



Hawke's Bay  
District Health Board

# Māori Health Profile 2015



## Te Rei Puta

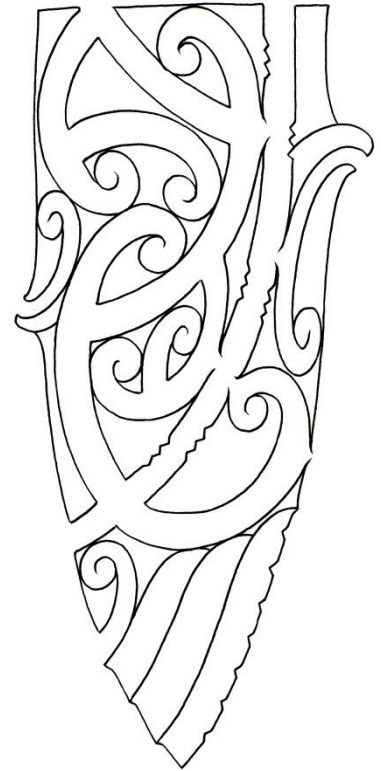
The cover design represents the journey of data from its production to its use by the health sector. The overall shape of the design is the prized rei puta. This signifies the importance of information and the acknowledgement that knowledge is a taonga.

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

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Ngā mihi nui ki a koutou katoa.

Nā,

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



# Tiro whānui

## – Hawke’s Bay at a glance

### Hawke’s Bay population

- In 2013, 39,500 Māori lived in the Hawke’s Bay District Health Board region, 25% of the District’s total population.
- The Hawke’s Bay Māori population is youthful, but showing signs of ageing. The median age in 2013 was 23.6 years. In 2013, Māori made up 40% of the DHB population aged 0–14 years and 35% of young adults aged 15–24 years. The Māori population aged 65 years and over will increase by 41% between 2013 and 2020.

### Whānau ora – Healthy families

- In 2013, most Hawke’s Bay Māori adults (79%) reported that their whānau was doing well, but 9% felt their whānau was doing badly. A small proportion (7%) found it hard to access whānau support in times of need, but most found it easy (75%).
- Being involved in Māori culture was important (very, quite or somewhat) to the majority of Māori adults in Hawke’s Bay (70%), as was spirituality (70%).
- Almost all (98%) Hawke’s Bay Māori had been to a marae at some time. Two-thirds (66%) had been to their ancestral marae, with over half (58%) stating they would like to go more often.
- One in ten had taken part in traditional healing or massage in the last 12 months.
- One in four Hawke’s Bay Māori could have a conversation about a lot of everyday things in te reo Māori.

### Wai ora – Healthy environments

#### Education

- In 2013, 94% of Hawke’s Bay Māori children starting school had participated in early childhood education.
- In 2013, 43% of Māori adults aged 18 years and over had at least a Level 2 Certificate, a significant increase since 2006 (35%). The proportion of non-Māori with this level of qualification was 63%.

#### Work

- In 2013, 11% of Māori adults aged 15 years and over were unemployed, more than twice the non-Māori rate (5%).
- Most Māori adults (87%) do voluntary work.
- In 2013, Māori were twice as likely as non-Māori to look after someone who was disabled or ill within the home, and around 50% more likely to care for a non-household member, without pay.

#### Income and standard of living

- In 2013, almost one in two children and two in five 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, 11% of Hawke’s Bay Māori adults reported putting up with feeling the cold a lot to keep costs down during the previous 12 months, 7% had gone without fresh fruit and vegetables, and 12% had often postponed or put off visits to the doctor.

- Residents of Māori households were more likely to have no access to a motor vehicle than residents of other households (11% compared to 3% had no vehicle).
- People in Māori households were less likely to have access to telecommunications than those living in other households: 36% had no internet, 29% no telephone, 17% no mobile phone, and 5% had no access to any telecommunications.

## Housing

- The most common housing problems reported to be a big problem by Hawke's Bay Māori adults in 2013 were finding it hard to keep warm (14%), needing repairs (13%), and damp (12%).
- Sixty percent of children in Māori households were living in rented accommodation in 2013, twice the proportion of children in other households (30%).
- Hawke's Bay residents living in Māori households were 3.3 times as likely as others to be in crowded homes (i.e. requiring at least one additional bedroom) (23% compared to 7%).

## Area deprivation

- Using the NZDep2013 index of small area deprivation, 33% of Hawke's Bay Māori lived in the most deprived neighbourhoods (decile 10) compared to 10% of non-Māori.

# Mauri ora – Healthy individuals

## Pepi, tamariki – Infants and children

- On average 1,066 Māori infants were born per year during 2009–2013, 46% of all live births in Hawke's Bay DHB.
- Eight percent of Māori and 6% of non-Māori babies had low birth weight.
- In 2013, 65% of Māori babies in Hawke's Bay were fully breastfed at 6 weeks.
- Sixty-two percent of Māori infants were enrolled with a Primary Health Organisation by three months of age.
- In 2014, 94% of Māori children were fully immunised at 8 months of age, 95% at 24 months.
- In 2013, 63% of Hawke's Bay Māori children and 36% of non-Māori children aged 5 years had caries. At Year 8 of school, 52% of Māori children and 42% of non-Māori children had caries. Māori children under 15 years were twice as likely as non-Māori to be hospitalised for tooth and gum disease.
- During 2011–2013, on average there were 61 hospital admissions per year for grommet insertions among Māori children (at a rate 25% higher than non-Māori) and 73 admissions per year for serious skin infections (with the rate 2.2 times that of non-Māori children).
- An average of two Māori children aged 0–14 years and one aged 15–24 were admitted to hospital per year for acute rheumatic fever.
- On average, 798 hospitalisations per year of Māori children were potentially avoidable through population-based health promotion and intersectoral actions, at a rate 59% higher than that of non-Māori.
- Each year, an average of 512 hospitalisations of Māori children were potentially avoidable through preventive or treatment intervention in primary care (ambulatory care sensitive hospitalisations, or ASH), with a rate 49% higher than for non-Māori children.

## Rangatahi – Young adults

- There has been a significant increase in the proportion of Hawke's Bay 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, 47% of Māori aged 20–24 were regular smokers compared to 24% of non-Māori.
- By September 2014, 74% of Māori girls aged 17 years and 68% 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 intentional self-harm were 64% higher for Māori males than for non-Māori males among those aged 15–24 years during 2011–2013.

## Pakeke – Adults

- Just over half of Māori adults in Hawke's Bay reported having excellent or very good health in 2013, and almost a third reported having good health. One in six (16%) reported having fair or poor health.

- Smoking rates are decreasing, but remain over twice as high for Māori as for non-Māori (37% compared to 17% in 2013).

### Circulatory system diseases

- During 2011–2013, Māori adults aged 25 years and over were 72% more likely than non-Māori to be hospitalised for circulatory system diseases (including heart disease and stroke), with around 500 admissions per year.
- Hawke’s Bay Māori were 87% more likely than non-Māori to be admitted with acute coronary syndrome, 66% more likely to have angiography, 34% more likely to have angioplasty, and 91% more likely to have a coronary artery bypass and graft.
- Heart failure admission rates were 4.3 times as high for Māori as for non-Māori.
- Stroke admission rates were two-thirds higher for Māori than for non-Māori, and hypertensive disease admissions over twice as high.
- Chronic rheumatic heart disease admission rates were 4.5 times as high for Māori as for non-Māori, and heart valve replacement rates 82% higher.
- Māori under 75 years were 3.6 times as likely as non-Māori to die from circulatory system diseases in 2007–2011.

### Diabetes

- In 2013, 5.2% of Māori and 5.5% of non-Māori were estimated to have diabetes. Among Māori aged 25 years and over who had diabetes, 61% were regularly receiving metformin or insulin, 86% were having their blood sugar monitored regularly, and 69% were being screened regularly for renal disease.
- In 2011–2013 Māori with diabetes were 5.2 times as likely as non-Māori to have a lower limb amputated (seven Māori per year on average).

### Cancer

- Compared to non-Māori, cancer incidence was 45% higher for Māori females while cancer mortality was 85% higher. Among males, Māori had similar cancer incidence but 70% higher mortality than non-Māori.
- Breast, lung, colorectal, and uterine cancers were the most commonly registered among Hawke’s Bay Māori women during 2008–2012. The rate of lung cancer was 4.2 times as high as the non-Māori rate, uterine cancer twice as high, and breast cancer 53% higher.
- Breast screening coverage of Māori women aged 45–69 years was 65% compared to 75% of non-Māori women at the end of 2014.
- Cervical screening coverage of Māori women aged 25–69 years was 74% over 3 years and 92% over five years (compared to 78% and 92% of non-Māori women respectively).
- Lung, prostate, colorectal and stomach cancers were the most common cancers among Hawke’s Bay Māori men. Lung cancer was 2.7 times as high as the non-Māori rate and stomach cancer was 5.8 times as high.
- Lung cancer was the most common causes of death from cancer among Māori men and women. Compared to non-Māori, the lung cancer mortality rate was 4.6 times as high for Māori women, and 2.8 times as high for Māori men. Cancers of the digestive organs were the second leading cause of cancer death among Māori, followed by breast cancer for women, and prostate cancer for men.

### Respiratory disease

- Māori aged 45 years and over were 3.5 times as likely as non-Māori to be admitted to hospital for chronic obstructive pulmonary disease (COPD).
- Asthma hospitalisation rates were higher for Māori than non-Māori under 65 years of age.
- Māori under 75 years had 3.3 times the non-Māori rate of death from respiratory disease in 2007–2011.

### Mental disorders

- Māori were 68% more likely than non-Māori to be admitted to hospital for a mental disorder during 2011–2013. Schizophrenia related disorders were the most common disorders, followed by mood disorders.

## Gout

- In 2011 the prevalence of gout among Hawke's Bay Māori was estimated to be 7%, compared to 4% in non-Māori.
- Forty percent of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those who received allopurinol, only 27% had a lab test for serum urate levels in the following six months.
- In 2011–2013 the rate of hospitalisations for gout was 7 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 27% higher for Māori than for non-Māori during 2011–2013.
- On average, 2,353 Māori hospital admissions per year were potentially avoidable, with the rate 53% higher for Māori than for non-Māori. The ASH rate was 68% higher.

### Mortality

- During 2012–2014 life expectancy at birth was 75.9 years for Māori females in the Hawke's Bay Region (7.7 years lower than for non-Māori females) and 71.7 years for Māori males (8.2 years lower than for non-Māori males).
- The all-cause mortality rate for Hawke's Bay Māori was twice the non-Māori rate during 2008–2012.
- Leading causes of death for Māori females during 2007–2011 were ischaemic heart disease (IHD), lung cancer, stroke, diabetes and COPD. Leading causes of death for Māori males were IHD, accidents, lung cancer, diabetes, and COPD.
- Potentially avoidable mortality was 2.5 times as high for Māori as for non-Māori in Hawke's Bay, and mortality amenable to health care 2.7 times as high.

### Injuries

- The rate of hospitalisation due to injury was 36% higher for Māori than for non-Māori.
- The most common causes of injury resulting in hospitalisations among Māori were falls, exposure to mechanical forces, complications of medical and surgical care, assault, and transport accidents.
- Rates of hospital admission for injury caused by assault were 6.7 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.
- Injury mortality was nearly twice as high for Māori as for non-Māori in Hawke's Bay.



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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 Matua o te Matau o Maui, Hawke's Bay 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 Hawke's Bay DHB. Accompanying Excel tables also include data for the total Hawke's Bay 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 population<sup>1</sup>.

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.

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

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

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

Further technical notes and methods are provided in Appendix 2.

## Further sources of data

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

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





# Te Tatauranga o te Iwi

## – Key demographics

In 2013, approximately 6% (39,500) of the country’s Māori population lived in the Hawke’s Bay District Health Board. The total population of the DHB (157,900) made up 4% of the national population. In 2015, the Hawke’s Bay Māori population is estimated to be 40,500 and the total population 160,200.

**Table 1: Population by age group, Hawke’s Bay DHB, 2013**

Age group (years)	Māori			Non-Māori		Total DHB Number
	Number	Age distribution	% of DHB	Number	Age distribution	
0–14	13,680	35	40	20,840	18%	34,520
15–24	6,910	18	35	12,620	11%	19,530
25–44	9,140	23	26	26,110	22%	35,250
45–64	7,410	19	18	34,960	30%	42,370
65+	2,310	6	9	23,870	20%	26,180
Total	39,500	100	25	118,400	100%	157,900

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

In 2013, Māori residents comprised 25% of the DHB population. The Māori population is relatively young, with a median age of 23.6 years, compared with 40.2 years for the total DHB population. In 2013, Māori made up 40% of the DHB’s children aged 0–14 years and 35% of those aged 15–24 years.

**Table 2: Population projections, Hawke’s Bay 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	39,500	25	6	35	40	6	23.6	157,900	40.2	4	692,300	4,442,100
2018	41,600	26	6	34	59	7	24.1	162,600	41.3	3	734,500	4,726,200
2023	43,500	26	6	33	59	9	25.0	165,000	42.2	3	773,500	4,935,200
2028	45,400	27	6	32	58	10	25.9	166,700	43.0	3	811,700	5,139,700
2033	47,300	28	6	31	58	11	26.5	167,400	43.9	3	850,700	5,327,700

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

Note: Detailed population projections are provided in Appendix 1.

