



Hutt Valley
District Health Board

Māori Health Profile 2015



Te Rei Puta

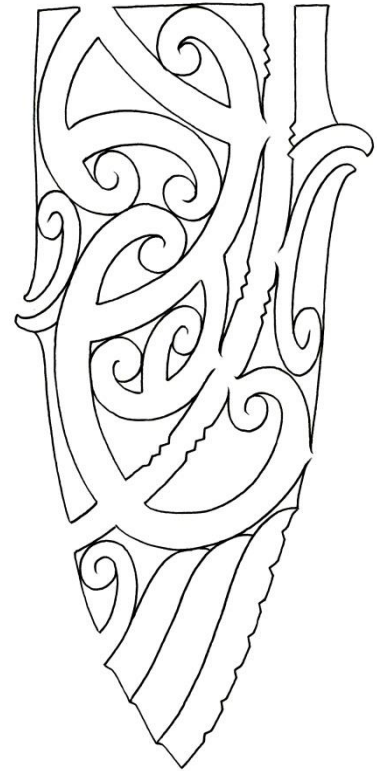
The cover design represents the journey of data from its production to its use by the health sector. The overall shape of the design is the prized rei puta. This signifies the importance of information and the acknowledgement that knowledge is a taonga.

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.

Design by Graham Tipene
Ngāti Whatua, Ngāti Hine, Ngāti Kahu, Ngāti Manu, Ngāti Hāua

tewhekemoko@gmail.com
www.facebook.com/pages/Te-Wheke-Moko/371495646243927



Suggested citation: Robson B, Purdie G, Simmonds S, Waa A, Scorrige K, Rameka R. 2015. *Hutt Valley District Health Board Māori Health Profile 2015*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare.

ISBN 978-0-9941252-6-2 (electronic)

Published in October 2015 by Te Rōpū Rangahau Hauora a Eru Pōmare, University of Otago Wellington, PO Box 7343, Wellington South.

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.

Acknowledgements

Many people have contributed their time and expertise to the Māori Health Profiles. We would like to thank members of Te Tumu Whakarae, DHB Planning and Funding groups, Public Health Services, Māori providers, and Māori governance groups who contributed to our consultation discussions. We would also like to acknowledge those who participated in the workshop at the Tū Kaha conference in Hastings, October 2014.

Paula Searle, Peter Himona, Te Taiawatea Moko-Mead, Li-Chia Yeh, Roimata Timutimu, Natalie Talamaivao from Te Kete Hauora, Ministry of Health provided valuable advice.

The following people assisted us to obtain data: Roslyn Parker, Dale Robison, Catherine Gerard and Mishra Suriyaprakash from the Ministry of Health; Ester Goodwin and Andrew Maclaren, Statistics New Zealand; June Atkinson, University of Otago Wellington; Nikki Turner, Immunisation Advisory Centre; Ali Ajmal, Action on Smoking and Health New Zealand.

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

Doone Winnard and Sarah Sharpe from Counties Manukau DHB provided very useful peer review of early drafts.

We appreciated the discussions and input of the participants of the Māori Health Profiles Summer School in February 2015, and a special thanks to the guest presenters Paula Searle, Kirikowhai Mikaere, Ana Morrison, Sonia Hawkins, Gay Keating and Jean Gilmour.

We would like to particularly acknowledge Olga Rameka who provided cultural support and guidance throughout the project, ngā mihi aroha ki a koe.

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

– Hutt Valley DHB at a glance

Hutt Valley DHB population

- In 2013, 23,800 Māori lived in the Hutt District Health Board region, 17% of the District's total population.
- The Hutt Māori population is youthful, but showing signs of ageing. The median age in 2013 was 24.2 years. Twenty-seven percent of the District's children aged 0–14 years and 23% of the District's youth aged 15–24 years were Māori.
- The Māori population aged 65 years and over will increase by 62% between 2013 and 2020.

Whānau ora – Healthy families

- Te Kupenga data is presented for Hutt Valley and Wairarapa DHBs combined. In 2013, most Hutt Valley and Wairarapa Māori adults (80%) reported that their whānau was doing well, but 7% 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 (76%).
- Being involved in Māori culture was important to the majority of Māori adults (76%) and spirituality was important to 66%.
- Practically all Hutt Valley and Wairarapa Māori (98%) had been to a marae at some time. Most (68%) had been to their ancestral marae, with 76% stating they would like to go more often.
- One in nine had taken part in traditional healing or massage in the last 12 months.
- One in five Hutt Māori (21%) could have a conversation about a lot of everyday things in te reo Māori in 2013.

Wai ora – Healthy environments

Education

- In 2013, 95% of Hutt Māori children starting school had participated in early childhood education.
- In 2013, 51% of Māori adults aged 18 years and over had at least a Level 2 Certificate, higher than in 2006 (41%). However the proportion was still three-quarters that of non-Māori in 2013.

Work

- In 2013, 11% of Māori adults aged 15 years and over were unemployed, compared to 6% of non-Māori.
- Most Hutt Māori adults (88%) did voluntary work.
- In 2013, Māori were 71% more likely than non-Māori to look after a household member who was disabled or ill, and 40% more likely to care for someone outside of the home, without pay.

Income and standard of living

- In 2013, one in three children and one in four 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 the Hutt Valley DHB.
- In 2013, 16% of Hutt Valley and Wairarapa Māori adults reported putting up with feeling the cold a lot to keep costs down during the previous 12 months, 7% had often gone without fresh fruit and vegetables, and 16% had postponed or put off a visit to the doctor.

- In 2013, 11% of residents in Māori households in Hutt Valley DHB had no motor vehicle compared to 4% of residents in other households.
- Residents in Hutt Māori households were less likely to have access to telecommunications than those living in other households: 26% had no internet, 24% no telephone, 11% no mobile phone, and 3% had no access to any telecommunications.

Housing

- The most common housing problems reported to be a big problem by Hutt Valley and Wairarapa Māori adults in 2013 were finding it hard to keep warm (23%), needing repairs (17%), and damp (16%).
- Just over half of children in Hutt Māori households (54%) were living in rented accommodation, four-fifths higher than the proportion of children in other households (29%).
- Hutt residents living in Māori households were twice as likely as others to be in crowded homes (i.e. requiring at least one additional bedroom) (19% compared to 10%).

Area deprivation

- Using the NZDep2013 index of small area deprivation, 59% of Hutt Māori lived in the four most deprived decile areas compared to 37% of non-Māori. Conversely 10% of Māori lived in the two least deprived deciles compared to 25% of non-Māori.

Mauri ora – Healthy individuals

Pepi, tamariki – Infants and children

- On average, close to 620 Māori infants were born per year during 2009–2013, 30% of all live births in Hutt Valley DHB. Seven percent of Māori and 6% of non-Māori babies had low birth weight.
- In 2013, 65% of Māori babies in the Hutt Valley DHB area were fully breastfed at 6 weeks.
- Two-thirds of Māori infants were enrolled with a Primary Health Organisation by three months of age.
- In 2014, 90% of Māori children were fully immunised at 8 months of age, 92% at 24 months.
- In 2013, half of Hutt Māori children aged 5 years and a third of non-Māori children had caries. At Year 8 of school, half of Māori children and just over a third non-Māori children had caries. Māori children under 15 years were 37% more likely than non-Māori children to be hospitalised for tooth and gum disease.
- During 2011–2013, on average there were 55 hospital admissions per year for grommet insertions among Māori children (at a rate 40% higher than non-Māori) and 64 admissions per year for serious skin infections (with the rate nearly twice that of non-Māori children).
- Māori children under 15 years were 6 times as likely as non-Māori children to be hospitalised for acute rheumatic fever, with 3 children per year admitted at least once on average.
- Over 600 hospitalisations per year of Māori children were potentially avoidable through population-based health promotion and intersectoral actions, at a rate a third higher than that of non-Māori children.
- Around 420 hospitalisations per year of Māori children were potentially avoidable through preventive or treatment intervention in primary care (ambulatory care sensitive hospitalisations, or ASH), with a rate 27% higher than for non-Māori children.

Rangatahi – Young adults

- There has been a significant increase in the proportion of Hutt 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, at age 20–24 years, Māori were twice as likely as non-Māori to smoke regularly (44% compared to 21%) in 2013.
- By September 2014, 55% of Māori girls aged 17 years and 70% of those aged 14 years had completed all three doses of the human papilloma virus (HPV) immunisation.
- Rates of hospitalisation for injury from self-harm were 44% higher for Māori than for non-Māori among youth aged 15–24 years during 2011–2013.

Pakeke – Adults

- Just under half of Māori adults in Hutt Valley and Wairarapa DHBs reported having excellent or very good health in 2013, and a third reported having good health. One in six (17%) reported having fair or poor health.
- Smoking rates are decreasing, but remained twice as high for Māori (35%) as for non-Māori (16%) in 2013.

Circulatory system diseases

- Hutt Māori adults aged 25 years and over were 61% more likely than non-Māori to be hospitalised for circulatory system diseases (including heart disease and stroke) during 2011–2013.
- Māori were 30% more likely than non-Māori to be admitted with acute coronary syndrome, 46% more likely to have angiography, just as likely to have angioplasty, and 88% more likely to have a coronary artery bypass and graft.
- Heart failure admission rates were 3.8 times as high for Māori as for non-Māori.
- Stroke admission rates were 79% higher for Māori than for non-Māori.
- Chronic rheumatic heart disease admissions were 5.6 times as common for Māori as for non-Māori, and heart valve replacements 2.3 times as common.
- Māori under 75 years were nearly 3 times as likely as non-Māori to die from circulatory system diseases during 2007–2011.

Diabetes

- In 2013, 4% of Māori and 5% of non-Māori were estimated to have diabetes. Over half of Māori aged 25 years and over who had diabetes were regularly receiving metformin or insulin (57%), 86% were having their blood sugar monitored regularly, and two-thirds were being screened regularly for renal disease.
- In 2011–2013 Māori with diabetes were over 3 times as likely as non-Māori to have a lower limb amputated.

Cancer

- Compared to non-Māori females, cancer incidence was 46% higher for Māori females while cancer mortality was 94% higher.
- Breast, lung, uterine and colorectal cancers were the most commonly registered among Hutt Māori women in 2008–2012. The rate of breast cancer was 57% higher than the non-Māori rate, and the rate of lung cancer was over 4 times as high.
- Breast screening coverage of Māori women aged 45–69 years was 64% compared to 74% of non-Māori women at December 2014.
- Cervical screening coverage of Māori women aged 25–69 years was 70% over 3 years and 86% over five years (compared to 79% and 93% of non-Māori respectively).
- Among Hutt males, overall cancer incidence was similar for Māori and non-Māori, but the cancer mortality rate was 50% higher for Māori.
- Prostate, colorectal, testicular, liver, lung and stomach cancers were the most frequent cancers among Hutt Māori males. Lung and stomach cancer registration rates were 5.4 and 2.65 times the rate for non-Māori men respectively.
- Lung and breast cancer were the most common causes of death from cancer among Māori women in 2007–2011. Lung cancer mortality for Māori women was 4.6 times as high as for non-Māori women.
- Lung, liver, colorectal and prostate cancers were the leading causes of cancer death for Māori men. Liver cancer mortality was 6.8 times as high for Māori as for non-Māori 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) in 2011–2013.
- Asthma hospitalisation rates were higher for Māori than non-Māori under 65 years of age.
- Māori under 75 years of age had 3.6 times the non-Māori rate of death from respiratory disease in 2007–2011.

Mental disorders

- Māori were 82% 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 Hutt Māori was estimated to be 5.6%, three-quarters higher than the prevalence in non-Māori (3.3%).
- Forty percent of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those who received allopurinol, only 32% had a lab test for serum urate levels in the following six months. Forty-three percent of Māori with gout were using non-steroidal anti-inflammatory medication.
- During 2011–2013 the rate of hospitalisations for gout was 2.9 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 22% higher for Māori than for non-Māori during 2011–2013.
- On average, 1,500 Māori hospital admissions per year were potentially avoidable, with the rate 40% higher for Māori than for non-Māori. The ASH rate was 50% higher.

Mortality

- In 2012–2014, life expectancy at birth for Māori in the greater Wellington Region was 78.6 years for females (5.3 years lower than for non-Māori females) and 74.7 years for males (5.6 years lower than for non-Māori).
- The all-cause mortality rate for Hutt Māori was 90% higher than the rate for non-Māori in 2008–2012.
- Leading causes of death for Māori females in 2007–2011 were lung cancer, ischaemic heart disease (IHD), COPD, breast cancer, and diabetes.
- Leading causes of death for Māori males were IHD, accidents, diabetes, COPD, and lung cancer.
- Potentially avoidable mortality and mortality amenable to health care were around twice as high for Māori as for non-Māori in the Hutt Valley DHB area during 2007–2011.

Injuries

- The rate of hospitalisation due to injury was 37% higher for Māori than for non-Māori during 2011–2013.
- The most common causes of injury resulting in hospitalisations among Māori were exposure to mechanical forces, falls, complications of medical and surgical care, assault, and transport accidents.
- Rates of hospital admission for injury caused by assault were 2.7 times as high for Māori as for non-Māori. Males had higher rates of admission than females.
- Injury mortality was nearly twice as high for Māori as for non-Māori in the Hutt Valley DHB area.

