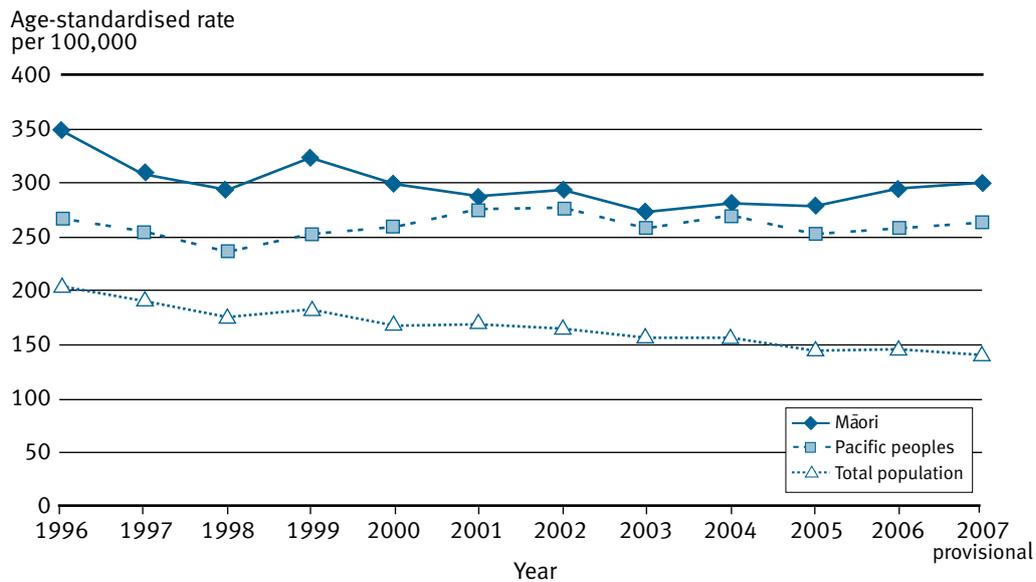


Figure 25: Cardiovascular disease mortality, all ages, age-standardised rate per 100,000, by ethnicity, 1996 to 2006



Source: Analytical Services, Ministry of Health, 2010

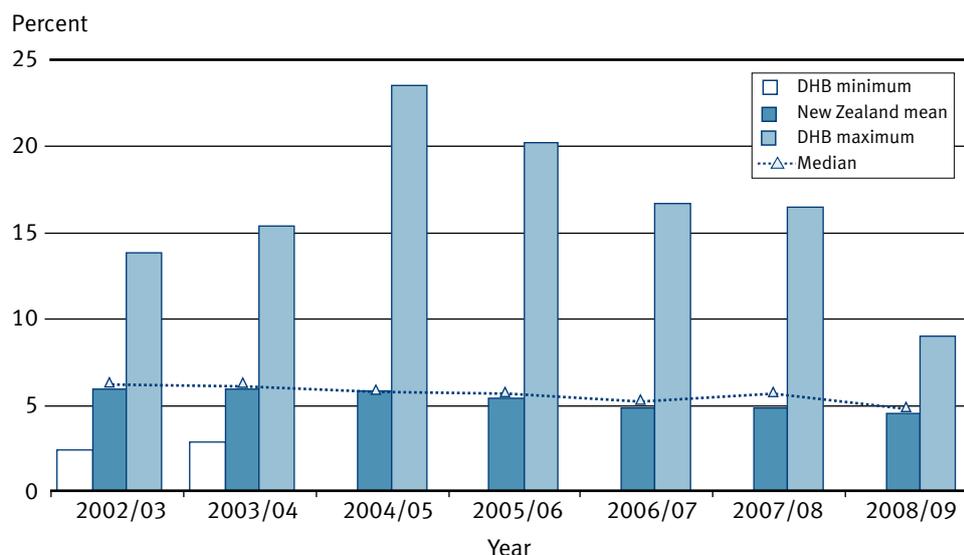
Note: Rates per 100,000 are age standardised to the WHO standard population.

Rate of new admissions to acute inpatient mental health services

The early detection of serious mental illness minimises the potential impact of illness and improves a person’s likelihood of having the opportunity to fully participate in society and the everyday life of their community and family/whānau. If a person’s first contact with mental health services coincides with needing an inpatient admission (termed ‘first-to-acute admission’), it may suggest that early signs of severe mental illness were not detected. With this in mind, this indicator is a measure of the effectiveness and responsiveness of community-based services.

Figure 26 shows the rate of first-to-acute admissions has been decreasing, particularly from the maximum in 2004/05. This suggests that mental health services are becoming more responsive and consistent.

Figure 26: First-to-acute admissions as a percentage of all acute admissions, 2002/03 to 2008/09



Source: Population Health Directorate, Ministry of Health, 2010

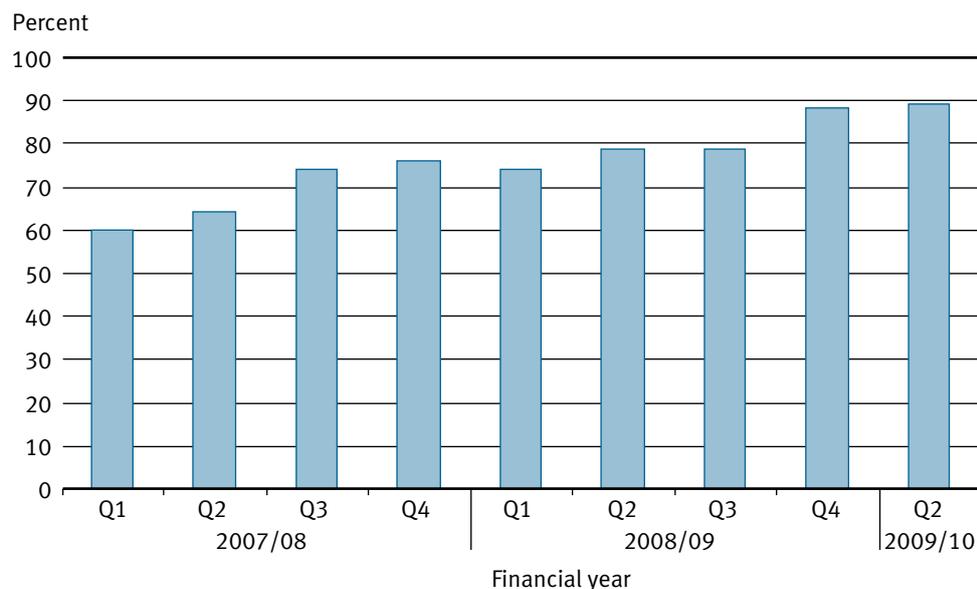
Notes: DHB minimum is the lowest individual DHB figure; DHB maximum is the highest individual DHB figure; NZ mean is the national mean. The DHB minimum for 2004/05–2008/09 is 0.0 percent. The definition has changed from ‘seen for the first time in acute/inpatient services (not seen at all in the national system)’ to ‘seen in acute/inpatient services for the first time (not seen by mental health services in the year prior to acute admission)’.

Mental health relapse prevention planning

Relapse prevention plans identify long-term mental health service users’ early relapse warning signs, along with what the person can do for themselves and what the service will do to support the person. Developing and updating a plan indicates effective service provision. Ideally, each plan will be developed collaboratively by clinicians, clients and family members.

Figure 27 shows the results of DHBs’ reporting against this indicator since the start of 2007/08. Nationally, the percentage of adult long-term service users with up-to-date relapse prevention plans increased from 60 percent at the start of 2007/08 to 89 percent at the end of 2009 (quarter 2 in 2009/10). Adult long-term service users are defined as people aged 20–64 years who have been seen by specialist mental health services in each quarter during the preceding two years. As at the end of 2009, there were approximately 10,260 adult long-term service users.

Figure 27: Percentage of adult long-term mental health service users with an up-to-date relapse prevention plan, 2007/08 to 2009/10



Source: Population Health Directorate, Ministry of Health, 2010

Note: From 1 July 2009 DHBs were only required to report six monthly on this indicator rather than quarterly; therefore, there is no data for Q1 2009/10. All data is provisional.

