Te Aka Whai Ora
Māori Health Authority

Iwi-Māori Partnership Board Health Profile:
Ātiawa Toa

Volume One

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Toitū te mauri roa

Toitū te mauri ora

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Te kupu takamua
Foreword

Te kupu takamua - Foreword

We are extremely pleased to present this report that provides the most up-to-date snapshot of Māori health for the newly formed Iwi-Māori Partnership Boards.

In doing so, we acknowledge the legacy of work associated with Māori-led health data reporting to date – from the seminal *Hauora* series to *Tatau Kahukura* and the *2015 District Health Board Māori Health Profiles*, this report continues the commitment to excellence that Māori communities and whānau both need and deserve.

Iwi-Māori Partnership Boards were created under the Pae Ora (Healthy Futures) Act 2022 to provide a vehicle for local feedback and leadership on how the health sector is performing to meet the needs and aspirations of whānau in their area. Iwi-Māori Partnership Boards have a pivotal role to play in determining how health services and public health interventions should be designed and delivered.

Te Aka Whai Ora welcomes the contribution of each Iwi-Māori Partnership Board to use the data presented in these reports to understand what issues are important to them and what response(s) are needed to ensure their tino rangatiratanga and mana motuhake over their health and wellbeing are being realised. The data presented in this profile require contextualisation - they are a starting point for Iwi-Māori Partnership Boards to interpret, together with other sources of information, and decide how best to respond to the needs (and rights) of the whānau within their rohe.

This report represents the first wave of analysis (Volume One). This volume includes key demographic information, mauri ora (overall health status), whānau ora (healthy families) and wai ora (healthy environments) indicators specific to each Iwi-Māori Partnership Board. A second volume with additional indicators focused on Te Aka Whai Ora-identified health priority areas (e.g. cancer, long-term conditions, first 1,000 days and mental health) will be released early in 2024.

The data presented within these profiles are a dimension of 'whānau voice'. They represent Māori stories and Māori lived experience and should be valued as a taonga for the health system to use and respond to as part of the broader commitment to Te Tiriti o Waitangi and equity.

We are extremely humbled by the sacrifices that have been made by our people: externally, as Iwi-Māori Partnership Boards have been established, and within the organisation, to produce this output in such a short time-frame since our establishment as an entity in July 2022.

We thank our partners who have contributed to this report and hope that this commitment to excellence in Māori health continues - mō āke tonu atu.

Ngā mihi,

Tipa Mahuta

Waikato, Maniapoto, Ngāpuhi

Te Kaihautū (Chair)

Riana Manuel

Ngāti Pukenga, Ngāti Maru, Ngāti Kahungunu

Te Aka Matua (Chief Executive)

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List of Abbreviations, Acronyms and Initialisms

ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industrial Classification
Av	Average
CI	Confidence Intervals
COPD	Chronic Obstructive Pulmonary Disease
DHB	District Health Board
ERP	Estimated resident population
GCH	Geographic Classification for Health
ICD-10-AM	International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification
IMPB	Iwi-Māori Partnership Board
NHI	National Health Index
No	Number
NZ	Aotearoa/New Zealand
NZDep2018	New Zealand Index of Deprivation 2018
PHO	Primary Health Organisation
RR	Rate ratio
SA1	Statistical Area Level 1
SA2	Statistical Area Level 2
StatsNZ	Statistics New Zealand
TKHM	Te Kupenga Hauora Māori
UR	Usually resident
WHO	World Health Organization

Māori Glossary

Aotearoa	New Zealand
Hāpori Māori	Māori communities
Hauora Māori	Māori health
Hui	Meeting, gathering
Iwi	Tribe
Kaupapa Māori	Māori initiative, approach, topic, agenda, principle, ideology
Manatū Hauora	Ministry of Health
Māori	Indigenous people(s) of Aotearoa New Zealand
Marae	Complex of buildings significant to Māori, may include, but not limited to, wharenui, wharekai, and urupā
Mauri ora	Overall health status
Mō āke tonu atu	Forever
Ngā āpitihanga	Appendices
Ngā kupu whakamihi	Acknowledgements
Ngā mihi	Greetings
Ngā tatauranga taupori matua	Key demographics
Pae ora	Healthy futures
Rohe	Region
Tangi	Funeral, mourning
Taonga	Treasure
Tatau Kahukura	Māori Health Chartbook 2015
Te Aka Whai Ora	Māori Health Authority
Te ihirangi	Contents
Te Kupenga Hauora Māori	Department of Māori Health, Faculty of Medical and Health Sciences, The University of Auckland
Te kupu takamua	Foreword
Te kupu whakataki	Introduction
Te rārangi tohutoro	References
Te Rōpū Rangahau Hauora a Eru Pōmare	Eru Pomare Māori Health Research Centre, The University of Otago
Te Tiriti o Waitangi	Treaty of Waitangi
Te Whatu Ora	Health New Zealand
Wai ora	Healthy environments
Whakamaua	Māori Health Action Plan: 2020-2025
Whānau	Family
Whānau ora	Healthy families

Te kupu whakataki
Introduction

1. Te kupu whakataki - Introduction

1.1. Overview of Iwi-Māori Partnership Boards

One of the three purposes of the Pae Ora (Healthy Futures) Act 2022 (Pae Ora) is to "achieve equity in health outcomes among New Zealand's population groups, including by striving to eliminate health disparities, in particular for Māori". Iwi-Māori Partnership Boards (IMPBs) are an important legislated mechanism for the Crown to give effect to the principles of Te Tiriti o Waitangi (the Treaty of Waitangi). The Pae Ora Act requires Health New Zealand (Te Whatu Ora) and the Māori Health Authority (Te Aka Whai Ora) to engage with IMPBs.

The purpose of IMPBs is to represent local Māori perspectives on:

a) the needs and aspirations of Māori in relation to hauora Māori outcomes; and

b) how the health sector is performing in relation to those needs and aspirations; and

c) the design and delivery of services and public health interventions within localities.

The Pae Ora Act sets out the criteria for recognition of an organisation as an IMPB. The criteria ensure the Boards are broadly representative of all Māori within the relevant area and include;

a) that the proposed boundaries of the area covered by the organisation do not overlap with the boundaries of any area covered by any other IMPB;

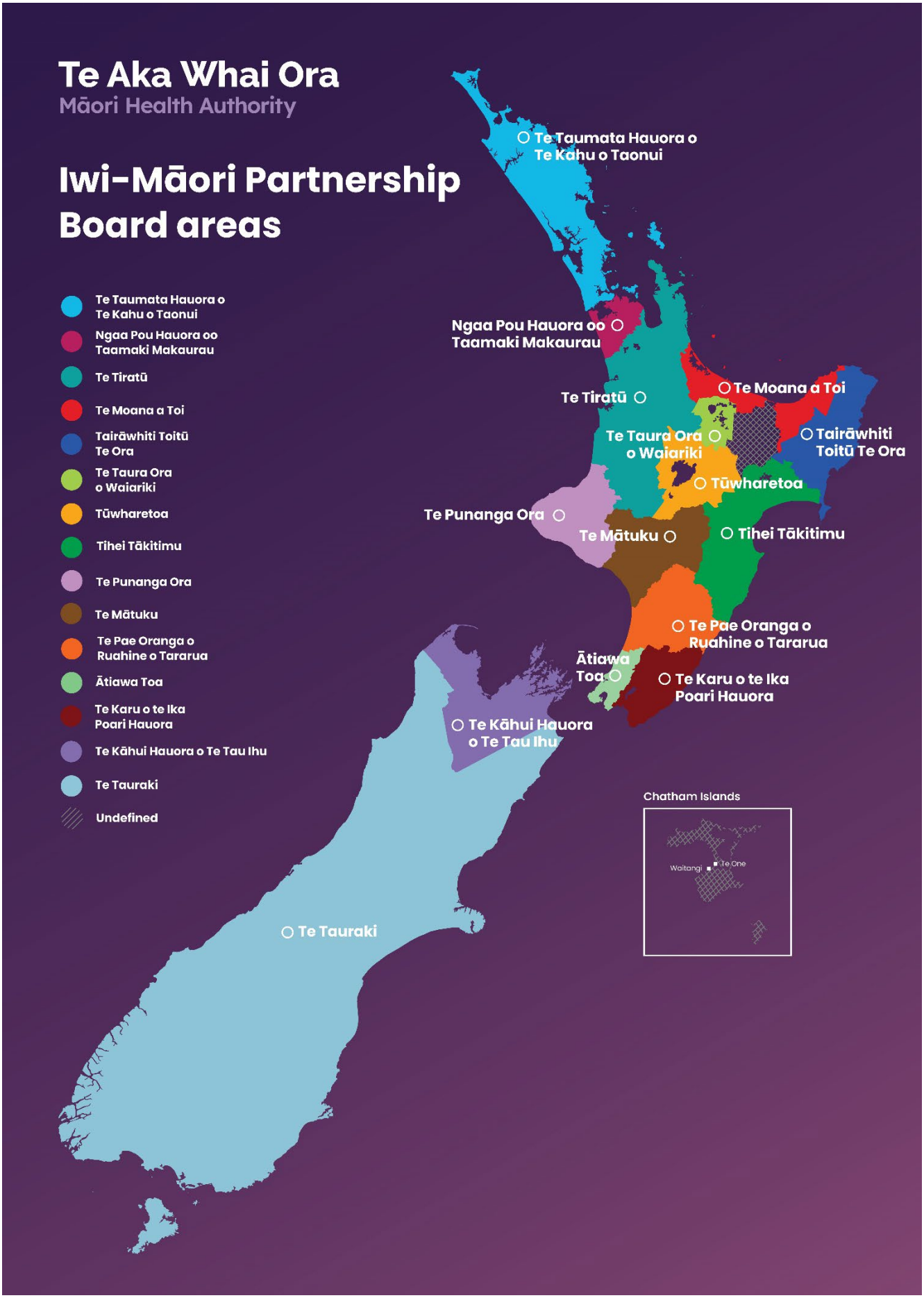
b) that the organisation has taken reasonable steps to engage with relevant Māori communities and groups; and

c) the organisation must demonstrate that it has the capacity and capability to perform the necessary functions of IMPBs as set out in the Act, and that the organisation can represent and be accountable to hāpori Māori (Māori communities).

Once the Board of Te Aka Whai Ora is satisfied that an organisation has met the criteria for recognition, they advise the Minister of Health who then recommends the making of an Order in Council so that the organisation can be listed as an IMPB (under Schedule 4 of the Pae Ora Act). On the advice of the Te Aka Whai Ora Board, the Minister of Health can also recommend an Order in Council to vary or remove an IMPB from Schedule 4 of the Pae Ora Act. An important feature of IMPBs is that they can renegotiate boundaries between each other as and when works for the collective. Such is the case for any emerging organisation who must consult with neighbouring IMPBs should their intended boundary result in overlap. This ensures the self-determination of communities, and strategic alignment with community need.

As at July 2023, 15 IMPBs were listed in Schedule 4, as shown in Figure 1.

Figure 1 - Map of Iwi-Māori Partnership Board areas



1.2. Purpose and audience for this report

Under the Pae Ora Act, Te Aka Whai Ora must take reasonable steps to support IMPBs to achieve their purpose, including by providing administrative, analytical, or financial support where needed; and providing sufficient and timely information. These data profiles have been prepared for each IMPB formed in 2023, as part of a commitment by Te Aka Whai Ora to provide IMPBs with health information to inform priorities and actions.

Te Aka Whai Ora has produced these profiles, together with support from Te Whatu Ora, to provide IMPBs with a baseline snapshot of the health of Māori in their rohe (region). These profiles are limited to the data sources and indicators currently available in the government health system, and may not capture all aspects of hauora Māori, determinants of wellbeing, or government responsibility.

1.3. Positioning

This profile has been drafted from a Kaupapa Māori research and epidemiology positioning (Simmonds, Robson et al. 2008). This positioning includes:

- a commitment to high quality ethnicity data reporting and analysis (that includes understanding how ethnicity data are collected and recorded and the implications of these factors on data quality from various sources);
- a commitment to using appropriate comparator groupings (or not) within ethnic data comparisons (that reflect Te Tiriti o Waitangi/rights-based and equity appropriate interpretations) (Harris, Paine et al. 2022), and;
- a strengths-based interpretation of data that rejects 'victim-blame' or 'cultural-deficit' interpretations of any data presented (Curtis 2016).

It is important to note that the identification of inequities between Māori and non-Māori is not a signal of Māori failure or shortcomings. Rather, a Kaupapa Māori positioning foregrounds racism, privilege and power imbalances as the fundamental drivers of ethnic inequities in health for Māori compared to non-Māori (Curtis, Jones et al. 2023).

The data presented in this profile require contextualisation - they are a starting point for IMPBs to interpret, together with other sources of information, and decide how best to respond to the needs (and rights) of their specific population. Although quantitative in nature, the data presented within these profiles are a dimension of 'whānau voice'. They represent Māori stories and Māori lived experience and should be valued as a taonga for the health system to use and respond to as part of the broader commitment to Te Tiriti o Waitangi and equity.

1.4. Understanding Māori health and health inequities

It is important to have a common understanding on what the fundamental drivers or Māori health and health inequities are in order to respond appropriately. A helpful framework is the 'Te Kupenga Hauora Māori (TKHM) modified model' (Curtis, Jones et al. 2023) - a Māori model that draws upon international theorisation on the causation of ethnic health inequities (Figure 2). The TKHM modified model outlines a framework to understand the causes of Māori:non-Māori health inequities within an Aotearoa and Indigenous specific context.

