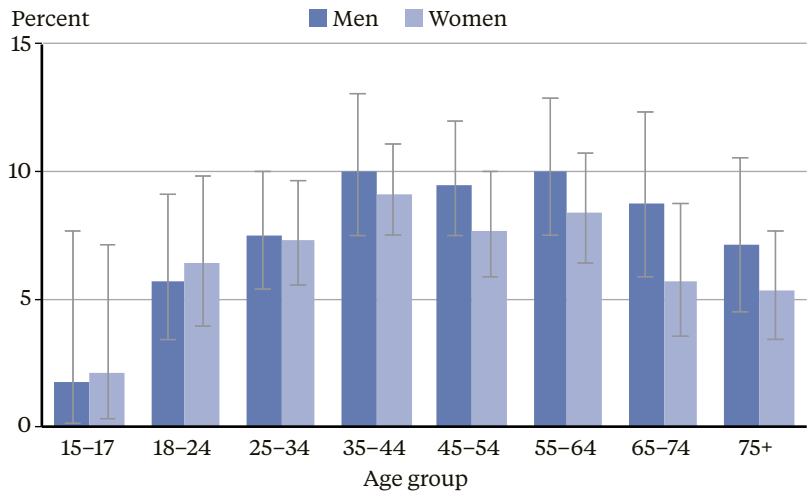
A similar proportion of men (8%) and women (7%) had a tooth removed in the past year.

Adults aged 35–64 years are more likely to have had a tooth removed in the past year

Almost 10% of adults aged 35–64 years had a tooth removed in the past year due to decay, infection, abscess or gum disease.

The younger and older age groups were generally less likely to have had a tooth removed in the past year than other age groups (Figure 70).

Figure 70: Had a tooth removed in the past 12 months due to decay, abscess, infection or gum disease, by age group and sex



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori adults are more likely to have had a tooth removed

About 12% of Māori adults and 11% of Pacific adults had a tooth removed in the past 12 months due to decay, abscess, infection or gum disease (Table 35).

After adjusting for age and sex differences, Māori adults were 1.7 times as likely as non-Māori to have had a tooth removed in the past 12 months. Similarly Pacific adults were 1.6 times as likely as non-Pacific adults to have had a tooth removed.

Table 35: Had a tooth removed in the past 12 months due to decay, abscess, infection or gum disease, by ethnic group and sex

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	8	8	7	270,000
	Māori	12	12	11	52,000
	Pacific	11	10	11	22,000
	Asian	6	7	6	24,000
	European/Other	7	8	7	200,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.7*	1.7*	1.7*	
	Pacific	1.6*	1.5	1.7*	
	Asian	0.8	0.8	0.9	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

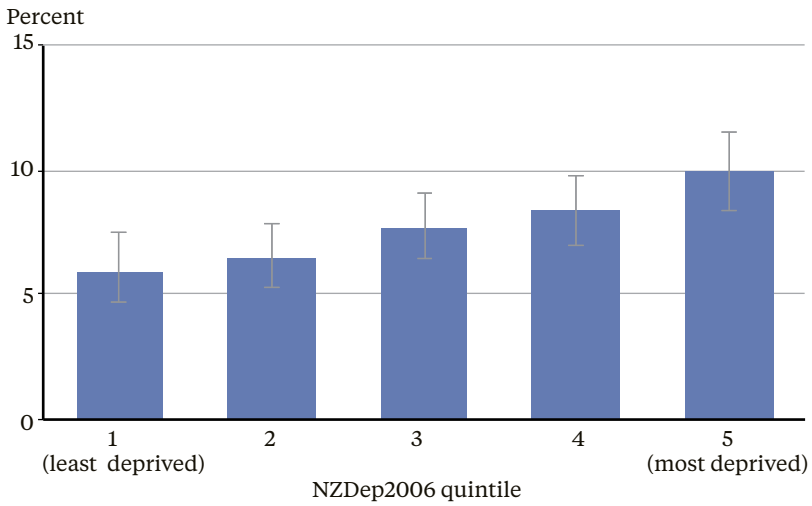
2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in more deprived areas are more likely to have had a tooth removed

People living in the most deprived areas were more likely to have had a tooth removed in the past 12 months (10%) than people in the least deprived areas (6%) (Figure 71).

Figure 71: Had a tooth removed in the past 12 months due to decay, abscess, infection or gum disease, by neighbourhood deprivation



Source: 2011/12 New Zealand Health Survey (15 years and over)

Adjusting for differences in age, sex and ethnic group, people in the most deprived areas were 1.6 times as likely to have had a tooth removed in the past 12 months as people in the least deprived areas.

Some adults have had all their teeth removed

About 8% of adults aged 15 years and over reported that, in their lifetime, they had had all of their teeth removed due to decay, gum disease, abscess or infection. This is about 280,000 adults.

Women were more likely to have had all their teeth removed (9%) than men (7%). This difference remained significant after adjusting for age differences.

Older people were much more likely to have had all of their teeth removed than younger age groups. The following percentage of people in each age group had had all of their teeth removed:

- less than 1% aged 15–44 years
- 4% aged 45–54 years
- 13% aged 55–64 years
- 23% aged 65–74 years
- 42% aged 75+ years.

About 8% of Māori adults had had all their teeth removed due to decay, abscess, infection or gum disease. After adjusting for age and sex differences, Māori adults were 1.4 times as likely as non-Māori to have had all their teeth removed. There were no other differences by ethnic groups.

About 11% of people living in the most deprived areas had had all their teeth removed, compared with 5% of those in the least deprived areas. People in the most deprived areas were 1.5 times as likely to have had all their teeth removed as those in the least deprived areas, after adjusting for age, sex and ethnic differences.

How do these findings compare with the 2009 New Zealand Oral Health Survey?

The 2009 New Zealand Oral Health Survey collected comprehensive information about the oral health of New Zealand adults and children (Ministry of Health 2010).

In the 2011/12 New Zealand Health Survey, the percentage of adults who reported they had no teeth (8% of adults aged 15 years and over) was similar to the percentage in the 2009 New Zealand Oral Health Survey (9% of adults aged 18 years and over).

The 2011/12 survey found women were more likely to have had all their teeth removed than men. By contrast, the 2009 survey found no difference between men and women, although this result may be due to a smaller sample size and less statistical power than the 2011/12 survey.

Where can you go for more information?

You can find the data from the 2011/12 New Zealand Health Survey for the indicator 'had a tooth removed due to decay, abscess, infection or gum disease in the past 12 months' in Appendix 3 and in the online data tables.

Data for the following indicators from the 2011/12 New Zealand Health Survey are also available in the online data tables:

- ever had any teeth removed due to decay, an abscess, infection or gum disease
- has had all teeth removed due to decay, an abscess, infection or gum disease.

For more information about oral health from the 2009 New Zealand Oral Health Survey, see the report *Our Oral Health* (Ministry of Health 2010).

What were the survey questions?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- How many of your teeth have been removed by a dental health care worker because of tooth decay, an abscess, infection or gum disease? Do not include teeth lost for other reasons such as injury, crowded mouth or orthodontics. (Include baby teeth and wisdom teeth only if removed because of tooth decay, an abscess, infection or gum disease.)
- Were any of these teeth removed in the last 12 months?

The analyses of people who have had all their teeth removed used the approximate definition of having had 28–32 teeth removed due to decay, abscess, infection or gum disease. This definition was used to reduce the impact of variation in interviewer coding of the number of missing teeth. It may have excluded a small number of adults who have no natural teeth because they had all their teeth removed for reasons other than poor oral health.

8.2 Visited a dental health care worker in the past 12 months

Among adults with natural teeth, less than half have visited a dental health care worker in the past 12 months.

Dental visiting rates are lower among some ethnic groups and people living in more deprived areas.

The Ministry of Health and the New Zealand Dental Association recommend regular dental checks as one of the ways to keep teeth and gums healthy.

Dental health care workers can detect oral health problems (including decay and oral cancer) early. They can also provide timely preventive measures and treatments (such as fillings) to maintain and improve people's oral health. In this report, **dental health care workers** mean dentists and other dental health care workers, such as dental therapists, dental nurses, dental hygienists, and dental health specialists such as orthodontists.

Dentate adults means adults aged 15 years and over with natural teeth. It does not include people who have had all their teeth removed due to decay, abscess, gum infection or disease (which is most common in the older age groups).

About half of dentate adults have visited a dental health care worker in the past 12 months

In 2011/12, 49% of dentate adults had visited a dental health care worker in the past 12 months. This is 45% of all adults (with and without natural teeth), or about 1.6 million adults.

Among dentate adults, about 51% of women had visited a dental health care worker in the past year, compared with 47% of men. Adjusting for age, women were 1.1 times as likely as men to have had a dental visit in the last 12 months.

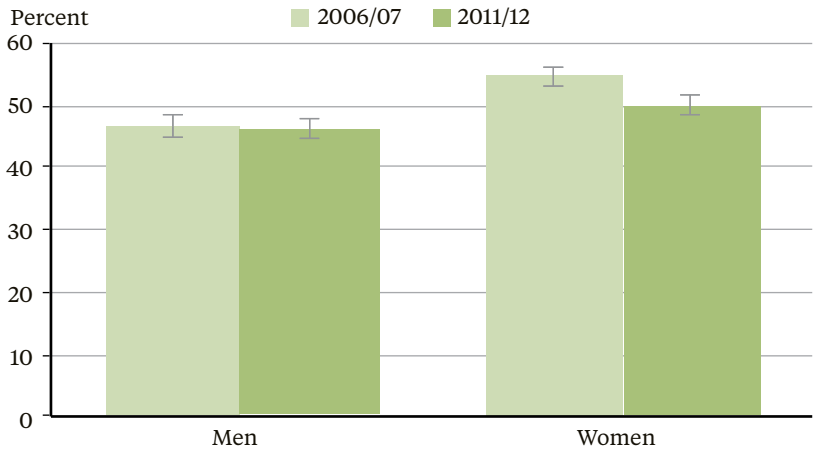
Fewer dentate women had a dental visit in 2011/12 than in 2006/07

Among dentate adults, the percentage who had visited a dental health care worker in the past 12 months fell from 52% in 2006/07 to 49% in 2011/12.

The percentage of dentate women who had a dental visit in the past year decreased from 55% in 2006/07 to 51% in 2011/12 (Figure 72).

There was no change for men over this time.

Figure 72: Visited a dental health care worker in the past 12 months, by sex, among dentate adults, 2006/07 and 2011/12



Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

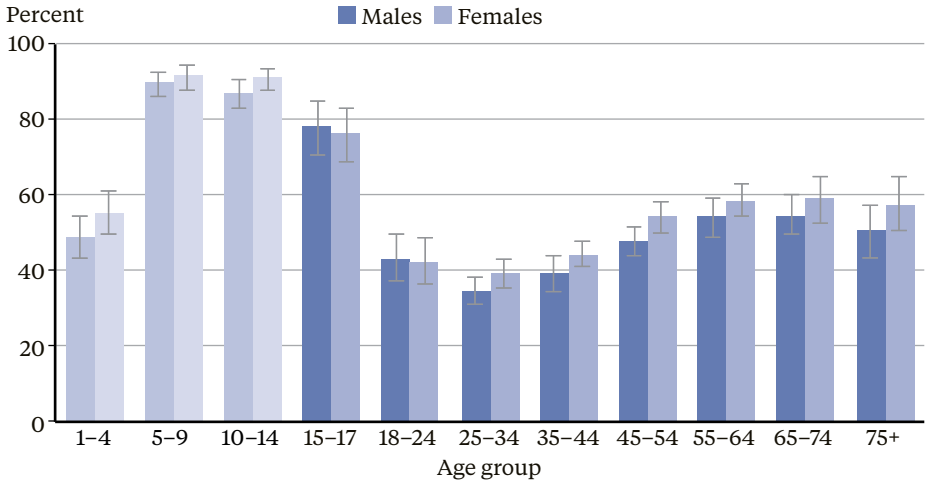
Adults aged 18–44 years are less likely to visit a dentist

Patterns in dental visiting rates were clearly linked to age.

People aged 18–44 years had the lowest dental visiting rates: less than half of them had visited a dental health care worker in the past year (Figure 73).

In New Zealand, basic oral health services are publicly funded for children and adolescents from birth up until their 18th birthday. This funding arrangement clearly influenced the trends by age group, as those aged 1–17 years were generally more likely to have visited a dental health care worker than adults aged 18 years and over.

Figure 73: Visited a dental health care worker in the past 12 months, by age group and sex, among dentate children, adolescents and adults



Source: 2011/12 New Zealand Health Survey (1 year and over)

Dental visiting rates are low among Māori, Pacific and Asian adults

Adults of Māori, Pacific and/or Asian ethnicity were much less likely than other people to have visited a dental health care worker in the past 12 months.

Among dentate adults, two in five Māori (38%) had visited a dental health care worker in the past 12 months (Table 36). There were also much lower dental visiting rates for Pacific (33%) and Asian (37%) dentate adults. These rates remained lower than those for non-Māori, non-Pacific and non-Asian adults respectively, after adjusting for age and sex differences.

Table 36: Visited a dental health care worker in the past 12 months, by ethnic group and sex, among dentate adults

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	49	47	51	1,584,000
	Māori	38	35	41	156,000
	Pacific	33	34	32	66,000
	Asian	37	31	42	135,000
	European/Other	53	51	55	1,343,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	0.8*	0.8*	0.8*	
	Pacific	0.7*	0.7*	0.6*	
	Asian	0.8*	0.6*	0.9*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

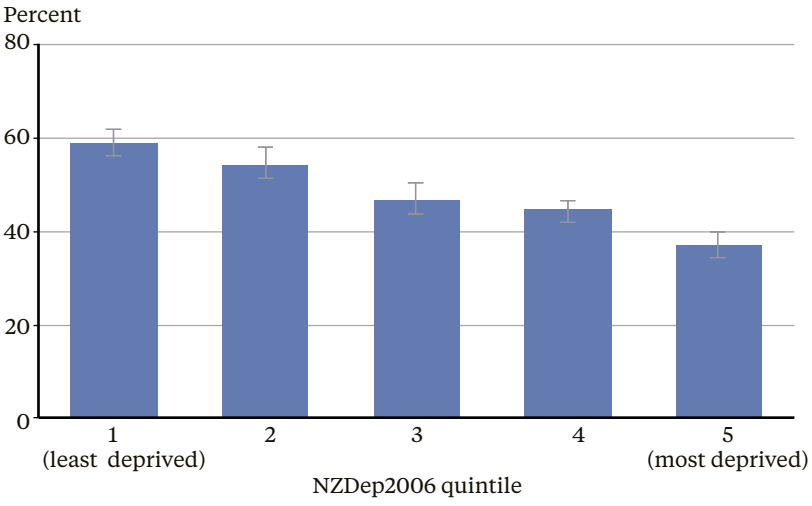
The proportions of dentate Māori, Pacific and Asian adults visiting a dental health care worker in the past 12 months have not changed since 2006/07.

Visiting a dental health care worker is less common in more deprived areas

Dental visiting patterns were strongly related to neighbourhood deprivation levels for adults.

Just over a third (37%) of people living in the most deprived areas had visited a dental health care worker in the past 12 months, compared with over half (59%) of people living in the least deprived areas (Figure 74).

Figure 74: Visited a dental health care worker in the past 12 months, by neighbourhood deprivation, among dentate adults



Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in the least deprived areas were 1.5 times as likely to have visited a dental health care worker in the past 12 months as people in the most deprived areas, after adjusting for age, sex and ethnic differences.

Cost is a common reason for not visiting a dental health care worker

For many people, cost is likely to be a reason why they do not visit a dental health care worker regularly.

In the 2009 New Zealand Oral Health Survey, about 44% of adults aged 18 years and over reported that they had avoided dental care in the last 12 months due to the cost. Rates were higher among those aged 18–44 years, Māori and Pacific adults, and people living in the most deprived neighbourhoods (Ministry of Health 2010).

Where can you go for more information?

You can find the data for the indicator 'visited a dental health care worker in the last 12 months (dentate adults)' in Appendix 3 and in the online data tables. Data for the following indicators are also available in the online data tables:

- visited a dental health care worker in the last 12 months (for dentate adults and for total adults)
- visited a dental health care worker in the last two years (for dentate adults)
- visited a dental health care worker in the last five years (for dentate adults).

For further results from the 2009 New Zealand Oral Health Survey, see the publication *Our Oral Health* (Ministry of Health 2010).

What was the survey question?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- The next questions are about dental health care services. When I say 'dental health care worker', I mean dentists, dental therapists, dental nurses, dental hygienists, as well as any dental health specialists such as orthodontists.
  - How long has it been since you last visited a dental health care worker about your own dental health, for any reason? Within the past year (any time less than 12 months ago); within the past two years (more than 1 year but less than 2 years ago); within the past five years (more than 2 years but less than 5 years ago); five or more years ago; have never seen a dental health care worker.

This indicator presents data for **dentate** adults only; that is, adults who reported that they had not had all their teeth removed due to decay, gum disease, abscess or infection.