Obesity

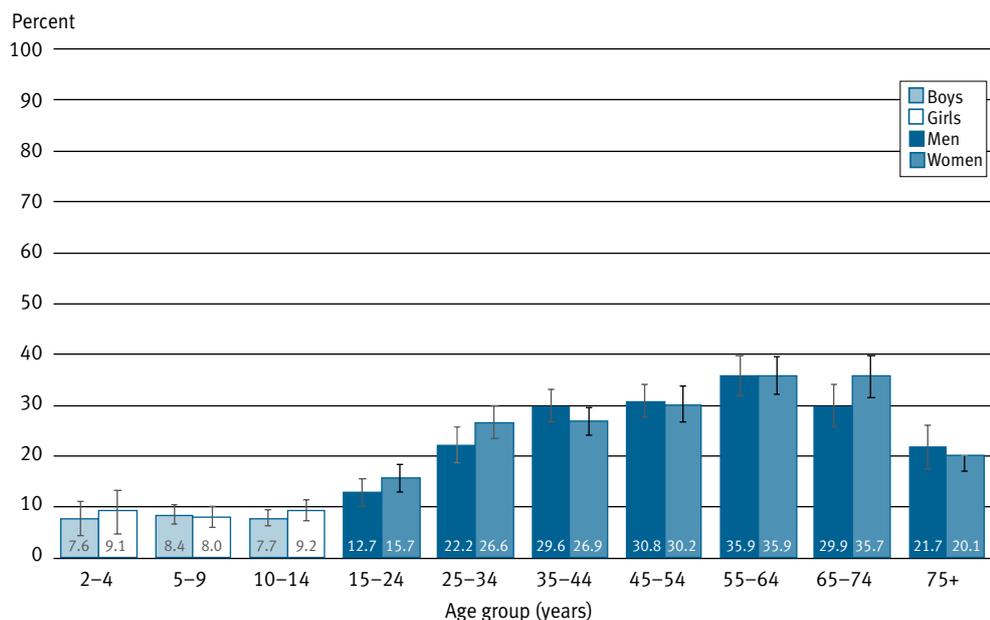
The World Health Organization (WHO) describes the prevalence of obesity as an epidemic. New Zealand, like many other countries, is facing the complex issue of high rates of obesity in children, young people and adults. Obesity has severe health effects (eg, cardiovascular disease, some cancers and type 2 diabetes), as well as social and economic effects.

Body mass index¹² (BMI) is a commonly used indicator of population-level obesity. International BMI cut-off points are used to classify people as underweight, overweight or obese. This report focuses on the proportion of the population who are obese; that is, who have a BMI of 30.00 or over (or the age-appropriate equivalent cut-off point for those aged under 18 years), as measured in the 2006/07 New Zealand Health Survey.

Obesity is not evenly distributed throughout the population: it is related to age, ethnicity and socioeconomic position. The prevalence of obesity in adults increases with age until 55–64 years in men and 65–74 years in women (Figure 28).

¹² Body mass index (BMI) is a measure of weight, adjusted for height, and is calculated by dividing weight in kilograms by height in metres squared (kg/m²).

Figure 28: Proportion of children and adults who are obese, by age group and gender (unadjusted prevalence), 2006/07



Source: 2006/07 New Zealand Health Survey

Children and adults who live in the most deprived neighbourhoods (NZDep2006¹³ quintile 5) are significantly more likely to be obese.

Adjusted for age, Pacific children and Pacific adults were at least 2.5 times more likely to be obese than children and adults in the total population in 2006/07. Māori children were 1.4 times, and Māori adults 1.7 times, more likely to be obese than children and adults in the total population.

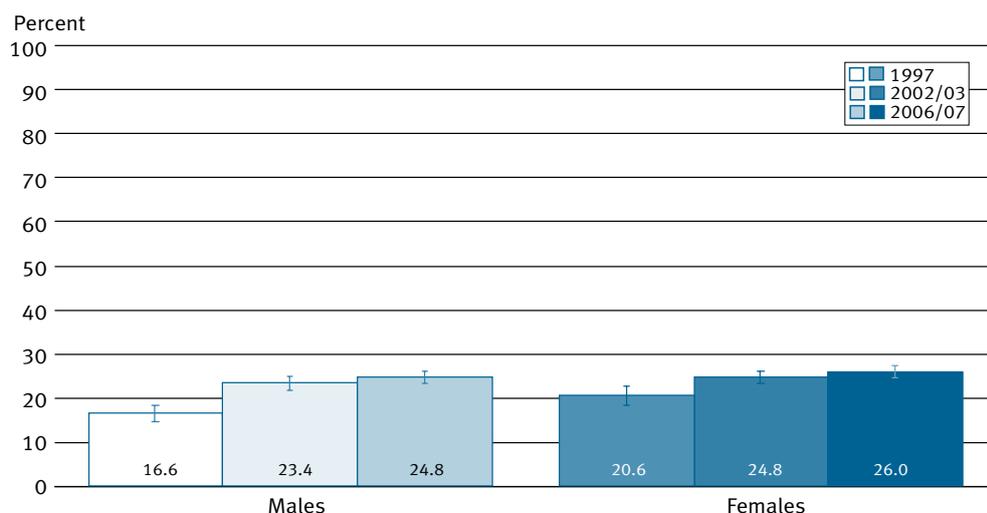
Trends in childhood obesity over time show that obesity remained stable from 2002 to 2006/07, at around 9 percent of 5- to 14-year-olds. There was no significant change for Māori children (13 percent) and Pacific children (26 percent) over this period. In 2006/07, one in five children (20.1 percent) were categorised as being overweight, a very similar proportion to that recorded in 2002 (19.8 percent).¹⁴

In contrast, the prevalence of obesity in adults increased in both men and women (Figure 29). However, the increase appears to be slowing, with no statistically significant increase between 2002/03 and 2006/07 for either men or women.

13 The New Zealand Deprivation Index (NZDep) is a small-area census-based measure of social and material deprivation, derived by principal components analysis of 10 socioeconomic variables included in the New Zealand Census.

14 The 2002 figures come from Ministry of Health 2003.

Figure 29: Proportion of adults who are obese, by gender, 1997, 2002/03 and 2006/07 (age-standardised prevalence)

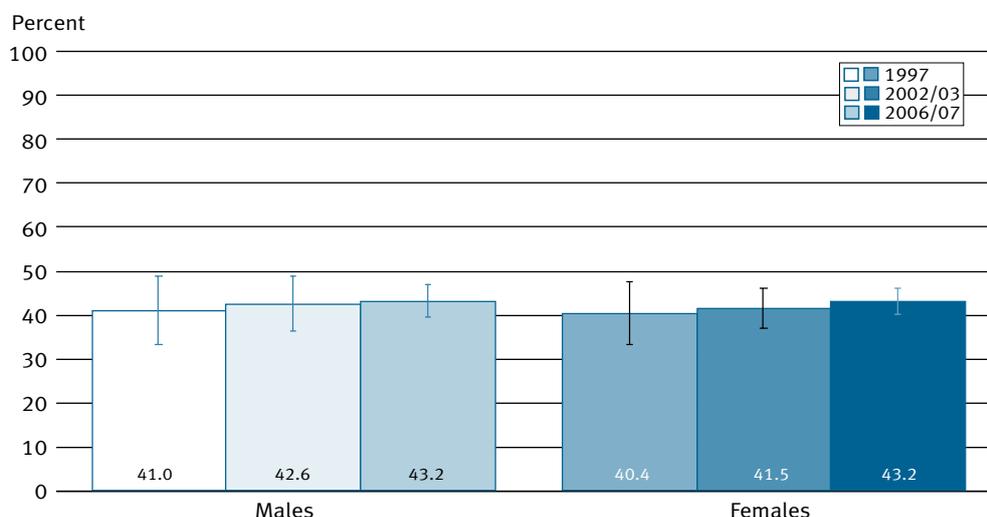


Source: 2002/03 and 2006/07 New Zealand Health Surveys; 1997 National Nutrition Survey

Note: Data from previous years has been re-analysed to allow for comparability.

There was no significant change in the prevalence of obesity for Māori men or women from 1997 to 2006/07 (Figure 30).