The proportion of Māori who are aged 65 years and over was 6% in 2013 but is projected to increase to 11% in 2033 (Table 2). Between 2013 and 2020 the number of Māori aged 65 and over will increase by 41% from 2,310 to 3,260 (see Appendix 1). In 2013 there were 740 Māori aged 75 years and over in Hawke’s Bay, with 207 living alone (see accompanying Excel tables).



# 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, Hawke’s Bay DHB, 2013**

How the whānau is doing	Hawke’s Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Well / Extremely well	21,000	78.8	(74.6, 83.1)	83.4	(82.5, 84.4)
Neither well nor badly	3,500	12.7	(9.4, 16)	10.3	(9.4, 11.2)
Badly / Extremely badly	2,000*	8.5*	(5.6, 11.3)	6.3	(5.6, 7.0)

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

Note: An asterisk (\*) shows the sampling error is 30% or more but less than 50%

In 2013, 79% of Hawke’s Bay Māori adults reported that their whānau was doing well or extremely well. However 8.5% felt their whānau was doing badly or extremely badly.

**Table 4: Whānau composition reported by Māori aged 15 years and over, Hawke’s Bay DHB, 2013**

Whānau description	Hawke’s Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
<b>Size of whānau</b>					
10 or less	15,500	59.8	(54.8, 64.9)	53.7	(52.1, 55.3)
11 to 20	6,000	23.0	(18.8, 27.1)	22.6	(21.3, 24)
More than 20	4,500	17.2	(13.1, 21.3)	23.6	(22.4, 24.8)
<b>Groups included in whānau</b>					
Parents, partner, children, brothers & sisters	25,500	95.4	(93.3, 97.5)	94.6	(94.0, 95.2)
Aunts & uncles, cousins, nephews & nieces, other in-laws	8,500	32.8	(28.3, 37.4)	41.3	(39.8, 42.8)
Grandparents, grandchildren	11,000	41.4	(36.3, 46.5)	41.9	(40.5, 43.4)
Friends, others	3,000	11.6	(8.4, 14.8)	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 17% reporting whānau sizes of more than 20 people. Twelve percent included friends in their description of whānau.

## Whānau support

Table 5: Access to whānau support, Māori aged 15 years and over, Hawke's Bay DHB, 2013

How easy is it to get help	Hawke's Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
<b>Support in times of need</b>					
Easy, very easy	20,000	75.4	(70.8, 79.9)	81.2	(80.1, 82.4)
Sometimes easy, sometimes hard	4,500	17.3	(13.1, 21.5)	12.7	(11.7, 13.6)
Hard / very hard	2,000*	7.3*	(4.6, 10.1)	6.1	(5.4, 6.8)
<b>Help with Māori cultural practices such as going to a tangi, speaking at a hui, or blessing a taonga</b>					
Easy, very easy	15,500	58.1	(52.8, 63.4)	64.1	(62.7, 65.6)
Sometimes easy, sometimes hard	5,500	21.0	(16.7, 25.3)	16.9	(15.9, 18)
Hard / very hard	4,500	16.9	(12.9, 20.9)	14.7	(13.5, 15.9)
Don't need help	1,000*	4.0*	(2.1, 6.0)	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 Hawke's Bay (75%) reported having easy access to whānau support in times of need. However, an estimated 2,000 (7%) had difficulty getting help.

A smaller proportion found it easy to get help with Māori cultural practices (58%), with 17% finding it hard or very hard. A further 4% reported not needing help.

## Importance of participation in Māori culture

Table 6: Importance of Māori culture and spirituality, Māori aged 15 years and over, Hawke's Bay DHB, 2013

	Hawke's Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
<b>Importance of being involved in Māori culture</b>					
Very / quite	12,000	44.3	(39.2, 49.5)	46.3	(44.9, 47.6)
Somewhat	7,000	25.4	(20.5, 30.3)	24.2	(22.9, 25.6)
A little / not at all	8,000	30.2	(24.9, 35.6)	29.5	(28.3, 30.7)
<b>Importance of spirituality</b>					
Very / quite	14,000	52.4	(47.4, 57.3)	48.7	(47.4, 49.9)
Somewhat	4,500	17.4	(13.2, 21.7)	17.0	(16.0, 18.0)
A little / not at all	8,000	30.2	(25.8, 34.6)	34.3	(33.1, 35.5)

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

Being involved in Māori culture was important (very, quite or somewhat) to 70% of Hawke's Bay Māori adults. Spirituality was also important to 70%.

## Te Reo Māori

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

Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in proportion
Number	%	(95% CI)	Number	%	(95% CI)		
8,301	24.1	(23.6, 24.5)	1,023	1.0	(1.0, 1.1)	<b>23.23 (21.52, 25.07)</b>	23.0

Source: 2013 Census, 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, one in four Māori in Hawke's Bay (8,301) and 1% (1,023) 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, Hawke's Bay DHB, 2013**

Language spoken at home	Hawke's Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Māori is main language	S	S		2.6	(2.2, 3.0)
Māori is used regularly	5,500	23.0	(18.5, 27.6)	20.5	(19.2, 21.8)

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

Note: S shows the data was suppressed.

In 2013, 23% (5,500) of Māori adults reported that te reo Māori was used regularly in the home.

## Access to marae

**Table 9: Access to marae, Māori aged 15 years and over, Hawke's Bay DHB, 2013**

Been to marae	Hawke's Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
At some time	26,000	98.1	(96.8, 99.4)	96.0	(95.5, 96.6)
In previous 12 months <sup>(1)</sup>	15,000	57.1	(51.9, 62.3)	58.2	(56.6, 59.7)
Ancestral marae at some time <sup>(2)</sup>	17,500	65.7	(60.9, 70.5)	62.3	(60.9, 63.7)
Ancestral marae in previous 12 months <sup>(3)</sup>	8,500	32.2	(27.3, 37.2)	33.6	(32.3, 34.9)
Like to go to ancestral marae more often <sup>(2)</sup>	11,000	57.5	(50.7, 64.3)	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 Hawke's Bay (98%) had been to a marae, with 57% having been in the last 12 months. Two-thirds had been to at least one of their ancestral marae, with 32% having been in the last 12 months. Overall 58% reported that they would like to go to 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, Hawke's Bay DHB, 2013**

Hawke's Bay DHB			New Zealand	
Estimated number	%	(95% CI)	%	(95% CI)
2,500	9.5	(6.7, 12.2)	10.9	(10.0, 11.7)

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

In 2013 an estimated 2,500 Māori adults (9.5%) in Hawke's Bay had taken part in traditional healing or massage during the previous 12 months.

# 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 Hawke's Bay DHB, 2006 and 2013**

Year	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
2006	6,606	34.8	(34.1, 35.4)	41,433	56.5	(56.1, 56.9)	<b>0.62</b> (0.60, 0.63)	-21.7
2013	8,379	43.0	(42.3, 43.7)	45,585	62.9	(62.5, 63.3)	<b>0.68</b> (0.67, 0.70)	-19.9

Source: 2006 and 2013 Censuses, Statistics New Zealand

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

The proportion of Māori adults aged 18 years and over with at least a Level 2 Certificate increased from 35% to 43% between 2006 and 2013. However, Māori remained two-thirds as likely as non-Māori to have this level of qualification in 2013, with a difference of 20 percentage points.

### Work

**Table 12: Labour force status, 15 years and over, Hawke's Bay 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)		
<b>2006</b>								
Employed full-time	10,668	50.4	(49.8, 51.0)	44,970	57.7	(57.4, 58.1)	<b>0.87</b> (0.86, 0.88)	-7.3
Employed part-time	3,045	13.6	(13.2, 14.1)	14,268	17.6	(17.3, 17.9)	<b>0.77</b> (0.75, 0.80)	-4.0
Unemployed	1,533	7.3	(7.0, 7.7)	1,941	3.4	(3.2, 3.5)	<b>2.17</b> (2.03, 2.32)	4.0
Not in the labour force	6,471	28.6	(28.0, 29.1)	27,411	21.3	(21.0, 21.6)	<b>1.34</b> (1.31, 1.37)	7.2
<b>2013</b>								
Employed full-time	9,768	44.4	(43.8, 45.0)	42,117	53.7	(53.4, 54.1)	<b>0.83</b> (0.81, 0.84)	-9.3
Employed part-time	2,940	12.4	(12.0, 12.8)	13,653	16.5	(16.2, 16.8)	<b>0.75</b> (0.72, 0.78)	-4.1
Unemployed	2,319	11.2	(10.8, 11.6)	2,766	4.9	(4.7, 5.1)	<b>2.29</b> (2.17, 2.43)	6.3
Not in the labour force	7,806	32.1	(31.5, 32.7)	30,693	24.9	(24.5, 25.2)	<b>1.29</b> (1.26, 1.32)	7.2

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 number and proportion of Māori adults employed either full-time or part-time, and a corresponding increase in the unemployment rate (from 7% to 11%). There was also an increase in the number and proportion of Māori who were not in the labour force.

In 2013 Māori were 2.3 times as likely as non-Māori to be unemployed, with an absolute gap of 6% in unemployment rates.

**Table 13: Leading industries in which Māori were employed, Hawke's Bay DHB, 2013**

ANZSIC Industry	Hawke's Bay DHB						New Zealand	
	Māori			Non-Māori				
	Number	%	Rank	Number	%	Rank	%	Rank
<b>Females</b>								
Health Care and Social Assistance	1,029	17.8	1	5,322	20.8	1	17.1	1
Education and Training	891	15.4	2	3,468	13.5	2	12.9	2
Manufacturing	888	15.4	3	1,809	7.1	5	6.0	6
Retail Trade	597	10.3	4	3,174	12.4	3	11.6	3
Accommodation and Food Services	477	8.2	5	1,623	6.3	7	7.3	5
<b>Males</b>								
Manufacturing	1,533	27.0	1	4,512	16.2	2	13.4	1
Agriculture, Forestry and Fishing	1,152	20.3	2	4,680	16.8	1	8.7	4
Construction	612	10.8	3	3,339	12.0	3	13.2	2
Transport, Postal and Warehousing	381	6.7	4	1,542	5.5	7	5.9	7
Public Administration and Safety	300	5.3	5	1,230	4.4	8	5.2	8

Source: 2013 Census, Statistics New Zealand

Note: Australian and New Zealand Standard Industrial Classification (ANZSIC).

In 2013, Māori women in Hawke's Bay were mainly employed in health care and social assistance (18%); education and training (15%); manufacturing (15%), and retail trade (10%). For Māori men, the leading industries were manufacturing (27%); agriculture, forestry, and fishing (20%); and construction (11%).

**Table 14: Leading occupations of employed Māori, Hawke's Bay DHB, 2013**

ANZSCO Occupation	Hawke's Bay DHB						New Zealand	
	Māori			Non-Māori				
	Number	%	Rank	Number	%	Rank	%	Rank
<b>Females</b>								
Labourers	1,518	26.0	1	2,769	10.8	5	8.3	6
Professionals	1,128	19.3	2	6,519	25.5	1	26.7	1
Community and Personal Service Workers	954	16.3	3	3,633	14.2	3	12.9	4
Clerical and Administrative Workers	711	12.2	4	4,869	19.0	2	19.5	2
Sales Workers	579	9.9	5	2,733	10.7	6	11.7	5
Managers	522	8.9	6	3,399	13.3	4	14.4	3
Technicians and Trades Workers	276	4.7	7	1,344	5.3	7	5.0	7
Machinery Operators and Drivers	153	2.6	8	327	1.3	8	1.5	8
<b>Males</b>								
Labourers	2,235	39.0	1	5,211	18.9	2	13.6	4
Machinery Operators and Drivers	909	15.8	2	2,580	9.4	5	9.1	5
Technicians and Trades Workers	840	14.6	3	5,025	18.2	3	18.5	3
Managers	591	10.3	4	6,579	23.9	1	22.7	1
Professionals	447	7.8	5	4,017	14.6	4	18.6	2
Community and Personal Service Workers	381	6.6	6	1,344	4.9	7	5.4	7
Sales Workers	207	3.6	7	1,737	6.3	6	7.1	6
Clerical and Administrative Workers	126	2.2	8	1,062	3.9	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 in 2013, the leading occupational groupings were labourers (26%), professionals (19%) and community and personal service workers (16%). The next most common occupations were clerical and administrative workers, sales workers and managers.

Māori men were most likely to be employed as labourers (39%), machinery operators and drivers (16%), technicians and trade workers (15%), and managers (10%).

**Table 15: Unpaid work, 15 years and over, Hawke's Bay 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	18,132	87.4	(86.9, 87.9)	74,109	88.8	(88.5, 89.1)	<b>0.98 (0.98, 0.99)</b>	-1.4
Looking after disabled/ill household member	2,854	13.6	(13.2, 14.1)	5,976	7.0	(6.8, 7.2)	<b>1.96 (1.87, 2.05)</b>	6.7
Looking after disabled/ill non-household member	2,632	12.0	(11.6, 12.5)	8,301	8.0	(7.8, 8.2)	<b>1.51 (1.44, 1.58)</b>	4.0

Source: 2013 Census, Statistics New Zealand

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

In 2013, 87% of Māori adults worked without pay. Māori were around twice as likely as non-Māori to look after a household member who was disabled or ill without pay, and 51% more likely than non-Māori to look after someone outside of the home.

