



Waikato
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

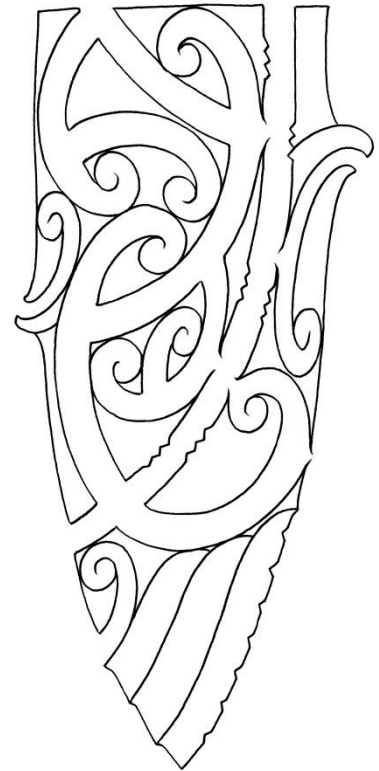
The cover design represents the journey of data from its production to its use by the health sector. The overall shape of the design is the prized rei puta. This signifies the importance of information and the acknowledgement that knowledge is a taonga.

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](#).



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 awahi 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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Ngā mihi nui ki a koutou katoa.

Nā,

Te Rōpū Rangahau Hauora a Eru Pōmare (Eru Pōmare Māori Health Research Centre)
University of Otago Wellington



Tiro whānui

– Waikato at a glance

Waikato population

- In 2013, 84,900 Māori lived in the Waikato District Health Board region, 23% of the District's total population.
- The Waikato Māori population is youthful, but showing signs of ageing. In 2013, over a third (35%) of the District's children under 15 years of age, and 29% of those aged 15–24 years were Māori.
- The Māori population aged 65 years and over will increase by 50% between 2013 and 2020.

Whānau ora – Healthy families

- In 2013, most Waikato Māori adults (87%) reported that their whānau was doing well, but 4% felt their whānau was doing badly. A small proportion (6%) found it hard to access whānau support in times of need, but most found it easy (82%).
- Being involved in Māori culture was important to 73% of Māori adults and spirituality was important to 71%.
- Practically all (99%) Waikato Māori had been to a marae at some time. A majority (62%) had been to their ancestral marae, with a similar proportion (60%) stating they would like to go more often.
- One in eight had taken part in traditional healing or massage in the last 12 months.
- Almost a quarter of Waikato Māori could have a conversation about a lot of everyday things in te reo Māori in 2013.

Wai ora – Healthy environments

Education

- In 2013, 93% of Waikato Māori children had participated in early childhood education.
- In 2013, 46% of Māori adults aged 18 years and over had at least a Level 2 Certificate, an increase since 2006 (40%). Māori were 29% less likely than non-Māori to have a Level 2 Certificate or higher in 2013.

Work

- In 2013, 12% of Māori adults aged 15 years and over were unemployed, more than twice the non-Māori rate (5%).
- Most Māori adults (89%) did voluntary work.
- In 2013, Māori were around twice as likely as non-Māori to look after someone within the home who was disabled or ill, and three-quarters more likely to look after someone outside the home.

Income and standard of living

- In 2013, two in five children and one in three 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 one in five children and adults in other households.
- In 2013, one in ten Waikato Māori adults reported putting up with feeling the cold a lot to keep costs down during the previous 12 months, 4% had gone without fresh fruit and vegetables, and 7% had postponed or put off visits to the doctor.

- Residents of Māori households were 3.7 times as likely as residents of other households to have no access to a motor vehicle in 2013.
- People in Māori households were less likely to have access to telecommunications than those living in other households: 35% had no internet, 32% no telephone, 13% no mobile phone, and 4% had no access to any telecommunications.

Housing

- The most common housing problems reported to be a big problem by Māori adults in 2013 were finding it hard to keep warm (16%), needing repairs (14%), and damp (11%).
- Three out of five children in Waikato Māori households were living in rented accommodation, twice the proportion of children in other households.
- Waikato residents living in Māori households were 3 times as likely as those living in other households to be in crowded homes (i.e. requiring at least one additional bedroom) (20% compared to 7%).

Area deprivation

- Using the NZDep2013 index of small area deprivation, 26% of Waikato Māori lived in the most deprived decile areas (decile 10) compared to 9% of non-Māori. Conversely, only 6% of Māori resided in the two least deprived decile neighbourhoods compared to 17% of non-Māori.

Mauri ora – Healthy individuals

Pepi, tamariki – Infants and children

- On average, 2,180 Māori infants were born per year during 2009–2013, 40% of all live births in the DHB. Seven percent of Māori and 6% of non-Māori babies had low birth weight.
- In 2013, 69% of Māori babies in Waikato were fully breastfed at 6 weeks.
- Two-thirds of Māori infants were enrolled with a Primary Health Organisation by three months of age.
- In 2014, 85% of Māori children were fully immunised at 8 months of age, 89% at 24 months.
- In 2013, two-thirds of Waikato Māori children aged 5 years and one-third of non-Māori children had caries. At Year 8 of school, almost three in five Māori children and just over two in five non-Māori children had caries. Māori children under 15 years were two-fifths more likely than non-Māori to be hospitalised for tooth and gum disease.
- During 2011–2013, on average there were 204 hospital admissions per year for grommet insertions among Māori children (at a similar rate to non-Māori) and 136 admissions per year for serious skin infections (with the rate more than twice that of non-Māori children).
- Māori children under 15 years were 21 times as likely as non-Māori children to be hospitalised for acute rheumatic fever, with an average of 12 children per year admitted at least once. Among those aged 15–24 years, the rate was 6 times the non-Māori rate (with four Māori youth and one non-Māori youth admitted per year).
- On average, 1,800 hospitalisations per year of Māori children were potentially avoidable through population-based health promotion and intersectoral actions, at a rate one-third higher than that of non-Māori.
- Of the avoidable hospitalisations for Māori children, 1,190 were potentially avoidable through preventive or treatment intervention in primary care (ambulatory care sensitive hospitalisations, or ASH), with a rate one-quarter higher than for non-Māori children.

Rangatahi – Young adults

- There has been a significant increase in the proportion of Waikato Māori aged 14 and 15 years who have never smoked, and a decrease in the proportion of Māori aged 15–24 years who smoke regularly. However, in 2013, 40% of Māori aged 20–24 years smoked regularly, twice the proportion of non-Māori (18%).
- By September 2014, 66% of Māori girls aged 17 years and 64% of those aged 14 years had completed all three doses of the human papilloma virus (HPV) immunisation. Coverage was higher for Māori than for non-Māori.
- Rates of hospitalisation for injury from self-harm were similar for Māori and non-Māori among those aged 15–24 years during 2011–2013 but over a third higher for Māori than for non-Māori at ages 25–44 years.

Pakeke – Adults

- Half of Māori adults in Waikato reported having excellent or very good health in 2013, and a third reported good health. One in five (20%) reported having fair or poor health.
- Smoking rates are decreasing, but remain more than twice as high for Māori as for non-Māori (36% compared to 15% in 2013).

Circulatory system diseases

- Māori adults aged 25 years were 82% more likely than non-Māori to be hospitalised for circulatory system diseases (including heart disease and stroke) in 2011–2013.
- Waikato Māori were 28% more likely than non-Māori to be admitted with acute coronary syndrome, 43% more likely to have angiography. Māori women were more likely than non-Māori women to have an angioplasty or coronary artery bypass and graft. Māori men were less likely to have an angioplasty than non-Māori.
- Heart failure admission rates were 5 times as high for Māori as for non-Māori.
- Stroke admission rates were twice as high for Māori as for non-Māori, as were rates of admission for hypertensive disease.
- Chronic rheumatic heart disease admissions were almost 6 times as common for Māori as for non-Māori, while heart valve replacement rates were just over twice as high.
- Māori under 75 years were three-and-a-half times as likely as non-Māori to die from circulatory system diseases in 2007–2011.

Diabetes

- In 2013, 6% of Māori were estimated to have diabetes. Nearly half of Māori aged 25 years and over who had diabetes were regularly receiving metformin or insulin, 84% were having their blood sugar monitored regularly, and almost two-thirds were being screened regularly for renal disease.
- During 2011–2013 Māori with diabetes were nearly 4 times as likely as non-Māori to have a lower limb amputated.

Cancer

- Compared to non-Māori, cancer incidence was almost 50% higher for Māori females while cancer mortality was close to twice as high. For Māori males, cancer incidence was similar to that of non-Māori, while cancer mortality was two-thirds higher.
- Breast, lung, colorectal, uterine and cervical cancers were the most commonly registered among Waikato Māori women. The rate of lung cancer was 4 times the rate for non-Māori, as was the mortality rate. Breast cancer incidence and mortality rates were both two-thirds higher for Māori than for non-Māori. Colorectal registration and mortality rates were similar for Māori and non-Māori. Stomach cancer was the fourth leading cause of cancer death with 4 times the mortality rate of non-Māori.
- Breast screening coverage of Māori women aged 45–69 years was 55% compared to 68% of non-Māori women at the end of 2014.
- Cervical screening coverage of Māori women aged 25–69 years was 60% over 3 years and 75% over five years (compared to 78% and 91% of non-Māori respectively).
- Lung, prostate, and colorectal cancers were the most common cancers among Waikato Māori men. The registration rate for lung cancer was 3 times the rate for non-Māori men and the mortality rate 2.4 times as high. The registration rate for prostate cancer was 41% lower for Māori than for non-Māori men, but the mortality rate was 79% higher. Registration and mortality rates for colorectal cancer were similar for Māori and non-Māori men. Other leading causes of cancer death for Māori men were cancers of the stomach, pancreas and liver, with mortality rates 2 to 3 times as high as those for non-Māori.

Respiratory disease

- Māori aged 45 years and over were 3.8 times as likely as non-Māori to be admitted to hospital for chronic obstructive pulmonary disease (COPD).
- Asthma hospitalisation rates were 2 to 3 times as high for Māori than for non-Māori in each age group.
- Māori under 75 years had 4 times the non-Māori rate of death from respiratory disease in 2007–2011.

Mental disorders

- Māori were four-fifths more likely as non-Māori to be admitted to hospital for a mental disorder during 2011–2013. Schizophrenia type disorders were the most common disorders, followed by mood disorders.

Gout

- In 2011 the prevalence of gout among Waikato Māori was estimated to be 7%, twice the prevalence in non-Māori (3%).
- Just over a third (36%) of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those who received allopurinol, only 32% had a lab test for serum urate levels in the following six months.
- In 2011–2013 the rate of hospitalisations for gout was nearly 10 times as high for Māori as for non-Māori, indicating a higher rate of flare-ups.

All ages

Hospitalisations

- The all-cause rate of hospital admissions was 16% higher for Māori than for non-Māori during 2011–2013.
- Almost 5,200 Māori hospital admissions per year were potentially avoidable, with the rate 38% higher for Māori than for non-Māori. The ASH rate was 75% higher.

Mortality

- In 2012–2014, life expectancy at birth for Māori in the Waikato Region was 76.5 years for females (7.5 years lower than for non-Māori females) and 72.2 years for males (8.1 years lower than for non-Māori).
- The all-cause mortality rate for Waikato Māori was twice as high as the non-Māori rate during 2008–2012.
- Leading causes of death for Māori females during 2007–2011 were ischaemic heart disease (IHD), lung cancer, COPD, diabetes, and stroke. Leading causes of death for Māori males were IHD, accidents, diabetes, lung cancer, and COPD.
- Potentially avoidable mortality and mortality amenable to health care were 2.6 times and 2.7 times as high for Māori as for non-Māori in Waikato during 2007–2011.

Injuries

- The rate of hospitalisation due to injury was 19% higher for Māori than for non-Māori. Males had higher rates of admission than females.
- The most common causes of injury resulting in hospitalisations among Māori were falls, exposure to mechanical forces, complications of medical and surgical care, transport accidents, and assault.
- Rates of hospital admission for injury caused by assault were over 5 times as high for Māori females as for non-Māori females and 2.4 times as high for Māori males as for non-Māori males. Males had higher rates than females.
- Injury mortality was 85% higher for Māori than for non-Māori in Waikato. Males had higher rates of death from injury than females.

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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 Waikato, the Waikato 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 Waikato DHB. Accompanying Excel tables also include data for the total Waikato DHB population and the total New Zealand population for reo speakers, socioeconomic indicators, mortality, cancer registrations, and hospital discharges.

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 population¹.

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.

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.

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.