This approach means the analyses only cover people who still have teeth. It also allows comparisons with the 2006/07 survey, which did not ask people who had had all their teeth removed about their dental visits. However, this focus is different from that of the 2009 New Zealand Oral Health Survey, which asked the total population about dental visits, so the results are not strictly comparable between the 2009 and 2011/12 surveys.

In practical terms, analyses defined dentate adults as people who reported having only 0–27 teeth removed due to decay, gum disease, abscess or infection, to reduce the impact of variation in interviewer coding of the number of missing teeth. A few adults who have no natural teeth may have been included in this group of dentate adults, for example, if they had all their teeth removed for a reason other than poor oral health.

8.3 Usually only visits a dental health care worker for dental problems, or never visits

Over half of adults usually only visit a dental health care worker when they have a toothache or another dental problem – or they never visit at all.

Regular dental visits for check-ups are important for our oral health. Through these check-ups, dental health care workers can detect early signs of oral disease and provide timely treatment and/or preventive measures.

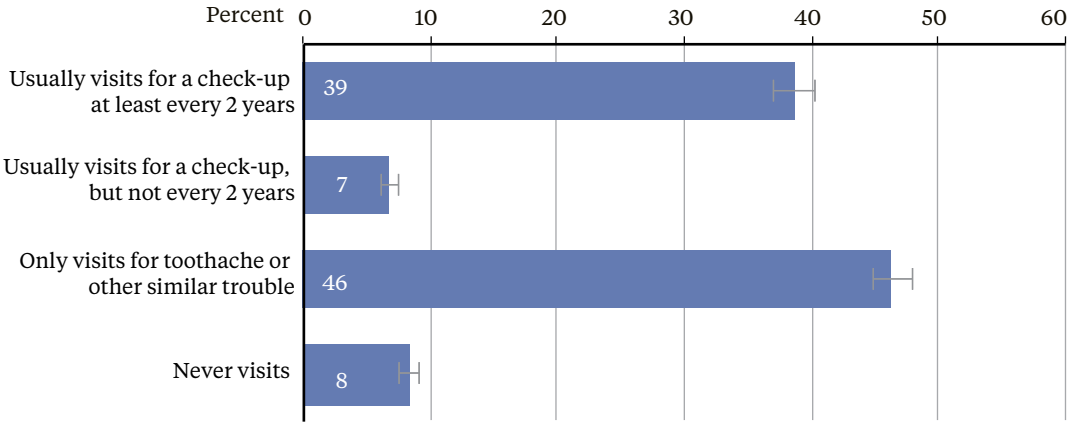
This indicator, **usually only visits a dental health care worker for dental problems or never visits**, is defined as people who reported that they only visit a dental health care worker when they have a toothache or other similar trouble, or that they never visit. The results are presented for adults with natural teeth (**dentate adults**).

More than half of dentate adults only visit a dental health care worker for dental problems, or never visit

Overall, 39% of dentate adults reported that they usually visited a dental health care worker for a check-up at least every two years (Figure 75). A further 7% reported they usually visited for check-ups but less frequently than every two years.

Nearly half of dentate adults (46%) usually only visit a dental health care worker when they had dental problems. A further 8% never visits a dental health care worker.

Figure 75: Regularity of dental checks, among dentate adults



Source: 2011/12 New Zealand Health Survey (15 years and over)

This indicator focuses on the 55% of dentate adults who reported that they usually only visited a dental health care worker for dental problems, or that they never visited. There were no differences between men (56%) and women (54%) for this indicator.

More women only have dental visits for dental problems (or never visits) compared with 2006/07

Since 2006/07 the percentage of dentate women who report that they usually only visit a dental health care worker when they have dental problems, or that they never visit, has significantly increased, from 45% to 54% (Figure 76). Among all dentate adults, the rate also increased, from 49% in 2006/07 to 55% in 2011/12.

Figure 76: Usually only visits a dental health care worker for dental problems or never visits, by sex, among dentate adults, 2006/07 and 2011/12

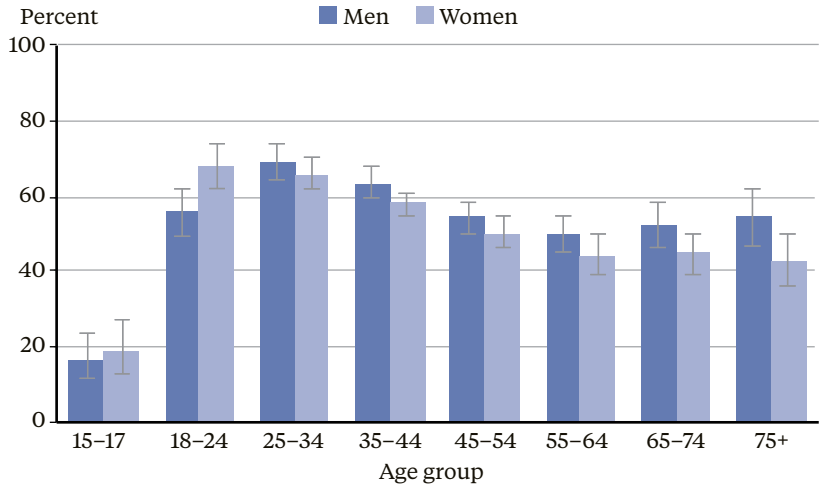
Note: Rates are age-standardised to the WHO world population.

Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

People aged 18–44 years are more likely to only visit a dental health care worker for problems or never visit

Most people aged 18–44 years reported that they only visit a dental health care worker when they have dental problems or that they never visit (Figure 77).

Figure 77: Usually only visits a dental health care worker for dental problems or never visits, by age group and sex, among dentate adults



Source: 2011/12 New Zealand Health Survey (15 years and over)

Māori, Pacific and Asian adults are more likely to only visit a dental health care worker for problems or never visit

Among dentate adults, the majority of Māori (73%), Pacific (78%) and Asian (66%) adults reported that they usually only visit a dental health care worker for dental problems, or that they never visit (Table 37).

These rates were significantly higher than those for other people, after adjusting for age and sex differences.

Table 37: Usually only visits a dental health care worker for dental problems or never visits, by ethnic group and sex, among dentate adults

		Total	Men	Women	Estimated number[1]
Percent (%)	Total NZ	55	56	54	1,778,000
	Māori	73	73	73	301,000
	Pacific	78	76	81	158,000
	Asian	66	69	64	244,000
	European/Other	49	51	47	1,244,000
Adjusted rate ratios (comparing each ethnic group with people not in that ethnic group)[2]	Māori	1.4*	1.4*	1.4*	
	Pacific	1.5*	1.4*	1.5*	
	Asian	1.2*	1.3*	1.2*	

* Significant at the 5% level (for adjusted rate ratios).

Notes: Total response measure of ethnicity. Adults may be counted in more than one ethnic group.

1 Due to total response ethnicity, summed numbers across ethnic groups may add to more than the total.

2 Adjusted rate ratios compare people, men or women in each ethnic group with people, men or women not in that ethnic group. Adjusted rate ratios adjust for age and, for the total column, sex.

Source: 2011/12 New Zealand Health Survey (15 years and over)

The percentage of dentate Māori women reporting that they usually only visit a dental health care worker for dental problems or that they never visit increased from 2006/07 (66%) to 2011/12 (73%). This increase remained significant after adjusting for age (Figure 78).

Figure 78: Usually only visits a dental health care worker for dental problems or never visits, among dentate Māori men and women, 2006/07 and 2011/12

Note: Rates are age-standardised to the WHO world population.

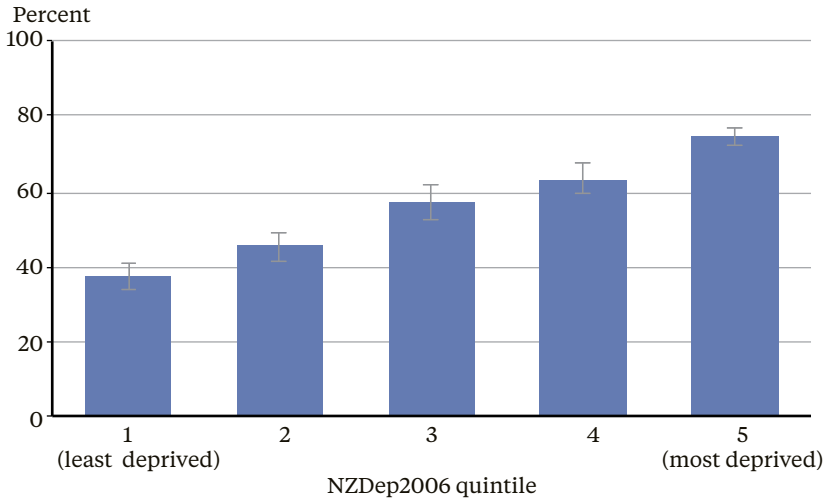
Source: New Zealand Health Surveys (2006/07, 2011/12) (15 years and over)

There were no changes from 2006/07 to 2011/12 for Pacific or Asian dentate adults.

Most people living in deprived areas only visit a dental health care worker for dental problems or never visit

The majority of dentate adults living in the most deprived areas (75%) usually only visit a dental health care worker when they had dental problems, or never visit (Figure 79). This rate was much higher than the rate among those in the least deprived areas (37%).

Figure 79: Usually only visits a dental health care worker for dental problems or never visits, by neighbourhood deprivation, among dentate adults



Source: 2011/12 New Zealand Health Survey (15 years and over)

People living in the most deprived areas were twice as likely as people in the least deprived areas to usually only visit a dental health care worker when they have dental problems, or never visit, after adjusting for age, sex and ethnic differences.

What do we know from the 2009 New Zealand Oral Health Survey?

The 2009 New Zealand Oral Health Survey also examined dental visiting patterns among adults, in relation to people's oral health status.

The survey found that 61% of adults aged 18 years and over reported usually visiting a dental professional for a dental problem rather than a check-up.

People who only visited a dental professional for a dental problem were much more likely to have untreated dental decay. They were over twice as likely to have untreated decay on the crowns of one or more teeth, and 1.5 times as likely to have root decay, than those who usually visited for a check-up. They were also twice as likely to rate their oral health as fair or poor.

Where can you go for more information?

You can find the data for the indicator 'usually only visiting a dental health care worker for dental problems' in Appendix 3 and in the online data tables. Data for the following indicator are also available in the online data tables:

- usually visits a dental health care worker for a check-up at least every two years
- regularity of dental checks.

For further results from the 2009 New Zealand Oral Health Survey, see the publication *Our Oral Health (*Ministry of Health 2010).

What was the survey question?

The 2011/12 New Zealand Health Survey asked people aged 15 years and over:

- Which of the following statements best describes the regularity of your consultations with a dental health care worker?
  - I visit a dental health care worker at least every two years for a check-up.
  - I visit a dental health care worker for check-ups regularly, but with intervals of more than two years.
  - I only visit a dental health care worker when I have a toothache or other similar trouble.
  - I never visit a dental health care worker.

Summary and Conclusions

This section summarises the key findings of the 2011/12 New Zealand Health Survey for adults. It highlights the areas where we are doing well and areas for improvement.

Health status

Most people report being in good health

These survey results show that most New Zealanders consider themselves to be in good health. Even in the older age groups, where long-term conditions such as arthritis, heart disease and chronic pain are relatively common, over 80% of people still reported being in good health.

Smoking rate is decreasing – but not for everyone

In New Zealand, the daily smoking rate has dropped considerably over the past 15 years, from 25% in 1996/97 to 17% in 2011/12. In particular, the smoking rate among youth (aged 15–17 years) has fallen.

However, for some groups, smoking rates have not changed over the past five years and remain relatively high. In particular, two in five (41%) Māori adults are current smokers, similar to the proportion in 2006/07, and smoking rates are also higher among Pacific adults (26%).

Smoking rates increase with socioeconomic deprivation. The smoking rate for people living in the most deprived areas is 2.5 times as high as that for people in the least deprived areas.

The obesity rate continues to climb

Obesity is a major risk factor for heart disease, type 2 diabetes and some types of cancer. About 28% of adults are now obese and a further 35% are overweight, which means that two in three adults (64%) are either obese or overweight. The obesity rate has increased considerably from 1997, when it was 19%.

Obesity rates are higher among Māori (44%) and Pacific (62%) adults than other ethnic groups. However, the obesity rates for Māori and Pacific adults have not changed since 2006/07.

The survey results also raise concerns about obesity in younger people. In the 15–24 year age group, the obesity rate has increased from 14% to 20% in the past five years.

Rates of medicated high blood pressure and high cholesterol have increased

Compared with 2006/07, more people are now taking medication for high blood pressure and for high cholesterol, to help lower the risk of heart attack and stroke. One reason for increases may be that more people have these conditions. Another possibility is that health professionals are undertaking more cardiovascular checks, which makes it more likely that they will appropriately diagnose and treat existing conditions.

Contrasting mental health results suggest access issues

Māori and Pacific adults had higher rates of psychological distress than other adults, with about one in ten affected. However, Māori and non-Māori have similar rates of being diagnosed with depressive and anxiety disorders during their lifetime, while the rate of diagnosed mental illness among Pacific adults is less than half that of other people.

These findings suggest that Māori and Pacific adults with an existing mental disorder may differ from other people in how and when they seek help and/or in their access to mental health services. This may be due to stigma, reluctance to accept that a person has mental health issues and/or difficulties in accessing mental health services.

Chronic pain affects one in six adults

Chronic pain can greatly affect a person's life. The survey results show that chronic pain is a major health problem, affecting one in six (16%) adults in 2011/12 (similar to 2006/07). Rates of chronic pain are higher among older adults, Māori and those living in more deprived areas. These results suggest that chronic pain is a considerable burden on the health of New Zealanders.

Primary health care use

Most people have visited a GP in the past year

In 2011/12 most adults (78%) reported that they had visited a GP in the past 12 months. One in three (31%) had visited a practice nurse without seeing a GP at that visit.

Over 90% of older adults (65+ years) had visited a GP in the past year.

Most adults were able to access primary health care

People need easy access to primary health care so that they can get treatment before health conditions get too severe. Without that access, their health can worsen (and the rate of hospitalisations can increase). Barriers to care can also contribute to disparities in health outcomes for different population groups.

The survey found that one in four adults – almost one million people – had an unmet need for primary health care in the past year. Such unmet need took various forms, including being unable to get an appointment within 24 hours at their usual medical centre, and not going to a GP and/or after-hours services when they had a medical problem due to cost or a lack of transport. Groups with higher levels of unmet need were women aged 25–44 years, Māori and Pacific adults, and adults living in more deprived areas.

The most common reason for unmet need, reported by 16% of adults, was that they could not get an appointment at their usual medical centre within 24 hours. However, this proportion has fallen since 2006/07, when 18% reported that they were unable to get an appointment within 24 hours.

Cost was the second main reason for not seeking medical care when needed. About 14% of adults reported they had not visited a GP when they needed to due to cost in the past year, while 7% reported cost was why they had not used after-hours services when they needed to. The average cost for a GP visit was about $32, while the average cost for after-hours services was $56.

The survey results also clearly show higher levels of unmet need in younger adults. In particular, two in five women aged 25–44 years had experienced some type of unmet need in the past year.

Māori adults reported higher levels of unmet need for GP services due to cost. Almost one in four Māori adults (23%) reported they had not visited a GP when they needed to due to cost, at some point in the past 12 months.

Neighbourhood deprivation is strongly related to unmet need for health care, across all measures. About 34% of adults living in the most deprived areas had experienced one or more types of unmet need in the past year, compared with 22% in the least deprived areas.

The majority of adults avoid going to a dental health care worker for regular check-ups

Through regular dental visits, dental health care workers can detect any oral health problems early and can treat them and prevent them from getting worse.

About half (49%) of adults with natural teeth had visited a dental health care worker in the past year, which is a decrease since 2006/07 (when 52% had visited).

More than one in two adults (55%) reported that they visit a dental health care worker only for dental problems or that they never visit, an increase since 2006/07 (when the rate was 49%). Rates are higher among those aged 25–34 years (68%), Māori adults (73%), Pacific adults (78%), Asian adults (66%) and people living in deprived areas (75%). The 2009 New Zealand Oral Health Survey showed that people who usually visited a dental professional for dental problems were more likely to have untreated dental decay, and were more likely to rate their oral health as fair or poor, than people who usually visited for a dental check-up.

Health of population groups

The survey results showed distinct trends and differences by population group.

Men and women differ in their levels of risk factors, health conditions and unmet need

The survey highlighted some differences between men and women in health status, health behaviours and health service use.

Women have higher rates of asthma, arthritis and chronic pain than men. They are also less likely to be physically active than men and are more likely to be taking medication for high blood pressure. Additionally, a higher proportion of women are affected by mental health problems than men, with higher rates of psychological distress and of diagnosed depression, anxiety disorder and/or bipolar disorder among women.

Women aged 25–44 years have particularly high rates of unmet need for primary health care and are more likely to have not filled a prescription at some time in the past 12 months due to cost.