Figure 30: Proportion of Māori adults who are obese, by gender, 1997, 2002/03, 2006/07 (age-standardised prevalence)

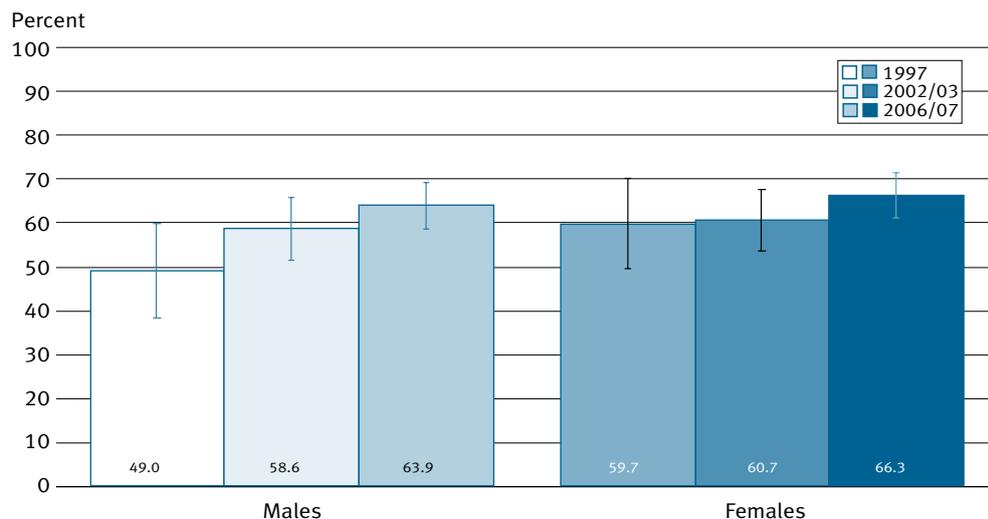


Source: 2002/03 and 2006/07 New Zealand Health Surveys; 1997 National Nutrition Survey

Note: Data from previous years has been re-analysed to allow for comparability.

For Pacific men, there was a significant increase in the prevalence of obesity from 1997 to 2006/07, while for Pacific women there was no significant change (Figure 31).

Figure 31: Proportion of Pacific adults who are obese, by gender, 1997, 2002/03, 2006/07 (age-standardised prevalence)



Source: 2002/03 and 2006/07 New Zealand Health Surveys; 1997 National Nutrition Survey

Note: Data from previous years has been re-analysed to allow for comparability.

Smoking prevalence and tobacco consumption

Smoking-related mortality is the single greatest cause of preventable premature death in New Zealand. Each year around 4500 to 5000 people in New Zealand die from smoking (including deaths due to second-hand-smoke exposure). Smoking is the main cause of lung cancer and chronic obstructive pulmonary disease (COPD) and is a major contributor to CVD and stroke.

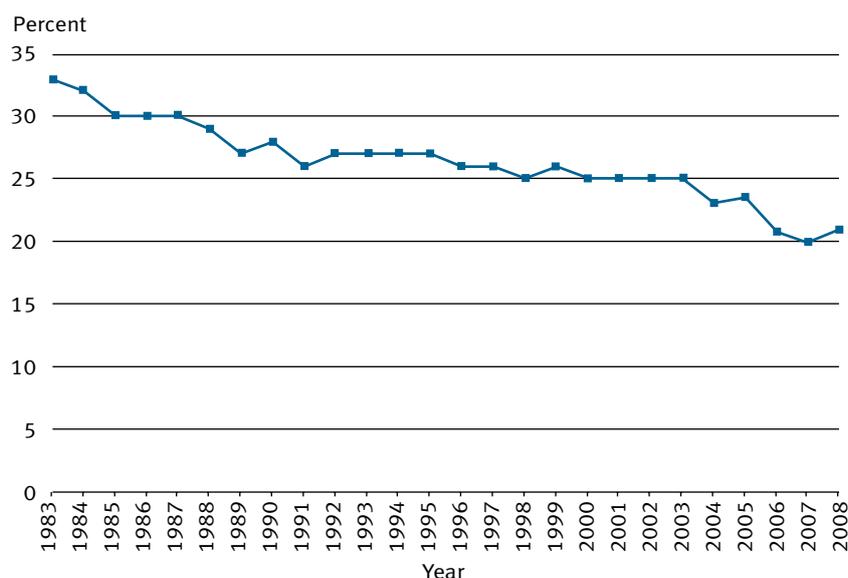
The most recent (2008) estimate for current adult smoking prevalence is 21 percent, a continuation of a downward trend evident since 1983 (see Figure 32).¹⁵

Smoking is a major contributor to health inequalities. In 2008 Māori were more than twice as likely to be smokers (45.4 percent), and Pacific peoples almost 1.5 times as likely (31.4 percent) to be smokers, than the European/Other population (21.3 percent). Males living in the most deprived areas (39.4 percent) were more than 2.5 times more likely to be smokers than males living in the least deprived areas (15.3 percent). Females in the most deprived areas (37.0 percent) were more than 2.8 times more likely to be smokers than females living in the least deprived areas (12.9 percent).

On a positive note, in 2008 half of youth aged 15 to 19 years had never tried smoking. This was significantly higher than in 2006 (39 percent).

¹⁵ A current adult smoker (daily plus non-daily) is defined as someone aged 15 or more years who has smoked more than 100 cigarettes (or equivalent) in their lifetime and currently smokes at least once a month. All data for this section comes from Ministry of Health 2009.

Figure 32: Current smoking among those aged 15 years and over, 1983 to 2008 (unadjusted prevalence)



Source: Ministry of Health data, 2009

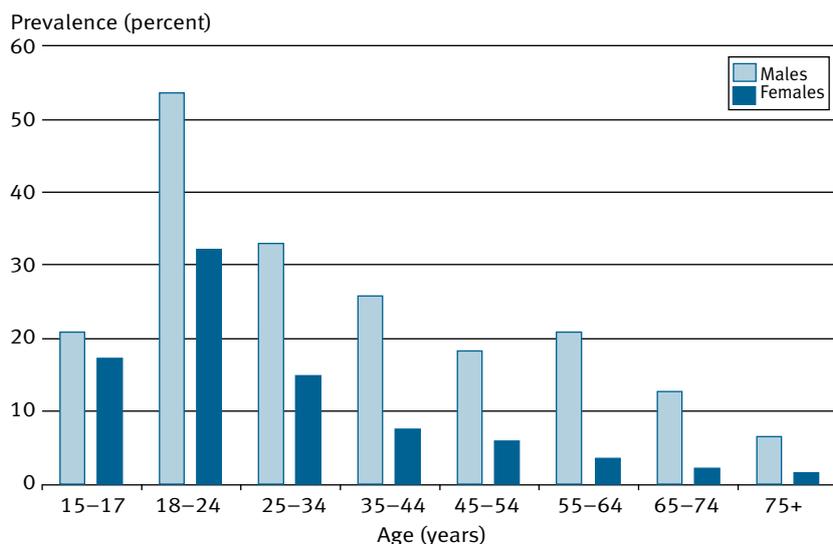
Hazardous alcohol consumption

Hazardous alcohol consumption is associated with elevated risks of intentional and unintentional injury. It is also associated with damage to the central nervous system, the gastrointestinal system, the cardiovascular system and foetal development, and with increased incidence of several cancers. Hazardous drinking refers to an established pattern of drinking that carries a high risk of future damage to physical or mental health. It is defined by a score of 8 or more on the Alcohol Use Disorders Identification Test (AUDIT) developed by the World Health Organization.

The 2006/07 New Zealand Health Survey found that 21 percent of adults who reported having consumed alcohol in the past 12 months had a hazardous drinking pattern. Men in all age groups had a higher prevalence of hazardous drinking than women, with twice the prevalence overall (see Figure 33).

The highest prevalence of potentially hazardous drinking patterns was among those aged 18–24 years, with 54 percent of males and 32 percent of females in this age group meeting the criteria for potentially hazardous drinking (see Figure 33).

Figure 33: Hazardous drinking among adults, by age group and gender (unadjusted prevalence), 2006/07

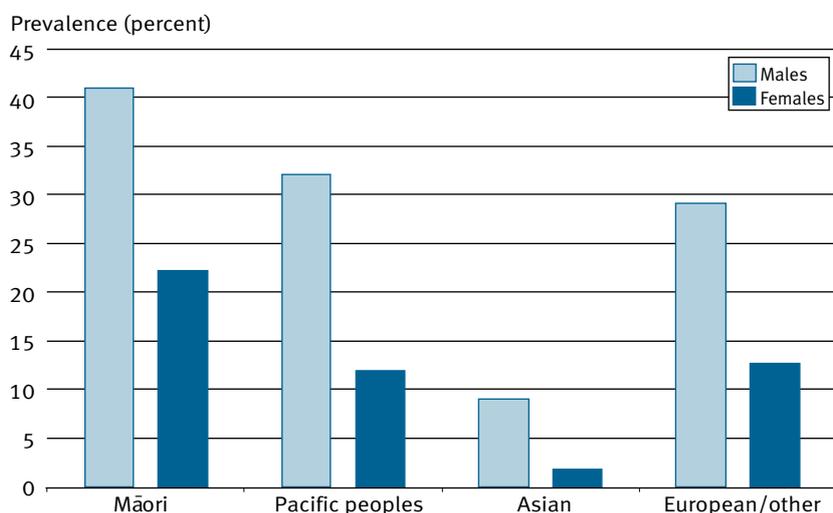


Source: Ministry of Health data, 2008

Adjusting for age, the prevalence of potentially hazardous drinking patterns was highest for Māori and lowest for Asian peoples, for both genders (see Figure 34).