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 12% (84,900) of the country's total Māori population lived in the Waikato District Health Board. The total population of the DHB (377,900) made up 9% of the national population. In 2015, the Māori population is estimated to be 87,700 and the total population 389,300.²

Table 1: Population by age group, Waikato DHB, 2013

Age group (years)	Māori			Non-Māori		Total DHB Number
	Number	Age distribution	% of DHB	Number	Number	
0–14	29,070	34%	35	52,960	18%	82,030
15–24	15,980	19%	29	38,380	13%	54,360
25–44	20,470	24%	22	71,880	25%	92,350
45–64	15,110	18%	16	79,300	27%	94,410
65+	4,320	5%	8	50,440	17%	54,760
Total	84,900	100%	23	293,000	100%	377,900

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

Māori residents comprised 23% of the DHB population in 2013. The Māori population is relatively young, with a median age in 2013 of 23.3 years, compared with 36.8 years for the total DHB population. In 2013, Māori comprised 35% of the DHB's children aged 0–14 years and 29% of those aged 15–24 years.

Table 2: Population projections, Waikato DHB, 2013 to 2033

Year	Māori							Total DHB			NZ	
	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	84,900	23	12	34	61	5	23.3	377,900	36.8	8	692,300	4442,100
2018	90,800	23	12	33	61	6	24.3	400,000	37.1	8	734,500	4726,200
2023	96,400	23	13	32	61	8	25.4	414,100	38	8	773,500	4935,200
2028	101,900	24	13	30	61	10	26.5	427,400	39	8	811,700	5139,700
2033	107,600	25	13	29	60	11	27.4	438,800	40.4	8	850,700	5327,700

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 who were aged 65 years and over in 2013 was 5% but is projected to increase to 11% in 2033. Between 2013 and 2020 the number of Māori aged 65 and over will increase by 50% from 4,320 to 6,490 (see Appendix 1). In 2013, there were 1,280 Māori aged 75 years and over in Waikato, with 372 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.

Whānau well-being

Table 3: Whānau well-being reported by Māori aged 15 years and over, Waikato DHB, 2013

How the whānau is doing	Waikato DHB			New Zealand		
	Estimated number	%	(95% CI)	%	(95% CI)	
Well / Extremely well	41,000	87.2	(84.1, 90.2)	83.4	(82.5, 84.4)	
Neither well nor badly	4,000	8.4	(6.1, 10.7)	10.3	(9.4, 11.2)	
Badly / Extremely badly	2000*	4.4*	(2.8, 6.1)	6.3	(5.6, 7.0)	

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

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

Eighty-seven percent of Waikato Māori adults reported that their whānau was doing well or extremely well in 2013. However 4% felt their whānau was doing badly or extremely badly.

Table 4: Whānau composition reported by Māori aged 15 years and over, Waikato DHB, 2013

Whānau description	Waikato DHB			New Zealand		
	Estimated number	%	(95% CI)	%	(95% CI)	
Size of whānau						
10 or less	22,000	47.1	(42.2, 52.1)	53.7	(52.1, 55.3)	
11 to 20	12,500	26.8	(22.4, 31.3)	22.6	(21.3, 24.0)	
More than 20	12,500	26.0	(22.1, 29.9)	23.6	(22.4, 24.8)	
Groups included in whānau						
Parents, partner, children, brothers & sisters	45,500	95.3	(93.4, 97.2)	94.6	(94.0, 95.2)	
Aunts & uncles, cousins, nephews & nieces, other in-laws	27,000	56.3	(51.2, 61.4)	41.3	(39.8, 42.8)	
Grandparents, grandchildren	21,500	45.5	(41.0, 50.1)	41.9	(40.5, 43.4)	
Friends, others	7,000	15.0	(11.4, 18.6)	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 over a quarter reporting whānau sizes of more than 20 people. Over half of Waikato Māori included extended relations as part of the whānau. Fifteen percent included friends and others.

Whānau support

Table 5: Access to whānau support, Māori aged 15 years and over, Waikato DHB, 2013

How easy is it to get help	Waikato DHB			New Zealand		
	Estimated number	%	(95% CI)	%	(95% CI)	
Support in times of need						
Easy, very easy	39,000	82.2	(78.7, 85.6)	81.2	(80.1, 82.4)	
Sometimes easy, sometimes hard	5,500	11.6	(8.7, 14.5)	12.7	(11.7, 13.6)	
Hard / very hard	3000*	6.3*	(4.1, 8.4)	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	32,000	67.7	(63.0, 72.4)	64.1	(62.7, 65.6)	
Sometimes easy, sometimes hard	8,000	16.7	(13.1, 20.4)	16.9	(15.9, 18.0)	
Hard / very hard	6,000	13.0	(9.4, 16.6)	14.7	(13.5, 15.9)	
Don't need help	1,000**	2.6**	(1.2, 3.9)	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%.

In 2013, the majority of Māori adults in Waikato (82%) reported having easy access to support in times of need. However, an estimated 3,000 (6%) had difficulty getting help.

Sixty-eight percent reported finding it easy to get help with Māori cultural practices, while 13% said they found it hard or very hard. A further 3% reported not needing help.

Importance of participation in Māori culture

Table 6: Importance of Māori culture and spirituality, Māori aged 15 years and over, Waikato DHB, 2013

	Waikato DHB			New Zealand		
	Estimated number	%	(95% CI)	%	(95% CI)	
Importance of being involved in Māori culture						
Very / quite	24,000	50.2	(45.2, 55.1)	46.3	(44.9, 47.6)	
Somewhat	11,000	23.1	(18.9, 27.4)	24.2	(22.9, 25.6)	
A little / not at all	12,500	26.7	(22.3, 31.1)	29.5	(28.3, 30.7)	
Importance of spirituality						
Very / quite	26,500	55.9	(51.3, 60.5)	48.7	(47.4, 49.9)	
Somewhat	7,000	14.7	(11.6, 17.9)	17.0	(16.0, 18.0)	
A little / not at all	14,000	29.4	(24.6, 34.1)	34.3	(33.1, 35.5)	

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

Being involved in Māori culture was important to half of Waikato Māori adults, and somewhat important to a further 23%. Spirituality was important (very, quite, or somewhat) to over half of Waikato Māori (71%).

Te Reo Māori

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

Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
Number	%	(95% CI)	Number	%	(95% CI)		
16,998	23.3	(22.9, 23.6)	1,755	0.7	(0.6, 0.7)	34.06 (32.19, 36.05)	22.6

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, 23% of all Māori in Waikato and 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, Waikato DHB, 2013

Language spoken at home	Waikato DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Māori is main language	1,000**	2.3**	(0.9, 3.7)	2.6	(2.2, 3.0)
Māori is used regularly	9,500	22.1	(18.0, 26.2)	20.5	(19.2, 21.8)

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

Note: ** Sampling error is 50 percent or more, but less than 100 percent

Twenty-two percent of Māori adults reported that Māori language was regularly in the home in 2013, and for 2% te reo Māori was the main language.

Access to marae

Table 9: Access to marae, Māori aged 15 years and over, Waikato DHB, 2013

Been to marae	Waikato DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
At some time	47,000	98.7	(97.4, 99.9)	96.0	(95.5, 96.6)
In previous 12 months ⁽¹⁾	28,000	59.6	(54.6, 64.6)	58.2	(56.6, 59.7)
Ancestral marae at some time ⁽²⁾	29,500	62.3	(57.4, 67.2)	62.3	(60.9, 63.7)
Ancestral marae in previous 12 months ⁽³⁾	16,000	33.5	(28.9, 38.1)	33.6	(32.3, 34.9)
Like to go to ancestral marae more often ⁽²⁾	19,000	59.9	(53.0, 66.7)	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, almost all Māori in Waikato (99%) had been to a marae, with most (60%) having been in the last 12 months. Around 60% had been to at least one of their ancestral marae, with a third having been in the previous 12 months. Sixty percent reported that they would like to go their ancestral marae 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, Waikato DHB, 2013

Waikato DHB			New Zealand	
Estimated number	%	(95% CI)	%	(95% CI)
6,000	13.0	(10.1, 15.9)	10.9	(10.0, 11.7)

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

An estimated 6,000 Māori adults (13%) in Waikato 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 Waikato DHB, 2006 and 2013

Year	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
2006	15,165	39.6	(39.1, 40.1)	100,236	58.4	(58.2, 58.7)	0.68 (0.67, 0.69)	-18.9
2013	19,335	45.5	(45.0, 45.9)	115,176	64.0	(63.8, 64.2)	0.71 (0.71, 0.72)	-18.5

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% to 46% between 2006 and 2013. However Māori remained approximately 30% less likely than non-Māori to have this level of qualification as the non-Māori proportion increased at the same rate.

Work

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

Labour force status	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
2006								
Employed full-time	19,728	47.0	(46.6, 47.4)	104,217	55.7	(55.5, 55.9)	0.84 (0.80, 0.85)	-8.7
Employed part-time	6,060	13.6	(13.3, 13.9)	31,809	16.7	(16.6, 16.9)	0.81 (0.79, 0.83)	-3.2
Unemployed	3,648	8.4	(8.2, 8.7)	5,697	3.9	(3.8, 4.0)	2.18 (2.09, 2.27)	4.6
Not in the labour force	14,007	31.0	(30.6, 31.4)	64,845	23.7	(23.5, 23.9)	1.31 (1.29, 1.33)	7.3
2013								
Employed full-time	19,839	42.2	(41.8, 42.6)	105,054	52.8	(52.5, 53.0)	0.80 (0.79, 0.81)	-10.5
Employed part-time	6,213	12.4	(12.1, 12.7)	32,757	16.0	(15.8, 16.2)	0.78 (0.76, 0.80)	-3.6
Unemployed	5,583	12.1	(11.8, 12.4)	8,217	5.4	(5.2, 5.5)	2.25 (2.18, 2.33)	6.7
Not in the labour force	17,046	33.3	(32.9, 33.8)	72,213	25.9	(25.7, 26.1)	1.29 (1.27, 1.31)	7.4

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 a decrease in the proportion of Māori adults employed full-time, or part-time, and a corresponding increase in the unemployment rate (from 8% to 12%). There was also an increase in the population who were not in the labour force.

In 2013, Māori were 2.3 times as likely as non-Māori to be unemployed, or an absolute gap of 7 percentage points in unemployment rates. The absolute gap in labour force participation was 7% in both periods.

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

ANZSIC Industry	Waikato DHB						New Zealand	
	Māori			Non-Māori				
	Number	%	Rank	Number	%	Rank	%	Rank
Females								
Health Care and Social Assistance	2,187	18.3	1	11,400	18.0	1	17.1	1
Education and Training	1,827	15.3	2	8,373	13.2	2	12.9	2
Retail Trade	1,341	11.2	3	7,398	11.7	3	11.6	3
Accommodation and Food Services	1,143	9.6	4	4,260	6.7	6	7.3	5
Manufacturing	909	7.6	5	3,309	5.2	7	6.0	6
Males								
Manufacturing	2,466	20.3	1	9,831	14.1	2	13.4	1
Construction	1,944	16.0	2	8,724	12.5	3	13.2	2
Agriculture, Forestry and Fishing	1,449	11.9	3	11,391	16.4	1	8.7	4
Transport, Postal and Warehousing	738	6.1	4	3,033	4.4	7	5.9	7
Retail Trade	723	5.9	5	5,880	8.4	4	8.3	5

Source: 2013 Census, Statistics New Zealand

Service industries were the main employers of Māori women in Waikato, including health care and social assistance; education and training; retail; and accommodation and food services. For Māori men, leading industries were manufacturing; construction; and agriculture, forestry and fishing.

Table 14: Leading occupations of employed Māori, Waikato DHB, 2013

ANZSCO Occupation	Waikato DHB						New Zealand	
	Māori			Non-Māori				
	Number	%	Rank	Number	%	Rank	%	Rank
Females								
Professionals	2,418	20.4	1	16,209	25.8	1	26.7	1
Community and Personal Service Workers	1,992	16.8	2	7,503	12.0	4	12.9	4
Labourers	1,947	16.4	3	5,265	8.4	6	8.3	6
Clerical and Administrative Workers	1,857	15.6	4	12,441	19.8	2	19.5	2
Sales Workers	1,425	12.0	5	6,996	11.1	5	11.7	5
Managers	1,377	11.6	6	10,155	16.2	3	14.4	3
Technicians and Trades Workers	597	5.0	7	3,420	5.4	7	5.0	7
Machinery Operators and Drivers	264	2.2	8	768	1.2	8	1.5	8
Males								
Labourers	3,306	27.2	1	9,402	13.6	4	13.6	4
Technicians and Trades Workers	2,013	16.6	2	13,218	19.2	2	18.5	3
Machinery Operators and Drivers	1,950	16.0	3	6,003	8.7	5	9.1	5
Managers	1,749	14.4	4	18,927	27.5	1	22.7	1
Professionals	1,245	10.2	5	10,659	15.5	3	18.6	2
Community and Personal Service Workers	837	6.9	6	3,036	4.4	7	5.4	7
Sales Workers	537	4.4	7	4,881	7.1	6	7.1	6
Clerical and Administrative Workers	513	4.2	8	2,793	4.1	8	5.1	8

Source: 2013 Census, Statistics New Zealand

Note: Australian and New Zealand Standard Classification of Occupations (ANZSCO), major grouping

Among employed Māori women, the leading occupational groupings were professionals (20%); community and personal service workers (17%); clerical and administrative workers (16%). The next most common occupations were sales workers, managers and technicians and trades workers.