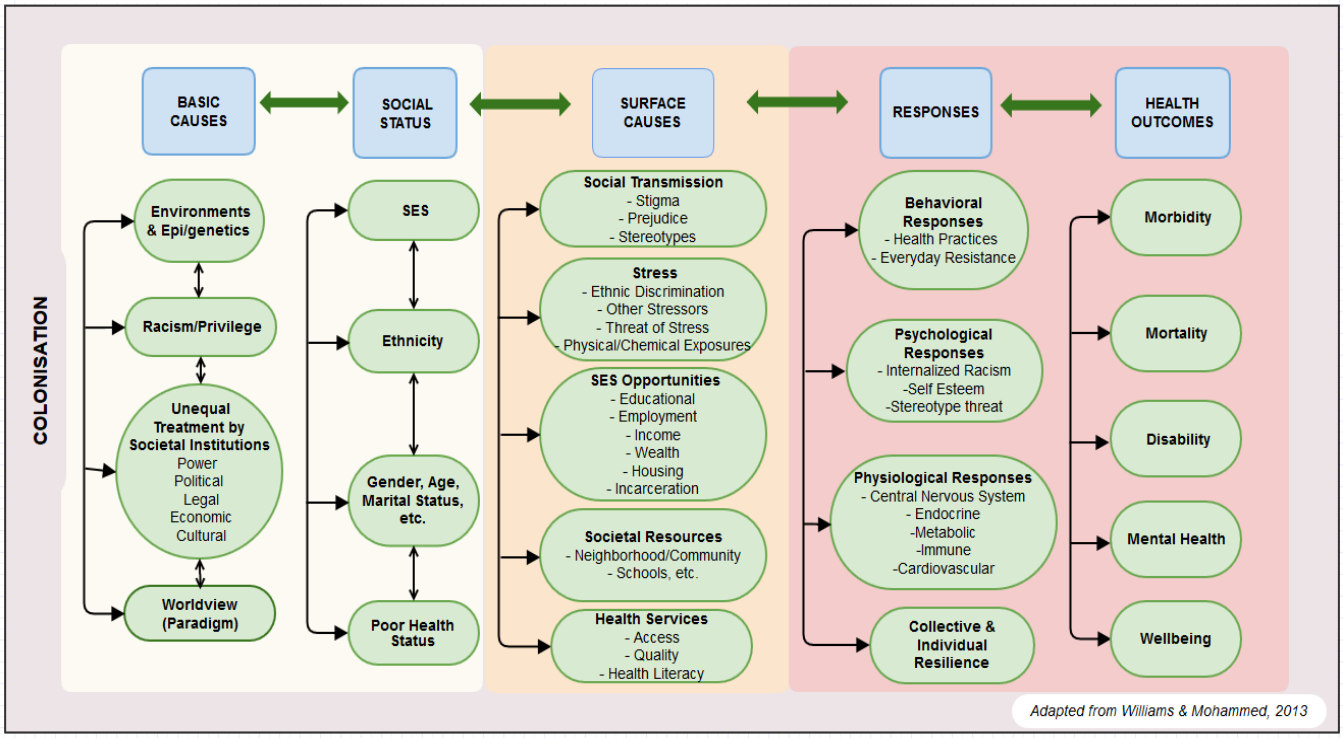
The framework emphasises the importance of distinguishing *basic* causes from *surface* (or intervening causes). Overall, changes in *basic* causes create important changes in health *outcomes*. *Social status* categories are created, and reinforced, by *basic* causes. *Social status* categories considered to have particular relevance to Māori health outcomes include: *ethnicity, socio-economic status, gender, age*, and *poor health status*. In the TKHM modified model, *surface causes* represent a number of intervening

mechanisms that link *social status* categories such as *ethnicity*, to *health outcomes*. Important intervening mechanisms include: *stress*, *socio-economic opportunities*, *societal resources*, *health services* and *social transmission*. Health *outcomes* reflect the mechanisms by which differences in health status and therefore health inequities are observed or measured. For example, health can vary with respect to *morbidity* (ill health), *mortality* (death rates), presence or absence of *disability*, *mental health* and generalised *wellbeing*.

The TKHM modified model foregrounds colonisation as a key determinant of health inequities underpinning all levels from *basic* to *surface* causes. In doing so, the model acknowledges the historical trauma of colonisation whilst also foregrounding the ongoing contemporary effects of colonisation in today's society. It is not a simple, unidirectional relationship between causes at different levels - but rather there is a dynamic interplay between causes and pathways. Worldviews and positioning are also a basic cause, and privilege alongside racism plays a causative role in Māori health inequities.

Explanations define solutions. Therefore, a conceptual framework can support the understanding of fundamental causes of Indigenous and Māori health inequities and how best to respond to those inequities once they have been identified. Many of the routine data that are collected and reported in Aotearoa, including in this report, focus on the downstream surface causes. It is important to understand that many of these indicators are outcomes/consequences of structural processes of marginalisation that we do not properly measure, and that intervention needs to occur upstream to achieve health equity for Māori.

Figure 2 - Te Kupenga Hauora Māori modified model for explaining Indigenous/ethnic determinants of health



Source: (Curtis, Jones et al. 2023)

1.5. Scope for these profiles

These profiles are the first reports which specifically focus on data related to IMPBs. These profiles focus on key population demographic data, indicators reflecting key socio-economic determinants of wellbeing, health status and health services indicators. Not every health issue or determinant is included. These IMPB profiles are presented in two volumes:

- Volume One - contains key demographic data and projections, overall life expectancy and health outcomes measures, and indicators relating to whānau wellbeing and socio-economic and environmental determinants of wellbeing.
- Volume Two - contains health service utilisation and outcomes measures, with a focus on the four health priority areas identified in the 2022 Te Aka Whai Ora Māori Health Priorities Report (Curtis E, Loring B et al. 2022): the first 1000 days, cancer, long term conditions, and mental health and addiction.

These reports are by no means exhaustive, and IMPBs may wish to also refer to other sources of information available through respective government agencies for more in-depth data related to areas such as education, social development, environment, employment or housing. We are limited to currently available data, which may not reflect all indicators of importance to IMPBs, and not all data (for example, on uncommon health conditions) can be meaningfully disaggregated by ethnicity to the level of IMPBs. These IMPB profiles are intended to be used in conjunction with other sources of publicly available health system reporting by the Ministry of Health, Te Whatu Ora, the Health Quality and Safety Commission, Statistics New Zealand (StatsNZ) and other agencies.

There have also been a number of previous sources of reporting specifically on Māori health, which IMPBs may wish to refer to for additional information relevant to their area, including trends over time. Some of these key sources include:

- **Whakamaua Dashboard**[1]

  This online dashboard presents quantitative measures which assess system performance against the four objectives of Whakamaua: Māori Health Action Plan 2020-2025. From 2023, the Whakamaua dashboard contains some indicators disaggregated by Iwi-Māori Partnership Boards (IMPB). These data for IMPBs use the Health Service Utilisation population as the denominator, which differs slightly from the Census population denominator chosen in these IMPB profiles. The Whakamaua dashboard compares Māori data to non-Māori non-Pacific data.

- **WAI 2575 Māori Health Trends Report**[2]

  This report was compiled by the Ministry of Health in 2019, to inform the Wai 2575 Health Services and Outcomes Kaupapa Inquiry (Wai 2575). The report shows changes of Māori health over the years 1990-2015. Most data are presented at a national level, for Māori compared to non-Māori, and Māori compared to non-Māori non-Pacific, although some variables are available at a District Health Board (DHB) level.

[1] https://minhealthnz.shinyapps.io/WhakamauaDashboard/

[2] https://www.health.govt.nz/publication/wai-2575-maori-health-trends-report

- **A Window on the Quality of Aotearoa New Zealand's Health Care 2019 - a view on Māori health equity**[3]

  A Window on the Quality of Aotearoa New Zealand's Health Care 2019 - a view on Māori health equity was compiled by the Health Quality and Safety Commission and highlights a number of areas where change is needed in the health system. The report is divided into three chapters. The first analyses inequity between how Māori and non-Māori access and receive health services, and the effects on equity of improvement activities in our system. The second chapter asks why these inequities exist, and the third chapter addresses opportunities for improvement.

- **2015 District Health Board Māori Health Profiles**[4]

  The 2015 District Health Board Māori Health Profiles were produced by Te Rōpū Rangahau Hauora a Eru Pōmare at the University of Otago in Wellington. The District Health Board Māori Health Profiles present a snapshot of Māori health compared with non-Māori across a range of health and disability-related indicators. They can create a picture of the health status of a DHB's population at a given time and allow some comparison of trends over time. The profiles are available as word and pdf documents, and Excel tables containing data from the profiles together with national rates for most indicators.

- **Tatau Kahukura: Māori health statistics**[5]

  Statistical profiles on Māori health compiled by the Ministry of Health, most recently completed in 2015. Presents Māori compared to non-Māori national level data for a range of health indicators (socio-economic determinants, risk factors, health services and health outcomes), and data are age-standardised to the 2001 Māori population.

- **Hauora: Māori Standards of Health IV: A study of the years 2000-2005**[6]

  Hauora: Māori Standards of Health IV, published in 2007, is the most recent edition in the Hauora series, produced by Te Rōpū Rangahau Hauora a Eru Pōmare, and covers the period 2000 to 2005. Careful consideration has been given to the manner in which evidence has been presented and the commentaries are rightly written from Māori perspectives. The first three chapters situate health statistics within the broader context, including the theoretical, demographic and socio-economic contexts. This is followed by chapters on mortality, public hospitalisations, cancer and mental health. This volume of Hauora also includes a number of topic-based chapters from invited authors, including chapters on cardiovascular disease; diabetes; respiratory disease; oral health; disability; sleep problems; occupational safety and health; health in prisons; and the National Primary Medical Care Survey.

To maximise consistency and make it easier for IMPBs to assess how various indicators in their rohe are tracking over time, we have endeavoured to replicate the scope and approach taken in the 2015 District Health Board Māori Health profiles as closely as possible. There are some minor variations in statistical methods, definitions and geographical boundaries for some indicators, which mean that exact comparison with these earlier profiles is not always possible.

[3] https://www.hqsc.govt.nz/resources/resource-library/a-window-on-the-quality-of-aotearoa-new-zealands-health-care-2019-a-view-on-maori-health-equity-2/

[4] https://www.health.govt.nz/publication/dhb-maori-health-profiles

[5] https://www.health.govt.nz/our-work/populations/maori-health/tatau-kahukura-maori-health-statistics

[6] https://www.otago.ac.nz/wellington/departments/publichealth/research-groups-in-the-department-of-public-health/erupomare/research/hauora-maori-standards-of-health-iv-a-study-of-the-years-2000-2005

1.6. Data sources

The data presented in this report come from routinely collected national government health datasets and routine national surveys. The main data sources for this report are:

- The 2018 Census of Population and Dwellings
- Te Kupenga 2018 (the Māori Social Survey)
- Mortality registrations
- Te Whatu Ora Primary Care Enrolment data

Data are presented for Māori and non-Māori residents, using the geographical boundaries in each dataset which most closely correspond to the boundaries of the IMPB. For some measures, the closest available match at this time has been the boundaries of the former DHBs covering the IMPB rohe. Where an IMPB area encompasses more than one former DHB, data are presented separately for each DHB area, to provide a sense of variation for Māori within the IMPB.

1.7. How to understand this report

The technical appendix at the end of this report contains further information to help users interpret the data presented. This includes a basic explanation of how to interpret the graphs and tables provided. There is also a description of key methods, including age-standardisation, comparator groups and statistical calculations. The appendix also contains a description of the quality of ethnicity data in each data source used in this profile, and how this may affect the accuracy of information for Māori. Further technical details are provided about the methods and data sources used to compile these reports, so that the methods can be replicated by others.

Ngā tatauranga taupori matua
Key demographics

2. Ngā tatauranga taupori matua - Key demographics

2.1. About Ātiawa Toa

Ātiawa Toa is home to an estimated 72,190 Māori in 2023 (Table 1). The Ātiawa Toa IMPB is located in the Te Upoko o te Ika Greater Wellington/Hutt region. Figure 3 shows that the health planning area of Ātiawa Toa IMPB includes all of the former geographic areas of the former Capital and Coast and Hutt Valley DHBs. Ātiawa Toa also includes a small part of the former MidCentral DHB, however as these areas do not include major population centres, data for MidCentral DHB are not presented in this IMPB report for indicators where DHB level data are used. However, these areas in the former MidCentral DHB are included in the IMPB level data on population demographics and whānau ora presented in this report, as these are mapped to SA2 geographic areas (see technical appendix for more details on how IMPB areas were calculated in this report).

