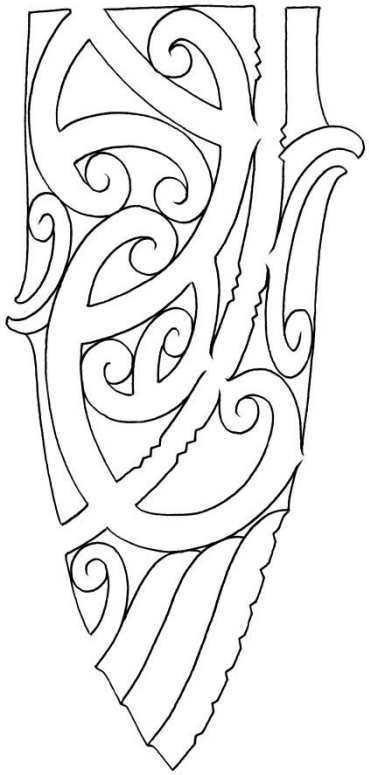
West Coast District Health Board

Māori Health Profile 2015

By Te Rōpū Rangahau Hauora a Eru Pōmare, University of Otago, Wellington
For the Ministry of Health

Te Rei Puta



The cover design represents the journey of data from its production to its use by the health sector. The overall shape of the design is the prized rei puta. This signifies the importance of information and the acknowledgement that knowledge is a taonga.

At the centre of the design interwoven kowhaiwhai represent the complexity of data that underpins the reports. The ngutu kākā represents the verbal mechanisms for passing on knowledge and the mangopare design symbolises strength and the application of knowledge.

The reports focus on the health status of Māori, and in particular where there are inequalities compared to non-Māori. Niho taniwha represents the strength required to meet adversity and persist through to a successful end, the koru symbolises the growth that results from access to information. The retention of knowledge is embodied in the pātaka kai.

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Further information on Te Rōpū Rangahau Hauora a Eru Pōmare can be found here.

TE RŌPŪ RANGAHAU HAUORA A ERU PŌMARE

UNIVERSITY of OTAGO
Te Whare Wānanga o Otāgo
NEW ZEALAND

MANATŪ HAUORA
MINISTRY OF HEALTH

He Mihi

Tūi Tuia i Te Herenga Tangata

Te tangi a Te Rōpū Rangahau Hauora a Eru Pōmare.

Tui Tui Tui Tuia

E ngā maunga whakahii, ngā pū kōrero huri noa

Tēnā koutou, tēnā koutou, tēnā tātou katoa.

Ngā mate huhua e hinga mai nei i runga i o tātou marae maha

Haere atu rā, okioki ai.

Ngā whakaaro, ngā kōrero aroha, ngā tautoko i awhi nei i te kaupapa

Anei te mihi ki ngā kaimahi hauora

Whakapiki te kaha

Whakapiki te ora

Whakapiki te māramatanga

Kia eke tātou katoa ki Te Pae Ora.

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Graham Tipene designed the rei puta and Somar Design developed the document template.

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Ngā mihi nui ki a koutou katoa.

Nā,

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University of Otago Wellington

Tiro whānui
– West Coast at a glance

West Coast population

- In 2013, 3,600 Māori lived in the West Coast District Health Board region, 11% of the District's total population (33,000).
- The West Coast Māori population is youthful, but showing signs of ageing. The median age in 2013 was 24.8 years. In 2013, 19% of the District's children aged 0–14 years were Māori, as were 17% of West Coast's youth aged 15–24 years. The Māori population aged 65 years and over will increase by 80% between 2013 and 2020.

Whānau ora – Healthy families

- Te Kupenga data is presented for four DHBs combined: West Coast, Nelson Marlborough, Cantebury, and South Canterbury. In 2013, most Māori adults (84%) from these four DHBs reported that their whānau was doing well, but 5% felt their whānau was doing badly. A small proportion (8%) found it hard to access whānau support in times of need, but most found it easy (77%).
- The majority (59%) of Māori from the four DHBs thought Māori culture and spirituality was very/quite or somewhat important. Spirituality was important to a similar proportion of Māori (59%).
- Most Māori from these DHBs (89%) had been to a marae at some time. Forty-four percent had been to their ancestral marae, with over half (56%) stating they would like to go more often.
- One in twenty Māori from these four DHBs had taken part in traditional healing or massage in the last 12 months.
- Ten percent of West Coast Māori could have a conversation about a lot of everyday things in te reo Māori in 2013.

Wai ora – Healthy environments

Education

- In 2013, 89% of children starting school had participated in early childhood education.
- In 2013, 44% of West Coast Māori adults aged 18 years and over had at least a Level 2 Certificate, a higher proportion than in 2006 (40%).Fifty-five percent of non-Māori had this level of qualification.

Work

- In 2013, 7% of West Coast Māori adults aged 15 years and over were unemployed, 1.5 times the non-Māori rate (4%).
- Most West Coast Māori adults (90%) do voluntary work.
- In 2013, Māori were more likely than non-Māori to look after someone without pay who was disabled or ill, within or outside of the home.

Income and standard of living

- In 2013, 29% of West Coast children and 27% of adults in Māori households (defined as households with at least one Māori resident) were in households with low equivalised household incomes (under $15,172), compared to 19% of children and 18% of adults in other households.

- In 2013, 9% of Māori adults in West Coast, Nelson Marlborough, Canterbury, and South Canterbury DHBs combined reported putting up with feeling the cold a lot to keep costs down in the previous 12 months, 5% had gone without fresh fruit and vegetables, and 9% had postponed or put off visits to the doctor.
- In 2013, 6% of Māori household residents had no motor vehicle, compared to 3% of residents in other households.
- Residents in Māori households were generally less likely to have access to telecommunications than those living in other households on the West Coast: 24% had no internet, 21% no telephone, 15% no mobile phone, and 3% had no access to any telecommunications in the home.

Housing

- In West Coast, Nelson Marlborough, Canterbury and South Canterbury DHBs combined, the most common housing problems reported to be a big problem by Māori adults in 2013 were finding it hard to keep warm (15%), needing repairs (14%), and damp (9%).
- In 2013, 42% of children in Māori households on the West Coast were living in rented accommodation, two-thirds higher than the proportion of children in other households (25%).
- West Coast residents living in Māori households were more than twice as likely as others to be in crowded homes (i.e. requiring at least one additional bedroom) (10% compared to 4%).

Area deprivation

- Using the NZDep2013 index of small area deprivation, the majority of West Coast Māori (75%) lived in NZDep deciles 5 to 9.Only around 2% lived in the most deprived decile (decile 10) and around 2% in the least deprived decile (Dep 1) areas.

Mauri ora – Healthy individuals

Pepi, tamariki – Infants and children

- On average 92 Māori infants were born per year during 2009 to 2013, 22% of all live births in the DHB. Eight percent of Māori and 5% of non-Māori babies had low birth weight.
- In 2013, 50% of Māori babies on the West Coast were fully breastfed at 6 weeks.
- In 2014, 90% of Māori children were fully immunised at 8 months of age, and 94% at 24 months.
- In 2013, 70% of West Coast Māori children aged 5 years and 46% of non-Māori children had caries. These proportions were similar for Year 8 students (69% of Māori and 50% of non-Māori children). Māori children under 15 years were 43% more likely than non-Māori children to be hospitalised for diseases of the teeth and gums.
- During 2011–2013, on average there were six hospital admissions per year for grommet insertions among Māori children under 15 years, and one admission per year for skin infections.
- On average 48 hospitalisations per year of Māori children were potentially avoidable through population-based health promotion and intersectoral actions, at a rate 24% higher than that of non-Māori children.
- Thirty-eight hospitalisations per year of Māori children were potentially avoidable through preventive or treatment intervention in primary care (ambulatory care sensitive hospitalisations, or ASH), with a rate 36% higher than for non-Māori children.

Rangatahi – Young adults

- There has been a significant decrease in the proportion of West Coast Māori aged 15–24 years who smoke regularly, but Māori smoking rates remain higher than those of non-Māori.
- By September 2014, betwee 40% and 57% of Māori girls aged 14 to 17 yearsy had received all three doses of the human papilloma virus (HPVvaccine. The coverage was lowest among 14 years olds.
- During 2011 to 2013, there was an average of three hospital admissions per year for serious injury from self-harm among Māori youth aged 15–24 years, and two per year among Māori aged 25–44 years.

Pakeke – Adults

- Over half of Māori adults (56%) in West Coast, Nelson Marlborough, Canterbury, and South Canterbury DHBs combined reported having excellent or very good health in 2013, and over a quarter (28%) reported good health. One in six (17%) reported having fair or poor health.
- Smoking rates among West Coast adults are decreasing, but remain higher for Māori (35% in 2013) than for non-Māori (22%).

Circulatory system diseases

- On average, 31 West Coast Māori adults aged 25 years and over were admitted to hospital per year for circulatory system diseases (including heart disease and stroke) during 2011–2013, at a similar rate to non-Māori.
- Nine Māori adults per year on average were admitted for ischaemic heart disease (IHD), of whom seven had acute coronary syndrome (heart attack or unstable angina). Five per year had angiography procedures, two had an angioplasty, and one per year had a coronary artery bypass and graft. There were no significant differences in rates between Māori and non-Māori.
- There were three hospital admissions per year for heart failure, two per year for stroke, and less than one for hypertensive disease among West Coast Māori.
- Māori under 75 years were three-quarters more likely than non-Māori to die from circulatory system diseases during 2002 to 2011.

Diabetes

- In 2013, 4% of West Coast Māori were estimated to have diabetes. Among those aged 25 years and over, 60% were regularly receiving metformin or insulin.

Cancer

- Compared to non-Māori, cancer incidence was 47% higher for Māori females during the ten-year period 2003 to 2011.
- Cancers of the breast, lung, and digestive organs were the most commonly registered among West Coast Māori women. The rate of lung cancer was 2.6 times the rate for non-Māori women.
- Cancers of the digestive organs were the most common cause of cancer death for Māori women.
- Breast screening coverage of women aged 45–69 years during the 24 months to the end of 2014 was 79% for both Māori and non-Māori women.
- Cervical screening coverage of Māori women aged 25–69 years was 62% over 3 years to the end of 2014 and 73% over five years (compared to 76% and 88% of non-Māori women respectively).
- Among West Coast males, overall cancer incidence was similar for Māori and non-Māori. Cancer mortality, on the other hand was twice as high for Māori as for non-Māori males.
- Cancers of the prostate, digestive organs, and lung were the most commonly registered cancers for Māori males.
- Cancers of the digestive organs and of the lung were the most common causes of death from cancer among Māori males.

Respiratory disease

- Māori aged 45 years and over were 75% more likely than non-Māori to be admitted to hospital for chronic obstructive pulmonary disease (COPD) during 2011 to 2013, with an average of 10 Māori admissions per year.
- Asthma hospitalisation rates were higher for Māori than non-Māori among children aged under 15 years and adults aged 35 to 64 years.
- Māori under 75 years had 3.6 times the non-Māori rate of death from respiratory disease during 2002–2011.

Mental disorders

- Māori were 43% more likely than non-Māori to be admitted to hospital for a mental disorder during 2011–2013. Mood disorders were the most common disorders.

Gout

- In 2011 the prevalence of gout among West Coast Māori was estimated to be 5% (and 4% among non-Māori).

- Only 29% of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those who received allopurinol, only a quarter had a lab test for serum urate levels in the following six months.
- In 2011–2013 the rate of hospitalisations for gout was 4.3 times as high for Māori as for non-Māori, indicating a higher rate of flare-ups (although the number of admissions was low, with one Maori admitted per year).

All ages

Hospitalisations

- The all-cause rate of hospital admissions was similar for Māori and non-Māori females, but 10% lower for Māori males than for non-Māori males during 2011–2013.
- The avoidable hospitalisation rate was 18% higher for Māori than for non-Māori. There was an average of 144 potentially avoidable Māori admissions per year.
- The ASH rate was 45% higher for Māori than non-Māori, with 90 Māori admissions per year on average.

Mortality

- During 2012–2014 life expectancy at birth was 80.3 years for Māori females in the West Coast Region (2.5 years lower than for non-Māori females) and 76.2 years for Māori males (2.9 years lower than for non-Māori males). The differences between Māori and non-Māori life expectancy were not statistically significant.
- The all-cause mortality rate for West Coast Māori during 2003–2012 was 63% higher than the non-Māori rate.
- Leading causes of death for Māori females were stroke, COPD, lung cancer, IHD, and accidents. Leading causes of death for Māori males were IHD, accidents, COPD, suicide, and lung cancer.
- Potentially avoidable mortality and mortality from conditions amenable to health care were around 70% higher for Māori than for non-Māori in the West Coast.

Injuries

- There were 61 hospital admissions for injury per year on average among West Coast Māori during 2011 to 2013, at a similar rate to non-Māori.
- The most common causes of injury resulting in hospitalisation were exposure to mechanical forces, falls, complications of medical and surgical care, intentional self-harm, and transport accidents.
- On average, two Māori per year died from injuries during the decade 2002 to 2011.

Contents

List of Tables and Figures

Introduction

The Ministry of Health commissioned Te Rōpū Rangahau Hauora a Eru Pōmare to produce a Māori Health Profile for each District Health Board (DHB) in Aotearoa New Zealand. Each profile report is accompanied by an Excel© data file. The profiles are intended to be used by the health sector for planning purposes. They build on and update the previous Health Needs Assessments produced by Massey University in 2012 which can be viewed here.

The overall aim of the Māori Health Strategy, He Korowai Oranga, is Pae Ora or Healthy Futures. Pae Ora is a holistic concept that includes three interconnected elements; whānau ora, wai ora and mauri ora. Further detail on He Korowai Oranga can be found here. Health indicators contained in the Māori Health Profiles are arranged according to these three elements. Whānau ora, healthy families, includes indicators of whānau wellbeing and support, participation in Māori culture and reo. Wai ora, or healthy environments, encompasses indicators on education, work, income, housing and deprivation. Mauri ora, healthy individuals, includes individual level indicators of health status. Mauri ora indicators are ordered according to life stage from pepi/tamariki to rangatahi then pakeke, and also a section on indicators that affect individuals of all ages.

This document presents data for residents of **Te Poari Hauora a Rohe o Tai Poutini, the West Coast District Health Board.**

Data sources and key methods

The main data sources for this report are: the 2013 Census of Population and Dwellings, Te Kupenga 2013 (the Māori Social Survey), mortality registrations, public hospital discharges, cancer registrations, the national immunisation register, the community oral health service, the Health Quality and Safety Commission's Atlas of Healthcare Variation, Action on Smoking and Health (ASH) Year 10 Snapshot Survey of tobacco smoking among 14 and 15 year olds, and data from the Well Child/Tamariki Ora Quality Improvement Framework indicators.

Most data are presented for Māori and non-Māori residents of West Coast DHB. Accompanying Excel tables also include data for the total West Coast DHB population and the total New Zealand population for reo speakers, socioeconomic indicators, mortality, cancer registrations, and hospital discharges. Due to the relatively small numbers of Māori in West Coast DHB, most mortality rates are presented for the ten-year period 2002 to 2011.

The unequal distribution of the social determinants of health is an important driver of health inequities between Māori and non-Māori. Information from the 2013 Census on living conditions that influence health has been analysed by individual, household, and neighbourhood. A household was classified as Māori if there was at least one Māori resident. The 2013 NZ Deprivation Index was used for classifying neighbourhoods. The index combines eight dimensions of deprivation, including access to telecommunications and internet, income, employment, qualifications, home ownership, support, living space, and access to transport.

Māori models of health encompass cultural vitality and whānau wellbeing. Indicators of these dimensions of health have been included in these Profiles, sourced from Te Kupenga 2013, the Māori Social Survey conducted in 2013 by Statistics New Zealand (SNZ). Further information on Te Kupenga can be found here. Data from Te Kupenga is presented for Māori only.

Hospitalisation, cancer registration, and mortality rates and Census data were age–sex-standardised to the 2001 Māori population[1].