## 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, Hawke's Bay DHB, 2013**

Actions taken a lot to keep costs down	Hawke's Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Put up with feeling the cold	3,000	10.6	(7.8, 13.3)	11.0	(10.2, 11.8)
Go without fresh fruit and vegetables	2,000*	7.1*	(4.6, 9.6)	5.4	(4.8, 6.0)
Postpone or put off visits to the doctor	3,000	11.5	(8.3, 14.7)	8.8	(7.9, 9.6)

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

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

In 2013, an estimated 3,000 Māori in Hawke's Bay (11%) reported putting up with feeling cold to keep costs down, 2,000 (7%) had gone without fresh fruit and vegetables, and 3,000 (12%) had postponed or put off visits to the doctor during the previous 12 months.

**Table 17: Children aged 0–17 years living in families where the only income is means-tested benefits, Hawke's Bay 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	3,204	21.8	(21.1, 22.4)	1,491	6.8	(6.5, 7.2)	<b>3.19 (3.01, 3.37)</b>	14.9
2013	3,855	25.5	(24.9, 26.2)	1,380	6.7	(6.4, 7.1)	<b>3.80 (3.59, 4.03)</b>	18.8

Source: 2006 and 2013 Censuses, Statistics New Zealand

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

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

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 22% to 25.5%. Children in Māori families were 3.8 times as likely as non-Māori children to be in this situation in 2013.

**Table 18: Children and adults living in households with low incomes, Hawke's Bay 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	5,700	46.6	(45.7, 47.5)	3,888	20.0	(19.5, 20.6)	<b>2.33 (2.25, 2.41)</b>	26.6
Adults 18 years & over	7,953	39.4	(38.7, 40.1)	10,764	19.5	(19.1, 19.9)	<b>2.02 (1.97, 2.08)</b>	19.9

Source: 2013 Census, Statistics New Zealand

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

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

Household income is equivalised using the revised Jensen scale. Low income is defined as an equivalised household income under \$15,172.

Nearly half of the children in Māori households (5,700) were in households with low equivalised household incomes, 2.3 times the proportion of other children. Nearly 40% of adults in Māori households (over 7,900) lived in low income households, twice the proportion of adults in non-Māori households.

**Table 19: Households with no access to a motor vehicle, Hawke's Bay 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)		
<b>Households</b>								
2006	1,236	10.2	(9.7, 10.8)	2,865	7.1	(6.8, 7.3)	<b>1.45 (1.36, 1.54)</b>	3.2
2013	1,680	12.6	(12.1, 13.2)	2,790	6.7	(6.5, 7.0)	<b>1.87 (1.77, 1.98)</b>	5.9
<b>People (% age-standardised)</b>								
2006	3,120	7.8	(7.5, 8.1)	3,804	2.5	(2.4, 2.6)	<b>3.11 (2.94, 3.29)</b>	5.3
2013	4,494	10.8	(10.5, 11.1)	3,822	2.9	(2.7, 3.0)	<b>3.76 (3.56, 3.96)</b>	7.9

Source: 2006 and 2013 Censuses, 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, almost 13% of Māori households had no access to a motor vehicle, nearly twice the proportion of non-Māori households (7%). 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, Hawke's Bay 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 cell/mobile phone	7,560	16.7	(16.3, 17.0)	14,118	10.7	(10.5, 11.0)	<b>1.55 (1.51, 1.60)</b>	5.9
No telephone	11,697	29.1	(28.7, 29.6)	8,574	11.9	(11.6, 12.1)	<b>2.46 (2.39, 2.52)</b>	17.3
No internet	15,540	36.2	(35.8, 36.7)	17,571	13.6	(13.4, 13.9)	<b>2.66 (2.60, 2.72)</b>	22.6
No tele-communications	1,869	4.5	(4.3, 4.7)	1,038	1.2	(1.1, 1.3)	<b>3.81 (3.49, 4.15)</b>	3.3

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.

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

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

Residents of Māori households were less likely than residents of non-Māori households to have access to telecommunications. In 2013, 36% of people in Māori households had no access to the internet, 29% had no landline, 17% did not have a cell phone, and 4.5% had no access to any telecommunications in the home. The largest absolute gap between Hawke's Bay Māori and non-Māori households was in access to the internet (a difference of 23%).



## Housing

**Table 21: Housing problems reported by Māori aged 15 years and over, Hawke's Bay DHB, 2013**

Housing problem (a big problem)	Hawke's Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Too small	1,500*	5.3*	(3.3, 7.3)	5.3	(4.7, 5.9)
Damp	3,500	12.3	(9.2, 15.5)	11.3	(10.5, 12.2)
Hard to keep warm	4,000	14.1	(11.0, 17.3)	16.5	(15.4, 17.7)
Needs repairs	3,500	12.9	(9.8, 16.1)	13.8	(12.7, 14.9)
Pests in the house	2,000*	6.8*	(4.2, 9.3)	5.8	(5.1, 6.5)

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

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

Housing problems mostly commonly reported to be a big problem by Hawke's Bay Māori adults in 2013 included difficulty keeping the house warm (14%), needing repairs (13%), and damp (12%). Around 5% felt their house was too small, and 7% 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, Hawke's Bay DHB, 2013**

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage	
	Number	%	(95% CI)	Number	%	(95% CI)			
Households	6,705	51.0	(50.2, 51.9)	9,351	22.9	(22.5, 23.3)	<b>2.23</b>	<b>(2.17, 2.28)</b>	28.1
Children under 18 years (% age-standardised)	9,279	59.5	(58.8, 60.3)	6,240	29.6	(29.0, 30.2)	<b>2.01</b>	<b>(1.97, 2.06)</b>	30.0
Adults 18 years and over (% age-standardised)	12,579	50.9	(50.3, 51.5)	15,774	31.4	(31.0, 31.9)	<b>1.62</b>	<b>(1.59, 1.65)</b>	19.5

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, 6,705 Māori households were rented, making up 51% of all Māori households, compared to 23% of non-Māori households.

Among children living in a Māori household, 60% (almost 9,280) were living in rented homes, compared to 30% (6,240 children) in non-Māori households.

One in two adults living in Māori households were living in rented accommodation (around 12,580), compared to one in three adults in non-Māori households.

## Household crowding

**Table 23: People living in crowded households (requiring at least one more bedroom), Hawke's Bay DHB, 2013**

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage	
	Number	%	(95% CI)	Number	%	(95% CI)			
Households	1,659	12.5	(11.9, 13.0)	843	2.0	(1.9, 2.2)	<b>6.12</b>	<b>(5.65, 6.64)</b>	10.4
People (% age standardised)	9,084	22.9	(22.5, 23.3)	4,347	6.9	(6.7, 7.1)	<b>3.33</b>	<b>(3.22, 3.45)</b>	16.0

Source: 2013 Census, Statistics New Zealand

Notes: Crowding was defined as needing at least one additional bedroom according to the Canadian National Occupancy Standard (based on the age, sex and number of people living in the dwelling).

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

In 2013, Māori households were 6 times as likely as non-Māori households to be classified as crowded using the Canadian National Occupancy Standard, with around 1,660 homes needing at least one additional bedroom, affecting over 9,000 people. People living in Māori households were 3.3 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, Hawke’s Bay DHB, 2013**

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households	366	2.8	(2.5, 3.1)	513	1.2	(1.1, 1.4)	<b>2.22</b> (1.95, 2.54)	1.5
People (% age standardised)	1,005	2.5	(2.3, 2.6)	1,095	1.5	(1.4, 1.7)	<b>1.60</b> (1.46, 1.75)	0.9

Source: 2013 Census, Statistics New Zealand

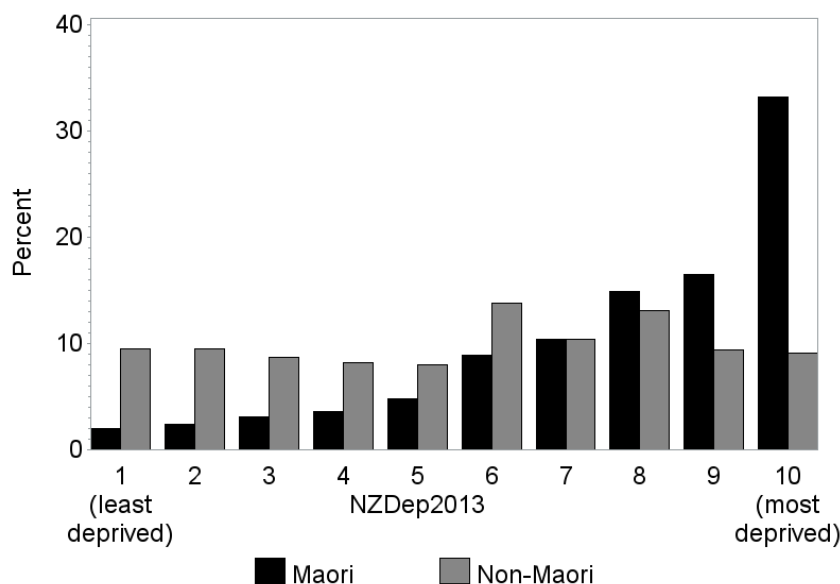
Notes: No form of heating used in the dwelling (including electricity, coal, mains or bottled gas, wood, solar heating equipment, other heating).

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, nearly 3% of Māori households (366 homes) had no heating, with just over 1,000 residents. Among non-Māori households, 1% had no heating (513 homes) with nearly 1,100 residents.

## Area deprivation

**Figure 1: Distribution by NZDep 2013 decile, Hawke’s Bay DHB, 2013**



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

In 2013 Hawke’s Bay Māori were more likely than non-Māori to live in the three most deprived areas. A third of Māori lived in decile 10 (the most deprived neighbourhoods) compared to 10% of non-Māori. Conversely non Māori were more likely than Māori to live in the least deprived areas, with 9% living in decile 1 compared to 2% of Māori.



# 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, Hawke’s Bay 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	85	8.0 (7.3, 8.8)	68	5.5 (5.0, 6.1)	<b>1.45 (1.26, 1.66)</b>	2.5
High birth-weight	20	1.9 (1.5, 2.3)	32	2.6 (2.2, 3.0)	<b>0.72 (0.56, 0.92)</b>	-0.7
Preterm	96	9.0 (8.3, 9.9)	94	7.6 (7.0, 8.3)	<b>1.19 (1.05, 1.34)</b>	1.4

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 1,066 Māori infants born per year on average, 46% of all live births in the DHB (2,300 per year). On average, 85 Māori babies per year were born with low birth-weight, at a rate of 8% of live births (45% higher than the non-Māori rate). Twenty Māori babies per year (2%) were born with high birth-weight (at a rate 28% lower than non-Māori), and 96 per year (9%) were born preterm, at a rate 19% higher than non-Māori.

### Well child/Tamariki ora indicators

**Table 26: Selected Well Child/Tamariki Ora indicators for Māori children, Hawke’s Bay DHB**

Indicator	Period	Māori	
		Count	%
1. Babies enrolled with a Primary Health Organisation (PHO) by three months old	20 Aug to 19 Nov 2013	130	62
11. Babies exclusively or fully breastfed at 2 weeks	January to June 2013	249	78
12. Babies exclusively or fully breastfed at 6 weeks		254	65
19. Mothers smoke-free two weeks postnatal	2012	190	58
5. Children under 5 years enrolled with oral health services (PHO enrolled children)		3,288	64
7. Children starting school who have participated in ECE	2013	934	94
15. Children with a healthy weight at 4 years, DHB of service	July to Dec 2013	337	75

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, 62% 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 65% at six weeks. Fifty eight percent of Māori mothers were smoke-free two weeks after giving birth.

Among pre-school children enrolled with a PHO 64% of Māori were enrolled with oral health services in 2012. Ninety-four percent of Māori children who started school in 2013 had participated in early childhood education. Three quarters 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, Hawke’s Bay 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	683	67	1,001	84	0.80	-17
8 months	959	94	1,130	94	0.99	-1
12 months	958	96	1,117	93	1.03	3
18 months	818	83	1,115	88	0.94	-5
24 months	1,002	95	1,219	93	1.02	2
5 years	973	88	1,228	90	0.98	-2

Source: National Immunisation Register

In the 12 months up to 31 December 2014, 67% of Māori infants aged six months were fully immunised compared to 84% of non-Māori infants. However, 94% of Māori children aged eight months and 95% of those aged 24 months had completed their immunisations. At five years of age 88% of Māori children were fully immunised.

## Oral health

**Table 28: Oral health status of children aged 5 or in Year 8 at school, Hawke’s Bay 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	780	63 (60, 67)	3.1	1,245	36 (34, 39)	1.5	<b>1.74 (1.59, 1.91)</b>	27
Year 8	670	52 (49, 56)	1.4	1,380	42 (40, 45)	1.0	<b>1.24 (1.13, 1.36)</b>	10

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.