Figure 3 - Map of Ātiawa Toa IMPB with DHB boundaries, 2023

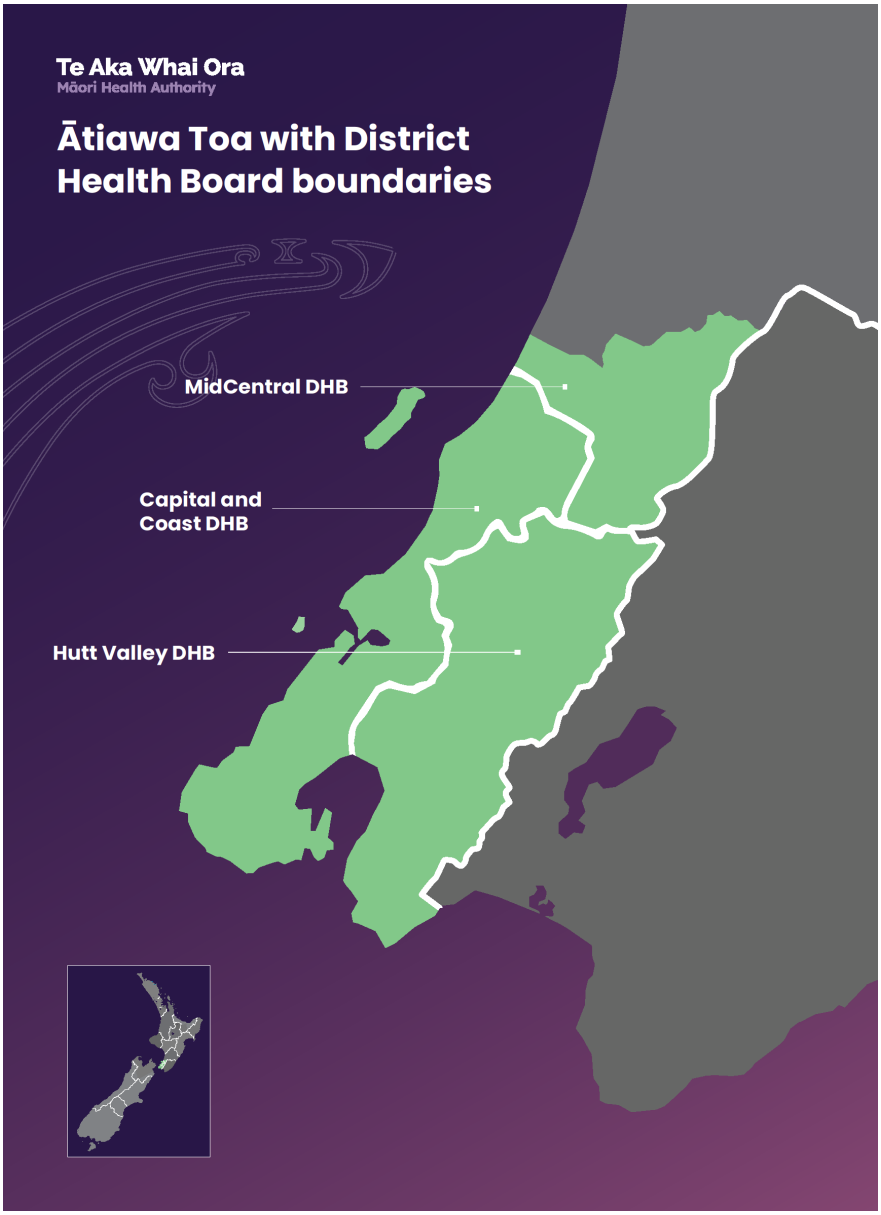


Table 1 shows the age breakdown of the population of Ātiawa Toa. The Māori population of Ātiawa Toa is very young, with 46% of the Māori population under the age of 25 years (compared to only 29% of the non-Māori population in the area). Overall, Māori make up 15% of the IMPB population, but this varies by DHB. Māori make up 13% of the Capital and Coast DHB population (Table 2), and 19% of the Hutt Valley DHB population (Table 3).

Table 1 - Population estimates by age group, Ātiawa Toa, 2023

Age group (years)	Māori			non-Māori		Total IMPB number
	Number	Age distribution	% of IMPB	Number	Age distribution	
0-14	19,325	27%		60,655	15%	79,980
15-24	13,370	19%		57,590	14%	70,960
25-44	21,135	29%		123,990	30%	145,125
45-64	13,715	19%		105,420	25%	119,135
65+	3,795	5%		67,260	16%	71,055
Total	**72,190**	**100%**	**15%**	**414,100**	**100%**	**486,290**

Source: Te Whatu Ora Populations Webtool (Statistics NZ base Census 2018 base).

Table 2 - Population by age group, Capital and Coast DHB, 2023

Age group (years)	Māori			non-Māori		Total DHB number
	Number	Age distribution	% of DHB	Number	Age distribution	
0-14	10,400	26%		39,490	14%	49,890
15-24	7,760	19%		44,420	16%	52,180
25-44	12,260	30%		83,010	29%	95,270
45-64	7,720	19%		70,970	25%	78,690
65+	2,410	6%		43,550	15%	45,960
Total	**40,600**	**100%**	**13%**	**281,400**	**100%**	**322,000**

Source: Te Whatu Ora Populations Webtool (Statistics NZ base Census 2018 base).

Table 3 - Population by age group, Hutt Valley DHB, 2023

Age group (years)	Māori			non-Māori		Total DHB number
	Number	Age distribution	% of DHB	Number	Age distribution	
0-14	8,960	29%		21,490	16%	30,450
15-24	5,450	18%		13,030	10%	18,480
25-44	8,520	28%		40,580	31%	49,100
45-64	5,930	19%		33,950	26%	39,880
65+	1,890	6%		21,640	17%	23,530
Total	**30,700**	**100%**	**19%**	**130,800**	**100%**	**161,500**

Source: Te Whatu Ora Populations Webtool (Statistics NZ base Census 2018 base).

Over the next two decades, the Māori population of Ātiawa Toa is projected to grow to an estimate of 95,900 (Table 4) and to be older. By 2043, 10% of the Māori population will be over 65 years old, compared to 5% in 2023. The Māori population is projected to make up an increasing share of the IMPB population - growing from 15% in 2023 to 18% in 2043, although this masks significant differences between DHBs. In Capital and Coast DHB, Māori make up 13% of the 2023 population, and this is projected to increase to 15% in 2043 (Table 5). In Hutt Valley DHB, Māori make up 19% of the population, and this is projected to increase to 24% in 2043 (Table 6).

Table 4 - Population projections, Ātiawa Toa, 2023 to 2043

Year	Māori					non-Māori				
	Residents	% of IMPB	% 0-14 years	% 15-64 years	% 65+ years	Residents	% of IMPB	% 0-14 years	% 15-64 years	% 65+ years
2023	72,190	15%	27%	67%	5%	414,100	85%	15%	69%	16%
2028	78,290	16%	25%	67%	7%	420,670	84%	13%	68%	18%
2033	84,450	16%	24%	67%	8%	427,460	84%	13%	67%	20%
2038	90,790	17%	23%	67%	10%	432,490	83%	13%	66%	21%
2043	95,900	18%	22%	67%	10%	435,210	82%	13%	65%	22%

Source: Te Whatu Ora Populations Webtool (Statistics NZ base Census 2018 base).

Table 5 - Population projections, Capital and Coast DHB, 2023 to 2043

Year	Māori					non-Māori				
	Residents	% of IMPB	% 0-14 years	% 15-64 years	% 65+ years	Residents	% of IMPB	% 0-14 years	% 15-64 years	% 65+ years
2023	40,600	13%	26%	68%	6%	281,400	87%	14%	71%	15%
2028	44,000	13%	24%	69%	7%	285,400	87%	13%	70%	18%
2033	47,500	14%	23%	68%	9%	290,900	86%	12%	68%	20%
2038	50,900	15%	22%	68%	10%	295,900	85%	12%	66%	21%
2043	54,300	15%	21%	68%	11%	299,700	85%	13%	66%	22%

Source: Te Whatu Ora Populations Webtool (Statistics NZ base Census 2018 base).

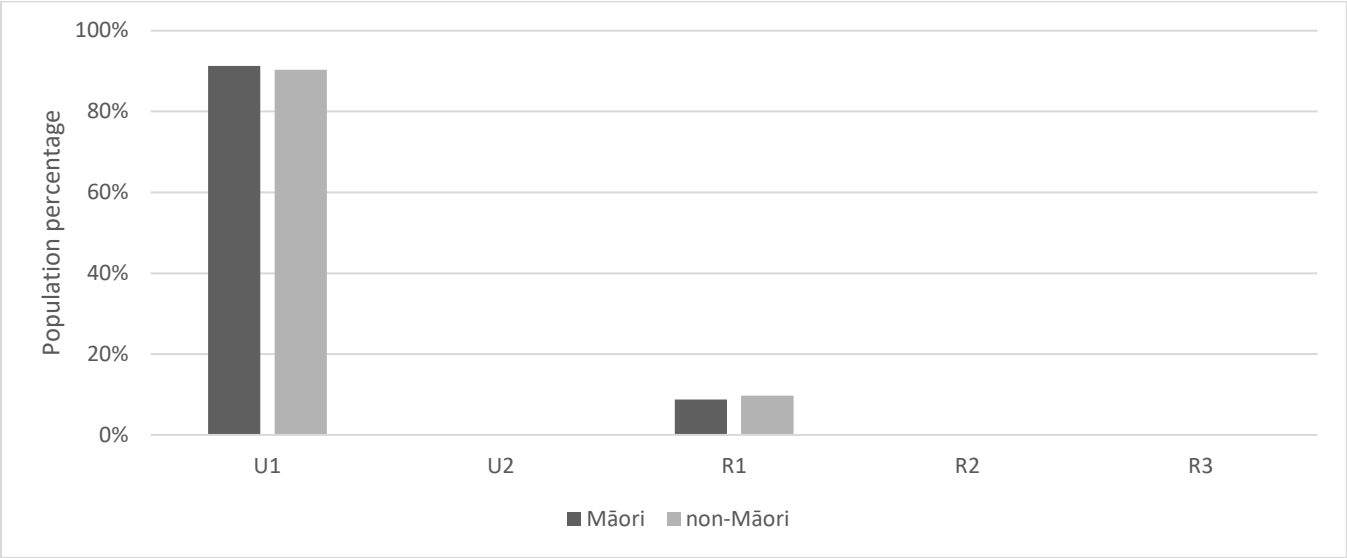
Table 6 - Population projections, Hutt Valley DHB, 2023 to 2043

Year	Māori					non-Māori				
	Residents	% of IMPB	% 0-14 years	% 15-64 years	% 65+ years	Residents	% of IMPB	% 0-14 years	% 15-64 years	% 65+ years
2023	30,700	19%	29%	65%	6%	130,800	81%	16%	67%	17%
2028	33,400	20%	27%	65%	8%	132,600	80%	16%	66%	18%
2033	36,100	21%	26%	65%	9%	133,800	79%	15%	65%	20%
2038	38,900	22%	25%	65%	10%	134,200	78%	14%	65%	21%
2043	41,900	24%	24%	65%	11%	133,700	76%	14%	65%	21%

Source: Te Whatu Ora Populations Webtool (Statistics NZ base Census 2018 base).

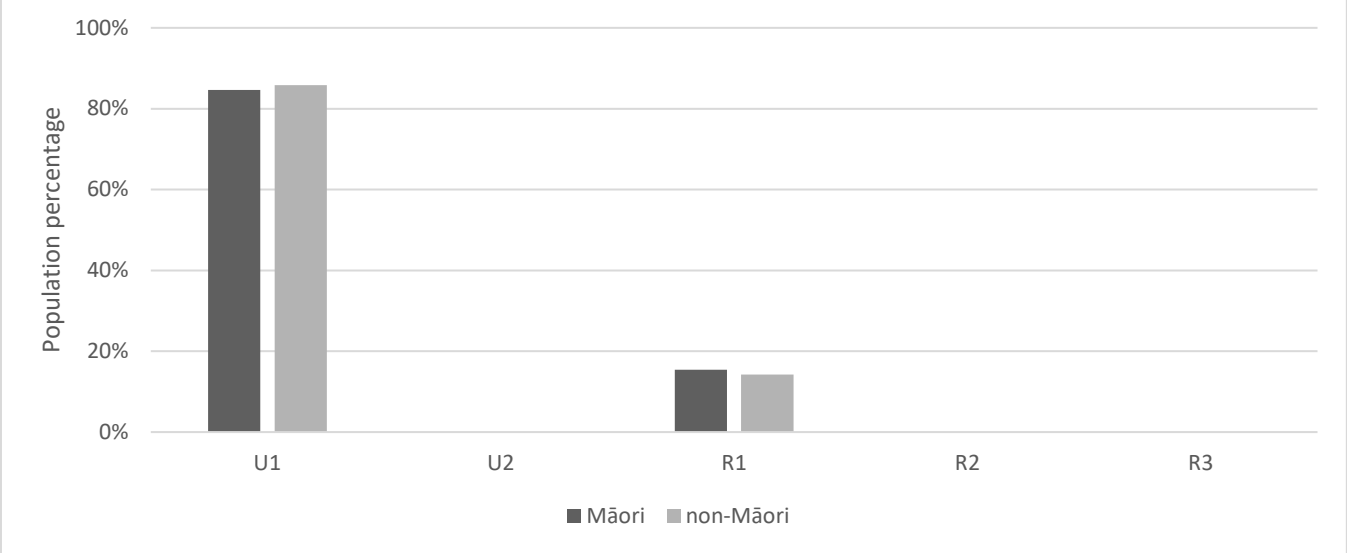
The Geographic Classification for Health (GCH) is a rural-urban geographic classification composed of five categories, two urban and three rural, that reflect degrees of reducing urban influence and increasing rurality. It is applied to all of New Zealand's Statistical Areas on a scale from 'Urban 1' to 'Urban 2' based on population size, and from "Rural 1' to 'Rural 3' based on drive time to their closest major, large, medium, and small urban areas. Overall, most Māori in Ātiawa Toa (91%) live in urban areas, compared to 90% for non-Māori (Figure 4). In Capital and Coast DHB, 85% of Māori live in urban areas, compared to 86% of non-Māori (Figure 5). In Hutt Valley DHB, the entire DHB is classified as urban, so 100% of Māori and non-Māori in Hutt Valley DHB live in urban areas (Figure 6).