By contrast, men are less likely to eat the recommended amount of vegetables and fruit than women. Men have higher rates of diagnosed ischaemic heart disease and diabetes than women, and are also more likely to be taking medication for high cholesterol. Men are also less likely to have visited a GP, practice nurse or dental health care worker in the past year.

Risk factors are relatively common among younger adults

The main health issues facing younger adults relate to unhealthy lifestyles, which can lead to poor health later in life.

At least one in four people aged 25–34 years smoke, which is the highest smoking rate of all age groups. People aged 15–34 were also less likely than older adults to eat the recommended amount of vegetables and fruit, although a reasonable percentage was physically active (55–58%). Obesity is becoming much more common in younger adults, with at least one in five now obese.

If not addressed, these risk factors are likely to persist into adulthood and contribute to the development of long-term health conditions.

Older adults have higher health needs and low levels of unmet need

Long-term health conditions are most common in the older age groups. In those aged 75 years and over, commonly reported conditions include arthritis (47%), ischaemic heart disease (29%) and chronic pain (28%). Despite the prevalence of such conditions, most people in this age group (82%) reported being in good health.

Access to health services is relatively good for older adults. Almost all had visited a GP in the previous year, and rates of unmet need are the lowest of all age groups.

Māori adults tend to have poorer health and a higher level of unmet need for health care

The survey results highlight persisting health inequities for Māori in New Zealand. Māori have higher rates of risk factors – particularly smoking (41%) and obesity (44%). These high rates are likely to have contributed to the higher levels of ischaemic heart disease, stroke and diabetes also found in this survey.

On a positive note, Māori have levels similar to the national average for some healthy behaviours (being physically active and meeting the recommended daily vegetable intake).

Part of the explanation for differences in health status may be differences in access to health care. Māori are more likely than other groups to experience unmet need for health care. This difference exists across all types of unmet need measured in the survey: being unable to get an appointment at a medical centre within 24 hours; not visiting a GP or after-hours services when they have a medical problem due to cost or a lack of transport; not being able to fill a prescription due to cost; and not regularly visiting a dental health care worker.

Improving access to health care, and ensuring services are appropriate and responsive to Māori, will help improve health outcomes for Māori in the future.

Obesity and diabetes are key challenges for Pacific adults

Survey results suggest key health issues facing Pacific adults include obesity and diabetes. Obesity increases the risk of developing associated health conditions such as type 2 diabetes.

Pacific adults have high rates for obesity (62%) and diagnosed diabetes (10%) – about 2–3 times higher than for other people. Additionally the 2008/09 New Zealand Adult Nutrition Survey results suggest that about half of all Pacific adults with diabetes (diagnosed or indicated through survey blood tests) had undiagnosed diabetes (Ministry of Health 2012c). This finding suggests there is scope to improve the diagnosis and treatment of diabetes, particularly for Pacific adults.

Pacific adults also have higher levels of unmet need for health care than other adults. Cost is a key barrier to accessing GP services, after-hours services and filling prescriptions for Pacific adults.

Asian health is relatively good

Overall, Asian adults have relatively good health status. In particular, they have comparatively low levels of a range of risk factors and health conditions, including smoking, diagnosed asthma, diagnosed arthritis and chronic pain.

However, Asian adults are less likely to be physically active or to eat the recommended daily amount of vegetables than other adults. While Asian adults are less likely to be obese than other people, their obesity rate has increased rapidly from 11% to 16% in the past five years. Also of note is that Asian men have a higher level of diagnosed diabetes (8%) than other men.

Asian adults generally reported lower use of primary health services and dental services than other people, possibly due to their better health status. They were also less likely to report unmet need for health care.

The 'Asian' category includes a diversity of ethnic groups (for example, Chinese, Indian, Korean, Japanese and other groups). It also includes people born in New Zealand and migrants (recent or longer term). In future, we will be able to report on differences in the health experiences of these groups by combining multiple years of data from the New Zealand Health Survey.

Socioeconomic deprivation is strongly associated with health status and unmet need

Many health conditions are more common in population groups that are worse off socioeconomically. Factors such as income, employment status, housing and education directly and indirectly affect health, and the effects accumulate throughout life (Robson and Harris 2007).

The survey showed that people living in socioeconomically deprived areas have higher levels of smoking, obesity, psychological distress, ischaemic heart disease, diabetes, arthritis, chronic pain and tooth loss than people living in less deprived areas. These higher rates are not explained by differences in the ethnic, age or sex structure of the population.

Similarly, unmet need for health care is much more common in the most deprived areas, affecting one in three (34%) people in these areas in the past year. Relatively common barriers are cost and lack of transport. Additionally, one in seven adults (14%) living in the most deprived areas had not filled a prescription due to the cost in the past year. These types of unmet need for health care are of particular concern if they affect people who already have poorer health.

Conclusion

Over the past five years, some aspects of health and access to some health services have improved in New Zealand. One noteworthy improvement is that the smoking rate continues to decline, which will have positive health outcomes in the future by preventing smoking-related diseases.

However, the health sector faces some challenges. While the daily smoking rate has been decreasing, the obesity rate has steadily increased. It is important to prevent any further increases in the obesity rate in order to reduce the burden of type 2 diabetes and other obesity-related health conditions in the future.

Another key priority is improving the health of Māori and Pacific adults, and adults living in more deprived areas, and improving their access to health services. Improving health status and access to health care for these people will help to reduce health inequalities, as well as helping to improve the overall level of health in the population.

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Appendix 1: Methodology of the New Zealand Health Survey

This section briefly describes the methodology of the 2011/12 New Zealand Health Survey. For more information, see the *New Zealand Health Survey Methodology Report* (Ministry of Health 2012b).

Survey population

The target population for the survey is the usually resident population of all ages, including those living in aged-care facilities and student accommodation. The target population excludes some non-private dwellings such as prison, hospitals, hospices and dementia care units, and some remote areas.

Reference period

The results in this report refer to the sample selected from 1 July 2011 to 30 June 2012. Data for the 2011/12 New Zealand Health Survey were collected from July 2011 to August 2012.

Sample size

Respondents to the 2011/12 New Zealand Health Survey were 12,370 adults aged 15 years and over, and the primary caregivers of 4478 children aged from birth to 14 years.

Table A1 provides the sample sizes for interviews and measurements by population group, for adults in the 2011/12 New Zealand Health Survey. The table also provides the population total that the survey data were weighted to.

Table A1: Sample size for adults aged 15 years and over, 2011/12 New Zealand Health Survey

	Interviews	Measurements (height, weight)	Population total
Total	12,370	10,524	3,532,055
Sex			
Males	5014	4509	1,717,923
Females	7356	6015	1,814,133
Age group (years)			
15–24	1464	1264	643,175
25–34	1923	1597	572,678
35–44	2330	2024	596,798
45–54	2088	1830	618,345
55–64	1928	1662	498,888
65–74	1384	1181	336,955
75+	1253	966	265,218
Ethnic group (total response)			
Māori	2543	2072	444,224
Pacific	938	780	205,176
Asian	915	793	374,647
European/Other	9315	8028	2,783,286
Neighbourhood deprivation (NZDep2006)			
Quintile 1 (least deprived)	1932	1698	729,949
Quintile 2	1948	1677	721,410
Quintile 3	2459	2103	711,812
Quintile 4	2652	2292	702,591
Quintile 5 (most deprived)	3379	2754	666,293

Weighted data

Survey weights were used in all of the results presented in this report, so that estimates of population totals, averages and proportions represent the total resident adult population of New Zealand.

Survey weights were calculated for all survey respondents to indicate how many people each respondent represents in the total population. The weights were calculated over three stages. After an initial selection weight is calculated, it is adjusted for non-response and then for calibration. The survey data were benchmarked to the estimated annual resident population by age, sex and Māori/non-Māori.

For measurement data (heights, weights and body mass index), survey weights were recalculated to account for item non-response, so that the estimates still represent the total resident adult population.

Response rate

An important measure of the quality of a survey is the final weighted response rate. The response rate is a measure of how many people who were selected to take part in the survey actually participated. A high response rate means that the survey results are more representative of the New Zealand population.

The weighted response rate for adults was 79% for the 2011/12 New Zealand Health Survey. The response rate was calculated by dividing the weighted percentage of eligible individuals who participated in the survey by the estimated number of eligible individuals.

Survey content

The survey questionnaire collects demographic and socioeconomic information, along with information about diagnosed health conditions, health service use, barriers to use, patient experience, health risks and lifestyle behaviours. The survey interview also includes measurements of height, weight and waist circumference.

Interviews are conducted using computer-assisted personal interviews (CAPI). On average each interview lasts less than an hour for adult respondents. Surveyors from CBG Health Research Ltd carried out the survey interviews. They underwent dedicated training and many have a health background.

Information about survey design and data collection

The New Zealand Health Survey is designed to provide estimates at the national level.

The 2011/12 survey has a dual sample frame approach: an area-based frame of meshblocks (geographically defined areas for the Census) and a list-based frame consisting of a sample of addresses from the electoral roll. This approach increases the sample sizes of Māori, Pacific and Asian ethnic groups.

The area-based sample used a three-stage selection process. The first stage of selection consists of selecting a sample of meshblocks. This process used a probability-proportional-to-size methodology, modified to give higher probabilities for households in areas where more Māori, Pacific and Asian people lived. Second, a sample of eligible dwellings was selected within the selected meshblocks. Third, one eligible adult and one eligible child (if any) were selected from within each selected dwelling. The eligible individual(s) were chosen at random from the list of all eligible individuals in the dwelling.

For the electoral roll sample, the electoral roll was used to get a sample of addresses where a person living there had self-identified as having Māori ancestry. A sample of meshblocks was then selected within each stratum (district health board), with probability proportional to the number of addresses on the electoral roll in the meshblock. From each selected meshblock, a random sample of 10 addresses (from the list of households where a person had self-identified as having Māori ancestry) was then selected. The household contact process and selection of an adult and child were carried out exactly as for the area-based sample; at each selected address, one eligible adult and one eligible child were selected at random.

In 2011/12, some survey interviews were delayed in one region in the North Island. The reduced sample size in this region has been accounted for through the weighting process and does not affect the national results. Data collection for this region will be completed by the end of 2012. These additional data will be included in the release of results by region/district health board and in the microdata release in 2013.

Ethics approval

The Multi-region Ethics Committee provided approval of the New Zealand Health Survey for 2011/12 (Multi-region Ethics Committee Reference MEC/10/10/103).

Reliability of survey estimates

Two types of error are possible in estimates based on a sample survey: sampling error and non-sampling error.

Sampling error can be measured and quantifies the variability that occurs by chance because a sample rather than an entire population is surveyed. Sampling errors have been estimated

using a jack-knife method, which is based on the variation between estimates using 100 mutually exclusive subsamples from the whole sample. Sampling errors are quoted at the 95% confidence level.

Non-sampling errors are all errors that are not sampling errors. These errors are not quantifiable and include unintentional mistakes by respondents, variation in the respondents' and interviewers' interpretation of the questions, and errors in the recording and coding of data. The Ministry of Health aims to minimise the impact of these errors by using best survey practices and by monitoring known indicators (such as non-response).

Most of the information from the New Zealand Health Survey is self-reported, according to the questionnaire. This approach raises a potential source of non-sampling error due to unintentional mistakes such as recall error and social desirability bias.

Indicators about body size (such as obesity and overweight) used measured height and weight data rather than self-reported data to increase the reliability of results.

Rounding and percentages

All percentages used in the text have been calculated from weighted data and then rounded to a whole number. To improve the readability of the data, the calculation of percentages excludes residual categories such as 'don't know' and 'refused' in the population base from which percentages are calculated.

Testing differences between two groups

The difference between two groups is statistically significant if their confidence intervals do not overlap. Sometimes, even when two confidence intervals overlap, the difference between these groups can be statistically significant. In these cases, if the text reports a difference, a statistical test (a '*t*-test') has been carried out to confirm that the finding is statistically significant.

Calculating adjusted rate ratios

Regression models were used to calculate the adjusted rate ratios. For rate ratios, sampling errors were estimated using the Taylor linearisation method.

When adjusting for ethnicity, regression models used prioritised ethnic group in the order: Māori, Pacific, Asian and European/Other. Using prioritised ethnic group in models simplifies the modelling process and gives results similar to including total response ethnicity variables in the models.

Relative index of inequality

In the neighbourhood deprivation comparisons in this report, the rate ratio refers to the **relative index of inequality** (Hayes and Berry 2002). This measure gives a comparison by neighbourhood deprivation after adjusting for age, sex and ethnic differences. A relative index of inequality can be interpreted in the same way as adjusted rate ratios, although it is calculated in a slightly different way.

A relative index of inequality uses data from all deprivation quintiles to create a best fit line. It then compares the estimated values for people at the minimum and maximum points on the deprivation scale, instead of simply comparing people living in quintiles 1 and 5.

Software used

All analyses were carried out using SAS and SUDAAN.

For more information

For more information, see the survey design report (Ministry of Health 2011) and the methodology report (Ministry of Health 2012b).

Appendix 2: Data Tables of Key Results

The following tables summarise the results for the key indicators presented in this report.

For definitions of topics and indicators, please refer to the appropriate section of this report.

Table A2: Summary of results by sex and age group (unadjusted prevalence)

Description			Percent (%) by age group (years)						
	Percent (%)	Estimated number	15–24	25–34	35–44	45–54	55–64	65–74	75+
Excellent, very good or good self-rated health	89.3	3,154,000	93.2	90.3	90.0	90.0	87.5	85.8	82.0
Current smoking	18.4	650,000	21.6	27.7	21.8	16.9	14.9	9.1	4.5
Daily smoking	16.5	583,000	19.0	24.9	19.7	15.2	13.4	8.2	4.4
Meets vegetable intake guidelines (3+ servings per day)	68.4	2,417,000	60.5	61.3	66.1	71.1	75.6	79.1	74.8
Meets fruit guidelines (2+ servings per day)	58.5	2,068,000	52.9	55.8	56.4	59.3	63.9	65.4	62.4
Physically active	53.9	1,905,000	57.5	55.3	55.5	56.1	57.0	50.5	32.3
Obese	28.4	1,004,000	19.7	25.8	31.9	31.2	33.0	36.6	22.6
Overweight or obese	63.8	2,253,000	45.1	58.8	67.2	71.4	71.9	77.0	62.6
High blood pressure (medicated)	15.8	558,000	0.4	1.2	4.3	13.5	29.2	46.6	52.0
High cholesterol (medicated)	10.4	367,000	0.0	0.4	2.7	9.1	21.4	31.6	30.7
Diagnosed ischaemic heart disease	5.5	193,000	0.2	0.3	0.4	3.0	7.8	16.2	28.6
Diagnosed stroke	1.8	62,000	0.1	0.5	0.7	1.0	2.7	4.3	7.7
Diagnosed depression, bipolar disorder and/or anxiety disorder	16.2	572,000	9.9	16.7	18.9	19.1	18.1	17.3	12.4
Psychological distress	5.6	198,000	6.2	6.8	5.5	5.6	4.6	4.6	5.0
Diagnosed diabetes	5.5	193,000	0.8	1.3	2.9	5.4	9.3	14.4	13.1
Diagnosed asthma (medicated)	11.0	389,000	12.5	11.4	9.9	10.1	10.6	11.9	10.7
Diagnosed arthritis	15.1	532,000	0.6	2.4	5.3	12.6	27.7	42.4	46.6
Chronic pain	16.2	571,000	5.8	10.8	13.7	17.9	22.8	26.9	28.2
Visited a GP in the past 12 months	78.5	2,771,000	68.8	71.0	74.7	78.2	86.5	90.5	96.6
Visited a practice nurse (without seeing a GP at the same time) in the past 12 months	30.5	1,079,000	21.7	23.2	25.7	29.1	38.2	49.8	43.1
Visited an after-hours medical centre in the past 12 months	12.9	456,000	16.9	14.4	14.2	11.3	11.3	9.3	8.6
Experienced unmet need for primary health care in the past 12 months	26.8	947,000	23.2	36.1	32.5	29.4	22.9	17.7	15.5
- Unable to get an appointment at their usual medical centre within 24 hours	15.5	507,000	12.6	19.4	19.0	18.2	14.4	10.8	9.1
- Unmet need for GP services due to cost	13.8	487,000	13.7	23.0	18.3	13.4	8.6	6.5	4.2
- Unmet need for after-hours services due to cost	7.1	252,000	6.2	12.1	9.3	8.1	4.4	3.4	1.4
- Unmet need for GP services due to lack of transport	3.4	121,000	4.9	3.8	3.4	3.1	3.1	1.8	2.6
- Unmet need for after-hours services due to lack of transport	1.8	62,000	1.9	2.0	1.9	2.3	1.3	0.6	1.5
Unfilled prescription due to cost in the past 12 months	7.6	267,000	8.9	10.7	8.7	7.2	6.0	4.1	3.0
Had a tooth removed due to decay, abscess, infection or gum disease in past 12 months	7.6	270,000	4.8	7.4	9.6	8.6	9.1	7.2	6.0
Visited a dental health care worker in past 12 months (dentate adults)	48.7	1,584,000	53.2	36.9	41.8	51.2	56.4	56.8	54.3
Usually only visits a dental health care worker for a dental problem, or never visits (dentate adults)	54.6	1,778,000	48.6	67.5	60.6	52.5	47.2	48.4	48.3

Note: Percents are rounded to one decimal place. Estimated numbers are rounded to nearest 1000 people.