Almost two-thirds of Māori children aged five years in 2013 had caries (63%), three-quarters higher than the proportion of non-Māori children (36%). The mean number of decayed, missing or filled teeth was 3.1 for Māori and 1.5 for non-Māori children. Of those in Year 8 at school (aged around 12 years) 52% of Māori and 42% of non-Māori children had caries. The mean number of decayed, missing or filled teeth was 1.4 for Māori and 1.0 for non-Māori.

**Table 29: Hospitalisations for tooth and gum disease, children aged 0–14 years, Hawke’s Bay 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	64	944.7	(820.0, 1088.4)	47	462.4	(392.0, 545.5)	<b>2.04 (1.64, 2.54)</b>	482.3
Male	68	984.4	(857.7, 1129.8)	44	420.1	(354.1, 498.4)	<b>2.34 (1.88, 2.92)</b>	564.3
Total	132	964.6	(873.9, 1064.7)	91	441.3	(391.8, 496.9)	<b>2.19 (1.87, 2.55)</b>	523.3

Source: National Minimum Data Set (NMDS).

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

During 2011–2013, there were 132 hospital admissions per year on average for tooth and gum disease among Māori children aged 0–14 years, with a rate 2.2 times that of non-Māori, or 523 more admissions per 100,000.

## Middle ear disease

**Table 30: Hospitalisations for grommet insertions, children aged 0–14 years, Hawke’s Bay 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	26	382.1	(305.5, 477.8)	30	297.3	(241.5, 366.0)	1.28 (0.95, 1.74)	84.7
Male	36	515.9	(426.7, 623.7)	43	419.7	(352.9, 499.2)	1.23 (0.95, 1.59)	96.2
Total	61	449.0	(388.5, 518.9)	72	358.5	(313.8, 409.6)	<b>1.25 (1.03, 1.52)</b>	90.4

Source: NMDS

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

On average, 61 Māori children per year were admitted for insertion of grommets for otitis media, at a rate 25% higher than the non-Māori rate, or 90 more procedures per 100,000 Māori children.

## Healthy skin

**Table 31: Hospitalisations for serious skin infections, children aged 0–14 years, Hawke’s Bay 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	32	467.2	(382.8, 570.2)	24	235.0	(186.2, 296.6)	<b>1.99 (1.46, 2.70)</b>	232.2
Male	41	578.0	(483.9, 690.4)	25	237.6	(189.3, 298.1)	<b>2.43 (1.82, 3.25)</b>	340.4
Total	73	522.6	(457.7, 596.7)	49	236.3	(200.8, 278.0)	<b>2.21 (1.79, 2.73)</b>	286.3

Source: NMDS

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

There were 73 admissions per year on average for serious skin infections among Māori children. The rate was 2.2 times the rate for non-Māori children, or 286 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, Hawke’s Bay 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)			
<b>0–14 years</b>								
Female	<1	5.0	(0.7, 35.2)	1	5.8	(1.5, 23.3)	0.85 (0.08, 9.39)	-0.9
Male	2	25.0	(10.4, 60.0)	1	6.0	(1.5, 24.0)	4.17 (0.81, 21.56)	19.0
Total	2	15.0	(6.7, 33.3)	1	5.9	(2.2, 15.7)	2.53 (0.71, 8.99)	9.1
<b>15–24 years</b>								
Female	<1	9.3	(1.3, 66.2)	0	0.0	.	.	9.3
Male	1	18.5	(4.6, 73.9)	0	0.0	.	.	18.5
Total	1	13.9	(4.5, 43.1)	0	0.0	.	.	13.9

Source: NMDS

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

Among Hawke’s Bay Māori children aged 14 years and under, two children per year on average were admitted to hospital with acute rheumatic fever. Among Māori aged 15 to 24 years there was an average of one admission per year and none among 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, Hawke’s Bay 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	357	5,188.1	(4,886.4, 5,508.4)	318	3,196.2	(2,999.5, 3,405.8)	<b>1.62 (1.49, 1.77)</b>	1,991.9
Male	441	6,212.0	(5,885.7, 6,556.4)	400	3,986.1	(3,766.5, 4,218.5)	<b>1.56 (1.44, 1.69)</b>	2,225.9
Total	798	5,700.1	(5,476.0, 5,933.3)	718	3,591.1	(3,442.4, 3,746.2)	<b>1.59 (1.50, 1.68)</b>	2,108.9

Source: NMDS

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

There were around 798 potentially avoidable hospitalisations per year on average among Māori children, at a rate 59% higher than for non-Māori children, or around 2,100 more admissions per 100,000 children.

**Table 34: Ambulatory care sensitive hospitalisations for children aged 1 month to 14 years, Hawke’s Bay 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	240	3,511.9	(3,264.3, 3,778.3)	231	2,319.8	(2,153.3, 2,499.2)	<b>1.51 (1.36, 1.68)</b>	1,192.1
Male	272	3,873.7	(3,616.4, 4,149.4)	267	2,642.1	(2,465.1, 2,831.7)	<b>1.47 (1.33, 1.62)</b>	1,231.6
Total	512	3,692.8	(3,512.4, 3,882.5)	499	2,480.9	(2,358.2, 2,610.1)	<b>1.49 (1.39, 1.60)</b>	1,211.9

Source: NMDS

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

On average there were 512 admissions per year for ambulatory care sensitive conditions among Hawke’s Bay Māori children, at a rate 49% higher than among non-Māori children, or 1,212 more admissions per 100,000 children.



# Mauri ora: Rangatahi

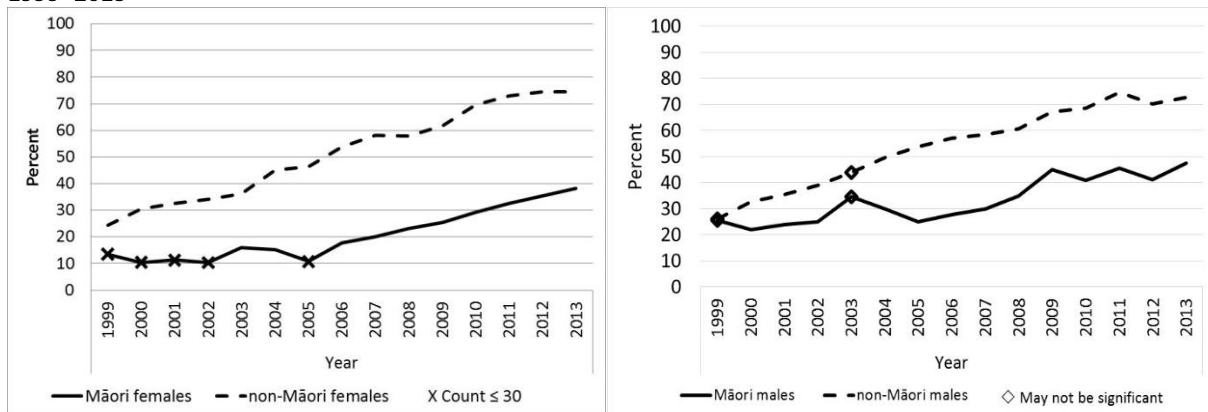
## – Young adults

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

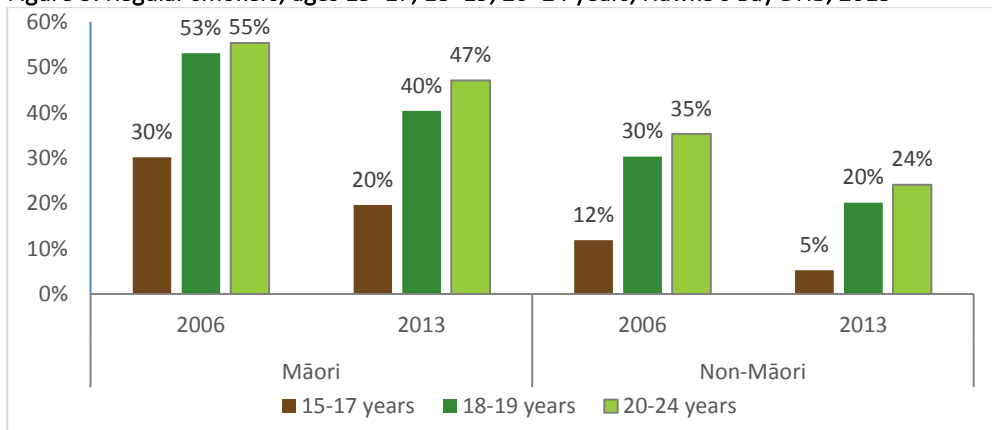
Figure 2: Trends in the proportion of students aged 14–15 years who have never smoked, by gender, Hawke’s Bay DHB, 1999–2013



Source: ASH Year 10 Snapshot Survey, 2013

Over the last 15 years the number of Māori aged 14 or 15 who have never smoked has increased (Figure 2). In 2013, 43% of Māori had never smoked compared 74% of non-Māori Year 10 students.

Figure 3: Regular smokers, ages 15–17, 18–19, 20–24 years, Hawke’s Bay DHB, 2013



Source: 2013 Census, Statistics New Zealand

Note: Regular smokers smoke one or more cigarettes per day.

Smoking rates have decreased significantly among young Māori and non-Māori adults in Hawke's Bay since 2006. However, the smoking rates among those aged 18–24 years indicate a high proportion take up smoking in this age group. In 2013, 47% of Māori aged 20–24 years were smoking regularly. 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, Hawke's Bay 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	293	68.1	366	48.2	1.41	20.0
1999	15	2012	328	80.0	385	57.5	1.39	22.5
1998	16	2011	280	70.0	351	45.0	1.56	25.0
1997	17	2010	303	73.9	369	49.9	1.48	24.0

Source: National Immunisation Register.

Note: 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 are higher for Māori than for non-Māori girls in Hawke's Bay. Just over two-thirds of Māori girls aged 14 years in 2014 had received all three doses by September 2014, and 80% of Māori girls aged 15 years. Among Māori aged 17 years, 74% were fully immunised, 48% higher than non-Māori coverage in this age group.

## Mental health

**Table 36: Hospitalisations for injury from intentional self-harm, 15–24 and 25–44 years, Hawke's Bay 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)					
<b>15–24 years</b>										
Female	16	464.8 (351.3, 615.0)		38	615.7 (512.0, 740.3)		0.76	(0.54, 1.06)		-150.8
Male	13	392.4 (285.1, 540.1)		16	238.7 (179.3, 317.7)		<b>1.64</b>	<b>(1.07, 2.52)</b>		153.7
Total	29	428.6 (347.2, 529.2)		53	427.2 (365.8, 498.8)		1.00	(0.77, 1.30)		1.4
<b>25–44 years</b>										
Female	12	246.8 (178.6, 341.0)		34	245.4 (200.6, 300.1)		1.01	(0.69, 1.47)		1.4
Male	8	196.9 (131.8, 294.1)		14	119.8 (87.8, 163.4)		1.64	(0.99, 2.73)		77.1
Total	20	221.8 (172.2, 285.7)		47	182.6 (154.1, 216.3)		1.22	(0.90, 1.65)		39.3

Source: NMDS.

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

Overall Māori aged 15–24 years were just as likely as non-Māori to be admitted to hospital for injury from intentional self-harm. However Māori males in this age group were 64% more likely to be admitted than non-Māori males. On average there were 29 admissions per year among Māori in this age group.

There were 20 admissions per year among Māori aged 25–44 years.





# 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 Hawke’s Bay can be found in the accompanying Excel® tables labelled ‘Death registrations’ and ‘Hospitalisations by principal diagnosis’. For example, the hospitalisations table shows disparities between Hawke’s Bay Māori and non-Māori in rates of admission for tuberculosis, viral hepatitis, thyroid disorders, epilepsy, bronchiectasis, acute bronchitis and bronchiolitis, cholelithiasis (gallstones), acute pancreatitis, glomerular diseases, renal failure, 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, Hawke’s Bay DHB, 2013**

Health status	Hawke’s Bay DHB			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Excellent	3,500	12.6	(9.1, 16.1)	18.1	(16.8, 19.3)
Very good	10,500	40.3	(35.5, 45.1)	37.0	(35.5, 38.5)
Good	8,000	30.7	(25.9, 35.5)	28.5	(27.3, 29.7)
Fair / poor	4,500	16.3	(12.7, 20.0)	16.4	(15.3, 17.5)

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

Fifty-three-percent of Hawke’s Bay Māori adults reported having excellent or very good health in 2013 and another 31% described their health as good. Around 4,500 (16%) reported having fair or poor health status.

### Smoking status

**Table 38: Cigarette smoking status, 15 years and over, Hawke’s Bay DHB, 2006 and 2013**

Smoking status	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in proportion
	Number	%	(95% CI)	Number	%	(95% CI)		
<b>2006</b>								
Regular smoker	9,051	46.0	(45.3, 46.7)	16,725	24.3	(23.9, 24.6)	<b>1.89 (1.85, 1.93)</b>	21.7
Ex-smoker	3,633	17.2	(16.7, 17.7)	21,519	19.9	(19.6, 20.2)	<b>0.86 (0.84, 0.89)</b>	2.7
Never smoked	7,356	36.8	(36.1, 37.4)	45,615	55.8	(55.4, 56.2)	<b>0.66 (0.65, 0.67)</b>	19.1
<b>2013</b>								
Regular smoker	7,698	37.4	(36.8, 38.1)	11,775	17.0	(16.7, 17.4)	<b>2.20 (2.14, 2.26)</b>	20.4
Ex-smoker	4,905	21.0	(20.4, 21.5)	23,532	20.8	(20.5, 21.1)	1.01 (0.98, 1.04)	0.2
Never smoked	8,844	41.5	(40.9, 42.2)	49,971	62.2	(61.8, 62.5)	<b>0.67 (0.66, 0.68)</b>	-20.6

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 46% to 37%. There was a corresponding increase in those who have never smoked and an increase in ex-smokers. However, Māori remained more than twice as likely as non-Māori to smoke regularly in 2013, with a difference of 20 percentage points.