Ninety-five percent confidence intervals (95% CI) were calculated for crude and age-standardised hospitalisation and mortality rates and ratios using the log-transformation method (Clayton and Hills 1993). Confidence intervals for data from Te Kupenga were calculated by Statistics New Zealand. Confidence intervals have not been calculated for data from other sources.

[1] The use of the 2001 Māori population standard makes the age-standardised data in this report comparable to the Ministry of Health's Māori health chartbooks, but not to other Ministry of Health documents which use the World Health Organisation's world population.

For ambulatory care sensitive admissions and admission rates for specific causes, transfers are only included as an admission if the principal diagnosis is not in the same diagnostic group as the initial admission.

Average numbers of events per year have been rounded to the nearest whole number.

Further technical notes and methods are provided in Appendix 2.

Further sources of data

Risk factors common to several chronic conditions such as diabetes, cardiovascular disease, cancer, respiratory disease, or vascular dementia, include smoking, alcohol and drug use, nutrition, body size, and physical activity. Improvements in these indicators require public health and intersectoral action to support healthy environments and living conditions for Māori communities, as well as primary care interventions designed for individuals and whānau. The 2012/13 New Zealand Health Survey provides evidence of inequities between Māori and non-Māori in the prevalence of these risks factors at the national level (Ministry of Health 2013).

Other useful data sources include the Ministry of Health's publications on Māori health, the Health Quality and Safety Commission's Atlas of Healthcare Variation, the DHB reports and Te Ohonga Ake reports of the New Zealand Child and Youth Epidemiology Service, the Trendly health performance monitoring website, and the Māori Health Plan Indicator reports provided to DHBs.

Te Tatauranga o te Iwi – Key demographics

In 2013, approximately 1% (3,600) of the country's total Māori population lived in the West Coast District Health Board. The total population of the DHB (33,000) made up 1% of the national population. In 2015, the Māori population is estimated to be 3,730 and the total population 33,600.[2]

Table 1: Population by age group, West Coast DHB, 2013

	Māori			Non-Māori		Total DHB
Age group (years)	Number	Age distribution	% of DHB	Number	Age distribution	Number
0–14	1,170	33%	19	5,150	18%	6,320
15–24	640	18%	17	3,040	10%	3,680
25–44	830	23%	11	6,770	23%	7,600
45–64	760	21%	8	9,310	32%	10,070
65+	200	6%	4	5,090	17%	5,290
Total	3,600	100%	11	29,400	100%	33,000

Source: Statistics NZ Population projections for the Ministry of Health (2013 Census base) 2014 update

Māori residents constituted 11% of the DHB population in 2013. The Māori population is relatively young, with a median age in 2013 of 24.8 years, compared with 42.6 years for the total DHB population. Māori comprised 19% of the DHB's children aged 0–14 years and 17% of those aged 15–24 years.

Table 2: Population projections, West Coast DHB, 2013 to 2033

	Māori							Total DHB				
Year	Residents	% of DHB	% of NZ Māori	% 0–14 years	% 15–64 years	% 65+ years	Median age	Residents	Median age	% of NZ pop	NZ Māori	Total NZ
2013	3,600	11	1	33	62	6	24.8	33,000	42.6	1	692,300	4,442,100
2018	3,890	11	1	32	61	8	26.0	34,100	43.6	1	734,500	4,726,200
2023	4,160	12	1	32	58	10	27.2	34,400	44.4	1	773,500	4,935,200
2028	4,420	13	1	31	56	14	28.2	34,500	44.9	1	811,700	5,139,700
2033	4,690	14	1	30	55	16	28.8	34,400	45.8	1	850,700	5,327,700

Source: Statistics NZ Population projections for the Ministry of Health (2013 Census base) 2014 update
Note: Detailed population projections are provided in Appendix 1.

The proportion of Māori aged 65 years and over in 2013 was 6% but is projected to increase to 16% in 2033. Between 2013 and 2020 the number of Māori aged 65 and over will increase by 80% from 200 to 360 (see Appendix 1). In 2013, there were 60 Māori aged 75 years and over on the West Coast, with 12 living alone (see accompanying Excel tables).

[2] Population projections are provided in Appendix 1.

Whānau ora
– Healthy families

The refreshed Māori health strategy, He Korowai Oranga (Ministry of Health, 2014) defines whānau ora as Māori families supported to achieve their maximum health and wellbeing. It aims to support families to be self-managing, leading healthy lifestyles, confidently participating in te ao Māori and society. This section reports selected findings from Te Kupenga 2013 on whānau well-being and support and engagement with Māori culture and reo. Te Kupenga was a sample survey of Māori adults aged 15 years and above with insufficient numbers to report results for West Coast alone. Therefore we present data for four DHBs combined: West Coast, Nelson Marlborough, Canterbury, and South Canterbury.

Whānau well-being

Table 3: Whānau well-being reported by Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

	West Coast and other South Island DHBs			New Zealand	
How the whānau is doing	Estimated number	%	(95% CI)	%	(95% CI)
Well / Extremely well	45,000	84.3	(80.6, 88.0)	83.4	(82.5, 84.4)
Neither well nor badly	5,500*	10.7*	(7.1, 14.3)	10.3	(9.4, 11.2)
Badly / Extremely badly	2,500*	5.0*	(3.2, 6.7)	6.3	(5.6, 7.0)

Source: Te Kupenga 2013, Statistics New Zealand customised report.
Note: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

Over 80% of Māori adults from West Coast Nelson Marlborough, Canterbury, and South Canterbury DHBs combined reported that their whānau was doing well or extremely well in 2013. However 5% felt their whānau was doing badly or extremely badly. These were similar to the national findings of Te Kupenga.

Table 4: Whānau composition reported by Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

	West Coast and other South Island DHBs			New Zealand	
Whānau description	Estimated number	%	(95% CI)	%	(95% CI)
Size of whānau					
10 or less	29,000	54.0	(48.9, 59.1)	53.7	(52.1, 55.3)
11 to 20	13,500	25.2	(20.7, 29.7)	22.6	(21.3, 24.0)
More than 20	11,000	20.8	(16.7, 24.9)	23.6	(22.4, 24.8)
Groups included in whānau					
Parents, partner, children, brothers & sisters	52,000	95.9	(94.0, 97.7)	94.6	(94.0, 95.2)
Aunts & uncles, cousins, nephews & nieces, other in-laws	19,000	35.5	(30.7, 40.3)	41.3	(39.8, 42.8)
Grandparents, grandchildren	23,500	43.4	(38.4, 48.3)	41.9	(40.5, 43.4)
Friends, others	9,500	17.8	(14.3, 21.3	12.4	(11.5, 13.3)

Source: Te Kupenga 2013, Statistics New Zealand customised report.

Table 4 shows the size and composition of whānau, with a fifth reporting whānau sizes of more than 20 people. Eighteen percent included friends in their description of whānau.

Whānau support

Table 5: Access to whānau support, Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

	West Coast and other South Island DHBs			New Zealand	
How easy is it to get help	Estimated number	%	(95% CI)	%	(95% CI)
Support in times of need					
Easy, very easy	42,000	77.3	(73.4, 81.2)	81.2	(80.1, 82.4)
Sometimes easy, sometimes hard	8,000	14.4	(11.1, 17.7)	12.7	(11.7, 13.6)
Hard / very hard	4,500*	8.3*	(5.6, 11.0)	6.1	(5.4, 6.8)
Help with Māori cultural practices such as going to a tangi, speaking at a hui, or blessing a taonga					
Easy, very easy	32,500	60.5	(55.9, 65.1)	64.1	(62.7, 65.6)
Sometimes easy, sometimes hard	8,500	15.7	(12.1, 19.3)	16.9	(15.9, 18.0)
Hard / very hard	12,000	22.6	(18.6, 26.6)	14.7	(13.5, 15.9)
Don't need help	500**	1.2**	(0.2, 2.1)	4.2	(3.7, 4.7)

Source: Te Kupenga 2013, Statistics New Zealand customised report.
Note: * Sampling error is 30% or more but less than 50%. ** Sampling error is 50% or more, but less than 100%.

In 2013, the majority of Māori adults in these four South Island DHBs (77%) reported having easy access to whānau support in times of need. However, an estimated 4,500 (8%) had difficulty getting help.

A smaller proportion found it easy to get help with Māori cultural practices (61%), with almost a quarter (23%) finding it hard or very hard. A few (1%) reported not needing help.

Importance of participation in Māori culture

Table 6: Importance of Māori culture and spirituality, Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

	West Coast and other South Island DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Importance of being involved in Māori culture					
Very / quite	18,000	33.6	(29.1, 38.1)	46.3	(44.9, 47.6)
Somewhat	13,500	25.2	(20.5, 29.9)	24.2	(22.9, 25.6)
A little / not at all	22,000	41.2	(36.1, 46.4)	29.5	(28.3, 30.7)
Importance of spirituality					
Very / quite	22,500	42.4	(37.0, 47.9)	48.7	(47.4, 49.9)
Somewhat	8,500	16.2	(12.5, 20.0)	17.0	(16.0, 18.0)
A little / not at all	22,000	41.3	(35.9, 46.8)	34.3	(33.1, 35.5)

Source: Te Kupenga 2013, Statistics New Zealand customised report.

Being involved in Māori culture was important to a third of Māori adults, and somewhat important to a further quarter (25%). Spirituality was important (very, quite or somewhat) to over half of Māori (59%).

Te Reo Māori

Table 7: People who can have a conversation about a lot of everyday things in te reo Māori, West Coast DHB, 2013

Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
Number	%	(95% CI)	Number	%	(95% CI)		
330	9.9	(8.9, 11.1)	180	0.7	(0.6, 0.8)	**14.44 (11.70, 17.84)**	9.2

Source: 2013 Censuses, Statistics New Zealand
Notes: Percentages are age-standardised. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

According to the 2013 Census, 10% of Māori on the West Coast and nearly 1% of non-Māori could have a conversation about a lot of everyday things in te reo Māori.

Table 8: Use of te reo Māori in the home, Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs, 2013

	West Coast and other South Island DHBs			New Zealand	
Language spoken at home	Estimated number	%	(95% CI)	%	(95% CI)
Māori is main language	S	S		2.6	(2.2, 3.0)
Māori is used regularly	6,000*	13.2	(9.3, .7.2)	20.5	(19.2, 21.8)

Source: Te Kupenga 2013, Statistics New Zealand customised report.
Note: * Sampling error is 30% or more but less than 50%. S shows the data was suppressed.

Just over one in eight Māori adults across the four DHBs (13%) reported that Māori language was used regularly in the home in 2013.

Access to marae

Table 9: Access to marae, Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

	West Coast and other South Island DHB			New Zealand	
Been to marae	Estimated number	%	(95% CI)	%	(95% CI)
At some time	48,500	89.4	(86.2, 92.6)	96.0	(95.5, 96.6)
In previous 12 months[1]	17,500	35.8	(30.9, 40.7)	58.2	(56.6, 59.7)
Ancestral marae at some time[2]	23,000	43.9	(38.2, 49.6)	62.3	(60.9, 63.7)
Ancestral marae in previous 12 months[3]	6,500	12.1	(8.7, 15.5)	33.6	(32.3, 34.9)
Like to go to ancestral marae more often[2]	16,500	55.7	(48.9, 62.5)	58.7	(56.7, 60.7)

Source: Te Kupenga 2013, Statistics New Zealand customised report.
Notes: (1) Those who had been to a marae at some time.
(2) Both those who knew and did not know their ancestral marae.
(3) Those who had been to any of their ancestral marae in the last 12 months.

In 2013, most Māori in West Coast and the three other South Island DHBs (89%) had been to a marae, with just over a third (36%) having been in the last 12 months. Forty-four percent had been to at least one of their ancestral marae, 12% within the previous 12 months, but over half (56%) reported that they would like to go more often.

Traditional healing or massage

Table 10: Māori aged 15 years and over who took part in traditional healing or massage in last 12 months, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

West Coast and other South Island DHBs			New Zealand	
Estimated number	%	(95% CI)	%	(95% CI)
3,000*	5.4*	(3.1, 7.7)	10.9	(10.0, 11.7)

Source: Te Kupenga 2013, Statistics New Zealand customised report.
* Sampling error is 30% or more but less than 50%.

An estimated 3,000 Māori adults (5%) in West Coast and three other South Island DHBs took part in traditional healing or massage in 2013.

Wai ora
– Healthy environments

This section focuses on those aspects of social and physical environments that influence our health and well-being. Data is presented on individuals, households, and individuals living in households. A household that includes at least one Māori usual resident on Census night is categorised as a Māori household, and other households are categorised as non-Māori.

Education

Table 11: Adults aged 18 years and over with a Level 2 Certificate or higher, West Coast DHB, 2006 and 2013

	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)		Difference in percentage
Year	Number	%	(95% CI)	Number	%	(95% CI)			
2006	621	39.9	(37.6, 42.4)	9,006	49.2	(48.4, 50.0)	**0.81**	**(0.76, 0.86)**	-9.3
2013	810	44.0	(41.7, 46.3)	9,960	55.3	(54.5, 56.1)	**0.80**	**(0.75, 0.84)**	-11.3

Source: 2006 and 2013 Censuses, Statistics New Zealand
Notes: Percentages are age-standardised. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

The proportion of Māori adults aged 18 years and over with at least a Level 2 Certificate increased from 40% in 2006 to 44% in 2013, but remained 80% of the non-Māori proportion.

Work

Table 12: Labour force status, 15 years and over, West Coast DHB, 2006 and 2013

	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)		Difference in percentage
Labour force status	Number	%	(95% CI)	Number	%	(95% CI)			
2006									
Employed full-time	905	51.6	(49.5, 53.8)	11,277	57.5	(56.8, 58.2)	**0.90**	**(0.86, 0.94)**	-5.9%
Employed part-time	322	16.7	(15.1, 18.4)	3,612	17.6	(17.0, 18.2)	0.95	(0.85, 1.05)	-0.9%
Unemployed	90	4.8	(3.9, 5.9)	447	2.8	(2.5, 3.1)	**1.72**	**(1.37, 2.16)**	2.0%
Not in the labour force	504	26.9	(25.1, 28.9)	6,768	22.1	(21.5, 22.7)	**1.22**	**(1.13, 1.31)**	4.8%
2013									
Employed full-time	1,036	51.4	(49.5, 53.5)	11,151	56.2	(55.5, 56.9)	**0.92**	**(0.88, 0.95)**	-4.8%
Employed part-time	359	15.7	(14.3, 17.3)	3,450	16.7	(16.1, 17.3)	0.94	(0.85, 1.05)	-0.9%
Unemployed	129	6.5	(5.4, 7.7)	666	4.3	(4.0, 4.7)	**1.49**	**(1.23, 1.81)**	2.1%
Not in the labour force	588	25.8	(24.0, 27.7)	6,918	22.9	(22.2, 23.5)	**1.13**	**(1.04, 1.22)**	2.9%

Source: 2006 and 2013 Censuses, Statistics New Zealand
Notes Percentages are age-standardised. Ratios in **bold** show a statistically significant difference between Māori and non-Māori. Employed part-time includes people working 1 hour per week or more. Employed full-time includes people who usually work 30 or more hours per week. Unemployed people are without a paid job, available for work and actively seeking work. People not in the labour force includes people in the working age population who are neither employed nor unemployed.

Between 2006 and 2013 there was no change in the proportion of West Coast Māori adults employed full-time. Proportions of Māori employed part-time, unemployed, or who were not in the labour force were similar for 2006 and 2013. Māori were 49% more likely than non-Māori to be unemployed in 2013 and 13% more likely not to be in the labour force.