Table A3: Summary of results by sex and ethnic group (unadjusted prevalence)

Indicator	Percent (%)						
	Total	Men	Women	Māori	Pacific	Asian	European/ Other
Excellent, very good or good self-rated health	89.3	89.6	89.0	83.6	85.9	89.4	90.0
Current smoking	18.4	19.4	17.5	40.9	26.5	9.8	16.7
Daily smoking	16.5	17.2	15.8	38.4	23.1	8.3	14.8
Meets vegetable intake guidelines (3+ servings per day)	68.4	64.4	72.2	64.2	45.6	53.9	72.0
Meets fruit guidelines (2+ servings per day)	58.5	52.6	64.2	49.2	54.0	55.7	60.1
Physically active	53.9	57.3	50.7	57.1	46.3	39.2	55.9
Obese	28.4	28.1	28.8	44.4	62.1	15.9	26.0
Overweight or obese	63.8	68.3	59.5	75.3	84.8	44.9	63.6
High blood pressure (medicated)	15.8	14.5	17.1	13.2	11.3	10.4	16.7
High cholesterol (medicated)	10.4	11.5	9.4	8.0	7.3	6.8	11.1
Diagnosed ischaemic heart disease	5.5	6.9	4.1	5.1	1.7	1.9	6.0
Diagnosed stroke	1.8	1.9	1.7	2.1	0.6	1.1	1.8
Diagnosed depression, bipolar disorder and/or anxiety disorder	16.2	11.9	20.2	15.8	7.0	4.4	18.6
Psychological distress	5.6	4.5	6.6	9.1	10.1	6.5	4.9
Diagnosed diabetes	5.5	6.0	5.0	7.3	10.2	6.2	4.7
Diagnosed asthma (medicated)	11.0	8.6	13.2	16.7	9.3	4.4	11.4
Diagnosed arthritis	15.1	13.0	17.0	11.4	6.6	7.2	16.8
Chronic pain	16.2	14.8	17.4	17.5	13.6	9.8	16.9
Visited a GP in the past 12 months	78.5	74.2	82.5	75.5	75.3	71.2	80.1
Visited a practice nurse without seeing a GP at the same time in the past 12 months	30.5	24.9	35.9	29.9	20.3	18.7	32.6
Visited an after-hours medical centre in the past 12 months	12.9	12.4	13.4	13.3	13.4	8.5	13.5
Experienced unmet need for primary health care in the past 12 months	26.8	21.2	32.1	39.0	30.6	22.2	26.1
- Unable to get an appointment at their usual medical centre within 24 hours	15.5	12.7	18.1	20.1	15.3	14.5	15.2
- Unmet need for GP services due to cost	13.8	9.9	17.5	22.8	17.1	10.5	13.2
- Unmet need for after-hours services due to cost	7.1	4.8	9.3	14.3	10.4	6.3	6.2
- Unmet need for GP services due to lack of transport	3.4	2.0	4.8	8.6	8.9	3.0	2.5
- Unmet need for after-hours services due to lack of transport	1.8	1.1	2.4	4.6	2.8	1.7	1.3
Unfilled prescription due to cost in the past 12 months	7.6	6.0	9.0	18.3	13.3	5.3	6.1
Had a tooth removed due to decay, abscess, infection or gum disease in past 12 months	7.6	8.1	7.2	11.6	10.7	6.5	7.2
Visited a dental health care worker in past 12 months (dentate adults)	48.7	46.7	50.6	37.9	32.6	36.8	52.9
Usually only visits a dental health care worker for a dental problem, or never visits (dentate adults)	54.6	55.7	53.6	73.3	78.4	66.2	49.0

Note: Total response measure of ethnicity.

Table A4 gives comparisons by sex, ethnic group and neighbourhood deprivation, for the key indicators in this report. The table only presents adjusted rate ratios that are statistically significant.

A rate ratio less than 1 means the outcome is less likely in the group of interest than the reference group. A rate ratio greater than 1 means the outcome is more likely in the group of interest.

Table A4: Summary of results by sex, ethnic group and neighbourhood deprivation (significant adjusted rate ratios)

Description	Adjusted rate ratios (significant ratios only)				
	Men vs women	Māori vs non-Māori	Pacific vs non-Pacific	Asian vs non-Asian	Most deprived vs least deprived
Excellent, very good or good self-rated health		0.9	0.9		0.9
Current smoking		2.4	1.3	0.4	2.5
Daily smoking		2.6	1.3	0.4	2.9
Meets vegetable intake guidelines (3+ servings per day)	0.9		0.7	0.8	0.9
Meets fruit guidelines (2+ servings per day)	0.8	0.8			0.7
Physically active	1.1		0.8	0.7	0.9
Obese		1.8	2.5	0.5	1.6
Overweight or obese	1.2	1.3	1.4	0.7	1.2
High blood pressure (medicated)	0.9	1.3	1.4		1.4
High cholesterol (medicated)	1.1		1.2		
Diagnosed ischaemic heart disease	1.9	1.8			1.9
Diagnosed stroke		1.3			
Diagnosed depression, bipolar disorder and/or anxiety disorder	0.6		0.4	0.2	1.7
Psychological distress	0.7	1.7	1.8		3.5
Diagnosed diabetes	1.2	2.1	3.4	1.7	3.1
Diagnosed asthma (medicated)	0.6	1.6		0.4	1.3
Diagnosed arthritis	0.8	1.2		0.8	1.4
Chronic pain	0.9	1.3		0.7	1.7
Visited a GP in the past 12 months	0.9			0.9	
Visited a practice nurse without seeing a GP at the same time in the past 12 months	0.7	1.1	0.8	0.7	1.2
Visited an after-hours medical centre in the past 12 months				0.6	
Experienced unmet need for primary health care in the past 12 months	0.7	1.5		0.7	1.4
- Unable to get an appointment at their usual medical centre within 24 hours	0.7	1.3			1.3
- Unmet need for GP services due to cost	0.6	1.6		0.6	1.8
- Unmet need for after-hours services due to cost	0.5	2.1	1.3	0.7	2.4
- Unmet need for GP services due to lack of transport	0.4	3.0	2.5		3.4
- Unmet need for after-hours services due to lack of transport	0.5	3.2	1.5		3.6
Unfilled prescription due to cost in the past 12 months	0.7	2.8	1.6	0.6	3.2
Had a tooth removed due to decay, abscess, infection or gum disease in past 12 months		1.7	1.6		1.6
Visited a dental health care worker in past 12 months (dentate adults)	0.9	0.8	0.7	0.8	0.7
Usually only visits a dental health care worker for a dental problem, or never visits (dentate adults)		1.4	1.5	1.2	2.0

Note: Only statistically significant adjusted rate ratios are presented. Total response measure of ethnicity. A rate ratio less than 1 means the outcome is less likely in the group of interest than the reference group; a rate ratio greater than 1 means the outcome is more likely in the group of interest. Sex rate ratios adjust for age. Ethnic rate ratios adjust for age and sex. Deprivation ratios adjust for age, sex and ethnic group.

Appendix 3: Detailed Data Tables

The following tables provide detailed data for the key indicators presented in this report.

For each indicator, the first table presents the unadjusted prevalence and estimated number of people, by sex, age group, ethnic group (total response) and neighbourhood deprivation. Deprivation results are presented for the least deprived quintile (q1) and the most deprived quintile (q5).

The second table presents adjusted rate ratios for comparisons by sex, ethnic group and neighbourhood deprivation. A rate ratio greater than 1 means that the outcome is more likely in the group of interest than the reference group. A rate ratio less than 1 means that the outcome is less likely in the group of interest. Statistically significant rate ratios are noted with an asterisk (*). The table notes the variables that each analysis adjusts for.

Prevalence estimates are rounded to one decimal place. Estimated numbers of people are rounded to the nearest 1000 people. Rate ratios are rounded to two decimal places.

95% confidence intervals are given for all estimates.

For definitions of topics and indicators, please refer to the appropriate section of this report. Further data tables are available online.

1.1 Excellent, very good or good self-rated health, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	89.3	(88.6–89.9)	89.6	(88.5–90.6)	89.0	(88.0–89.8)	3,154,000
15–24 years	93.2	(91.4–94.8)	93.9	(91.2–96.0)	92.5	(90.1–94.5)	600,000
25–34 years	90.3	(88.7–91.8)	89.8	(87.1–92.1)	90.8	(88.5–92.8)	517,000
35–44 years	90.0	(88.2–91.5)	90.1	(87.1–92.6)	89.8	(87.7–91.7)	537,000
45–54 years	90.0	(88.4–91.5)	89.6	(87.3–91.6)	90.4	(88.4–92.2)	557,000
55–64 years	87.5	(85.6–89.2)	87.7	(85.2–89.9)	87.3	(84.3–90.0)	436,000
65–74 years	85.8	(83.3–88.0)	86.3	(83.1–89.2)	85.3	(82.0–88.2)	289,000
75+ years	82.0	(79.4–84.4)	84.4	(79.7–88.3)	80.2	(76.8–83.3)	217,000
Māori	83.6	(81.3–85.7)	83.3	(79.4–86.7)	83.9	(81.5–86.0)	371,000
Pacific	85.9	(82.1–89.1)	84.9	(78.4–90.0)	86.7	(82.1–90.5)	176,000
Asian	89.4	(87.0–91.6)	92.2	(88.6–94.9)	86.9	(83.3–90.1)	335,000
European/Other	90.0	(89.3–90.7)	90.3	(89.1–91.3)	89.8	(88.8–90.8)	2,506,000
Least deprived areas (q1)	94.6	(93.1–95.8)	95.0	(93.3–96.3)	94.1	(91.9–95.9)	690,000
Most deprived areas (q5)	83.8	(81.9–85.6)	81.9	(78.6–85.0)	85.4	(83.7–86.9)	558,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	1.01 (0.99–1.02)		Age
Māori	Non-Māori	0.91 (0.88–0.93)	*	Age, sex
Māori men	Non-Māori men	0.90 (0.86–0.94)	*	Age
Māori women	Non-Māori women	0.91 (0.88–0.94)	*	Age
Pacific	Non-Pacific	0.93 (0.90–0.97)	*	Age, sex
Pacific men	Non-Pacific men	0.92 (0.85–0.98)	*	Age
Pacific women	Non-Pacific women	0.95 (0.90–1.00)	*	Age
Asian	Non-Asian	0.99 (0.96–1.02)		Age, sex
Asian men	Non-Asian men	1.02 (0.99–1.06)		Age
Asian women	Non-Asian women	0.96 (0.91–1.01)		Age
Most deprived areas	Least deprived areas	0.88 (0.85–0.91)	*	Age, sex, ethnic group

2.1 Current smoking, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	18.4	(17.4–19.5)	19.4	(17.9–20.8)	17.5	(16.3–18.7)	650,000
15–17 years	8.0	(5.5–11.1)	9.4	(5.4–15.1)	6.5	(3.8–10.2)	15,000
18–24 years	27.4	(23.8–31.3)	24.3	(19.5–29.8)	30.8	(25.9–35.9)	124,000
25–34 years	27.7	(25.0–30.6)	30.7	(26.7–34.9)	24.9	(21.4–28.7)	159,000
35–44 years	21.8	(19.8–23.9)	21.2	(18.3–24.3)	22.3	(19.8–25.1)	130,000
45–54 years	16.9	(14.8–19.3)	18.1	(14.7–21.9)	15.9	(13.4–18.7)	105,000
55–64 years	14.9	(12.9–17.1)	17.8	(14.3–21.7)	12.2	(10.1–14.6)	74,000
65–74 years	9.1	(7.4–11.0)	10.6	(8.0–13.6)	7.8	(5.7–10.3)	31,000
75+ years	4.5	(3.0–6.4)	4.4	(2.0–8.1)	4.6	(3.0–6.7)	12,000
Māori	40.9	(38.0–43.8)	37.8	(33.3–42.5)	43.7	(40.7–46.9)	182,000
Pacific	26.5	(22.9–30.3)	27.8	(22.4–33.7)	25.4	(20.3–31.1)	54,000
Asian	9.8	(7.6–12.4)	17.6	(13.1–22.8)	2.7	(1.6–4.3)	37,000
European/Other	16.7	(15.6–17.8)	17.4	(16.0–18.9)	16.0	(14.7–17.4)	464,000
Least deprived areas (q1)	10.8	(9.0–12.9)	12.2	(9.5–15.4)	9.4	(7.4–11.7)	79,000
Most deprived areas (q5)	28.2	(25.9–30.5)	28.6	(25.4–32.0)	27.8	(25.0–30.7)	188,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	1.09 (0.99–1.19)		Age
Māori	Non-Māori	2.44 (2.23–2.67)	*	Age, sex
Māori men	Non-Māori men	2.07 (1.80–2.38)	*	Age
Māori women	Non-Māori women	2.86 (2.55–3.21)	*	Age
Pacific	Non-Pacific	1.30 (1.12–1.51)	*	Age, sex
Pacific men	Non-Pacific men	1.34 (1.06–1.68)	*	Age
Pacific women	Non-Pacific women	1.27 (1.04–1.55)	*	Age
Asian	Non-Asian	0.43 (0.34–0.56)	*	Age, sex
Asian men	Non-Asian men	0.79 (0.60–1.05)		Age
Asian women	Non-Asian women	0.12 (0.08–0.18)	*	Age
Most deprived areas	Least deprived areas	2.48 (2.05–3.00)	*	Age, sex, ethnic group

2.1a Daily smoking, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	16.5	(15.6–17.4)	17.2	(16.0–18.5)	15.8	(14.8–16.9)	583,000
15–17 years	6.5	(4.3–9.3)	6.8	(3.5–11.8)	6.1	(3.5–9.8)	12,000
18–24 years	24.3	(21.0–27.9)	21.7	(17.4–26.6)	27.1	(22.6–32.0)	110,000
25–34 years	24.9	(22.2–27.8)	28.0	(23.9–32.4)	22.0	(18.9–25.4)	143,000
35–44 years	19.7	(17.9–21.5)	19.3	(16.6–22.2)	20.0	(17.7–22.3)	117,000
45–54 years	15.2	(13.2–17.4)	15.5	(12.6–18.7)	15.0	(12.6–17.8)	94,000
55–64 years	13.4	(11.4–15.5)	15.5	(12.2–19.2)	11.3	(9.2–13.7)	67,000
65–74 years	8.2	(6.7–10.0)	9.7	(7.3–12.5)	6.9	(5.0–9.2)	28,000
75+ years	4.4	(3.0–6.3)	4.4	(2.0–8.1)	4.5	(2.9–6.6)	12,000
Māori	38.4	(35.6–41.2)	35.9	(31.6–40.4)	40.6	(37.7–43.6)	170,000
Pacific	23.1	(19.6–26.9)	25.1	(19.5–31.4)	21.4	(16.7–26.8)	47,000
Asian	8.3	(6.2–10.9)	14.6	(10.7–19.4)	2.5	(1.4–4.1)	31,000
European/Other	14.8	(13.8–15.8)	15.4	(14.1–16.8)	14.2	(13.0–15.5)	412,000
Least deprived areas (q1)	9.1	(7.5–11.0)	9.6	(7.2–12.4)	8.6	(6.5–11.1)	66,000
Most deprived areas (q5)	26.4	(24.2–28.7)	26.6	(23.5–30.0)	26.2	(23.5–29.0)	176,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	1.07 (0.97–1.18)		Age
Māori	Non-Māori	2.61 (2.38–2.87)	*	Age, sex
Māori men	Non-Māori men	2.26 (1.95–2.62)	*	Age
Māori women	Non-Māori women	3.00 (2.65–3.39)	*	Age
Pacific	Non-Pacific	1.26 (1.07–1.49)	*	Age, sex
Pacific men	Non-Pacific men	1.36 (1.06–1.75)	*	Age
Pacific women	Non-Pacific women	1.18 (0.95–1.46)		Age
Asian	Non-Asian	0.41 (0.31–0.54)	*	Age, sex
Asian men	Non-Asian men	0.73 (0.53–1.01)		Age
Asian women	Non-Asian women	0.12 (0.08–0.19)	*	Age
Most deprived areas	Least deprived areas	2.85 (2.33–3.49)	*	Age, sex, ethnic group