## Heart disease and stroke

**Table 39: Hospitalisations for circulatory system diseases, 25 years and over, Hawke's Bay 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	249	1,691.7	(1,569.7, 1,823.3)	1,161	819.3	(779.4, 861.2)	<b>2.06</b>	<b>(1.89, 2.26)</b>	872.5
Male	253	2,214.9	(2,058.0, 2,383.8)	1,485	1,458.4	(1,402.0, 1,517.1)	<b>1.52</b>	<b>(1.40, 1.65)</b>	756.5
Total	502	1,953.3	(1,852.9, 2,059.2)	2,646	1,138.8	(1,104.1, 1,174.7)	<b>1.72</b>	<b>(1.61, 1.82)</b>	814.5

Source: NMDS

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

Around 500 Māori were admitted to hospital per year for diseases of the circulatory system (including heart disease and stroke), at a rate 72% higher than non-Māori, or 815 more admissions per 100,000.

**Table 40: Ischaemic heart disease indicators, 25 years and over, Hawke's Bay 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)				
<b>Ischaemic heart disease admissions</b>									
Female	68	444.1	(385.9, 511.0)	263	161.0	(146.4, 177.0)	<b>2.76</b>	<b>(2.33, 3.27)</b>	283.1
Male	73	619.4	(541.3, 708.9)	468	442.3	(414.7, 471.6)	<b>1.40</b>	<b>(1.21, 1.63)</b>	177.2
Total	142	531.8	(482.1, 586.5)	731	301.6	(285.9, 318.2)	<b>1.76</b>	<b>(1.58, 1.97)</b>	230.1
<b>Angiography procedures</b>									
Female	57	403.5	(345.9, 470.7)	180	173.6	(156.5, 192.5)	<b>2.32</b>	<b>(1.93, 2.80)</b>	229.9
Male	65	569.0	(492.7, 657.1)	364	410.8	(383.2, 440.5)	<b>1.38</b>	<b>(1.18, 1.63)</b>	158.2
Total	122	486.3	(437.5, 540.5)	544	292.2	(275.8, 309.6)	<b>1.66</b>	<b>(1.48, 1.88)</b>	194.0
<b>Angioplasty procedures</b>									
Female	15	100.9	(74.9, 136.1)	44	40.3	(33.0, 49.2)	<b>2.50</b>	<b>(1.75, 3.59)</b>	60.6
Male	17	149.6	(113.2, 197.6)	122	147.2	(130.8, 165.8)	1.02	(0.75, 1.38)	2.3
Total	32	125.3	(102.0, 153.8)	167	93.8	(84.6, 103.9)	<b>1.34</b>	<b>(1.06, 1.68)</b>	31.5
<b>Coronary Artery Bypass Graft (CABG)</b>									
Female	3	23.0	(12.2, 43.4)	14	10.5	(7.4, 14.7)	<b>2.20</b>	<b>(1.07, 4.52)</b>	12.6
Male	11	92.0	(64.7, 130.7)	48	49.7	(41.4, 59.6)	<b>1.85</b>	<b>(1.25, 2.75)</b>	42.3
Total	14	57.5	(42.3, 78.3)	62	30.1	(25.6, 35.3)	<b>1.91</b>	<b>(1.35, 2.71)</b>	27.5
<b>Acute coronary syndrome admissions</b>									
Female	52	336.7	(286.6, 395.5)	193	110.4	(98.4, 123.9)	<b>3.05</b>	<b>(2.50, 3.72)</b>	226.3
Male	52	441.3	(375.5, 518.6)	327	305.1	(282.1, 329.9)	<b>1.45</b>	<b>(1.21, 1.73)</b>	136.2
Total	104	389.0	(346.7, 436.4)	520	207.7	(194.6, 221.7)	<b>1.87</b>	<b>(1.64, 2.14)</b>	181.2

Source: NMDS.

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

On average, 142 Māori per year were admitted to hospital for ischaemic heart disease, at a rate 76% higher than non-Māori. Of these, 104 were admitted with acute coronary syndrome (87% higher than the rate for non-Māori).

There were 122 angiography procedures conducted for Māori patients per year, at a rate two-thirds higher than for non-Māori. On average, 17 Māori men and 15 Māori women per year had angioplasty procedures, with the rate for Māori women 2.5 times higher than the non-Māori rate. Three Māori women per year on average had a coronary artery bypass graft (CABG), more than twice the rate of non-Māori women. Eleven Māori men per year on average had a CABG at a rate 85% higher than non-Māori men.

**Table 41: Hospitalisations for heart failure, stroke, and hypertensive disease, 25 years and over, Hawke's Bay 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)				
<b>Heart failure</b>									
Female	52	319.6	(271.8, 375.9)	155	62.7	(55.1, 71.3)	<b>5.10</b>	<b>(4.14, 6.27)</b>	256.9
Male	60	514.0	(442.6, 596.9)	199	133.2	(120.4, 147.4)	<b>3.86</b>	<b>(3.22, 4.62)</b>	380.8
Total	112	416.8	(373.0, 465.9)	354	97.9	(90.4, 106.1)	<b>4.26</b>	<b>(3.71, 4.88)</b>	318.9
<b>Stroke</b>									
Female	29	196.3	(157.4, 244.7)	162	93.8	(81.5, 108.0)	<b>2.09</b>	<b>(1.61, 2.72)</b>	102.5
Male	19	164.0	(125.1, 215.1)	156	122.8	(109.0, 138.4)	1.34	(0.99, 1.80)	41.2
Total	48	180.2	(151.6, 214.0)	318	108.3	(98.9, 118.6)	<b>1.66</b>	<b>(1.37, 2.02)</b>	71.8
<b>Hypertensive disease</b>									
Female	4	35.4	(19.5, 64.3)	25	15.4	(10.7, 22.1)	<b>2.30</b>	<b>(1.15, 4.63)</b>	20.0
Male	3	30.7	(16.1, 58.4)	8	13.5	(7.6, 23.9)	2.27	(0.96, 5.37)	17.1
Total	7	33.0	(21.3, 51.2)	34	14.4	(10.4, 20.1)	<b>2.29</b>	<b>(1.32, 3.96)</b>	18.6

Source: NMDS.

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

There were 112 admissions per year on average for Māori with heart failure, 4.3 times the rate for non-Māori, or 319 more admissions per 100,000.

On average, 48 Māori per year were admitted for stroke, at a rate two-thirds higher than the non-Māori rate, or 72 more admissions per 100,000.

There were seven Māori admissions per year on average for hypertensive disease, at more than twice the rate of non-Māori, or 19 more admissions per 100,000.

**Table 42: Hospitalisations for chronic rheumatic heart disease and heart valve replacements, 25 years and over, Hawke's Bay 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)				
<b>Chronic rheumatic heart disease</b>									
Female	5	45.1	(26.6, 76.2)	5	7.9	(4.4, 14.1)	<b>5.73</b>	<b>(2.61, 12.56)</b>	37.2
Male	1	14.8	(5.5, 40.0)	4	5.4	(2.8, 10.2)	2.75	(0.84, 9.02)	9.4
Total	6	29.9	(18.8, 47.7)	9	6.6	(4.3, 10.2)	<b>4.52</b>	<b>(2.39, 8.55)</b>	23.3
<b>Heart valve replacements</b>									
Female	3	21.4	(10.4, 43.8)	11	11.5	(7.4, 17.7)	1.86	(0.80, 4.30)	9.9
Male	3	33.5	(17.7, 63.6)	18	18.6	(13.0, 26.5)	1.80	(0.87, 3.75)	14.9
Total	6	27.4	(17.0, 44.4)	29	15.0	(11.4, 19.8)	<b>1.82</b>	<b>(1.05, 3.17)</b>	12.4

Source: NMDS.

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

On average, there were six hospital admissions per year for Māori with chronic rheumatic heart disease, at a rate 4.5 times as high as the rate for non-Māori.

Heart valve replacements were conducted on six Māori per year on average, at a rate 82% higher than on non-Māori.

**Table 43: Early deaths from circulatory system disease, Hawke's Bay 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	14	51.6	(40.5, 65.8)	25	13.0	(10.8, 15.7)	<b>3.97</b> (2.92, 5.40)	38.6
Male	26	116.8	(98.1, 139.1)	51	33.4	(29.0, 38.6)	<b>3.49</b> (2.79, 4.38)	83.4
Total	40	84.2	(73.1, 97.1)	76	23.2	(20.7, 26.1)	<b>3.63</b> (3.02, 4.36)	61.0

Source: Mortality data, Ministry of Health

Notes: "Early deaths" are defined as those occurring under 75 years of age.

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

On average 40 Hawke's Bay Māori per year died early from circulatory system disease, at a rate 3.6 times that of non-Māori, or 61 more deaths per 100,000. Māori men had nearly twice the mortality rate of Māori women.

## Diabetes

**Table 44: Diabetes prevalence, medication use, monitoring of blood glucose levels, screening for renal disease, Hawke's Bay DHB, 2013**

Indicator	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	Count	% (crude)	Count	% (crude)		
Prevalence of diabetes (all ages)	2,080	5.2	6,384	5.5	0.95	-0.3
People with diabetes regularly receiving metformin or insulin, 25+	1,269	61.0	3,534	55.4	1.10	5.6
People with diabetes having regular Hb1Ac monitoring, 25+	1,788	86.0	5,648	85.8	1.00	0.1
People with diabetes having regular screening for renal disease, 25+	1,431	68.8	4,446	69.6	0.99	-0.8

Source: NZ Atlas of Healthcare Variation

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

In 2013, 2,080 Māori were estimated to have diabetes, giving a crude prevalence of 5.2%, similar to the non-Māori crude prevalence (5.5%). Sixty-one percent of Māori aged 25 years and over with diabetes were regularly receiving metformin or insulin; 86% were having regular monitoring of blood glucose levels and 69% were being screened for renal disease.

**Table 45: Hospitalisations for lower limb amputations for people with concurrent diabetes, 15 years and over, Hawke's Bay 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	3	15.7	(8.0, 30.6)	3	2.7	(1.2, 6.2)	<b>5.87</b> (2.00, 17.17)	13.0
Male	4	26.7	(15.0, 47.7)	7	5.4	(3.1, 9.5)	<b>4.90</b> (2.19, 10.98)	21.3
Total	7	21.2	(13.6, 32.9)	10	4.1	(2.5, 6.5)	<b>5.22</b> (2.75, 9.92)	17.1

Source: NMDS

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

On average seven Māori per year with diabetes had lower limbs amputated, at a rate 5.2 times that of non-Māori.

# Cancer

**Table 46: Most common cancer registrations for Māori by site, all ages, Hawke's Bay 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)				
<b>Female</b>									
All cancers	69	250.4	(224.5, 279.3)	330	172.3	(161.1, 184.2)	<b>1.45</b>	<b>(1.28, 1.65)</b>	78.1
Breast	22	83.2	(68.8, 100.4)	89	54.3	(48.5, 60.8)	<b>1.53</b>	<b>(1.23, 1.91)</b>	28.9
Lung	14	47.1	(37.2, 59.6)	29	11.2	(9.3, 13.5)	<b>4.21</b>	<b>(3.12, 5.69)</b>	35.9
Colorectal	4	14.4	(9.4, 22.0)	57	20.9	(17.8, 24.5)	0.69	(0.44, 1.08)	-6.5
Uterus	4	14.3	(9.1, 22.5)	15	7.3	(5.6, 9.3)	<b>1.97</b>	<b>(1.17, 3.30)</b>	7.0
<b>Male</b>									
All cancers	49	202.1	(177.9, 229.5)	381	201.7	(189.8, 214.4)	1.00	(0.87, 1.15)	0.3
Lung	10	39.3	(29.8, 51.9)	35	14.3	(12.1, 17.0)	<b>2.74</b>	<b>(1.98, 3.80)</b>	25.0
Prostate	10	38.8	(29.3, 51.4)	113	51.9	(47.5, 56.7)	0.75	(0.56, 1.00)	-13.1
Colorectal	4	18.1	(11.7, 28.0)	57	25.2	(21.9, 29.1)	0.72	(0.45, 1.13)	-7.2
Stomach	4	15.0	(9.5, 23.6)	6	2.6	(1.7, 3.9)	<b>5.83</b>	<b>(3.14, 10.85)</b>	12.4

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 69 cancer registrations per year on average among Māori females, at a rate 45% higher than non-Māori. The most common cancers registered for Māori females were breast (33% of all cancers), lung (21%), colorectal and uterine cancers (6% each). Registration rates were higher for Māori than non-Māori women for breast (53% higher), lung (4.2 times the non-Māori rate) and uterine cancer (twice the non-Māori rate).