Table 13: Leading industries in which Māori were employed, West Coast DHB, 2013

	West Coast DHB						New Zealand	
	Māori			Non-Māori				
ANZSIC Industry	Number	%	Rank	Number	%	Rank	%	Rank
Females								
Accommodation and Food Services	114	27.0	1	819	13.0	3	7.3	5
Health Care and Social Assistance	93	22.0	2	1,086	17.3	1	17.1	1
Retail Trade	78	18.4	3	834	13.3	2	11.6	3
Education and Training	51	12.1	4	741	11.8	4	12.9	2
Manufacturing	39	9.2	5	318	5.1	6	6.0	6
Males								
Manufacturing	123	29.3	1	960	12.9	3	13.4	1
Construction	96	22.9	2	1,197	16.1	1	13.2	2
Mining	87	20.7	3	861	11.6	4	0.5	19
Agriculture, Forestry and Fishing	57	13.6	4	1,071	14.4	2	8.7	4
Retail Trade	21	5.0	5	507	6.8	5	8.3	5

Source: 2013 Census, Statistics New Zealand
Note: ANZSIC is the Australian and New Zealand Standard Industrial Classification.

The leading industries employing Māori females on the West Coast in 2013 were accommodation and food services (27%); health care and social assistance (22%); and retail trade (18%). Other leading industries included education and training; and manufacturing.

For Māori men, 29% were employed in manufacturing, 23% in construction, and 21% in mining. Other leading industries included agriculture, forestry and fishing, and retail trade.

Table 14: Leading occupations of employed Māori, West Coast DHB, 2013

	West Coast DHB						New Zealand	
	Māori			Non-Māori				
ANZSCO Occupation	Number	%	Rank	Number	%	Rank	%	Rank
Females								
Labourers	129	22.3	1	819	12.9	5	8.3	6
Professionals	117	20.2	2	1,236	19.5	1	26.7	1
Community and Personal Service Workers	102	17.6	3	918	14.5	4	12.9	4
Managers	75	13.0	4	1,035	16.3	3	14.4	3
Sales Workers	72	12.4	5	711	11.2	6	11.7	5
Clerical and Administrative Workers	66	11.4	6	1,146	18.1	2	19.5	2
Males								
Labourers	201	39.0	1	1,305	17.5	4	13.6	4
Technicians and Trades Workers	114	22.1	2	1,389	18.6	2	18.5	3
Machinery Operators and Drivers	108	20.9	3	1,347	18.0	3	9.1	5
Managers	72	14.0	4	1,728	23.2	1	22.7	1
Community and Personal Service Workers	12	2.3	5	333	4.5	6	5.4	7
Sales Workers	9	1.7	6	327	4.4	7	7.1	6

Source: 2013 Census, Statistics New Zealand
Note: Australian and New Zealand Standard Classification of Occupations (ANZSCO), major grouping.

Among employed West Coast Māori women, the leading occupational groupings were labourers (22%); professionals (20%); and community and personal service workers (18%). The next most common occupations were managers; sales workers; and clerical and administrative workers.

Māori men were most likely to be employed as labourers (39%); technicians and trade workers (22%); and machinery operators and drivers (21%). Managers; community and personal services workers; and sales workers were the next most common occupations.

Table 15: Unpaid work, 15 years and over, West Coast DHB, 2013

	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)		Difference in percentage
Unpaid work	Number	%	(95% CI)	Number	%	(95% CI)			
Any unpaid work	1,755	89.9	(88.5, 91.2)	18,603	89.7	(89.2, 90.2)	1.00	(0.99, 1.02)	0.1
Looking after disabled/ill household member	193	9.7	(8.4, 11.1)	1,506	7.2	(6.8, 7.6)	**1.35**	**(1.16, 1.57)**	2.5
Looking after disabled/ill non-household member	253	12.1	(10.8, 13.7)	2,089	8.6	(8.1, 9.0)	**1.42**	**(1.24, 1.61)**	3.6

Source: 2013 Census, Statistics New Zealand

Notes: Percentages are age-standardised. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Ninety percent of West Coast Māori adults worked without pay in 2013. Māori were 35% more likely than non-Māori to look after someone who was disabled or ill without pay within the home, and 42% more likely to look after a non-household member who was disabled or ill without pay.

Income and standard of living

Table 16: Unmet need reported by Māori aged 15 years and over to keep costs down in the last 12 months, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

	West Coast and other South Island DHBs			New Zealand	
Actions taken a lot to keep costs down	Estimated number	%	(95% CI)	%	(95% CI)
Put up with feeling the cold	5,000*	9.0*	(6.2, 11.7)	11.0	(10.2, 11.8)
Go without fresh fruit and vegetables	3,000*	5.1*	(3.3, 6.9)	5.4	(4.8, 6.0)
Postpone or put off visits to the doctor	5,000*	9.0*	(6.3, 11.7)	8.8	(7.9, 9.6)

Source: Te Kupenga 2013, Statistics New Zealand customised report.

Note: * Sampling error is 30% or more but less than 50%.

In 2013, an estimated 5,000 Māori adults (9%) across the four DHBs reported putting up with feeling cold a lot to keep costs down during the previous 12 months, 3,000 (5%) had gone without fresh fruit and vegetables, and 5,000 (9%) had postponed or put off visits to the doctor in 2013.

Table 17: Children aged 0–17 years living in families where the only income is means-tested benefits, West Coast DHB, 2006 and 2013

	Māori families			Non-Māori families			Māori/non-Māori ratio (95% CI)		Difference in percentage
Year	Number	%	(95% CI)	Number	%	(95% CI)			
2006	228	16.3	(14.4, 18.4)	345	6.7	(6.0, 7.4)	**2.44**	**(2.09, 2.86)**	9.6
2013	180	12.9	(11.2, 14.7)	300	6.0	(5.4, 6.7)	**2.13**	**(1.79, 2.53)**	6.8

Source: 2006 and 2013 Censuses, Statistics New Zealand.

Notes: Māori families include at least one Māori member. Non-Māori families have no Māori members.

Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

The proportion of children living in Māori families where the only income was means-tested benefits changed only slightly between 2006 and 2013 (16% and 13% respectively). Children in Māori families were twice as likely as non-Māori children to live homes where the only income was means-tested benefits in 2013.

Table 18: Children and adults living in households with low incomes, West Coast DHB, 2013

Age group	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Children 0–17 years	345	28.6	(26.2, 31.2)	879	19.2	(18.1, 20.4)	**1.49**	**(1.34, 1.65)**	9.4
Adults 18 years & over	723	26.6	(24.9, 28.3)	2,739	17.7	(16.9, 18.5)	**1.50**	**(1.39, 1.62)**	8.9

Source: 2013 Census, Statistics New Zealand

Notes: % is age-standardised. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.
A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.
Household income is equivalised using the revised Jensen scale. Low income is defined as an equivalised household income under $15,172.

Just over a quarter of the children (29%) and adults (27%) in Māori households were in households with low equivalised household incomes in 2013, around 50% higher than the proportion of children and adults in other households.

Table 19: Households with no access to a motor vehicle, West Coast DHB, 2006 and 2013

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Households									
2006	141	10.0	(8.5, 11.7)	843	8.0	(7.5, 8.6)	**1.24**	**(1.05, 1.47)**	1.9
2013	147	8.9	(7.6, 10.4)	732	6.8	(6.4, 7.3)	**1.30**	**(1.10, 1.54)**	2.1
People (% age-standardised)									
2006	315	7.8	(7.0, 8.8)	1,152	3.4	(3.2, 3.7)	**2.30**	**(2.01, 2.63)**	4.4
2013	279	5.8	(5.1, 6.5)	939	2.9	(2.6, 3.2)	**2.00**	**(1.72, 2.33)**	2.9

Source: 2006 and 2013 Census, Statistics New Zealand,

Note: A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

In 2013, 9% of Māori households had no motor vehicle, 30% more than the proportion of non-Māori households. The proportion of residents of Māori households without a vehicle was twice that of people living in non-Māori households.

Table 20: People in households with no access to telephone, mobile/cell phone, internet, or any telecommunications, West Coast DHB, 2013

Mode of tele-communication	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
No mobile/cell phone	822	15.3	(14.3, 16.4)	5,271	17.0	(16.5, 17.6)	**0.90**	**(0.83, 0.97)**	-1.7
No telephone	909	20.6	(19.4, 21.9)	2,457	12.0	(11.5, 12.5)	**1.72**	**(1.60, 1.85)**	8.6
No internet	1,152	24.1	(22.9, 25.4)	5,115	15.0	(14.5, 15.6)	**1.61**	**(1.51, 1.71)**	9.1
No tele-communications	159	3.2	(2.8, 3.8)	462	1.8	(1.6, 2.0)	**1.83**	**(1.51, 2.24)**	1.5

Source: 2013 Censuses, Statistics New Zealand

Note: A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.
% is age–sex-standardised to the 2001 Māori population.
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

In 2013, 24% of residents of West Coast Māori households had no access to the internet, 21% had no telephone (landline), 15% did not have a cell phone, and 3% had no access to any telecommunications in the home. The largest absolute gaps between West Coast Māori and non-Māori households were in access to the internet and telephone (9% each).

Housing

Table 21: Housing problems reported by Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury, South Canterbury DHBs combined, 2013

Housing problem (a big problem)	West Coast and other South Island DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Too small	2,500*	4.7*	(3.2, 6.3)	5.3	(4.7, 5.9)
Damp	5,000	9.1	(6.5, 11.7)	11.3	(10.5, 12.2)
Hard to keep warm	8,000	14.6	(11.2, 18.0)	16.5	(15.4, 17.7)
Needs repairs	7,500	13.8	(10.2, 17.5)	13.8	(12.7, 14.9)
Pests in the house	2,500*	4.3*	(2.4, 6.3)	5.8	(5.1, 6.5)

Source: Te Kupenga 2013, Statistics New Zealand customised report.
Note: * Sampling error is 30% or more but less than 50%.

Housing problems reported to be a big problem by Māori adults in West Coast and other South Island DHBs in 2013 included difficulty keeping the house warm (15%), needing repairs (14%), and damp (9%). Five percent felt their house was too small, and 4% stated that pests were a big problem in their house.

Housing security

Table 22: Children and adults living in households where rent payment are made, West Coast DHB, 2013

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Households	609	37.5	(35.1, 39.9)	2,430	23.2	(22.4, 24.0)	**1.61**	**(1.50, 1.73)**	14.3
Children under 18 years (% age-standardised)	603	42.3	(39.8, 44.9)	1,284	25.4	(24.2, 26.6)	**1.66**	**(1.54, 1.80)**	16.9
Adults 18 years and over (% age-standardised)	1,107	38.1	(36.4, 39.9)	3,852	29.2	(28.3, 30.0)	**1.31**	**(1.24, 1.38)**	8.9

Source: 2013 Census, Statistics New Zealand
Note: A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

In 2013, 609 Māori households on the West Coast were rented, 38% of all Māori households, compared to 23% of non-Māori households.

Among children living in a Māori household, 42% (603) were living in rented homes, two-thirds higher than the proportion of children in non-Māori households (25%).

Thirty-eight percent of adult residents of Māori households were living in rented accommodation, nearly a third higher than the proportion of adults in non-Māori households (29%).

Household crowding

Table 23: People living in crowded households (requiring at least one more bedroom), West Coast DHB, 2013

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Households	78	4.7	(3.7, 5.8)	141	1.3	(1.1, 1.6)	**3.56**	**(2.72, 4.68)**	3.4
People (% age standardised)	405	10.0	(9.0, 10.9)	639	4.1	(3.8, 4.5)	**2.40**	**(2.12, 2.72)**	5.8

Source: 2013 Census, Statistics New Zealand
Notes: Crowding was defined as needing at least one additional bedroom according to the Canadian National Occupancy

Standard (based on the age, sex and number of people living in the dwelling).
A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

In 2013, Māori households were 3.6 times as likely as non-Māori households to be classified as crowded using the Canadian National Occupancy Standard, with 78 homes needing at least one additional bedroom, affecting just over 400 people. People living in Māori households were 2.4 times as likely as residents of non-Māori households to be living in crowded conditions.

Fuel poverty

Table 24: People living in households where no heating fuels are used, West Coast DHB, 2013

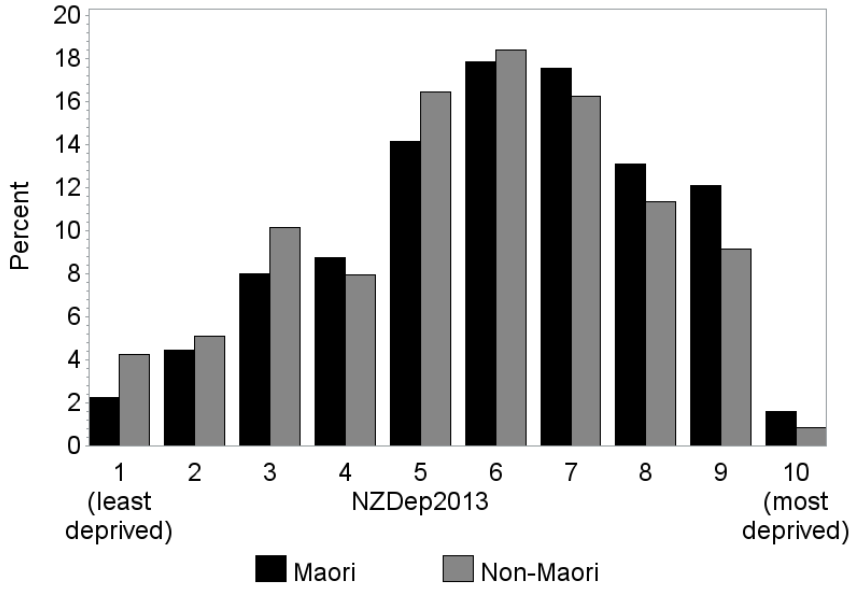
	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
Measure	Number	%	(95% CI)	Number	%	(95% CI)		
Households	27	1.6	(1.1, 2.4)	84	0.8	(0.6, 1.0)	**2.07 (1.35, 3.18)**	0.8
People (% age standardised)	69	1.4	(1.1, 1.8)	129	0.6	(0.5, 0.7)	**2.35 (1.71, 3.24)**	0.8

Source: 2013 Census, Statistics New Zealand
Notes: No form of heating used in the dwelling (including electricity, coal, mains or bottled gas, wood, solar heating equipment, other heating).
A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

In 2013, almost 2% of West Coast Māori households (27 homes) had no heating, compared to almost 1% of non-Māori households (84 homes).

Area deprivation

Figure 1: Distribution by NZDep 2013 decile, West Coast DHB, 2013



Source: 2013 Census, Statistics New Zealand. Atkinson J, Salmond C, Crampton P. 2014. NZDep2013 Index of Deprivation. University of Otago Wellington.

In 2013, the majority of West Coast Māori (75%) lived in NZDep deciles 5 to 9 .Only around 2% lived in the most deprived decile (Dep 10) and around 2% in the least deprived decile (Dep 1) areas (see accompanying Excel table).

Mauri ora: Pepi, tamariki – Infants and children

This section presents information on infants and children. Indicators include birth-weight and gestation, immunisations, breastfeeding and other well-child/tamariki ora indicators, oral health, skin infections, middle ear disease, acute rheumatic fever, and potentially preventable hospitalisations.

Infant mortality, including perinatal mortality and sudden unexpected death in infants (SUDI), are also important indicators of Māori health need. Although the numbers are too small to present at a DHB level, the national data shows that Māori infant mortality and SUDI rates are improving, but significant inequities still remain. The reports of the Perinatal and Maternal Mortality Review Committee (PMMRC) and the Child and Youth Mortality Review Committee (CYMRC) provide useful information and recommendations on preventing infant and child deaths.

Other useful sources of information include the DHB reports by the Child and Youth Epidemiology Service (CYES) on health status (2011), the determinants of health (2012), chronic conditions and disability (2013). The *Te Ohonga Ake* reports by the CYES also include in-depth information on Māori child and youth health at a national level.