Contents

Tiro whānui – Hutt Valley DHB at a glance	v
Introduction.....	1
Data sources and key methods	1
Further sources of data	2
Te Tatauranga o te Iwi – Key demographics	3
Whānau ora – Healthy families	4
Whānau well-being	4
Whānau support	5
Importance of participation in Māori culture.....	5
Te Reo Māori.....	5
Access to marae	6
Traditional healing or massage	6
Wai ora – Healthy environments.....	7
Education	7
Work.....	7
Income and standard of living.....	9
Housing	11
Housing security.....	11
Household crowding	11
Fuel poverty	12
Area deprivation.....	12
Mauri ora: Pepi, tamariki - Infants and children	13
Births.....	13
Well child/Tamariki ora indicators	13
Oral health	14
Middle ear disease	15
Healthy skin.....	15
Acute rheumatic fever.....	15
Potentially preventable hospitalisations	16
Mauri ora: Rangatahi – Young adults	17
Smoking.....	17
Immunisations.....	18
Mental health.....	18
Mauri ora: Pakeke – Adults	19
Self-assessed health	19

Smoking status	19
Heart disease and stroke.....	20
Diabetes	22
Cancer	23
Breast and cervical cancer screening	23
Respiratory disease	25
Mental disorders	26
Gout	26
Hip fractures.....	27
Elective surgery	27
Mauri ora: All ages	29
Hospitalisations.....	29
Potentially avoidable hospitalisations	29
Mortality	29
Potentially avoidable mortality	31
Injuries	32
References	33
Appendix 1: Population projections	34
Appendix 2: Technical notes	36
Data sources.....	36
Data from the Census of Population and Dwellings	36
Data from Te Kupenga 2013	36
Deaths, hospitalisations and cancer registrations.....	37
Ethnicity	37
Residence.....	37
Hospital transfers.....	37
Suppression of causes of death or hospitalisation	37
Ninety-five percent confidence intervals	37
Age standardisation	38
ICD-10 codes	38

List of Tables and Figures

Table 1: Population by age group, Hutt Valley DHB, 2013	3
Table 2: Population projections, Hutt Valley DHB, 2013 to 2033	3
Table 3: Whānau well-being reported by Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013	4
Table 4: Whānau composition reported by Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013	4
Table 5: Access to whānau support, Māori aged 15 years and over Hutt Valley and Wairarapa DHBs combined, 2013	5
Table 6: Importance of Māori culture and spirituality, Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013	5
Table 7: People who can have a conversation about a lot of everyday things in te reo Māori, Hutt Valley DHB, 2013 ..	5
Table 8: Use of te reo Māori in the home, Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013	6
Table 9: Access to marae, Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013	6
Table 10: Māori aged 15 years and over who took part in traditional healing or massage in last 12 months, Hutt Valley and Wairarapa DHBs combined, 2013	6
Table 11: Adults aged 18 years and over with a Level 2 Certificate or higher Hutt Valley DHB, 2006 and 2013.....	7
Table 12: Labour force status, 15 years and over, Hutt Valley DHB, 2006 and 2013	7
Table 13: Leading industries in which Māori were employed, Hutt Valley DHB, 2013.....	8
Table 14: Leading occupations of employed Māori, Hutt Valley DHB, 2013.....	8
Table 15: Unpaid work, 15 years and over, Hutt Valley DHB, 2013.....	9
Table 16: Unmet need reported by Māori aged 15 years and over to keep costs down in the last 12 months, Hutt Valley and Wairarapa DHBs combined, 2013	9
Table 17: Children aged 0–17 years living in families where the only income is means-tested benefits, Hutt Valley DHB, 2006 and 2013.....	9
Table 18: Children and adults living in households with low incomes, Hutt Valley DHB, 2013	10
Table 19: Households with no access to a motor vehicle, Hutt Valley DHB, 2006 and 2013.....	10
Table 20: People in households with no access to telephone, mobile/cell phone, internet, or any telecommunications, Hutt Valley DHB, 2013.....	10
Table 21: Housing problems reported by Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013	11
Table 22: Children and adults living in households where rent payments are made, Hutt Valley DHB, 2013.....	11
Table 23: People living in crowded households (requiring at least one more bedroom), Hutt Valley DHB, 2013	11
Table 24: People living in households where no heating fuels are used, Hutt Valley DHB, 2013	12
Table 25: Birth-weight and gestation, Hutt Valley DHB, 2009–2013	13
Table 26: Selected Well Child/Tamariki Ora indicators for Māori children, Hutt Valley DHB	13
Table 27: Children fully immunised by the milestone age, Hutt Valley DHB, 1 Jan 2014 to 31 Dec 2014	14
Table 28: Oral health status of children aged 5 or in Year 8 at school, Hutt Valley DHB, 2013	14

Table 29: Hospitalisations for tooth and gum disease, children aged 0–14 years, Hutt Valley DHB, 2011–2013	14
Table 30: Hospitalisations for grommet insertions, children aged 0–14 years, Hutt Valley DHB, 2011–2013	15
Table 31: Hospitalisations for serious skin infections, children aged 0–14 years, Hutt Valley DHB, 2011–2013	15
Table 32: Individuals admitted to hospital for acute rheumatic fever, ages 0–14 and 15–24 years, Hutt Valley DHB, 2011–2013	15
Table 33: Potentially avoidable hospitalisations for children aged 1 month to 14 years, Hutt Valley DHB, 2011–2013	16
Table 34: Ambulatory care sensitive hospitalisations for children aged 1 month to 14 years, Hutt Valley DHB, 2011–2013	16
Table 35: Human papilloma virus immunisations (HPV) by birth cohorts, Hutt Valley DHB, 1 September 2008 to 30 September 2014	18
Table 36: Hospitalisations for injury from intentional self-harm, 15–24 and 25–44 years, Hutt Valley DHB, 2011–2013	18
Table 37: Health status reported by Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013	19
Table 38: Cigarette smoking status, 15 years and over, Hutt Valley DHB, 2006 and 2013	19
Table 39: Hospitalisations for circulatory system diseases, 25 years and over, Hutt Valley DHB, 2011–2013	20
Table 40: Ischaemic heart disease indicators, 25 years and over, Hutt Valley DHB, 2011–2013	20
Table 41: Hospitalisations for heart failure, stroke, and hypertensive disease, 25 years and over, Hutt Valley DHB, 2011–2013	21
Table 42: Hospitalisations for chronic rheumatic heart disease and heart valve replacements, 25 years and over, Hutt Valley DHB, 2011–2013	21
Table 43: Early deaths from circulatory system disease, Hutt Valley DHB, 2007–2011	22
Table 44: Diabetes prevalence, medication use, monitoring of blood glucose levels, screening for renal disease, Hutt Valley DHB, 2013	22
Table 45: Hospitalisations for lower limb amputations for people with concurrent diabetes, 15 years and over, Hutt Valley DHB, 2011–2013	22
Table 46: Most common cancer registrations for Māori by site, all ages, Hutt Valley DHB, 2008–2012	23
Table 47: Most common cancer deaths for Māori by site, all ages, Hutt Valley DHB, 2007–2011	23
Table 48: BreastScreen Aotearoa breast screening coverage, women aged 45–69 years, Hutt Valley DHB, 24 months to 31 December 2014	24
Table 49: Cervical screening coverage, women aged 25–69 years, Hutt Valley DHB, 3 years and 5 years to 31 December 2014	24
Table 50: Hospitalisations for asthma, by age group, Hutt Valley DHB, 2011–2013	25
Table 51: Hospitalisations for chronic obstructive pulmonary disease (COPD), 45 years and over, Hutt Valley DHB, 2011–2013	25
Table 52: Early deaths from respiratory disease, Hutt Valley DHB, 2007–2011	25
Table 53: Hospitalisations for mental disorders, all ages, Hutt Valley DHB, 2011–2013	26
Table 54: Gout prevalence and treatment, 20–79 years, Hutt Valley DHB, 2011	27

Table 55: Hospitalisations for gout, 25 years and over, Hutt Valley DHB, 2011–2013	27
Table 56: Hospitalisations for hip fractures, 65 years and over, Hutt Valley DHB, 2011–2013	27
Table 57: Hospitalisations for hip replacements, 50 years and over, Hutt Valley DHB, 2011–2013	28
Table 58: Publicly funded hospitalisations for cataract surgery, 45 years and over, Hutt Valley DHB, 2011–2013	28
Table 59: All-cause hospitalisations, all ages, Hutt Valley DHB, 2011–2013	29
Table 60: Potentially avoidable hospitalisations, 0–74 years, Hutt Valley DHB, 2011–2013	29
Table 61: Ambulatory care sensitive hospitalisations, 0–74 years, Hutt Valley DHB, 2011–2013.....	29
Table 62: Life expectancy at birth, Wellington Region, 2012–2014	30
Table 63: All-cause deaths, all ages, Hutt Valley DHB, 2008–2012.....	30
Table 64: Leading causes of death for Māori, all ages, Hutt Valley DHB, 2007–2011	30
Table 65: Potentially avoidable mortality, 0–74 years, Hutt Valley DHB, 2007–2011.....	31
Table 66: Amenable mortality, 0–74 years, Hutt Valley DHB, 2007–2011.....	31
Table 67: Hospitalisations for injuries, all ages, Hutt Valley DHB, 2011–2013.....	32
Table 68: Hospitalisations for assault, all ages, Hutt Valley DHB, 2011–2013	32
Table 69: Deaths from injury, all ages, Hutt Valley DHB, 2007–2011.....	32
Table 70: Māori population projections, single year by age group, Hutt Valley DHB, 2013 to 2020	34
Table 71: Total population projections, single year, by age group, Hutt Valley DHB, 2013 to 2020	35
Table 72: Data sources	36
Table 73: 2001 Census total Māori population.....	38
Table 74: Potentially avoidable hospitalisation ICD-10 codes for children aged 1 month to 14 years.....	38
Table 75: Ambulatory care sensitive hospitalisation ICD-10 codes for children aged 1 month to 14 years	39
Table 76: Ambulatory care sensitive hospitalisation ICD-10 codes for people aged 1 month to 74 years	40
Table 77: Avoidable mortality ICD-10 codes	40
Table 78: Amenable mortality ICD-10 codes.....	42
Figure 1: Distribution by NZDep 2013 decile, Hutt Valley DHB, 2013	12
Figure 2: Trends in the proportion of students aged 14–15 years who have never smoked, by gender, Hutt Valley DHB, 1999–2013.....	17
Figure 3: Regular smokers, ages 15–17, 18–19, 20–24 years, Hutt Valley DHB, 2013	17



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 the **Te Poari Hauora a Rohe o Te Awakairangi, Hutt Valley 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 Hutt Valley DHB. Accompanying Excel tables also include data for the total Hutt Valley DHB population and the total New Zealand population for reo speakers, socioeconomic indicators, mortality, cancer registrations, and hospital discharges.

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

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

Hospitalisation, cancer registration, and mortality rates and Census data were age–sex-standardised to the 2001 Māori population¹.

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

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

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

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

Further technical notes and methods are provided in Appendix 2.

Further sources of data

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

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



Te Tatauranga o te Iwi

– Key demographics

In 2013, approximately 3% (23,800) of the country’s total Māori population lived in the Hutt Valley District Health Board area. The total population of the DHB (142,500) made up 3% of the national population. In 2015, the Māori population is estimated to be 24,200 and the total population 144,200.²

Table 1: Population by age group, Hutt Valley DHB, 2013

Age group (years)	Māori			Non-Māori		Total DHB Number
	Number	Age distribution	% of DHB	Number	Age distribution	
0–14	7,960	33%	27	22,030	19%	29,990
15–24	4,250	18%	23	14,590	12%	18,840
25–44	6,190	26%	16	31,500	27%	37,690
45–64	4,420	19%	12	32,640	28%	37,060
65+	980	4%	5	17,910	15%	18,890
Total	23,800	100%	17	118,700	100%	142,500

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

In 2013, Māori residents comprised 17% of the DHB population. The Māori population is relatively young, with a median age in 2013 of 24.2 years, compared with 37.7 years for the total DHB population. Māori comprised 27% of the DHB’s children aged 0–14 years and 23% of those aged 15–24 years.

Table 2: Population projections, Hutt Valley 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	23,800	17	3	34	62	4	24.2	142,500	37.7	3	692,300	4,442,100
2018	24,600	17	3	33	62	6	25.1	145,700	38.5	3	734,500	4,726,200
2023	25,100	17	3	31	61	8	26.3	147,200	39.3	3	773,500	4,935,200
2028	25,500	17	3	29	60	10	27.5	148,200	40.4	3	811,700	5,139,700
2033	25,900	18	3	28	60	12	28.5	148,300	41.8	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 were aged 65 years and over in 2013 was 4% but is projected to increase to 12% in 2033. Between 2013 and 2020 the number of Māori aged 65 and over will increase by 62% from 980 to 1,590 (see Appendix 1). In 2013, there were 250 Māori aged 75 years and over in the Hutt Valley DHB area, with 69 living alone (see accompanying Excel tables).

² Population projections are provided in Appendix 1.



Whānau ora

– Healthy families

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

Whānau well-being

Table 3: Whānau well-being reported by Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013

How the whānau is doing	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Well / Extremely well	23,000	80.2	(75.3, 85.1)	83.4	(82.5, 84.4)
Neither well nor badly	3,500*	12.7*	(7.9, 17.5)	10.3	(9.4, 11.2)
Badly / Extremely badly	2,000*	7.1*	(4.7, 9.4)	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%.

Eighty percent of Hutt Valley and Wairarapa Māori adults reported that their whānau was doing well or extremely well in 2013. However 7% felt their whānau was doing badly or extremely badly.

Table 4: Whānau composition reported by Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013

Whānau description	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Size of whānau					
10 or less	14,500	51.8	(45.8, 57.8)	53.7	(52.1, 55.3)
11 to 20	7,000	24.6	(19.6, 29.5)	22.6	(21.3, 24.0)
More than 20	6,500	23.6	(19.7, 27.5)	23.6	(22.4, 24.8)
Groups included in whānau					
Parents, partner, children, brothers & sisters	28,000	97.3	(95.7, 99.0)	94.6	(94.0, 95.2)
Aunts & uncles, cousins, nephews & nieces, other in-laws	13,000	45.3	(39.0, 51.7)	41.3	(39.8, 42.8)
Grandparents, grandchildren	12,500	43.2	(37.6, 48.8)	41.9	(40.5, 43.4)
Friends, others	3,500*	12.4	(8.7, 16.0)	12.4	(11.5, 13.3)

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

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

Table 4 shows the size and composition of whānau, with around a quarter 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 Hutt Valley and Wairarapa DHBs combined, 2013

How easy is it to get help	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Support in times of need					
Easy, very easy	21,500	75.8	(71.1, 80.6)	81.2	(80.1, 82.4)
Sometimes easy, sometimes hard	5,000	17.7	(13.2, 22.2)	12.7	(11.7, 13.6)
Hard / very hard	2,000*	6.5*	(3.8, 9.1)	6.1	(5.4, 6.8)
Help with Māori cultural practices such as going to a tangi, speaking at a hui, or blessing a taonga					
Easy, very easy	15,500	55.4	(49.4, 61.4)	64.1	(62.7, 65.6)
Sometimes easy, sometimes hard	7,000	24.6	(19.3, 29.9)	16.9	(15.9, 18.0)
Hard / very hard	4,500	16.3	(12.5, 20.1)	14.7	(13.5, 15.9)
Don't need help	1,000**	3.7**	(1.4, 5.9)	4.2	(3.7, 4.7)

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

Notes: * Sampling error is 30% or more but less than 50%. ** Sampling error is 50% or more but less than 100%.