Māori men were most likely to be employed as labourers (27%); technicians and trade workers (17%); machinery operators and drivers (16%); and managers (14%).

Table 15: Unpaid work, 15 years and over, Waikato DHB, 2013

Unpaid work	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Any unpaid work	39,606	89.2	(88.9, 89.5)	183,222	89.3	(89.1, 89.5)	1.00 (1.00, 1.00)	-0.1
Looking after disabled/ill household member	6,091	13.7	(13.4, 14.0)	13,878	6.5	(6.4, 6.6)	2.12 (2.05, 2.18)	7.2
Looking after disabled/ill non-household member	5,956	12.9	(12.6, 13.2)	18,180	7.3	(7.1, 7.4)	1.78 (1.73, 1.83)	5.7

Source: 2013 Census, Statistics New Zealand

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

Around 90% of Māori adults worked without pay in 2013. Māori were twice as likely as non-Māori to look after someone within the home who was disabled or ill without pay and 78% more likely than non-Māori to look after a disabled or ill non-household member.

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, Waikato DHB, 2013

Actions taken a lot to keep costs down	Waikato DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Put up with feeling the cold	5,000	10.6	(7.9, 13.2)	11.0	(10.2, 11.8)
Go without fresh fruit and vegetables	2,000*	4.1*	(2.1, 6.0)	5.4	(4.8, 6.0)
Postpone or put off visits to the doctor	3,500*	7*	(4.8, 9.1)	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%.

An estimated 5,000 Māori adults (11%) reported putting up with feeling cold to keep costs down, 2,000 (4%) went without fresh fruit and vegetables, and 3,500 (7%) 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, Waikato DHB, 2006 and 2013

Year	Māori families			Non-Māori families			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
2006	6,249	21.0	(20.6, 21.5)	3,609	6.8	(6.6, 7.0)	3.10 (2.99, 3.23)	14.3
2013	8,169	25.5	(25.0, 26.0)	3,789	7.1	(6.9, 7.3)	3.59 (3.46, 3.72)	18.4

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.

There was an increase in the number of children living in Māori families where the only income was means-tested benefits between 2006 and 2013, with the proportion increasing from 21% to 26%. In 2013, children in Māori families were 3.6 times as likely as non-Māori children to be in this situation.

Table 18: Children and adults living in households with low incomes, MidCentral 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	10,797	41.2	(40.6, 41.8)	9,060	18.1	(17.7, 18.4)	2.28 (2.23, 2.33)	23.1
Adults 18 years & over	16,407	34.5	(34.1, 35.0)	27,312	18.9	(18.7, 19.2)	1.82 (1.79, 1.86)	15.6

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.

On average 41% of the children in Māori households (over 10,800) were in households with low equivalised household incomes, 2.3 times the proportion of other children. Thirty-five percent of adults in Māori households (over 16,400) lived in low income households, 82% higher than other adults.

Table 19: Households with no access to a motor vehicle, Waikato 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	2,535	10.3	(9.9, 10.7)	5,769	6.3	(6.1, 6.4)	1.65 (1.57, 1.72)	4.0
2013	3,390	12.0	(11.6, 12.3)	5,670	5.8	(5.6, 5.9)	2.07 (1.99, 2.15)	6.2
People (% age-standardised)								
2006	6,588	7.9	(7.7, 8.1)	7,971	2.3	(2.3, 2.4)	3.36 (3.24, 3.49)	5.5
2013	8,838	9.6	(9.4, 9.8)	8,238	2.6	(2.5, 2.7)	3.70 (3.57, 3.83)	7.0

Source: 2006 and 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.

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

In 2013, 10% of Māori households in Waikato had no access to a motor vehicle, two thirds more than the proportion of non-Māori households. The proportion of Māori households without a vehicle increased between 2006 and 2013.

Table 20: People in households with no access to telephone, mobile/cell phone, internet, or any telecommunications, Waikato 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	13,017	13.3	(13.1, 13.6)	32,391	10.5	(10.3, 10.6)	1.27 (1.25, 1.30)	2.9
No telephone	28,665	32.3	(31.9, 32.6)	26,526	13.5	(13.3, 13.6)	2.39 (2.36, 2.43)	18.8
No internet	32,151	34.7	(34.3, 35.0)	41,088	12.8	(12.6, 12.9)	2.71 (2.67, 2.75)	21.9
No tele-communications	3,492	3.8	(3.7, 3.9)	2,331	1.0	(1.0, 1.1)	3.74 (3.53, 3.96)	2.8

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.

% is age–sex-standardised to the 2001 Māori population.

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

In 2013, 35% of people in Māori households had no access to the internet, 32% had no landline, 13% did not have a cell phone, and 4% had no access to any telecommunications in the home. The largest absolute gap between Waikato Māori and non-Māori households was in access to the internet.

Housing

Table 21: Housing problems reported by Māori aged 15 years and over, Waikato DHB, 2013

Housing problem (a big problem)	Waikato DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Too small	2,000*	3.7*	(2.2, 5.2)	5.3	(4.7, 5.9)
Damp	5,000	11.0	(8.1, 13.9)	11.3	(10.5, 12.2)
Hard to keep warm	7,500	16.1	(13.0, 19.3)	16.5	(15.4, 17.7)
Needs repairs	6,500	13.9	(10.9, 16.9)	13.8	(12.7, 14.9)
Pests in the house	3000*	6.2*	(3.8, 8.6)	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 by Waikato Māori adults in 2013 included difficulty keeping the house warm (16%), needing repairs (14%), and damp (11%). Only 4% felt their house was too small, and 6% 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, Waikato DHB, 2013

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households	15,006	53.6	(53.0, 54.2)	24,843	25.7	(25.4, 26.0)	2.08 (2.05, 2.12)	27.9
Children under 18 years (% age-standardised)	19,716	60.2	(59.7, 60.7)	16,833	31.0	(30.6, 31.4)	1.94 (1.91, 1.97)	29.2
Adults 18 years and over (% age-standardised)	30,111	53.5	(53.1, 53.9)	45,099	33.5	(33.3, 33.8)	1.60 (1.58, 1.61)	20.0

Source: 2013 Census, Statistics New Zealand

Notes: 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, 15,000 Māori households were rented, making up 54% of all Māori households, compared to 26% of non-Māori households.

Among children living in a Māori household, 60% (over 19,700) were living in rented homes, compared to 31% (over 16,800 children) in non-Māori households.

Fifty-four percent of adults living in Māori households were living in rented accommodation (around 30,100), 60% more than the proportion of adults living in non-Māori households.

Household crowding

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

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households	3,228	11.4	(11.0, 11.8)	2,262	2.3	(2.2, 2.4)	4.93 (4.68, 5.20)	9.1
People (% age standardised)	17,910	20.4	(20.1, 20.7)	11,439	6.6	(6.5, 6.7)	3.09 (3.02, 3.16)	13.8

Source: 2013 Census, Statistics New Zealand

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).

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, Māori households in Waikato were almost 5 times as likely as non-Māori households to be classified as crowded using the Canadian National Occupancy Standard, with over 3,200 homes needing at least one additional bedroom, affecting almost 18,000 people. People living in Māori households were 3 times as likely as people living in non-Māori households to be living in crowded conditions.

Fuel poverty

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

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households	1,119	4.0	(3.7, 4.2)	1,968	2.0	(1.9, 2.1)	1.97 (1.84, 2.12)	2.0
People (% age)	3,282	3.6	(3.5, 3.8)	4,557	2.3	(2.2, 2.4)	1.57 (1.50, 1.65)	1.3

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).

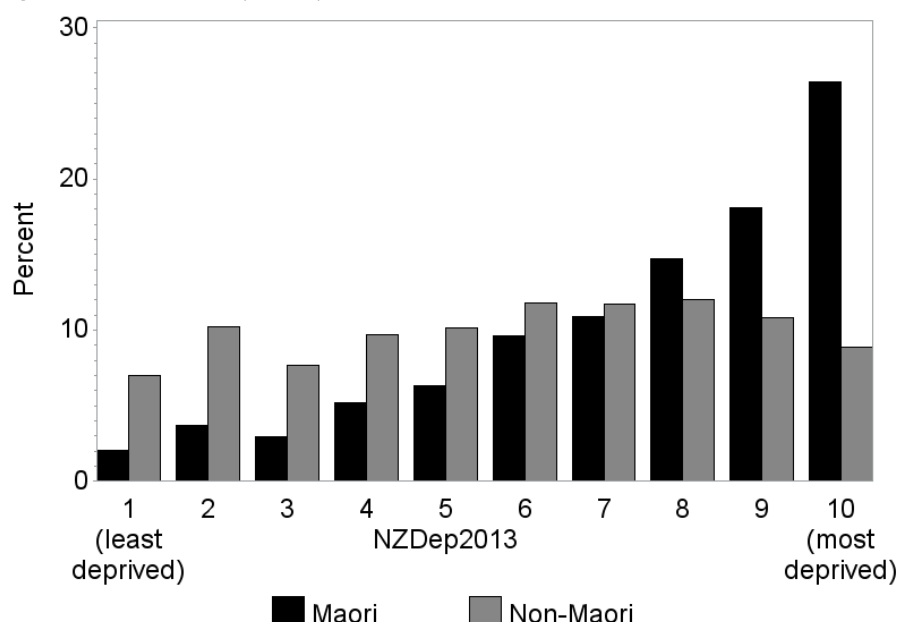
A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.

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

In 2013, 4% of Māori households (1,119 homes) had no heating, twice the proportion of non-Māori households (1,968 homes).

Area deprivation

Figure 1: Distribution by NZDep 2013 decile, Waikato DHB, 2013



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

Waikato Māori have a more deprived small area profile than Waikato non-Māori. In 2013, 70% of Māori lived in the four most deprived decile areas, with 26% in the most deprived decile (compared to 43% and 9% of non-Māori respectively). Conversely 6% of Māori lived in the two least deprived decile areas compared to 17% of non-Māori (see accompanying Excel tables).

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, Waikato DHB, 2009–2013

Indicator	Māori		Non-Māori		Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	% of live births (95% CI)	Ave. no. per year	% of live births (95% CI)		
Low birth-weight	146	6.7 (6.2, 7.2)	191	5.8 (5.4, 6.2)	1.15 (1.05 1.26)	0.9
High birth-weight	54	2.5 (2.2, 2.8)	110	3.3 (3.1, 3.6)	0.75 (0.65, 0.86)	-0.9
Preterm	167	7.7 (7.2, 8.2)	250	7.6 (7.2, 8.0)	1.01 (0.93 1.10)	0.1

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

From 2009 to 2013 there were 2,182 Māori infants born per year on average, 40% of all live births in the DHB (5,484 per year). On average, 146 Māori babies per year (7% of live births) were born with low birth-weight, 15% higher than the rate for non-Māori. Fifty-four Māori infants per year (2%) were born with high birth-weight at a rate 25% lower than non-Māori, and 167 per year (8%) were born preterm.

Well child/Tamariki ora indicators

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

Indicator	Period	Māori	
		Count	%
1. Babies enrolled with a Primary Health Organisation (PHO) by three months old	20 Aug to 19 Nov 2013	256	65
11. Babies exclusively or fully breastfed at 2 weeks	January to June 2013	624	78
12. Babies exclusively or fully breastfed at 6 weeks		591	69
19. Mothers smoke-free two weeks postnatal		478	61
5. Children under 5 years enrolled with oral health services (PHO enrolled children)	2012	<10	.
7. Children starting school who have participated in ECE	2013	1907	93
15. Children with a healthy weight at 4 years, DHB of service	July to Dec 2013	526	68

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: National Maternity Collection. 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)

During late 2013, 65% of Māori babies were enrolled with a PHO by three months of age. In the first half of 2013, 78% of Māori babies were breastfed at two weeks of age and 69% at six weeks. Sixty-one percent of Māori mothers were smoke-free two weeks after giving birth.