Births

Table 25: Birth-weight and gestation, West Coast DHB, 2009–2013

	Māori			Non-Māori				
Indicator	Ave. no. per year	% of live births (95% CI)		Ave. no. per year	% of live births (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Low birth-weight	7	8.0	(5.7, 10.9)	16	4.8	(3.8, 5.9)	**1.68 (1.15, 2.45)**	3.3
High birth-weight	2	2.2	(1.0, 4.0)	9	2.7	(1.9, 3.6)	0.82 (0.41, 1.61)	-0.5
Preterm	9	10.0	(7.4, 13.1)	24	7.4	(6.2, 8.8)	1.35 (0.98, 1.87)	2.6

Source: Birth registrations, Ministry of Health

Notes: Low birth-weight less than 2500g, High birth-weight greater than or equal to 4500g, Preterm less than 37 weeks gestation

During 2009 to 2013 there were 92 Māori infants born per year on average, 22% of all live births in the DHB (422 per year). Seven Māori babies per year on average were born with low birth-weight, 8% of all Māori live births, two-thirds higher than the rate for non-Māori babies (or three more babies per year). Two per year (2%) were born with high birth-weight, and nine per year (10%) were born preterm.

Well child/Tamariki ora indicators

Table 26: Selected Well Child/Tamariki Ora indicators for Māori children, West Coast DHB

		Māori	
Indicator	Period	Count	%
1. Babies enrolled with a Primary Health Organisation (PHO) by three months old	20 Aug to 19 Nov 2013	<10	.
11. Babies exclusively or fully breastfed at 2 weeks		<10	.
12. Babies exclusively or fully breastfed at 6 weeks	January to June 2013	4	50
19. Mothers smoke-free two weeks postnatal		32	89
5. Children under 5 years enrolled with oral health services (PHO enrolled children)	2012	299	70
7. Children starting school who have participated in ECE	2013	55	89
15. Children with a healthy weight at 4 years, DHB of service	July to Dec 2013	25	81

Source: Well Child/Tamariki Ora Indicators, Ministry of Health, March 2014

Notes: Since the production of this table, the Ministry of Health (2015) has published more recent Well Child/Tamariki Ora Indicators for March 2015 which can be viewed here.

Indicator 1: Source: PHO Enrolment Collection (numerator), National Immunisation Register enrolment (denominator)

Indicator 11: Source: National Maternity Collection. Number of babies with breastfeeding recorded (denominator)
Indicator 12: Source: Plunket. Number of babies with breastfeeding recorded (denominator)
Indicator 19: Source: National Maternity Collection. Number of mother with tobacco use recorded at 2 weeks postnatal (denominator)
Indicator 5: Source Community Oral Health Services (numerator); PHO enrolments (denominator)
Indicator 7: Source: ENROL Ministry of Education
Indicator 15: Source: B4 School Check Information System. Children who have a BMI recorded at their B4 School Check (denominator)

In the first half of 2013, 50% of Māori babies were breastfed at six weeks of age; 89% of Māori mothers were smoke-free two weeks after giving birth. Among pre-school children enrolled with a PHO, 70% were enrolled with oral health services in 2012. Most Māori children (89%) who started school in 2013 had participated in early childhood education. Eighty-one percent of Māori children who had their BMI recorded at their B4 School Check had a healthy weight.

Table 27: Children fully immunised by the milestone age, West Coast DHB, 1 Jan 2014 to 31 Dec 2014

	Māori		Non-Māori			
Milestone age	No. fully immunised for age	% fully immunised	No. fully immunised for age	% fully immunised	Māori/non-Māori ratio	Difference in percentage
6 months	56	73%	224	72%	1.02	1%
8 months	69	90%	247	80%	1.11	9%
12 months	83	94%	253	82%	1.16	13%
18 months	84	91%	265	84%	1.09	7%
24 months	67	94%	294	84%	1.12	10%
5 years	74	85%	310	78%	1.09	7%

Source: National Immunisation Register

During 2014, 73% of Māori infants aged six months were fully immunised. At eight months 90% of Māori infants were fully immunised, 94% at 24 months, and 85% at five years.

Oral health

Table 28: Oral health status of children aged 5 or in Year 8 at school, West Coast DHB, 2013

	Māori			Non-Māori			Māori/non-Māori ratio % with caries (95% CI)	Difference in percentage
Age group	Total no.	% with caries (95% CI)	Mean DMFT	Total no.	% with caries (95% CI)	Mean DMFT		
Age 5	57	70 (57, 82)	3.6	291	46 (40, 52)	1.7	**1.54 (1.24, 1.90)**	24
Year 8	67	69 (56, 79)	2.1	342	50 (45, 56)	1.3	**1.37 (1.13, 1.66)**	18

Source: Community Oral Health Service, Ministry of Health
Notes: DMFT is Decayed, missing or filled teeth
Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

Seventy percent of Māori and 46% of non-Māori children aged five years in 2013 had caries, with mean DMFTs of 3.6 and 1.7 respectively. Of those in Year 8, 69% of Māori and 50% of non-Māori children had caries, with mean DMFTs of 2.1 for Māori and 1.3 for non-Māori.

Table 29: Hospitalisations for tooth and gum disease, children aged 0–14 years, West Coast DHB, 2011–2013

	Māori		Non-Māori			
Gender	Ave. no. per year	Rate per 100,000 (95% CI)	Ave. no. per year	Rate per 100,000 (95% CI)	Māori/non-Māori ratio (95% CI)	Rate difference
Female	8	1,430.1 (956.6, 2,138.1)	25	1,010.1 (805.2, 1,267.0)	1.42 (0.89, 2.25)	420.1
Male	7	1,257.1 (827.5, 1,909.9)	23	874.5 (691.8, 1,105.3)	1.44 (0.89, 2.32)	382.7
Total	15	1,343.6 (1,005.4, 1,795.6)	48	942.3 (800.5, 1,109.1)	**1.43 (1.02, 1.99)**	401.4

Source: National Minimum Data Set (NMDS).
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

There were 15 admissions to hospital per year on average for tooth and gum disease among West Coast Māori children during 2011 to 2013, at a rate that was 43% higher than for non-Māori children, or 401 more admissions per 100,000 children per year.

Middle ear disease

Table 30: Hospitalisations for grommet insertions, children aged 0–14 years, West Coast DHB, 2011–2013

	Māori			Non-Māori					
Gender	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)		Rate difference
Female	4	724.3	(410.2, 1279.0)	11	457.3	(326.6, 640.2)	1.58	(0.82, 3.07)	267.0
Male	2	402.1	(191.6, 844.0)	13	488.4	(356.8, 668.5)	0.82	(0.37, 1.84)	-86.3
Total	6	563.2	(358.6, 884.5)	24	472.8	(375.8, 594.9)	1.19	(0.72, 1.98)	90.4

Source: NMDS

On average, six Māori children per year had grommets for otitis media, at similar rate to non-Māori.

Healthy skin

Table 31: Hospitalisations for serious skin infections, children aged 0–14 years, West Coast DHB, 2011–2013

	Māori			Non-Māori					
Gender	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)		Rate difference
Female	1	109.2	(27.3, 436.5)	1	41.3	(13.3, 128.2)	2.64	(0.44, 15.84)	67.9
Male	<1	55.5	(7.8, 393.7)	2	87.4	(41.7, 183.3)	0.63	(0.08, 5.16)	-31.9
Total	1	82.3	(26.5, 255.2)	3	64.3	(34.6, 119.7)	1.28	(0.35, 4.65)	18.0

Source: NMDS

There was only one admission per year on average for serious skin infections among Māori children.

Acute Rheumatic Fever

There were no hospital admissions for acute rheumatic fever among West Coast Māori children during the period 2011 to 2013.

Potentially preventable hospitalisations

Potentially preventable hospitalisations can be categorised into those which are considered potentially avoidable and those more likely to be unavoidable. Potentially avoidable hospitalisations are those resulting from diseases preventable through population-based health promotion strategies and those related to the social determinants of health. Addressing these can require actions beyond the health care system, including intersectoral actions.

A subgroup of potentially avoidable hospitalisations, ambulatory care sensitive hospitalisations (ASH) reflect hospitalisations for conditions considered sensitive to preventive or treatment interventions in primary care. It is also recognised that while access to effective primary care is important in reducing ASH, addressing the factors which drive the underlying burden of disease such as housing, or second hand smoke exposures, is also important.

Table 32: Potentially avoidable hospitalisations for children aged 1 month to 14 years, West Coast DHB, 2011–2013

	Māori			Non-Māori					
Gender	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)		Rate difference
Female	22	3,854.5	(3,031.1, 4,901.7)	73	2,897.1	(2,537.4, 3,307.8)	**1.33**	**(1.01, 1.75)**	957.4
Male	25	4,322.0	(3,451.1, 5,412.8)	98	3,693.0	(3,293.5, 4,141.1)	1.17	(0.91, 1.51)	629.0
Total	48	4,088.3	(3,469.0, 4,818.2)	171	3,295.1	(3,021.5, 3,593.4)	**1.24**	**(1.03, 1.49)**	793.2

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

There were 48 potentially avoidable hospitalisations per year on average among Māori children, at a rate 24% higher than for non-Māori children, or 793 more admissions per 100,000.

Table 33: Ambulatory care sensitive hospitalisations for children aged 1 month to 14 years, West Coast DHB, 2011–2013

	Māori		Non-Māori			
Gender	Ave. no. per year	Rate per 100,000 (95% CI)	Ave. no. per year	Rate per 100,000 (95% CI)	Māori/non-Māori ratio (95% CI)	Rate difference
Female	17	3,031.1 (2,307.1, 3,982.4)	54	2,147.0 (1,839.4, 2,506.1)	**1.41 (1.03, 1.93)**	884.0
Male	21	3,531.8 (2,752.8, 4,531.2)	71	2,669.9 (2,333.6, 3,054.6)	1.32 (1.00, 1.76)	861.9
Total	38	3,281.5 (2,729.8, 3,944.5)	124	2,408.5 (2,175.8, 2,666.0)	**1.36 (1.10, 1.68)**	873.0

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average there were 38 admissions per year for ambulatory care sensitive conditions among Māori children, at a rate 36% higher than among non-Māori children, or 873 more admissions per 100,000.

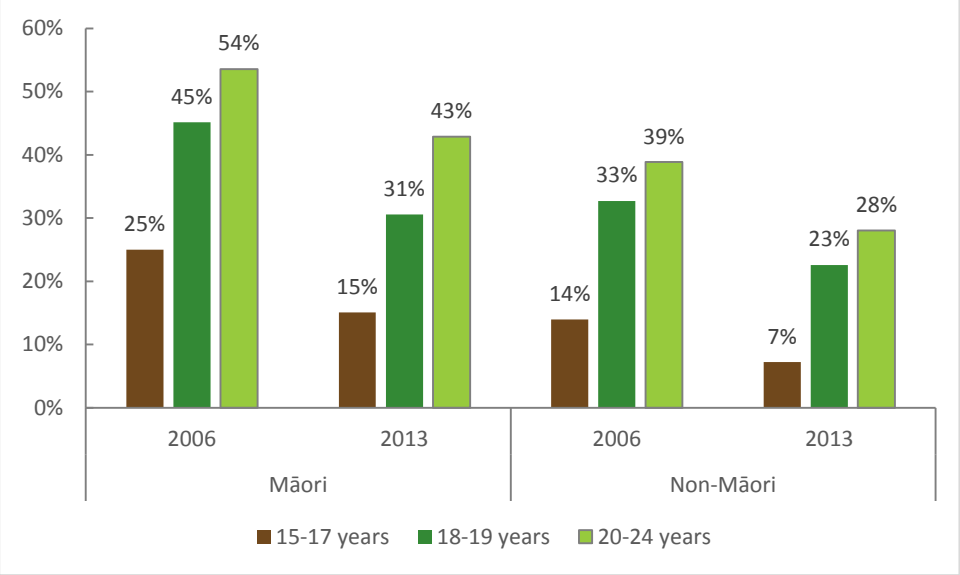
Mauri ora: Rangatahi – Young adults

This section presents data on smoking, immunisations, and self-harm as an indicator of mental health. Nationally, leading causes of hospitalisation among Māori aged 15 to 24 years include pregnancy and childbirth, injury, digestive system diseases, symptoms and signs (unknown causes), and mental disorders. Major causes of death for Māori in this age group include accidents, suicide, cancer, and homicide (Robson and Harris 2007).

Challenges faced by rangatahi Māori that can affect their health and wellbeing include socioeconomic factors, perceived positive school climate, access to healthcare, exposure to violence, and risky health behaviours including suicide attempts (Crengle et al, 2013). Other data related to youth can be found in the CYES reports on child and youth health. The Child and Youth Health Compass provides exemplars of youth specific services.

Smoking

Figure 2: Regular smokers, ages 15–17, 18–19, 20–24 years, West Coast DHB, 2013



Source: 2013 Census, Statistics New Zealand
Note: Regular smoker defined as smoking at least one cigarette daily.

Smoking rates have decreased significantly among young Māori and non-Māori adults on the West Coast since 2006. However, smoking remains higher among 18–24 year olds than younger age groups, suggesting that a sizeable group may start smoking in early adulthood. At ages 20–24 years, 43% of Māori were smoking regularly in 2013. Non-Māori youth were less likely than Māori to smoke regularly.

Immunisations

Table 34: Human papilloma virus immunisations (HPV) by birth cohorts, West Coast DHB, 1 September 2008 to 30 September 2014

Birth cohort	Age in 2014	Offered HPV vaccine in (year)	Māori		Non-Māori		Māori/non-Māori ratio	Māori % minus non-Māori %
			Fully immunised	% fully immunised	Fully immunised	% fully immunised		
2000	14	2013	16	40.0	86	61.4	0.65	-21.4
1999	15	2012	15	50.0	57	40.7	1.23	9.3
1998	16	2011	13	43.3	56	32.9	1.32	10.4
1997	17	2010	17	56.7	72	37.9	1.50	18.8

Source: National Immunisation Register.
Three doses are required to be fully immunised. Young women are eligible for free vaccination up to the age of 20.

Human papilloma virus immunisation rates were lower for Māori girls than for non-Māori girls aged 14 (40% compared to 61%), but higher for those aged 15 to 17 years. The highest coverage for Māori was in those aged 17 during 2014, with 57% having received all three doses of the vaccine, (compared to 38% of non-Māori).

Mental health

Table 35: Hospitalisations for serious injury from intentional self-harm, 15–24 and 25–44 years, West Coast DHB, 2011–2013

Age group and gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
15–24 years										
Female	2	753.8	(358.5, 1,585.1)	7	480.9	(316.5, 730.6)	1.57	(0.67,	3.68)	272.9
Male	1	306.2	(98.7, 949.4)	3	182.5	(94.9, 350.9)	1.68	(0.45,	6.20)	123.7
Total	3	530.0	(284.7, 986.7)	10	331.7	(233.2, 471.9)	1.60	(0.78,	3.26)	198.3
25–44 years										
Female	2	391.7	(161.4, 950.8)	9	255.9	(174.1, 376.0)	1.53	(0.58,	4.03)	135.8
Male	<1	100.2	(14.1, 711.7)	4	134.0	(76.7, 234.2)	0.75	(0.10,	5.74)	-33.8
Total	2	246.0	(109.3, 553.6)	13	194.9	(141.9, 267.7)	1.26	(0.53,	3.02)	51.0

Source: NMDS.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average three Māori aged 15 to 24 years and two Māori aged 25 to 44 years were admitted to hospital per year for serious injury from intentional self-harm.

Mauri ora: Pakeke – Adults

This section focuses mainly on long term conditions among adults, including heart disease and stroke, cancer, diabetes, respiratory disease (asthma, chronic obstructive pulmonary disease), mental disorders, and gout. Information is also presented on hip fractures, hip replacements and cataract surgery. Self-assessed health status and smoking status are also included.

Information on other causes of hospitalisation or deaths on the West Coast can be found in the accompanying Excel© tables labelled 'Death registrations' and 'Hospitalisations by principal diagnosis'.

The New Zealand Health Survey provides other information on long term conditions and risk factors that have been shown to be more common for Māori adults than other adults at a national level, including medicated blood pressure, obesity, chronic pain, arthritis, oral disease, and mental distress (Ministry of Health 2014).