Figure 4 - Population distribution by urban and rural classification, Ātiawa Toa, 2023



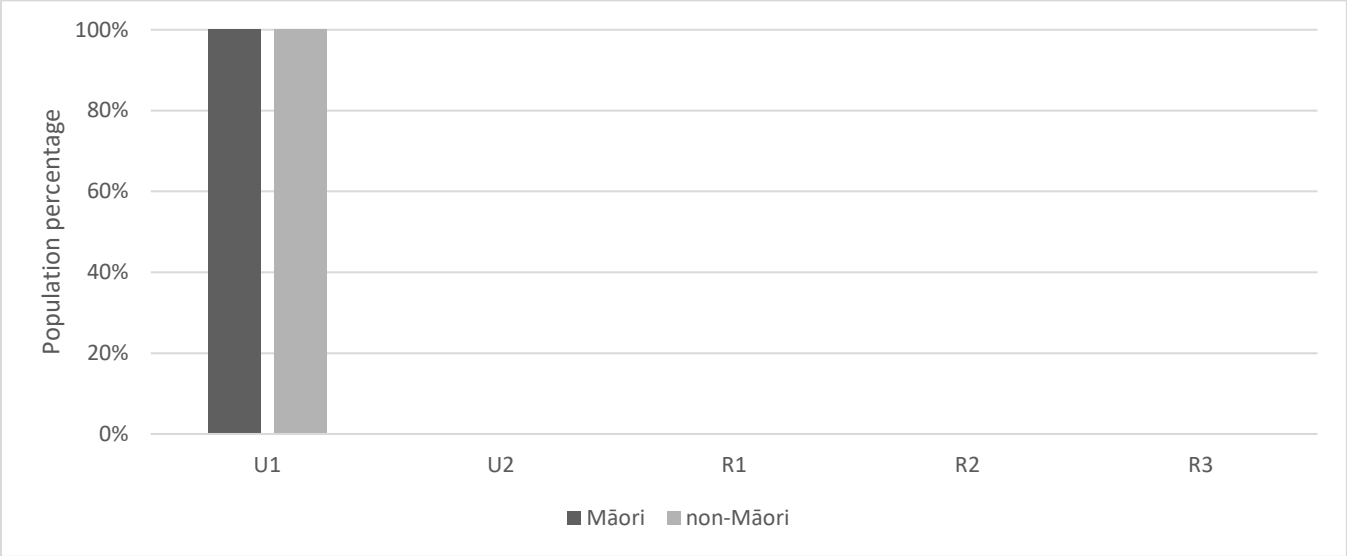
Source: Population count (Population Webtool SA2 2023); GCH (SA2 University of Otago). IMPB area is mapped to DHB geographic boundaries. Note that total values may add up to more than 100% due to rounding.

Figure 5 - Population distribution by urban and rural classification, Capital and Coast DHB, 2023



Source: Population count (Population Webtool SA2 2023); GCH (SA2 University of Otago). Note that total values may add up to more than 100% due to rounding.

Figure 6 - Population distribution by urban and rural classification, Hutt Valley DHB, 2023



Source: Population count (Population Webtool SA2 2023); GCH (SA2 University of Otago). Note that total values may add up to more than 100% due to rounding.

Mauri ora
Overall health status

3. Mauri ora - overall health status

3.1. Life Expectancy

The life expectancy at birth for Māori born in Ātiawa Toa (mapped to SA2 geographic areas) between 2018-2022 is 79.4 years for females and 76.4 years for males (Table 7). Life expectancy in Ātiawa Toa is 5.1 years shorter for Māori females and males, compared to non-Māori in Ātiawa Toa.

Table 7 - Life expectancy at birth, Ātiawa Toa, Māori and non-Māori, 2018 to 2022

Sex	Māori		non-Māori		Difference in years
	Years (95% credible interval)		Years (95% credible interval)		
Female	79.4	(78.4, 80.4)	84.5	(84.2, 84.8)	-5.1
Male	76.4	(75.4, 77.5)	81.5	(81.2, 81.7)	-5.1

Source: Mortality data sourced from Ministry of Health. Mortality Collection, https://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/mortality-collection.
Population denominator data from Statistics New Zealand, Population estimates (2022 update).
Analysed by Michael Walsh, Equity, Scientific and Technical Team, Equity Directorate, Service Improvement and Innovation, Te Whatu Ora; October 2023.

Within the IMPB, life-expectancy for Māori is higher in Capital and Coast DHB than in Hutt Valley DHB. Between 2018-2022, life expectancy for Māori in Capital and Coast DHB was 79.4 years for females (5.4 years shorter than non-Māori females) and 78.7 years for males (2.9 years shorter than non-Māori males) (Table 8). In Hutt Valley DHB (Table 9), life expectancy for Māori was 78.9 years for females (4.7 years shorter than non-Māori females) and 75.2 years for males (5.7 years shorter than non-Māori males).

Table 8 - Life expectancy at birth, Capital and Coast DHB, Māori and non-Māori, 2018 to 2022

Sex	Māori		non-Māori		Difference in years
	Years (95% credible interval)		Years (95% credible interval)		
Female	79.4	(78.2, 80.6)	84.8	(84.5, 85.1)	-5.4
Male	78.7	(75.3, 82.2)	81.6	(81.3, 81.9)	-2.9

Source: Mortality data sourced from Ministry of Health. Mortality Collection, https://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/mortality-collection.
Population denominator data from Statistics New Zealand, Population estimates (2022 update).
Analysed by Michael Walsh, Equity, Scientific and Technical Team, Equity Directorate, Service Improvement and Innovation, Te Whatu Ora; October 2023.

Table 9 - Life expectancy at birth, Hutt Valley DHB, Māori and non-Māori, 2018 to 2022

Sex	Māori		non-Māori		Difference in years
	Years (95% credible interval)		Years (95% credible interval)		
Female	78.9	(77.3, 80.5)	83.6	(83.2, 84.1)	-4.7
Male	75.2	(73.8, 76.5)	80.9	(80.4, 81.3)	-5.7

Source: Mortality data sourced from Ministry of Health. Mortality Collection, https://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/mortality-collection.
Population denominator data from Statistics New Zealand, Population estimates (2022 update).
Analysed by Michael Walsh, Equity, Scientific and Technical Team, Equity Directorate, Service Improvement and Innovation, Te Whatu Ora; October 2023.

In terms of the conditions which make up the life expectancy gap for Māori, this degree of information is not available at IMPB level, however analysis has been done for the four Te Whatu Ora regions of Aotearoa. Ātiawa Toa is situated in the Central Region, which also includes MidCentral, Whanganui, Hawke's Bay, and Wairarapa DHBs. In the Central Region for 2018-2020, life expectancy for Māori was 76.7 years, 6.0 years lower than the non-Māori/non-Pacific population (82.6 years).

Avoidable deaths include those considered *amenable* to high-quality healthcare, *preventable* through public health interventions, or both. Among Māori in the Central Region, 2.0 years of the 6.0-year gap can be attributed to conditions that are considered both amenable and preventable followed by 1.1 years from conditions considered preventable only and 0.8 years from conditions considered amenable only. An additional 2.0 years can be attributed to conditions that are considered non avoidable[7].

The leading avoidable causes of death contributing to the life expectancy gap among Māori in the Central Region are coronary disease (0.7 years), lung cancer (0.6 years) and chronic obstructive pulmonary disease (COPD) (0.4 years). A list of the top 10 conditions and their contribution to the gap are presented in Table 10. In total, these conditions contribute 3.1 years of the 6.0 year gap. These data are not able to be disaggregated by sex for Māori at a regional level because the numbers are too small.

Table 10 - Decomposition of the ethnic gap in life expectancy by avoidable category - Māori compared with non-Māori/non-Pacific, 2018 to 2020, Central Region

Avoidable cause	Contribution (years)
Coronary disease	0.7
Lung cancer	0.6
Chronic obstructive pulmonary disease	0.4
Diabetes	0.3
Suicide	0.3
Stroke	0.2
Land transport injuries	0.2
Other accidental injuries	0.2
Valvular heart disease	0.2
Liver cancer	0.1
Total contribution from top 10 avoidable conditions	**3.1 years***

Source: Te Whatu Ora, May 2023. The Contribution of Avoidable Mortality to the Life Expectancy Gap among the Māori and Pacific population. Regional Summary.
Note: * total number provided reflects source reporting (rounding issues may apply).

[7] By 'non-avoidable', the metric is referring to the direct causal pathway. Broader determinants of health such as income, education, housing, colonisation, and institutional racism are not covered. Longer term all the 'gap' is avoidable through government, policy and intersectoral actions.

3.2. Self-assessed health

In 2018, 86.8% of Māori aged 15 years and over in Ātiawa Toa (mapped to SA2 geographic areas) reported their own health status as good, very good or excellent (Table 11), compared to 82.3% of Māori nationally. Māori in Ātiawa Toa were less likely to report their health status as fair or poor (13.2%) compared to Māori nationally (17.7%). Māori in Capital and Coast DHB (23.2%) were more likely than Māori nationally (15.1%) to report their health as excellent (Table 12). For Māori in Hutt Valley DHB (Table 13), results were similar to those for Māori nationally.

Table 11 - Health status reported by Māori aged 15 years and over, Ātiawa Toa and Aotearoa, 2018

Health Status	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
Excellent	20.1	(16.1, 24.1)	15.1	(14.0, 16.2)
Very Good	36.6	(32.8, 40.5)	36.9	(35.4, 38.3)
Good	30.1	(25.8, 34.4)	30.3	(29.0, 31.7)
Fair/poor	13.2	(10.5, 15.8)	17.7	(16.6, 18.8)

Source: Te Kupenga 2018, Statistics New Zealand customised report.

Table 12 - Health status reported by Māori aged 15 years and over, Capital and Coast DHB and Aotearoa, 2018

Health Status	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
Excellent	23.2	(17.3, 29.0)	15.1	(14.0, 16.2)
Very Good	36.4	(31.0, 41.8)	36.9	(35.4, 38.3)
Good	28.4	(22.2, 34.7)	30.3	(29.0, 31.7)
Fair/poor	12.0	(8.8, 15.3)	17.7	(16.6, 18.8)

Source: Te Kupenga 2018, Statistics New Zealand customised report.

Table 13 - Health status reported by Māori aged 15 years and over, Hutt Valley DHB and Aotearoa, 2018

Health Status	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
Excellent	16.2	(11.8, 20.7)	15.1	(14.0, 16.2)
Very Good	36.9	(31.7, 42.1)	36.9	(35.4, 38.3)
Good	32.2	(27.1, 37.4)	30.3	(29.0, 31.7)
Fair/poor	14.6 *	(10.2, 19.1)	17.7	(16.6, 18.8)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

3.3. Mortality

For the mortality data presented in this report, the IMPB area has been mapped to the DHB boundaries, so will differ slightly from IMPB data mapped to smaller SA2 geographic areas.

The leading causes of death for Māori in Ātiawa Toa in 2014-2018 were ischaemic heart disease, lung cancer, diabetes, chronic obstructive pulmonary disease (COPD), and cerebrovascular disease (Table 14).These five conditions are also the leading causes of death for Māori nationally (Table 17) and in Hutt Valley DHB (Table 16), while in Capital and Coast DHB (Table 15), suicide was in the top five leading causes of death for Māori. This contrasts with the leading causes of death for non-Māori in Ātiawa Toa (and nationally) in 2014-2018, which were ischaemic heart disease, dementia, cerebrovascular disease, lung cancer and COPD.

The leading causes of death for Māori females in Ātiawa Toa in 2014-2018 were lung cancer, ischaemic heart disease, COPD, cerebrovascular disease, and breast cancer (Table 14). The leading causes were similar for Māori females across the two DHBs, with suicide being among the leading causes of death in Capital and Coast DHB (Table 15) and diabetes featuring in the leading causes in Hutt Valley DHB (Table 16). For Māori males, the leading causes of death in Ātiawa Toa in 2014-2018 were ischaemic heart disease, lung cancer, diabetes, suicide and cerebrovascular disease (Table 14). The leading causes were the same for Māori in Capital and Coast DHB (Table 15) and COPD was among the leading causes in Hutt Valley DHB (Table 16).When looking at leading causes of death for Māori in a specific DHB, small population numbers mean that 1-2 deaths from a particular cause can have an impact on the ranking of leading causes in a given time period. For this reason, local causes of death for Māori men and women should be interpreted together with the leading causes of death for Māori nationally (Table 17).

Table 14 - Leading causes of death for Māori, all ages, Ātiawa Toa, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Lung cancer	10	21.7	(10.3, 40.0)	60	7.5	(5.4, 10.0)	**2.89**	**(1.45, 5.77)**	14.2
Ischaemic heart disease	10	20.2	(9.6, 37.1)	152	9.8	(7.7, 12.1)	**2.07**	**(1.07, 4.00)**	10.4
COPD	6	13.5	(4.9, 29.4)	51	4.6	(3.2, 6.3)	**2.94**	**(1.23, 7.01)**	8.9
Cerebrovascular disease	5	10.4	(3.2, 24.7)	128	7.5	(5.8, 9.5)	1.39	(0.54, 3.52)	2.9
Breast cancer	5	10.2	(3.1, 24.2)	58	9.4	(6.6, 12.8)	1.08	(0.42, 2.81)	0.8
Male									
Ischaemic heart disease	19	51.6	(30.7, 80.9)	216	25.4	(21.4, 29.9)	**2.03**	**(1.25, 3.30)**	26.2
Lung cancer	8	19.1	(8.2, 37.8)	55	7.9	(5.6, 10.6)	**2.44**	**(1.14, 5.21)**	11.2
Diabetes mellitus	8	18.8	(7.8, 37.7)	33	4.4	(2.8, 6.4)	**4.32**	**(1.91, 9.76)**	14.4
Suicide	5	17.1	(5.4, 39.8)	28	11.3	(7.0, 16.8)	1.52	(0.58, 4.01)	5.8
Cerebrovascular disease	5	13.6	(4.2, 32.1)	87	8.8	(6.7, 11.3)	1.54	(0.61, 3.91)	4.8
Total									
Ischaemic heart disease	30	34.9	(23.4, 50.0)	368	17.0	(14.8, 19.4)	**2.05**	**(1.39, 3.01)**	17.9
Lung cancer	18	20.5	(12.1, 32.5)	115	7.6	(6.1, 9.4)	**2.69**	**(1.61, 4.48)**	12.9
Diabetes mellitus	12	13.4	(6.8, 23.6)	62	3.5	(2.5, 4.8)	**3.78**	**(1.95, 7.33)**	9.9
COPD	11	12.3	(6.0, 22.3)	103	5.0	(3.9, 6.3)	**2.45**	**(1.28, 4.68)**	7.3
Cerebrovascular disease	10	12.1	(5.7, 22.5)	215	8.2	(6.8, 9.7)	1.48	(0.77, 2.85)	3.9