In 2013, 93% of Māori children who started school had participated in early childhood education. Over two-thirds 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, Waikato DHB, 1 Jan 2014 to 31 Dec 2014

Milestone age	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	No. fully immunised for age	% fully immunised	No. fully immunised for age	% fully immunised		
6 months	1,192	60%	2,600	78%	0.77	-18%
8 months	1,717	85%	2,952	90%	0.94	-5%
12 months	1,841	90%	3,065	92%	0.98	-2%
18 months	1,525	73%	2,828	85%	0.86	-12%
24 months	1,908	89%	3,098	90%	0.99	-1%
5 years	1,509	70%	2,776	75%	0.93	-5%

Source: National Immunisation Register

In the 12 months to 31 December 2014, 60% of infants aged six months were fully immunised, compared to 78% of non-Māori infants. However, 85% of Māori children aged eight months and 89% of those aged 24 months had completed their appropriate immunisations. At five years of age 70% of Māori children were fully immunised.

Oral health

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

Age group	Māori				Non-Māori				Māori/non-Māori ratio % with caries (95% CI)	Difference in percentage
	Total	% with caries (95% CI)	Mean DMFT		Total	% with caries (95% CI)	Mean DMFT			
Age 5	1,347	67 (65, 70)	3.2		2,780	35 (33, 36)	1.6		1.95 (1.83, 2.08)	33
Year 8	1,508	57 (54, 59)	1.7		3,043	44 (42, 46)	1.1		1.29 (1.21, 1.37)	13

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.

Two-thirds of Māori children aged five years in 2013 had caries, almost twice the proportion of non-Māori children. The mean number of decayed, missing or filled teeth was 3.2 for Māori and 1.6 for non-Māori. Of those in Year 8, 57% of Māori children had caries, 29% higher than non-Māori with a mean DMFT of 1.7 compared to 1.1.

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

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)			
Femal	177	1,252.4	(1,150.1, 1,363.8)	218	853.5	(790.5, 921.5)	1.47 (1.31, 1.65)	398.8
Male	195	1,310.3	(1,208.2, 1,421.0)	249	950.7	(884.9, 1021.3)	1.38 (1.24, 1.54)	359.6
Total	372	1,281.3	(1,208.2, 1,358.9)	467	902.1	(856.1, 950.6)	1.42 (1.31, 1.54)	379.2

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 372 hospital admissions per year on average for tooth and gum disease among Māori children in Waikato, at a rate that was 42% higher than non-Māori, or around 380 more admissions per 100,000 children.

Middle ear disease

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

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)					
Female	78	556.2	(489.4, 632.2)	147	577.2	(525.7, 633.6)	0.96	(0.82, 1.13)	-20.9	
Male	126	845.3	(764.0, 935.2)	229	869.6	(807.0, 937.2)	0.97	(0.86, 1.10)	-24.3	
Total	204	700.8	(647.3, 758.7)	376	723.4	(682.4, 766.9)	0.97	(0.88, 1.07)	-22.6	

Source: NMDS

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

On average, there were 204 admissions per year for grommet insertions among Māori children per year, at a rate similar to the non-Māori rate.

Healthy skin

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

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)					
Female	66	466.5	(405.9, 536.1)	42	163.1	(136.9, 194.2)	2.86	(2.29, 3.58)	303.4	
Male	69	462.7	(403.8, 530.2)	68	255.0	(222.3, 292.6)	1.81	(1.50, 2.20)	207.6	
Total	136	464.6	(421.5, 512.1)	110	209.1	(187.7, 232.9)	2.22	(1.92, 2.57)	255.5	

Source: NMDS

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

On average there were 136 admissions per year for serious skin infections among Māori children. The rate was 2.2 times the rate for non-Māori children, or 256 more admissions per 100,000 children per year.

Acute rheumatic fever

Table 32: Individuals admitted to hospital for acute rheumatic fever, ages 0–14 and 15–24 years, Waikato DHB, 2011–2013

Age group and Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)					
0–14 years										
Female	3	24.6	(13.2, 45.7)	1	2.6	(0.7, 10.4)	9.42	(2.06, 42.97)	22.0	
Male	8	58.3	(39.4, 86.4)	<1	1.3	(0.2, 9.2)	45.00	(6.10, 332.11)	57.1	
Total	12	41.5	(29.8, 57.8)	1	2.0	(0.6, 6.1)	21.22	(6.53, 69.01)	39.5	
15–24 years										
Female	2	21.0	(8.7, 50.5)	1	3.6	(0.9, 14.5)	5.85	(1.13, 30.39)	17.4	
Male	2	25.7	(11.5, 57.2)	1	3.7	(0.9, 14.7)	6.97	(1.41, 34.56)	22.0	
Total	4	23.3	(12.9, 42.2)	1	3.6	(1.4, 9.7)	6.42	(2.04, 20.22)	19.7	

Source: NMDS

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

Among Waikato Māori children aged 14 years and under, on average 12 per year were hospitalised at least once for acute rheumatic fever, at a rate 21 times the rate for non-Māori, or 40 more children per 100,000. Among Māori aged 15 to 24 years, an average of four per year were admitted, at a rate of 23 per 100,000, 6.4 times the rate for non-Māori in this age group.

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 33: Potentially avoidable hospitalisations for children aged 1 month to 14 years, Waikato DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)			
Female	759	5312.2	(5,098.3, 5,535.2)	995	3,928.4	(3,789.9, 4,071.9)	1.35 (1.28, 1.43)	1,383.8
Male	1,041	6803.7	(6,568.9, 7,046.9)	1,281	4,872.6	(4,720.9, 5,029.2)	1.40 (1.33, 1.46)	1,931.1
Total	1,800	6057.9	(5,898.2, 6,222.0)	2,276	4,400.5	(4,297.3, 4,506.2)	1.38 (1.33, 1.43)	1,657.5

Source: NMDS

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

There were 1,800 potentially avoidable hospitalisations per year on average among Māori children aged 14 years and under, at a rate nearly 38% higher than the non-Māori rate, or 1,658 more admissions per 100,000.

Table 34: Ambulatory care sensitive hospitalisations for children aged 1 month to 14 years, Waikato DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Rate per 100,000 (95% CI)		Ave. no. per year	Rate per 100,000 (95% CI)			
Female	528	3,729.4	(3,550.1, 3,917.8)	772	3,041.3	(2,919.9, 3,167.8)	1.23 (1.15, 1.31)	688.1
Male	661	4,380.8	(4,191.9, 4,578.2)	913	3,474.2	(3,346.4, 3,606.8)	1.26 (1.19, 1.34)	906.6
Total	1,190	4,055.1	(3,924.0, 4,190.6)	1,684	3,257.7	(3,169.1, 3,348.9)	1.24 (1.19, 1.30)	797.4

Source: NMDS

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

On average there were 1,190 admissions per year for ambulatory care sensitive conditions among Māori children, at a rate 24% higher than the rate for non-Māori children, or almost 800 more admissions per 100,000 children.



Mauri ora: Rangatahi

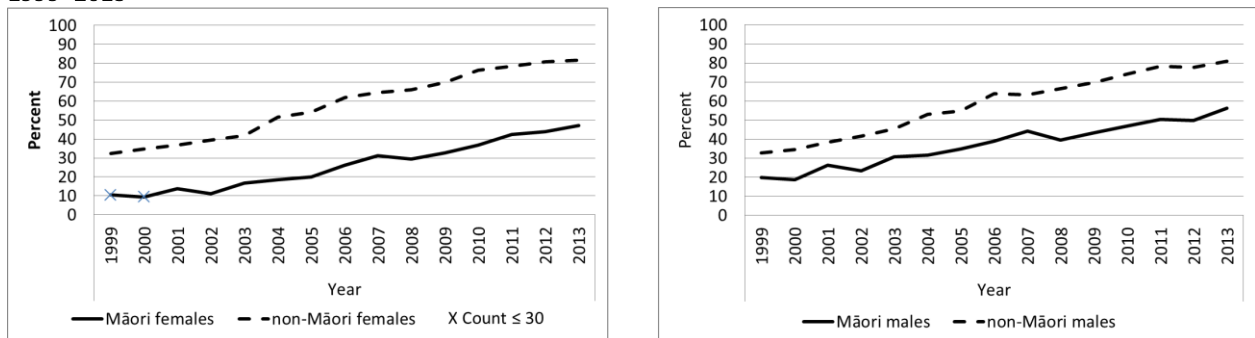
– Young adults

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

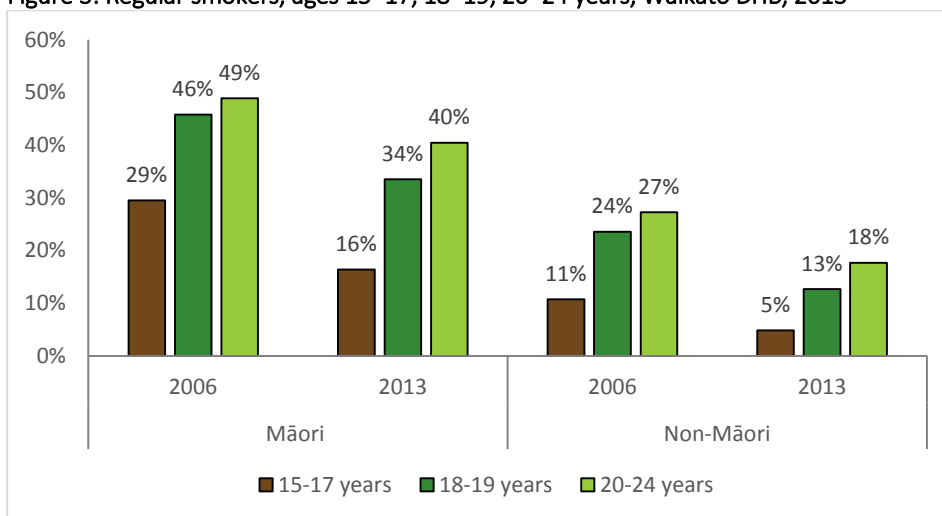
Figure 2: Trends in the proportion of students aged 14–15 years who have never smoked, by gender, Waikato DHB, 1999–2013



Source: ASH Year 10 Snapshot Survey, 2013

Over the last 15 years there has been a significant increase in the number of Māori males and females aged 14 or 15 who have never smoked cigarettes (Figure 2).

Figure 3: Regular smokers, ages 15–17, 18–19, 20–24 years, Waikato 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 in Waikato since 2006. However, smoking uptake remains relatively high among those aged 18–24 years, with a sizeable group starting smoking in this age group. At ages 20–24 years, 4% of Māori were smoking regularly in 2013. Non-Māori in each age group were at least half as likely as Māori to smoke regularly.

Immunisations

Table 35: Human papilloma virus immunisations (HPV) by birth cohorts, Waikato 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	534	63.6%	970	54.2%	1.17	9.4%
1999	15	2012	497	66.3%	914	51.3%	1.29	14.9%
1998	16	2011	519	64.1%	812	44.9%	1.43	19.2%
1997	17	2010	518	66.4%	783	43.5%	1.53	22.9%

Source: National Immunisation Register.

Notes: 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 in Waikato are higher for Māori than for non-Māori girls. Sixty-four percent of Māori women who were aged 14 years in 2014 had received all three doses. Māori aged 17 in 2014 had a higher rate of coverage compared to non-Māori (66% compared to 44%).

Mental health

Table 36: Hospitalisations for injury from intentional self-harm, 15–24 and 25–44 years, Waikato 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	36	458.0 (379.6, 552.6)		91	506.0 (449.2, 570.0)		0.91 (0.72, 1.13)	-48.0
Male	18	225.8 (172.5, 295.5)		36	180.0 (148.8, 217.7)		1.25 (0.90, 1.74)	45.8
Total	54	341.9 (293.1, 398.8)		127	343.0 (310.0, 379.5)		1.00 (0.83, 1.20)	-1.1
25–44 years								
Female	31	277.5 (226.4, 340.2)		85	229.1 (202.3, 259.4)		1.21 (0.95, 1.54)	48.4
Male	22	236.3 (185.9, 300.4)		51	146.8 (125.1, 172.3)		1.61 (1.21, 2.15)	89.5
Total	53	256.9 (219.9, 300.3)		136	187.9 (170.4, 207.3)		1.37 (1.14, 1.64)	69.0

Source: NMDS.

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

An average of 54 Māori aged 15–24 years were admitted to hospital per year for injury caused by intentional self-harm at a similar rate to non-Māori. However, Māori aged 25–44 years were almost 40% more likely than non-Māori to be admitted, with an average of 53 Māori per year.



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 in Waikato can be found in the accompanying Excel® tables labelled 'Death registrations' and 'Hospitalisations by principal diagnosis'. For example, the hospitalisations table shows disparities between Waikato Māori and non-Māori in rates of admission for viral hepatitis, meningococcal infection, thyroid disease, atrial fibrillation and flutter, bronchiectasis, gastric ulcers, gallstones (cholelithiasis), renal failure, pancreatitis, epilepsy, head injuries, and burns.