Self-assessed health

Table 36: Health status reported by Māori aged 15 years and over, West Coast, Nelson Marlborough, Canterbury and South Canterbury DHBs, 2013

	West Coast and other South Island DHBs			New Zealand	
Health status	Estimated number	%	(95% CI)	%	(95% CI)
Excellent	9,000	16.4	(12.2, 20.5)	18.1	(16.8, 19.3)
Very good	21,000	39.4	(34.4, 44.4)	37.0	(35.5, 38.5)
Good	15,000	27.6	(23.4, 31.9)	28.5	(27.3, 29.7)
Fair / poor	9,000	16.6	(13.0, 20.3)	16.4	(15.3, 17.5)

Source: Te Kupenga 2013, Statistics New Zealand customised report.

In 2013, over half of Māori adults (56%) in West Coast, Nelson Marlborough, Canterbury, and South Canterbury DHBs combined reported having excellent or very good health and another quarter (28%) described their health as good. One in six (17%) reported having fair or poor health status.

Smoking status

Table 37: Cigarette smoking status, 15 years and over, West Coast DHB, 2006 and 2013

	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Difference in percent
Smoking status	Number	%	(95% CI)	Number	%	(95% CI)				
2006										
Regular smoker	699	42.8	(40.5, 45.2)	5,082	27.7	(27.0, 28.5)	**1.54**	**(1.45,**	**1.64)**	15.1
Ex-smoker	367	20.8	(19.0, 22.8)	5,097	19.2	(18.6, 19.7)	1.09	(0.99,	1.19)	1.6
Never smoked	628	36.3	(34.1, 38.7)	10,635	53.2	(52.4, 54.0)	**0.68**	**(0.64,**	**0.73)**	-16.9
2013										
Regular smoker	673	34.7	(32.6, 36.9)	4,074	21.5	(20.8, 22.2)	**1.61**	**(1.50,**	**1.73)**	13.2
Ex-smoker	470	21.2	(19.5, 23.1)	5,643	20.1	(19.5, 20.7)	1.06	(0.97,	1.16)	1.2
Never smoked	834	42.7	(40.5, 44.9)	11,469	58.4	(57.6, 59.2)	**0.73**	**(0.69,**	**0.77)**	-15.7

Source: 2006 and 2013 Census, Statistics New Zealand
Notes: % is age-standardised to the 2001 Māori population
Regular smokers smoke one or more cigarettes per day.

Between 2006 and 2013 the proportion of West Coast Māori adults who smoked cigarettes regularly decreased from 43% to 35%. The corresponding increase in those who have never smoked was greater than the increase in ex-smokers. However, Māori remained 61% more likely than non-Māori to smoke regularly in 2013.

Heart disease and stroke

Table 38: Hospitalisations for circulatory system diseases, 25 years and over, West Coast DHB, 2011–2013

	Māori			Non-Māori				
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Female	12	913.4	(652.9, 1,277.7)	260	1,031.5	(934.1, 1,139.1)	0.89 (0.62, 1.26)	-118.2
Male	19	1,642.7	(1,250.5, 2,157.9)	351	1,561.5	(1,441.4, 1,691.5)	1.05 (0.79, 1.40)	81.2
Total	31	1,278.0	(1,033.4, 1,580.5)	611	1,296.5	(1,218.2, 1,379.8)	0.99 (0.79, 1.23)	-18.5

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, 31 Māori per year were admitted to hospital for diseases of the circulatory system (heart disease and stroke), at a similar rate to non-Māori.

Table 39: Ischaemic heart disease indicators, 25 years and over, West Coast DHB, 2011–2013

	Māori			Non-Māori				
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Ischaemic heart disease admissions								
Female	3	194.6	(96.6, 391.8)	68	249.9	(211.7, 294.9)	0.78 (0.38, 1.60)	-55.3
Male	6	493.9	(312.6, 780.6)	119	479.9	(427.8, 538.4)	1.03 (0.64, 1.65)	14.0
Total	9	344.3	(234.7, 505.0)	187	364.9	(332.0, 401.1)	0.94 (0.64, 1.40)	-20.6
Angiography procedures								
Female	2	150.1	(67.3, 335.0)	40	183.3	(148.6, 226.1)	0.82 (0.36, 1.88)	-33.1
Male	3	253.8	(135.2, 476.6)	79	358.6	(311.1, 413.4)	0.71 (0.37, 1.35)	-104.8
Total	5	202.0	(123.0, 331.6)	119	271.0	(240.8, 304.8)	0.75 (0.45, 1.24)	-69.0
Angioplasty procedures								
Female	1	74.7	(24.0, 233.2)	13	55.9	(39.7, 78.6)	1.34 (0.41, 4.38)	18.8
Male	1	74.1	(23.5, 233.5)	36	160.9	(131.0, 197.6)	0.46 (0.14, 1.48)	-86.8
Total	2	74.4	(33.2, 167.0)	48	108.4	(90.9, 129.3)	0.69 (0.30, 1.57)	-34.0
Coronary Artery Bypass Graft (CABG)								
Female	0	0.0	. .	3	9.7	(4.4, 21.1)	0.00 . .	-9.7
Male	1	52.2	(12.4, 219.8)	16	66.6	(49.3, 90.0)	0.78 (0.18, 3.40)	-14.5
Total	1	26.1	(6.2, 109.9)	19	38.1	(28.8, 50.5)	0.68 (0.16, 2.96)	-12.1
Acute coronary syndrome admissions								
Female	2	145.5	(64.7, 327.3)	41	145.8	(116.7, 182.2)	1.00 (0.43, 2.31)	-0.3
Male	5	439.3	(267.8, 720.6)	73	301.1	(259.6, 349.4)	1.46 (0.87, 2.45)	138.2
Total	7	292.4	(191.6, 446.4)	114	223.5	(197.5, 252.9)	1.31 (0.84, 2.03)	68.9

Source: NMDS.

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

Nine Māori per year on average were admitted to hospital for ischaemic heart disease at a rate of 344 per 100,000. Of these, seven were admitted with acute coronary syndrome (around 290 per 100,000). On average, there were five angiography procedures conducted for Māori patients per year, two angioplasties, and one coronary artery bypass graft. There were no significant differences between Māori and non-Māori.

Table 40: Hospitalisations for heart failure, stroke, and hypertensive disease, 25 years and over, West Coast DHB, 2011–2013

	Māori			Non-Māori				
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Heart failure								
Female	1	46.4	(11.6, 185.6)	39	75.4	(60.7, 93.5)	0.62 (0.15, 2.50)	-29.0
Male	2	170.9	(79.9, 365.7)	34	92.4	(73.8, 115.7)	1.85 (0.84, 4.09)	78.5
Total	3	108.7	(55.7, 211.8)	73	83.9	(71.7, 98.2)	1.30 (0.65, 2.57)	24.8
Stroke								
Female	1	73.2	(23.4, 228.8)	41	111.5	(87.7, 141.6)	0.66 (0.20, 2.10)	-38.3
Male	1	163.4	(58.4, 457.0)	41	134.8	(107.4, 169.3)	1.21 (0.42, 3.48)	28.6
Total	2	118.3	(53.5, 261.4)	83	123.1	(104.4, 145.2)	0.96 (0.43, 2.16)	-4.8
Hypertensive disease								
Female	0	0.0	. .	7	26.1	(14.2, 48.1)	0.00 . .	-26.1
Male	<1	47.6	(6.7, 337.7)	4	18.5	(9.8, 34.8)	2.57 (0.33, 20.17)	29.1
Total	<1	23.8	(3.4, 168.9)	11	22.3	(14.3, 34.8)	1.07 (0.14, 7.96)	1.5

Source: NMDS.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

There were three admissions per year on average for Māori with heart failure, at a rate of 109 per 100,000.

Two Māori per year were admitted for stroke (118 per 100,000) on average and less than one per year admitted for hypertensive disease.

Table 41: Hospitalisations for chronic rheumatic heart disease and heart valve replacements, 25 years and over, West Coast DHB, 2011–2013

	Māori			Non-Māori				
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Chronic rheumatic heart disease								
Female	<1	28.5	(4.0, 202.5)	1	4.3	(1.1, 17.4)	6.56 (0.59, 72.34)	24.2
Male	0	0.0	. .	1	2.9	(0.9, 9.5)	0.00 . .	-2.9
Total	<1	14.3	(2.0, 101.3)	2	3.6	(1.4, 9.4)	3.96 (0.45, 35.16)	10.7
Heart valve replacements								
Female	1	54.9	(13.7, 219.6)	5	15.8	(8.7, 28.6)	3.48 (0.77, 15.72)	39.1
Male	<1	33.3	(4.7, 236.7)	8	28.1	(18.0, 43.9)	1.19 (0.16, 8.86)	5.2
Total	1	44.1	(14.1, 137.5)	12	21.9	(15.4, 31.3)	2.01 (0.61, 6.62)	22.2

Source: NMDS.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, less than one Māori per year was admitted with chronic rheumatic heart disease, and one per year on average had a heart valve replacement.

Table 42: Early deaths from circulatory system disease, West Coast DHB, 2002–2011

	Māori			Non-Māori				
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Female	1	41.3	(21.5, 79.4)	8	19.5	(15.4, 24.8)	**2.12 (1.06, 4.24)**	21.8
Male	1	69.8	(40.5, 120.4)	18	43.6	(37.0, 51.4)	1.60 (0.91, 2.83)	26.3
Total	2	55.6	(36.5, 84.6)	26	31.6	(27.5, 36.1)	**1.76 (1.13, 2.74)**	24.0

Source: Mortality data, Ministry of Health
Notes: "Early deaths" are defined as those occurring under 75 years of age.
Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

During the period 2002 to 2011, on average two Māori per year died early from cardiovascular disease, at a rate 76% higher than West Coast non-Māori, or 24 more deaths per 100,000.

Diabetes

Table 43: Diabetes prevalence, medication use, monitoring of blood glucose levels, screening for renal disease, West Coast DHB, 2013

Indicator	Māori Count	Māori % (crude)	Non-Māori Count	Non-Māori % (crude)	Māori/non-Māori ratio	Difference in percentage
Prevalence of diabetes (all ages)	121	4.0	1,243	4.2	0.84	-0.7
People with diabetes regularly receiving metformin or insulin, 25+	73	60.3	681	54.8	1.10	5.5

Source: NZ Atlas of Healthcare Variation

Note: The 'crude' percentage is not adjusted for differences in the age structure of the Māori and non-Māori populations.

In 2013, 121 West Coast Māori were estimated to have diabetes, giving a crude prevalence of 4%. Of Māori with diabetes, 60% were regularly receiving metformin or insulin. Note these percentages are not adjusted for age.

Table 44: Hospitalisations for lower limb amputations for people with concurrent diabetes, 15 years and over, West Coast DHB, 2011–2013

Gender	Māori Ave. no. per year	Māori Age-standardised rate per 100,000 (95% CI)			Non-Māori Ave. no. per year	Non-Māori Age-standardised rate per 100,000 (95% CI)			Māori/non-Māori ratio (95% CI)			Rate difference
Female	0	0.0	.	.	3	10.6	(5.2,	21.7)	0.00	.	.	-10.6
Male	<1	23.3	(3.3,	165.8)	2	5.8	(2.5,	13.2)	4.03	(0.48,	33.80)	17.6
Total	<1	11.7	(1.6,	82.9)	5	8.2	(4.7,	14.2)	1.43	(0.19,	10.92)	3.5

Source: NMDS

Note Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average every three years one Māori with diabetes had a lower limb amputated during the period 2011 to 2013.

Cancer

Table 45: Most common cancer registrations for Māori by site, all ages, West Coast DHB, 2003–2012

Gender and site	Māori Ave. no. per year	Māori Age-standardised rate per 100,000 (95% CI)			Non-Māori Ave. no. per year	Non-Māori Age-standardised rate per 100,000 (95% CI)			Māori/non-Māori ratio (95% CI)			Rate difference
Female												
All cancers	6	263.3	(201.3,	344.6)	73	179.2	(163.3,	196.6)	**1.47**	**(1.11,**	**1.95)**	84.1
Breast	1	57.6	(33.4,	99.3)	18	48.3	(40.8,	57.2)	1.19	(0.67,	2.11)	9.2
Lung	1	38.5	(20.0,	74.0)	8	14.8	(11.4,	19.3)	**2.59**	**(1.28,**	**5.24)**	23.6
Digestive organs	1	39.5	(20.5,	76.0)	18	33.0	(27.7,	39.3)	1.20	(0.61,	2.36)	6.5
Male												
All cancers	4	225.2	(161.5,	314.1)	93	195.9	(181.3,	211.7)	1.15	(0.82,	1.62)	29.3
Prostate	1	51.3	(28.3,	93.1)	28	51.8	(45.7,	58.6)	0.99	(0.54,	1.82)	-0.4
Digestive organs	1	47.0	(25.2,	87.7)	20	37.6	(32.3,	43.8)	1.25	(0.66,	2.38)	9.4
Lung	1	39.2	(16.0,	95.9)	10	16.4	(13.2,	20.2)	2.40	(0.95,	6.02)	22.8

Source: Cancer Registry, Ministry of Health

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

During the ten-year period 2003 to 2012, on average, there were six cancer registrations per year among Māori females, at a rate 47% higher than the rate for non-Māori females. The most common cancers registered for Māori females were cancers of the breast, lung, digestive organs. Māori women's registration rates for lung cancer were 2.6 times the rate for non-Māori women.

Among Māori males there were four cancer registrations per year on average. Cancers of the prostate, digestive organs and lung were the most common cancers for Māori males.

Table 46: Most common cancer deaths for Māori by site, all ages, West Coast DHB, 2002–2011

	Māori			Non-Māori				
Gender and site	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Female								
All cancers	2	87.0	(54.4, 138.9)	32	59.3	(51.4, 68.5)	1.47 (0.90, 2.39)	27.6
Digestive organs	1	28.2	(12.6, 62.7)	9	15.1	(11.7, 19.5)	1.86 (0.80, 4.31)	13.0
Male								
All cancers	2	127.6	(81.3, 200.1)	37	63.5	(56.6, 71.2)	**2.01 (1.26, 3.20)**	64.1
Digestive organs	1	36.1	(17.2, 75.7)	10	18.7	(15.2, 23.1)	1.92 (0.89, 4.16)	17.3
Lung	1	34.9	(15.3, 79.3)	9	15.7	(12.6, 19.5)	2.23 (0.95, 5.20)	19.2

Source: Death registrations, Ministry of Health
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

During the ten-year period 2002 to 2011, deaths from cancer accounted for a third of all deaths among West Coast Māori females. Cancers of the digestive organs were the most common cause of cancer death.

For Māori males, cancer comprised 26% of all deaths. Cancers of the digestive organs and lung were the most frequent causes of death from cancer.

Breast and cervical cancer screening

Table 47: BreastScreen Aotearoa breast screening coverage, women aged 45–69 years, West Coast DHB, 24 months to 31 December 2014

Māori			Non-Māori		
Number screened	Eligible population	% screened	Number screened	Eligible population	% screened
375	475	78.9%	4,184	5,320	78.6%

Source: National Screening Unit, Ministry of Health

BreastScreen Aotearoa provides free mammography screening for breast cancer to women aged 45 to 69 years, with a target of at least 70% of eligible women screened every two years. During the two years prior to 31 December 2014, 79% of both Māori and non-Māori women in the West Coast had been screened.

Table 48: Cervical screening coverage, women aged 25–69 years, West Coast DHB, 3 years and 5 years to 31 December 2014

Māori					Non-Māori				
Eligible population	Women screened in last 5 years	5-year coverage %	Women screened in last 3 years	3-year coverage %	Eligible population	Women screened in last 5 years	5-year coverage %	Women screened in last 3 years	3-year coverage %
842	614	73.0%	521	61.9%	7,756	6,790	87.5%	5,928	76.4%

Source: National Screening Unit, Ministry of Health
Note: Population is adjusted for hysterectomy.

Among women aged 25 to 69 years, 73% of Māori women and 88% of non-Māori women had had a cervical smear test during the five years prior to December 2014. The three year cervical screening coverage was 62% for Māori women and 76% for non-Māori women. The National Cervical Screening Programme has a three year screening coverage target of 80% of eligible women aged 25 to 69 years.