2.2 Meets the recommended daily vegetable intake (3+ servings per day), adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	68.4	(66.3–70.5)	64.4	(61.8–67.1)	72.2	(70.0–74.2)	2,417,000
15–24 years	60.5	(56.7–64.2)	58.7	(53.3–63.9)	62.4	(57.8–66.9)	389,000
25–34 years	61.3	(57.2–65.2)	56.0	(50.3–61.6)	66.4	(61.8–70.7)	351,000
35–44 years	66.1	(62.5–69.5)	60.1	(55.0–65.0)	71.6	(67.8–75.2)	394,000
45–54 years	71.1	(67.3–74.8)	67.1	(61.4–72.4)	74.9	(70.8–78.7)	440,000
55–64 years	75.6	(72.5–78.6)	70.0	(64.9–74.7)	81.1	(77.8–84.1)	377,000
65–74 years	79.1	(76.1–81.8)	78.0	(73.3–82.1)	80.2	(75.7–84.1)	266,000
75+ years	74.8	(71.6–77.9)	74.9	(69.9–79.5)	74.8	(70.4–78.7)	198,000
Māori	64.2	(61.3–67.1)	61.5	(56.9–65.9)	66.8	(63.4–70.1)	285,000
Pacific	45.6	(39.8–51.4)	44.0	(36.1–52.1)	46.8	(40.8–53.0)	93,000
Asian	53.9	(48.9–58.8)	52.8	(44.8–60.6)	55.0	(49.3–60.6)	202,000
European/Other	72.0	(69.7–74.2)	67.5	(64.6–70.3)	76.3	(74.0–78.6)	2,004,000
Least deprived areas (q1)	73.0	(68.8–76.9)	69.3	(63.9–74.3)	76.9	(72.3–81.0)	533,000
Most deprived areas (q5)	58.7	(55.3–62.1)	53.6	(48.8–58.3)	63.0	(59.4–66.6)	391,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.90	(0.87–0.93)	*	Age
Māori	Non-Māori	0.97	(0.93–1.01)		Age, sex
Māori men	Non-Māori men	0.99	(0.92–1.06)		Age
Māori women	Non-Māori women	0.95	(0.90–0.99)	*	Age
Pacific	Non-Pacific	0.70	(0.64–0.76)	*	Age, sex
Pacific men	Non-Pacific men	0.72	(0.62–0.84)	*	Age
Pacific women	Non-Pacific women	0.68	(0.61–0.76)	*	Age
Asian	Non-Asian	0.80	(0.75–0.86)	*	Age, sex
Asian men	Non-Asian men	0.85	(0.76–0.94)	*	Age
Asian women	Non-Asian women	0.76	(0.69–0.84)	*	Age
Most deprived areas	Least deprived areas	0.88	(0.83–0.93)	*	Age, sex, ethnic group

2.2 Meets the recommended daily fruit intake (2+ servings per day), adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	58.5	(57.4–59.7)	52.6	(50.9–54.2)	64.2	(62.7–65.7)	2,068,000
15–24 years	52.9	(49.5–56.4)	48.0	(43.0–53.0)	58.2	(53.7–62.6)	340,000
25–34 years	55.8	(52.9–58.7)	51.3	(46.8–55.8)	60.2	(56.4–64.0)	320,000
35–44 years	56.4	(53.5–59.1)	52.6	(48.4–56.9)	59.7	(56.5–62.9)	336,000
45–54 years	59.3	(56.3–62.2)	53.6	(48.7–58.5)	64.5	(61.0–68.0)	366,000
55–64 years	63.9	(61.1–66.6)	56.1	(51.7–60.5)	71.3	(67.8–74.7)	319,000
65–74 years	65.4	(62.4–68.3)	57.6	(53.1–62.1)	72.7	(68.1–76.9)	220,000
75+ years	62.4	(58.6–66.1)	51.4	(45.8–57.0)	70.6	(66.1–74.9)	166,000
Māori	49.2	(46.7–51.7)	46.6	(42.4–50.9)	51.6	(48.3–54.9)	219,000
Pacific	54.0	(48.5–59.4)	49.7	(41.4–58.0)	57.6	(51.4–63.5)	111,000
Asian	55.7	(50.9–60.4)	51.8	(44.5–59.1)	59.3	(53.0–65.4)	209,000
European/Other	60.1	(58.7–61.6)	53.3	(51.3–55.3)	66.7	(65.0–68.5)	1,674,000
Least deprived areas (q1)	65.3	(61.5–68.9)	61.2	(56.9–65.4)	69.6	(65.3–73.7)	476,000
Most deprived areas (q5)	49.8	(47.2–52.4)	44.1	(40.3–48.0)	54.5	(51.7–57.3)	332,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.82	(0.79–0.86)	*	Age
Māori	Non-Māori	0.84	(0.80–0.89)	*	Age, sex
Māori men	Non-Māori men	0.89	(0.80–0.98)	*	Age
Māori women	Non-Māori women	0.81	(0.76–0.87)	*	Age
Pacific	Non-Pacific	0.95	(0.88–1.02)		Age, sex
Pacific men	Non-Pacific men	0.97	(0.84–1.11)		Age
Pacific women	Non-Pacific women	0.93	(0.85–1.02)		Age
Asian	Non-Asian	0.97	(0.90–1.04)		Age, sex
Asian men	Non-Asian men	1.00	(0.89–1.12)		Age
Asian women	Non-Asian women	0.95	(0.86–1.03)		Age
Most deprived areas	Least deprived areas	0.75	(0.70–0.80)	*	Age, sex, ethnic group

2.3 Physically active, adults aged 15 years and over, 2011/12

Population group	Total	Men	Women	Estimated number
Total	53.9 (51.5–56.3)	57.3 (54.7–59.9)	50.7 (47.7–53.7)	1,905,000
15–24 years	57.5 (53.5–61.5)	63.4 (58.0–68.5)	51.3 (45.7–57.0)	370,000
25–34 years	55.3 (51.5–59.0)	58.5 (53.1–63.8)	52.2 (47.5–56.9)	317,000
35–44 years	55.5 (52.2–58.7)	57.3 (52.7–61.8)	53.8 (49.0–58.6)	331,000
45–54 years	56.1 (52.3–59.8)	57.7 (52.6–62.7)	54.5 (49.9–59.0)	347,000
55–64 years	57.0 (53.7–60.4)	57.9 (53.3–62.5)	56.2 (51.3–61.0)	285,000
65–74 years	50.5 (46.4–54.6)	54.7 (49.3–59.9)	46.6 (40.9–52.3)	170,000
75+ years	32.3 (28.1–36.6)	38.0 (31.8–44.5)	28.0 (23.9–32.4)	86,000
Māori	57.1 (53.7–60.4)	60.9 (56.1–65.5)	53.6 (49.4–57.7)	254,000
Pacific	46.3 (41.6–51.1)	53.5 (46.9–60.0)	40.4 (34.4–46.6)	95,000
Asian	39.2 (34.2–44.4)	39.3 (32.5–46.5)	39.1 (33.0–45.4)	147,000
European/Other	55.9 (53.1–58.6)	59.4 (56.5–62.3)	52.5 (49.1–55.8)	1,555,000
Least deprived areas (q1)	59.2 (53.5–64.7)	61.3 (55.5–66.9)	56.9 (49.6–63.9)	432,000
Most deprived areas (q5)	47.0 (43.4–50.6)	50.4 (46.2–54.7)	44.1 (39.5–48.7)	313,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	1.12 (1.07–1.17)	*	Age
Māori	Non-Māori	1.04 (0.99–1.10)		Age, sex
Māori men	Non-Māori men	1.05 (0.97–1.13)		Age
Māori women	Non-Māori women	1.03 (0.96–1.11)		Age
Pacific	Non-Pacific	0.82 (0.74–0.90)	*	Age, sex
Pacific men	Non-Pacific men	0.88 (0.77–1.01)		Age
Pacific women	Non-Pacific women	0.76 (0.66–0.87)	*	Age
Asian	Non-Asian	0.67 (0.61–0.75)	*	Age, sex
Asian men	Non-Asian men	0.63 (0.55–0.73)	*	Age
Asian women	Non-Asian women	0.72 (0.62–0.82)	*	Age
Most deprived areas	Least deprived areas	0.86 (0.80–0.92)	*	Age, sex, ethnic group

2.4 Obesity, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)			Estimated number
	Total	Men	Women	
Total	28.4 (27.3–29.6)	28.1 (26.2–30.0)	28.8 (27.4–30.3)	1,004,000
15–24 years	19.7 (17.1–22.5)	18.2 (14.3–22.6)	21.2 (17.3–25.6)	126,000
25–34 years	25.8 (23.0–28.7)	23.7 (20.2–27.4)	27.8 (23.5–32.4)	148,000
35–44 years	31.9 (29.3–34.5)	33.9 (30.0–38.0)	30.1 (26.8–33.5)	190,000
45–54 years	31.2 (28.0–34.4)	31.5 (27.2–36.0)	30.8 (27.1–34.8)	193,000
55–64 years	33.0 (29.9–36.1)	33.9 (29.5–38.4)	32.1 (28.1–36.3)	164,000
65–74 years	36.6 (32.5–40.7)	34.6 (29.3–40.3)	38.4 (32.6–44.5)	123,000
75+ years	22.6 (19.0–26.4)	22.1 (16.7–28.4)	22.9 (18.6–27.6)	60,000
Māori	44.4 (41.5–47.4)	44.0 (39.0–49.1)	44.8 (41.3–48.4)	197,000
Pacific	62.1 (56.1–67.7)	59.4 (51.1–67.3)	64.2 (56.7–71.3)	127,000
Asian	15.9 (13.1–19.0)	16.2 (11.5–21.8)	15.6 (11.4–20.7)	59,000
European/Other	26.0 (24.7–27.3)	25.9 (23.9–28.1)	26.0 (24.4–27.6)	724,000
Least deprived areas (q1)	22.6 (19.6–25.9)	24.2 (20.1–28.7)	21.0 (17.6–24.6)	162,000
Most deprived areas (q5)	39.7 (37.2–42.3)	36.4 (33.2–39.7)	42.5 (39.2–45.8)	263,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.98 (0.91–1.05)		Age
Māori	Non-Māori	1.78 (1.65–1.92)	*	Age, sex
Māori men	Non-Māori men	1.80 (1.60–2.03)	*	Age
Māori women	Non-Māori women	1.76 (1.60–1.95)	*	Age
Pacific	Non-Pacific	2.51 (2.33–2.71)	*	Age, sex
Pacific men	Non-Pacific men	2.45 (2.16–2.77)	*	Age
Pacific women	Non-Pacific women	2.57 (2.32–2.83)	*	Age
Asian	Non-Asian	0.55 (0.45–0.67)	*	Age, sex
Asian men	Non-Asian men	0.59 (0.44–0.77)	*	Age
Asian women	Non-Asian women	0.51 (0.39–0.68)	*	Age
Most deprived areas	Least deprived areas	1.63 (1.41–1.87)	*	Age, sex, ethnic group

3.1 Medicated high blood pressure, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	15.8	(15.1–16.5)	14.5	(13.4–15.5)	17.1	(16.1–18.0)	558,000
15–24 years	0.4	(0.1–1.2)	0.5	(0.0–1.8)	0.4	(0.0–1.6)	3,000
25–34 years	1.2	(0.6–2.1)	1.4	(0.4–3.3)	1.0	(0.5–2.0)	7,000
35–44 years	4.3	(3.3–5.5)	5.1	(3.4–7.2)	3.5	(2.5–4.9)	26,000
45–54 years	13.5	(11.7–15.4)	13.6	(10.8–16.6)	13.4	(11.3–15.8)	83,000
55–64 years	29.2	(26.9–31.6)	27.9	(24.2–31.9)	30.4	(27.0–34.0)	146,000
65–74 years	46.6	(42.4–50.8)	43.5	(37.8–49.4)	49.5	(43.9–55.1)	157,000
75+ years	52.0	(48.6–55.5)	43.7	(38.3–49.3)	58.2	(53.7–62.6)	138,000
Māori	13.2	(11.6–14.9)	13.2	(10.7–16.1)	13.1	(11.5–15.0)	59,000
Pacific	11.3	(8.7–14.3)	11.0	(7.0–16.2)	11.5	(8.4–15.3)	23,000
Asian	10.4	(8.0–13.1)	9.9	(6.7–14.0)	10.8	(7.7–14.6)	39,000
European/Other	16.7	(15.8–17.5)	15.0	(13.9–16.3)	18.2	(17.1–19.4)	464,000
Least deprived areas (q1)	13.1	(11.3–15.1)	12.4	(10.0–15.1)	13.8	(11.5–16.5)	96,000
Most deprived areas (q5)	16.3	(14.7–18.0)	15.9	(13.7–18.2)	16.6	(14.6–18.8)	108,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.90 (0.83–0.98)	*	Age
Māori	Non-Māori	1.34 (1.20–1.49)	*	Age, sex
Māori men	Non-Māori men	1.43 (1.19–1.71)	*	Age
Māori women	Non-Māori women	1.27 (1.12–1.43)	*	Age
Pacific	Non-Pacific	1.40 (1.19–1.64)	*	Age, sex
Pacific men	Non-Pacific men	1.50 (1.16–1.95)	*	Age
Pacific women	Non-Pacific women	1.32 (1.08–1.62)	*	Age
Asian	Non-Asian	1.08 (0.90–1.31)		Age, sex
Asian men	Non-Asian men	1.11 (0.83–1.49)		Age
Asian women	Non-Asian women	1.06 (0.84–1.35)		Age
Most deprived areas	Least deprived areas	1.43 (1.22–1.67)	*	Age, sex, ethnic group

3.2 Medicated high cholesterol, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	10.4	(9.7–11.1)	11.5	(10.4–12.7)	9.4	(8.6–10.2)	367,000
15–24 years	0.0	(0.0–0.3)	0.0	(0.0–0.6)	0.0	(0.0–0.5)	<2,000
25–34 years	0.4	(0.1–0.8)	0.3	(0.1–1.0)	0.4	(0.1–1.2)	2,000
35–44 years	2.7	(1.7–4.0)	4.5	(2.7–6.8)	1.1	(0.4–2.3)	16,000
45–54 years	9.1	(7.5–10.9)	11.4	(8.5–14.8)	6.9	(5.0–9.2)	56,000
55–64 years	21.4	(19.3–23.5)	25.1	(21.5–28.9)	17.8	(15.2–20.7)	107,000
65–74 years	31.6	(28.4–34.9)	32.9	(28.2–37.9)	30.4	(25.7–35.3)	106,000
75+ years	30.7	(27.5–34.1)	31.6	(26.2–37.3)	30.1	(25.9–34.6)	82,000
Māori	8.0	(6.9–9.3)	8.6	(6.7–10.7)	7.5	(6.1–9.2)	36,000
Pacific	7.3	(5.1–10.1)	8.0	(4.8–12.3)	6.8	(4.2–10.3)	15,000
Asian	6.8	(4.8–9.3)	9.1	(6.3–12.8)	4.7	(2.2–8.4)	26,000
European/Other	11.1	(10.3–11.8)	12.0	(10.8–13.3)	10.2	(9.3–11.1)	308,000
Least deprived areas (q1)	9.6	(8.1–11.3)	11.3	(9.0–14.0)	7.8	(6.2–9.7)	70,000
Most deprived areas (q5)	11.0	(9.5–12.5)	12.0	(10.0–14.2)	10.1	(8.3–12.2)	73,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	1.15	(1.05–1.26)	*	Age
Māori	Non-Māori	1.14	(0.99–1.30)		Age, sex
Māori men	Non-Māori men	1.09	(0.89–1.32)		Age
Māori women	Non-Māori women	1.20	(0.99–1.45)		Age
Pacific	Non-Pacific	1.24	(1.02–1.50)	*	Age, sex
Pacific men	Non-Pacific men	1.22	(0.92–1.62)		Age
Pacific women	Non-Pacific women	1.26	(0.96–1.65)		Age
Asian	Non-Asian	1.06	(0.86–1.31)		Age, sex
Asian men	Non-Asian men	1.17	(0.89–1.54)		Age
Asian women	Non-Asian women	0.93	(0.66–1.32)		Age
Most deprived areas	Least deprived areas	1.18	(1.00–1.40)		Age, sex, ethnic group