Among Māori males there were 49 cancer registrations per year on average. Lung and prostate cancers were the most common cancers registered for Māori males (each 20% of all cancers) followed by colorectal and stomach (8% each of all Māori male cancers). The lung cancer registration rate was 2.7 times the non-Māori rate and stomach cancer 5.8 times the non-Māori rate.

**Table 47: Most common cancer deaths for Māori by site, all ages, Hawke's Bay 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)				
<b>Female</b>									
All cancers	31	105.8	(90.1, 124.4)	143	57.1	(51.3, 63.7)	<b>1.85</b>	<b>(1.53, 2.25)</b>	48.7
Lung	11	38.5	(29.5, 50.1)	23	8.4	(6.8, 10.4)	<b>4.58</b>	<b>(3.25, 6.44)</b>	30.1
Digestive organs	5	17.1	(11.4, 25.5)	42	13.3	(11.1, 15.9)	1.28	(0.83, 1.99)	3.8
Breast	5	16.4	(10.9, 24.7)	25	12.0	(9.5, 15.1)	1.37	(0.85, 2.19)	4.4
<b>Male</b>									
All cancers	25	106.2	(88.8, 126.9)	163	62.6	(57.5, 68.2)	<b>1.70</b>	<b>(1.39, 2.07)</b>	43.6
Lung	8	32.2	(23.5, 44.1)	31	11.5	(9.7, 13.7)	<b>2.79</b>	<b>(1.95, 4.00)</b>	20.6
Digestive organs	7	29.6	(21.0, 41.5)	50	20.2	(17.4, 23.3)	<b>1.47</b>	<b>(1.01, 2.12)</b>	9.4
Prostate	3	10.7	(6.2, 18.6)	24	6.4	(5.2, 7.8)	1.68	(0.93, 3.03)	4.3

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 35% of all deaths, with a rate 85% higher than the rate for non-Māori. Lung cancer was the most common cause of cancer death (36% of all cancer deaths), followed by cancers of the digestive organs and breast. The mortality rate for lung cancer was 4.6 times the non-Māori rate.

For Māori males, cancer accounted for a quarter of all deaths, with a mortality rate 70% higher than that of non-Māori males. Lung cancer was the most common cause of cancer death for Māori males, comprising 32% of all cancer deaths, at a rate 2.8 times the non-Māori rate. Cancers of the digestive organs and prostate were the next leading causes of cancer death. The mortality rate for cancers of the digestive organs was 47% higher for Māori than for non-Māori males.

## Breast and cervical cancer screening

**Table 48: BreastScreen Aotearoa breast screening coverage, women aged 45–69 years, Hawke’s Bay DHB, 24 months to 31 December 2014**

Māori			Non-Māori		
Number screened	Eligible population	% screened	Number screened	Eligible population	% screened
2,959	4,565	64.8	16,542	22,135	74.7

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, 65% of Māori women and 75% of non-Māori women in Hawke’s Bay had been screened.

**Table 49: Cervical screening coverage, women aged 25–69 years, Hawke’s Bay DHB, 3 years and 5 years to 31 December 2014**

Māori					Non-Māori				
Eligible population	Women screened in		Women screened in		Eligible population	Women screened in		Women screened in	
	last 5 years	5-year coverage %	last 3 years	3-year coverage %		last 5 years	5-year coverage %	last 3 years	3-year coverage %
8,735	8,045	92.1	6,450	73.8	31,070	28,487	91.7	24,177	77.8

Source: National Screening Unit, Ministry of Health

Note: Population is adjusted for hysterectomy.

Among women aged 25 to 69 years, 92% of Māori women had had a cervical smear test during the five years prior to December 2014, at a similar rate to non-Māori women. The three year cervical screening coverage was 74% 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, Hawke's Bay 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)				
<b>0–14 years</b>									
Female	36	532.8	(441.5, 642.9)	36	360.3	(298.3, 435.1)	<b>1.48</b>	<b>(1.13, 1.93)</b>	172.5
Male	49	695.6	(592.0, 817.3)	46	452.2	(382.6, 534.4)	<b>1.54</b>	<b>(1.22, 1.94)</b>	243.4
Total	86	614.2	(543.4, 694.1)	82	406.2	(358.4, 460.4)	<b>1.51</b>	<b>(1.27, 1.80)</b>	208.0
<b>15–34 years</b>									
Female	9	158.7	(109.3, 230.4)	10	85.9	(60.4, 122.3)	<b>1.85</b>	<b>(1.11, 3.09)</b>	72.8
Male	3	58.5	(31.3, 109.4)	5	39.1	(23.1, 66.0)	1.50	(0.66, 3.39)	19.5
Total	13	108.6	(78.9, 149.6)	15	62.5	(46.6, 83.8)	<b>1.74</b>	<b>(1.13, 2.68)</b>	46.1
<b>35–64 years</b>									
Female	11	176.6	(125.1, 249.4)	22	83.7	(64.2, 109.3)	<b>2.11</b>	<b>(1.36, 3.26)</b>	92.9
Male	12	238.5	(169.1, 336.4)	9	39.1	(25.9, 58.9)	<b>6.10</b>	<b>(3.57, 10.43)</b>	199.4
Total	23	207.6	(162.3, 265.5)	31	61.4	(49.1, 76.8)	<b>3.38</b>	<b>(2.42, 4.71)</b>	146.2
<b>65 years and over</b>									
Female	1	118.3	(44.3, 315.8)	7	48.2	(29.5, 78.8)	2.45	(0.82, 7.36)	70.1
Male	<1	34.3	(4.8, 243.5)	3	29.0	(14.1, 59.7)	1.18	(0.15, 9.54)	5.3
Total	2	76.3	(31.7, 183.9)	9	38.6	(25.6, 58.1)	1.98	(0.75, 5.21)	37.7

Source: NMDS.

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

There were 86 admissions for asthma per year among Māori children aged 0–14 years, at a rate 51% higher than non-Māori. Among Māori aged 15–34 there were 13 admissions per year at a rate 74% higher than non-Māori and among Māori adults aged 35–64 years there were 23 admissions per year on average, at a rate 3.4 times the rate of non-Māori. On average there were two admissions per year among Māori aged 65 years and over.

Table 51: Hospitalisations for chronic obstructive pulmonary disease (COPD), 45 years and over, Hawke's Bay 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	93	1,630.3	(1,448.2, 1,835.5)	197	344.7	(312.6, 380.1)	<b>4.73</b>	<b>(4.06, 5.52)</b>	1,285.7
Male	39	840.0	(699.8, 1,008.2)	184	352.4	(319.3, 388.8)	<b>2.38</b>	<b>(1.94, 2.93)</b>	487.6
Total	132	1,235.2	(1,117.8, 1,364.9)	380	348.5	(325.2, 373.5)	<b>3.54</b>	<b>(3.14, 4.00)</b>	886.6

Source: NMDS.

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

There were 132 hospitalisations per year on average for Māori with COPD, at a rate 3.5 times that of non-Māori, or 887 more admissions per 100,000.

Table 52: Early deaths from respiratory disease, Hawke's Bay 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	4	15.4	(10.0, 23.8)	10	5.0	(3.7, 6.7)	<b>3.11</b>	<b>(1.84, 5.26)</b>	10.5
Male	4	18.1	(11.6, 28.2)	9	5.2	(3.6, 7.3)	<b>3.51</b>	<b>(2.00, 6.18)</b>	13.0
Total	8	16.8	(12.3, 22.9)	19	5.1	(4.0, 6.4)	<b>3.32</b>	<b>(2.25, 4.88)</b>	11.7

Source: Mortality data, Ministry of Health

Note: "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, eight Māori per year died early from respiratory disease, at a rate that was 3.3 times the non-Māori rate, or 12 more deaths per 100,000 per year.

## Mental disorders

**Table 53: Hospitalisations for mental disorders, all ages, Hawke's Bay 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)					
<b>Female</b>										
All disorders	98	467.2	(415.5, 525.2)	311	349.2	(321.0, 380.0)	<b>1.34</b>	<b>(1.16, 1.55)</b>		117.9
Schizophrenia	32	159.8	(130.4, 195.8)	49	45.6	(37.2, 55.8)	<b>3.50</b>	<b>(2.63, 4.67)</b>		114.2
Mood (affective)	33	147.6	(120.6, 180.7)	132	138.6	(122.3, 157.2)	1.06	(0.84, 1.35)		8.9
—Bipolar	18	77.4	(59.0, 101.7)	30	31.9	(24.9, 41.0)	<b>2.43</b>	<b>(1.68, 3.51)</b>		45.5
—Depressive episode	12	57.5	(41.2, 80.2)	96	98.9	(85.1, 114.8)	<b>0.58</b>	<b>(0.40, 0.84)</b>		-41.4
Substance use	12	62.6	(45.1, 86.8)	29	48.2	(38.0, 61.1)	1.30	(0.87, 1.95)		14.4
—Alcohol	8	37.9	(25.0, 57.6)	27	43.0	(33.5, 55.1)	0.88	(0.54, 1.43)		-5.1
Anxiety, stress-related	11	53.1	(37.4, 75.5)	40	57.6	(45.9, 72.1)	0.92	(0.61, 1.40)		-4.4
<b>Male</b>										
All disorders	127	738.0	(666.0, 817.8)	224	367.5	(335.9, 402.2)	<b>2.01</b>	<b>(1.75, 2.30)</b>		370.5
Schizophrenia	61	361.2	(311.3, 419.0)	57	112.7	(95.5, 133.0)	<b>3.20</b>	<b>(2.57, 4.00)</b>		248.5
Mood (affective)	25	150.1	(119.3, 188.8)	52	86.6	(72.2, 103.8)	<b>1.73</b>	<b>(1.29, 2.32)</b>		63.5
—Bipolar	11	68.5	(48.6, 96.5)	19	32.9	(24.6, 44.1)	<b>2.08</b>	<b>(1.32, 3.27)</b>		35.5
—Depressive episode	12	70.3	(50.6, 97.6)	28	47.1	(36.8, 60.3)	1.49	(0.99, 2.25)		23.2
Substance use	21	119.4	(93.0, 153.2)	53	88.5	(74.1, 105.7)	1.35	(0.99, 1.83)		30.8
—Alcohol	11	58.4	(41.2, 82.7)	45	71.8	(59.1, 87.2)	0.81	(0.54, 1.21)		-13.5
Anxiety, stress-related	8	46.7	(31.4, 69.5)	23	39.2	(29.7, 51.8)	1.19	(0.73, 1.94)		7.5
<b>Total</b>										
All disorders	225	602.6	(557.6, 651.2)	534	358.4	(336.9, 381.3)	<b>1.68</b>	<b>(1.52, 1.86)</b>		244.2
Schizophrenia	93	260.5	(230.9, 293.8)	106	79.1	(69.4, 90.3)	<b>3.29</b>	<b>(2.75, 3.93)</b>		181.3
Mood (affective)	58	148.8	(127.7, 173.5)	184	112.6	(101.5, 124.9)	<b>1.32</b>	<b>(1.10, 1.59)</b>		36.2
—Bipolar	30	73.0	(58.8, 90.6)	49	32.4	(26.7, 39.3)	<b>2.25</b>	<b>(1.68, 3.01)</b>		40.5
—Depressive episode	24	63.9	(50.5, 80.8)	124	73.0	(64.2, 83.0)	0.88	(0.67, 1.14)		-9.1
Substance use	34	91.0	(74.6, 111.0)	82	68.3	(59.3, 78.8)	<b>1.33</b>	<b>(1.04, 1.70)</b>		22.6
—Alcohol	19	48.1	(36.8, 62.9)	72	57.4	(49.2, 66.9)	0.84	(0.62, 1.14)		-9.3
Anxiety, stress-related	19	49.9	(38.3, 65.0)	63	48.4	(40.6, 57.7)	1.03	(0.75, 1.42)		1.5

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 68% higher for Māori than non-Māori. The most common cause of Māori admission was schizophrenia related disorders, with 93 admissions per year on average, at 3.3 times the rate of non-Māori. Admissions for mood disorders were the next most common cause of Māori admission with 58 admissions per year, 1.3 times the rate for non-Māori. Among both males and females, admission rates for bipolar disorders were higher for Māori than for non-Māori. Māori females had lower rates of admission for depression than non-Māori females.



Substance use disorder admission rates were 33% higher among Māori than non-Māori, while rates of admission for anxiety/stress-related disorders were similar to those of non-Māori.

## Gout

**Table 54: Gout prevalence and treatment, 20–79 years, Hawke’s Bay DHB, 2011**

Indicator	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	Count	%	Count	%		
Gout prevalence	1,739	7.4	3,299	3.9	1.89	3.5
People with gout who received allopurinol regularly	692	39.8	1,412	42.8	0.93	-3.0
Colchicine use by people with gout not dispensed allopurinol	114	6.6	267	8.1	0.81	-1.5
NSAID use by people with gout	826	47.5	1,455	44.1	1.08	3.4
Serum urate test within six months following allopurinol dispensing	278	26.5	493	25.5	1.04	0.9

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.