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

Table 15 - Leading causes of death for Māori, all ages, Capital and Coast DHB, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Ischaemic heart disease	7	19.9	(7.4, 42.3)	96	8.8	(6.5, 11.5)	2.25	(0.98, 5.14)	11.1
Lung cancer	6	22.7	(8.3, 49.0)	37	6.8	(4.4, 9.8)	**3.34**	**(1.39, 8.04)**	15.9
COPD	4	14.1	(3.6, 36.5)	28	3.8	(2.3, 5.8)	**3.75**	**(1.26, 11.13)**	10.3
Cerebrovascular disease	3	10.4	(1.6, 32.4)	76	6.8	(4.8, 9.2)	1.53	(0.43, 5.40)	3.6
Suicide	2	9.1	(0.4, 38.3)	8	4.4	(1.5, 9.3)	2.09	(0.35, 12.43)	4.7
Male									
Ischaemic heart disease	11	58.5	(25.7, 110.3)	137	24.7	(19.9, 30.1)	**2.37**	**(1.19, 4.74)**	33.8
Diabetes mellitus	4	17.9	(4.8, 45.8)	20	3.9	(2.2, 6.3)	**4.59**	**(1.52, 13.84)**	14.0
Suicide	3	18.8	(3.7, 54.3)	18	10.4	(5.6, 17.1)	1.82	(0.53, 6.28)	8.4
Lung cancer	3	13.8	(3.0, 39.1)	33	7.1	(4.6, 10.4)	1.93	(0.60, 6.20)	6.7
Cerebrovascular disease	3	13.3	(2.3, 40.5)	55	8.3	(5.8, 11.3)	1.61	(0.47, 5.49)	5.0
Total									
Ischaemic heart disease	18	35.3	(20.7, 56.2)	234	16.2	(13.6, 19.1)	**2.17**	**(1.32, 3.58)**	19.1
Lung cancer	9	18.9	(8.8, 35.5)	71	6.9	(5.2, 9.1)	**2.73**	**(1.36, 5.48)**	12.0
Cerebrovascular disease	6	12.1	(4.1, 27.3)	130	7.5	(5.9, 9.4)	1.61	(0.67, 3.85)	4.6
Suicide	5	13.6	(4.0, 32.8)	26	7.3	(4.4, 11.2)	1.87	(0.68, 5.17)	6.3
Diabetes mellitus	5	11.1	(3.7, 25.2)	37	3.2	(2.0, 4.8)	**3.43**	**(1.33, 8.85)**	7.9

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

Table 16 - Leading causes of death for Māori, all ages, Hutt Valley DHB, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Ischaemic heart disease	4	20.2	(5.0, 53.5)	56	11.7	(7.5, 16.7)	1.74	(0.58, 5.17)	8.5
Lung cancer	4	19.9	(4.9, 52.5)	23	8.9	(5.2, 14.1)	2.23	(0.73, 6.85)	11.0
Breast cancer	3	14.3	(2.6, 43.5)	20	10.4	(5.3, 17.5)	1.38	(0.37, 5.09)	3.9
Diabetes mellitus	3	13.0	(2.2, 40.7)	11	3.2	(1.0, 6.6)	4.06	(0.95, 17.46)	9.8
Cerebrovascular disease	2	10.6	(1.4, 36.5)	52	8.9	(5.8, 12.6)	1.20	(0.30, 4.76)	1.7
Male									
Ischaemic heart disease	8	48.8	(21.2, 95.2)	78	26.9	(19.8, 35.2)	1.82	(0.87, 3.81)	21.9
Lung cancer	5	26.0	(8.0, 61.8)	21	9.3	(5.2, 14.8)	**2.80**	**(1.01, 7.79)**	16.7
Diabetes mellitus	4	19.9	(4.8, 53.6)	14	5.2	(2.3, 9.6)	**3.81**	**(1.13, 12.88)**	14.7
COPD	3	14.6	(2.4, 45.8)	22	7.4	(4.3, 11.7)	1.96	(0.53, 7.26)	7.2
Suicide	2	15.1	(1.5, 55.1)	11	13.4	(5.6, 25.8)	1.13	(0.24, 5.39)	1.7
Total									
Ischaemic heart disease	12	34.2	(17.6, 59.8)	134	18.6	(14.6, 23.3)	1.83	(0.99, 3.38)	15.6
Lung cancer	9	22.8	(10.1, 44.0)	44	9.0	(6.2, 12.6)	**2.52**	**(1.19, 5.35)**	13.8
Diabetes mellitus	6	16.4	(6.1, 35.3)	24	4.1	(2.3, 6.7)	**3.96**	**(1.55, 10.09)**	12.3
COPD	5	13.4	(4.1, 31.9)	46	6.7	(4.6, 9.4)	1.98	(0.75, 5.22)	6.7
Cerebrovascular disease	4	12.2	(3.4, 30.2)	85	9.4	(6.9, 12.4)	1.29	(0.48, 3.47)	2.8

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

Table 17 - Leading causes of death for Māori, all ages, Aotearoa, 2014 to 2018

Cause	Māori		non-Māori		Māori/non-Māori rate ratio (95% CI)		non-Māori leading cause
	Age-standardised rate per 100,000 (95% CI)		Age-standardised rate per 100,000 (95% CI)				
Female							
Lung cancer	29.4	(25.4, 33.9)	7.7	(7.0, 8.4)	**3.84**	**(3.24, 4.55)**	Ischaemic heart disease
Ischaemic heart disease	24.4	(20.8, 28.3)	10.1	(9.5, 10.7)	**2.42**	**(2.05, 2.84)**	Dementia
COPD	16.6	(13.7, 19.9)	5.3	(4.8, 5.8)	**3.14**	**(2.55, 3.86)**	Cerebrovascular disease
Cerebrovascular disease	13.9	(11.2, 17.1)	7.7	(7.1, 8.4)	**1.80**	**(1.44, 2.25)**	COPD
Diabetes mellitus	12.9	(10.3, 16.0)	2.7	(2.3, 3.2)	**4.76**	**(3.64, 6.23)**	Lung cancer
Male							
Ischaemic heart disease	56.7	(50.5, 63.4)	25.3	(24.1, 26.6)	**2.24**	**(1.98, 2.53)**	Ischaemic heart disease
Lung cancer	28.4	(24.2, 33.2)	9.1	(8.4, 9.9)	**3.12**	**(2.61, 3.72)**	Dementia
Diabetes mellitus	19.3	(15.8, 23.4)	4.1	(3.6, 4.6)	**4.76**	**(3.77, 6.00)**	Cerebrovascular disease
COPD	15.5	(12.5, 19.1)	6.4	(5.8, 6.9)	**2.44**	**(1.95, 3.04)**	Lung cancer
Suicide	23.6	(18.8, 29.3)	13.0	(11.4, 14.6)	**1.82**	**(1.42, 2.34)**	COPD
Total							
Ischaemic heart disease	39.4	(35.9, 43.1)	17.3	(16.6, 18.0)	**2.27**	**(2.06, 2.51)**	Ischaemic heart disease
Lung cancer	29.0	(26.0, 32.2)	8.3	(7.8, 8.9)	**3.48**	**(3.08, 3.93)**	Dementia
COPD	16.0	(13.9, 18.3)	5.7	(5.4, 6.1)	**2.79**	**(2.40, 3.24)**	Cerebrovascular disease
Diabetes mellitus	15.9	(13.7, 18.4)	3.4	(3.0, 3.7)	**4.75**	**(3.99, 5.67)**	Lung cancer
Cerebrovascular disease	13.4	(11.4, 15.7)	8.0	(7.5, 8.4)	**1.68**	**(1.43, 1.99)**	COPD

Source: Mortality dataset, Ministry of Health.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates. Cerebrovascular disease includes stroke. Dementia includes Alzheimer's Disease.

When looking at all deaths, the age-standardised death rate (263 deaths each year per 100,000 people) was 1.8 times higher for Māori compared to non-Māori in Ātiawa Toa in 2014-2018 (Table 18). This equates to an average of 96 Māori females and 117 Māori males dying each year in Ātiawa Toa. For Māori in Capital and Coast DHB (Table 19), the age-standardised death rate was 1.8 times higher for non-Māori, and in Hutt Valley DHB (Table 20), the age-standardised death rate was 1.7 times higher for Māori compared to non-Māori.

Table 18 - All-cause deaths, all ages, Ātiawa Toa, 2014 to 2018

Sex	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female	96	214.8	(172.7, 263.8)	1,282	125.0	(113.6, 137.0)	**1.72**	**(1.37, 2.15)**	89.8
Male	117	317.9	(261.4, 382.7)	1,255	176.0	(162.5, 190.1)	**1.81**	**(1.48, 2.21)**	141.9
Total	213	262.8	(227.9, 301.3)	2,538	148.9	(140.1, 158.0)	**1.76**	**(1.52, 2.05)**	113.9

Source: Mortality dataset, Ministry of Health.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB. Average no. per year columns may not total exactly because of rounding.

Table 19 - All-cause deaths, all ages, Capital and Coast DHB, 2014 to 2018

Sex	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female	53	200.1	(147.4, 264.8)	816	115.7	(102.8, 129.4)	**1.73**	**(1.27, 2.34)**	84.4
Male	63	322.6	(242.9, 418.6)	795	167.9	(151.8, 184.9)	**1.92**	**(1.45, 2.54)**	154.7
Total	117	252.0	(207.3, 303.3)	1,611	140.3	(130.0, 151.0)	**1.80**	**(1.47, 2.19)**	111.7

Source: Mortality dataset, Ministry of Health.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB. Average no. per year columns may not total exactly because of rounding.

Table 20 - All-cause deaths, all ages, Hutt Valley DHB, 2014 to 2018

Sex	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female	43	235.0	(168.6, 318.2)	467	144.3	(121.8, 168.4)	**1.63**	**(1.15, 2.30)**	90.7
Male	53	323.4	(240.8, 424.7)	460	193.2	(168.4, 219.7)	**1.67**	**(1.24, 2.27)**	130.2
Total	96	277.7	(224.0, 340.3)	927	167.0	(150.3, 184.6)	**1.66**	**(1.32, 2.09)**	110.7

Source: Mortality dataset, Ministry of Health.
Note: Ratios in **bold** show that Māori rates were significantly different from non-Māori rates in the DHB. Average no. per year columns may not total exactly because of rounding.

The gap between Māori and non-Māori was higher for avoidable deaths (those deaths considered amenable to high-quality healthcare, preventable through public health interventions, or both) compared to all deaths in Ātiawa Toa (Table 21). The age-standardised potentially avoidable death rate (142 deaths each year per 100,000 people) was 2.0 times higher for Māori compared to non-Māori in Ātiawa Toa in 2014-2018.

Between 2014-2018, this equates to an average of 110 avoidable Māori deaths each year in Ātiawa Toa (62 in males and 48 in females). The age-standardised potentially avoidable death rate was higher for Māori in Hutt Valley DHB (Table 23) than for Māori in Capital and Coast DHB (Table 22), and the gap between Māori and non-Māori was higher in Capital and Coast DHB compared to Hutt Valley DHB (2.1 times, and 1.9 times higher respectively).

Table 21 - Potentially avoidable deaths, ages 0-74 years, Ātiawa Toa, 2014 to 2018

Sex	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female	48	115.9	(84.6, 154.8)	231	58.0	(48.6, 68.5)	**2.00**	**(1.43, 2.80)**	57.9
Male	62	169.6	(129.2, 218.3)	311	82.5	(71.6, 94.3)	**2.06**	**(1.54, 2.74)**	87.1
Total	110	141.8	(116.0, 171.6)	541	69.9	(62.6, 77.6)	**2.03**	**(1.63, 2.52)**	71.9

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

Table 22 - Potentially avoidable deaths, ages 0-74 years, Capital and Coast DHB, 2014 to 2018

Sex	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female	25	108.4	(69.2, 161.3)	140	52.5	(41.8, 64.6)	**2.07**	**(1.31, 3.26)**	55.9
Male	33	162.6	(111.1, 229.2)	191	76.0	(63.4, 90.1)	**2.14**	**(1.45, 3.15)**	86.6
Total	59	134.1	(101.2, 174.0)	331	63.9	(55.5, 72.9)	**2.10**	**(1.56, 2.82)**	70.2

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

Table 23 - Potentially avoidable deaths, ages 0-74 years, Hutt Valley DHB, 2014-2018

Sex	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female	22	127.3	(78.9, 193.7)	91	69.4	(51.1, 90.9)	**1.83**	**(1.10, 3.05)**	57.9
Male	29	178.4	(117.9, 258.3)	120	96.4	(76.0, 119.9)	**1.85**	**(1.20, 2.86)**	82.0
Total	51	152.6	(112.8, 201.7)	211	82.6	(68.7, 98.0)	**1.85**	**(1.33, 2.57)**	70.0

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

The leading causes of potentially avoidable deaths (those deaths considered amenable to high-quality healthcare, preventable through public health interventions, or both) for Māori aged 0-74 years in Ātiawa Toa were similar to the leading causes of death overall for Māori in all IMPBs. In 2014-2018, the leading causes of potentially avoidable deaths for Māori aged 0-74 years in Ātiawa Toa were ischaemic heart disease, lung cancer, diabetes, suicide and COPD (Table 24). This was the same as the leading causes of potentially avoidable deaths for Māori nationally (Table 27). These leading causes of avoidable death were the same for Māori in Hutt Valley DHB (Table 26), while cerebrovascular disease featured in the top five avoidable causes for Māori in Capital and Coast DHB (Table 25).

The leading causes of potentially avoidable deaths for Māori females in Ātiawa Toa in 2014-2018 were lung cancer, COPD, ischaemic heart disease, breast cancer and suicide (Table 24). For Māori males, the leading causes of potentially avoidable deaths in 2014-2018 were ischaemic heart disease, lung cancer, suicide, diabetes and cerebrovascular disease. When looking at leading causes of potentially avoidable death for Māori in a specific DHB, small population numbers mean that 1-2 deaths from a particular cause can have an impact on the ranking of leading causes in a given time period. For this reason, local causes of potentially avoidable death for Māori men and women in each DHB should be interpreted together with the leading causes of potentially avoidable death for Māori nationally (Table 27).