Over the period 1996/97 to 2006/07 there was no change in the prevalence of hazardous drinking in the total adult population. However, the age-standardised prevalence rate of hazardous drinking for Māori men increased from 35 percent in 2002/03 to 41 percent in 2006/07.

Figure 34: Hazardous drinking, by gender and ethnicity (age-standardised prevalence), 2006/07



Source: Ministry of Health data, 2008

Equity and Access

Equity and access: Fair access to health services in relation to people's needs, irrespective of income, physical location, ethnicity, age or sex

Timely and equitable access to health care is critical to achieving positive health outcomes. The Government's commitment to improving equity and access is reflected in the selection of three of the indicators for this outcome as Health Targets for 2009/10.

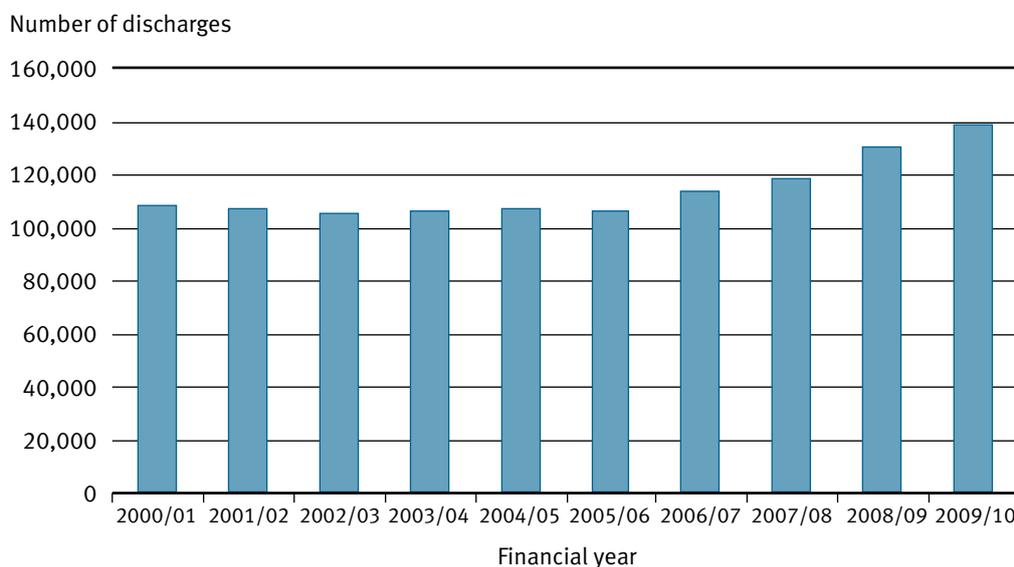
Health Target: Improved access to elective surgery

From 2000/01 to 2007/08 the number of publicly funded elective surgical discharges rose by an average of 1432 discharges per annum. However, this growth did not keep pace with population growth over the same period.

The elective services Health Target seeks to ensure that patients are managed in accordance with the principles of clarity, timeliness and fairness. This includes a requirement that DHBs demonstrate effective management of clinical prioritisation so that patients with the greatest clinical need and ability to benefit are seen first.

The volume of elective surgical discharges increased substantially in 2009/10, following significant growth (10 percent) in 2008/09. Figure 35 shows that 138,376 discharges were made in 2009/10, an increase of 8607 (6.6 percent) on 2008/09. Figure 36 shows that DHBs exceeded the national target by 5 percent in 2009/10.

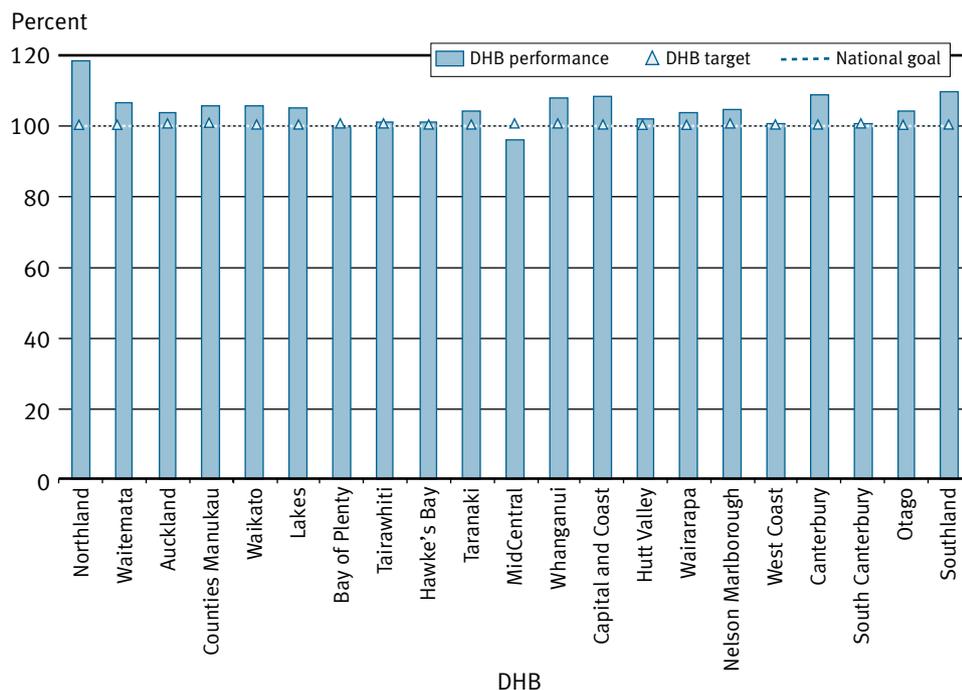
Figure 35: Number of elective surgical discharges, 2000/01 to 2009/10



Source: Data was extracted from the National Minimum Data Set, Ministry of Health, 2010

Notes: This is a dynamic data set and is subject to change as data is updated by DHBs. Updates occur as records are completed or revised.

Figure 36: DHB performance against improved access to elective services Health Target, 2009/10



Source: Ministry of Health data, 2010

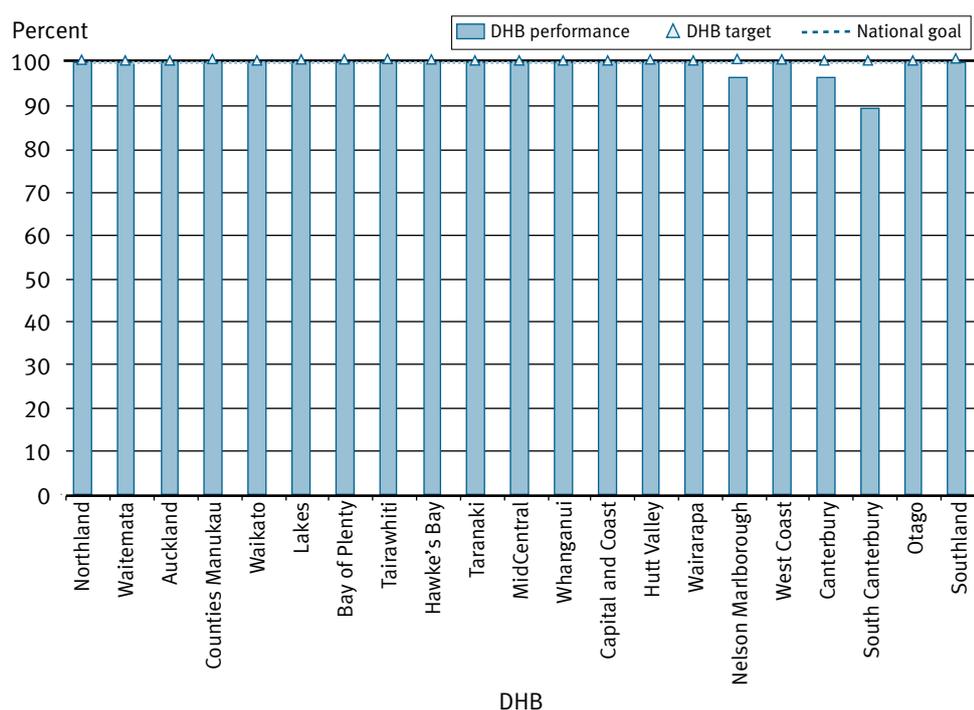
Health Target: Shorter waits for cancer treatment

Specialist cancer treatment is essential to reducing the impact of cancer by improving remission rates, tumour control and symptoms. Radiation oncology treatment waiting times are a Health Target because this was identified as a service area where waiting times are an issue for patients. Radiotherapy is of proven effectiveness in reducing the impact of a range of cancers, and delays in access to radiotherapy are likely to lead to poorer treatment outcomes.