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 37: Health status reported by Māori aged 15 years and over, Waikato DHB, 2013

Health status	Waikato DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Excellent	6,000	12.4	(9.1, 15.7)	18.1	(16.8, 19.3)
Very good	17,000	35.4	(30.0, 40.8)	37.0	(35.5, 38.5)
Good	15,500	32.4	(27.2, 37.5)	28.5	(27.3, 29.7)
Fair / poor	9,500	19.8	(15.1, 24.5)	16.4	(15.3, 17.5)

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

In 2013, half of Waikato Māori adults (48%) reported having excellent or very good health and another third (32%) described their health as good. One in five (20%) reported having fair or poor health status.

Smoking status

Table 38: Cigarette smoking status, 15 years and over, Waikato DHB, 2006 and 2013

Smoking status	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percent	
	Number	%	(95% CI)	Number	%	(95% CI)			
2006									
Regular smoker	17,307	43.1	(42.6, 43.5)	36,384	21.2	(20.9, 21.4)	2.04	(2.01, 2.07)	21.9
Ex-smoker	7,305	17.7	(17.3, 18.0)	45,087	18.6	(18.4, 18.7)	0.95	(0.93, 0.97)	-0.9
Never smoked	15,936	39.2	(38.8, 39.7)	115,272	60.3	(60.0, 60.5)	0.65	(0.64, 0.66)	-21.0
2013									
Regular smoker	15,864	35.5	(35.1, 36.0)	27,699	14.9	(14.7, 15.1)	2.39	(2.35, 2.43)	20.6
Ex-smoker	10,005	20.6	(20.3, 21.0)	49,584	18.7	(18.5, 18.8)	1.10	(1.08, 1.13)	2.0
Never smoked	19,863	43.8	(43.4, 44.3)	131,478	66.4	(66.2, 66.7)	0.66	(0.65, 0.67)	-22.6

Source: 2006 and 2013 Censuses, 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 Māori adults who smoked cigarettes regularly decreased from 43% to 36%. However, Māori remained more than twice as likely as non-Māori to smoke regularly.

Heart disease and stroke

Table 39: Hospitalisations for circulatory system diseases, 25 years and over, Waikato 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	452	1,665.5	(1,576.5, 1,759.4)	2,247	820.3	(793.1, 848.4)	2.03	(1.90, 2.17)	845.2
Male	520	2,321.2	(2,206.3, 2,442.2)	2,904	1,376.2	(1,340.2, 1,413.3)	1.69	(1.59, 1.79)	945.0
Total	972	1,993.3	(1,920.1, 2,069.4)	5,150	1,098.3	(1,075.6, 1,121.4)	1.82	(1.74, 1.89)	895.1

Source: NMDS

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

On average, 972 Waikato Māori were admitted to hospital per year for diseases of the circulatory system (including heart disease and stroke), at a rate 82% higher than non-Māori, or 895 more admissions per 100,000.

Table 40: Ischaemic heart disease indicators, 25 years and over, Waikato 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)				
Ischaemic heart disease admissions									
Female	70	247.5	(215.7, 283.9)	486	159.7	(149.6, 170.4)	1.55	(1.33, 1.80)	87.8
Male	102	432.2	(385.8, 484.1)	886	412.3	(394.3, 431.1)	1.05	(0.93, 1.18)	19.9
Total	172	339.8	(311.3, 371.0)	1372	286.0	(275.6, 296.7)	1.19	(1.08, 1.31)	53.8
Angiography procedures									
Female	82	306.9	(270.2, 348.6)	382	161.2	(150.5, 172.7)	1.90	(1.65, 2.20)	145.7
Male	110	483.1	(433.0, 539.0)	755	390.8	(372.3, 410.2)	1.24	(1.10, 1.39)	92.3
Total	192	395.0	(363.4, 429.3)	1137	276.0	(265.2, 287.2)	1.43	(1.30, 1.57)	119.0
Angioplasty procedures									
Female	18	63.7	(48.6, 83.4)	118	47.1	(41.6, 53.4)	1.35	(1.00, 1.82)	16.6
Male	29	126.7	(102.5, 156.6)	309	160.8	(149.2, 173.2)	0.79	(0.63, 0.99)	-34.1
Total	47	95.2	(80.5, 112.5)	427	103.9	(97.5, 110.8)	0.92	(0.77, 1.10)	-8.8
Coronary Artery Bypass Graft (CABG)									
Female	6	22.2	(14.0, 35.4)	28	12.0	(9.4, 15.4)	1.85	(1.09, 3.14)	10.2
Male	12	52.7	(38.1, 72.9)	130	62.8	(56.1, 70.3)	0.84	(0.59, 1.18)	-10.1
Total	18	37.5	(28.7, 48.9)	159	37.4	(33.8, 41.5)	1.00	(0.75, 1.33)	0.0
Acute coronary syndrome admissions									
Female	54	190.9	(163.2, 223.3)	338	106.3	(98.1, 115.2)	1.80	(1.51, 2.14)	84.6
Male	70	301.3	(262.8, 345.4)	597	279.1	(264.1, 294.9)	1.08	(0.93, 1.25)	22.2
Total	125	246.1	(221.9, 272.9)	934	192.7	(184.1, 201.7)	1.28	(1.14, 1.43)	53.4

Source: NMDS.

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

On average, 172 Māori per year were admitted to hospital for ischaemic heart disease, at a rate 19% higher than non-Māori. Of these, 125 were admitted with acute coronary syndrome (with a rate 28% than non-Māori).

Māori men had higher rates of angiography, angioplasty, and CABG than Māori women. There were 192 angiography procedures conducted for Māori patients per year, at a rate 43% higher than non-Māori. On average, 29 Māori men and 18 Māori women per year had angioplasty procedures, with the rate for Māori women 35% higher than the non-Māori rate. Six Māori women per year were admitted for a CABG on average, at a rate 85% higher than that of non-Māori women. Eighteen Māori men per year had a CABG at a similar rate to non-Māori men.

Table 41: Hospitalisations for heart failure, stroke, and hypertensive disease, 25 years and over, Waikato 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)					
Heart failure										
Female	82	275.0	(242.0, 312.7)	299	61.8	(56.2, 67.8)	4.45	(3.80, 5.22)	213.3	
Male	121	511.6	(460.7, 568.1)	326	95.6	(88.3, 103.5)	5.35	(4.69, 6.10)	416.0	
Total	203	393.3	(362.5, 426.8)	625	78.7	(74.1, 83.6)	5.00	(4.52, 5.53)	314.6	
Stroke										
Female	73	260.6	(227.4, 298.6)	324	92.8	(85.0, 101.3)	2.81	(2.39, 3.30)	167.8	
Male	47	206.3	(174.5, 243.9)	325	130.9	(120.9, 141.7)	1.58	(1.31, 1.90)	75.4	
Total	120	233.5	(210.0, 259.6)	649	111.8	(105.4, 118.6)	2.09	(1.85, 2.36)	121.6	
Hypertensive disease										
Female	12	47.1	(33.4, 66.4)	52	21.2	(17.1, 26.3)	2.22	(1.48, 3.33)	25.9	
Male	8	38.6	(25.6, 58.3)	31	19.4	(14.9, 25.4)	1.99	(1.22, 3.25)	19.2	
Total	20	42.8	(32.9, 55.8)	83	20.3	(17.1, 24.1)	2.11	(1.54, 2.89)	22.5	

Source: NMDS.

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

There were around 200 admissions per year on average for Māori with heart failure, at 5 times the rate for non-Māori, or 315 more admissions per 100,000.

On average, 120 Māori per year were admitted for stroke, at twice the non-Māori rate, or 122 more admissions per 100,000.

There were 20 Māori admissions per year on average for hypertensive disease, at twice the rate of non-Māori, or 23 more admissions per 100,000.

Table 42: Hospitalisations for chronic rheumatic heart disease and heart valve replacements, 25 years and over, Waikato 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)					
Chronic rheumatic heart disease										
Female	22	88.8	(69.1, 114.1)	32	12.0	(9.3, 15.5)	7.41	(5.18, 10.60)	76.8	
Male	9	41.4	(27.8, 61.5)	24	10.3	(7.6, 13.9)	4.02	(2.44, 6.61)	31.1	
Total	30	65.1	(52.6, 80.5)	57	11.1	(9.2, 13.6)	5.84	(4.37, 7.80)	53.9	
Heart valve replacements										
Female	7	27.4	(17.7, 42.5)	28	11.0	(8.3, 14.7)	2.48	(1.47, 4.19)	16.4	
Male	8	40.9	(27.4, 61.2)	50	19.2	(15.8, 23.3)	2.13	(1.37, 3.34)	21.8	
Total	15	34.2	(25.4, 46.1)	78	15.1	(12.9, 17.8)	2.26	(1.61, 3.18)	19.1	

Source: NMDS.

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

On average, there were 30 hospital admissions per year for Māori with chronic rheumatic heart disease, at a rate 5.8 times that of non-Māori.

Heart valve replacements were conducted on 15 Waikato Māori per year on average, at a rate 2.3 times the rate for non-Māori.

Table 43: Early deaths from circulatory system disease, Waikato DHB, 2007–2011

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	30	59.6	(50.7, 70.2)	54	14.4	(12.5, 16.5)	4.15	(3.36, 5.14)	45.3
Male	51	117.4	(103.8, 132.9)	126	37.0	(33.9, 40.3)	3.18	(2.73, 3.69)	80.5
Total	81	88.5	(80.2, 97.7)	179	25.7	(23.8, 27.6)	3.45	(3.05, 3.90)	62.9

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.

On average 81 Māori per year died early from circulatory system disease, at a rate 3.5 times the rate for non-Māori, or 63 more deaths per 100,000. Māori men had twice the mortality rate of Māori women.

Diabetes

Table 44: Diabetes prevalence, medication use, monitoring of blood glucose levels, screening for renal disease, Waikato DHB, 2013

Indicator	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	Count	% (crude)	Count	% (crude)		
Prevalence of diabetes (all ages)	4,436	5.5	15,795	5.4	1.00	0.0
People with diabetes regularly receiving metformin or insulin, 25+	2,118	47.8	7,962	50.4	0.95	-2.7
People with diabetes having regular Hb1Ac monitoring, 25+	3,710	83.6	1,3748	85.4	0.98	-1.8
People with diabetes having regular screening for renal disease, 25+	2,833	63.9	1,1084	70.2	0.91	-6.3

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.

Over 4,400 Waikato Māori are estimated to have diabetes, giving a crude prevalence of 6%, similar to the prevalence among non-Māori. The prevalence has not been adjusted for age and the rate for Māori would likely be higher than for non-Māori if age differences were taken into account. Almost half of Māori with diabetes were regularly receiving metformin or insulin in 2013. Almost 84% were having regular monitoring of blood glucose levels and 64% were being screened for renal disease.

Table 45: Hospitalisations for lower limb amputations for people with concurrent diabetes, 15 years and over, Waikato 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	7	20.4	(13.3, 31.1)	18	4.7	(3.4, 6.5)	4.30	(2.53, 7.32)	15.6
Male	14	44.1	(32.4, 59.9)	42	11.9	(9.6, 14.6)	3.71	(2.56, 5.38)	32.2
Total	21	32.2	(25.1, 41.3)	60	8.3	(7.0, 9.9)	3.88	(2.86, 5.26)	23.9

Source: NMDS

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

On average 21 Māori individuals per year with diabetes had lower limbs amputated, at a rate nearly 4 times that of non-Māori.

Cancer

Table 46: Most common cancer registrations for Māori by site, all ages, Waikato DHB, 2008–2012

Gender and site	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									
All cancers	134	252.9	(234.1, 273.2)	663	170.5	(163.1, 178.1)	1.48	(1.36, 1.62)	82.4
Breast	45	85.4	(74.7, 97.6)	185	53.5	(49.6, 57.7)	1.60	(1.37, 1.86)	31.9
Lung	26	46.6	(39.2, 55.4)	54	10.6	(9.1, 12.2)	4.42	(3.53, 5.53)	36.1
Colorectal	10	18.6	(14.0, 24.7)	107	19.4	(17.4, 21.6)	0.96	(0.71, 1.30)	-0.8
Uterus	7	12.7	(9.0, 17.9)	30	7.5	(6.2, 9.0)	1.70	(1.15, 2.52)	5.2
Cervix	5	9.6	(6.4, 14.6)	10	4.7	(3.4, 6.4)	2.07	(1.22, 3.50)	5.0
Male									
All cancers	100	211.6	(193.7, 231.2)	841	198.5	(191.1, 206.2)	1.07	(0.97, 1.17)	13.1
Lung	21	41.5	(34.2, 50.3)	78	13.8	(12.3, 15.4)	3.02	(2.41, 3.77)	27.7
Prostate	16	32.2	(25.8, 40.1)	253	54.9	(51.8, 58.3)	0.59	(0.47, 0.74)	-22.8
Colorectal	10	21.0	(15.8, 27.8)	124	24.6	(22.4, 27.1)	0.85	(0.63, 1.14)	-3.7

Source: Cancer Registry, Ministry of Health

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

There were 134 cancer registrations per year on average among Waikato Māori females, at a rate 48% higher than non-Māori. The most common cancers registered for Māori females were breast, lung, colorectal, uterine, and cervical cancers. Registration rates were higher for Māori than for non-Māori women for each of these cancers, apart from colorectal cancer.