In 2013, the majority of Māori adults in Hutt Valley and Wairarapa (76%) reported having easy access to support in times of need. However, an estimated 2,000 (7%) had difficulty getting help from whānau.

A smaller proportion found it easy to get help with Māori cultural practices (55%), with 16% 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, Hutt Valley and Wairarapa DHBs combined, 2013

	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Importance of being involved in Māori culture					
Very / quite	14,000	49.1	(42.9, 55.3)	46.3	(44.9, 47.6)
Somewhat	7,500	27.0	(21.8, 32.1)	24.2	(22.9, 25.6)
A little / not at all	7,000	23.9	(18.5, 29.4)	29.5	(28.3, 30.7)
Importance of spirituality					
Very / quite	15,000	53.0	(47.7, 58.4)	48.7	(47.4, 49.9)
Somewhat	3,500*	12.7*	(8.6, 16.8)	17.0	(16.0, 18.0)
A little / not at all	10,000	34.3	(29.0, 39.5)	34.3	(33.1, 35.5)

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

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

Being involved in Māori culture was important (very, quite, or somewhat) to the majority (76%) of Hutt Valley and Wairarapa Māori adults. Spirituality was important to two-thirds (66%).

Te Reo Māori

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

Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in proportion
Number	%	(95% CI)	Number	%	(95% CI)		
4,395	21.0	(20.4, 21.6)	975	0.9	(0.8, 1.0)	23.25 (21.48, 25.16)	20.1

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, just over one in five Māori in Hutt Valley DHB (21%) and nearly 1% of non-Māori could have a conversation about a lot of everyday things in te reo Māori.

Table 8: Use of te reo Māori in the home, Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013

Language spoken at home	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Māori is main language	1,000**	4.1**	(1.8, 6.4)	2.6	(2.2, 3.0)
Māori is used regularly	6,500	24.4	(18.3, 30.5)	20.5	(19.2, 21.8)

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

Note: ** Sampling error is 50% or more but less than 100%.

A quarter of Māori adults from Hutt Valley and Wairarapa reported that Māori language was used regularly in the home, and for 4% te reo Māori was the main language.

Access to marae

Table 9: Access to marae, Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013

Been to marae	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
At some time	28,500	98.4	(97.0, 99.8)	96.0	(95.5, 96.6)
In previous 12 months ⁽¹⁾	17,000	60.6	(55.3, 66.0)	58.2	(56.6, 59.7)
Ancestral marae at some time ⁽²⁾	19,000	68.1	(62.5, 73.6)	62.3	(60.9, 63.7)
Ancestral marae in previous 12 months ⁽³⁾	9,000	31.4	(26.5, 36.4)	33.6	(32.3, 34.9)
Like to go to ancestral marae more often ⁽²⁾	15,000	75.5	(68.6, 82.5)	58.7	(56.7, 60.7)

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

Notes: (1) Those who had been to a marae at some time.

(2) Both those who knew and did not know their ancestral marae.

(3) Those who had been to any of their ancestral marae in the last 12 months.

In 2013, almost all Māori in Hutt Valley and Wairarapa (99%) had been to a marae at some time, with a majority (61%) having been in the last 12 months. Sixty-eight percent had been to at least one of their ancestral marae, with 31% having been in the previous year, but 76% reported that they would like to go more often.

Traditional healing or massage

Table 10: Māori aged 15 years and over who took part in traditional healing or massage in last 12 months, Hutt Valley and Wairarapa DHBs combined, 2013

Hutt Valley and Wairarapa DHBs			New Zealand	
Estimated number	%	(95% CI)	%	(95% CI)
3,000*	10.8*	(6.9, 14.7)	10.9	(10.0, 11.7)

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

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

An estimated 3,000 Māori adults (11%) in Hutt Valley and Wairarapa had taken part in traditional healing or massage in 2013.

Wai ora

– Healthy environments

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

Education

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

Year	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
2006	5,079	41.1	(40.3, 42.0)	46,305	61.0	(60.6, 61.4)	0.67 (0.66, 0.69)	-19.9
2013	6,336	50.7	(49.9, 51.6)	51,123	67.4	(67.1, 67.8)	0.75 (0.74, 0.77)	-16.7

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 41% to 51% between 2006 and 2013. The absolute gap closed by three percentage points, but Māori were still three-quarters as likely as non-Māori to have at least this level of qualification in 2013.

Work

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

Labour force status	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
2006								
Employed full-time	7,137	51.9	(51.1, 52.6)	46,935	57.0	(56.6, 57.3)	0.91 (0.90, 0.92)	-5.1
Employed part-time	1,707	12.1	(11.6, 12.6)	12,618	15.7	(15.4, 16.0)	0.77 (0.73, 0.81)	-3.6
Unemployed	1,101	7.9	(7.5, 8.4)	2,853	4.4	(4.2, 4.5)	1.82 (1.70, 1.94)	3.6
Not in the labour force	3,834	28.1	(27.4, 28.8)	26,499	23.0	(22.7, 23.3)	1.22 (1.19, 1.26)	5.1
2013								
Employed full-time	6,651	47.1	(46.3, 47.9)	45,720	54.5	(54.2, 54.8)	0.86 (0.85, 0.88)	-7.4%
Employed part-time	1,680	11.7	(11.2, 12.3)	11,961	14.8	(14.5, 15.0)	0.80 (0.76, 0.84)	-3.0%
Unemployed	1,536	11.4	(10.9, 12.0)	3,891	6.0	(5.8, 6.2)	1.91 (1.80, 2.02)	5.5%
Not in the labour force	4,209	29.7	(29.0, 30.5)	27,861	24.8	(24.5, 25.1)	1.20 (1.17, 1.23)	5.0%

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 full-time, and a corresponding increase in the unemployment rate (from 8% to 11%). There was also an increase in the population who were not in the labour force.

In 2013, Māori were 91% more likely than non-Māori to be unemployed, with an absolute gap of 5% in unemployment rates. The absolute gap in the proportions not in the labour force was also 5%.

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

ANZSIC Industry	Hutt Valley DHB						New Zealand	
	Māori			Non-Māori				
	Number	%	Rank	Number	%	Rank	%	Rank
Females								
Public Administration and Safety	651	17.0	1	3,243	12.0	3	5.0	7
Health Care and Social Assistance	606	15.8	2	4,323	16.0	1	17.1	1
Education and Training	456	11.9	3	3,495	13.0	2	12.9	2
Retail Trade	411	10.7	4	2,820	10.5	4	11.6	3
Accommodation and Food Services	255	6.7	5	1,431	5.3	7	7.3	5
Males								
Construction	744	19.9	1	4,068	14.1	1	13.2	2
Manufacturing	468	12.5	2	2,934	10.2	4	13.4	1
Public Administration and Safety	441	11.8	3	3,228	11.2	3	5.2	8
Transport, Postal and Warehousing	408	10.9	4	1,743	6.1	6	5.9	7
Retail Trade	312	8.3	5	2,565	8.9	5	8.3	5

Source: 2013 Census, Statistics New Zealand

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

Service industries were the main employers of Māori women in the Hutt District, with over half (55%) employed in public administration and safety; health care and social assistance; education and training industry; and retail trade. For Māori men, leading industries were construction (20%); manufacturing (13%); public administration and safety (12%); and transport, postal and warehousing (11%).

Table 14: Leading occupations of employed Māori, Hutt Valley DHB, 2013

ANZSCO Occupation	Hutt Valley DHB						New Zealand	
	Māori			Non-Māori				
	Number	%	Rank	Number	%	Rank	%	Rank
Females								
Clerical and Administrative Workers	936	24.7	1	6,441	24.2	2	19.5	2
Professionals	813	21.5	2	7,596	28.5	1	26.7	1
Community and Personal Service Workers	555	14.7	3	3,228	12.1	4	12.9	4
Sales Workers	504	13.3	4	3,054	11.5	5	11.7	5
Managers	432	11.4	5	3,543	13.3	3	14.4	3
Labourers	315	8.3	6	1,305	4.9	6	8.3	6
Technicians and Trades Workers	168	4.4	7	1,164	4.4	7	5.0	7
Machinery Operators and Drivers	60	1.6	8	309	1.2	8	1.5	8
Males								
Technicians and Trades Workers	732	19.1	1	5,532	19.7	3	18.5	3
Labourers	660	17.3	2	2,514	8.9	4	13.6	4
Machinery Operators and Drivers	612	16.0	3	2,148	7.6	6	9.1	5
Managers	531	13.9	4	5,685	20.2	2	22.7	1
Professionals	456	11.9	5	6,417	22.8	1	18.6	2
Community and Personal Service Workers	327	8.5	6	1,704	6.1	8	5.4	7
Sales Workers	261	6.8	7	2,193	7.8	5	7.1	6
Clerical and Administrative Workers	246	6.4	8	1,959	7.0	7	5.1	8

Source: 2013 Census, Statistics New Zealand

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

Among employed Māori women, the leading occupational groupings were clerical and administrative workers (25%), professionals (22%), and community and personal service workers (15%).

Māori men were most likely to be employed as technicians and trade workers (19%), labourers (17%), machinery operators and drivers (16%), and managers (14%).

Table 15: Unpaid work, 15 years and over, Hutt Valley 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	11,649	88.3	(87.8, 88.9)	76,386	89.8	(89.5, 90.0)	0.98	(0.98, 0.99)	-1.4
Looking after disabled/ill household member	1,518	11.3	(10.8, 11.9)	5,910	6.6	(6.4, 6.8)	1.71	(1.62, 1.81)	4.7
Looking after disabled/ill non-household member	1,429	10.3	(9.8, 10.9)	7,617	7.4	(7.2, 7.6)	1.40	(1.32, 1.48)	2.9

Source: 2013 Census, Statistics New Zealand

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

Close to 90% of Māori adults worked without pay in 2013. Māori were 71% more likely than non-Māori to look after a household member who was disabled or ill, and 40% more likely to look after a disabled or ill non-household member.

Income and standard of living

Table 16: Unmet need reported by Māori aged 15 years and over to keep costs down in the last 12 months, Hutt Valley and Wairarapa DHBs combined, 2013

Actions taken a lot to keep costs down	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Put up with feeling the cold	4,500	15.7	(11.5, 19.9)	11.0	(10.2, 11.8)
Go without fresh fruit and vegetables	2,000*	7.4*	(4.4, 10.5)	5.4	(4.8, 6.0)
Postpone or put off visits to the doctor	4,500	15.5	(11.1, 19.8)	8.8	(7.9, 9.6)

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

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

In 2013, an estimated 4,500 Māori adults (16%) in Hutt Valley and Wairarapa reported putting up with feeling cold to keep costs down during the previous 12 months, and a similar number postponed or put off visits to the doctor. Seven percent (2,000 people) had gone without fresh fruit and vegetables.

Table 17: Children aged 0–17 years living in families where the only income is means-tested benefits, Hutt Valley 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	1,998	20.6	(19.9, 21.5)	1,707	6.9	(6.6, 7.2)	2.99	(2.81, 3.17)	13.7
2013	2,046	22.2	(21.4, 23.1)	1,470	6.3	(6.0, 6.7)	3.50	(3.29, 3.72)	15.9

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.

In 2013, just over 2,000 children in Māori families and 1,470 children in non-Māori families were in families where the only income was means-tested benefits. Hutt Valley children in Māori families were 3.5 times as likely as non-Māori children to be in this situation in 2013. The absolute difference increased two percentage points between 2006 and 2013 from 14% to 16%.

Table 18: Children and adults living in households with low incomes, Hutt Valley 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	2,655	34.0	(33.0, 35.1)	3,957	18.5	(18.0, 19.0)	1.84 (1.77, 1.92)	15.6
Adults 18 years & over	4,320	28.4	(27.7, 29.2)	10,983	17.8	(17.5, 18.2)	1.60 (1.55, 1.65)	10.6

Source: 2013 Census, Statistics New Zealand

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

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

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

Just over a third of the children in Hutt Valley Māori households (2,655) were in households with low equivalised household incomes in 2013, 84% higher than the proportion of other children. More than a quarter of adults in Māori households (4,320) lived in low income households, 60% higher than the proportion of adults in other households.

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

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households								
2006	1,191	14.2	(13.4, 14.9)	4,032	10.2	(9.9, 10.5)	1.39 (1.31, 1.48)	4.0
2013	1,278	14.5	(13.8, 15.2)	3,591	9.1	(8.8, 9.4)	1.60 (1.51, 1.70)	5.4
People (% age-standardised)								
2006	2,979	11.0	(10.6, 11.4)	6,066	4.6	(4.4, 4.7)	2.41 (2.30, 2.52)	6.4
2013	3,123	11.2	(10.8, 11.5)	5,400	4.2	(4.1, 4.4)	2.64 (2.52, 2.77)	6.9

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, 14% of Māori households had no motor vehicle, 60% higher than the proportion of non-Māori households. The proportion of people in Māori households without a vehicle was 2.6 times the proportion of people in other households.

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

Mode of tele-communication	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
No mobile/cell phone	3,348	11.3	(10.9, 11.7)	12,063	9.2	(9.0, 9.4)	1.22 (1.18, 1.27)	2.1
No telephone	6,570	24.3	(23.8, 24.8)	8,544	10.5	(10.2, 10.7)	2.32 (2.25, 2.39)	13.8
No internet	7,479	26.4	(25.9, 26.9)	14,355	11.2	(10.9, 11.4)	2.36 (2.30, 2.43)	15.2
No tele-communications	834	3.0	(2.8, 3.2)	744	0.8	(0.7, 0.9)	3.68 (3.30, 4.09)	2.2

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.

In 2013, 26% of people in Hutt Māori households had no access to the internet, 24% did not have a telephone, 11% had no mobile phone, and 3% had no access to any telecommunications in the home. The largest absolute gap between Hutt Māori and non-Māori households was in access to the internet (a difference of 15 percentage points).