3.3 Diagnosed ischaemic heart disease, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	5.5	(5.1–5.8)	6.9	(6.2–7.6)	4.1	(3.7–4.6)	193,000
15–24 years	0.2	(0.0–0.5)	0.3	(0.0–1.0)	0.1	(0.0–0.4)	1,000
25–34 years	0.3	(0.1–0.7)	0.3	(0.1–0.9)	0.3	(0.1–0.7)	2,000
35–44 years	0.4	(0.2–0.7)	0.4	(0.1–1.0)	0.3	(0.2–0.7)	2,000
45–54 years	3.0	(2.1–4.2)	4.3	(2.9–6.2)	1.8	(0.8–3.5)	19,000
55–64 years	7.8	(6.5–9.3)	10.5	(8.2–13.2)	5.3	(4.0–6.8)	39,000
65–74 years	16.2	(13.7–18.9)	23.0	(18.7–27.7)	9.8	(7.5–12.5)	55,000
75+ years	28.6	(25.7–31.7)	35.2	(30.3–40.3)	23.8	(19.9–28.1)	76,000
Māori	5.1	(4.4–5.9)	5.4	(4.2–6.9)	4.8	(3.8–6.0)	23,000
Pacific	1.7	(0.9–3.0)	2.0	(0.6–5.0)	1.5	(0.7–2.7)	3,000
Asian	1.9	(1.1–2.9)	2.8	(1.5–4.9)	1.0	(0.3–2.4)	7,000
European/Other	6.0	(5.5–6.5)	7.6	(6.8–8.4)	4.5	(4.0–5.0)	167,000
Least deprived areas (q1)	4.4	(3.4–5.6)	5.8	(4.4–7.5)	2.9	(1.7–4.7)	32,000
Most deprived areas (q5)	6.9	(6.0–7.9)	8.1	(6.7–9.6)	5.9	(4.8–7.2)	46,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	1.85 (1.58–2.17)	*	Age
Māori	Non-Māori	1.79 (1.49–2.16)	*	Age, sex
Māori men	Non-Māori men	1.42 (1.07–1.89)	*	Age
Māori women	Non-Māori women	2.45 (1.92–3.13)	*	Age
Pacific	Non-Pacific	0.81 (0.49–1.36)		Age, sex
Pacific men	Non-Pacific men	0.77 (0.35–1.72)		Age
Pacific women	Non-Pacific women	0.87 (0.47–1.60)		Age
Asian	Non-Asian	0.68 (0.43–1.06)		Age, sex
Asian men	Non-Asian men	0.79 (0.47–1.33)		Age
Asian women	Non-Asian women	0.49 (0.20–1.19)		Age
Most deprived areas	Least deprived areas	1.93 (1.43–2.61)	*	Age, sex, ethnic group

3.4 Diagnosed stroke, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	1.8	(1.5–2.1)	1.9	(1.4–2.4)	1.7	(1.4–2.1)	62,000
15–24 years	0.1	(0.0–0.4)	0.0	(0.0–0.6)	0.2	(0.0–0.7)	1,000
25–34 years	0.5	(0.1–1.2)	0.4	(0.0–1.9)	0.5	(0.1–1.5)	3,000
35–44 years	0.7	(0.4–1.3)	0.8	(0.2–1.9)	0.7	(0.3–1.3)	4,000
45–54 years	1.0	(0.6–1.7)	1.0	(0.3–2.4)	1.1	(0.5–1.9)	6,000
55–64 years	2.7	(1.8–3.8)	3.1	(1.8–4.8)	2.3	(1.3–3.7)	13,000
65–74 years	4.3	(3.3–5.6)	4.8	(3.3–6.8)	3.9	(2.4–6.0)	15,000
75+ years	7.7	(6.0–9.7)	8.9	(6.1–12.5)	6.8	(4.9–9.3)	20,000
Māori	2.1	(1.5–2.9)	2.1	(1.0–3.7)	2.2	(1.5–3.1)	9,000
Pacific	0.6	(0.3–1.3)	0.6	(0.2–1.4)	0.6	(0.1–1.9)	1,000
Asian	1.1	(0.4–2.1)	1.3	(0.4–3.4)	0.8	(0.2–2.0)	4,000
European/Other	1.8	(1.6–2.1)	1.9	(1.5–2.4)	1.8	(1.4–2.2)	51,000
Least deprived areas (q1)	1.1	(0.7–1.7)	1.2	(0.6–2.1)	1.1	(0.5–2.0)	8,000
Most deprived areas (q5)	2.7	(2.2–3.4)	2.9	(1.9–4.1)	2.6	(1.9–3.5)	18,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	1.19	(0.90–1.59)		Age
Māori	Non-Māori	1.28	(1.00–1.63)	*	Age, sex
Māori men	Non-Māori men	1.14	(0.79–1.64)		Age
Māori women	Non-Māori women	2.27	(1.50–3.42)	*	Age
Pacific	Non-Pacific	0.92	(0.61–1.39)		Age, sex
Pacific men	Non-Pacific men	0.96	(0.57–1.62)		Age
Pacific women	Non-Pacific women	0.69	(0.26–1.80)		Age
Asian	Non-Asian	1.00	(0.65–1.52)		Age, sex
Asian men	Non-Asian men	1.04	(0.61–1.80)		Age
Asian women	Non-Asian women	0.74	(0.28–1.92)		Age
Most deprived areas	Least deprived areas	1.34	(0.91–1.97)		Age, sex, ethnic group

4.1 Diagnosed depression, bipolar disorder and/or anxiety disorder, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	16.2	(15.3–17.1)	11.9	(10.8–13.1)	20.2	(18.8–21.7)	572,000
15–24 years	9.9	(8.2–11.9)	6.6	(4.5–9.3)	13.4	(10.5–16.8)	64,000
25–34 years	16.7	(14.6–19.1)	12.9	(10.3–15.7)	20.5	(17.0–24.5)	96,000
35–44 years	18.9	(16.9–21.1)	13.6	(10.1–17.8)	23.8	(21.1–26.6)	113,000
45–54 years	19.1	(17.0–21.4)	15.5	(12.6–18.7)	22.5	(19.6–25.5)	118,000
55–64 years	18.1	(16.1–20.3)	14.1	(11.6–17.0)	22.0	(18.6–25.6)	90,000
65–74 years	17.3	(14.9–20.0)	11.5	(8.8–14.6)	22.9	(19.0–27.1)	58,000
75+ years	12.4	(10.1–15.0)	7.7	(5.5–10.6)	15.9	(12.2–20.1)	33,000
Māori	15.8	(14.0–17.8)	11.5	(9.0–14.4)	19.8	(17.1–22.9)	70,000
Pacific	7.0	(5.0–9.5)	5.3	(2.8–9.1)	8.4	(5.4–12.3)	14,000
Asian	4.4	(2.8–6.4)	1.6	(0.6–3.6)	6.9	(4.2–10.5)	16,000
European/Other	18.6	(17.5–19.6)	13.8	(12.4–15.2)	23.2	(21.6–24.8)	517,000
Least deprived areas (q1)	14.0	(11.7–16.4)	11.1	(8.7–13.8)	17.0	(13.6–20.8)	102,000
Most deprived areas (q5)	16.9	(15.1–18.8)	14.9	(12.7–17.4)	18.5	(16.1–21.1)	112,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.59 (0.53–0.66)	*	Age
Māori	Non-Māori	0.99 (0.87–1.13)		Age, sex
Māori men	Non-Māori men	0.97 (0.76–1.25)		Age
Māori women	Non-Māori women	1.01 (0.87–1.16)		Age
Pacific	Non-Pacific	0.44 (0.32–0.59)	*	Age, sex
Pacific men	Non-Pacific men	0.47 (0.29–0.78)	*	Age
Pacific women	Non-Pacific women	0.42 (0.29–0.62)	*	Age
Asian	Non-Asian	0.24 (0.17–0.36)	*	Age, sex
Asian men	Non-Asian men	0.13 (0.06–0.26)	*	Age
Asian women	Non-Asian women	0.31 (0.20–0.47)	*	Age
Most deprived areas	Least deprived areas	1.66 (1.37–2.02)	*	Age, sex, ethnic group

4.2 Psychological distress (high K10 score), adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	5.6	(5.1–6.2)	4.5	(3.8–5.3)	6.6	(5.8–7.5)	198,000
15–24 years	6.2	(4.8–7.9)	4.5	(2.9–6.8)	8.0	(5.7–10.9)	40,000
25–34 years	6.8	(5.3–8.5)	6.1	(4.1–8.7)	7.4	(5.4–9.7)	39,000
35–44 years	5.5	(4.4–6.7)	3.8	(2.6–5.4)	7.0	(5.5–8.7)	33,000
45–54 years	5.6	(4.4–6.9)	4.7	(3.1–6.8)	6.4	(4.7–8.4)	34,000
55–64 years	4.6	(3.6–5.7)	3.7	(2.6–5.2)	5.4	(4.0–7.1)	23,000
65–74 years	4.6	(3.2–6.5)	3.7	(2.2–6.0)	5.5	(3.3–8.5)	16,000
75+ years	5.0	(3.7–6.6)	4.6	(2.9–7.1)	5.3	(3.4–7.9)	13,000
Māori	9.1	(7.7–10.6)	6.5	(4.6–8.8)	11.5	(9.4–13.7)	40,000
Pacific	10.1	(7.1–13.7)	8.9	(5.2–14.2)	11.0	(7.9–15.0)	21,000
Asian	6.5	(4.4–9.1)	3.5	(1.9–5.9)	9.1	(5.5–13.9)	24,000
European/Other	4.9	(4.4–5.5)	4.1	(3.4–4.8)	5.8	(4.9–6.7)	137,000
Least deprived areas (q1)	2.4	(1.6–3.5)	2.0	(1.1–3.4)	2.8	(1.4–4.9)	18,000
Most deprived areas (q5)	9.4	(7.8–11.1)	7.8	(5.9–10.1)	10.7	(8.7–12.8)	62,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.68 (0.57–0.82)	*	Age
Māori	Non-Māori	1.71 (1.40–2.08)	*	Age, sex
Māori men	Non-Māori men	1.48 (1.04–2.13)	*	Age
Māori women	Non-Māori women	1.86 (1.48–2.35)	*	Age
Pacific	Non-Pacific	1.79 (1.36–2.36)	*	Age, sex
Pacific men	Non-Pacific men	2.06 (1.29–3.31)	*	Age
Pacific women	Non-Pacific women	1.64 (1.18–2.28)	*	Age
Asian	Non-Asian	1.12 (0.80–1.56)		Age, sex
Asian men	Non-Asian men	0.73 (0.41–1.28)		Age
Asian women	Non-Asian women	1.39 (0.93–2.07)		Age
Most deprived areas	Least deprived areas	3.46 (2.39–5.01)	*	Age, sex, ethnic group

5.1 Diagnosed diabetes, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	5.5	(5.0–5.9)	6.0	(5.3–6.6)	5.0	(4.4–5.6)	193,000
15–24 years	0.8	(0.3–1.5)	0.5	(0.1–2.0)	1.0	(0.3–2.2)	5,000
25–34 years	1.3	(0.7–2.3)	1.5	(0.4–3.5)	1.1	(0.6–1.9)	7,000
35–44 years	2.9	(2.2–3.9)	3.0	(1.9–4.5)	2.9	(1.7–4.4)	18,000
45–54 years	5.4	(4.3–6.6)	6.8	(5.0–9.0)	4.1	(3.1–5.4)	33,000
55–64 years	9.3	(7.9–10.9)	10.2	(8.0–12.9)	8.4	(6.6–10.6)	46,000
65–74 years	14.4	(12.1–16.9)	16.7	(13.6–20.3)	12.1	(9.1–15.7)	48,000
75+ years	13.1	(11.2–15.2)	13.4	(10.0–17.3)	13.0	(10.6–15.7)	35,000
Māori	7.3	(6.2–8.6)	7.9	(6.2–9.9)	6.8	(5.4–8.4)	33,000
Pacific	10.2	(8.1–12.7)	10.6	(6.9–15.5)	9.9	(7.2–13.1)	21,000
Asian	6.2	(4.3–8.6)	8.4	(5.1–12.8)	4.2	(2.3–7.0)	23,000
European/Other	4.7	(4.3–5.1)	4.9	(4.3–5.6)	4.5	(3.9–5.1)	130,000
Least deprived areas (q1)	2.7	(2.1–3.5)	3.2	(2.2–4.5)	2.3	(1.4–3.4)	20,000
Most deprived areas (q5)	8.6	(7.5–9.7)	9.6	(7.8–11.7)	7.7	(6.3–9.2)	57,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	1.24	(1.05–1.47)	*	Age
Māori	Non-Māori	2.08	(1.72–2.52)	*	Age, sex
Māori men	Non-Māori men	2.04	(1.54–2.70)	*	Age
Māori women	Non-Māori women	2.12	(1.63–2.76)	*	Age
Pacific	Non-Pacific	3.39	(2.74–4.19)	*	Age, sex
Pacific men	Non-Pacific men	3.25	(2.35–4.50)	*	Age
Pacific women	Non-Pacific women	3.53	(2.66–4.69)	*	Age
Asian	Non-Asian	1.73	(1.28–2.34)	*	Age, sex
Asian men	Non-Asian men	2.23	(1.53–3.25)	*	Age
Asian women	Non-Asian women	1.22	(0.74–2.02)		Age
Most deprived areas	Least deprived areas	3.13	(2.28–4.29)	*	Age, sex, ethnic group

5.2 Medicated asthma, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	11.0	(10.4–11.7)	8.6	(7.8–9.5)	13.2	(12.3–14.3)	389,000
15–24 years	12.5	(10.4–14.8)	10.2	(7.6–13.3)	15.0	(12.0–18.3)	80,000
25–34 years	11.4	(9.7–13.3)	9.4	(6.9–12.5)	13.3	(11.1–15.9)	65,000
35–44 years	9.9	(8.2–11.7)	8.7	(6.3–11.6)	10.9	(9.1–13.0)	59,000
45–54 years	10.1	(8.5–11.9)	7.2	(5.1–9.9)	12.7	(10.4–15.4)	62,000
55–64 years	10.6	(9.1–12.3)	8.8	(6.5–11.7)	12.4	(10.1–15.0)	53,000
65–74 years	11.9	(9.9–14.2)	7.4	(5.1–10.4)	16.1	(12.6–20.0)	40,000
75+ years	10.7	(8.8–12.8)	7.1	(4.8–10.1)	13.3	(10.7–16.3)	28,000
Māori	16.7	(14.6–19.0)	12.9	(9.6–16.7)	20.3	(17.5–23.3)	74,000
Pacific	9.3	(7.3–11.8)	6.7	(3.9–10.8)	11.5	(8.7–14.8)	19,000
Asian	4.4	(2.9–6.5)	5.6	(3.3–8.8)	3.4	(1.8–5.9)	17,000
European/Other	11.4	(10.6–12.2)	8.8	(7.9–9.8)	13.9	(12.8–15.1)	317,000
Least deprived areas (q1)	9.1	(7.6–10.8)	8.0	(6.1–10.3)	10.3	(8.0–12.9)	67,000
Most deprived areas (q5)	12.4	(11.1–13.9)	8.3	(6.6–10.3)	15.9	(13.9–18.0)	83,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.65 (0.57–0.75)	*	Age
Māori	Non-Māori	1.63 (1.42–1.88)	*	Age, sex
Māori men	Non-Māori men	1.55 (1.19–2.03)	*	Age
Māori women	Non-Māori women	1.68 (1.44–1.96)	*	Age
Pacific	Non-Pacific	0.79 (0.62–1.02)		Age, sex
Pacific men	Non-Pacific men	0.72 (0.44–1.17)		Age
Pacific women	Non-Pacific women	0.84 (0.63–1.11)		Age
Asian	Non-Asian	0.37 (0.26–0.52)	*	Age, sex
Asian men	Non-Asian men	0.59 (0.37–0.93)	*	Age
Asian women	Non-Asian women	0.24 (0.14–0.38)	*	Age
Most deprived areas	Least deprived areas	1.33 (1.05–1.68)	*	Age, sex, ethnic group

5.3 Diagnosed arthritis, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	15.1	(14.3–15.8)	13.0	(11.9–14.2)	17.0	(16.1–17.8)	532,000
15–24 years	0.6	(0.3–1.1)	0.3	(0.0–1.1)	0.9	(0.3–1.9)	4,000
25–34 years	2.4	(1.7–3.5)	2.6	(1.5–4.1)	2.3	(1.2–4.0)	14,000
35–44 years	5.3	(4.1–6.7)	5.5	(3.6–8.0)	5.1	(3.8–6.7)	31,000
45–54 years	12.6	(11.2–14.3)	13.6	(10.9–16.6)	11.8	(9.5–14.4)	78,000
55–64 years	27.7	(25.0–30.5)	25.7	(21.9–29.7)	29.6	(25.6–33.9)	138,000
65–74 years	42.4	(38.8–46.0)	35.8	(30.7–41.1)	48.5	(43.4–53.7)	143,000
75+ years	46.6	(42.4–50.8)	34.3	(28.3–40.8)	55.7	(50.9–60.4)	124,000
Māori	11.4	(9.9–13.1)	12.4	(9.9–15.3)	10.6	(9.1–12.1)	51,000
Pacific	6.6	(5.1–8.4)	6.4	(3.7–10.2)	6.8	(4.7–9.3)	14,000
Asian	7.2	(5.3–9.6)	6.0	(3.9–8.7)	8.4	(5.5–12.1)	27,000
European/Other	16.8	(16.0–17.6)	14.0	(12.8–15.3)	19.4	(18.4–20.5)	467,000
Least deprived areas (q1)	13.5	(11.9–15.2)	12.7	(10.4–15.3)	14.4	(12.3–16.7)	99,000
Most deprived areas (q5)	15.5	(13.9–17.2)	15.2	(12.8–17.8)	15.8	(13.8–18.0)	103,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.82	(0.74–0.90)	*	Age
Māori	Non-Māori	1.17	(1.04–1.32)	*	Age, sex
Māori men	Non-Māori men	1.43	(1.17–1.74)	*	Age
Māori women	Non-Māori women	0.99	(0.86–1.15)		Age
Pacific	Non-Pacific	0.84	(0.66–1.07)		Age, sex
Pacific men	Non-Pacific men	0.94	(0.62–1.42)		Age
Pacific women	Non-Pacific women	0.78	(0.59–1.04)		Age
Asian	Non-Asian	0.76	(0.60–0.96)	*	Age, sex
Asian men	Non-Asian men	0.70	(0.48–1.01)		Age
Asian women	Non-Asian women	0.81	(0.60–1.09)		Age
Most deprived areas	Least deprived areas	1.37	(1.16–1.61)	*	Age, sex, ethnic group