Among Waikato Māori males there were 100 cancer registrations per year on average, at a similar rate to non-Māori. Lung, prostate, and colorectal cancers were the most common cancers registered for Māori males. Lung cancer incidence was 3 times as high for Māori as for non-Māori males, while the prostate cancer registration rate was lower.

Table 47: Most common cancer deaths for Māori by site, all ages, Waikato DHB, 2007–2011

Gender and site	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									
All cancers	54	102.9	(91.2, 116.2)	293	53.4	(49.8, 57.3)	1.93	(1.67, 2.21)	49.5
Lung	18	33.2	(27.0, 40.9)	44	8.1	(6.9, 9.5)	4.12	(3.17, 5.34)	25.1
Breast	9	16.9	(12.6, 22.9)	46	10.1	(8.6, 11.9)	1.68	(1.20, 2.37)	6.9
Colorectal	4	7.8	(5.1, 12.1)	49	7.8	(6.6, 9.3)	1.00	(0.63, 1.59)	0.0
Stomach	3	6.1	(3.6, 10.4)	9	1.5	(1.0, 2.2)	4.18	(2.15, 8.12)	4.6
Male									
All cancers	53	114.5	(101.4, 129.1)	365	68.0	(64.2, 72.0)	1.68	(1.47, 1.92)	46.5
Lung	14	29.0	(22.9, 36.7)	68	12.1	(10.7, 13.6)	2.41	(1.84, 3.14)	16.9
Colorectal	7	14.1	(10.1, 19.8)	53	9.9	(8.6, 11.4)	1.43	(0.99, 2.06)	4.3
Prostate	6	12.2	(8.5, 17.5)	53	6.8	(6.0, 7.8)	1.79	(1.22, 2.62)	5.4
Stomach	4	8.3	(5.2, 13.2)	13	2.4	(1.8, 3.2)	3.44	(1.98, 5.98)	5.9
Pancreas	3	5.9	(3.5, 10.0)	15	2.9	(2.2, 3.9)	2.02	(1.12, 3.67)	3.0
Liver	3	5.8	(3.3, 10.0)	10	2.1	(1.5, 2.9)	2.75	(1.45, 5.21)	3.7

Source: Death registrations, Ministry of Health

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

For Māori females, deaths from cancer comprised a third of all deaths, with a rate nearly twice that of non-Māori. Lung cancer was the most common cause of cancer death (33% of all cancer deaths) at a rate 4 times that of Māori,

or 25 more deaths per 100,000. Breast, colorectal, and stomach cancers were the next most common causes of cancer death. Stomach cancer mortality was 4 times that of non-Māori, or 5 more deaths per 100,000. Breast cancer mortality was 68% higher for Māori than non-Māori, or 7 more deaths per 100,000 per year.

For Māori males, cancer deaths accounted for 25% of all deaths, with a rate 68% higher than that of non-Māori males. Lung cancer was the most common cause of cancer death for Māori males, comprising 26% of all cancer deaths, at a rate over twice that of non-Māori males or 17 more deaths per 100,000. Lung cancer was followed by colorectal, prostate, stomach, pancreatic, and liver cancers. Waikato Māori males had significantly higher mortality rates than non-Māori for each of these cancers except colorectal.

Breast and cervical cancer screening

Table 48: BreastScreen Aotearoa breast screening coverage, women aged 45–69 years, Waikato DHB, 24 months to 31 December 2014

Māori			Non-Māori		
Number screened	Eligible population	% screened	Number screened	Eligible population	% screened
5,115	9,240	55.4%	33,529	49,355	67.9%

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 up to the end of 2014, 55% of Māori women and 68% of non-Māori women in Waikato had been screened.

Table 49: Cervical screening coverage, women aged 25–69 years, Waikato 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 %
18,639	13,952	74.9%	11,183	60.0%	76,918	70,187	91.2%	59,898	77.9%

Source: National Screening Unit, Ministry of Health

Note: Population is adjusted for hysterectomy.

Among women aged 25 to 69 years, 75% of Māori women and 91% 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 60% for Māori women and 78% 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 50: Hospitalisations for asthma, by age group, Waikato 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	63	445.0	(386.0, 513.1)	69	269.6	(235.2, 308.9)	1.65 (1.36, 2.01)	175.4
Male	109	713.4	(639.9, 795.3)	89	337.8	(299.7, 380.8)	2.11 (1.80, 2.48)	375.6
Total	172	579.2	(531.2, 631.5)	158	303.7	(277.6, 332.3)	1.91 (1.68, 2.16)	275.5
15–34 years								
Female	53	380.9	(325.6, 445.6)	44	119.8	(100.9, 142.1)	3.18 (2.52, 4.01)	261.1
Male	20	155.0	(119.7, 200.7)	18	49.9	(38.3, 65.0)	3.11 (2.15, 4.50)	105.1
Total	72	267.9	(234.3, 306.4)	62	84.8	(73.5, 97.9)	3.16 (2.59, 3.85)	183.1
35–64 years								
Female	43	315.4	(264.0, 376.9)	48	85.5	(71.7, 102.0)	3.69 (2.87, 4.74)	229.9
Male	23	203.3	(159.5, 259.2)	28	52.6	(41.7, 66.5)	3.86 (2.76, 5.41)	150.7
Total	65	259.4	(224.6, 299.6)	76	69.1	(60.0, 79.5)	3.75 (3.07, 4.59)	190.3
65 years and over								
Female	9	415.2	(284.4, 606.1)	34	124.9	(101.0, 154.5)	3.32 (2.15, 5.13)	290.3
Male	4	234.8	(136.3, 404.5)	12	51.3	(36.2, 72.7)	4.57 (2.40, 8.73)	183.5
Total	13	325.0	(238.0, 443.7)	46	88.1	(73.5, 105.7)	3.69 (2.57, 5.29)	236.9

Source: NMDS.

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

There were 172 admissions for asthma per year among Māori children aged 0–14 years, at a rate almost twice that of non-Māori. Young Māori adults were admitted at a rate 3 times as high as those for non-Māori, with an average of 72 admissions per year. Among Māori adults aged 35–64 years, there were 65 admissions per year on average, at 3.8 times the rate of non-Māori. Māori aged 65 years and over were admitted at a rate of 3.7 times the non-Māori rate, with thirteen admissions per year on average.

Table 51: Hospitalisations for chronic obstructive pulmonary disease (COPD), 45 years and over, Waikato 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	213	1,989.0	(1,839.3, 2,150.8)	439	409.9	(385.1, 436.2)	4.85 (4.39, 5.36)	1,579.1
Male	96	1,029.0	(916.2, 1,155.8)	421	382.3	(359.2, 406.8)	2.69 (2.36, 3.07)	646.8
Total	309	1,509.0	(1,414.0, 1,610.4)	860	396.1	(379.0, 413.9)	3.81 (3.52, 4.12)	1,112.9

Source: NMDS.

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

There were 309 hospitalisations per year on average for Māori with COPD, at a rate 3.8 times that of non-Māori, or 1113 more admissions per 100,000.

Table 52: Early deaths from respiratory disease, Waikato DHB, 2007–2011

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	11	23.3	(17.9, 30.3)	20	5.9	(4.6, 7.5)	3.98 (2.77, 5.71)	17.4
Male	13	30.5	(24.0, 38.9)	24	7.1	(5.7, 9.0)	4.29 (3.07, 5.99)	23.4
Total	25	26.9	(22.5, 32.1)	44	6.5	(5.5, 7.7)	4.15 (3.24, 5.30)	20.4

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, 25 Waikato Māori per year died early from respiratory disease, at a rate 4 times the non-Māori rate, or 20 more deaths per 100,000.

Mental disorders

Table 53: Hospitalisations for mental disorders, all ages, Waikato DHB, 2011–2013

Disorder	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Age-standardised rate (95% CI)		Ave. no. per year	Age-standardised rate (95% CI)			
Female								
All disorders	247	555.2	(516.1, 597.3)	800	390.1	(371.5, 409.6)	1.42 (1.30, 1.55)	165.1
Schizophrenia	80	176.2	(154.9, 200.4)	92	44.4	(38.7, 50.9)	3.97 (3.29, 4.79)	131.8
Mood (affective)	70	157.4	(137.2, 180.6)	332	146.7	(136.0, 158.1)	1.07 (0.92, 1.26)	10.7
—Bipolar	29	64.1	(51.7, 79.4)	72	31.3	(26.8, 36.6)	2.05 (1.57, 2.67)	32.7
—Depressive episode	29	66.4	(53.7, 82.0)	203	85.0	(77.0, 93.8)	0.78 (0.62, 0.99)	-18.7
Substance use	43	101.1	(85.0, 120.3)	90	61.3	(53.9, 69.7)	1.65 (1.33, 2.05)	39.8
—Alcohol	25	57.2	(45.5, 72.0)	71	48.7	(42.1, 56.3)	1.17 (0.90, 1.54)	8.5
Anxiety, stress-related	37	84.9	(70.3, 102.6)	132	71.4	(63.4, 80.3)	1.19 (0.95, 1.49)	13.6
Male								
All disorders	314	813.2	(762.1, 867.8)	715	367.3	(349.0, 386.6)	2.21 (2.04, 2.40)	445.9
Schizophrenia	176	473.5	(434.3, 516.3)	204	94.4	(85.4, 104.3)	5.02 (4.40, 5.73)	379.2
Mood (affective)	45	110.3	(92.8, 131.1)	185	94.0	(85.4, 103.5)	1.17 (0.96, 1.43)	16.3
—Bipolar	27	65.0	(52.0, 81.2)	51	26.1	(21.8, 31.2)	2.49 (1.87, 3.32)	38.9
—Depressive episode	12	30.6	(21.9, 42.7)	91	43.8	(38.1, 50.3)	0.70 (0.49, 1.00)	-13.2
Substance use	54	133.8	(114.4, 156.4)	141	94.0	(84.7, 104.3)	1.42 (1.18, 1.72)	39.8
—Alcohol	26	61.3	(49.0, 76.8)	107	66.7	(59.0, 75.3)	0.92 (0.71, 1.19)	-5.3
Anxiety, stress-related	24	61.8	(48.9, 78.1)	79	48.9	(42.2, 56.6)	1.26 (0.96, 1.66)	12.9
Total								
All disorders	562	684.2	(651.7, 718.4)	1515	378.7	(365.6, 392.3)	1.81 (1.70, 1.92)	305.5
Schizophrenia	256	324.9	(302.3, 349.1)	296	69.4	(64.0, 75.3)	4.68 (4.20, 5.22)	255.5
Mood (affective)	115	133.9	(120.2, 149.1)	517	120.3	(113.4, 127.7)	1.11 (0.98, 1.26)	13.5
—Bipolar	56	64.5	(55.3, 75.3)	122	28.7	(25.5, 32.3)	2.25 (1.85, 2.73)	35.8
—Depressive episode	41	48.5	(40.5, 58.0)	294	64.4	(59.4, 69.8)	0.75 (0.62, 0.92)	-15.9
Substance use	97	117.5	(104.6, 131.9)	231	77.6	(71.6, 84.2)	1.51 (1.31, 1.74)	39.8
—Alcohol	51	59.3	(50.5, 69.6)	179	57.7	(52.5, 63.4)	1.03 (0.85, 1.24)	1.6
Anxiety, stress-related	61	73.3	(63.3, 85.0)	211	60.1	(54.8, 65.9)	1.22 (1.03, 1.45)	13.2

Source: NMDS

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

Rates of hospitalisation for mental disorders were 1.8 times as high for Māori as for non-Māori.

Among Māori females, the most common cause of admission was schizophrenia related disorders, with 80 admissions per year on average, at a rate 4 times that of non-Māori females. Admission rates for bipolar disorders were higher for Māori than for non-Māori, while the rate of admission for depressive episodes was lower. Substance use admissions were higher for Māori women.

Among Māori males, the overall admission rate was 2.2 times the non-Māori rate. Admissions for schizophrenia type disorders were the most common, at a rate 5 times the non-Māori rate. The admission rate for bipolar was two-and-a-half times the non-Māori rate. Māori males were also more likely than non-Māori males to be admitted for substance use disorders.