Housing

Table 21: Housing problems reported by Māori aged 15 years and over, Hutt Valley and Wairarapa DHBs combined, 2013

Housing problem (a big problem)	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Too small	2,000*	7.6*	(4.7, 10.4)	5.3	(4.7, 5.9)
Damp	4,500	16.2	(12.2, 20.3)	11.3	(10.5, 12.2)
Hard to keep warm	6,500	23.0	(18.0, 28.1)	16.5	(15.4, 17.7)
Needs repairs	5,000	16.6	(11.9, 21.4)	13.8	(12.7, 14.9)
Pests in the house	2,500*	9.1*	(5.5, 12.7)	5.8	(5.1, 6.5)

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

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

Housing problems reported by Hutt Valley and Wairarapa Māori adults in 2013 to be a big problem included difficulty keeping the house warm (23%), needing repairs (17%), and damp (16%). Eight percent felt their house was too small, and 9% stated that pests were a big problem in their house.

Housing security

Table 22: Children and adults living in households where rent payments are made, Hutt Valley DHB, 2013

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households	4,368	50.1	(49.0, 51.1)	9,690	24.8	(24.3, 25.2)	2.02 (1.97, 2.08)	25.3
Children under 18 years (% age-standardised)	5,130	54.1	(53.2, 55.2)	6,894	29.4	(28.8, 30.0)	1.84 (1.79, 1.89)	24.8
Adults 18 years and over (% age-standardised)	8,508	47.7	(46.9, 48.4)	17,475	29.2	(28.8, 29.6)	1.63 (1.60, 1.67)	18.5

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, 4,368 Hutt Valley Māori households were rented, 50% of all Māori households, compared to 25% of non-Māori households.

Among children living in a Māori household, 54% (5,130) were living in rented homes, compared to 29% (6,894 children) in non-Māori households.

Just under half of adults living in Māori households were living in rented accommodation (8,508), 63% higher than the proportion of adults living in non-Māori households (29%).

Household crowding

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

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households	996	11.3	(10.6, 12.0)	1,470	3.7	(3.5, 3.9)	3.04 (2.81, 3.28)	7.6
People (% age standardised)	5,106	19.1	(18.7, 19.6)	7,527	9.8	(9.6, 10.0)	1.95 (1.89, 2.02)	9.3

Source: 2013 Census, Statistics New Zealand

Notes: Crowding was defined as needing at least one additional bedroom according to the Canadian National Occupancy

Standard (based on the age, sex and number of people living in the dwelling).

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

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

In 2013, Māori households were 3 times as likely as non-Māori households to be classified as crowded using the Canadian National Occupancy Standard, with 996 homes needing at least one additional bedroom, affecting 5,106 people. People living in Māori households were twice as likely as others to be living in crowded conditions.

Fuel poverty

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

Measure	Māori households			Non-Māori households			Māori/non-Māori ratio (95% CI)	Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)		
Households	234	2.7	(2.3, 3.0)	498	1.3	(1.2, 1.4)	2.11 (1.81, 2.46)	1.4
People (% age standardised)	621	2.3	(2.1, 2.5)	1,170	1.4	(1.3, 1.5)	1.60 (1.45, 1.77)	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).

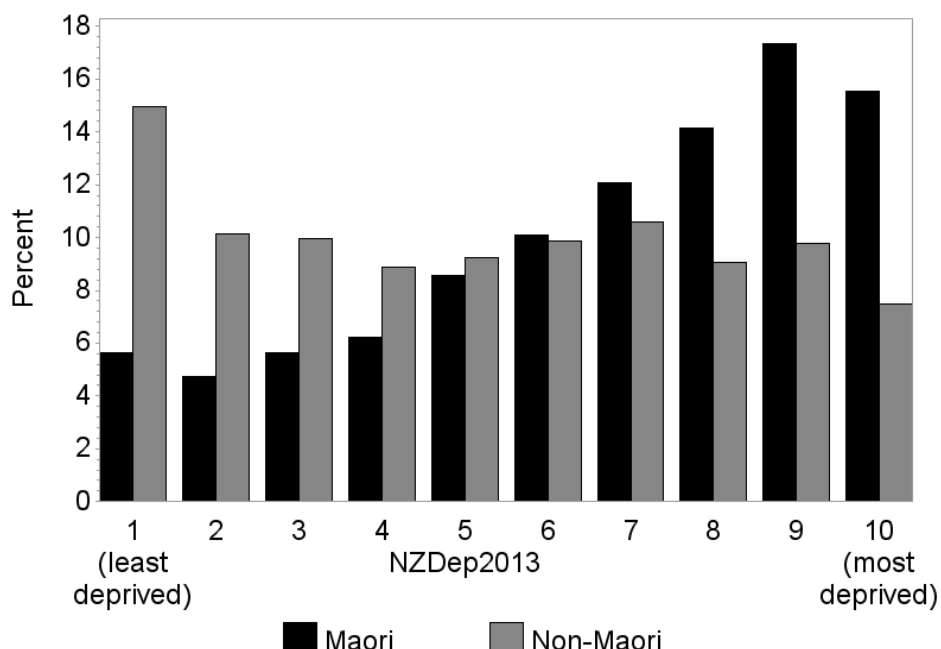
A Māori household is a household with at least one Māori resident. Non-Māori households have no Māori residents.

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

In 2013, 3% of Māori households in Hutt Valley DHB (234 homes) had no heating, twice the proportion of non-Māori households (498 homes).

Area deprivation

Figure 1: Distribution by NZDep 2013 decile, Hutt Valley DHB, 2013



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

Hutt Valley Māori have a more deprived small area profile than Hutt Valley non-Māori. In 2013, 59% of Māori lived in the four most deprived decile areas compared to 37% of non-Māori (see accompanying Excel table). Conversely, only 10% of Māori lived in the two least deprived decile areas, compared to 25% of non-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, Hutt Valley 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	44	7.1 (6.3, 8.1)	82	5.6 (5.1, 6.2)	1.27 (1.08, 1.49)	1.5
High birth-weight	14	2.2 (1.7, 2.8)	49	3.4 (3.0, 3.7)	0.67 (0.51, 0.87)	-1.1
Preterm	53	8.7 (7.7, 9.7)	109	7.5 (6.9, 8.1)	1.15 (1.00, 1.33)	1.2

Source: Birth registrations, Ministry of Health

Notes: Low birth-weight less than 2500g, High birth-weight greater than or equal to 4,500g, Preterm less than 37 weeks gestation.

During 2009 to 2013 there were 617 Māori infants born per year on average, 30% of all live births in the DHB (1,453 per year). On average, 44 Māori babies per year were born with low birth-weight, at a rate of 7%, 27% higher than non-Māori babies, while 14 per year (2%) were born with high birth-weight, a third lower than non-Māori. Fifty-three Māori babies per year (9%) were born prematurely, 15% higher than the rate of non-Māori babies.

Well child/Tamariki ora indicators

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

Indicator	Period	Māori	
		Count	%
1. Babies enrolled with a Primary Health Organisation (PHO) by three months old	20 Aug to 19 Nov 2013	83	66
11. Babies exclusively or fully breastfed at 2 weeks	January to June 2013	168	76
12. Babies exclusively or fully breastfed at 6 weeks		160	65
19. Mothers smoke-free two weeks postnatal		164	74
5. Children under 5 years enrolled with oral health services (PHO enrolled children)	2012	1163	37
7. Children starting school who have participated in ECE	2013	525	95
15. Children with a healthy weight at 4 years, DHB of service	July to Dec 2013	161	73

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, 66% of Māori babies were enrolled with a PHO by three months of age. In the first half of 2013, 76% of Māori babies were breastfed at two weeks of age and 65% at six weeks. Three-quarters of Māori mothers were smoke-free two weeks after giving birth.

Among pre-school children enrolled with a PHO in 2012, 37% of Māori were enrolled with oral health services. Most (95%) Māori children who started school in 2013 had participated in early childhood education. Nearly three quarters with a BMI recorded at their B4 School Check had a healthy weight.

Table 27: Children fully immunised by the milestone age, Hutt Valley 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	415	75%	1,193	87%	0.86	-12%
8 months	507	90%	1,307	94%	0.95	-5%
12 months	544	95%	1,312	95%	0.99	0%
18 months	482	87%	1,305	92%	0.95	-5%
24 months	540	92%	1,419	95%	0.97	-3%
5 years	496	83%	1,410	87%	0.95	-4%

Source: National Immunisation Register

In the 12 months to 31 December 2014, three-quarters of Māori infants aged six months were fully immunised, compared to 87% of non-Māori infants. However, 90% of Māori children aged eight months and 92% of those aged 24 months had completed their immunisations. At five years 83% of Māori children were fully immunised.

Oral health

Table 28: Oral health status of children aged 5 or in Year 8 at school, Hutt Valley 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	408	52 (47, 57)	2.4		1,308	32 (29, 34)	1.3		1.65 (1.46, 1.86)	21
Year 8	332	49 (44, 55)	1.1		1,304	36 (33, 38)	0.7		1.38 (1.21, 1.58)	14

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.

In 2013, 52% of Māori children aged five years had caries, 65% higher than the proportion of non-Māori children. The mean number of decayed, missing or filled teeth (DMFT) was 2.4 for Māori and 1.3 for non-Māori. Among Year 8 students 49% of Māori and 36% of non-Māori children had caries, with mean DMFTs of 1.1 and 0.7 respectively.

Table 29: Hospitalisations for tooth and gum disease, children aged 0–14 years, Hutt Valley 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	59	1,499.0	(1,294.0, 1,736.6)	116	1,088.0	(979.6, 1,208.4)	1.38 (1.15, 1.65)	411.1
Male	61	1,473.2	(1,274.8, 1,702.4)	120	1,077.2	(971.4, 1,194.4)	1.37 (1.14, 1.63)	396.0
Total	121	1,486.1	(1,340.5, 1,647.6)	236	1,082.6	(1,005.7, 1,165.3)	1.37 (1.21, 1.56)	403.5

Source: National Minimum Data Set (NMDS).

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

There were 121 admissions per year on average for tooth and gum disease among Māori children, at a rate that was 37% higher than for non-Māori, or 404 more admissions per 100,000 children per year.

Middle ear disease

Table 30: Hospitalisations for grommet insertions, children aged 0–14 years, Hutt Valley 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	23	561.5	(442.6, 712.4)		41	383.9	(321.7, 458.1)		1.46	(1.09, 1.97)	177.6	
Male	32	765.3	(627.1, 934.0)		63	563.2	(488.1, 649.7)		1.36	(1.06, 1.74)	202.2	
Total	55	663.4	(569.4, 772.9)		104	473.5	(423.7, 529.2)		1.40	(1.16, 1.69)	189.9	

Source: NMDS

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

On average, 55 Māori children per year were admitted for insertion of grommets for otitis media in the Hutt Valley DHB region, at a rate 40% higher than the non-Māori rate, or 190 more procedures per 100,000 children.

Healthy skin

Table 31: Hospitalisations for serious skin infections, children aged 0–14 years, Hutt Valley 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	798.5	(652.9, 976.7)		44	403.4	(340.1, 478.4)		1.98	(1.52, 2.58)	395.2	
Male	33	784.2	(643.2, 956.1)		46	406.3	(343.8, 480.1)		1.93	(1.49, 2.50)	377.9	
Total	64	791.4	(687.1, 911.5)		90	404.8	(359.3, 456.2)		1.95	(1.62, 2.35)	386.5	

Source: NMDS

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

There were approximately 64 admissions per year on average for serious skin infections among Māori children. The rate was 95% higher than for non-Māori children, or 387 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, Hutt Valley DHB, 2011–2013

Age group and Gender	Māori				Non-Māori				Māori/non-Māori ratio (95% CI)			Rate difference
	Ave. no. per year	Rate per 100,000 (95% CI)			Ave. no. per year	Rate per 100,000 (95% CI)						
0–14 years												
Female	1	26.4	(8.5, 81.9)		<1	3.2	(0.5, 22.7)		8.25	(0.86, 79.28)	23.2	
Male	2	42.2	(17.5, 101.3)		1	8.2	(2.7, 25.5)		5.12	(1.22, 21.43)	33.9	
Total	3	34.3	(17.1, 68.6)		1	5.7	(2.1, 15.3)		6.00	(1.80, 19.96)	28.6	
15–24 years												
Female	<1	16.4	(2.3, 116.3)		0	0.0	. .		. . .	. . .	16.4
Male	1	31.1	(7.8, 124.2)		0	0.0	. .		. . .	. . .	31.1
Total	1	23.7	(7.6, 73.6)		0	0.0	. .		. . .	. . .	23.7

Source: NMDS

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

On average, three Māori children under 15 years were admitted to hospital at least once with acute rheumatic fever, at a rate of 34 per 100,000, 6 times the non-Māori rate.

Among young Māori aged 15–24 years, on average one was admitted per year, at a rate of 23 per 100,000, while no non-Māori were admitted.

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, Hutt Valley 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	291	7,185.5	(6,724.0, 7,678.7)	531	4,932.8	(4,696.4, 5,181.2)	1.46 (1.34 , 1.58)	2,252.7
Male	321	7,601.1	(7,135.8, 8,096.7)	657	5,907.3	(5,652.1, 6,174.1)	1.29 (1.19 , 1.39)	1,693.8
Total	613	7,393.3	(7,062.5, 7,739.6)	1,188	5,420.1	(5,244.9, 5,601.1)	1.36 (1.29 , 1.44)	1,973.2

Source: NMDS

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

Just over 600 hospitalisations of Māori children per year were potentially avoidable, at a rate 36% higher than the non-Māori rate, or 1,973 more admissions per 100,000.

Table 34: Ambulatory care sensitive hospitalisations for children aged 1 month to 14 years, Hutt Valley 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	212	5,272.9	(4,877.8, 5,700.1)	402	3,742.9	(3,537.5, 3,960.2)	1.41 (1.28 , 1.55)	1,530.1
Male	212	5,049.6	(4,671.7, 5,458.0)	485	4,358.4	(4,140.0, 4,588.4)	1.16 (1.06 , 1.27)	691.2
Total	424	5,161.3	(4,884.8, 5,453.4)	887	4,050.7	(3,899.6, 4,207.6)	1.27 (1.19 , 1.36)	1,110.6

Source: NMDS

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

On average there were 424 admissions per year for ambulatory care sensitive conditions among Māori children, at a rate 27% higher than among non-Māori children, or 1,111 more admissions per 100,000 children.