Māori aged 0-74 years in Ātiawa Toa in 2014-2018 had over 4.4 times higher potentially avoidable mortality from diabetes compared to non-Māori, 3.0 times higher potentially avoidable mortality for lung cancer, 3.0 times higher potentially avoidable mortality for COPD and 2.3 times higher potentially avoidable mortality for ischaemic heart disease (Table 24). Between 2014-2018, this equates to an average of 18 preventable Māori deaths each year in Ātiawa Toa from ischaemic heart disease (14 males, 4 females), and 15 preventable Māori deaths each year from lung cancer (8 females, 7 males).

Table 24 - Leading causes of potentially avoidable deaths, ages 0-74 years, Ātiawa Toa, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Lung cancer	8	18.5	(8.0, 36.3)	31	5.7	(3.8, 8.2)	**3.25**	**(1.49, 7.10)**	12.8
COPD	5	10.7	(3.1, 26.2)	17	2.8	(1.6, 4.5)	**3.86**	**(1.35, 11.05)**	7.9
Ischaemic heart disease	4	10.0	(2.8, 24.9)	21	4.1	(2.4, 6.4)	2.47	(0.86, 7.09)	5.9
Breast cancer	4	8.7	(2.3, 22.4)	35	8.2	(5.5, 11.7)	1.06	(0.37, 3.02)	0.5
Suicide and self-inflicted injuries	3	9.0	(1.6, 27.6)	10	4.2	(1.7, 8.3)	2.14	(0.53, 8.62)	4.8
Male									
Ischaemic heart disease	14	35.0	(18.8, 59.5)	71	15.2	(11.6, 19.5)	**2.31**	**(1.28, 4.18)**	19.8
Lung cancer	7	15.7	(6.0, 33.0)	28	5.7	(3.7, 8.4)	**2.75**	**(1.16, 6.52)**	10.0
Suicide and self-inflicted injuries	5	17.3	(5.5, 40.1)	26	11.2	(7.0, 16.8)	1.54	(0.58, 4.09)	6.1
Diabetes	5	12.8	(4.2, 29.5)	14	2.8	(1.4, 4.8)	**4.58**	**(1.64, 12.80)**	10.0
Cerebrovascular disease	4	10.8	(2.8, 27.8)	20	4.1	(2.4, 6.5)	2.64	(0.88, 7.94)	6.7
Total									
Ischaemic heart disease	18	22.0	(12.9, 34.9)	92	9.4	(7.5, 11.8)	**2.33**	**(1.39, 3.91)**	12.6
Lung cancer	15	17.2	(9.5, 28.5)	60	5.7	(4.3, 7.4)	**3.02**	**(1.69, 5.39)**	11.5
Diabetes	9	10.2	(4.5, 19.6)	23	2.3	(1.4, 3.6)	**4.37**	**(1.94, 9.87)**	7.9
Suicide and self-inflicted injuries	8	13.0	(5.4, 25.8)	36	7.6	(5.1, 10.9)	1.70	(0.77, 3.76)	5.4
COPD	7	8.8	(3.6, 18.0)	34	3.0	(2.0, 4.1)	**3.00**	**(1.34, 6.70)**	5.8

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

Table 25 - Leading causes of potentially avoidable deaths, ages 0-74 years, Capital and Coast DHB, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Lung cancer	5	18.0	(5.4, 43.6)	18	4.9	(2.8, 8.0)	**3.65**	**(1.29, 10.3)**	13.1
COPD	3	10.9	(2.0, 33.0)	9	2.1	(0.9, 4.2)	**5.09**	**(1.31, 19.8)**	8.8
Suicide and self-inflicted injuries	2	9.2	(0.4, 38.6)	7	4.3	(1.4, 9.4)	2.15	(0.36, 12.87)	4.9
Ischaemic heart disease	2	9.1	(1.3, 29.8)	11	3.1	(1.4, 5.8)	2.91	(0.70, 12.13)	6.0
Breast cancer	2	6.9	(0.6, 26.4)	23	7.7	(4.7, 11.9)	0.89	(0.19, 4.11)	-0.8
Male									
Ischaemic heart disease	7	33.0	(13.3, 67.6)	47	14.9	(10.6, 20.1)	**2.22**	**(1.00, 4.93)**	18.1
Suicide and self-inflicted injuries	3	19.0	(3.7, 54.8)	17	10.4	(5.6, 17.2)	1.83	(0.53, 6.34)	8.6
Lung cancer	3	13.0	(2.6, 37.9)	16	5.0	(2.7, 8.3)	2.61	(0.75, 9.11)	8.0
Diabetes	3	11.7	(1.9, 36.9)	8	2.4	(1.0, 4.9)	**4.83**	**(1.17, 19.93)**	9.3
Cerebrovascular disease	2	11.7	(1.6, 38.4)	13	3.7	(1.8, 6.6)	3.13	(0.77, 12.83)	8.0
Total									
Ischaemic heart disease	10	20.4	(9.5, 38.1)	58	8.8	(6.5, 11.5)	**2.33**	**(1.16, 4.67)**	11.6
Lung cancer	8	15.8	(6.6, 31.6)	34	5.0	(3.3, 7.0)	**3.18**	**(1.43, 7.07)**	10.8
Suicide and self-inflicted injuries	5	13.8	(4.1, 33.1)	24	7.3	(4.4, 11.2)	1.89	(0.68, 5.25)	6.5
Cerebrovascular disease	4	8.9	(2.2, 23.5)	22	3.2	(1.9, 4.9)	2.78	(0.91, 8.48)	5.7
Diabetes	4	8.6	(2.3, 22.1)	13	2.1	(1.0, 3.7)	**4.19**	**(1.31, 13.41)**	6.5

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

Table 26 - Leading causes of potentially avoidable deaths, ages 0-74 years, Hutt Valley DHB, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Lung cancer	4	19.1	(4.5, 51.7)	13	7.2	(3.7, 12.4)	2.66	(0.81, 8.73)	11.9
Ischaemic heart disease	2	11.6	(1.1, 42.3)	10	6.0	(2.6, 11.6)	1.92	(0.40, 9.22)	5.6
Breast cancer	2	11.4	(1.4, 39.2)	12	9.3	(4.4, 16.9)	1.22	(0.28, 5.29)	2.1
COPD	2	10.7	(0.7, 41.8)	8	4.1	(1.7, 8.1)	2.63	(0.50, 13.85)	6.6
Diabetes	2	10.0	(1.1, 36.2)	4	2.3	(0.4, 6.1)	4.45	(0.76, 25.98)	7.7
Male									
Ischaemic heart disease	6	37.2	(13.8, 79.8)	24	15.9	(9.8, 24.3)	2.33	(0.95, 5.73)	21.3
Lung cancer	4	19.0	(4.6, 51.2)	12	7.1	(3.5, 12.8)	2.67	(0.80, 8.85)	11.9
Diabetes	3	14.2	(2.3, 44.6)	6	3.5	(1.1, 8.2)	4.01	(0.89, 18.08)	10.7
Suicide and self-inflicted injuries	2	15.3	(1.5, 55.6)	9	13.2	(5.4, 25.9)	1.16	(0.24, 5.58)	2.1
COPD	2	11.1	(1.2, 40.2)	8	4.5	(1.9, 8.8)	2.49	(0.52, 11.8)	6.6
Total									
Ischaemic heart disease	8	24.1	(10.4, 47.0)	34	10.8	(7.2, 15.5)	**2.22**	**(1.02, 4.84)**	13.3
Lung cancer	7	19.2	(7.7, 39.3)	26	7.1	(4.5, 10.7)	**2.68**	**(1.15, 6.24)**	12.1
Diabetes	5	12.1	(3.6, 29.4)	10	2.9	(1.2, 5.6)	**4.22**	**(1.34, 13.25)**	9.2
COPD	4	10.8	(2.6, 28.4)	16	4.2	(2.4, 6.9)	2.53	(0.81, 7.89)	6.6
Suicide and self-inflicted injuries	3	12.2	(2.5, 34.7)	12	8.5	(3.8, 15.6)	1.44	(0.40, 5.16)	3.7

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

Table 27 - Leading causes of potentially avoidable mortality, ages 0-74 years, Aotearoa, 2014 to 2018

Cause	Māori		non-Māori		Māori/non-Māori rate ratio (95% CI)		non-Māori leading cause
	Age-standardised rate per 100,000 (95% CI)		Age-standardised rate per 100,000 (95% CI)				
Female							
Lung cancer	24.6	(20.8, 28.9)	6.0	(5.3, 6.7)	**4.11**	**(3.38, 5.00)**	Breast cancer
Ischaemic heart disease	14.5	(11.5, 17.9)	3.9	(3.4, 4.5)	**3.67**	**(2.85, 4.74)**	Lung cancer
COPD	11.2	(8.7, 14.1)	3.1	(2.7, 3.6)	**3.59**	**(2.72, 4.74)**	Ischaemic heart disease
Breast cancer	11.7	(8.9, 15.1)	8.1	(7.2, 9.1)	**1.45**	**(1.09, 1.92)**	Colorectal cancer
Diabetes	9.7	(7.3, 12.6)	1.7	(1.4, 2.2)	**5.56**	**(3.91, 7.91)**	COPD
Male							
Ischaemic heart disease	42.1	(36.7, 48.1)	15.5	(14.4, 16.7)	**2.71**	**(2.33, 3.16)**	Ischaemic heart disease
Lung cancer	24.0	(20.1, 28.5)	6.7	(6.0, 7.5)	**3.59**	**(2.93, 4.40)**	Lung cancer
Suicide and self-inflicted injuries	23.8	(18.9, 29.5)	12.9	(11.4, 14.6)	**1.84**	**(1.43, 2.36)**	Suicide and self-inflicted injuries
Diabetes	15.5	(12.3, 19.3)	2.8	(2.3, 3.3)	**5.64**	**(4.24, 7.51)**	Colorectal cancer
Motor vehicle accidents	16.1	(12.2, 20.7)	7.0	(5.8, 8.4)	**2.29**	**(1.68, 3.13)**	Cerebrovascular disease
Total							
Ischaemic heart disease	27.6	(24.5, 30.9)	9.6	(9.0, 10.2)	**2.88**	**(2.52, 3.28)**	Ischaemic heart disease
Lung cancer	24.3	(21.6, 27.4)	6.3	(5.8, 6.8)	**3.85**	**(3.34, 4.43)**	Lung cancer
Diabetes	12.4	(10.4, 14.7)	2.2	(1.9, 2.6)	**5.58**	**(4.47, 6.96)**	Colorectal cancer
Suicide and self-inflicted injuries	16.9	(14.0, 20.2)	8.6	(7.7, 9.6)	**1.96**	**(1.59, 2.41)**	Suicide and self-inflicted injuries
COPD	10.4	(8.6, 12.4)	3.2	(2.8, 3.5)	**3.30**	**(2.68, 4.05)**	COPD

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

Whānau ora
Healthy families

4. Whānau ora - Healthy families

Māori models of health encompass cultural vitality and whānau wellbeing. Indicators of these dimensions of health specific for Māori in each IMPB are included in these profiles, sourced from Te Kupenga 2018, the Māori Social Survey conducted in 2018 by StatsNZ. In 2018, this was a survey of almost 8,500 adults (aged 15 years and over) of Māori ethnicity and/or descent. Further information on Te Kupenga can be found here[8]. Data from Te Kupenga are presented for Māori only. For Te Kupenga survey data presented in this report, the IMPB area has been mapped to SA2 geographic areas.

Based on a scale where 0 is doing extremely badly and 10 is doing extremely well (Table 28), most Māori (78.0%) in Ātiawa Toa reported their whānau was doing well (7/10 or greater), compared to 73.6% of Māori nationally. Just over a fifth of Māori (22.1%) in Ātiawa Toa reported that their whānau was not doing well (6/10 or less). These results were similar for Capital and Coast DHB (Table 29) and Hutt Valley DHB (Table 30).

Table 28 - Whānau well-being reported by Māori aged 15 years and over, Ātiawa Toa and Aotearoa, 2018

How the whānau is doing	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
(10 out of 10)	12.5	(9.6, 15.3)	12.9	(12.1, 13.7)
(9 out of 10)	12.4	(9.6, 15.1)	12.8	(11.9, 13.6)
(8 out of 10)	29.2	(24.3, 34.0)	24.4	(23.3, 25.6)
(7 out of 10)	23.9	(20.7, 27.1)	23.5	(22.5, 24.6)
(0-6 out of 10)	22.1	(17.9, 26.2)	26.4	(25.2, 27.6)

Source: Te Kupenga 2018, Statistics New Zealand customised report.

Table 29 - Whānau wellbeing reported by Māori aged 15 years and over, Capital and Coast DHB and Aotearoa, 2018

How the whānau is doing	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
(10 out of 10)	11.6 *	(7.5, 15.6)	12.9	(12.1, 13.7)
(9 out of 10)	11.4 *	(7.4, 15.3)	12.8	(11.9, 13.6)
(8 out of 10)	30.7	(23.5, 37.9)	24.4	(23.3, 25.6)
(7 out of 10)	24.6	(20.1, 29.1)	23.5	(22.5, 24.6)
(0-6 out of 10)	21.8	(16.4, 27.3)	26.4	(25.2, 27.6)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

[8] https://www.stats.govt.nz/information-releases/te-kupenga-2018-final-english

Table 30 - Whānau wellbeing reported by Māori aged 15 years and over, Hutt Valley DHB and Aotearoa, 2018

How the whānau is doing	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
(10 out of 10)	13.6 *	(9.3, 17.9)	12.9	(12.1, 13.7)
(9 out of 10)	13.6 *	(9.3, 18.0)	12.8	(11.9, 13.6)
(8 out of 10)	27.3	(21.0, 33.6)	24.4	(23.3, 25.6)
(7 out of 10)	23.1	(18.4, 27.8)	23.5	(22.5, 24.6)
(0-6 out of 10)	22.4	(16.2, 28.6)	26.4	(25.2, 27.6)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

When thinking about who made up the whānau, 16.9% of Māori aged 15 years and over in Ātiawa Toa included “close friends or others” (Table 31), compared to 22.6% of Māori nationally. This figure varied from 10% in Capital and Coast DHB (Table 32) to 25.5% in Hutt Valley DHB (Table 33), although small sample numbers from Capital and Coast DHB make it difficult to be certain about this response.