5.4 Chronic pain, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	16.2	(15.2–17.1)	14.8	(13.6–16.1)	17.4	(16.1–18.8)	571,000
15–24 years	5.8	(4.3–7.5)	5.1	(3.3–7.4)	6.5	(4.5–9.2)	37,000
25–34 years	10.8	(9.0–12.9)	10.9	(8.2–14.2)	10.7	(8.4–13.5)	62,000
35–44 years	13.7	(11.9–15.7)	14.9	(12.3–17.8)	12.7	(10.2–15.5)	82,000
45–54 years	17.9	(15.9–20.0)	17.7	(14.7–20.9)	18.1	(15.4–21.0)	111,000
55–64 years	22.8	(20.4–25.4)	19.8	(16.7–23.3)	25.7	(22.4–29.2)	114,000
65–74 years	26.9	(23.6–30.4)	23.5	(19.1–28.3)	30.1	(25.7–34.8)	91,000
75+ years	28.2	(25.0–31.7)	22.4	(18.1–27.1)	32.6	(27.9–37.5)	75,000
Māori	17.5	(15.5–19.7)	17.6	(14.6–20.8)	17.5	(14.9–20.4)	78,000
Pacific	13.6	(10.0–17.9)	12.8	(7.5–19.8)	14.3	(9.9–19.8)	28,000
Asian	9.8	(7.3–12.9)	7.3	(4.5–11.1)	12.2	(8.5–16.8)	37,000
European/Other	16.9	(15.9–17.9)	15.3	(13.9–16.8)	18.4	(16.9–19.9)	469,000
Least deprived areas (q1)	13.1	(10.8–15.6)	11.1	(8.6–14.0)	15.2	(11.6–19.3)	96,000
Most deprived areas (q5)	19.1	(17.1–21.1)	18.1	(15.5–21.0)	19.9	(17.3–22.6)	127,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.87 (0.79–0.96)	*	Age
Māori	Non-Māori	1.32 (1.18–1.49)	*	Age, sex
Māori men	Non-Māori men	1.42 (1.17–1.72)	*	Age
Māori women	Non-Māori women	1.25 (1.08–1.44)	*	Age
Pacific	Non-Pacific	1.10 (0.90–1.35)		Age, sex
Pacific men	Non-Pacific men	1.12 (0.80–1.59)		Age
Pacific women	Non-Pacific women	1.09 (0.85–1.39)		Age
Asian	Non-Asian	0.70 (0.57–0.87)	*	Age, sex
Asian men	Non-Asian men	0.55 (0.38–0.79)	*	Age
Asian women	Non-Asian women	0.83 (0.63–1.08)		Age
Most deprived areas	Least deprived areas	1.74 (1.45–2.09)	*	Age, sex, ethnic group

6.1 Visited a GP in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)			Estimated number
	Total	Men	Women	
Total	78.5 (77.5–79.4)	74.2 (72.6–75.7)	82.5 (81.3–83.7)	2,771,000
15–24 years	68.8 (65.6–71.8)	63.4 (58.4–68.2)	74.5 (70.9–77.8)	442,000
25–34 years	71.0 (68.4–73.6)	60.4 (55.9–64.8)	81.3 (78.3–84.1)	407,000
35–44 years	74.7 (72.4–76.9)	69.4 (66.4–72.4)	79.5 (76.2–82.5)	446,000
45–54 years	78.2 (75.8–80.4)	77.9 (74.3–81.2)	78.5 (75.4–81.4)	484,000
55–64 years	86.5 (83.9–88.8)	85.3 (81.4–88.7)	87.6 (84.6–90.3)	432,000
65–74 years	90.5 (88.4–92.3)	89.5 (86.5–92.0)	91.4 (88.6–93.7)	305,000
75+ years	96.6 (95.3–97.6)	95.7 (93.2–97.5)	97.2 (95.4–98.5)	256,000
Māori	75.5 (72.8–77.9)	71.1 (66.5–75.4)	79.5 (76.5–82.2)	335,000
Pacific	75.3 (71.1–79.1)	70.1 (61.6–77.7)	79.6 (75.3–83.5)	154,000
Asian	71.2 (67.3–74.8)	66.0 (60.1–71.6)	75.9 (71.0–80.3)	267,000
European/Other	80.1 (78.9–81.2)	75.7 (74.0–77.3)	84.3 (82.8–85.6)	2,229,000
Least deprived areas (q1)	80.0 (77.4–82.4)	78.1 (74.3–81.6)	82.0 (78.9–84.7)	584,000
Most deprived areas (q5)	77.2 (74.8–79.4)	74.9 (71.5–78.1)	79.0 (76.0–81.9)	514,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.90 (0.88–0.93)	*	Age
Māori	Non-Māori	1.00 (0.97–1.03)		Age, sex
Māori men	Non-Māori men	1.01 (0.96–1.07)		Age
Māori women	Non-Māori women	0.99 (0.96–1.02)		Age
Pacific	Non-Pacific	1.01 (0.96–1.05)		Age, sex
Pacific men	Non-Pacific men	1.02 (0.94–1.10)		Age
Pacific women	Non-Pacific women	1.00 (0.95–1.05)		Age
Asian	Non-Asian	0.94 (0.90–0.99)	*	Age, sex
Asian men	Non-Asian men	0.95 (0.88–1.02)		Age
Asian women	Non-Asian women	0.94 (0.89–1.00)	*	Age
Most deprived areas	Least deprived areas	0.98 (0.93–1.02)		Age, sex, ethnic group

6.2 Visited a practice nurse (without seeing a GP at the same time) in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)			Estimated number
	Total	Men	Women	
Total	30.5 (29.2–31.9)	24.9 (23.2–26.8)	35.9 (34.3–37.5)	1,079,000
15–24 years	21.7 (19.1–24.5)	14.5 (11.2–18.4)	29.4 (25.2–33.8)	140,000
25–34 years	23.2 (20.5–26.1)	14.7 (11.4–18.5)	31.5 (27.9–35.3)	133,000
35–44 years	25.7 (23.4–28.1)	18.0 (14.9–21.5)	32.7 (29.5–36.0)	153,000
45–54 years	29.1 (26.7–31.7)	24.2 (20.3–28.5)	33.7 (29.9–37.7)	180,000
55–64 years	38.2 (35.2–41.2)	36.2 (30.9–41.8)	40.1 (36.1–44.1)	190,000
65–74 years	49.8 (46.3–53.3)	45.5 (40.2–51.0)	53.8 (48.8–58.7)	168,000
75+ years	43.1 (39.8–46.4)	45.9 (40.6–51.3)	41.0 (36.7–45.3)	114,000
Māori	29.9 (27.0–32.9)	20.1 (16.6–24.0)	38.9 (35.3–42.7)	133,000
Pacific	20.3 (16.5–24.7)	14.5 (9.6–20.6)	25.3 (19.6–31.6)	42,000
Asian	18.7 (15.4–22.3)	12.6 (9.3–16.6)	24.3 (19.7–29.4)	70,000
European/Other	32.6 (31.2–34.1)	27.3 (25.4–29.4)	37.7 (36.0–39.4)	907,000
Least deprived areas (q1)	29.3 (26.7–32.0)	27.0 (23.4–30.8)	31.8 (28.3–35.4)	214,000
Most deprived areas (q5)	29.7 (26.9–32.6)	24.1 (20.7–27.7)	34.4 (30.7–38.3)	198,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.70 (0.66–0.76)	*	Age
Māori	Non-Māori	1.09 (1.00–1.18)	*	Age, sex
Māori men	Non-Māori men	0.95 (0.80–1.12)		Age
Māori women	Non-Māori women	1.17 (1.07–1.28)	*	Age
Pacific	Non-Pacific	0.75 (0.64–0.88)	*	Age, sex
Pacific men	Non-Pacific men	0.75 (0.56–1.01)		Age
Pacific women	Non-Pacific women	0.76 (0.63–0.90)	*	Age
Asian	Non-Asian	0.66 (0.56–0.78)	*	Age, sex
Asian men	Non-Asian men	0.60 (0.44–0.80)	*	Age
Asian women	Non-Asian women	0.70 (0.57–0.85)	*	Age
Most deprived areas	Least deprived areas	1.18 (1.04–1.33)	*	Age, sex, ethnic group

6.3 Visited an after-hours medical centre in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	12.9	(12.0–13.8)	12.4	(11.2–13.7)	13.4	(12.2–14.6)	456,000
15–24 years	16.9	(14.2–19.8)	15.9	(12.1–20.4)	17.9	(14.5–21.8)	109,000
25–34 years	14.4	(12.3–16.6)	13.3	(10.6–16.5)	15.4	(12.6–18.5)	82,000
35–44 years	14.2	(12.2–16.5)	14.8	(12.2–17.8)	13.6	(10.8–16.9)	85,000
45–54 years	11.3	(9.4–13.4)	10.6	(7.9–13.9)	11.9	(9.6–14.5)	70,000
55–64 years	11.3	(9.5–13.3)	9.7	(7.1–12.8)	12.9	(10.4–15.7)	56,000
65–74 years	9.3	(7.2–11.7)	9.7	(6.7–13.4)	8.9	(6.6–11.6)	31,000
75+ years	8.6	(6.5–11.1)	8.7	(5.6–12.7)	8.6	(6.0–11.8)	23,000
Māori	13.3	(11.0–15.8)	12.6	(9.6–16.1)	13.9	(11.2–16.9)	59,000
Pacific	13.4	(10.0–17.5)	14.7	(9.9–20.7)	12.4	(8.7–17.0)	28,000
Asian	8.5	(6.4–11.0)	8.3	(5.5–11.9)	8.6	(5.6–12.5)	32,000
European/Other	13.5	(12.6–14.5)	12.8	(11.4–14.2)	14.2	(12.9–15.6)	376,000
Least deprived areas (q1)	14.5	(12.5–16.7)	15.4	(12.7–18.5)	13.5	(10.2–17.4)	106,000
Most deprived areas (q5)	11.3	(9.6–13.3)	9.6	(7.4–12.2)	12.8	(10.3–15.5)	75,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.92	(0.81–1.04)		Age
Māori	Non-Māori	0.96	(0.81–1.13)		Age, sex
Māori men	Non-Māori men	0.95	(0.72–1.25)		Age
Māori women	Non-Māori women	0.96	(0.79–1.17)		Age
Pacific	Non-Pacific	0.93	(0.74–1.18)		Age, sex
Pacific men	Non-Pacific men	1.08	(0.76–1.52)		Age
Pacific women	Non-Pacific women	0.82	(0.59–1.14)		Age
Asian	Non-Asian	0.58	(0.45–0.76)	*	Age, sex
Asian men	Non-Asian men	0.59	(0.41–0.86)	*	Age
Asian women	Non-Asian women	0.58	(0.40–0.83)	*	Age
Most deprived areas	Least deprived areas	0.81	(0.65–1.03)		Age, sex, ethnic group

7.1 Unmet need for primary health care in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	26.8	(25.6–28.0)	21.2	(19.8–22.7)	32.1	(30.4–33.8)	947,000
15–24 years	23.2	(20.7–25.8)	16.3	(12.9–20.2)	30.5	(26.7–34.5)	149,000
25–34 years	36.1	(33.5–38.8)	27.2	(23.3–31.3)	44.7	(40.9–48.6)	207,000
35–44 years	32.5	(29.9–35.2)	23.7	(20.4–27.2)	40.6	(37.1–44.2)	194,000
45–54 years	29.4	(26.7–32.2)	25.8	(22.1–29.9)	32.8	(29.2–36.5)	182,000
55–64 years	22.9	(20.5–25.5)	18.8	(15.7–22.4)	26.9	(23.4–30.6)	114,000
65–74 years	17.7	(15.1–20.7)	15.1	(11.3–19.6)	20.2	(16.5–24.3)	60,000
75+ years	15.5	(12.7–18.6)	16.2	(11.9–21.2)	15.0	(11.7–18.8)	41,000
Māori	39.0	(36.1–42.0)	30.6	(26.0–35.5)	46.8	(43.0–50.7)	173,000
Pacific	30.6	(25.8–35.7)	23.1	(17.2–30.0)	36.8	(30.6–43.4)	63,000
Asian	22.2	(19.0–25.6)	16.2	(12.1–21.0)	27.6	(22.7–33.0)	83,000
European/Other	26.1	(24.9–27.3)	20.8	(19.3–22.4)	31.1	(29.3–32.9)	725,000
Least deprived areas (q1)	21.8	(18.6–25.3)	17.2	(13.7–21.2)	26.7	(22.1–31.7)	159,000
Most deprived areas (q5)	33.6	(30.6–36.6)	26.2	(22.7–30.0)	39.7	(35.7–43.9)	224,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.66	(0.61–0.71)	*	Age
Māori	Non-Māori	1.48	(1.37–1.60)	*	Age, sex
Māori men	Non-Māori men	1.50	(1.29–1.75)	*	Age
Māori women	Non-Māori women	1.47	(1.34–1.60)	*	Age
Pacific	Non-Pacific	1.08	(0.94–1.23)		Age, sex
Pacific men	Non-Pacific men	1.11	(0.86–1.43)		Age
Pacific women	Non-Pacific women	1.06	(0.91–1.24)		Age
Asian	Non-Asian	0.73	(0.63–0.86)	*	Age, sex
Asian men	Non-Asian men	0.71	(0.54–0.94)	*	Age
Asian women	Non-Asian women	0.75	(0.62–0.90)	*	Age
Most deprived areas	Least deprived areas	1.44	(1.26–1.66)	*	Age, sex, ethnic group

7.2 Unable to get an appointment at usual medical centre within 24 hours in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)			Estimated number
	Total	Men	Women	
Total	15.5 (14.5–16.6)	12.7 (11.4–13.9)	18.1 (16.7–19.5)	507,000
15–24 years	12.6 (10.5–14.9)	8.1 (5.6–11.4)	16.8 (13.5–20.5)	70,000
25–34 years	19.4 (17.2–21.8)	14.2 (11.3–17.5)	23.8 (20.6–27.2)	97,000
35–44 years	19.0 (16.6–21.5)	14.6 (11.6–18.1)	22.7 (19.5–26.2)	104,000
45–54 years	18.2 (15.8–20.7)	17.5 (13.9–21.7)	18.7 (15.3–22.6)	107,000
55–64 years	14.4 (12.4–16.7)	11.6 (9.1–14.4)	17.2 (14.2–20.5)	70,000
65–74 years	10.8 (8.5–13.3)	10.4 (7.4–14.2)	11.1 (8.2–14.5)	35,000
75+ years	9.1 (7.1–11.4)	9.4 (6.3–13.3)	8.8 (6.4–11.8)	23,000
Māori	20.1 (17.7–22.7)	15.6 (12.3–19.4)	24.0 (21.0–27.3)	81,000
Pacific	15.3 (11.9–19.3)	11.6 (7.1–17.5)	18.4 (13.6–24.0)	29,000
Asian	14.5 (11.9–17.4)	11.1 (7.5–15.7)	17.3 (13.2–22.1)	47,000
European/Other	15.2 (14.2–16.3)	12.7 (11.4–14.0)	17.5 (16.0–19.0)	395,000
Least deprived areas (q1)	14.3 (12.0–16.9)	12.8 (9.8–16.3)	15.8 (12.7–19.4)	98,000
Most deprived areas (q5)	17.1 (14.8–19.6)	12.2 (10.1–14.6)	21.1 (17.6–25.0)	105,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.70 (0.62–0.79)	*	Age
Māori	Non-Māori	1.29 (1.14–1.46)	*	Age, sex
Māori men	Non-Māori men	1.26 (0.99–1.61)		Age
Māori women	Non-Māori women	1.31 (1.14–1.50)	*	Age
Pacific	Non-Pacific	0.95 (0.76–1.18)		Age, sex
Pacific men	Non-Pacific men	0.96 (0.63–1.45)		Age
Pacific women	Non-Pacific women	0.94 (0.73–1.21)		Age
Asian	Non-Asian	0.86 (0.70–1.05)		Age, sex
Asian men	Non-Asian men	0.85 (0.59–1.22)		Age
Asian women	Non-Asian women	0.86 (0.68–1.11)		Age
Most deprived areas	Least deprived areas	1.25 (1.02–1.53)	*	Age, sex, ethnic group