Mauri ora: Rangatahi

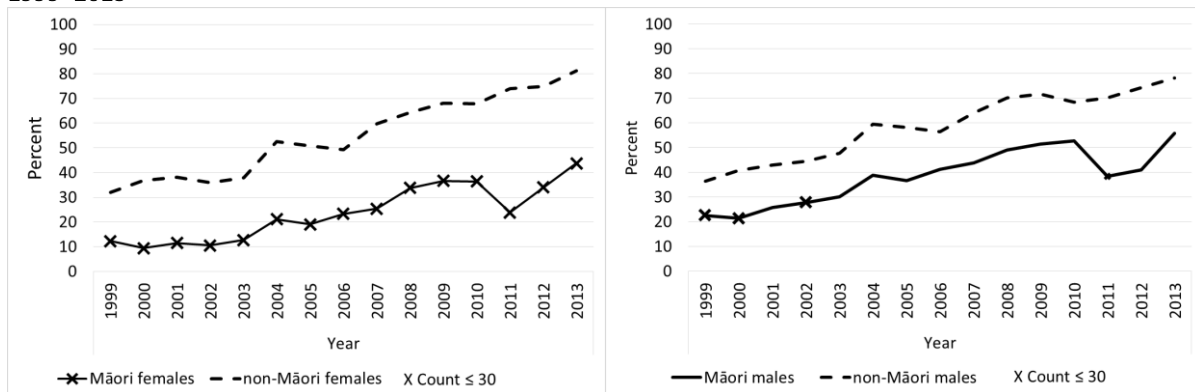
– Young adults

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

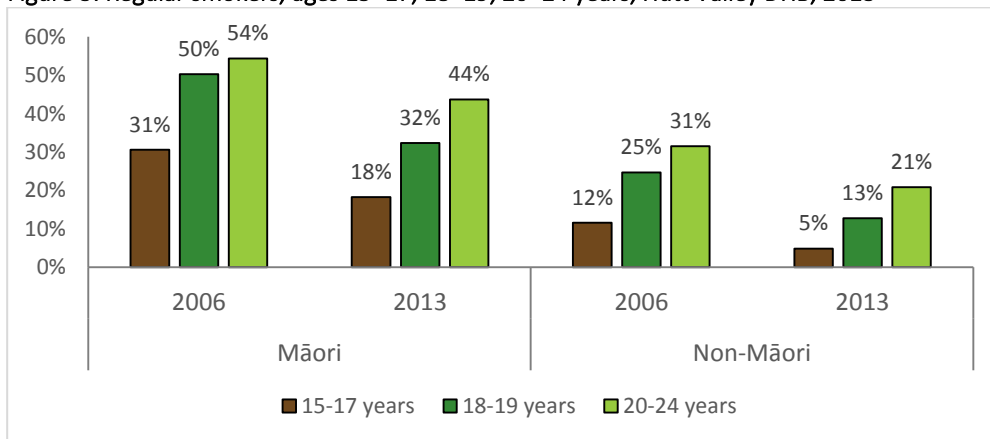
Figure 2: Trends in the proportion of students aged 14–15 years who have never smoked, by gender, Hutt Valley DHB, 1999–2013



Source: ASH Year 10 Snapshot Survey, 2013

Over the last 15 years there has been a significant increase in the number of Māori aged 14 or 15 who have never smoked cigarettes (Figure 2). In 2013, 52% had never smoked.

Figure 3: Regular smokers, ages 15–17, 18–19, 20–24 years, Hutt Valley 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 the Hutt Valley DHB area since 2006. However, smoking uptake remains relatively high among those aged 18–24 years, with a sizeable group starting smoking in this age group. At ages 20–24 years, 44% of Māori were smoking regularly in 2013. Non-Māori in each age group were at least half as likely as Māori to smoke regularly.

Immunisations

Table 35: Human papilloma virus immunisations (HPV) by birth cohorts, Hutt Valley 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	Percent difference
			Fully immunised	% fully immunised	Fully immunised	% fully immunised		
2000	14	2013	175	70.0%	463	63.4%	1.10	6.6%
1999	15	2012	156	65.0%	376	52.2%	1.24	12.8%
1998	16	2011	140	53.8%	404	55.3%	0.97	-1.5%
1997	17	2010	144	55.4%	401	54.2%	1.02	1.2%

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 in the Hutt Valley DHB area are higher for Māori girls aged 14 and 15 years than for their non-Māori counterparts. Over half (55%) of Māori who were aged 17 years in 2014 had received all three doses of the vaccine. Māori aged 14 years in 2014 have a higher rate of coverage at 70%, compared to 63% for non-Māori, and a greater difference is seen in 15 year olds where 65% of these young Māori women were fully immunised compared to 52% of non-Māori.

Mental health

Table 36: Hospitalisations for injury from intentional self-harm, 15–24 and 25–44 years, Hutt Valley DHB, 2011–2013

Age group and gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)		Rate difference
	Ave. no. per year	Age-standardised rate per 100,000	(95% CI)	Ave. no. per year	Age-standardised rate per 100,000	(95% CI)			
15–24 years									
Female	13	625.0	(458.3, 852.3)	28	378.6	(305.2, 469.6)	1.65	(1.13, 2.41)	246.4
Male	5	230.8	(139.2, 382.9)	16	215.8	(162.6, 286.4)	1.07	(0.60, 1.91)	15.0
Total	18	427.9	(328.5, 557.5)	44	297.2	(250.4, 352.8)	1.44	(1.05, 1.97)	130.7
25–44 years									
Female	12	361.8	(260.7, 502.0)	40	237.0	(197.3, 284.7)	1.53	(1.05, 2.22)	124.8
Male	2	81.7	(38.9, 171.6)	18	125.6	(96.1, 164.3)	0.65	(0.30, 1.43)	-43.9
Total	14	221.7	(164.3, 299.3)	58	181.3	(155.8, 211.0)	1.22	(0.87, 1.71)	40.4

Source: NMDS.

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

Among Māori aged 15–24 years, there were 18 admissions per year on average for injury from intentional self-harm, at a rate 44% higher than non-Māori, or 131 more admissions per 100,000. Females were admitted more frequently than males for both Māori and non-Māori.

Among Māori aged 25–44 years there were 14 admissions per year on average, at a rate of 222 per 100,000, similar to the non-Māori rate.

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 the Hutt Valley DHB can be found in the accompanying Excel® tables labelled 'Death registrations' and 'Hospitalisations by principal diagnosis'. For example, the table on hospitalisations shows admission rates for Hutt Māori were higher than for non-Māori for bronchiectasis, gastric ulcers, gallstones, pancreatitis, glomerular diseases, thyroid disease, burns, and head injuries.

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, Hutt Valley and Wairarapa DHBs combined, 2013

Health status	Hutt Valley and Wairarapa DHBs			New Zealand	
	Estimated number	%	(95% CI)	%	(95% CI)
Excellent	4,000*	13.1*	(8.8, 17.4)	18.1	(16.8, 19.3)
Very good	10,000	34.7	(28.8, 40.6)	37.0	(35.5, 38.5)
Good	10,000	35.1	(30.1, 40.2)	28.5	(27.3, 29.7)
Fair / poor	5,000	17.0	(12.7, 21.3)	16.4	(15.3, 17.5)

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

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

Just under half of Hutt Valley and Wairarapa Māori adults (48%) reported having excellent or very good health in 2013 and another third (35%) described their health as good. One in six (17%) reported having fair or poor health status.

Smoking status

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

Smoking status	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Difference in percent	
	Number	%	(95% CI)	Number	%	(95% CI)			
2006									
Regular smoker	5,677	43.6	(42.8, 44.5)	16,725	22.3	(22.0, 22.6)	1.96	(1.91, 2.00)	21.3
Ex-smoker	2,478	19.2	(18.5, 19.8)	19,341	18.4	(18.2, 18.7)	1.04	(1.00, 1.08)	0.7
Never smoked	4,731	37.2	(36.3, 38.0)	48,675	59.3	(58.9, 59.7)	0.63	(0.61, 0.64)	-22.1
2013									
Regular smoker	4,587	34.8	(34.0, 35.7)	11,892	15.5	(15.2, 15.7)	2.25	(2.19, 2.32)	19.4
Ex-smoker	3,179	22.5	(21.8, 23.2)	20,721	19.2	(18.9, 19.4)	1.17	(1.14, 1.21)	3.3
Never smoked	5,559	42.6	(41.8, 43.5)	53,334	65.4	(65.0, 65.7)	0.65	(0.64, 0.67)	-22.7

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 44% to 35%. However, Māori remain more than twice as likely as non-Māori to smoke regularly.

Heart disease and stroke

Table 39: Hospitalisations for circulatory system diseases, 25 years and over, Hutt Valley 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	114	1,670.9	(1,500.7, 1,860.4)	918	904.7	(859.9, 951.9)	1.85 (1.64, 2.08)	766.2
Male	143	2,294.4	(2,084.1, 2,525.9)	1,143	1,554.5	(1,492.7, 1,618.9)	1.48 (1.33, 1.64)	739.9
Total	257	1,982.6	(1,845.4, 2,130.1)	2,061	1,229.6	(1,191.2, 1,269.3)	1.61 (1.49, 1.74)	753.0

Source: NMDS

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

There were just under 260 Māori admissions to hospital per year on average for diseases of the circulatory system (including heart disease and stroke), at 1.6 times the rate of non-Māori, or 753 more admissions per 100,000.

Table 40: Ischaemic heart disease indicators, 25 years and over, Hutt Valley DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)			
Ischaemic heart disease admissions								
Female	22	305.4	(239.7, 389.1)	186	165.2	(149.1, 183.0)	1.85 (1.42, 2.41)	140.2
Male	33	514.5	(422.3, 626.9)	347	449.5	(419.9, 481.3)	1.14 (0.93, 1.41)	65.0
Total	56	410.0	(351.7, 477.9)	533	307.4	(290.3, 325.4)	1.33 (1.13, 1.57)	102.6
Angiography procedures								
Female	15	214.6	(160.2, 287.5)	114	155.1	(137.3, 175.1)	1.38 (1.01, 1.90)	59.6
Male	34	522.6	(429.8, 635.5)	235	349.4	(322.4, 378.7)	1.50 (1.21, 1.85)	173.2
Total	49	368.6	(313.2, 433.7)	350	252.2	(235.9, 269.8)	1.46 (1.23, 1.74)	116.4
Angioplasty procedures								
Female	4	49.0	(27.0, 88.8)	37	42.6	(34.7, 52.2)	1.15 (0.61, 2.16)	6.4
Male	9	141.8	(96.8, 207.7)	108	168.9	(150.1, 190.0)	0.84 (0.56, 1.25)	-27.1
Total	13	95.4	(69.1, 131.7)	145	105.7	(95.4, 117.2)	0.90 (0.64, 1.27)	-10.3
Coronary Artery Bypass Graft (CABG)								
Female	1	14.9	(4.8, 46.2)	5	6.4	(3.5, 11.7)	2.31 (0.64, 8.34)	8.4
Male	5	82.2	(50.2, 134.4)	34	45.2	(36.6, 55.7)	1.82 (1.07, 3.11)	37.0
Total	6	48.5	(30.9, 76.2)	39	25.8	(21.2, 31.5)	1.88 (1.15, 3.08)	22.7
Acute coronary syndrome admissions								
Female	16	213.5	(159.8, 285.1)	121	103.8	(91.3, 118.0)	2.06 (1.50, 2.82)	109.7
Male	18	287.2	(220.0, 375.1)	217	280.1	(256.6, 305.8)	1.03 (0.77, 1.36)	7.1
Total	34	250.4	(205.7, 304.7)	337	192.0	(178.5, 206.5)	1.30 (1.06, 1.61)	58.4

Source: NMDS.

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

On average, 56 Māori per year were admitted to hospital for ischemic heart disease (IHD), at a rate 33% higher than non-Māori. Māori women had nearly twice the rate of non-Māori women, or 140 more admissions per 100,000. Of those admitted for IHD, 34 Māori admissions per year were for acute coronary syndrome (ACS). Māori women had twice the risk of admission for ACS of non-Māori women (110 more admissions per 100,000). For IHD admissions, rates were higher for men than for women. Admission rates for IHD and ACS were similar for Māori and non-Māori men.

There were 49 angiography procedures conducted for Māori patients per year on average, at a rate 46% higher than the non-Māori rate. On average, 13 Māori per year had angioplasty procedures. The rates for Māori and non-Māori

were similar for angioplasty. Six Māori per year had a CABG, with the rate for males was higher than those of females. Māori men had a rate that was nearly twice that of non-Māori.

Table 41: Hospitalisations for heart failure, stroke, and hypertensive disease, 25 years and over, Hutt Valley DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference	
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)				
Heart failure									
Female	18	255.2	(195.1, 333.8)	123	66.3	(57.4, 76.6)	3.85	(2.84, 5.22)	188.9
Male	29	450.8	(363.5, 559.2)	133	119.0	(106.2, 133.3)	3.79	(2.97, 4.83)	331.9
Total	47	353.0	(298.3, 417.7)	256	92.6	(84.7, 101.3)	3.81	(3.15, 4.61)	260.4
Stroke									
Female	12	184.2	(132.7, 255.6)	148	113.8	(100.5, 128.9)	1.62	(1.14, 2.30)	70.4
Male	18	287.8	(219.8, 377.0)	139	150.2	(134.1, 168.2)	1.92	(1.43, 2.57)	137.7
Total	30	236.0	(191.6, 290.7)	287	132.0	(121.4, 143.6)	1.79	(1.43, 2.24)	104.0
Hypertensive disease									
Female	3	47.3	(25.2, 88.7)	13	12.5	(8.0, 19.3)	3.79	(1.76, 8.16)	34.8
Male	1	15.6	(5.0, 48.7)	12	17.7	(11.6, 27.2)	0.88	(0.26, 2.96)	-2.2
Total	4	31.4	(18.1, 54.5)	25	15.1	(11.1, 20.6)	2.08	(1.11, 3.91)	16.3

Source: NMDS.

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

There were 47 admissions per year on average among Hutt Māori with heart failure, nearly 4 times the rate for non-Māori, or 260 more admissions per 100,000. Men were more likely to be admitted than women.