Respiratory disease

Table 49: Hospitalisations for asthma, by age group, West Coast DHB, 2011–2013

Gender and age group	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
0–14 years										
Female	3	455.1	(227.1, 911.9)	4	173.9	(100.9, 299.7)	**2.62**	**(1.08,**	**6.33)**	281.2
Male	4	633.9	(350.8, 1,145.5)	11	400.5	(283.3, 566.4)	1.58	(0.80,	3.14)	233.4
Total	6	544.5	(347.0, 854.4)	15	287.2	(214.4, 384.8)	**1.90**	**(1.11,**	**3.24)**	257.3
15–34 years										
Female	1	126.2	(31.6, 504.7)	2	64.9	(29.0, 145.2)	1.94	(0.39,	9.65)	61.3
Male	0	0.0	. .	2	53.5	(22.3, 128.5)	0.00	.	.	-53.5
Total	1	63.1	(15.8, 252.3)	4	59.2	(32.7, 107.1)	1.07	(0.24,	4.81)	3.9
35–64 years										
Female	2	252.6	(112.9, 565.4)	4	80.8	(44.6, 146.4)	**3.13**	**(1.15,**	**8.51)**	171.8
Male	0	46.0	(6.5, 326.5)	2	17.6	(7.2, 43.3)	2.61	(0.30,	22.52)	28.4
Total	2	149.3	(70.8, 314.7)	6	49.2	(29.5, 82.3)	**3.03**	**(1.23,**	**7.50)**	100.1
65 years and over										
Female	0	0.0	. .	2	55.4	(20.0, 153.2)	0.00	.	.	-55.4
Male	0	0.0	. .	1	29.3	(7.2, 120.1)	0.00	.	.	-29.3
Total	0	0.0	. .	2	42.4	(18.6, 96.7)	0.00	.	.	-42.4

Source: NMDS.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

There were six admissions for asthma per year on average among West Coast Māori children aged 0–14 years during 2011 to 2013, at a rate nearly twice that of non-Māori. Among Māori adults aged 35–64 years, there were two admissions per year on average, at a rate 3 times the rate of non-Māori. No Māori aged 65 years and over was admitted for asthma during this period.

Table 50: Hospitalisations for chronic obstructive pulmonary disease (COPD), 45 years and over, West Coast DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
Female	6	1,053.3	(650.4, 1,705.7)	58	509.0	(431.0, 601.1)	**2.07**	**(1.24,**	**3.45)**	544.3
Male	4	908.5	(513.1, 1,608.5)	67	614.1	(529.7, 712.0)	1.48	(0.82,	2.67)	294.4
Total	10	980.9	(677.5, 1420.2)	125	561.5	(502.7, 627.2)	**1.75**	**(1.19,**	**2.57)**	419.4

Source: NMDS.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

There were 10 hospitalisations per year on average for Māori with COPD, at a rate 75% higher than that of non-Māori, or 419 more admissions per 100,000.

Table 51: Early deaths from respiratory disease, West Coast DHB, 2002–2011

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
Female	1	22.9	(9.5, 55.0)	3	6.8	(4.6, 9.9)	**3.38**	**(1.30,**	**8.80)**	16.1
Male	1	31.8	(14.3, 71.0)	4	8.4	(6.1, 11.4)	**3.80**	**(1.61,**	**8.99)**	23.4
Total	1	27.4	(15.1, 49.5)	7	7.6	(5.9, 9.6)	**3.61**	**(1.90,**	**6.86)**	19.8

Source: Mortality data, Ministry of Health
Notes: "Early deaths" defined as those occurring under 75 years of age.
Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, one West Coast Māori per year died early from respiratory disease during the ten-year period 2002 to 2011, with a rate 3.6 times the non-Māori rate, or 20 more deaths per 100,000.

Mental disorders

Table 52: Hospitalisations for mental disorders, all ages, West Coast DHB, 2011–2013

	Māori			Non-Māori				
Disorder	Ave. no. per year	Age-standardised rate (95% CI)		Ave. no. per year	Age-standardised rate (95% CI)		Māori/non-Māori ratio (95% CI)	Difference
Female								
All disorders	13	700.6	(506.5, 969.2)	88	363.9	(308.7, 428.9)	**1.93 (1.34, 2.77)**	336.7
Schizophrenia	<1	11.9	(1.7, 84.6)	10	46.2	(29.4, 72.5)	0.26 (0.03, 1.93)	-34.3
Mood (affective)	7	425.5	(273.4, 662.2)	33	130.4	(100.9, 168.4)	**3.26 (1.96, 5.44)**	295.1
—Bipolar	2	123.9	(54.9, 279.6)	5	22.2	(11.9, 41.6)	**5.57 (1.99, 15.56)**	101.6
—Depressive episode	3	172.0	(85.6, 345.6)	19	79.1	(56.7, 110.5)	**2.17 (1.00, 4.71)**	92.9
Substance use	1	47.8	(15.3, 149.6)	12	81.9	(56.6, 118.6)	0.58 (0.18, 1.94)	-34.2
—Alcohol	1	47.8	(15.3, 149.6)	8	52.8	(33.0, 84.4)	0.91 (0.26, 3.11)	-5.0
Anxiety, stress-related	2	75.6	(33.2, 172.1)	10	50.5	(31.7, 80.4)	1.50 (0.58, 3.85)	25.1
Male								
All disorders	10	591.6	(412.0, 849.6)	111	540.8	(470.9, 621.1)	1.09 (0.74, 1.61)	50.8
Schizophrenia	4	223.8	(122.4, 409.3)	39	192.7	(153.5, 241.9)	1.16 (0.61, 2.21)	31.2
Mood (affective)	2	105.8	(43.5, 257.3)	30	155.6	(120.2, 201.5)	0.68 (0.27, 1.71)	-49.8
—Bipolar	0	0.0	. .	10	55.4	(35.5, 86.4)	0.00 . .	-55.4
—Depressive episode	2	105.8	(43.5, 257.3)	16	79.9	(56.2, 113.6)	1.32 (0.51, 3.44)	25.9
Substance use	3	153.0	(78.0, 300.2)	14	94.2	(66.0, 134.4)	1.62 (0.76, 3.48)	58.8
—Alcohol	2	94.4	(38.2, 233.2)	11	72.0	(48.0, 107.9)	1.31 (0.49, 3.53)	22.4
Anxiety, stress-related	1	75.1	(27.1, 208.2)	11	64.3	(42.4, 97.4)	1.17 (0.39, 3.51)	10.8
Total								
All disorders	23	646.1	(507.4, 822.7)	199	452.3	(406.9, 502.9)	**1.43 (1.10, 1.86)**	193.8
Schizophrenia	4	117.9	(65.9, 210.9)	49	119.4	(97.5, 146.3)	0.99 (0.53, 1.83)	-1.6
Mood (affective)	8	265.7	(178.8, 394.7)	63	143.0	(119.1, 171.7)	**1.86 (1.20, 2.87)**	122.6
—Bipolar	2	61.9	(27.4, 139.8)	14	38.8	(27.0, 55.9)	1.60 (0.65, 3.89)	23.1
—Depressive episode	4	138.9	(80.2, 240.5)	35	79.5	(62.4, 101.3)	1.75 (0.96, 3.18)	59.4
Substance use	4	100.4	(56.1, 179.5)	26	88.1	(68.2, 113.8)	1.14 (0.60, 2.15)	12.3
—Alcohol	3	71.1	(34.8, 144.9)	19	62.4	(45.9, 84.7)	1.14 (0.52, 2.48)	8.7
Anxiety, stress-related	3	75.3	(39.2, 145.0)	20	57.4	(42.1, 78.2)	1.31 (0.64, 2.71)	18.0

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

There were 23 hospital admissions for mental disorders per year on average among Māori residents of the West Coast DHB. Rates of hospitalisation for mental disorders were 43% higher for Māori than for non-Māori.

Mood disorders were the most common cause of admission for Māori women, with a rate of admission 3.3 times the rate for non-Māori women.

Schizophrenia related disorders were the most common causes of admission for Māori men.

Gout

Table 53: Gout prevalence and treatment, 20–79 years, West Coast DHB, 2011

Indicator	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	Count	%	Count	%		
Gout prevalence	92	4.6	909	4.2	1.09	0.4
People with gout who received allopurinol regularly	27	29.3	375	41.3	0.71	-11.9
NSAID use by people with gout	34	37.0	366	40.3	0.92	-3.3
Serum urate test within six months following allopurinol dispensing	12	25.0	121	24.0	1.04	1.0

Source: NZ Atlas of Healthcare Variation, Ministry of Health.
Notes: Denominator is people in contact with health services (using Health Tracker). Prevalence may be underestimated by up to 20%. Prevalence rates are not age adjusted. NSAID is non-steroidal anti-inflammatory medication.

In 2011, 92 Māori were estimated to have gout, a prevalence of almost 5%, similar to the prevalence in non-Māori. Under a third of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those who received allopurinol, only 25% had a laboratory test for serum urate levels within the following six months.

Table 54: Hospitalisations for gout, 25 years and over, West Coast DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
Female	1	68.8	(22.2, 213.4)	1	1.4	(0.3, 5.7)	**50.60**	**(8.10,**	**315.92)**	67.4
Male	<1	30.1	(4.2, 213.7)	4	21.5	(10.5, 44.0)	1.40	(0.17,	11.26)	8.6
Total	1	49.4	(18.4, 132.8)	5	11.4	(5.8, 22.5)	**4.32**	**(1.30,**	**14.31)**	38.0

Source: NMDS
Ratios in bold show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, one Māori per year was admitted to hospital for gout. The admission rate was four times as high for Māori as for non-Māori.

Hip fractures

There were no West Coast Māori admissions for hip fractures during 2011 to 2013.

Elective surgery

Table 55: Hospitalisations for hip replacements, 50 years and over, West Coast DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
Female	2	530.4	(238.0, 1181.9)	33	517.0	(419.0, 637.9)	1.03	(0.45,	2.35)	13.4
Male	1	201.3	(64.8, 625.0)	28	406.4	(324.6, 508.7)	0.50	(0.16,	1.57)	-205.1
Total	3	365.9	(189.3, 707.3)	61	461.7	(395.9, 538.4)	0.79	(0.40,	1.56)	-95.8

Source: NMDS
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, three West Coast Māori aged 50 years and over were admitted to hospital per year for a hip replacement.

Table 56: Publicly funded hospitalisations for cataract surgery, 45 years and over, West Coast DHB, 2011–2013

	Māori			Non-Māori					
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)		Rate difference
Female	3	522.8	(261.0, 1,047.4)	92	690.6	(603.7, 789.9)	0.76	(0.37, 1.54)	-167.8
Male	4	852.2	(486.6, 1,492.2)	83	631.2	(550.4, 723.8)	1.35	(0.76, 2.40)	221.0
Total	7	687.5	(444.4, 1,063.5)	175	660.9	(600.4, 727.4)	1.04	(0.67, 1.63)	26.6

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average seven Māori per year were admitted for cataract surgery at a rate of 688 per 100,000.

Mauri ora: All ages

This section presents information on overall hospitalisations, potentially avoidable and ambulatory sensitive hospitalisations, life expectancy at birth, overall mortality rates, leading causes of death, potentially avoidable mortality and mortality amenable to health care, and injuries. ICD codes for these classifications are provided in Appendix 2. Life expectancy at birth is presented for the West Coast Region.

Hospitalisations

Table 57: All-cause hospitalisations, all ages, West Coast DHB, 2011–2013

	Māori		Non-Māori			
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Māori/non-Māori ratio (95% CI)	Rate difference
Female	409	21,700.7 (20,472.8, 23,002.2)	3,874	21,185.1 (20,682.9, 21,699.5)	1.02 (0.96, 1.09)	515.6
Male	269	14,283.9 (13,296.6, 15,344.4)	3,493	15,929.4 (15,499.9, 16,370.8)	**0.90 (0.83, 0.97)**	-1,645.5
Total	678	17,992.3 (17,197.3, 18,824.0)	7,368	18,557.3 (18,225.6, 18,894.9)	0.97 (0.92, 1.02)	-565.0

Source: NMDS
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, there were 678 Māori hospital admissions per year and over 7,300 non-Māori admissions. All-cause admission rates were 10% lower for Māori males compared to non-Māori males. Among females the Māori admission rate was similar to that of non-Māori females.

Potentially avoidable hospitalisations

Table 58: Potentially avoidable hospitalisations, 0–74 years, West Coast DHB, 2011–2013

	Māori		Non-Māori			
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Māori/non-Māori ratio (95% CI)	Rate difference
Female	75	4,055.9 (3,540.7, 4,645.9)	492	3,011.1 (2,818.8 3,216.4)	**1.35 (1.16, 1.57)**	1044.8
Male	69	3,772.0 (3,277.0, 4,341.8)	628	3,608.6 (3,400.4 3,829.5)	1.05 (0.90, 1.22)	163.5
Total	144	3,913.9 (3,549.6, 4,315.7)	1,120	3,309.8 (3,166.9 3,459.2)	**1.18 (1.06, 1.32)**	604.1

Source: NMDS
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

During 2011–2013, on average 144 hospital admissions per year among Māori were potentially avoidable. The overall rate was 18% higher for Māori compared to non-Māori, or 604 more admissions per 100,000.

Table 59: Ambulatory care sensitive hospitalisations, 0–74 years, West Coast DHB, 2011–2013

	Māori		Non-Māori			
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Māori/non-Māori ratio (95% CI)	Rate difference
Female	43	2,409.5 (2,014.8, 2,881.5)	247	1,570.5 (1,429.6, 1,725.3)	**1.53 (1.25, 1.88)**	839.0
Male	47	2,581.4 (2,177.4, 3,060.5)	317	1,875.7 (1,724.9, 2,039.6)	**1.38 (1.14, 1.66)**	705.8
Total	90	2,490.1 (2,201.1, 2,816.9)	564	1,719.4 (1,615.1, 1,830.4)	**1.45 (1.26, 1.66)**	770.7

Source: NMDS
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, there were 90 ambulatory care sensitive hospitalisations per year among Māori, at a rate that was 45% higher than the non-Māori rate, or 771 more admissions per 100,000.

Mortality

Table 60: Life expectancy at birth, West Coast Region, 2012–2014

Gender	Māori		Non-Māori		Difference in years
	Years (95% credible interval)		Years (95% credible interval)		
Female	80.3	(77.8, 83.3)	82.8	(82.2, 83.3)	-2.5
Male	76.2	(73.5, 79.4)	79.1	(78.5, 79.7)	-2.9

Source: Statistics New Zealand Subnational Period Life Tables: 2012–14.
Notes: This data is for the West Coast Region. A map of Regional Council boundaries can be found here. The credible interval is the 2.5th percentile and the 97.5th percentile, the years of expected life at birth is the 50th percentile. Further information on the regional life tables and methods can be found here.

Life expectancy at birth is a summary measure of age-specific mortality rates during a specific period. During 2012–2014, among residents of the West Coast Region, life expectancy at birth was 80.3 years for Māori females, 2.5 years lower than for non-Māori females (82.8 years). For Māori males, life expectancy was 76.2 years, 2.9 years lower than that of non-Māori males (79.1 years). However, the differences between Māori and non-Māori life expectancy at birth were not statistically significant.

Table 61: All-cause deaths, all ages, West Coast DHB, 2003–2012

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
Female	5	285.9	(209.0, 391.1)	119	181.7	(164.6, 200.6)	**1.57**	**(1.13,**	**2.19)**	104.2
Male	8	471.9	(373.3, 596.6)	131	282.8	(260.4, 307.2)	**1.67**	**(1.30,**	**2.14)**	189.1
Total	13	378.9	(314.0, 457.2)	250	232.3	(218.0, 247.5)	**1.63**	**(1.34,**	**1.99)**	146.6

Source: Mortality dataset, Ministry of Health.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

During the ten-year period 2003 to 2012, there were 13 Māori deaths per year on average on the West Coast. The Māori mortality rate was 63% higher than the non-Māori rate, or 147 more deaths per 100,000.