7.3 Unmet need for GP services due to cost in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	13.8	(13.0–14.6)	9.9	(8.9–10.9)	17.5	(16.3–18.7)	487,000
15–24 years	13.7	(11.6–15.9)	9.0	(6.8–11.7)	18.6	(15.2–22.4)	88,000
25–34 years	23.0	(20.6–25.5)	17.0	(13.9–20.5)	28.8	(25.0–32.8)	132,000
35–44 years	18.3	(16.4–20.4)	12.0	(9.7–14.8)	24.1	(21.3–27.0)	109,000
45–54 years	13.4	(11.7–15.2)	10.3	(7.8–13.3)	16.3	(13.9–18.9)	83,000
55–64 years	8.6	(7.1–10.2)	5.6	(3.9–7.7)	11.4	(9.3–13.9)	43,000
65–74 years	6.5	(4.8–8.4)	5.0	(2.8–8.1)	7.8	(5.4–10.9)	22,000
75+ years	4.2	(3.0–5.7)	4.9	(2.7–8.0)	3.7	(2.2–5.8)	11,000
Māori	22.8	(20.6–25.1)	15.7	(12.9–18.9)	29.3	(25.9–32.9)	101,000
Pacific	17.1	(13.2–21.6)	14.9	(9.7–21.4)	19.0	(14.6–24.1)	35,000
Asian	10.5	(8.0–13.6)	8.5	(5.2–13.0)	12.4	(9.0–16.6)	39,000
European/Other	13.2	(12.3–14.0)	9.2	(8.2–10.4)	16.9	(15.6–18.3)	366,000
Least deprived areas (q1)	9.4	(7.4–11.7)	5.6	(3.9–7.9)	13.4	(10.3–17.0)	69,000
Most deprived areas (q5)	19.2	(17.3–21.3)	13.7	(11.6–16.0)	23.9	(20.9–27.1)	128,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.56	(0.49–0.63)	*	Age
Māori	Non-Māori	1.61	(1.44–1.81)	*	Age, sex
Māori men	Non-Māori men	1.55	(1.24–1.94)	*	Age
Māori women	Non-Māori women	1.65	(1.45–1.87)	*	Age
Pacific	Non-Pacific	1.08	(0.88–1.32)		Age, sex
Pacific men	Non-Pacific men	1.42	(1.01–2.02)	*	Age
Pacific women	Non-Pacific women	0.93	(0.73–1.18)		Age
Asian	Non-Asian	0.62	(0.49–0.79)	*	Age, sex
Asian men	Non-Asian men	0.74	(0.49–1.11)		Age
Asian women	Non-Asian women	0.57	(0.42–0.77)	*	Age
Most deprived areas	Least deprived areas	1.83	(1.47–2.27)	*	Age, sex, ethnic group

7.4 Unmet need for after-hours services due to cost in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	7.1	(6.4–7.9)	4.8	(4.1–5.6)	9.3	(8.2–10.5)	252,000
15–24 years	6.2	(4.5–8.2)	4.6	(2.8–7.2)	7.8	(5.5–10.8)	40,000
25–34 years	12.1	(10.4–14.0)	8.1	(6.1–10.5)	16.0	(13.1–19.1)	69,000
35–44 years	9.3	(7.8–10.9)	5.6	(4.1–7.4)	12.6	(10.2–15.3)	55,000
45–54 years	8.1	(6.5–10.0)	5.9	(4.1–8.1)	10.2	(7.9–12.9)	50,000
55–64 years	4.4	(3.4–5.7)	1.8	(0.7–3.5)	7.0	(5.2–9.2)	22,000
65–74 years	3.4	(2.2–4.9)	3.0	(1.5–5.4)	3.7	(2.3–5.7)	11,000
75+ years	1.4	(0.8–2.3)	1.9	(0.8–3.6)	1.0	(0.4–2.3)	4,000
Māori	14.3	(12.0–16.8)	10.7	(7.5–14.7)	17.6	(14.5–21.0)	63,000
Pacific	10.4	(7.8–13.4)	6.9	(4.3–10.5)	13.2	(9.7–17.6)	21,000
Asian	6.3	(4.3–8.8)	3.9	(1.9–6.9)	8.4	(5.4–12.4)	23,000
European/Other	6.2	(5.5–6.9)	4.2	(3.4–5.0)	8.2	(7.1–9.3)	173,000
Least deprived areas (q1)	4.2	(3.0–5.5)	2.5	(1.5–3.9)	5.9	(3.9–8.5)	30,000
Most deprived areas (q5)	11.4	(9.5–13.4)	8.7	(6.5–11.5)	13.6	(11.0–16.6)	76,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.51	(0.43–0.61)	*	Age
Māori	Non-Māori	2.09	(1.78–2.45)	*	Age, sex
Māori men	Non-Māori men	2.41	(1.76–3.31)	*	Age
Māori women	Non-Māori women	1.94	(1.63–2.32)	*	Age
Pacific	Non-Pacific	1.29	(1.00–1.67)	*	Age, sex
Pacific men	Non-Pacific men	1.33	(0.84–2.10)		Age
Pacific women	Non-Pacific women	1.28	(0.94–1.73)		Age
Asian	Non-Asian	0.72	(0.52–1.00)	*	Age, sex
Asian men	Non-Asian men	0.68	(0.37–1.27)		Age
Asian women	Non-Asian women	0.74	(0.51–1.08)		Age
Most deprived areas	Least deprived areas	2.40	(1.73–3.34)	*	Age, sex, ethnic group

7.5 Unfilled prescription due to cost in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	7.6	(6.7–8.5)	6.0	(4.9–7.2)	9.0	(8.1–10.0)	267,000
15–24 years	8.9	(7.2–11.0)	6.2	(4.2–8.6)	11.9	(9.2–15.1)	58,000
25–34 years	10.7	(8.6–13.0)	9.2	(6.2–13.0)	12.1	(9.6–15.0)	61,000
35–44 years	8.7	(7.3–10.1)	7.2	(5.4–9.4)	10.0	(8.1–12.1)	52,000
45–54 years	7.2	(5.7–8.9)	5.2	(3.5–7.4)	9.0	(7.1–11.3)	44,000
55–64 years	6.0	(4.9–7.4)	4.7	(3.4–6.4)	7.3	(5.6–9.3)	30,000
65–74 years	4.1	(2.8–5.9)	3.7	(1.9–6.3)	4.6	(2.8–7.0)	14,000
75+ years	3.0	(1.8–4.6)	2.9	(1.2–5.7)	3.1	(1.6–5.2)	8,000
Māori	18.3	(15.6–21.1)	15.4	(11.3–20.1)	21.0	(18.0–24.2)	81,000
Pacific	13.3	(10.3–16.9)	10.3	(6.2–15.7)	15.9	(11.8–20.7)	27,000
Asian	5.3	(3.7–7.2)	4.7	(2.6–7.9)	5.7	(3.6–8.6)	20,000
European/Other	6.1	(5.3–7.0)	4.8	(3.7–6.1)	7.3	(6.3–8.4)	170,000
Least deprived areas (q1)	3.9	(2.5–5.9)	3.1	(1.4–5.9)	4.8	(3.2–7.0)	29,000
Most deprived areas (q5)	14.2	(12.4–16.3)	10.5	(7.9–13.5)	17.4	(15.3–19.6)	95,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)		Significant (*)	Adjustment variables
Men	Women	0.65	(0.56–0.77)	*	Age
Māori	Non-Māori	2.77	(2.37–3.24)	*	Age, sex
Māori men	Non-Māori men	3.05	(2.30–4.04)	*	Age
Māori women	Non-Māori women	2.61	(2.18–3.12)	*	Age
Pacific	Non-Pacific	1.62	(1.30–2.03)	*	Age, sex
Pacific men	Non-Pacific men	1.65	(1.08–2.50)	*	Age
Pacific women	Non-Pacific women	1.61	(1.25–2.07)	*	Age
Asian	Non-Asian	0.59	(0.42–0.83)	*	Age, sex
Asian men	Non-Asian men	0.69	(0.40–1.18)		Age
Asian women	Non-Asian women	0.54	(0.35–0.82)	*	Age
Most deprived areas	Least deprived areas	3.21	(2.34–4.42)	*	Age, sex, ethnic group

8.1 Had any teeth removed due to decay, abscess, infection or gum disease in the past 12 months, adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)						Estimated number
	Total		Men		Women		
Total	7.6	(7.0–8.3)	8.1	(7.2–9.2)	7.2	(6.4–8.0)	270,000
15–17 years	1.9	(0.5–5.0)	1.7	(0.1–7.7)	2.1	(0.3–7.2)	4,000
18–24 years	6.1	(4.3–8.3)	5.8	(3.4–9.1)	6.4	(3.9–9.8)	27,000
25–34 years	7.4	(5.9–9.1)	7.4	(5.4–9.9)	7.4	(5.6–9.6)	42,000
35–44 years	9.6	(8.0–11.3)	10.0	(7.4–13.0)	9.2	(7.5–11.1)	57,000
45–54 years	8.6	(7.1–10.3)	9.5	(7.4–12.0)	7.7	(5.9–10.0)	53,000
55–64 years	9.1	(7.5–11.0)	10.0	(7.5–13.0)	8.3	(6.3–10.7)	46,000
65–74 years	7.2	(5.3–9.5)	8.7	(5.9–12.3)	5.7	(3.5–8.8)	24,000
75+ years	6.0	(4.6–7.8)	7.1	(4.5–10.5)	5.3	(3.4–7.7)	16,000
Māori	11.6	(10.0–13.4)	12.3	(9.5–15.6)	10.9	(9.2–12.9)	52,000
Pacific	10.7	(8.5–13.3)	10.3	(6.7–14.9)	11.0	(8.2–14.4)	22,000
Asian	6.5	(4.5–9.0)	6.5	(4.0–10.0)	6.4	(3.9–10.0)	24,000
European/Other	7.2	(6.5–7.9)	7.9	(6.8–9.1)	6.5	(5.7–7.4)	200,000
Least deprived areas (q1)	6.0	(4.7–7.6)	7.1	(5.1–9.6)	4.8	(3.3–6.8)	44,000
Most deprived areas (q5)	9.9	(8.4–11.6)	10.7	(8.3–13.4)	9.2	(7.6–11.0)	66,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	1.14 (0.97–1.33)		Age
Māori	Non-Māori	1.70 (1.43–2.02)	*	Age, sex
Māori men	Non-Māori men	1.74 (1.33–2.27)	*	Age
Māori women	Non-Māori women	1.67 (1.36–2.06)	*	Age
Pacific	Non-Pacific	1.57 (1.21–2.04)	*	Age, sex
Pacific men	Non-Pacific men	1.45 (0.98–2.14)		Age
Pacific women	Non-Pacific women	1.68 (1.19–2.39)	*	Age
Asian	Non-Asian	0.84 (0.61–1.16)		Age, sex
Asian men	Non-Asian men	0.83 (0.51–1.33)		Age
Asian women	Non-Asian women	0.86 (0.56–1.33)		Age
Most deprived areas	Least deprived areas	1.63 (1.20–2.23)	*	Age, sex, ethnic group

8.2 Visited a dental health care worker in the past 12 months, dentate adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)			Estimated number
	Total	Men	Women	
Total	48.7 (47.3–50.0)	46.7 (44.9–48.5)	50.6 (48.9–52.2)	1,584,000
15–17 years	77.5 (72.4–82.0)	78.3 (70.3–85.0)	76.6 (68.9–83.2)	149,000
18–24 years	42.9 (38.3–47.6)	43.4 (37.0–49.9)	42.4 (36.5–48.5)	194,000
25–34 years	36.9 (34.2–39.8)	34.7 (31.1–38.3)	39.1 (35.2–43.2)	211,000
35–44 years	41.8 (39.0–44.7)	39.1 (34.4–43.8)	44.4 (41.1–47.7)	249,000
45–54 years	51.2 (48.2–54.3)	48.0 (43.9–52.0)	54.4 (50.0–58.7)	303,000
55–64 years	56.4 (52.8–60.0)	54.1 (48.9–59.3)	58.7 (54.0–63.2)	246,000
65–74 years	56.8 (52.8–60.8)	54.6 (49.3–59.8)	59.1 (52.6–65.4)	149,000
75+ years	54.3 (48.6–59.9)	50.5 (43.4–57.6)	57.5 (50.3–64.5)	85,000
Māori	37.9 (35.1–40.8)	35.2 (30.8–39.8)	40.6 (36.9–44.3)	156,000
Pacific	32.6 (28.1–37.3)	33.7 (25.8–42.3)	31.7 (26.4–37.3)	66,000
Asian	36.8 (32.9–40.8)	30.6 (26.0–35.5)	42.5 (36.5–48.6)	135,000
European/Other	52.9 (51.4–54.5)	51.2 (49.0–53.3)	54.7 (53.0–56.3)	1,343,000
Least deprived areas (q1)	59.1 (56.0–62.0)	56.7 (52.4–61.0)	61.5 (57.1–65.7)	411,000
Most deprived areas (q5)	37.0 (34.2–39.9)	35.5 (31.7–39.5)	38.3 (34.9–41.8)	219,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	0.92 (0.87–0.97)	*	Age
Māori	Non-Māori	0.78 (0.73–0.85)	*	Age, sex
Māori men	Non-Māori men	0.75 (0.66–0.86)	*	Age
Māori women	Non-Māori women	0.81 (0.74–0.89)	*	Age
Pacific	Non-Pacific	0.66 (0.58–0.76)	*	Age, sex
Pacific men	Non-Pacific men	0.70 (0.57–0.86)	*	Age
Pacific women	Non-Pacific women	0.63 (0.54–0.75)	*	Age
Asian	Non-Asian	0.76 (0.68–0.85)	*	Age, sex
Asian men	Non-Asian men	0.65 (0.54–0.77)	*	Age
Asian women	Non-Asian women	0.86 (0.76–0.98)	*	Age
Most deprived areas	Least deprived areas	0.65 (0.59–0.72)	*	Age, sex, ethnic group

8.3 Usually only visits a dental health care worker for dental problems (or never visits), dentate adults aged 15 years and over, 2011/12

Population group	Prevalence (%, 95% CI)			Estimated number
	Total	Men	Women	
Total	54.6 (53.0–56.3)	55.7 (53.6–57.8)	53.6 (51.6–55.5)	1,778,000
15–17 years	17.9 (13.5–23.1)	16.8 (11.4–23.4)	19.1 (12.8–27.0)	34,000
18–24 years	61.7 (57.1–66.1)	55.6 (49.4–61.6)	68.2 (62.1–73.8)	278,000
25–34 years	67.5 (64.3–70.7)	69.1 (64.2–73.8)	66.0 (61.4–70.3)	386,000
35–44 years	60.6 (57.8–63.4)	63.7 (59.3–67.9)	57.8 (54.4–61.2)	360,000
45–54 years	52.5 (49.3–55.6)	54.5 (50.0–59.0)	50.5 (46.3–54.7)	311,000
55–64 years	47.2 (43.2–51.1)	49.9 (45.1–54.7)	44.4 (39.0–49.9)	206,000
65–74 years	48.4 (43.7–53.1)	52.1 (46.1–57.9)	44.7 (38.9–50.6)	127,000
75+ years	48.3 (42.7–53.9)	54.3 (46.8–61.7)	43.1 (36.2–50.3)	75,000
Māori	73.3 (70.4–76.0)	73.4 (68.6–77.8)	73.2 (69.7–76.6)	301,000
Pacific	78.4 (74.3–82.0)	75.7 (67.7–82.5)	80.6 (74.7–85.6)	158,000
Asian	66.2 (61.3–70.9)	68.7 (63.4–73.7)	64.0 (56.7–70.9)	244,000
European/Other	49.0 (47.0–51.0)	50.7 (48.2–53.2)	47.4 (45.0–49.7)	1,244,000
Least deprived areas (q1)	36.8 (33.3–40.4)	39.7 (34.9–44.6)	33.8 (28.9–38.9)	256,000
Most deprived areas (q5)	74.7 (72.2–77.1)	74.8 (71.5–77.9)	74.7 (70.7–78.4)	442,000

Group of interest	Reference group	Adjusted rate ratio (95% CI)	Significant (*)	Adjustment variables
Men	Women	1.04 (1.00–1.09)		Age
Māori	Non-Māori	1.39 (1.33–1.45)	*	Age, sex
Māori men	Non-Māori men	1.37 (1.28–1.47)	*	Age
Māori women	Non-Māori women	1.41 (1.33–1.50)	*	Age
Pacific	Non-Pacific	1.48 (1.40–1.56)	*	Age, sex
Pacific men	Non-Pacific men	1.42 (1.30–1.54)	*	Age
Pacific women	Non-Pacific women	1.53 (1.43–1.64)	*	Age
Asian	Non-Asian	1.22 (1.14–1.30)	*	Age, sex
Asian men	Non-Asian men	1.26 (1.15–1.38)	*	Age
Asian women	Non-Asian women	1.18 (1.08–1.30)	*	Age
Most deprived areas	Least deprived areas	2.01 (1.84–2.20)	*	Age, sex, ethnic group