On average, 30 Māori per year were admitted for stroke, at a rate 79% higher than non-Māori, or just over 100 more admissions per 100,000.

There were four Māori admissions per year on average for hypertensive disease, at a rate twice that of non-Māori.

Table 42: Hospitalisations for chronic rheumatic heart disease and heart valve replacements, 25 years and over, Hutt Valley DHB, 2011–2013

Gender	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference	
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)				
Chronic rheumatic heart disease									
Female	7	101.3	(65.4, 156.8)	11	20.6	(13.7, 30.8)	4.92	(2.71, 8.93)	80.7
Male	2	36.0	(17.0, 76.3)	4	3.9	(2.0, 7.7)	9.29	(3.37, 25.63)	32.1
Total	9	68.6	(47.0, 100.2)	15	12.2	(8.6, 17.5)	5.62	(3.34, 9.44)	56.4
Heart valve replacements									
Female	3	39.7	(19.5, 80.9)	11	14.8	(9.8, 22.6)	2.68	(1.17, 6.11)	24.9
Male	2	37.4	(17.7, 79.1)	15	19.3	(13.8, 26.8)	1.94	(0.86, 4.41)	18.1
Total	5	38.6	(23.0, 64.6)	26	17.1	(13.1, 22.1)	2.26	(1.27, 4.03)	21.5

Source: NMDS.

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

On average, there were nine hospital admissions per year for Māori with chronic rheumatic heart disease, at a rate of 69 per 100,000, more than 5 times the rate of non-Māori, or 56 more admissions per 100,000.

Five Māori per year were admitted for heart valve replacements, at more than double the rate of non-Māori.

Table 43: Early deaths from circulatory system disease, Hutt Valley 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	54.8	(39.0, 76.8)	21	15.3	(12.3, 19.0)	3.58	(2.39, 5.34)		39.4
Male	12	100.8	(78.5, 129.5)	50	37.9	(33.1, 43.5)	2.66	(2.00, 3.53)		62.9
Total	19	77.8	(63.6, 95.1)	72	26.6	(23.7, 29.9)	2.92	(2.32, 3.68)		51.2

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 19 Māori per year died early from diseases of the circulatory system (including heart disease and stroke), at close to 3 times the rate of non-Māori, or 51 more deaths per 100,000.

Diabetes

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

Indicator	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	Count	% (crude)	Count	% (crude)		
Prevalence of diabetes (all ages)	1,033	4.0	6,199	5.2	0.78	-1.2
People with diabetes regularly receiving metformin or insulin, 25+	593	57.4	3,732	60.2	0.95	-2.8
People with diabetes having regular Hb1Ac monitoring, 25+	883	85.5	5,404	84.7	1.01	0.8
People with diabetes having regular screening for renal disease, 25+	699	67.7	4,218	68.0	0.99	-0.4

Source: NZ Atlas of Healthcare Variation

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

Over 1,033 Māori residents in the Hutt Valley DHB area were estimated to have diabetes, giving a crude prevalence of 4%. Although this is lower than the prevalence among non-Māori, the prevalence has not been adjusted for age and may be higher for Māori in each age group. Over half of Māori with diabetes were regularly receiving metformin or insulin in 2013. Over 85% were having regular monitoring of blood glucose levels and 68% were being screened for renal disease.

Table 45: Hospitalisations for lower limb amputations for people with concurrent diabetes, 15 years and over, Hutt Valley 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	29.1	(15.1, 56.1)	8	4.4	(2.9, 6.9)	6.58	(2.99, 14.50)		24.7
Male	3	30.5	(15.0, 62.2)	15	14.3	(10.5, 19.7)	2.13	(0.98, 4.63)		16.1
Total	6	29.8	(18.3, 48.4)	23	9.4	(7.2, 12.2)	3.18	(1.83, 5.51)		20.4

Source: NMDS

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

On average six Māori individuals per year with diabetes had lower limbs amputated, at a rate 3.2 times that of non-Māori.

Cancer

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

Gender and site	Māori				Non-Māori				Māori/nonMāori ratio (95% CI)	Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)			Ave. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female										
All cancers	37	258.4	(223.3, 299.0)	278	176.4	(165.3, 188.3)	1.46	(1.25, 1.72)	82.0	
Breast	14	94.8	(74.7, 120.3)	81	60.5	(54.1, 67.6)	1.57	(1.21, 2.04)	34.3	
Lung	7	50.5	(36.2, 70.6)	25	12.2	(10.0, 14.9)	4.14	(2.81, 6.10)	38.3	
Uterus	2	14.5	(7.7, 27.1)	12	7.3	(5.5, 9.7)	1.98	(0.99, 3.93)	7.2	
Colorectal	2	10.5	(5.2, 21.3)	41	21.1	(17.8, 24.9)	0.50	(0.24, 1.03)	-10.5	
Male										
All cancers	27	214.9	(181.5, 254.4)	327	208.5	(196.7, 221.1)	1.03	(0.86, 1.23)	6.3	
Prostate	7	53.2	(38.1, 74.1)	110	65.7	(60.2, 71.7)	0.81	(0.57, 1.14)	-12.5	
Colorectal	2	18.3	(10.3, 32.3)	43	24.6	(21.1, 28.5)	0.74	(0.41, 1.34)	-6.3	
Testis	2	16.3	(8.5, 31.4)	5	9.1	(6.1, 13.6)	1.79	(0.83, 3.87)	7.2	
Liver	2	11.8	(5.9, 23.8)	4	2.2	(1.4, 3.5)	5.42	(2.35, 12.52)	9.6	
Lung	1	11.1	(5.2, 23.4)	26	13.1	(10.8, 15.9)	0.84	(0.39, 1.83)	-2.0	
Stomach	1	10.4	(4.6, 23.2)	7	3.9	(2.7, 5.7)	2.65	(1.09, 6.45)	6.5	

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 37 cancer registrations per year on average among Māori females, with a rate 46% higher than non-Māori. The most common cancers registered for Māori females were breast (38% of all cancers), lung (19%) and colorectal cancer (5%). Registration rates were higher for Māori than non-Māori women for breast (57% higher) and lung (over 4 times as high).

Among Māori males there were 27 new cancers registered per year on average, at a similar rate to non-Māori. Prostate (25% of all cancers), colorectal, testis and liver (4% each) were the most common cancers registered for Māori males. Rates were 5.5 times as high for Māori as for non-Māori males for liver cancer, and 2.7 times as high for stomach cancer.

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

Gender and site	Māori				Non-Māori				Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)			Ave. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female										
All cancers	15	112.4	(89.5, 141.1)	127	58.0	(52.4, 64.2)	1.94	(1.51, 2.49)	54.4	
Lung	6	47.1	(33.0, 67.2)	22	10.2	(8.2, 12.7)	4.61	(3.04, 6.99)	36.8	
Breast	2	14.6	(7.8, 27.5)	19	10.4	(8.1, 13.4)	1.40	(0.71, 2.76)	4.2	
Male										
All cancers	13	104.6	(81.8, 133.9)	138	69.5	(63.6, 76.1)	1.50	(1.16, 1.96)	35.1	
Lung	2	13.7	(7.1, 26.5)	21	10.4	(8.4, 12.8)	1.32	(0.66, 2.64)	3.4	
Liver	1	11.4	(5.4, 23.9)	3	1.7	(1.0, 2.9)	6.75	(2.70, 16.87)	9.7	
Colorectal	1	10.5	(4.7, 23.4)	21	10.6	(8.5, 13.2)	0.99	(0.43, 2.28)	-0.1	
Prostate	1	10.3	(4.6, 23.1)	18	6.8	(5.4, 8.6)	1.52	(0.66, 3.50)	3.5	

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 accounted for 38% of all deaths during 2007–2011, with a rate nearly twice the rate for non-Māori. Lung cancer was the most common cause of cancer death (40% of all cancer deaths), followed by breast (13%). The lung cancer mortality rate was 4.6 times that of non-Māori females.

For Māori males, cancer deaths accounted for 28% of all deaths, with a rate 50% higher than that of non-Māori males. Lung cancer was the most common cause of cancer death for Māori males, followed by liver, colorectal and prostate cancers. Liver cancer mortality was 6.8 times as high for Māori as for non-Māori males.

Breast and cervical cancer screening

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

Māori			Non-Māori		
Number screened	Eligible population	% screened	Number screened	Eligible population	% screened
1,646	2,570	64.0%	14,663	19,770	74.2%

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, 64% of Māori women and 74% of non-Māori women in the Hutt Valley DHB area had been screened.

Table 49: Cervical screening coverage, women aged 25–69 years, Hutt Valley 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 %
5,352	4,607	86.1%	3,721	69.5%	32,202	30,093	93.4%	25,474	79.1%

Source: National Screening Unit, Ministry of Health

Note: Population is adjusted for hysterectomy.

Among women aged 25 to 69 years, 86% of Hutt Māori women and 93% of non-Māori women had had a cervical smear test during the five years prior to December 2014. The three year cervical screening coverage was 70% for Māori women and 79% 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, Hutt Valley DHB, 2011–2013

Gender and age group	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference	
	Ave. no. per year	Age-standardised rate per 100,000 (95% CI)		Ave. no. per year	Age-standardised rate per 100,000 (95% CI)				
0–14 years									
Female	25	621.8	(495.7, 780.0)	37	342.2	(284.1, 412.2)	1.82	(1.36, 2.44)	279.6
Male	38	905.2	(753.9, 1086.9)	78	694.6	(610.9, 789.8)	1.30	(1.04, 1.63)	210.6
Total	63	763.5	(662.2, 880.3)	115	518.4	(466.4, 576.2)	1.47	(1.23, 1.76)	245.1
15–34 years									
Female	13	331.5	(241.1, 455.8)	20	138.1	(107.1, 178.1)	2.40	(1.60, 3.61)	193.4
Male	5	144.3	(86.7, 240.1)	10	72.0	(50.6, 102.4)	2.00	(1.08, 3.72)	72.2
Total	18	237.9	(181.5, 311.7)	30	105.1	(85.5, 129.1)	2.26	(1.61, 3.18)	132.8
35–64 years									
Female	16	415.1	(310.5, 555.0)	42	173.5	(144.1, 208.9)	2.39	(1.70, 3.38)	241.6
Male	7	190.2	(124.4, 291.0)	24	105.5	(82.7, 134.6)	1.80	(1.10, 2.94)	84.7
Total	23	302.7	(238.1, 384.7)	66	139.5	(120.3, 161.7)	2.17	(1.64, 2.88)	163.2
65 years and over									
Female	2	355.5	(147.9, 854.1)	11	121.6	(83.2, 177.8)	2.92	(1.12, 7.60)	233.9
Male	<1	72.6	(10.2, 515.5)	8	100.0	(64.8, 154.6)	0.73	(0.10, 5.40)	-27.4
Total	2	214.0	(96.2, 476.5)	19	110.8	(83.3, 147.6)	1.93	(0.83, 4.52)	103.2

Source: NMDS.

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

There were 63 admissions for asthma per year among Māori children aged 0–14 years, at a rate 47% higher than that of non-Māori children, or around 245 more admissions per 100,000. Among Māori adults aged 15–34 and 35–64 years, there were around 20 admissions per year on average in each age group, at more than twice the rate of non-Māori. On average there were two admissions per year among older Māori women (aged 65 years and over), at a rate of nearly three times that of non-Māori women.

Table 51: Hospitalisations for chronic obstructive pulmonary disease (COPD), 45 years and over, Hutt Valley 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	40	1,532.8	(1,279.0, 1,837.1)	164	368.3	(332.2, 408.4)	4.16	(3.38, 5.13)	1,164.5
Male	30	1,225.6	(9,96.1, 1,508.0)	157	424.9	(385.2, 468.7)	2.88	(2.29, 3.63)	800.7
Total	70	1,379.2	(1,203.3, 1,580.8)	321	396.6	(369.4, 425.9)	3.48	(2.98, 4.06)	982.6

Source: NMDS.

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

There were 70 hospitalisations per year on average for Māori with COPD, at a rate close to 3.5 times that of non-Māori or 983 more admissions per 100,000.

Table 52: Early deaths from respiratory disease, Hutt Valley 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	3	21.4	(12.6, 36.4)	11	6.7	(5.2, 8.8)	3.19	(1.76, 5.77)	14.7
Male	3	21.5	(12.4, 37.0)	8	5.3	(3.8, 7.4)	4.03	(2.12, 7.65)	16.1
Total	5	21.4	(14.7, 31.4)	19	6.0	(4.9, 7.4)	3.56	(2.31, 5.50)	15.4

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, five Māori per year died early from respiratory disease, at a rate more than 3 times that of non-Māori, or 15 more deaths per 100,000.