Around 1,740 Hawke’s Bay Māori were estimated to have gout in 2011, a prevalence of 7.4%, 89% higher than the prevalence in non-Māori. Forty percent of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those who received allopurinol, 27% had a lab test for serum urate levels within the following six months. Nearly half of Māori with gout were using non-steroidal anti-inflammatory medication.

**Table 55: Hospitalisations for gout, 25 years and over, Hawke’s Bay 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	44.5 (28.5, 69.5)		5	3.8 (2.2, 6.6)		<b>11.83</b>	<b>(5.79, 24.17)</b>	40.7
Male	23	203.8 (159.5, 260.3)		22	30.8 (21.3, 44.7)		<b>6.61</b>	<b>(4.24, 10.32)</b>	173.0
Total	29	124.1 (100.0, 154.1)		28	17.3 (12.3, 24.2)		<b>7.18</b>	<b>(4.81, 10.71)</b>	106.8

Source: NMDS

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

There were 29 hospital admissions for gout per year on average among Māori during 2011 to 2013, more frequent among males than females. The rate of admission was 7.2 times as high for Māori as for non-Māori, or 107 more admissions per 100,000.

## Hip fractures

**Table 56: Hospitalisations for hip fractures, 65 years and over, Hawke’s Bay 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	405.4 (257.4, 638.6)		95	393.7 (341.3, 454.0)		1.03	(0.64, 1.66)	11.7
Male	1	58.2 (14.5, 234.2)		37	218.8 (177.9, 269.3)		0.27	(0.07, 1.09)	-160.6
Total	7	231.8 (150.2, 357.8)		132	306.3 (272.2, 344.6)		0.76	(0.48, 1.19)	-74.4

Source: NMDS

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

On average, seven Māori per year aged 65 and over were admitted to hospital for hip fractures, at a rate of 232 per 100,000.

## Elective surgery

**Table 57: Hospitalisations for hip replacements, 50 years and over, Hawke's Bay 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	503.1	(391.3, 646.8)	94	269.0	(235.7, 307.0)	<b>1.87 (1.41, 2.48)</b>	234.1
Male	12	358.2	(257.0, 499.1)	59	210.9	(179.9, 247.2)	<b>1.70 (1.18, 2.45)</b>	147.3
Total	32	430.6	(352.1, 526.7)	153	240.0	(216.7, 265.7)	<b>1.79 (1.43, 2.25)</b>	190.7

Source: NMDS

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

On average, 32 Māori per year were admitted to hospital for a hip replacement, at a rate 79% higher than the rate for non-Māori.

**Table 58: Publicly funded hospitalisations for cataract surgery, 45 years and over, Hawke's Bay 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	53	880.6	(752.2, 1031.0)	420	620.4	(579.3, 664.5)	<b>1.42 (1.20, 1.69)</b>	260.2
Male	39	831.0	(692.9, 996.6)	258	463.5	(427.1, 503.1)	<b>1.79 (1.47, 2.19)</b>	367.5
Total	92	855.8	(759.2, 964.8)	678	542.0	(514.2, 571.3)	<b>1.58 (1.39, 1.80)</b>	313.8

Source: NMDS

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

On average, 92 Māori per year aged 65 years and over were admitted to hospital for cataract surgery. The rate for Māori was 58% higher than for non-Māori, or 314 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 Hawke's Bay Region.

## Hospitalisations

**Table 59: All-cause hospitalisations, all ages, Hawke's Bay 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	5,843	27,434.6	(27,018.5, 27,857.2)	15,838	21,019.3	(20,759.1, 21,282.7)	<b>1.31 (1.28, 1.33)</b>	6,415.3
Male	3,987	19,739.8	(19,379.4, 20,106.8)	13,259	16,044.8	(15,817.4, 16,275.5)	<b>1.23 (1.20, 1.26)</b>	3,694.9
Total	9,831	23,587.2	(23,311.3, 23,866.4)	29,097	18,532.1	(18,358.9, 18,706.8)	<b>1.27 (1.25, 1.29)</b>	5,055.1

Source: NMDS

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

On average, there were 9,831 Māori hospital admissions per year and around 29,100 non-Māori admissions. All-cause admission rates were 27% higher for Māori than non-Māori, or just over 5,000 more admissions per 100,000. This includes admissions for pregnancy and childbirth.

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

## Potentially avoidable hospitalisations

**Table 60: Potentially avoidable hospitalisations, 0–74 years, Hawke's Bay 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	1,270	5,789.7	(5,603.1, 5,982.5)	2,345	3,611.7	(3,504.2, 3,722.4)	<b>1.60 (1.53, 1.68)</b>	2,178.0
Male	1,083	5,497.9	(5,307.4, 5,695.2)	2,505	3,758.8	(3,650.2, 3,870.7)	<b>1.46 (1.40, 1.53)</b>	1,739.1
Total	2,353	5,643.8	(5,509.8, 5,781.0)	4,849	3,685.2	(3,608.5, 3,763.6)	<b>1.53 (1.48, 1.58)</b>	1,958.6

Source: NMDS

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

Around 2,350 Māori hospital admissions per year were potentially avoidable through population based prevention strategies, with a rate 53% higher for Māori than for non-Māori, or around 1,960 more admissions per 100,000.

**Table 61: Ambulatory care sensitive hospitalisations, 0–74 years, Hawke's Bay 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	842	3,823.9	(3,672.9, 3,981.0)	1,419	2,222.5	(2,137.7, 2,310.6)	<b>1.72 (1.63, 1.82)</b>	1,601.4
Male	768	3,849.9	(3,691.8, 4,014.8)	1,584	2,346.8	(2,261.0, 2,435.7)	<b>1.64 (1.55, 1.74)</b>	1,503.2
Total	1,610	3,828.6	(3,718.9, 3,941.5)	3,003	2,279.7	(2,219.2, 2,341.8)	<b>1.68 (1.61, 1.75)</b>	1,548.9

Source: NMDS

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

On average, there were 1,610 ambulatory care sensitive hospitalisations per year among Māori, at a rate that was 68% higher than the non-Māori rate, or almost 1,550 more admissions per 100,000.

## Mortality

**Table 62: Life expectancy at birth, Hawke's Bay Region, 2012–2014**

Gender	Māori		Non-Māori		Difference in years
	Years (95% credible interval)		Years (95% credible interval)		
Female	75.9	(75.0, 76.8)	83.6	(83.2, 83.9)	-7.7
Male	71.7	(70.8, 72.7)	79.9	(79.5, 80.2)	-8.2

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

Notes: This data is for the Hawke's Bay Region. A map of Regional Council boundaries can be found [here](#). The credible interval is the 2.5<sup>th</sup> percentile and the 97.5<sup>th</sup> percentile, the years of expected life at birth is the 50<sup>th</sup> percentile. Further information on the regional life tables and methods can be found [here](#).

Life expectancy at birth is a summary measure of age-specific mortality rates during a specific period. During 2012–2014, among residents of the Hawke's Bay Region, life expectancy at birth was 75.9 years for Māori females, 7.7 years lower than for non-Māori females (83.6 years). For Māori males, life expectancy was 71.7 years, 8.2 years lower than that of non-Māori males (79.9 years).

**Table 63: All-cause deaths, all ages, Hawke's Bay 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)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)			
Female	90	332.0	(310.3, 355.2)	547	154.3	(146.8, 162.2)	<b>2.15 (1.98, 2.34)</b>	177.7
Male	104	486.4	(457.3, 517.3)	524	237.0	(227.1, 247.3)	<b>2.05 (1.90, 2.21)</b>	249.4
Total	194	409.2	(390.9, 428.4)	1071	195.6	(189.4, 202.1)	<b>2.09 (1.98, 2.21)</b>	213.6

Source: Mortality dataset, Ministry of Health.

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

There were 194 Māori deaths per year on average during 2008 to 2012. The Māori mortality rate was 2.1 times the non-Māori rate, or 214 more deaths per 100,000.

**Table 64: Leading causes of death for Māori, all ages, Hawke's Bay 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)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)			
<b>Female</b>								
IHD	13	39.5	(30.6, 50.9)	92	13.9	(12.2, 15.7)	<b>2.84 (2.14, 3.78)</b>	25.6
Lung cancer	11	38.5	(29.5, 50.1)	23	8.4	(6.8, 10.4)	<b>4.58 (3.25, 6.44)</b>	30.1
Stroke	6	16.9	(11.5, 24.9)	60	9.6	(8.2, 11.3)	<b>1.76 (1.16, 2.66)</b>	7.3
Diabetes	5	19.4	(13.2, 28.6)	12	4.2	(2.6, 6.7)	<b>4.63 (2.52, 8.53)</b>	15.2
COPD	5	15.3	(10.2, 22.9)	25	5.5	(4.4, 6.8)	<b>2.78 (1.76, 4.41)</b>	9.8
<b>Male</b>								
IHD	22	91.9	(75.9, 111.2)	104	34.1	(30.4, 38.3)	<b>2.69 (2.16, 3.36)</b>	57.8
Accidents	13	69.8	(54.5, 89.2)	28	32.2	(25.5, 40.7)	<b>2.17 (1.54, 3.04)</b>	37.6
Lung cancer	8	32.2	(23.5, 44.1)	31	11.5	(9.7, 13.7)	<b>2.79 (1.95, 4.00)</b>	20.6
Diabetes	8	32.4	(23.5, 44.9)	14	5.4	(4.1, 7.1)	<b>6.02 (3.93, 9.21)</b>	27.1
COPD	5	17.8	(11.8, 26.9)	27	7.0	(5.8, 8.5)	<b>2.55 (1.62, 4.01)</b>	10.8
<b>Total</b>								
IHD	34	65.7	(56.3, 76.6)	196	24.0	(21.9, 26.2)	<b>2.74 (2.29, 3.27)</b>	41.7
Lung cancer	19	35.3	(28.8, 43.3)	54	10.0	(8.7, 11.4)	<b>3.54 (2.77, 4.53)</b>	25.4
Accidents	17	44.9	(36.2, 55.7)	44	20.2	(16.5, 24.8)	<b>2.22 (1.65, 2.99)</b>	24.7
Diabetes	13	25.9	(20.2, 33.3)	26	4.8	(3.7, 6.2)	<b>5.41 (3.78, 7.75)</b>	21.1
COPD	9	16.6	(12.4, 22.1)	51	6.3	(5.4, 7.2)	<b>2.65 (1.92, 3.66)</b>	10.3

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 Māori women were ischemic heart disease (IHD), lung cancer, stroke, diabetes mellitus and chronic obstructive pulmonary disease (COPD). Mortality rates for these conditions were 1.8 to 4.6 times as high for Māori women as for non-Māori women.

For Māori men, the leading causes of death were IHD, lung cancer, accidents, diabetes mellitus, and COPD. Mortality rates were 2 to 6 times as high for Māori as for non-Māori men.

Data on leading causes of death by ICD chapter are also 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, Hawke’s Bay 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	46	180.6	(158.2, 206.1)	97	79.9	(70.6, 90.4)	<b>2.26</b> ( <b>1.89</b> , <b>2.71</b> )	100.7
Male	68	325.7	(292.2, 363.0)	146	123.2	(111.8, 135.7)	<b>2.64</b> ( <b>2.29</b> , <b>3.06</b> )	202.5
Total	114	253.1	(232.7, 275.4)	243	101.5	(94.1, 109.6)	<b>2.49</b> ( <b>2.22</b> , <b>2.79</b> )	151.6

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 114 potentially avoidable Māori deaths per year on average during 2007 to 2011, at a rate 2.5 times the non-Māori rate, or 152 more deaths per 100,000.

**Table 66: Amenable mortality, 0–74 years, Hawke’s Bay 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	29	117.7	(99.8, 138.8)	62	50.0	(42.9, 58.3)	<b>2.35</b> ( <b>1.88</b> , <b>2.95</b> )	67.6
Male	52	250.0	(220.9, 283.0)	102	88.3	(78.7, 99.1)	<b>2.83</b> ( <b>2.39</b> , <b>3.35</b> )	161.7
Total	81	183.8	(166.4, 203.1)	165	69.2	(63.1, 75.8)	<b>2.66</b> ( <b>2.32</b> , <b>3.04</b> )	114.7

Source: Mortality, Ministry of Health

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

Deaths amenable to health care were 2.7 times more frequent among Māori than non-Māori, or 115 more deaths per 100,000. There were 81 Māori deaths per year on average.

## 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 Hawke's Bay Māori were falls, exposure to mechanical forces, complications of medical and surgical care, assault, and transport accidents.

**Table 67: Hospitalisations for injuries, all ages, Hawke's Bay 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	424	1,988.1	(1,878.4, 2,104.1)	1,302	1,524.9	(1,456.4, 1,596.6)	<b>1.30</b>	<b>(1.21, 1.40)</b>	463.2
Male	639	3,454.1	(3,299.2, 3,616.2)	1,519	2,488.1	(2,399.6, 2,579.8)	<b>1.39</b>	<b>(1.31, 1.47)</b>	966.0
Total	1,063	2,721.1	(2,625.6, 2,820.1)	2,820	2,006.5	(1,950.2, 2,064.4)	<b>1.36</b>	<b>(1.30, 1.42)</b>	714.6

Source: NMDS

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

On average there were 1,063 hospitalisations per year for injury among Māori, at a rate 36% higher than non-Māori or 715 more admissions per 100,000.