Table 62: Leading causes of death for Māori, all ages, West Coast DHB, 2002–2011

Gender and cause	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)					
Female										
Stroke	1	46.4	(24.9, 86.3)	11	12.6	(9.8, 16.2)	**3.69**	**(1.89,**	**7.21)**	33.8
COPD	1	36.5	(14.6, 91.6)	8	9.6	(7.4, 12.5)	**3.80**	**(1.46,**	**9.90)**	26.9
Lung cancer	1	23.0	(9.6, 55.4)	7	12.6	(9.5, 16.6)	1.83	(0.73,	4.60)	10.5
IHD	1	41.1	(15.1, 111.9)	19	18.2	(15.1, 21.8)	2.26	(0.82,	6.27)	22.9
Accidents	1	27.3	(11.2, 66.1)	4	17.2	(10.8, 27.4)	1.58	(0.58,	4.30)	10.0
Male										
IHD	1	72.6	(42.7, 123.6)	28	45.0	(39.5, 51.3)	1.61	(0.93,	2.79)	27.6
Accidents	1	87.8	(49.3, 156.3)	11	71.8	(57.8, 89.2)	1.22	(0.66,	2.26)	16.0
COPD	1	46.9	(23.2, 95.0)	10	12.7	(10.3, 15.7)	**3.69**	**(1.77,**	**7.71)**	34.2
Suicide	1	42.7	(18.7, 97.2)	3	17.7	(12.0, 26.3)	2.40	(0.97,	5.99)	24.9
Lung cancer	1	26.1	(10.9, 62.8)	9	14.8	(11.9, 18.5)	1.76	(0.71,	4.35)	11.3
Total										
IHD	2	56.9	(34.6, 93.4)	47	31.6	(28.4, 35.2)	**1.80**	**(1.08,**	**2.99)**	25.3
Accidents	2	57.5	(35.3, 93.7)	15	44.5	(36.6, 54.2)	1.29	(0.76,	2.19)	13.0
COPD	1	41.7	(23.7, 73.4)	17	11.2	(9.5, 13.2)	**3.74**	**(2.08,**	**6.74)**	30.6
Stroke	1	25.7	(14.2, 46.5)	18	11.8	(9.5, 14.7)	**2.18**	**(1.16,**	**4.10)**	14.0
Lung	1	24.6	(13.2, 45.8)	15	13.7	(11.5, 16.4)	1.79	(0.94,	3.42)	10.9

Source: Mortality dataset, Ministry of Health.

Notes: IHD is ischaemic heart disease, COPD is chronic obstructive pulmonary disease.
Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

The leading causes of death for West Coast Māori women during the decade 2002 to 2011 were stroke, chronic obstructive pulmonary disease (COPD), lung cancer, ischaemic heart disease (IHD), and accidents. The mortality rates for stroke and COPD were more than three-and-a-half times the rates for non-Māori women.

For Māori men, the leading causes of death were IHD, accidents, COPD, suicide, and lung cancer. The rate of death from COPD was over three-and-a-half times the rate for non-Māori men.

Data on leading causes of death by ICD chapter are available in the accompanying Excel tables.

Potentially avoidable mortality

Avoidable mortality includes deaths occurring among those less than 75 years old that could potentially have been avoided through population-based interventions (including actions to address the social determinants of health) or through preventive and curative interventions at an individual level.

Amenable mortality is a subset of avoidable mortality and is restricted to deaths from conditions that are amenable to health care.

Table 63: Potentially avoidable mortality, 0–74 years, West Coast DHB, 2002–2011

	Māori			Non-Māori				
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Female	3	161.7	(114.4, 228.6)	28	96.5	(82.7, 112.7)	**1.67 (1.15, 2.45)**	65.1
Male	5	276.8	(205.9, 372.0)	47	160.8	(142.5, 181.4)	**1.72 (1.25, 2.37)**	116.0
Total	8	219.2	(174.8, 274.9)	75	128.7	(117.0, 141.5)	**1.70 (1.33, 2.18)**	90.6

Source: Mortality, Ministry of Health
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

During 2007 to 2011, there was an average of eight potentially avoidable deaths per year among West Coast Māori, at a rate 70% higher than the rate for non-Māori, or 91 more deaths per 100,000.

Table 64: Amenable mortality, 0–74 years, West Coast DHB, 2002–2011

	Māori			Non-Māori				
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)	Rate difference
Female	2	118.8	(79.0, 178.5)	19	68.7	(56.8, 83.1)	**1.73 (1.10, 2.71)**	50.1
Male	4	208.7	(148.9, 292.7)	35	122.1	(106.2, 140.4)	**1.71 (1.19, 2.46)**	86.6
Total	6	163.8	(126.1, 212.6)	54	95.4	(85.3, 106.8)	**1.72 (1.29, 2.28)**	68.3

Source: Mortality, Ministry of Health
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

The amenable mortality rate was 72% higher for Māori than for non-Māori, or 68 more deaths per 100,000. On average there were six deaths per year from conditions amenable to health care among West Coast Māori.

Injuries

A table on the causes of hospital admissions for injuries can be found in the accompanying Excel tables. The most common causes of injury resultingin a hospital admission among West Coast Māori were exposure to mechanical forces, falls, complications of medical and surgical care, intentional self-harm, and transport accidents.

Table 65: Hospitalisations for injury, all ages, West Coast DHB, 2011–2013

	Māori			Non-Māori					
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)		Rate difference
Female	28	1,530.3	(1,224.6, 1,912.2)	281	1,488.9	(1,358.6, 1,631.7)	1.03	(0.81, 1.31)	41.3
Male	34	1,974.5	(1,613.7, 2,415.8)	382	2,368.7	(2,203.5, 2,546.3)	0.83	(0.67, 1.03)	-394.2
Total	61	1,752.4	(1,508.8, 2,035.2)	663	1,928.8	(1,822.4, 2,041.4)	0.91	(0.77, 1.07)	-176.5

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average, 61 Māori per year were hospitalised for injury at a similar rate to non-Māori.

Table 66: Hospitalisations for assault, all ages, West Coast DHB, 2011–2013

	Māori			Non-Māori					
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)		Rate difference
Female	<1	22.1	(3.1, 156.7)	2	19.3	(8.0, 46.9)	1.14	(0.13, 9.81)	2.7
Male	2	93.1	(37.6, 230.0)	15	120.2	(87.2, 165.6)	0.77	(0.30, 2.02)	-27.1
Total	2	57.6	(25.3, 131.0)	16	69.8	(51.6, 94.4)	0.83	(0.34, 1.98)	-12.2

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

On average two Māori per year were admitted to hospital for injury caused by assault.

Table 67: Deaths from injury, all ages, West Coast DHB, 2002–2011

	Māori			Non-Māori					
Gender	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Māori/non-Māori ratio (95% CI)		Rate difference
Female	1	27.3	(11.2, 66.1)	5	22.4	(15.1, 33.3)	1.22	(0.46, 3.20)	4.8
Male	2	139.6	(88.1, 221.2)	15	93.7	(77.7, 112.9)	1.49	(0.91, 2.45)	45.9
Total	2	83.4	(55.3, 125.9)	20	58.1	(49.0, 68.7)	1.44	(0.92, 2.24)	25.4

Source: Mortality dataset, Ministry of Health.

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB.

During the ten-year period 2002 to 2011, an average of two West Coast Māori died from injuries per year. Mortality rates were higher for males than females.

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Appendix 1: Population projections

Table 68: Māori population projections, single year by age group, West Coast DHB, 2013 to 2020

Projected Māori Ethnic Group Population by Age and Sex at 30 June 2014-20 (2013-Base)

*** Medium Projection : Assuming Medium Fertility, Medium Mortality, Medium Inter-Ethnic Mobility, and Medium Migration ***

Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	2013(Base)			2014			2015			2016		
0	50	50	100	50	40	90	50	40	90	50	40	90
1-4	150	170	320	160	180	340	170	180	350	180	180	360
5-9	190	180	370	200	180	380	200	200	400	190	200	390
10–14	210	170	380	190	180	370	180	170	350	190	170	360
15-19	180	170	350	190	160	350	190	160	350	190	170	360
20-24	150	140	290	150	150	300	160	160	320	150	160	310
25-29	100	110	210	110	120	230	110	120	230	120	110	240
30-34	80	110	180	80	100	180	90	100	190	80	100	180
35-39	90	110	210	90	100	190	80	100	180	90	110	200
40-44	100	130	230	100	120	220	100	130	230	90	120	210
45-49	110	130	240	100	140	240	90	140	230	90	130	230
50-54	110	140	250	120	140	250	120	140	260	120	140	270
55-59	80	80	160	80	90	170	90	100	190	90	100	200
60-64	50	60	110	60	70	130	50	70	120	60	70	130
65-69	30	50	80	30	50	90	40	60	100	50	60	110
70-74	30	30	60	20	30	60	30	30	60	30	40	70
75-79	20	20	40	20	20	40	20	20	40	20	30	40
80-84	10	10	20	20	10	30	20	10	30	10	10	30
85-89	0	0	0	0	0	10	0	0	10	10	10	10
90+	0	0	0	0	0	0	0	0	0	0	0	0
All Ages	**1,740**	**1,860**	**3,600**	**1,770**	**1,900**	**3,670**	**1,810**	**1,930**	**3,730**	**1,840**	**1,960**	**3,790**
	2017			2018			2019			2020		
0	50	40	90	50	40	90	50	40	90	50	40	90
1-4	190	180	370	190	180	360	180	170	360	180	170	360
5-9	200	210	410	200	220	420	210	220	430	210	220	440
10–14	180	160	340	190	170	360	190	180	370	200	200	390
15-19	200	160	360	190	160	350	180	160	340	160	150	320
20-24	150	160	310	160	150	310	170	140	310	170	130	300
25-29	130	120	250	140	130	270	140	140	280	150	150	300
30-34	90	110	190	100	110	200	100	120	220	100	120	220
35-39	90	110	200	70	100	180	80	100	180	90	100	190
40-44	90	110	200	90	110	200	90	100	190	80	100	180
45-49	100	130	230	100	130	220	100	120	220	100	120	220
50-54	120	130	250	100	130	230	90	140	230	90	130	220
55-59	100	120	220	110	130	240	110	130	240	120	130	250
60-64	60	80	140	70	80	150	80	90	160	90	90	180
65-69	50	50	100	50	60	110	60	70	120	50	70	120
70-74	30	50	80	30	50	80	30	50	80	40	60	100
75-79	20	30	60	20	30	60	20	30	50	30	30	60
80-84	10	20	30	20	20	30	20	20	40	20	20	40
85-89	10	10	10	10	10	20	20	10	30	20	10	30
90+	0	0	0	0	0	0	0	0	10	0	0	10
All Ages	**1,860**	**1,980**	**3,840**	**1,880**	**2,010**	**3,890**	**1,910**	**2,030**	**3,940**	**1,940**	**2,060**	**4,000**

These projections were derived in October 2014.

Source: Statistics New Zealand
Population Projections

Table 69: Total population projections, single year, by age group, West Coast DHB, 2013 to 2020

Projected Total Population by Age and Sex at 30 June 2014-20 (2013-Base)

*** Medium Projection : Assuming Medium Fertility, Medium Mortality, and Medium Migration ***

Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	2013(Base)			2014			2015			2016		
0	190	220	420	210	200	400	210	200	410	210	200	410
1-4	890	900	1,790	860	880	1,740	830	870	1,690	830	870	1,690
5-9	1,100	970	2,070	1,110	1,040	2,150	1,170	1,090	2,260	1,140	1,110	2,250
10–14	1,050	990	2,040	1,030	970	2,010	1,040	950	1,990	1,060	910	1,980
15-19	1,000	930	1,930	1,000	880	1,880	950	850	1,810	950	850	1,800
20-24	910	840	1,750	930	880	1,810	950	900	1,850	950	890	1,840
25-29	820	850	1,670	910	910	1,820	960	980	1,940	1,030	1,030	2,060
30-34	780	910	1,690	780	910	1,690	850	910	1,760	870	900	1,770
35-39	900	980	1,880	860	960	1,820	840	960	1,800	840	990	1,830
40-44	1,140	1,220	2,360	1,140	1,190	2,330	1,120	1,140	2,260	1,060	1,110	2,170
45-49	1,270	1,310	2,580	1,200	1,260	2,460	1,150	1,270	2,420	1,140	1,260	2,400
50-54	1,440	1,400	2,840	1,430	1,450	2,880	1,410	1,420	2,820	1,370	1,350	2,720
55-59	1,320	1,170	2,500	1,350	1,210	2,570	1,400	1,250	2,650	1,430	1,330	2,760
60-64	1,160	990	2,150	1,190	1,020	2,200	1,210	1,060	2,270	1,250	1,090	2,340
65-69	960	880	1,830	1,000	910	1,910	1,060	940	2,000	1,110	950	2,060
70-74	700	640	1,340	750	650	1,400	750	700	1,450	750	720	1,470
75-79	450	470	910	460	480	930	500	510	1,010	540	530	1,070
80-84	310	360	680	320	360	680	320	330	640	320	330	650
85-89	170	190	360	160	200	360	160	220	370	170	220	390
90+	50	110	170	60	120	180	70	120	190	70	130	200
All Ages	16,600	16,300	33,000	16,800	16,500	33,200	17,000	16,600	33,600	17,100	16,800	33,800
	2017			2018			2019			2020		
0	210	200	410	210	200	410	210	200	410	210	200	420
1-4	840	850	1,690	860	820	1,680	860	820	1,680	860	820	1,680
5-9	1,130	1,140	2,260	1,100	1,140	2,250	1,070	1,090	2,170	1,040	1,070	2,110
10–14	1,070	900	1,970	1,070	930	2,000	1,070	1,000	2,070	1,130	1,040	2,170
15-19	930	830	1,760	910	800	1,710	890	780	1,670	890	740	1,630
20-24	930	860	1,790	910	830	1,740	900	760	1,660	830	730	1,550
25-29	1,050	1,060	2,110	1,080	1,060	2,150	1,080	1,080	2,160	1,080	1,080	2,160
30-34	910	950	1,860	930	1,010	1,940	1,010	1,050	2,060	1,040	1,100	2,140
35-39	840	970	1,810	830	940	1,770	830	930	1,760	890	920	1,810
40-44	970	1,050	2,020	930	990	1,920	890	960	1,850	850	960	1,810
45-49	1,180	1,250	2,430	1,160	1,230	2,390	1,160	1,190	2,350	1,120	1,140	2,260
50-54	1,320	1,330	2,650	1,270	1,320	2,600	1,200	1,260	2,470	1,150	1,260	2,410
55-59	1,440	1,370	2,810	1,440	1,410	2,840	1,420	1,450	2,870	1,400	1,410	2,810
60-64	1,300	1,130	2,430	1,310	1,140	2,460	1,340	1,180	2,530	1,380	1,210	2,590
65-69	1,090	930	2,020	1,120	940	2,070	1,140	970	2,110	1,160	1,000	2,160
70-74	810	760	1,570	870	810	1,670	910	840	1,750	970	860	1,830
75-79	570	570	1,140	580	570	1,150	630	580	1,210	630	620	1,250
80-84	320	350	670	330	380	700	330	380	710	370	410	780
85-89	180	230	410	180	230	410	190	230	420	190	200	390
90+	70	120	190	70	110	180	70	120	190	70	130	200
All Ages	17,200	16,800	34,000	17,200	16,900	34,100	17,200	16,900	34,100	17,300	16,900	34,200

These projections were derived in October 2014.

Source: Statistics New Zealand

Population Projections

Appendix 2: Technical notes

This appendix provides a list of data sources and technical information on the analyses of deaths, cancer registrations, and hospitalisations, Census data and data from Te Kupenga 2013.