A maximum waiting time of six weeks was the Health Target for 2009/10, reducing to four weeks by December 2010. Radiation treatment is provided in six public and one private cancer centre throughout New Zealand (a second private cancer centre will be providing cancer treatment in 2010).

Nationally, across the six public cancer centres, 99 percent of all patients received radiation treatment within six weeks in the fourth quarter (see Figure 37).

Figure 37: Percentage of people needing radiation treatment seen within six weeks, by DHB, 2009/10



Source: Ministry of Health data, 2010

Health Target: Increased immunisation

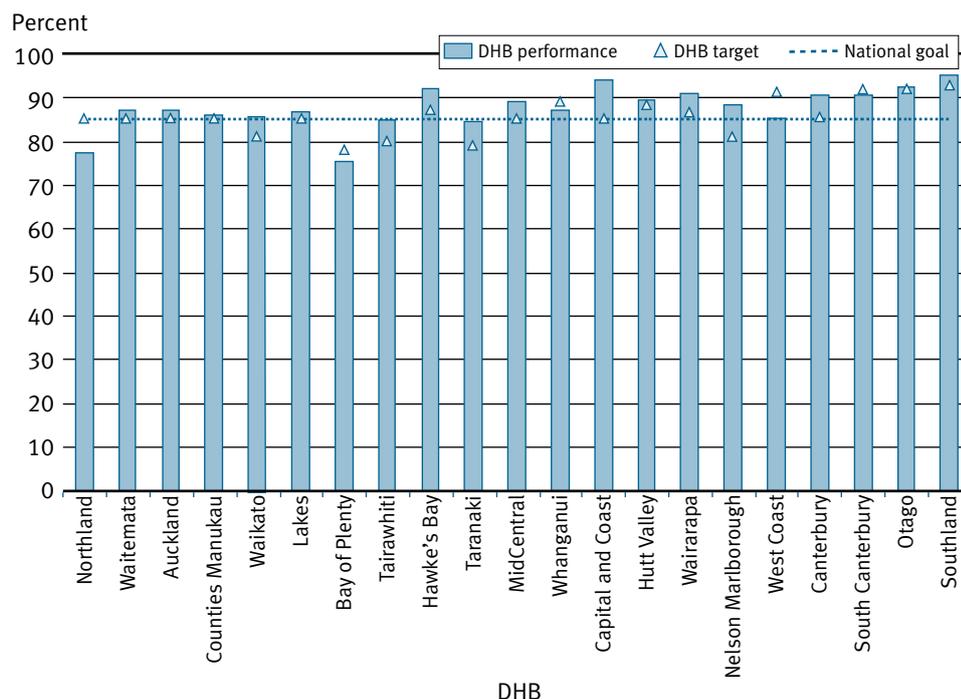
Immunisation can prevent a number of diseases and is therefore a very cost-effective health intervention. Immunisation provides not only individual protection for some diseases, but also population-wide protection by reducing the incidence of diseases and preventing them spreading to vulnerable people. Some of these population-wide benefits only arise with high immunisation rates, depending on the infectiousness of the disease and the effectiveness of the vaccine.

The Ministry of Health's long-term goal, adopted from the World Health Organization standard, is to have 95 percent of 24-month-old children fully immunised. The Health Target for 2009/10 is to have 85 percent of 24-month-old children fully immunised by July 2010, 90 percent by July 2011, and 95 percent by July 2012.

The results for this Health Target are very encouraging. The national target of 85 percent for 2009/10 was exceeded in quarter 4, with a further 2 percent improvement to 87 percent nationally.

A number of DHBs have been consistently achieving above their target for this year (see Figure 38), and some DHBs have achieved next year's target of 90 percent coverage for children under two years of age.

Figure 38: Immunisation coverage at the 24-month milestone age, by DHB, 2009/10



Source: National Immunisation Register, Datamart reports, 2010

Primary health care utilisation

‘High-need’ groups are defined as people living in a deprived area, or people of Māori or Pacific ethnicity.¹⁶ These groups are defined as high-need because analyses of morbidity and mortality statistics show that they experience higher levels of illness (morbidity) and die younger than the rest of the population.

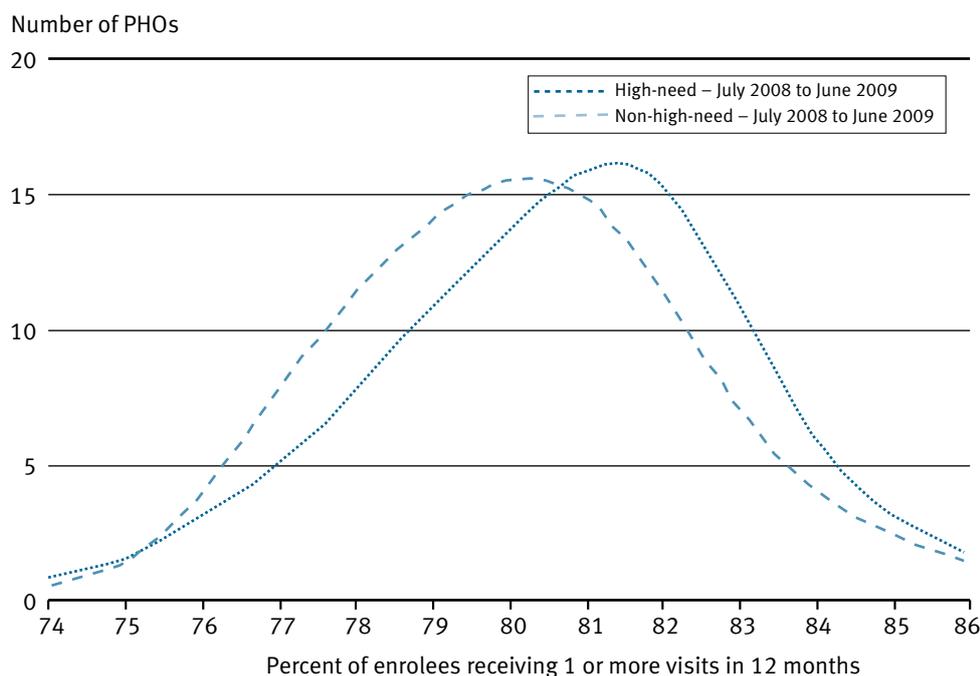
Given this higher level of need, higher utilisation of primary health care (as measured by GP visits) by these groups is important for reducing inequalities and is an important indicator of equity and access. The under-utilisation of primary health care by this population is an indicator of unmet health needs.

Figure 39 shows the distribution of primary health organisations (PHOs) (based on the percentage of the PHO enrolment register) having one or more GP visits for high-need enrolees and non-high-need enrolees for the 2008/09 year. The expectation is that PHOs will provide a level of contact/service for high-need patients that is higher than for non-high-need enrolees. That is, the distribution for high-need enrolees should sit to the right of the distribution for non-high-need enrolees.

Figure 39 shows that, as at 30 June 2009, more PHOs were serving non-high-need enrolees at the same or higher level than high-need enrolees. Less than one-third (25 out of 81) of PHOs were serving their high-need enrolees at the same or higher level than non-high-need enrolees.