Gout

Table 54: Gout prevalence and treatment, 20–79 years, Waikato DHB, 2011

Indicator	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	Count	%	Count	%		
Gout prevalence	3,093	6.6	6,754	3.4	1.95	3.2
People with gout who received allopurinol regularly	1,102	35.6	2,830	41.9	0.85	-6.3
Colchicine use by people with gout not dispensed allopurinol	234	7.6	435	6.4	1.17	1.1
NSAID use by people with gout	1,422	46.0	2,684	39.7	1.16	6.2
Serum urate test within six months following allopurinol dispensing	571	31.6	1,295	32.4	0.98	-0.8

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.

Approximately 3,100 Māori were estimated to have gout in 2011, a prevalence of 7%, compared to 3% for non-Māori. Just over a third of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those who received allopurinol, only 32% had a lab test for serum urate levels within the following six months.

Table 55: Hospitalisations for gout, 25 years and over, Waikato 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	19	64.8	(49.8, 84.1)	17	4.2	(2.5, 6.8)	15.57 (8.94, 27.13)	60.6
Male	54	246.6	(210.3, 289.3)	53	27.6	(22.5, 33.8)	8.93 (6.90, 11.56)	219.0
Total	73	155.7	(135.7, 178.7)	70	15.9	(13.2, 19.2)	9.80 (7.76, 12.37)	139.8

Source: NMDS

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

There were 73 hospital admissions for gout per year on average among Waikato Māori, more frequent among males than females. The rate of admission for Māori females was 15.6 times the rate for non-Māori females, or 61 more admissions per 100,000. Māori males had an admission rate nearly 9 times the non-Māori rate, or 219 more admissions per 100,000.

Hip fractures

Table 56: Hospitalisations for hip fractures, 65 years and over, Waikato 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	233.4	(147.1, 370.3)	196	402.0	(364.8, 443.0)	0.58 (0.36, 0.93)	-168.6
Male	2	88.1	(36.7, 211.9)	84	250.0	(218.2, 286.4)	0.35 (0.15, 0.86)	-161.8
Total	8	160.8	(106.5, 242.8)	280	326.0	(301.1, 352.9)	0.49 (0.32, 0.75)	-165.2

Source: NMDS

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

On average, 8 Māori per year aged 65 and over were admitted to hospital for hip fractures, at a rate half that of non-Māori.

Elective surgery

Table 57: Hospitalisations for hip replacements, 50 years and over, Waikato 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	21	280.1	(219.1, 358.1)	175	224.8	(204.2, 247.4)	1.25	(0.96, 1.62)	55.3
Male	17	257.8	(196.4, 338.5)	152	240.8	(217.9, 266.1)	1.07	(0.80, 1.43)	17.0
Total	39	269.0	(224.0, 322.9)	327	232.8	(217.2, 249.5)	1.16	(0.95, 1.40)	36.1

Source: NMDS

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

On average, 39 Māori aged 50 years and over were admitted to hospital per year for a hip replacement, at a similar rate to non-Māori.

Table 58: Publicly funded hospitalisations for cataract surgery, 45 years and over, Waikato 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	82	755.2	(665.6, 856.9)	535	407.5	(384.6, 431.7)	1.85	(1.61, 2.13)	347.8
Male	83	907.4	(801.3, 1,027.6)	370	335.9	(313.9, 359.4)	2.70	(2.35, 3.11)	571.6
Total	165	831.3	(760.6, 908.6)	904	371.7	(355.7, 388.4)	2.24	(2.03, 2.47)	459.7

Source: NMDS

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

Around 165 Waikato Māori per year aged 45 years and over were admitted to hospital for cataract surgery. The rate for Māori was 2.2 times that for non-Māori, or 460 more admissions per 100,000.

Mauri ora: All ages

This section presents information on overall hospitalisations, potentially avoidable and ambulatory sensitive hospitalisations, overall mortality rates, 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 Waikato Region, as this data was not available by DHB.

Hospitalisations

Table 59: All-cause hospitalisations, all ages, Waikato 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	11,601	25,501.1 (25,228.4, 25,776.7)	38,872	21,676.9 (21,515.4, 21,839.6)	1.18 (1.16 , 1.19)	3,824.2
Male	8,641	19,946.0 (19,700.6, 20,194.5)	32,969	17,587.1 (17,439.6, 17,735.8)	1.13 (1.12 , 1.15)	2,359.0
Total	20,242	22,723.6 (22,539.8, 22,908.8)	71,841	19,632.0 (19,522.5, 19,742.0)	1.16 (1.15 , 1.17)	3,091.6

Source: NMDS

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

On average, there were 20,242 Māori hospital admissions per year and 71,841 non-Māori admissions. All-cause admission rates were 16% higher for Māori than non-Māori. This includes admissions for pregnancy and childbirth.

Data on hospital admissions by principal diagnosis are available in the accompanying Excel tables.

Potentially avoidable hospitalisations

Table 60: Potentially avoidable hospitalisations, 0–74 years, Waikato 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	2,704	5,965.3 (5,834.1, 6,099.5)	6,051	4,165.2 (4,091.6, 4,240.1)	1.43 (1.39 , 1.47)	1,800.2
Male	2,475	5,835.7 (5,702.4, 5,972.0)	6,473	4,395.9 (4,320.6, 4,472.4)	1.33 (1.29 , 1.37)	1,439.8
Total	5,179	5,900.5 (5,806.7, 5,995.8)	12,524	4,280.5 (4,227.8, 4,333.9)	1.38 (1.35 , 1.41)	1,620.0

Source: NMDS

Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB. Table revised April 2016.

On average, 5,179 Māori hospital admissions per year were potentially avoidable through population based prevention strategies at a rate nearly 40% higher than for non-Māori, or 1,620 more admissions per 100,000.

Table 61: Ambulatory care sensitive hospitalisations, 0–74 years, Waikato 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	1,373	2,987.3 (2,895.2, 3,082.2)	2,592	1,649.3 (1,603.6, 1,696.2)	1.81 (1.74 , 1.89)	1,338.0
Male	1,326	3,073.9 (2,978.3, 3,172.7)	2,983	1,820.1 (1,772.9, 1,868.5)	1.69 (1.62 , 1.76)	1,253.9
Total	2,698	3,024.1 (2,957.5, 3,092.1)	5,574	1,730.9 (1,698.1, 1,764.4)	1.75 (1.70 , 1.80)	1,293.1

Source: NMDS

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

On average, there were 2,698 ambulatory care sensitive hospitalisations per year among Māori, at a rate that was 75% higher than the non-Māori rate, or 1,293 more admissions per 100,000.

Mortality

Table 62: Life expectancy at birth, Waikato Region, 2012–2014

Gender	Māori		Non-Māori		Difference in years
	Years (95% credible interval)	Years (95% credible interval)	Years (95% credible interval)	Years (95% credible interval)	
Female	76.5 (75.8, 77.2)	84.0 (83.8, 84.3)			-7.5
Male	72.2 (71.5, 72.9)	80.3 (80.0, 80.5)			-8.1

Source: Statistics New Zealand Subnational Period Life Tables: 2012–14.

Notes: This data is for the Waikato Region (including Waikato DHB area and the Taupo District). A map of Regional Council boundaries can be found [here](#). The credible interval is the 2.5th percentile and the 97.5th percentile, the expected years of 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, and takes no account of changes in death rates after that period. During 2012–2014, among residents of the Waikato Region, life expectancy at birth was 76.5 years for Māori females, 7.5 years lower than that of non-Māori females (84.0 years). For Māori males, life expectancy was 72.2 years, 8.1 years lower than for non-Māori males (80.3 years).

Table 63: All-cause deaths, all ages, Waikato DHB, 2008–2012

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Age-standardised rate per 100,000 (95% CI)	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Age-standardised rate per 100,000 (95% CI)		
Female	166	331.2 (315.4, 347.9)	1039	147.8 (143.0, 152.8)			2.24 (2.11, 2.38)	183.4
Male	204	483.3 (462.6, 504.9)	1085	231.3 (225.0, 237.8)			2.09 (1.98, 2.20)	252.0
Total	370	407.3 (394.1, 420.8)	2124	189.6 (185.6, 193.6)			2.15 (2.07, 2.23)	217.7

Source: Mortality dataset, Ministry of Health.

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

There were 370 Māori deaths per year on average in Waikato from 2008 to 2012. The Māori mortality rate was over twice the non-Māori rate, or 218 more deaths per 100,000.

Table 64: Leading causes of death for Māori, all ages, Waikato DHB, 2007–2011

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)	Age-standardised rate per 100,000 (95% CI)	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)	Age-standardised rate per 100,000 (95% CI)		
Female								
IHD	20	35.2 (28.9, 42.9)	181	14.6 (13.3, 16.1)			2.41 (1.94, 3.00)	20.6
Lung cancer	18	33.2 (27.0, 40.9)	44	8.1 (6.9, 9.5)			4.12 (3.17, 5.34)	25.1
COPD	13	23.0 (17.9, 29.5)	55	6.3 (5.4, 7.3)			3.66 (2.73, 4.89)	16.7
Diabetes	12	22.0 (17.1, 28.4)	24	2.3 (1.8, 2.9)			9.50 (6.75, 13.36)	19.7
Stroke	10	17.7 (13.3, 23.6)	117	9.7 (8.6, 11.0)			1.83 (1.34, 2.50)	8.0
Male								
IHD	34	74.6 (64.1, 86.8)	236	37.4 (34.8, 40.1)			2.00 (1.69, 2.36)	37.2
Accidents	21	52.9 (43.6, 64.2)	55	28.1 (24.2, 32.7)			1.88 (1.47, 2.40)	24.8
Diabetes	14	29.5 (23.4, 37.3)	32	5.7 (4.7, 6.9)			5.21 (3.85, 7.06)	23.9
Lung cancer	14	29.0 (22.9, 36.7)	68	12.1 (10.7, 13.6)			2.41 (1.84, 3.14)	16.9
COPD	12	25.7 (20.0, 32.9)	62	7.9 (7.0, 9.0)			3.23 (2.44, 4.27)	17.7
Total								
IHD	55	54.9 (48.7, 62.0)	418	26.0 (24.5, 27.5)			2.11 (1.85, 2.42)	28.9
Lung cancer	32	31.1 (26.6, 36.4)	112	10.1 (9.1, 11.1)			3.09 (2.57, 3.71)	21.0
Accidents	29	35.5 (30.1, 41.9)	96	19.1 (16.9, 21.7)			1.85 (1.50, 2.28)	16.3
Diabetes	26	25.8 (21.7, 30.6)	55	4.0 (3.4, 4.7)			6.46 (5.13, 8.13)	21.8
COPD	25	24.3 (20.4, 29.0)	117	7.1 (6.5, 7.8)			3.42 (2.80, 4.18)	17.2

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 Waikato Māori women were ischaemic heart disease (IHD), lung cancer, COPD, diabetes mellitus and stroke. Mortality rates for these conditions were 1.8 times higher to 9.5 times as high for Māori women compared to non-Māori women.

For Waikato Māori men, the leading causes of death were IHD, accidents, diabetes mellitus, lung cancer and COPD. Mortality rates were 1.9 times higher to 5.2 times as high for Māori compared to 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 65: Potentially avoidable mortality, 0–74 years, Waikato DHB, 2007–2011

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	97	202.0	(184.6, 221.1)	204	69.8	(64.5, 75.4)	2.90 (2.57, 3.26)	132.2
Male	129	300.8	(278.2, 325.2)	329	125.2	(117.8, 133.1)	2.40 (2.18, 2.65)	175.6
Total	226	251.4	(237.0, 266.7)	533	97.5	(92.9, 102.3)	2.58 (2.39, 2.78)	153.9

Source: Mortality, Ministry of Health

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

There were 226 potentially avoidable Māori deaths per year in Waikato, at a rate 2.6 times the non-Māori rate, or 154 more deaths per 100,000.

Table 66: Amenable mortality, 0–74 years, Waikato DHB, 2007–2011

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	69	143.8	(129.2, 160.0)	137	48.3	(43.9, 53.1)	2.98 (2.58, 3.44)	95.5
Male	96	223.1	(203.8, 244.3)	234	88.3	(82.2, 94.8)	2.53 (2.25, 2.84)	134.8
Total	164	183.4	(171.2, 196.6)	371	68.3	(64.5, 72.3)	2.69 (2.46, 2.94)	115.2

Source: Mortality, Ministry of Health

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

Amenable mortality was 2.7 times as high for Māori as for non-Māori, or 115 more deaths per 100,000. On average, 164 Waikato Māori died per year from conditions that were amenable to health care.

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 among Waikato Māori were falls; exposure to mechanical forces; complications of medical and surgical care; transport accidents; and assault.