Table 31 - Whānau composition reported by Māori aged 15 years and over, Ātiawa Toa and Aotearoa, 2018

Whānau description	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
Size of whānau				
10 or less	49.5	(44.4, 54.5)	52.1	(50.6, 53.6)
11 to 20	26.2	(21.7, 30.6)	24.2	(23.0, 25.4)
More than 20	24.4	(20.3, 28.4)	23.7	(22.3, 25.0)
Groups included in whānau				
Parents, partner, children, brothers and sisters	98.1	(96.9, 99.2)	97.4	(97.0, 97.8)
Grandparents, grandchildren	41.3	(36.7, 45.9)	39.0	(37.5, 40.5)
Aunts and uncles, cousins, nephews and nieces, other in-laws	52.8	(47.9, 57.7)	48.6	(47.1, 50.2)
Close friends, others	16.9	(13.5, 20.3)	22.6	(21.3, 23.8)

Source: Te Kupenga 2018, Statistics New Zealand customised report.

Table 32 - Whānau composition reported by Māori aged 15 years and over, Capital and Coast DHB and Aotearoa, 2018

Whānau description	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
Size of whānau				
10 or less	53.7	(46.1, 61.3)	52.1	(50.6, 53.6)
11 to 20	27.6	(20.8, 34.4)	24.2	(23.0, 25.4)
More than 20	18.7	(13.6, 23.8)	23.7	(22.3, 25.0)
Groups included in whānau				
Parents, partner, children, brothers and sisters	98.3	(96.9, 99.8)	97.4	(97.0, 97.8)
Grandparents, grandchildren	35.8	(29.0, 42.6)	39.0	(37.5, 40.5)
Aunts and uncles, cousins, nephews and nieces, other in-laws	47.1	(39.8, 54.4)	48.6	(47.1, 50.2)
Close friends, others	10.0 *	(6.6, 13.3)	22.6	(21.3, 23.8)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

Table 33 - Whānau composition reported by Māori aged 15 years and over, Hutt Valley DHB and Aotearoa, 2018

Whānau description	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
Size of whānau				
10 or less	44.2	(37.4, 51.0)	52.1	(50.6, 53.6)
11 to 20	24.4	(18.8, 30.0)	24.2	(23.0, 25.4)
More than 20	31.4	(23.8, 39.0)	23.7	(22.3, 25.0)
Groups included in whānau				
Parents, partner, children, brothers and sisters	97.8	(96.1, 99.5)	97.4	(97.0, 97.8)
Grandparents, grandchildren	48.1	(42.0, 54.2)	39.0	(37.5, 40.5)
Aunts and uncles, cousins, nephews and nieces, other in-laws	59.9	(53.5, 66.3)	48.6	(47.1, 50.2)
Close friends, others	25.5	(20.2, 30.7)	22.6	(21.3, 23.8)

Source: Te Kupenga 2018, Statistics New Zealand customised report.

Most Māori (78.9%) in Ātiawa Toa reported it was easy or very easy to get support in times of need (Table 34). Fewer Māori in Ātiawa Toa (61.5%) reported it was easy or very easy to get help with Māori cultural practices, such as going to a tangi, speaking at a hui or blessing a taonga. These results were similar for Capital and Coast DHB (Table 35) and Hutt Valley DHB (Table 36).

Table 34 - Access to whānau support, Māori aged 15 years and over, Ātiawa Toa and Aotearoa, 2018

How easy is it to get help	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
Support in times of need				
Easy, very easy	78.9	(74.4, 83.3)	76.1	(74.9, 77.3)
Sometimes easy, sometimes hard	13.8	(10.5, 17.1)	16.4	(15.5, 17.4)
Hard, very hard	7.3 *	(4.3, 10.4)	7.5	(6.7, 8.3)
Help with Māori cultural practices such as going to a tangi, speaking at a hui, or blessing a taonga				
Easy, very easy	61.5	(56.3, 66.8)	59.0	(57.7, 60.3)
Sometimes easy, sometimes hard	15.4	(12.5, 18.3)	18.9	(17.9, 19.9)
Hard, very hard	19.4	(14.9, 23.9)	18.1	(17.0, 19.2)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

Table 35 - Access to whānau support, Māori aged 15 years and over, Capital and Coast DHB and Aotearoa, 2018

How easy is it to get help	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
Support in times of need				
Easy, very easy	78.0	(71.5, 84.6)	76.1	(74.9, 77.3)
Sometimes easy, sometimes hard	13.2 *	(8.6, 17.8)	16.4	(15.5, 17.4)
Hard, very hard	8.8 **	(3.6, 13.9)	7.5	(6.7, 8.3)
Help with Māori cultural practices such as going to a tangi, speaking at a hui, or blessing a taonga				
Easy, very easy	60.5	(53.2, 67.7)	59.0	(57.7, 60.3)
Sometimes easy, sometimes hard	16.2	(12.4, 20.0)	18.9	(17.9, 19.9)
Hard, very hard	21.9	(15.6, 28.3)	18.1	(17.0, 19.2)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%, ** shows a sampling error of 50% or more but less than 100%.

Table 36 - Access to whānau support, Māori aged 15 years and over, Hutt Valley DHB and Aotearoa, 2018

How easy is it to get help	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
Support in times of need				
Easy, very easy	79.9	(74.1, 85.6)	76.1	(74.9, 77.3)
Sometimes easy, sometimes hard	14.5 *	(9.7, 19.3)	16.4	(15.5, 17.4)
Hard, very hard	5.6 **	(2.2, 8.9)	7.5	(6.7, 8.3)
Help with Māori cultural practices such as going to a tangi, speaking at a hui, or blessing a taonga				
Easy, very easy	62.9	(55.4, 70.3)	59.0	(57.7, 60.3)
Sometimes easy, sometimes hard	14.4	(10.6, 18.1)	18.9	(17.9, 19.9)
Hard, very hard	16.3 *	(10.2, 22.3)	18.1	(17.0, 19.2)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%, ** shows a sampling error of 50% or more but less than 100%.

Being involved in Māori culture was very/quite important to 46.5% of Māori in Ātiawa Toa, and spirituality was very/quite important to 43% of Māori in Ātiawa Toa (Table 37). Only 14.1% of Māori respondents in Ātiawa Toa reported that being involved in Māori culture was not at all important to them. For Capital and Coast DHB (Table 38), being involved in Māori culture was very/quite important to 43.6% of Māori, and spirituality was very/quite important to 41.3% of Māori. In Hutt Valley DHB (Table 39), being involved in Māori culture was very/quite important to 50% of Māori, and spirituality was very/quite important to 45.2% of Māori.

Table 37 - Importance of Māori culture and spirituality, Māori aged 15 years and over, Ātiawa Toa and Aotearoa, 2018

	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
Importance of being involved in Māori culture				
Very important	23.9	(20.1, 27.7)	22.1	(21.1, 23.1)
Quite important	22.6	(19.0, 26.1)	23.2	(22.1, 24.3)
Somewhat	23.8	(20.2, 27.3)	25.8	(24.7, 26.9)
A little important	15.7	(12.5, 18.9)	18.3	(17.1, 19.5)
Not at all important	14.1*	(9.1, 19.1)	10.6	(9.7, 11.6)
Importance of spirituality				
Very important	25.4	(21.0, 29.7)	30.7	(29.5, 31.9)
Quite important	17.6	(14.4, 20.8)	18.0	(16.9, 19.0)
Somewhat	18.3	(15.3, 21.4)	16.8	(15.9, 17.8)
A little important	15.1	(11.9, 18.4)	15.3	(14.3, 16.2)
Not at all important	23.5	(19.3, 27.8)	19.2	(18.1, 20.4)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

Table 38 - Importance of Māori culture and spirituality, Māori aged 15 years and over, Capital and Coast DHB and Aotearoa, 2018

	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
Importance of being involved in Māori culture				
Very important	19.7	(14.7, 24.8)	22.1	(21.1, 23.1)
Quite important	23.9	(18.2, 29.6)	23.2	(22.1, 24.3)
Somewhat	27.8	(22.4, 33.3)	25.8	(24.7, 26.9)
A little important	15.3	(11.0, 19.6)	18.3	(17.1, 19.5)
Not at all important	13.3 **	(6.4, 20.2)	10.6	(9.7, 11.6)
Importance of spirituality				
Very important	22.7	(16.0, 29.3)	30.7	(29.5, 31.9)
Quite important	18.6	(13.7, 23.5)	18.0	(16.9, 19.0)
Somewhat	17.8	(13.7, 21.9)	16.8	(15.9, 17.8)
A little important	17.1 *	(11.9, 22.4)	15.3	(14.3, 16.2)
Not at all important	23.8	(17.4, 30.2)	19.2	(18.1, 20.4)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%, ** shows a sampling error of 50% or more but less than 100%.

Table 39 - Importance of Māori culture and spirituality, Māori aged 15 years and over, Hutt Valley DHB and Aotearoa, 2018

	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
Importance of being involved in Māori culture				
Very important	29.0	(21.6, 36.4)	22.1	(21.1, 23.1)
Quite important	21.0	(16.6, 25.3)	23.2	(22.1, 24.3)
Somewhat	18.7	(13.8, 23.6)	25.8	(24.7, 26.9)
A little important	16.2	(11.6, 20.8)	18.3	(17.1, 19.5)
Not at all important	15.1 *	(8.2, 21.9)	10.6	(9.7, 11.6)
Importance of spirituality				
Very important	28.8	(21.4, 36.2)	30.7	(29.5, 31.9)
Quite important	16.4	(12.5, 20.3)	18.0	(16.9, 19.0)
Somewhat	19.0	(14.3, 23.7)	16.8	(15.9, 17.8)
A little important	12.6	(9.1, 16.2)	15.3	(14.3, 16.2)
Not at all important	23.2	(18.5, 27.9)	19.2	(18.1, 20.4)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

In Ātiawa Toa in 2018, 16.2% of Māori aged 15 years and over regularly used te reo Māori in the home (Table 40). This figure was 13.9% in Capital and Coast DHB (Table 41), and 19% in Hutt Valley DHB (Table 42), although small sample numbers make it difficult to be certain about this response for Capital and Coast DHB.

Table 40 - Use of te reo Māori in the home, Māori aged 15 years and over, Ātiawa Toa and Aotearoa, 2018

Language spoken at home	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
Māori is main language	S	(NA, NA)	1.8	(1.3, 2.2)
Māori is used regularly	16.2	(12.7, 19.7)	18.4	(17.3, 19.5)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Note: NA = Not Available, S = suppressed: number too small for reliable estimate.

Table 41 - Use of te reo Māori in the home, Māori aged 15 years and over, Capital and Coast DHB and Aotearoa, 2018

Language spoken at home	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
Māori is main language	S	(NA, NA)	1.8	(1.3, 2.2)
Māori is used regularly	13.9 *	(9.0, 18.9)	18.4	(17.3, 19.5)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%, NA = Not Available, S = suppressed: number too small for reliable estimate.

Table 42 - Use of te reo Māori in the home, Māori aged 15 years and over, Hutt Valley DHB and Aotearoa, 2018

Language spoken at home	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
Māori is main language	S	(NA, NA)	1.8	(1.3, 2.2)
Māori is used regularly	19.0	(13.6, 24.3)	18.4	(17.3, 19.5)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: NA = Not Available, S = suppressed: number too small for reliable estimate.

In 2018, almost all Māori aged 15 years and over in Ātiawa Toa (96.9%) had been to a marae at some time (Table 43). Of those, 49.5% had been in the last 12 months. Of those who had ever been to a marae, and who knew their ancestral marae, 82.3% had been to an ancestral marae at some time, 34.5% had been in the last 12 months, and 67% said that they would like to go more often. These figures were similar for Māori in Capital and Coast DHB (Table 44) and Hutt Valley DHB (Table 45).

Table 43 - Access to marae, Māori aged 15 years and over, Ātiawa Toa and Aotearoa, 2018

Been to marae	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
At some time	96.9	(95.3, 98.5)	96.6	(96.0, 97.1)
In previous 12 months [1]	49.5	(44.1, 54.9)	51.8	(50.6, 53.1)
Ancestral marae at some time [1][2]	82.3	(77.5, 87.0)	84.3	(82.9, 85.6)
Ancestral marae in previous 12 months [1][2]	34.5	(28.1, 40.9)	44.3	(42.6, 45.9)
Like to go to ancestral marae more often [1][2]	67.0	(61.0, 73.0)	63.6	(62.1, 65.1)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: [1] Those who had been to a marae at some time. [2] Includes only those who knew their ancestral marae.

Table 44 - Access to marae, Māori aged 15 years and over, Capital and Coast DHB and Aotearoa, 2018

Been to marae	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
At some time	98.2	(96.5, 99.8)	96.6	(96.0, 97.1)
In previous 12 months [1]	44.7	(37.0, 52.4)	51.8	(50.6, 53.1)
Ancestral marae at some time [1][2]	78.7	(71.5, 85.8)	84.3	(82.9, 85.6)
Ancestral marae in previous 12 months [1][2]	30.6 *	(19.9, 41.3)	44.3	(42.6, 45.9)
Like to go to ancestral marae more often [1][2]	68.0	(60.4, 75.6)	63.6	(62.1, 65.1)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: [1] Those who had been to a marae at some time. [2] Includes only those who knew their ancestral marae. An asterisk (*) shows the sampling error is 30% or more but less than 50%.

Table 45 - Access to marae, Māori aged 15 years and over, Hutt Valley DHB and Aotearoa, 2018

Been to marae	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
At some time	95.3	(92.4, 98.3)	96.6	(96.0, 97.1)
In previous 12 months [1]	55.4	(46.8, 64.1)	51.8	(50.6, 53.1)
Ancestral marae at some time [1][2]	86.7	(81.3, 92.2)	84.3	(82.9, 85.6)
Ancestral marae in previous 12 months [1][2]	39.4	(32.3, 46.5)	44.3	(42.6, 45.9)
Like to go to ancestral marae more often [1][2]	65.8	(57.5, 74.0)	63.6	(62.1, 65.1)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: [1] Those who had been to a marae at some time. [2] Includes only those who knew their ancestral marae.