Mental disorders

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

Disorder	Māori			Non-Māori			Māori/non-Māori ratio (95% CI)	Rate difference
	Ave. no. per year	Age-standardised rate (95% CI)		Ave. no. per year	Age-standardised rate (95% CI)			
Female								
All disorders	79	641.1	(563.6, 729.2)	329	422.0	(391.9, 454.5)	1.52 (1.31, 1.76)	219.1
Schizophrenia	29	234.0	(189.1, 289.6)	72	108.3	(93.6, 125.2)	2.16 (1.67, 2.80)	125.7
Mood (affective)	20	162.3	(125.9, 209.2)	88	120.6	(105.0, 138.4)	1.35 (1.01, 1.80)	41.7
—Bipolar	8	58.9	(38.9, 89.0)	36	42.9	(34.6, 53.2)	1.37 (0.86, 2.18)	15.9
—Depressive episode	11	89.9	(63.4, 127.4)	39	62.8	(51.2, 76.9)	1.43 (0.96, 2.14)	27.1
Substance use	12	101.7	(73.2, 141.3)	43	54.8	(44.9, 66.9)	1.86 (1.26, 2.73)	46.9
—Alcohol	9	72.5	(49.2, 106.8)	36	45.1	(36.1, 56.2)	1.61 (1.03, 2.51)	27.4
Anxiety, stress-related	11	89.8	(64.0, 126.1)	51	72.9	(60.9, 87.2)	1.23 (0.84, 1.81)	16.9
Male								
All disorders	88	755.9	(669.0, 854.2)	242	344.0	(316.2, 374.4)	2.20 (1.89, 2.55)	411.9
Schizophrenia	42	372.4	(312.1, 444.5)	75	126.4	(109.8, 145.6)	2.95 (2.35, 3.69)	246.0
Mood (affective)	15	122.3	(91.1, 164.1)	57	77.6	(65.4, 92.1)	1.58 (1.12, 2.21)	44.7
—Bipolar	10	78.3	(54.7, 112.1)	14	19.7	(14.2, 27.4)	3.97 (2.44, 6.47)	58.6
—Depressive episode	3	27.5	(14.2, 53.0)	35	45.7	(36.5, 57.1)	0.60 (0.30, 1.20)	-18.2
Substance use	16	138.1	(104.1, 183.1)	47	69.0	(57.3, 83.0)	2.00 (1.43, 2.81)	69.1
—Alcohol	13	106.4	(77.2, 146.7)	40	54.8	(44.7, 67.1)	1.94 (1.33, 2.84)	51.7
Anxiety, stress-related	8	69.1	(46.1, 103.5)	20	32.7	(24.8, 43.2)	2.11 (1.29, 3.45)	36.4
Total								
All disorders	166	698.5	(639.3, 763.3)	570	383.0	(362.3, 405.0)	1.82 (1.64, 2.02)	315.5
Schizophrenia	70	303.2	(264.6, 347.5)	147	117.3	(106.0, 129.8)	2.58 (2.18, 3.06)	185.9
Mood (affective)	36	142.3	(117.4, 172.4)	145	99.1	(89.0, 110.3)	1.44 (1.15, 1.79)	43.2
—Bipolar	18	68.6	(52.3, 89.9)	50	31.3	(26.2, 37.5)	2.19 (1.58, 3.03)	37.2
—Depressive episode	14	58.7	(43.1, 79.9)	74	54.2	(46.6, 63.0)	1.08 (0.77, 1.53)	4.5
Substance use	28	119.9	(96.8, 148.5)	90	61.9	(54.0, 70.9)	1.94 (1.50, 2.50)	58.0
—Alcohol	21	89.5	(69.9, 114.5)	76	49.9	(43.0, 58.0)	1.79 (1.34, 2.39)	39.5
Anxiety, stress-related	19	79.5	(61.3, 103.1)	71	52.8	(45.4, 61.4)	1.50 (1.11, 2.03)	26.6

Source: NMDS

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

The age-sex-standardised rate of admission for mental disorders for Māori was 82% higher than that of non-Māori.

For Māori the most common cause of admission was schizophrenia related disorders, followed by mood disorders. The Māori admission rate for schizophrenia was more than twice the non-Māori rate for both females and for males. Māori males had double the rate of admissions for mood disorder and of anxiety of non-Māori, while Māori and non-Māori females had similar rates for both causes of admission. Māori had almost twice the rate of admission as non-Māori for substance use.

Gout

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

Indicator	Māori		Non-Māori		Māori/non-Māori ratio	Difference in percentage
	Count	%	Count	%		
Gout prevalence	817	5.6	2,811	3.3	1.72	2.3
People with gout who received allopurinol regularly	325	39.8	1,249	44.4	0.90	-4.7
Colchicine use by people with gout not dispensed allopurinol	46	5.6	211	7.5	0.75	-1.9
NSAID use by people with gout	348	42.6	1,167	41.5	1.03	1.1
Serum urate test within six months following allopurinol dispensing	160	32.3	535	32.3	1.00	0.0

Source: NZ Atlas of Healthcare Variation, Ministry of Health.

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

In 2011, 817 Māori in the Hutt District were estimated to have gout in the 20 to 79 year age group. This is a prevalence of 6%, higher than the prevalence of non-Māori (3%). Forty percent of Māori with gout regularly received allopurinol, a preventive therapy to lower urate levels. Of those Māori who received allopurinol, (for gout or other reasons) 32% had a lab test for serum urate levels within the following six months. Forty-three percent of Māori with gout used non-steroidal anti-inflammatory medication.

Table 55: Hospitalisations for gout, 25 years and over, Hutt Valley 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	21.8	(8.1, 58.7)	8	6.7	(4.2, 10.6)	3.26	(1.10, 9.69)	15.1
Male	10	165.1	(114.6, 237.7)	28	58.6	(45.6, 75.2)	2.82	(1.81, 4.39)	106.5
Total	11	93.5	(66.4, 131.6)	36	32.6	(26.0, 41.0)	2.86	(1.90, 4.32)	60.8

Source: NMDS

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

Hospital admissions for gout were more frequent among males than females. There were 11 hospital admissions for gout per year on average among Māori, at a rate 2.9 times that of non-Māori, or 61 more admissions per 100,000.

Hip fractures

Table 56: Hospitalisations for hip fractures, 65 years and over, Hutt Valley 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	215.2	(69.4, 667.1)	77	436.6	(374.0, 509.6)	0.49	(0.16, 1.54)	-221.4
Male	1	364.0	(131.0, 1011.5)	22	185.5	(142.3, 241.8)	1.96	(0.68, 5.64)	178.5
Total	2	289.6	(134.4, 624.0)	99	311.0	(271.9, 355.7)	0.93	(0.43, 2.03)	-21.4

Source: NMDS

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

On average, two Māori aged 65 and over were admitted to hospital each year for hip fractures, at a rate of 290 per 100,000. Māori were admitted at a similar rate to non-Māori.

Elective surgery

Table 57: Hospitalisations for hip replacements, 50 years and over, Hutt Valley 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	313.5	(196.8, 499.3)	72	259.7	(224.3, 300.6)	1.21	(0.74, 1.97)	53.8
Male	9	477.1	(324.4, 701.7)	47	215.8	(181.4, 256.6)	2.21	(1.45, 3.38)	261.4
Total	15	395.3	(293.7, 532.0)	119	237.7	(212.5, 266.0)	1.66	(1.21, 2.28)	157.6

Source: NMDS

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

On average, 15 Māori per year were admitted to hospital for a hip replacement, with the rate for Māori two-thirds higher than the rate for non-Māori.

Table 58: Publicly funded hospitalisations for cataract surgery, 45 years and over, Hutt Valley 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	24	931.3	(737.0, 1,176.9)	242	539.2	(495.2, 587.1)	1.73	(1.35, 2.22)	392.1
Male	16	644.0	(483.2, 858.3)	163	440.1	(399.3, 485.2)	1.46	(1.08, 1.98)	203.9
Total	39	787.7	(657.0, 944.4)	405	489.7	(459.3, 522.1)	1.61	(1.33, 1.95)	298.0

Source: NMDS

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

Each year on average 39 Māori aged 45 years and over were admitted to hospital for cataract surgery. The rate for Māori was 61% higher than the rate for non-Māori, or 298 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 greater Wellington region, as this data was not available by DHB.

Hospitalisations

Table 59: All-cause hospitalisations, all ages, Hutt Valley 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	3,482	28,104.8 (27,564.7, 28,655.5)	15,775	22,240.3 (21,989.8, 22,493.6)	1.26 (1.24, 1.29)	5,864.5
Male	2,417	19,923.4 (19,465.1, 20,392.6)	12,135	17,166.1 (16,939.9, 17,395.3)	1.16 (1.13, 1.19)	2,757.4
Total	5,899	24,014.1 (23,658.9, 24,374.7)	27,909	19,703.2 (19,534.1, 1,9873.7)	1.22 (1.20, 1.24)	4,311.0

Source: NMDS

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

On average, there were 5,899 Māori hospital admissions per year and 27,909 non-Māori admissions. All-cause admission rates were 22% higher for Māori than for non-Māori, or 4,311 more admissions per 100,000.

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

Potentially avoidable hospitalisations

Table 60: Potentially avoidable hospitalisations, 0–74 years, Hutt Valley 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	812	6,509.8 (6,252.2, 6,778.0)	2,500	4,174.4 (4,061.6, 4,290.3)	1.56 (1.49, 1.64)	2,335.4
Male	689	5,697.9 (5,454.7, 5,951.9)	2,697	4,560.5 (4,442.0, 4,682.1)	1.25 (1.19, 1.31)	1,137.4
Total	1,500	6,103.8 (5,925.6, 6,287.4)	5,196	4,367.5 (4,285.4, 4,451.1)	1.40 (1.35, 1.45)	1,736.4

Source: NMDS

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

There were 1,500 Māori hospital admissions per year on average that were potentially avoidable through population based prevention strategies. The rate of admission was 40% higher for Māori than for non-Māori, or 1,736 more admissions per 100,000. The rate for Māori females was higher than the rate for Māori males.

Table 61: Ambulatory care sensitive hospitalisations, 0–74 years, Hutt Valley 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	461	3,756.1 (3,560.2, 3,962.8)	1,250	2,270.7 (2,184.9, 2,360.0)	1.65 (1.55, 1.77)	1,485.4
Male	416	3,446.8 (3,258.6, 3,645.8)	1,426	2,520.4 (2,430.7, 2,613.3)	1.37 (1.28, 1.46)	926.4
Total	877	3,593.7 (3,457.1, 3,735.7)	2,676	2,390.4 (2,328.1, 2,454.3)	1.50 (1.43, 1.58)	1,203.3

Source: NMDS

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

On average, there were 877 ambulatory care sensitive hospitalisations per year among Hutt Māori, at a rate 50% higher than the non-Māori rate, or 1,203 more admissions per 100,000.

Mortality

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

Gender	Māori		Non-Māori		Difference in years
	Years (95% credible interval)		Years (95% credible interval)		
Female	78.6	(77.7, 79.6)	83.9	(83.7, 84.1)	-5.3
Male	74.7	(73.8, 75.6)	80.3	(80.0, 80.5)	-5.6

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

Notes: This data is for the Wellington Region (including Kāpiti, Wellington, Hutt, Wairarapa). A map of Regional Council boundaries can be found [here](#). The credible interval is the 2.5th percentile and the 97.5th percentile, the expected years of life at birth is the 50th percentile. Further information on the regional life tables and methods can be found [here](#).

Life expectancy at birth is a summary measure of age-specific mortality rates during a specific period, and takes no account of changes in death rates after that period. During 2012–2014, among residents of the Wellington Region, life expectancy at birth was 78.6 years for Māori females, 5.3 years lower than that of non-Māori females (83.9 years). For Māori males, life expectancy was 74.7 years, 5.6 years lower than for non-Māori males (80.3 years).

Table 63: All-cause deaths, all ages, Hutt Valley 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	37	296.5	(267.4, 328.7)	444	157.3	(150.0, 165.1)	1.88 (1.68, 2.11)	139.2
Male	46	429.8	(389.3, 474.5)	411	224.3	(215.3, 233.7)	1.92 (1.72, 2.13)	205.5
Total	83	363.2	(337.9, 390.3)	855	190.8	(185.0, 196.9)	1.90 (1.76, 2.06)	172.3

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 83 Māori deaths per year on average. The Māori mortality rate was 90% higher than the non-Māori rate, or 172 more deaths per 100,000.

Table 64: Leading causes of death for Māori, all ages, Hutt Valley 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)			
Female								
Lung cancer	6	47.1	(33.0, 67.2)	22	10.2	(8.2, 12.7)	4.61 (3.04, 6.99)	36.8
IHD	5	38.5	(25.9, 57.2)	70	14.5	(12.5, 16.7)	2.66 (1.75, 4.06)	24.0
COPD	3	22.0	(13.0, 37.3)	28	8.4	(6.9, 10.3)	2.62 (1.49, 4.61)	13.6
Breast cancer	2	14.6	(7.8, 27.5)	19	10.4	(8.1, 13.4)	1.40 (0.71, 2.76)	4.2
Diabetes	2	12.8	(6.3, 25.7)	14	3.7	(2.7, 5.1)	3.48 (1.61, 7.52)	9.1
Male								
IHD	8	69.2	(51.1, 93.8)	79	35.9	(31.9, 40.4)	1.93 (1.39, 2.68)	33.4
Accidents	5	40.3	(27.2, 59.8)	12	11.2	(7.9, 15.8)	3.61 (2.14, 6.11)	29.1
Diabetes	3	24.2	(14.5, 40.3)	10	5.9	(4.3, 8.0)	4.12 (2.27, 7.49)	18.3
COPD	3	31.3	(17.9, 54.9)	27	9.0	(7.5, 10.8)	3.48 (1.93, 6.29)	22.3
Lung cancer	2	13.7	(7.1, 26.5)	21	10.4	(8.4, 12.8)	1.32 (0.66, 2.64)	3.4
Total								
IHD	13	53.9	(42.3, 68.6)	149	25.2	(22.9, 27.6)	2.14 (1.65, 2.77)	28.7
Lung cancer	8	30.4	(22.2, 41.6)	43	10.3	(8.8, 12.0)	2.95 (2.09, 4.18)	20.1
Accidents	6	25.8	(18.2, 36.6)	24	8.8	(6.7, 11.5)	2.94 (1.89, 4.56)	17.0
COPD	6	26.6	(18.0, 39.6)	55	8.7	(7.6, 10.0)	3.06 (2.02, 4.65)	18.0
Diabetes	5	18.5	(12.2, 27.9)	24	4.8	(3.8, 6.0)	3.88 (2.42, 6.21)	13.7

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 lung cancer, ischemic heart disease, chronic obstructive pulmonary disease, breast cancer, and diabetes. Māori women's mortality rates for lung cancer and diabetes were 4.6 and 3.5 times the rates for non-Māori respectively. For IHD and COPD, Māori women's mortality rates were 2.7 and 2.6 times the non-Māori rates.

For Māori men, the leading causes of death were IHD, accidents, diabetes, COPD, and lung cancer. Māori men's mortality rates were nearly double non-Māori rates for IHD and more than treble those of non-Māori for accidents, diabetes and COPD. Mortality rates for lung cancer were similar for Māori and non-Māori men.

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

Potentially avoidable mortality

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

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

Table 65: Potentially avoidable mortality, 0–74 years, Hutt Valley 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	21	167.4	(138.2, 202.9)	86	71.5	(63.8, 80.1)	2.34	(1.87, 2.93)	96.0
Male	25	205.8	(172.7, 245.3)	126	111.6	(101.6, 122.6)	1.84	(1.51, 2.25)	94.2
Total	46	186.6	(163.9, 212.5)	211	91.6	(85.2, 98.4)	2.04	(1.76, 2.36)	95.1

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 46 potentially avoidable deaths per year among Hutt Māori, at twice the non-Māori rate, or 95 more deaths per 100,000.