Table 67: Hospitalisations for injuries, all ages, Waikato 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	957	2,164.2	(2,084.9, 2,246.6)	3,527	1,853.0	(1,806.0, 1,901.3)	1.17	(1.12, 1.22)	311.2
Male	1,367	3,381.9	(3,278.5, 3,488.7)	4,266	2,820.2	(2,762.1, 2,879.5)	1.20	(1.16, 1.24)	561.7
Total	2,323	2,773.1	(2,707.6, 2,840.2)	7,793	2,336.6	(2,299.1, 2,374.7)	1.19	(1.15, 1.22)	436.5

Source: NMDS

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

On average there were 2,323 hospitalisations for injury among Māori, at a rate 19% higher than non-Māori, or almost 440 more admissions per 100,000.

Table 68: Hospitalisations for assault, all ages, Waikato 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	78	185.6	(163.1, 211.3)	47	35.7	(29.9, 42.6)	5.20	(4.18, 6.48)	149.9
Male	138	360.1	(326.5, 397.0)	187	148.3	(136.0, 161.7)	2.43	(2.13, 2.77)	211.8
Total	216	272.8	(252.3, 295.0)	234	92.0	(85.1, 99.4)	2.97	(2.66, 3.31)	180.9

Source: NMDS

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

On average 216 Māori per year were admitted to hospital for injury caused by assault, at a rate 3 times the non-Māori rate, or 181 more admissions per 100,000. Males had higher admission rates than females.

Table 69: Deaths from injury, all ages, Waikato DHB, 2007–2011

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	12	27.2	(21.0, 35.3)	48	14.7	(12.1, 17.9)	1.85	(1.33, 2.56)	12.5
Male	32	80.6	(68.8, 94.3)	83	43.5	(38.7, 49.0)	1.85	(1.52, 2.25)	37.1
Total	43	53.9	(47.1, 61.7)	131	29.1	(26.3, 32.2)	1.85	(1.56, 2.19)	24.8

Source: Mortality dataset, Ministry of Health.

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

On average 43 Waikato Māori died from injuries per year, at a rate 85% higher than non-Māori, or 25 more deaths per 100,000. Mortality rates were higher for males than females for both Māori and non-Māori.



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Appendix 1: Population projections

Table 70: Māori population projections, single year by age group, Waikato DHB, 2013 to 2020

Projected Māori Ethnic Group Population by Age and Sex at 30 June 2014–33 (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	1,050	1,010	2,060	1,060	1,000	2,060	1,050	1,000	2,050	1,050	990	2,040
1-4	4,390	4,060	8,450	4,330	4,070	8,400	4,280	4,060	8,340	4,160	4,020	8,170
5-9	4,920	4,700	9,620	5,120	4,800	9,920	5,250	4,960	10,210	5,480	5,020	10,510
10-14	4,590	4,350	8,940	4,560	4,370	8,930	4,570	4,300	8,880	4,520	4,340	8,870
15-19	4,330	4,170	8,500	4,370	4,220	8,590	4,460	4,200	8,670	4,500	4,230	8,730
20-24	3,590	3,890	7,480	3,760	3,940	7,700	3,870	3,990	7,860	3,990	4,020	8,020
25-29	2,660	2,980	5,640	2,760	3,040	5,800	2,840	3,230	6,070	2,980	3,320	6,300
30-34	2,280	2,670	4,950	2,280	2,700	4,980	2,360	2,730	5,090	2,370	2,790	5,160
35-39	2,260	2,610	4,870	2,260	2,600	4,860	2,200	2,580	4,780	2,220	2,610	4,830
40-44	2,270	2,740	5,010	2,280	2,770	5,050	2,330	2,800	5,130	2,270	2,700	4,960
45-49	2,100	2,430	4,530	2,090	2,440	4,530	2,100	2,450	4,550	2,160	2,560	4,720
50-54	2,040	2,410	4,450	2,090	2,420	4,510	2,070	2,440	4,510	2,060	2,410	4,460
55-59	1,620	1,880	3,500	1,670	1,970	3,640	1,730	2,030	3,760	1,800	2,090	3,900
60-64	1,210	1,420	2,630	1,240	1,510	2,740	1,330	1,600	2,930	1,380	1,690	3,070
65-69	870	970	1,830	910	1,030	1,950	950	1,120	2,070	1,010	1,190	2,200
70-74	580	630	1,210	630	660	1,290	620	690	1,310	640	710	1,350
75-79	290	360	650	320	400	710	380	430	800	400	480	880
80-84	180	250	420	190	260	440	200	260	460	200	270	470
85-89	60	100	160	50	100	140	40	110	140	50	120	170
90+	20	30	50	30	40	70	40	50	90	40	50	90
All Ages	41,300	43,700	84,900	42,000	44,300	86,300	42,700	45,000	87,700	43,300	45,600	88,900
	2017			2018			2019			2020		
0	1,040	990	2,040	1,050	990	2,040	1,050	1,000	2,050	1,050	1,000	2,050
1-4	4,200	3,990	8,180	4,180	3,960	8,140	4,170	3,950	8,120	4,170	3,950	8,120
5-9	5,430	5,030	10,470	5,380	5,010	10,380	5,310	5,000	10,310	5,240	4,980	10,220
10-14	4,630	4,450	9,080	4,800	4,590	9,390	4,990	4,680	9,670	5,110	4,830	9,930
15-19	4,470	4,210	8,680	4,410	4,130	8,540	4,370	4,130	8,500	4,370	4,050	8,420
20-24	4,070	3,950	8,020	4,120	3,980	8,100	4,140	4,020	8,160	4,230	3,990	8,220
25-29	3,110	3,450	6,550	3,240	3,510	6,750	3,410	3,550	6,960	3,500	3,600	7,100
30-34	2,430	2,900	5,330	2,520	2,920	5,440	2,610	2,960	5,570	2,680	3,150	5,830
35-39	2,220	2,580	4,800	2,200	2,630	4,820	2,200	2,650	4,850	2,270	2,680	4,950
40-44	2,190	2,630	4,830	2,180	2,560	4,730	2,180	2,540	4,720	2,100	2,520	4,620
45-49	2,180	2,580	4,760	2,180	2,680	4,860	2,190	2,700	4,900	2,230	2,730	4,960
50-54	2,070	2,410	4,480	2,000	2,360	4,350	1,980	2,360	4,340	1,980	2,360	4,350
55-59	1,800	2,200	4,000	1,920	2,310	4,230	1,970	2,320	4,290	1,950	2,340	4,280
60-64	1,470	1,770	3,250	1,490	1,770	3,260	1,530	1,860	3,390	1,590	1,900	3,490
65-69	1,050	1,220	2,270	1,080	1,310	2,390	1,100	1,390	2,490	1,190	1,480	2,670
70-74	680	780	1,450	740	850	1,590	780	910	1,690	810	980	1,800
75-79	440	500	950	460	530	980	500	550	1,050	490	580	1,070
80-84	180	280	460	200	270	470	210	300	510	260	320	580
85-89	80	130	210	100	150	250	110	160	270	130	170	300
90+	30	60	90	30	60	90	20	60	80	10	60	70
All Ages	43,800	46,100	89,900	44,200	46,600	90,800	44,800	47,100	91,900	45,400	47,700	93,000

These projections were derived in October 2014.

Source: Statistics New Zealand Population Projections

Table 71: Total population projections, single year, by age group, Waikato DHB, 2013 to 2020

Projected Total Population by Age and Sex at 30 June 2014–33 (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	2,720	2,650	5,370	2,660	2,530	5,190	2,710	2,570	5,290	2,740	2,610	5,350
1-4	11,810	11,060	22,870	11,540	10,990	22,520	11,270	10,810	22,080	11,050	10,650	21,700
5-9	13,730	13,420	27,150	14,230	13,710	27,940	14,610	13,970	28,580	14,940	14,150	29,090
10-14	13,510	13,120	26,640	13,340	12,960	26,300	13,180	12,840	26,020	13,080	12,850	25,930
15-19	14,200	13,280	27,480	14,250	13,440	27,690	14,390	13,570	27,960	14,290	13,520	27,820
20-24	13,510	13,380	26,880	14,040	13,650	27,690	14,470	13,690	28,160	14,840	13,670	28,510
25-29	11,170	11,770	22,940	11,870	12,270	24,140	12,420	12,950	25,370	12,940	13,400	26,340
30-34	10,380	11,290	21,670	10,630	11,640	22,270	11,010	11,920	22,920	11,290	12,480	23,770
35-39	10,650	11,610	22,250	10,490	11,450	21,940	10,470	11,520	21,990	10,680	11,490	22,170
40-44	12,070	13,420	25,490	12,010	13,230	25,250	11,850	13,020	24,870	11,400	12,500	23,910
45-49	12,050	13,070	25,120	12,090	13,050	25,140	12,100	13,210	25,310	12,200	13,490	25,700
50-54	12,430	13,380	25,810	12,400	13,540	25,940	12,450	13,410	25,870	12,370	13,290	25,660
55-59	11,200	11,830	23,030	11,520	12,220	23,750	11,710	12,520	24,230	12,020	12,920	24,940
60-64	9,910	10,540	20,450	10,080	10,760	20,840	10,420	11,090	21,510	10,720	11,290	22,000
65-69	8,820	9,170	17,990	9,210	9,620	18,820	9,570	10,000	19,570	9,870	10,390	20,260
70-74	6,530	7,080	13,620	6,880	7,340	14,220	7,040	7,680	14,720	7,220	7,870	15,080
75-79	4,630	5,070	9,690	4,790	5,330	10,120	5,070	5,650	10,720	5,370	6,070	11,440
80-84	3,230	4,070	7,300	3,260	4,080	7,340	3,360	4,100	7,470	3,440	4,100	7,540
85-89	1,660	2,520	4,180	1,710	2,520	4,240	1,770	2,560	4,330	1,850	2,710	4,560
90+	590	1,390	1,980	660	1,510	2,180	730	1,600	2,330	780	1,660	2,440
All Ages	184,800	193,100	377,900	187,700	195,800	383,500	190,600	198,700	389,300	193,100	201,100	394,200
	2017			2018			2019			2020		
0	2,760	2,620	5,380	2,770	2,630	5,410	2,800	2,650	5,450	2,830	2,680	5,510
1-4	10,970	10,520	21,490	10,970	10,450	21,430	11,050	10,530	21,580	11,120	10,600	21,720
5-9	14,860	14,130	28,990	14,630	13,890	28,520	14,210	13,620	27,830	13,890	13,390	27,280
10-14	13,220	12,910	26,130	13,540	13,220	26,760	13,970	13,440	27,410	14,270	13,630	27,900
15-19	14,050	13,380	27,430	13,660	13,060	26,720	13,390	12,810	26,210	13,140	12,600	25,740
20-24	14,920	13,520	28,440	15,000	13,490	28,490	14,870	13,490	28,360	14,840	13,450	28,300
25-29	13,490	13,800	27,290	13,880	14,070	27,960	14,170	14,120	28,290	14,340	13,930	28,270
30-34	11,560	12,840	24,400	11,940	13,150	25,090	12,430	13,450	25,880	12,810	13,960	26,770
35-39	10,680	11,570	22,250	10,770	11,670	22,440	10,910	11,900	22,820	11,180	12,070	23,250
40-44	11,090	12,030	23,120	10,770	11,700	22,480	10,520	11,440	21,960	10,410	11,410	21,820
45-49	12,190	13,470	25,670	12,110	13,380	25,500	11,980	13,120	25,110	11,740	12,830	24,570
50-54	12,140	13,120	25,260	11,990	13,050	25,040	11,970	12,970	24,930	11,910	13,050	24,950
55-59	12,210	13,240	25,460	12,400	13,380	25,780	12,330	13,490	25,820	12,320	13,310	25,630
60-64	11,010	11,610	22,610	11,210	11,950	23,160	11,490	12,300	23,790	11,610	12,540	24,150
65-69	9,840	10,390	20,240	9,830	10,510	20,350	9,970	10,700	20,670	10,270	10,990	21,260
70-74	7,660	8,240	15,900	8,330	8,820	17,150	8,700	9,250	17,950	9,040	9,600	18,630
75-79	5,660	6,430	12,090	5,720	6,540	12,260	6,020	6,770	12,790	6,130	7,070	13,200
80-84	3,450	4,190	7,640	3,620	4,300	7,920	3,740	4,520	8,260	3,990	4,800	8,790
85-89	2,020	2,840	4,860	2,020	2,880	4,900	2,040	2,900	4,940	2,130	2,940	5,060
90+	830	1,690	2,510	890	1,760	2,650	940	1,800	2,740	980	1,840	2,810
All Ages	194,600	202,500	397,100	196,100	203,900	400,000	197,500	205,300	402,800	199,000	206,700	405,600

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 72: 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

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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 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 other 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 73: 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 74: 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 75: 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 76: 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 77: 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 78: 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.