16 A ‘deprived’ area is one in which the New Zealand Deprivation Index score is 9 or 10.

Figure 39: Distribution of PHOs, by age-standardised percentage of enrolees contacting their GP in 12-months, for high-need and non-high-need enrolees, July 2008 to 30 June 2009



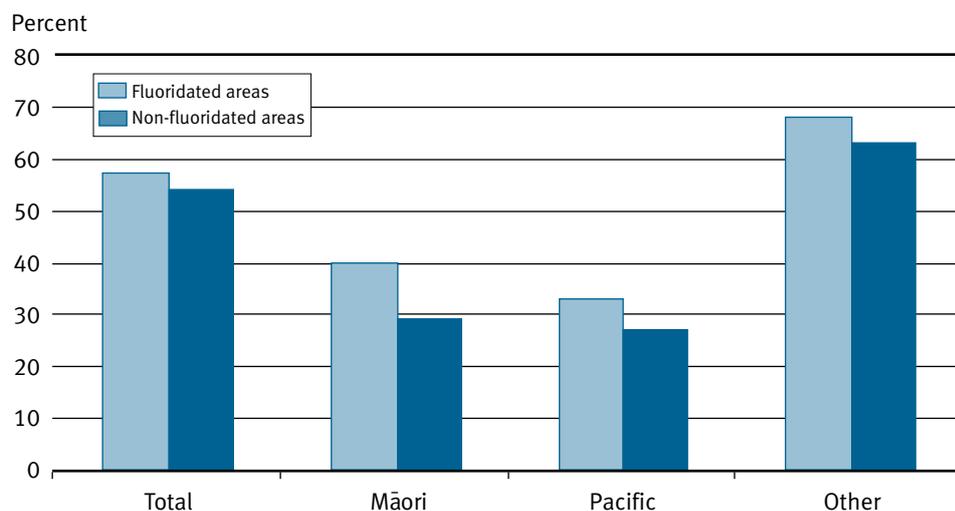
Source: PHO enrolment datamart, 2010

Oral health

Research indicates that tooth decay at age five is predictive of higher disease rates at older ages. Rates of decay and inequalities in those rates reduce during the primary school years but reappear when adolescents leave the school-based service.

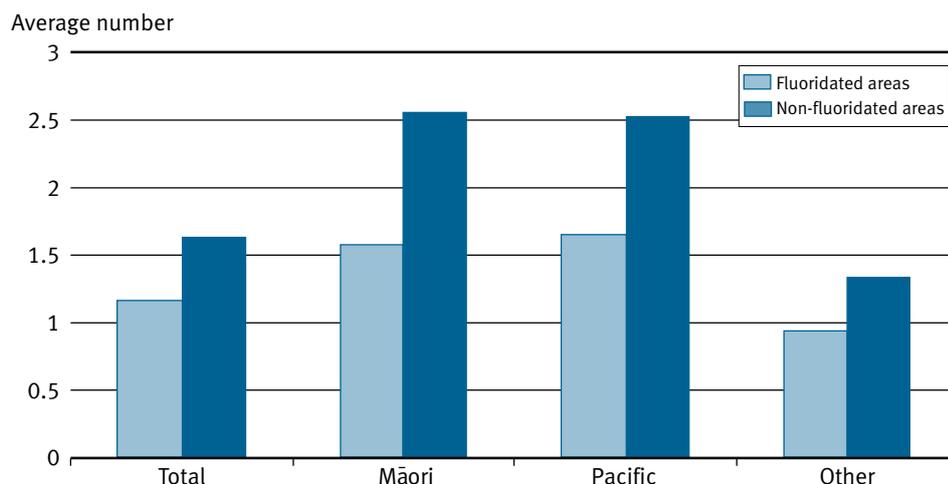
There are clear inequalities in child oral health outcomes: Māori and Pacific children, and those living in non-fluoridated areas experience a higher prevalence and severity of oral health disease at both school entry (at age five) and at school exit (Year 8) (see Figures 40 and 41).

Figure 40: Percentage of children caries free at age five, by ethnicity and fluoridation status, 2009



Source: DHB community oral health service for children and adolescents data, 2010

Figure 41: Average number of decayed, missing or filled teeth at Year 8, by ethnicity and fluoridation status, 2009



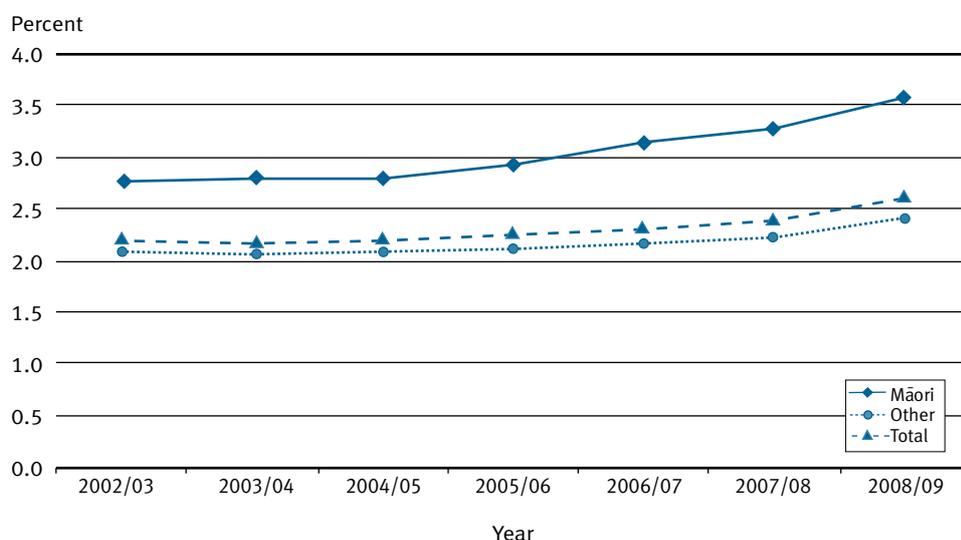
Source: DHB community oral health service for children and adolescents data, 2010

Access to specialist mental health and addiction services

Access to specialist mental health and addiction services indicates how the public health system is responding to the needs of people who are severely affected by a mental health and/or addiction problem. The decade from 2000 to 2010 saw significant investment in the development of the continuum of specialist mental health and addiction services, which was part of the longer-term trend towards providing more and better services in the community.

Figure 42 shows that access to specialist mental health services has increased since 2002/03. Epidemiological studies have shown that serious mental health and addiction problems are more prevalent in the Māori population than in the non-Māori population (Oakley Browne et al 2006), and Figure 42 shows that a higher proportion of the Māori population access specialist mental health services than the non-Māori population. Increases in access to specialist services have also occurred at a faster rate for Māori than for the non-Māori population, particularly since 2004/05.

Figure 42: Percentage of population accessing specialist/secondary mental health services, by ethnicity, 2002/03 to 2008/09



Source: Population Health Directorate, Ministry of Health, 2010

Note: Data is provisional.

Efficiency and Value for Money

Efficiency and value for money: Effective care is delivered with the most cost-effective use of resources

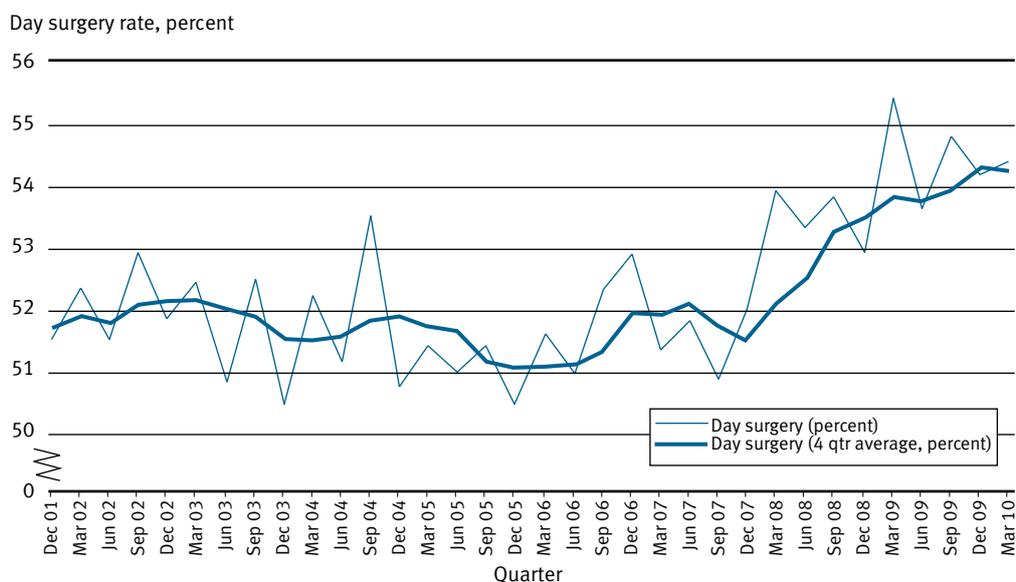
In order to obtain maximum value from the money invested in the health system, and to ensure the health system is able to function within the available funding, it is crucial that ongoing improvements in productivity and efficiency are maintained or accelerated. Key indicators of health system efficiency and effectiveness are day-case procedures, productivity and costs of public hospital services, including labour inputs.