Table 66: Amenable mortality, 0–74 years, Hutt Valley 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	13	104.4	(81.7, 133.4)	54	42.8	(37.2, 49.2)	2.44	(1.84, 3.24)	61.6
Male	19	157.7	(129.0, 192.8)	91	80.7	(72.3, 90.1)	1.95	(1.55, 2.46)	77.0
Total	32	131.1	(112.2, 153.1)	145	61.7	(56.6, 67.3)	2.12	(1.78, 2.54)	69.3

Source: Mortality, Ministry of Health

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

Amenable mortality rates were more than twice as high for Māori as for non-Māori in Hutt Valley DHB, or 69 more deaths per 100,000. On average, 32 Māori per year died from causes amenable to health care.

Injuries

A table on the causes of hospital admissions for injuries can be found in the accompanying Excel tables. The leading causes of injury among Hutt Māori were exposure to mechanical forces, falls, complications of medical and surgical care, assault, and transport accidents.

Table 67: Hospitalisations for injuries, all ages, Hutt Valley 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	233	1,917.6	(1,779.1, 2,066.8)	1,097	1,339.6	(1,279.4, 1,402.6)	1.43	(1.31, 1.56)	578.0
Male	361	3,110.7	(2,929.1, 3,303.6)	1,369	2,334.2	(2,252.2, 2,419.1)	1.33	(1.24, 1.43)	776.5
Total	595	2,514.2	(2,398.9, 2,634.9)	2,466	1,836.9	(1,785.8, 1,889.5)	1.37	(1.30, 1.45)	677.3

Source: NMDS

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

On average there were 595 hospitalisations for injury among Hutt Māori, at a rate 37% higher than non-Māori or approximately 680 more admissions per 100,000.

Table 68: Hospitalisations for assault, all ages, Hutt Valley 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	14	112.4	(82.6, 153.0)	14	24.2	(17.3, 33.8)	4.65	(2.95, 7.33)	88.2
Male	40	355.6	(297.1, 425.6)	78	151.7	(132.7, 173.4)	2.34	(1.87, 2.93)	203.9
Total	54	234.0	(200.3, 273.3)	92	87.9	(77.7, 99.6)	2.66	(2.18, 3.25)	146.0

Source: NMDS

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

On average, there were 54 admissions per year for injuries from assault among Māori in the Hutt Valley DHB area. The rate was 2.7 times the rate for non-Māori or 146 more Māori hospitalisations per 100,000.

Table 69: Deaths from injury, all ages, Hutt Valley 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	2	19.4	(11.0, 34.4)	16	11.9	(8.6, 16.5)	1.63	(0.84, 3.14)	7.5
Male	7	56.2	(40.1, 78.8)	25	27.7	(22.3, 34.6)	2.03	(1.35, 3.03)	28.5
Total	9	37.8	(28.3, 50.6)	41	19.8	(16.5, 23.8)	1.91	(1.35, 2.69)	18.0

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 nine Māori per year died from injuries, at a rate nearly double the non-Māori rate, or 18 more deaths per 100,000. Males had over twice the rate of death from injury as females.



References

Anderson P, Craig E, Jackson G, Jackson C. 2012. Developing a tool to monitor potentially avoidable and ambulatory care sensitive hospitalisations in New Zealand children. *New Zealand Medical Journal* 125(1366): 25–37.

Clayton D, Hills M. 1993. *Statistical Methods in Epidemiology*. Oxford: Oxford University Press.

Crengle S, Clark T C., Robinson E, Bullen P, Dyson B, Denny S, Fleming T, Fortune S, Peiris-John R, Utter J, Rossen F, Sheridan J, Teevale T, & The Adolescent Health Research Group (2013). *The health and wellbeing of Māori New Zealand secondary school students in 2012. Te Ara Whakapiki Taitamariki: Youth'12*. Auckland: The University of Auckland.

Ministry of Health. 2010. *Saving Lives: Amenable mortality in New Zealand, 1996–2006*. Wellington: Ministry of Health.

Ministry of Health. 2013. *New Zealand Health Survey: Annual update of key findings 2012/13*. Wellington: Ministry of Health.

Ministry of Health. 2014. *The Health of Māori Adults and Children, 2011–2013*. Wellington: Ministry of Health.

Robson B, Harris R. 2007. *Hauora: Māori Standards of Health IV. A study of the years 2000–2005*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare.

Robson B, Purdie G, Cram F, Simmonds S. 2007. Age standardisation: an indigenous standard? *Emerging Themes in Epidemiology* 4:3.

Appendix 1: Population projections

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

Projected Māori Ethnic Group Population by Age and Sex at 30 June 2014–33 (2013-Base)

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

Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	2013(Base)			2014			2015			2016		
0	270	270	540	300	290	590	300	280	580	290	280	570
1–4	1,170	1,150	2,320	1,110	1,120	2,230	1,130	1,100	2,220	1,140	1,080	2,210
5–9	1,370	1,280	2,650	1,400	1,280	2,680	1,420	1,340	2,760	1,400	1,390	2,790
10–14	1,240	1,210	2,450	1,260	1,250	2,510	1,230	1,220	2,450	1,250	1,210	2,460
15–19	1,170	1,090	2,260	1,160	1,080	2,240	1,180	1,090	2,260	1,160	1,080	2,240
20–24	980	1,010	1,990	1,000	970	1,980	990	970	1,970	990	950	1,940
25–29	740	860	1,600	740	880	1,620	790	880	1,670	840	900	1,740
30–34	720	800	1,520	730	790	1,520	710	790	1,500	660	800	1,460
35–39	720	800	1,530	700	790	1,490	690	790	1,480	700	770	1,470
40–44	710	830	1,540	690	830	1,520	690	810	1,510	720	790	1,510
45–49	680	710	1,380	670	730	1,410	640	750	1,390	650	760	1,410
50–54	630	700	1,330	640	660	1,300	660	670	1,320	650	670	1,320
55–59	460	520	990	500	580	1,080	530	610	1,150	550	620	1,170
60–64	350	370	720	370	380	750	360	410	770	370	440	810
65–69	220	240	460	220	250	470	260	260	520	290	300	580
70–74	140	140	270	150	150	290	160	170	320	160	160	320
75–79	70	80	150	80	80	160	80	90	170	90	100	190
80–84	30	30	70	40	40	80	40	40	80	40	40	70
85–89	10	20	30	10	20	30	20	20	40	20	30	50
90+	0	0	0	0	0	10	0	10	10	0	10	10
All Ages	11,700	12,100	23,800	11,800	12,200	24,000	11,900	12,300	24,200	12,000	12,400	24,300
	2017			2018			2019			2020		
0	290	270	560	280	270	550	280	270	550	280	260	540
1–4	1,130	1,080	2,210	1,140	1,080	2,230	1,120	1,070	2,190	1,110	1,050	2,160
5–9	1,380	1,390	2,770	1,370	1,350	2,720	1,340	1,340	2,680	1,350	1,310	2,660
10–14	1,280	1,180	2,450	1,290	1,210	2,500	1,320	1,210	2,530	1,330	1,260	2,600
15–19	1,160	1,120	2,280	1,140	1,120	2,270	1,160	1,160	2,320	1,130	1,130	2,260
20–24	1,000	950	1,950	1,040	950	1,990	1,030	940	1,970	1,040	950	1,990
25–29	860	900	1,760	840	870	1,710	860	830	1,700	850	830	1,690
30–34	660	770	1,440	670	790	1,470	670	820	1,490	730	810	1,540
35–39	680	770	1,460	670	750	1,420	680	750	1,430	660	740	1,410
40–44	700	770	1,470	680	760	1,430	660	740	1,400	640	740	1,380
45–49	650	770	1,430	670	780	1,440	650	780	1,420	650	760	1,410
50–54	640	670	1,320	630	660	1,300	630	690	1,320	600	700	1,300
55–59	570	630	1,200	580	660	1,240	600	610	1,210	610	630	1,240
60–64	390	480	880	420	490	910	450	550	1,000	480	570	1,060
65–69	290	300	590	310	330	640	320	350	670	320	370	690
70–74	170	170	350	180	200	390	180	220	400	220	220	440
75–79	110	100	210	100	110	220	110	120	230	120	140	260
80–84	40	60	90	50	50	100	60	60	120	50	60	120
85–89	20	30	50	20	20	50	30	30	50	30	30	50
90+	0	10	10	0	10	20	10	10	20	10	20	30
All Ages	12,000	12,400	24,500	12,100	12,500	24,600	12,200	12,500	24,700	12,200	12,600	24,800

These projections were derived in October 2014.

Source: Statistics New Zealand

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

Projected Total Population by Age and Sex at 30 June 2014–33 (2013-Base)

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

Age	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	2013(Base)			2014			2015			2016		
0	960	940	1,900	1,000	950	1,940	1,000	950	1,950	1,000	950	1,960
1–4	4,220	4,180	8,400	4,140	4,050	8,200	3,990	3,900	7,900	3,950	3,830	7,770
5–9	5,090	4,800	9,900	5,090	4,840	9,930	5,220	4,990	10,210	5,190	5,050	10,240
10–14	5,040	4,750	9,790	4,940	4,720	9,660	4,780	4,620	9,400	4,700	4,500	9,200
15–19	5,040	4,730	9,770	5,060	4,710	9,770	5,090	4,680	9,770	5,080	4,590	9,670
20–24	4,490	4,580	9,070	4,630	4,480	9,120	4,690	4,400	9,080	4,670	4,380	9,050
25–29	4,030	4,350	8,380	4,140	4,570	8,710	4,430	4,760	9,190	4,610	4,960	9,570
30–34	4,220	4,690	8,910	4,340	4,720	9,050	4,310	4,760	9,060	4,380	4,800	9,180
35–39	4,520	4,980	9,500	4,400	4,860	9,270	4,300	4,860	9,160	4,270	4,790	9,070
40–44	5,250	5,650	10,900	5,120	5,650	10,770	4,970	5,450	10,420	4,810	5,240	10,050
45–49	5,020	5,360	10,380	4,980	5,330	10,310	4,990	5,390	10,380	5,090	5,480	10,570
50–54	5,120	5,440	10,560	5,080	5,410	10,490	5,060	5,370	10,430	4,910	5,290	10,200
55–59	4,280	4,450	8,730	4,510	4,660	9,170	4,660	4,830	9,490	4,800	4,940	9,740
60–64	3,680	3,710	7,390	3,700	3,760	7,460	3,700	3,820	7,510	3,800	3,970	7,770
65–69	2,990	3,220	6,210	3,150	3,350	6,500	3,290	3,510	6,800	3,420	3,620	7,040
70–74	2,190	2,430	4,620	2,250	2,530	4,780	2,380	2,590	4,960	2,340	2,640	4,990
75–79	1,460	1,810	3,280	1,530	1,860	3,390	1,570	1,970	3,540	1,730	2,060	3,800
80–84	1,080	1,480	2,560	1,090	1,490	2,580	1,100	1,480	2,590	1,090	1,490	2,580
85–89	580	900	1,480	580	910	1,490	610	930	1,540	650	980	1,630
90+	220	520	740	240	550	790	260	560	820	270	560	830
All Ages	69,500	73,000	142,500	70,000	73,400	143,400	70,400	73,800	144,200	70,800	74,100	144,900
	2017			2018			2019			2020		
0	1,000	950	1,960	1,000	950	1,950	1,000	950	1,950	1,000	950	1,950
1–4	3,920	3,770	7,690	3,960	3,780	7,730	3,950	3,770	7,730	3,950	3,770	7,720
5–9	5,120	5,050	10,160	4,940	4,910	9,860	4,890	4,780	9,670	4,730	4,620	9,350
10–14	4,700	4,440	9,130	4,750	4,490	9,240	4,740	4,520	9,250	4,860	4,650	9,510
15–19	5,010	4,550	9,560	4,870	4,450	9,320	4,750	4,410	9,160	4,570	4,290	8,870
20–24	4,750	4,340	9,080	4,810	4,270	9,090	4,800	4,230	9,020	4,800	4,170	8,970
25–29	4,690	5,030	9,730	4,720	5,060	9,780	4,810	4,920	9,730	4,810	4,790	9,600
30–34	4,430	4,850	9,280	4,590	4,980	9,570	4,650	5,160	9,810	4,910	5,310	10,220
35–39	4,310	4,810	9,120	4,340	4,790	9,130	4,430	4,800	9,230	4,390	4,820	9,200
40–44	4,610	5,080	9,690	4,380	4,860	9,240	4,240	4,720	8,960	4,130	4,700	8,820
45–49	5,080	5,430	10,520	5,010	5,440	10,450	4,870	5,420	10,290	4,710	5,210	9,920
50–54	4,810	5,220	10,030	4,790	5,110	9,900	4,740	5,060	9,800	4,740	5,110	9,850
55–59	4,860	5,080	9,930	4,900	5,230	10,130	4,850	5,190	10,040	4,830	5,140	9,970
60–64	3,940	4,150	8,090	4,030	4,270	8,300	4,250	4,470	8,720	4,390	4,630	9,020
65–69	3,370	3,590	6,950	3,400	3,550	6,960	3,420	3,600	7,020	3,410	3,650	7,060
70–74	2,520	2,780	5,300	2,690	3,030	5,720	2,850	3,160	6,000	2,980	3,320	6,300
75–79	1,880	2,180	4,060	1,890	2,230	4,130	1,940	2,320	4,270	2,060	2,370	4,430
80–84	1,100	1,490	2,580	1,130	1,540	2,670	1,190	1,570	2,760	1,210	1,670	2,880
85–89	670	1,020	1,690	660	1,010	1,670	680	1,030	1,710	710	1,020	1,730
90+	280	580	860	310	590	900	300	610	910	330	620	950
All Ages	71,000	74,400	145,400	71,200	74,500	145,700	71,400	74,700	146,000	71,500	74,800	146,300

These projections were derived in October 2014.

Source: Statistics New Zealand



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

This report includes customised Statistics New Zealand’s data which are licensed by Statistics New Zealand for re-use under the Creative Commons Attribution 3.0 New Zealand licence.

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.



TE RŌPŪ RANGAHAU HAUORA A ERU PŌMARE