**Table 68: Hospitalisations for assault, all ages, Hawke's Bay 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	41	207.9	(173.9, 248.7)	14	31.1	(22.2, 43.4)	<b>6.69</b>	<b>(4.58, 9.78)</b>	176.8
Male	76	449.9	(394.3, 513.3)	85	191.3	(168.0, 218.0)	<b>2.35</b>	<b>(1.95, 2.83)</b>	258.5
Total	118	328.9	(295.7, 365.9)	99	111.2	(98.5, 125.6)	<b>2.96</b>	<b>(2.52, 3.48)</b>	217.7

Source: NMDS

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

On average 118 Māori per year were admitted to hospital for injury caused by assault, at a rate nearly 3 times the non-Māori rate, or 218 more admissions per 100,000. Males had higher admission rates than females.

**Table 69: Deaths from injury, all ages, Hawke's Bay 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	7	32.5	(22.9, 46.1)	20	14.0	(9.9, 19.6)	<b>2.33</b>	<b>(1.43, 3.80)</b>	18.6
Male	18	100.0	(81.2, 123.2)	42	54.9	(46.0, 65.5)	<b>1.82</b>	<b>(1.39, 2.39)</b>	45.1
Total	25	66.2	(55.4, 79.2)	62	34.4	(29.4, 40.3)	<b>1.92</b>	<b>(1.52, 2.44)</b>	31.8

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 25 Māori per year died from injuries, at a rate almost twice as high as non-Māori, or 32 more deaths per 100,000. Injury 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, Hawke's Bay DHB, 2013 to 2020

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

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

Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	<b>2013(Base)</b>			<b>2014</b>			<b>2015</b>			<b>2016</b>		
0	490	480	970	520	490	1,020	520	490	1,010	510	490	1,000
1-4	1,960	1,940	3,910	1,950	1,920	3,870	1,940	1,900	3,840	1,990	1,940	3,920
5-9	2,260	2,240	4,500	2,320	2,300	4,620	2,410	2,390	4,800	2,410	2,370	4,780
10-14	2,170	2,140	4,300	2,170	2,120	4,290	2,100	2,060	4,160	2,080	2,090	4,180
15-19	2,010	1,910	3,920	2,050	1,970	4,020	2,100	2,060	4,150	2,120	2,010	4,120
20-24	1,370	1,620	2,990	1,410	1,600	3,010	1,510	1,570	3,080	1,620	1,590	3,210
25-29	1,040	1,320	2,360	1,080	1,340	2,420	1,120	1,390	2,510	1,110	1,470	2,580
30-34	960	1,150	2,110	950	1,190	2,140	920	1,190	2,110	930	1,180	2,120
35-39	1,000	1,250	2,250	970	1,210	2,180	970	1,180	2,150	980	1,190	2,170
40-44	1,090	1,330	2,420	1,100	1,330	2,440	1,080	1,330	2,410	1,020	1,300	2,320
45-49	1,010	1,230	2,240	990	1,220	2,210	960	1,230	2,190	1,000	1,230	2,230
50-54	1,000	1,150	2,140	1,010	1,180	2,190	1,030	1,180	2,210	1,000	1,180	2,180
55-59	820	880	1,690	840	910	1,750	870	970	1,840	880	1,040	1,910
60-64	600	740	1,340	640	770	1,410	650	770	1,420	690	790	1,470
65-69	430	510	940	440	540	980	490	580	1,070	520	600	1,120
70-74	270	360	630	280	370	650	290	380	670	300	420	720
75-79	160	250	410	170	250	430	180	270	450	190	260	450
80-84	90	130	220	100	140	240	100	150	250	100	170	270
85-89	30	50	80	30	50	80	30	60	90	40	60	100
90+	10	30	30	10	30	40	10	30	40	10	30	40
<b>All Ages</b>	<b>18,800</b>	<b>20,700</b>	<b>39,500</b>	<b>19,000</b>	<b>20,900</b>	<b>40,000</b>	<b>19,300</b>	<b>21,200</b>	<b>40,500</b>	<b>19,500</b>	<b>21,400</b>	<b>40,900</b>
	<b>2017</b>			<b>2018</b>			<b>2019</b>			<b>2020</b>		
0	510	480	990	510	480	990	510	480	990	510	480	990
1-4	2,010	1,920	3,930	2,030	1,920	3,950	2,020	1,910	3,930	2,010	1,900	3,910
5-9	2,410	2,390	4,810	2,390	2,370	4,760	2,410	2,360	4,760	2,390	2,330	4,720
10-14	2,120	2,070	4,190	2,180	2,150	4,330	2,230	2,210	4,450	2,320	2,300	4,620
15-19	2,090	2,000	4,090	2,010	1,950	3,960	2,000	1,930	3,930	1,930	1,870	3,790
20-24	1,680	1,630	3,310	1,770	1,670	3,440	1,810	1,720	3,530	1,850	1,810	3,650
25-29	1,160	1,520	2,670	1,210	1,490	2,690	1,250	1,460	2,710	1,360	1,430	2,780
30-34	950	1,210	2,150	980	1,280	2,260	1,020	1,300	2,320	1,050	1,350	2,400
35-39	970	1,150	2,120	920	1,120	2,050	910	1,160	2,070	880	1,160	2,040
40-44	1,000	1,250	2,250	960	1,210	2,170	920	1,170	2,090	920	1,130	2,060
45-49	990	1,270	2,260	1,040	1,280	2,310	1,050	1,290	2,330	1,030	1,280	2,310
50-54	1,020	1,160	2,180	950	1,180	2,130	920	1,170	2,090	900	1,170	2,070
55-59	880	1,070	1,960	930	1,090	2,010	940	1,120	2,060	960	1,110	2,080
60-64	710	800	1,510	750	820	1,570	770	850	1,620	800	910	1,700
65-69	540	640	1,180	530	670	1,200	570	700	1,270	570	710	1,280
70-74	320	420	730	360	440	800	370	470	830	420	500	920
75-79	210	290	500	200	290	500	210	300	510	220	310	530
80-84	100	180	280	110	180	290	110	190	300	120	200	320
85-89	40	70	110	50	80	130	50	90	140	50	100	150
90+	10	30	40	10	30	40	20	30	50	20	40	60
<b>All Ages</b>	<b>19,700</b>	<b>21,600</b>	<b>41,300</b>	<b>19,900</b>	<b>21,700</b>	<b>41,600</b>	<b>20,100</b>	<b>21,900</b>	<b>42,000</b>	<b>20,300</b>	<b>22,100</b>	<b>42,400</b>

These projections were derived in October 2014.

Source: Statistics New Zealand Population Projections



Table 71: Total population projections, single year, by age group, Hawke's Bay DHB, 2013 to 2020

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

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

Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	<b>2013(Base)</b>			<b>2014</b>			<b>2015</b>			<b>2016</b>		
0	1,100	1,100	2,190	1,130	1,070	2,200	1,140	1,080	2,210	1,140	1,080	2,220
1-4	4,750	4,650	9,390	4,640	4,600	9,230	4,540	4,460	9,000	4,540	4,450	8,990
5-9	5,750	5,610	11,350	5,790	5,680	11,470	5,920	5,880	11,800	5,960	5,920	11,880
10-14	5,850	5,740	11,590	5,840	5,650	11,490	5,710	5,450	11,170	5,640	5,420	11,060
15-19	5,690	5,220	10,920	5,700	5,260	10,960	5,670	5,340	11,020	5,550	5,180	10,730
20-24	4,230	4,370	8,610	4,340	4,340	8,680	4,510	4,260	8,770	4,670	4,230	8,900
25-29	3,680	4,000	7,680	3,870	4,210	8,080	4,060	4,460	8,510	4,200	4,750	8,950
30-34	3,640	4,090	7,730	3,700	4,080	7,780	3,710	4,080	7,790	3,810	4,090	7,900
35-39	4,190	4,840	9,030	4,020	4,650	8,660	3,980	4,460	8,440	3,890	4,420	8,310
40-44	5,030	5,770	10,810	4,970	5,760	10,730	4,780	5,720	10,500	4,630	5,440	10,070
45-49	5,190	5,600	10,790	5,080	5,480	10,570	5,060	5,490	10,550	5,070	5,620	10,680
50-54	5,550	6,070	11,620	5,540	6,130	11,670	5,530	6,050	11,580	5,380	5,950	11,330
55-59	4,850	5,360	10,210	4,990	5,450	10,440	5,090	5,630	10,720	5,290	5,760	11,050
60-64	4,620	5,130	9,750	4,660	5,230	9,890	4,680	5,260	9,940	4,730	5,310	10,040
65-69	4,130	4,320	8,450	4,340	4,590	8,920	4,520	4,810	9,330	4,660	5,050	9,710
70-74	3,050	3,350	6,400	3,170	3,430	6,600	3,320	3,520	6,840	3,390	3,640	7,040
75-79	2,180	2,460	4,640	2,230	2,560	4,790	2,290	2,710	5,000	2,450	2,860	5,310
80-84	1,500	1,980	3,480	1,520	2,010	3,540	1,580	2,040	3,620	1,600	2,050	3,650
85-89	810	1,290	2,090	870	1,260	2,130	880	1,270	2,160	940	1,330	2,260
90+	340	780	1,120	340	810	1,150	370	830	1,200	380	840	1,220
<b>All Ages</b>	<b>76,100</b>	<b>81,700</b>	<b>157,900</b>	<b>76,700</b>	<b>82,200</b>	<b>159,000</b>	<b>77,300</b>	<b>82,800</b>	<b>160,200</b>	<b>77,900</b>	<b>83,400</b>	<b>161,300</b>
	<b>2017</b>			<b>2018</b>			<b>2019</b>			<b>2020</b>		
0	1,140	1,080	2,220	1,140	1,080	2,210	1,140	1,080	2,210	1,140	1,080	2,210
1-4	4,560	4,380	8,940	4,590	4,360	8,950	4,580	4,350	8,930	4,580	4,350	8,920
5-9	5,910	5,920	11,830	5,860	5,780	11,640	5,760	5,690	11,460	5,650	5,550	11,190
10-14	5,680	5,390	11,070	5,700	5,510	11,210	5,730	5,580	11,310	5,850	5,760	11,610
15-19	5,430	5,120	10,560	5,220	4,980	10,200	5,190	4,880	10,070	5,050	4,660	9,710
20-24	4,730	4,190	8,920	4,790	4,230	9,020	4,760	4,240	9,000	4,700	4,280	8,980
25-29	4,280	4,890	9,170	4,440	4,850	9,290	4,480	4,760	9,250	4,590	4,630	9,220
30-34	3,920	4,210	8,130	4,050	4,390	8,450	4,190	4,550	8,750	4,340	4,760	9,100
35-39	3,830	4,290	8,120	3,770	4,200	7,970	3,800	4,170	7,970	3,790	4,150	7,940
40-44	4,470	5,190	9,670	4,260	4,950	9,210	4,070	4,730	8,800	4,000	4,530	8,530
45-49	5,020	5,720	10,740	5,040	5,740	10,770	4,960	5,710	10,670	4,760	5,660	10,420
50-54	5,310	5,740	11,050	5,140	5,560	10,700	5,020	5,430	10,450	4,980	5,420	10,410
55-59	5,370	5,960	11,330	5,490	6,100	11,590	5,470	6,160	11,630	5,450	6,070	11,530
60-64	4,830	5,330	10,170	4,880	5,430	10,310	5,010	5,520	10,520	5,100	5,680	10,780
65-69	4,610	5,100	9,710	4,580	5,150	9,720	4,610	5,240	9,860	4,630	5,270	9,900
70-74	3,600	3,890	7,490	3,870	4,190	8,070	4,080	4,460	8,530	4,250	4,670	8,920
75-79	2,600	3,070	5,680	2,720	3,110	5,830	2,820	3,180	6,000	2,950	3,270	6,220
80-84	1,660	2,070	3,730	1,710	2,100	3,810	1,740	2,180	3,930	1,790	2,320	4,110
85-89	970	1,350	2,320	940	1,390	2,330	960	1,430	2,390	1,010	1,470	2,480
90+	400	860	1,260	430	880	1,310	470	860	1,340	480	880	1,360
<b>All Ages</b>	<b>78,300</b>	<b>83,800</b>	<b>162,100</b>	<b>78,600</b>	<b>84,000</b>	<b>162,600</b>	<b>78,800</b>	<b>84,200</b>	<b>163,100</b>	<b>79,100</b>	<b>84,400</b>	<b>163,500</b>

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 with Māori ethnicity or Māori descent in the 2013 Census. The target population was the usually resident Māori population of New Zealand, living in occupied

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

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

Further details on the survey measures are available in the Te Kupenga 2013 [Data Dictionary](#).

## Deaths, hospitalisations and cancer registrations

### Ethnicity

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

### Residence

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

### Hospital transfers

For ambulatory sensitive hospitalisations and analyses of hospitalisations by cause (such as asthma, ischaemic heart disease) transfers to other services or 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 cancer	C61*
Testicular cancer	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.