Day-case procedures

When surgical procedures can be undertaken on a day-case basis (ie, the patient is admitted and discharged on the same day), the hospital visit results in less disruption for the patient and fewer resources are used. The average case complexity is an obvious influence on the extent to which different specialities can implement day surgery.

Although the rate of day-case procedures performed fluctuates quarterly, the four-quarter average shows an increasing trend. This indicates hospitals are improving the efficiency of patient management. The four-quarter average to 31 March 2010 was 54.2 percent (measuring day-case procedures as a proportion of all electives, as opposed to all surgeries). This indicates that more than half of the procedures performed allow the patient to be admitted and discharged on the same day (see Figure 43).

Figure 43: Percentage of day-case procedures, all DHBs, quarterly, December 2001 to March 2010



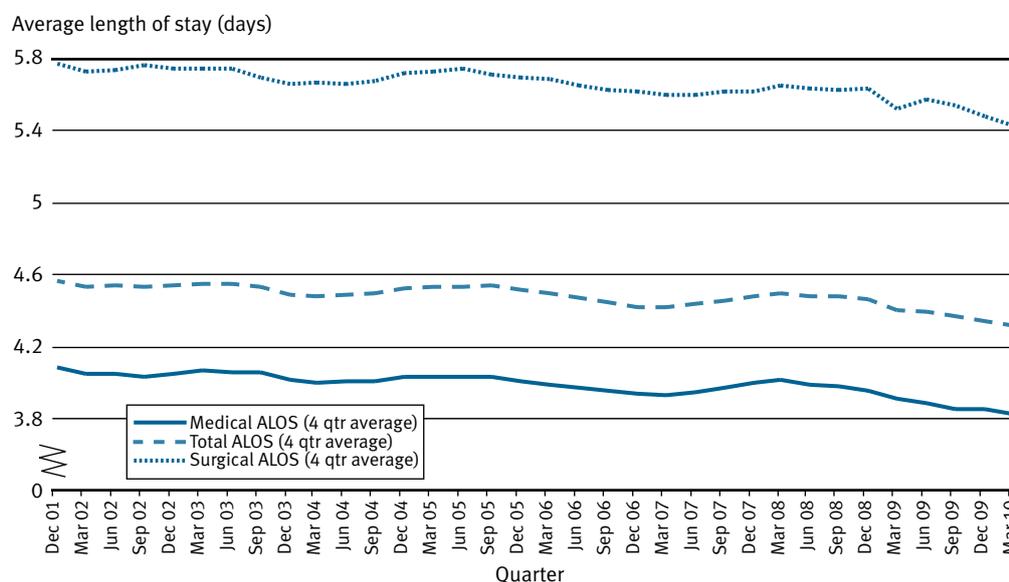
Source: Hospital benchmark information, 2010

Average length of stay

The length of time people spend in hospital for medical and surgical treatment has declined (see Figure 44). The average length of stay (ALOS) within the secondary health care sector continues to show a downward trend. Between December 2001 and March 2010, total ALOS decreased from 4.56 days to 4.31 days, medical ALOS from 4.09 days to 3.83 days, and surgical ALOS from 5.77 days to 5.43 days.

Reasons why people are spending less time in hospital include advances in medical technology (such as new and less-invasive surgical techniques), more effective drugs, improved community and follow-up care, as well as more effective hospital administration. The challenge for hospital staff is to ensure that a drive to reduce the length of stay – with efficiency gains for the provider and potential benefits to patient wellbeing – does not result in unnecessary readmissions (see Hospital readmissions, page 127).

Figure 44: Average number of days spent in hospital by inpatients, December 2001 to March 2010



Source: Hospital benchmark information, 2010

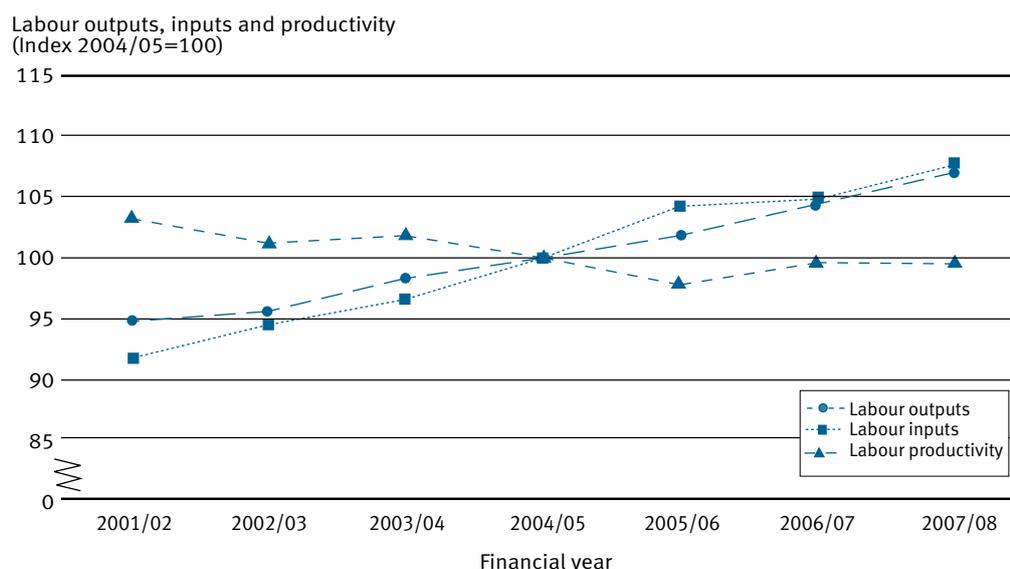
Productivity and costs of public hospital services

Productivity is a key indicator of whether value for money is being achieved for the resources allocated to the health system. Productivity should be viewed within the context of other measures of the quality, effectiveness and efficiency of the health system.

Figure 45 shows the overall change in medical and surgical outputs per full-time equivalent medical and nurse employee (ie, labour productivity) from 2001/02 to 2007/08 (indexed to 2004/05 as the base year). An output is measured as a case-weighted discharge equivalent (outpatients, emergency department and inpatients combined).

There was a 5.3 percent decline in labour productivity from 2001/02 to 2005/06, or an average annual decline of 1.4 percent. Labour productivity then increased by 1.9 percent between 2005/06 and 2006/07, after which it remained flat between 2006/07 and 2007/08, reflecting the fact that the rate of growth of outputs (2.6 percent) was equal to that of labour inputs between these two years (also 2.6 percent).

Figure 45: Doctor and nurse productivity in DHB provider arms (medical and surgical), 2001/02 to 2007/08

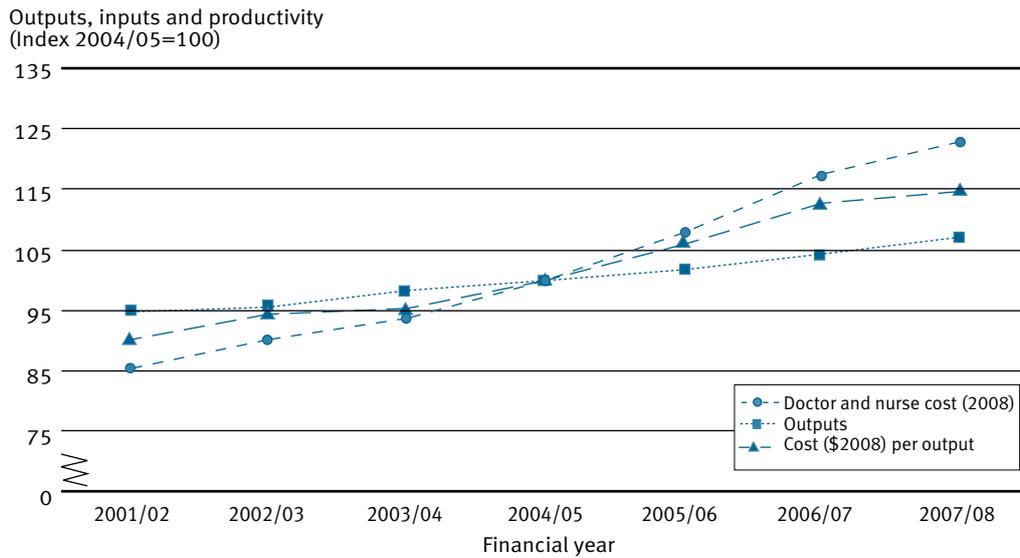


Source: Ministry of Health data, 2009

Notes: Labour inputs are full-time equivalent medical and nursing employees. Labour outputs are medical and surgical case-weighted discharge equivalents (outpatients, emergency department and inpatient combined). Labour productivity is calculated as outputs divided by inputs.