Data sources

Table 70: Data sources

Source (agency or collection)	Data	Period
Action on Smoking and Health (ASH)	ASH Year 10 Snapshot Survey	2013
Health Quality and Safety Commission	New Zealand Atlas of Healthcare Variation	2011, 2013
Ministry of Education	ENROL (Education Counts)	2013
Ministry of Health	Birth registrations	2009–2013
	B4 School Check Information System	2013
	Cancer Registry	2008–2012
	Community Oral Health Service	2013
	Death registrations	2007–2012*
	National Immunisation Register	2008–2014
	National Maternity Collection	2013
	National Screening Unit	2010–2014
	PHO Enrolment Collection	2012–2013
	Well Child/Tamariki Ora Indicators	2014
	National Minimum Data Set (NMDS) – hospital discharges	2011–2013
Plunket	Breastfeeding rates	2013
Statistics New Zealand	Census of Population and Dwellings	2006
	Census of Population and Dwellings	2013
	NZ Population projections for the Ministry of Health (2013 Census base)	2014
	Te Kupenga 2013, the Māori Social Survey	2013
	Subnational Period Life Tables	2012–2014

Note: *no causes for 2012

Data from the Census of Population and Dwellings

Indicators using data from the Census of Population and Dwellings include the Census usually resident population.

Prioritised ethnicity was used to identify Māori individuals (any person who identified Māori as any of their ethnic groups) and non-Māori included people who had at least one valid ethnic response, none of which was Māori.

Households were classified as Māori if any usual resident was Māori. Households were counted if they were in private occupied dwellings.

People living in households included the population resident in permanent private households.

Standard Census definitions and forms can be found here.

Data on proportions of people were age-standardised to the 2001 Māori population.

Data from Te Kupenga 2013

Te Kupenga 2013 was a post-census survey of individuals who identified with Māori ethnicity or Māori descent in the 2013 Census. The target population was the usually resident Māori population of New Zealand, living in

occupied private dwellings on the 2013 Census night and aged 15 years or older. The data was collected during June to August 2013.

All estimates of numbers, percentages, and confidence intervals for data presented from Te Kupenga were calculated by Statistics New Zealand. The estimates of numbers of people in the DHB were rounded to the nearest five hundred in order to provide a more appropriate level of precision to the sample survey. All percentages were calculated from unrounded data.

Further details on the survey measures are available in the Te Kupenga 2013 Data Dictionary.

Deaths, hospitalisations and cancer registrations

Ethnicity

Most indicators are presented for Māori and non-Māori. In each data set a person was classified as Māori if any one of their recorded ethnicity was Māori. No adjusters for undercount of hospitalisations, cancer registrations, or deaths were applied.

Residence

The DHB of residence was determined from the domicile code attached to the public hospital discharge record, the death registration, or the cancer registration.

Hospital transfers

For ambulatory sensitive hospitalisations and analyses of hospitalisations by cause (such as asthma, ischaemic heart disease) transfers to other services or others hospitals were not counted as an admission if the admission had an ambulatory sensitive diagnosis or had the same principal diagnosis group respectively, was on the same day or the following day as the initial admission and either had its admission source code as 'transfer from another hospital facility' or initial admission had its event end type code indicating a discharge to an acute facility, another healthcare facility, or other service within same facility. For avoidable hospitalisations, all admissions, the tables of hospitalisations for mental disorders, causes of hospital admissions for injuries and causes of admissions, admissions were not counted if the admission had its admission source code as 'transfer from another hospital facility'.

Suppression of causes of death or hospitalisation

In tables presenting data on causes of death, hospitalisation, or cancer registrations by site, data is not presented where there were fewer than five Māori events during the period represented by the data.

Ninety-five percent confidence intervals

The rates and ratios presented are estimates of the 'true' rate or ratio, calculated using data available. The 95% confidence interval (CI) indicates the interval that has a 95% probability of enclosing the 'true' value.

The CI is influenced by the population size of the group. When the population is small, the CI becomes wider and there is less certainty about the rate.

When the CIs of two groups do not overlap, the difference in rates between the groups is statistically significant. Sometimes, even when there are overlapping CIs, the difference between the groups may be statistically significant. In this report, if CIs overlap but a difference has been reported, a test of statistical significance (the log-transformation method) was performed (Clayton and Hills 1993).

Age standardisation

Age-standardised rates adjust for differences in age distribution of the populations being compared. They are artificial rates created to allow comparisons to be made with differing groups. Age-standardised rates are calculated by applying age-specific rates to a standard population; they should only be compared with other adjusted rates that were calculated using the same 'standard' population. The standard population used in this report was the 2001 Census Māori population (shown below).

Rates for the total Māori and non-Māori populations were age–sex-standardised. This means the rates were standardised to a population with equal numbers of males and females and the age distribution of the total Māori population from the 2001 Census (Robson, Purdie et al 2007).

Standardising to the Māori population provides age-standardised rates that closely approximate the crude Māori rates (the actual rates among the Māori population) while also allowing comparisons with the non-Māori population. Care should be taken when using data from another source that are standardised using a different standard population, as they are not comparable.

Table 71: 2001 Census total Māori population

Age group (years)	2001 Census total Māori population	Weighting
0–4	67,404	12.81
5–9	66,186	12.58
10–14	62,838	11.94
15–19	49,587	9.42
20–24	42,153	8.01
25–29	40,218	7.64
30–34	39,231	7.46
35–39	38,412	7.30
40–44	32,832	6.24
45–49	25,101	4.77
50–54	19,335	3.67
55–59	13,740	2.61
60–64	11,424	2.17
65–69	8,043	1.53
70–74	5,046	0.96
75–79	2,736	0.52
80–84	1,251	0.24
85 and over	699	0.13

ICD-10 codes

The International Classification of Diseases (ICD-10) codes used for the calculation of avoidable and ambulatory sensitive hospitalisations and avoidable and amenable mortality are presented in Tables 45 to 49 below. For the Excel tables of deaths by cause, hospitalisations by cause, mental disorders, hospitalisations for injuries by external cause, and cancer registrations, the codes are listed in Appendix 2 of Hauora: Māori Standards of Health IV. For other tables, the ICD codes are listed in the accompanying Excel tables.

Table 72: Potentially avoidable hospitalisation ICD-10 codes for children aged 1 month to 14 years

Condition	ICD-10-AM code
Acute bronchiolitis	J21
Acute rheumatic fever	I00–I02
Acute upper respiratory tract infection excluding croup	J00–J03, J06
Asthma	J45, J46
Bacterial meningitis*	G00, G01

Bacterial/Unspecified pneumonia	J13–J16, J18
Bronchiectasis	J47
Constipation	K59.0
Chronic rheumatic heart disease	I05–I09
Croup, acute laryngitis, tracheitis	J04, J05.0
Dental (dental caries, pulp, periodontal)	K02, K04, K05
Dermatitis/eczema	L20–L30
Febrile convulsions	R560
Gastroenteritis	A00–A09, K529, R11,
Gastro oesophageal reflux	K21
Meningococcal disease	A39
Nutritional deficiency	D50–D53, E40–E64,
Otitis media	H65–H67
Osteomyelitis	M86
Skin infection	H00.0, H01.0, J34.0, L00–L05, L08, L98.0
Tuberculosis	A15–A19
Urinary tract infection ≥ 5 years	N10, N12, N13.6, N30.0, N30.9, N39.0,
Vaccine preventable diseases: tetanus neonatorum congenital rubella	P350, A33, A34
tetanus, diphtheria, pertussis, polio, hepatitis B	A35, A36, A37, A80, B16, B18.0, B18.1
measles, rubella, mumps	B05, B06, B26, M01.4
Viral pneumonia	J12, J10.0, J11.0
Viral /other / unspecified meningitis	A87, G02, G03
Viral infection of unspecified site	B34

Source: Anderson et al (2012)

Notes:

Includes all acute admissions and arranged admissions that were admitted within 7 days.

Waiting list admissions were excluded, apart from dental admissions which were all included.

Admissions were included for patients aged 29 days through to 14 years, at admission.

Table 73: Ambulatory care sensitive hospitalisation ICD-10 codes for children aged 1 month to 14 years

Condition	ICD-10-AM code
Acute rheumatic fever	I00–I02
Acute upper respiratory tract infections excluding croup	J00–J03, J06
Asthma	J45, J46
Bacterial/Unspecified pneumonia	J13–J16, J18
Bronchiectasis	J47
Constipation	K59.0
Chronic rheumatic heart disease	I05–I09
Dental (dental caries, pulp, periodontal)	K02, K04, K05
Dermatitis/eczema	L20–L30
Gastroenteritis	A02–A09, K529, R11
Gastro oesophageal reflux	K21
Nutritional deficiency	D50–D53, E40–E64
Otitis media	H65–H67
Skin infection	L00–L04, L08, L98.0, J34.0, H01.0, H00.0
Urinary tract infection ≥ 5 years	N10, N12, N136, N30.0, N30.9, N39.0
Vaccine preventable diseases: tetanus neonatorum congenital rubella	P350, A33, A34
> 6 months: tetanus, diphtheria, pertussis, polio, hepatitis B	A35, A36, A37, A80, B16, B18.0, B18.1
> 16 months: measles, rubella, mumps	B05, B06, B26, M01.4

Source: Anderson et al (2012)

Notes:

Includes all acute admissions and arranged admissions that were admitted within 7 days.

Waiting list admissions were excluded, apart from dental admissions which were all included.

Admissions were included for patients aged 29 days through to 14 years, at admission.

Table 74: Ambulatory care sensitive hospitalisation ICD-10 codes for people aged 1 month to 74 years

Condition	ICD-10 code
Gastroenteritis/dehydration	A02–A09, K52.9, R11
Vaccine preventable disease MMR	B05*, B06*, B26*, M01.4*, P35.0
Vaccine preventable disease Other ‡	A33–A37, A40.3, A80, B16, B18
Sexually transmitted infections §	A50–A59, A60, A63, A64, I98.0, M02.3, M03.1, M73.0, M73.1, N29.0, N34.1
Cervical cancer §	C53
Nutrition deficiency and anaemia	D50–D53, E40–E46, E50–E64, M83.3§
Diabetes §	E10–E14, E162
Epilepsy §	G40, G41, O15, R56.0, R56.8
Upper respiratory and ENT	H65, H66, H67, J00–J04, J06
Rheumatic fever/heart disease	I00, I01, I02, I05–I09
Hypertensive disease §	I10–I15, I67.4
Angina and chest pain † §	I20, R07.2–R07.4
Myocardial infarction † §	I21–I23, I24.1
Other ischaemic heart disease † §	I24.0, I24.8, I24.9, I25
Congestive heart failure §	I50, J81
Stroke † §	I61, I63–I66
Pneumonia	J13–J16, J18
Asthma	J45, J46
Bronchiectasis ||	J47
Dental conditions	K02, K04, K05
Gastro-oesophageal reflux disease	K21
Peptic ulcer §	K25–K28
Constipation	K590
Cellulitis	H00.0, H01.0, J34.0, L01–L04, L08, L98.0
Dermatitis and eczema	L20–L30
Kidney/urinary infection ¶	N10, N12, N13.6, N30.9, N39.0

Source: Ministry of Health

Notes:

Acute and arranged (occurring in less than 7 days of decision) admissions, except dental where elective admission are also included.

Excluding discharges from an emergency department with one day of stay or shorter.

* Aged 15 months to 14 years.

† Each admission counts as a half.

‡ Aged six months to 14 years.

§ Aged 15 years and over.

|| Aged more than 15 years.

¶ Aged 5 years and over.

Table 75: Avoidable mortality ICD-10 codes

Condition	ICD-10-AM
Tuberculosis	A15–A19, B90
Selected invasive bacterial and protozoal infection	A38–A41, A46, A48.1, B50–B54, G00, G03, J02.0, J13–J15, J18, L03
Hepatitis	B15–B19
HIV/AIDS	B20–B24
Viral pneumonia and influenza	J10, J12, J17.1, J21
Lip, oral cavity and pharynx cancers	C00–C14
Oesophageal cancer	C15
Stomach cancer	C16
Colorectal cancer	C18–C21
Liver cancer	C22
Lung cancer	C33–C34
Bone and cartilage cancer	C40–C41*
Melanoma of skin	C43
Non-melanotic skin cancer	C44
Breast cancer (female only)	C50
Uterine cancer	C54–C55
Cervical cancer	C53
Prostate	C61*

Testis	C62*
Bladder cancer	C67
Thyroid cancer	C73
Hodgkin's disease	C81
Lymphoid leukaemia, acute/chronic	C91.0, C91.1
Benign tumours	D10–D36
Thyroid disorders	E00–E07
Diabetes	E10–E14**
Alcohol-related diseases	F10, I42.6, K29.2, K70
Illicit drug use disorders	F11–F16, F18–F19
Epilepsy	G40–G41
Rheumatic and other valvular heart diseases	I01–I09, I33–I37*
Hypertensive heart disease	I10*, I11
Ischaemic heart disease	I20–I25
Heart failure	I50*
Cerebrovascular diseases	I60–I69
Aortic aneurysm	I71
Nephritis and nephrosis	I12–I13, N00–N09, N17–N19
Obstructive uropathy and prostatic hyperplasia	N13, N20–N21, N35, N40, N99.1
DVT with pulmonary embolism	I26, I80.2
COPD	J40–J44***
Asthma	J45–J46***
Peptic ulcer disease	K25–K28
Acute abdomen, appendicitis, intestinal obstruction, cholecystitis/lithiasis, pancreatitis, hernia	K35–K38, K40–K46, K80–K83, K85–K86, K91.5
Chronic liver disease (excluding alcohol related disease)	K73, K74
Complications of pregnancy	O00–O96*, O98–O99*
Birth defects	H31.1, P00, P04, Q00–Q99
Complications of perinatal period	P01–P02*, P03, P05–P95
Road traffic injuries	V01–V04, V06, V09–V80, V82–V86*, V87, V88.0–V88.5*, V88.7–V88.9*, V89, V98*, V99
Accidental poisonings	X40–X49
Falls	W00–W19
Fires	X00–X09
Drownings	W65–W74
Suicide and self-inflicted injuries	X60–X84, Y87.0
Violence	X85–Y09, Y87.1
Event of undetermined intent	Y10–Y34, Y87.2****
Treatment injury	Y60–Y82*

Notes: *Added from amenable mortality
**E09 should be added if using ICD-10 AM version 3 or higher.
***All ages added from amenable mortality
****Y87.2 added by authors for completeness

Table 76: Amenable mortality ICD-10 codes

Group	Condition	ICD-10
Infections	Pulmonary tuberculosis	A15–A16
	Meningococcal disease	A39
	Pneumococcal disease	A40.3, G00.1, J13
	HIV/AIDS	B20–B24
Cancers	Stomach	C16
	Rectum	C19–C21
	Bone and cartilage	C40–C41
	Melanoma	C43
	Female breast	C50
	Cervix	C53
	Testis	C62
	Prostate	C61
	Thyroid	C73
	Hodgkin's	C81
	Acute lymphoblastic leukaemia (age 0–44 years)	C91.0
Maternal and infant	Complications of pregnancy	O00–O96, O98–O99
	Complications of the perinatal period	P01–P03, P05–P94
	Cardiac septal defect	Q21
Chronic disorders	Diabetes	E10–E14*
	Valvular heart disease	I01, I05–I09, I33–I37
	Hypertensive diseases	I10–I13
	Coronary disease	I20–I25
	Heart failure	I50
	Cerebrovascular diseases	I60–I69
	Renal failure	N17–N19
	Pulmonary embolism	I26
	COPD	J40-J44
	Asthma	J45–J46
	Peptic ulcer disease	K25–K27
	Cholelithiasis	K80
Injuries	Suicide	X60–X84
	Land transport accidents (excluding trains)	V01–V04,V06–V14, V16–V24, V26–V34, V36–V44, V46–V54, V56–V64, V66–V74, V76–V79, V80.0–V80.5, V80.7–V80.9, V82–V86, V87.0–V87.5, V87.7–V87.9, V88.0–V88.5, V88.7–V88.9, V89, V98–V99
	Falls (accidental fall on same level)	W00–W08, W18
	Fire, smoke or flames	X00–X09
	Treatment injury	Y60–Y82

Source: Ministry of Health 2010

Note: * E09 should be added if using ICD-10 AM version 3 or higher.

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