Figure 46 shows that costs per output (a measure of efficiency) increased steadily during the 2001/02–2007/08 period. Medical and nursing costs per output increased 50 percent, or 7.0 percent per annum on a nominal basis, over this period. When adjusted for the Consumer Price Index, medical and nursing costs per output increased 27.3 percent in real 2007/08 dollars during this period, or 4.1 percent per year on average. During this period there were significant wage settlements for senior doctors, resident medical officers and nurses employed by DHBs. These cost increases partly reflect the fact that New Zealand competes in an international market for doctors and nurses.

Figure 46: Doctor and nurse efficiency and costs (2008 dollars) in DHB provider arms (medical and surgical), 2001/02 to 2007/08



Source: Ministry of Health data, 2009

Notes: Labour costs are medical and nursing personnel direct costs for salaried staff, and they include outsourced staffing costs. Labour outputs are medical and nursing case-weighted discharge equivalents (outpatients, emergency department, and inpatient combined), and efficiency is calculated as costs divided by outputs.

Patient Centredness and Responsiveness

Patient centredness and responsiveness: The health system is client oriented and respectful of dignity, confidentiality, participation in choices, promptness and quality of amenities

A patient-centred and responsive health system is increasingly regarded as crucial for the delivery of high-quality care.

Patient engagement

The Commonwealth Fund conducts annual surveys of selected developed countries. The most recent survey in 2009 was of primary care doctors. Results show the New Zealand health system has some good-quality systems in place for reviewing patients' experiences of primary health care services (see Table 4).

When asked about comparative information systems, the survey showed that doctors in the United Kingdom are most likely to routinely receive and review data on patient clinical outcomes (89 percent), followed by New Zealand (68 percent) and the Netherlands (65 percent). Less than half of doctors in other surveyed countries reported using such reviews.

New Zealand practices also compared favourably in terms of receiving and reviewing data on the patient experience and patient satisfaction (65 percent).

Table 4: International comparisons of quality reporting and feedback on patient experience, 2009

Percent	AUS	CAN	FR	GER	NETH	NZ	UK	US
Practice routinely receives and reviews data on patient clinical outcomes	24	17	12	41	65	68	89	43
Practice routinely receives and reviews data on patient satisfaction and experience	52	15	2	24	23	65	96	55

Source: 2009 Commonwealth Fund International Health Policy Survey of Primary Care Physicians

Timely access to medical care

The 2009 Commonwealth Fund survey of primary care doctors found that 45 percent of New Zealand doctors reported that their patients face a long wait to see a specialist, a rate substantially lower than in Canada (75 percent), but not as low as in Australia (34 percent) or the United Kingdom (22 percent) (see Table 5).

The majority of primary care practices in New Zealand (89 percent) have provisions for after-hours care, eliminating the need for patients to seek care in emergency departments. This compares favourably with countries such as Australia (50 percent) and Canada (43 percent).

Table 5: International comparisons of timely patient access to medical care, 2009

Percent	AUS	CAN	FR	GER	NETH	NZ	UK	US
Patients often experience long waiting times to see specialist	34	75	53	66	36	45	22	28
Practice has arrangements for after-hours care	50	43	78	54	97	89	89	29

Source: 2009 Commonwealth Fund International Health Policy Survey of Primary Care Physicians

List of publications

- Baker M, Barnard L, Zhang J, Verral A, Howden-Chapman P. 2010. *Close-contact infectious diseases in New Zealand: Trends in ethnic inequalities in hospitalisations, 1989 to 2008*. Wellington: University of Otago.
- Cormack D. 2010. *Issues in Monitoring Māori Health and Ethnic Disparities: An update*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare.
- Cormack D. 2010. *The politics and practice of counting: ethnicity data in official statistics in Aotearoa/New Zealand*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare. This document is available on the website: www.ethnicity.maori.nz
- Cormack D. 2010. *Ethnicity in Official Statistics in Aotearoa/New Zealand, and Ethnicity and National Identity and New Zealanders. To be published in late 2010*.
- Commission on the Resident Medical Officer Workforce. 2009. *Treating People Well: Report of the Director-General of Health's Commission on the Resident Medical Officer Workforce*. Wellington: Ministry of Health.
- Committee on Strategic Oversight for Nursing Education. 2009. *A Nursing Education and Training Board for New Zealand*. Wellington: Ministry of Health.
- Associate Minister of Health, Minister of Health. 2010. *Actioning Medicines New Zealand 2010*. Wellington: Ministry of Health.
- Mauriora-ki-te-Ao/Living Universe Ltd. 2009. *Te Toi Hauora-Nui Achieving excellence through innovative Māori health service delivery*.
- Ministerial Review Group. 2009. *Meeting the Challenge: Enhancing sustainability and the patient and consumer experience within the current legislative framework for health and disability services in New Zealand*. <http://www.hive.org.nz/content/download-horn-report>
- Ministerial Task Group on Postgraduate Training and Education. 2009. *A review of how the training of the New Zealand health workforce is planned and funded: a proposal for a reconfiguration of the Clinical Training Agency*. Wellington: Ministry of Health.
- Minister for Disability Issues. 2001. *The New Zealand Disability Strategy: Making a world of difference – Whakanui Oranga*. Wellington: Ministry of Health.
- Minister of Health. 2000. *New Zealand Health Strategy*. Wellington: Ministry of Health.
- Ministry of Health. 2003. *NZ Food NZ Children: Key results of the 2002 National Children's Nutrition Survey*. Wellington: Ministry of Health.
- Ministry of Health. 2008. *A Portrait of Health: Key results of the 2006/07 New Zealand Health Survey*. Wellington: Ministry of Health.
- Ministry of Health. 2009. *Foundations of Excellence: Building Infrastructure for Medical Education and Training*. Wellington: Ministry of Health.
- Ministry of Health. 2009. *Māori Provider Work Programme*. Wellington: Ministry of Health.
- Ministry of Health. 2009. *Statement of Intent 2009–2012*. Wellington: Ministry of Health.
- Ministry of Health. 2009. *Tobacco Trends 2008: A brief update of tobacco use in New Zealand*. Wellington: Ministry of Health.
- Ministry of Health. 2010. *Statement of Intent 2010–2013*. Wellington: Ministry of Health.
- Ministry of Health. 2010. *Annual Review of Drinking-water Quality in New Zealand 2008/09*. Wellington: Ministry of Health.
- Ministry of Health. May 2010. *Preventing and Minimising Gambling Harm Three-year service plan 2010/11–2012/13*. Wellington: Ministry of Health.
- Ministry of Health. 2010. *Preventing and Minimising Gambling Harm: Six-year strategic plan 2010/11–2015/16*. Wellington: Ministry of Health.

Ministry of Health. 2010. *'Ala Mo'ui: Pathways to Pacific Health and Wellbeing 2010–2014*. Wellington: Ministry of Health.

Ministry of Health. 2010. *Annual Review of Drinking-Water Quality in New Zealand 2008/9*. Wellington: Ministry of Health.

Ministry of Health. 2010. *Kōrero Mārama: Health Literacy and Māori*. Wellington: Ministry of Health.

Ministry of Health. 2010. *Vote Health: Report in relation to selected Non-departmental Appropriations for the year ended 30 June 2010*. Wellington: Ministry of Health.

McKenna Brian, Katey Thom, Gareth Edwards, Ray Nairn, Anthony O'Brien and Ingrid Leary. 2010. *Reporting of New Zealand Media – Content and case study analysis*. Auckland: Centre for Mental Health Research, The University of Auckland.

National Health IT Board. 2010. *National Health IT Plan: Draft for discussion*. Available on www.ithealthboard.health.nz.

Oakley Browne MA, Wells JE, Scott KM (eds). 2006. *Te Rau Hinengaro: The New Zealand Mental Health Survey*. Wellington: Ministry of Health.

Page A, Tobias M, Glover J, et al. 2006. *Australian and New Zealand Atlas of Avoidable Mortality*. Adelaide: Public Health Information Development Unit (PHIDU), University of Adelaide.

The Quit Group and the Ministry of Health. 2009. *Māori Smoking and Tobacco Use 2009*. Wellington: Ministry of Health.