In 2018, 9.4% of Māori aged 15 years and over in Ātiawa Toa had taken part in traditional healing or massage in the past 12 months (Table 46). These figures were similar for Māori in Capital and Coast DHB (Table 47) and Hutt Valley DHB (Table 48) although small sample numbers make it difficult to be certain about the figures for each DHB separately.

Table 46 - Māori aged 15 years and over who took part in traditional healing or massage in last 12 months, Ātiawa Toa and Aotearoa, 2018

Ātiawa Toa		Aotearoa	
%	(95% CI)	%	(95% CI)
9.4	(6.6, 12.2)	12.3	(11.4, 13.2)

Source: Te Kupenga 2018, Statistics New Zealand customised report.

Table 47 - Māori aged 15 years and over who took part in traditional healing or massage in last 12 months, Capital and Coast DHB and Aotearoa, 2018

Capital and Coast		Aotearoa	
%	(95% CI)	%	(95% CI)
8.4 *	(4.3, 12.5)	12.3	(11.4, 13.2)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

Table 48 - Māori aged 15 years and over who took part in traditional healing or massage in last 12 months, Hutt Valley DHB and Aotearoa, 2018

Hutt Valley		Aotearoa	
%	(95% CI)	%	(95% CI)
10.6 *	(6.7, 14.6)	12.3	(11.4, 13.2)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%.

Wai ora
Healthy environments

5. Wai ora − Healthy environments

This section focuses on key aspects of social and physical environments that influence health and well-being. Information in this section comes from Māori and non-Māori individuals responding to the NZ Census 2018, or Māori respondents in the 2018 Te Kupenga survey. Because of data availability at the time of writing, NZ Census 2018, PHO enrolment and NZDep2018 data are presented for the overall IMPB mapped to DHB boundaries, and for each DHB within the IMPB area, whereas Te Kupenga survey data is presented for the IMPB mapped to smaller SA2 geographic areas. The data quality and degree of certainty for Māori is not the same for all variables from the NZ Census 2018. Please see the technical appendix at the end of this report, for further details about how geographic areas were defined for each data source, and for more information on how to interpret variables from the NZ Census 2018.

5.1. Education

In 2018, 69.9% of Māori aged 20 years and over in Ātiawa Toa had achieved a Level 2 Certificate or higher, compared to 85.8% for non-Māori (Table 49). In Capital and Coast DHB, 74.1% of Māori aged 20 years and over had achieved a Level 2 Certificate or higher (Table 50), and this figure was 63.9% for Māori in Hutt Valley DHB (Table 51).

Table 49 - Adults aged 20 years and over with a Level 2 Certificate or higher, Ātiawa Toa, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	24,240	69.9	(69.0, 70.8)	232,866	85.8	(85.4, 86.1)	**0.81**	**(0.81, 0.82)**	-15.9

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 50 - Adults aged 20 years and over with a Level 2 Certificate or higher, Capital and Coast DHB, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	15,084	74.1	(72.9, 75.3)	166,800	88.2	(87.8, 88.7)	**0.84**	**(0.83, 0.85)**	-14.2

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 51 - Adults aged 20 years and over with a Level 2 Certificate or higher, Hutt Valley DHB, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	9,156	63.9	(62.6, 65.2)	66,066	80.1	(79.4, 80.7)	**0.80**	**(0.79, 0.81)**	-16.1

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

5.2. Work

In 2018, 51.1% of Māori aged 15 years and over in Ātiawa Toa were employed full time, and 14.3% were employed part time (Table 52). In 2018, 8.6% of Māori in Ātiawa Toa were unemployed, 1.6 times the rate of non-Māori, and Māori were 1.1 times more likely than non-Māori to not be in the labour force. These figures were similar across the two DHBs: 52.3% of Māori aged 15 years and over were employed full time in Capital and Coast DHB (Table 53) and 49.4% in Hutt Valley DHB (Table 54). Unemployment was higher for Māori in Hutt Valley DHB (9.2%) than in Capital and Coast DHB (8.2%).

Table 52 - Labour force status, 15 years and over, Ātiawa Toa, 2018

Labour force status	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Employed full-time	21,996	51.1	(50.4, 51.8)	174,843	56.0	(55.7, 56.3)	**0.91**	**(0.90, 0.92)**	-4.9
Employed part-time	6,093	14.3	(13.9, 14.6)	45,549	15.7	(15.6, 15.9)	**0.91**	**(0.88, 0.93)**	-1.5
Unemployed	3,561	8.6	(8.3, 8.9)	13,248	5.3	(5.2, 5.4)	**1.63**	**(1.58, 1.69)**	3.3
Not in the labour force	11,526	26.1	(25.6, 26.5)	92,052	23.0	(22.8, 23.2)	**1.13**	**(1.11, 1.15)**	3.0

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. 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.

Table 53 - Labour force status, 15 years and over, Capital and Coast DHB, 2018

Labour force status	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Employed full-time	13,020	52.3	(51.4, 53.3)	121,674	56.1	(55.8, 56.5)	**0.93**	**(0.92, 0.94)**	-3.8
Employed part-time	3,672	14.6	(14.1, 15.1)	32,079	15.7	(15.5, 15.9)	**0.93**	**(0.90, 0.96)**	-1.1
Unemployed	1,998	8.2	(7.9, 8.6)	9,384	5.3	(5.2, 5.4)	**1.55**	**(1.48, 1.62)**	2.9
Not in the labour force	6,381	24.9	(24.3, 25.5)	61,839	22.8	(22.6, 23.0)	**1.09**	**(1.07, 1.12)**	2.1

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. 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.

Table 54 - Labour force status, 15 years and over, Hutt Valley DHB, 2018

Labour force status	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Employed full-time	8,976	49.4	(48.4, 50.5)	53,169	55.8	(55.2, 56.3)	**0.89**	**(0.87, 0.90)**	-6.3
Employed part-time	2,421	13.7	(13.2, 14.3)	13,470	15.6	(15.3, 15.9)	**0.88**	**(0.85, 0.92)**	-1.9
Unemployed	1,563	9.2	(8.7, 9.6)	3,864	5.2	(5.0, 5.4)	**1.77**	**(1.67, 1.87)**	4.0
Not in the labour force	5,145	27.6	(26.8, 28.4)	30,213	23.5	(23.1, 23.8)	**1.18**	**(1.15, 1.21)**	4.1

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. 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.

In 2018, the main employers of Māori women in Ātiawa Toa were public administration and safety (15.8%) health care and social assistance (13.9%); education and training (11.2%); retail (9.8%); and professional, scientific and technical services (9.4%) (Table 55). For Māori men, the leading industries were construction (21.4%); public administration and safety (11.2%); manufacturing (8.3%); professional, scientific and technical services (8.3%); and retail (7.0%). These top five industries were similar for Capital and Coast DHB (Table 56). For Hutt Valley DHB, professional, scientific and technical services were not among the leading industries for Māori (Table 57). Instead, accommodation and food services were among the leading industries for Māori women (8.6%) and transport, postal and warehousing (7.9%) was among the leading industries for Māori men.

Table 55 - Leading industries in which Māori were employed, Ātiawa Toa, 2018

ANZSIC Industry	Māori			non-Māori		
	Number	%	Rank	Number	%	Rank
Females						
Public Administration and Safety	2,205	15.8%	1	16,065	15.0%	1
Health Care and Social Assistance	1,941	13.9%	2	15,945	14.9%	2
Education and Training	1,569	11.2%	3	13,143	12.2%	4
Retail Trade	1,365	9.8%	4	9,093	8.5%	5
Professional, Scientific and Technical Services	1,308	9.4%	5	13,899	13.0%	3
Males						
Construction	3,027	21.4%	1	13,581	12.0%	3
Public Administration and Safety	1,587	11.2%	2	13,998	12.4%	2
Manufacturing	1,179	8.3%	3	7,248	6.4%	5
Professional, Scientific and Technical Services	1,173	8.3%	4	18,507	16.4%	1
Retail Trade	993	7.0%	5	8,430	7.5%	4

Source: 2018 Census, Statistics New Zealand.
Note: Australian and New Zealand Standard Industrial Classification (ANZSIC).

Table 56 - Leading industries in which Māori were employed, Capital and Coast DHB, 2018

ANZSIC Industry	Māori			non-Māori		
	Number	%	Rank	Number	%	Rank
Females						
Public Administration and Safety	1,374	16.3%	1	11,694	15.5%	1
Health Care and Social Assistance	1,131	13.4%	2	10,821	14.3%	2
Education and Training	954	11.3%	3	9,243	12.2%	4
Professional, Scientific and Technical Services	867	10.3%	4	10,344	13.7%	3
Retail Trade	819	9.7%	5	6,180	8.2%	5
Males						
Construction	1,635	19.8%	1	8,160	10.4%	3
Public Administration and Safety	942	11.4%	2	10,092	12.9%	2
Professional, Scientific and Technical Services	831	10.1%	3	14,025	17.9%	1
Retail Trade	579	7.0%	4	5,520	7.1%	4
Manufacturing	546	6.6%	5	3,885	5.0%	8

Source: 2018 Census, Statistics New Zealand.
Note: Australian and New Zealand Standard Industrial Classification (ANZSIC).

Table 57 - Leading industries in which Māori were employed, Hutt Valley DHB, 2018

ANZSIC Industry	Māori			non-Māori		
	Number	%	Rank	Number	%	Rank
Females						
Public Administration and Safety	831	15.1%	1	4,371	13.8%	2
Health Care and Social Assistance	810	14.7%	2	5,124	16.1%	1
Education and Training	615	11.2%	3	3,900	12.3%	3
Retail Trade	546	9.9%	4	2,913	9.2%	5
Accommodation and Food Services	474	8.6%	5	1,935	6.1%	6
Males						
Construction	1,392	23.6%	1	5,421	15.6%	1
Public Administration and Safety	645	10.9%	2	3,906	11.2%	3
Manufacturing	633	10.7%	3	3,363	9.6%	4
Transport, Postal and Warehousing	465	7.9%	4	1,899	5.4%	6
Retail Trade	414	7.0%	5	2,910	8.3%	5

Source: 2018 Census, Statistics New Zealand.
Note: Australian and New Zealand Standard Industrial Classification (ANZSIC).

In terms of the type of work Māori perform within those industries (Table 58), for employed Māori women in Ātiawa Toa, the leading occupational groupings were professionals (26.9%); clerical and administrative workers (19.5%); and community and personal service workers (15.2%). Māori men were most likely to be employed as technicians and trade workers (18.3%); professionals (18.0%); or labourers (15.6%). These top three categories were the same for Māori women across the two DHBs (Table 59 and Table 60). For Māori men in Capital and Coast DHB (Table 59), the leading occupations were professionals (21.6%); technicians and trades workers (17.2%); and managers (16.1%). For Māori men in Hutt Valley DHB (Table 60), the leading occupations were technicians and trades workers (19.7%); labourers (17.8%); and machinery operators and drivers (14.5%).

Table 58 - Leading occupations in which Māori were employed, Ātiawa Toa DHB, 2018

ANZSCO Occupation	Māori			non-Māori		
	Number	%	Rank	Number	%	Rank
Females						
Professionals	3,756	26.9%	1	38,718	36.1%	1
Clerical and Administrative Workers	2,715	19.5%	2	20,160	18.8%	2
Community and Personal Service Workers	2,115	15.2%	3	12,933	12.1%	4
Sales Workers	1,764	12.6%	4	10,617	9.9%	5
Managers	1,725	12.4%	5	15,099	14.1%	3
Labourers	1,071	7.7%	6	4,602	4.3%	6
Technicians and Trades Workers	567	4.1%	7	4,281	4.0%	7
Machinery Operators and Drivers	234	1.7%	8	903	0.8%	8
Males						
Technicians and Trades Workers	2,583	18.3%	1	17,085	15.1%	3
Professionals	2,550	18.0%	2	36,720	32.5%	1
Labourers	2,205	15.6%	3	8,685	7.7%	4
Managers	2,136	15.1%	4	22,086	19.5%	2
Machinery Operators and Drivers	1,596	11.3%	5	6,207	5.5%	8
Community and Personal Service Workers	1,212	8.6%	6	7,173	6.3%	6
Sales Workers	954	6.7%	7	8,061	7.1%	5
Clerical and Administrative Workers	909	6.4%	8	7,059	6.2%	7

Source: 2018 Census, Statistics New Zealand.
Note: Australian and New Zealand Standard Classification of Occupations (ANZSCO), major grouping.

Table 59 - Leading occupations in which Māori were employed, Capital and Coast DHB, 2018

ANZSCO Occupation	Māori			non-Māori		
	Number	%	Rank	Number	%	Rank
Females						
Professionals	2,481	29.4%	1	29,163	38.6%	1
Clerical and Administrative Workers	1,587	18.8%	2	13,254	17.5%	2
Community and Personal Service Workers	1,248	14.8%	3	8,778	11.6%	4
Managers	1,089	12.9%	4	10,791	14.3%	3
Sales Workers	1,020	12.1%	5	7,041	9.3%	5
Labourers	567	6.7%	6	3,036	4.0%	6
Technicians and Trades Workers	318	3.8%	7	2,928	3.9%	7
Machinery Operators and Drivers	123	1.5%	8	543	0.7%	8
Males						
Professionals	1,785	21.6%	1	28,089	35.9%	1
Technicians and Trades Workers	1,419	17.2%	2	10,374	13.3%	3
Managers	1,326	16.1%	3	15,348	19.6%	2
Labourers	1,155	14.0%	4	5,466	7.0%	4
Machinery Operators and Drivers	741	9.0%	5	3,501	4.5%	8
Community and Personal Service Workers	711	8.6%	6	5,094	6.5%	6
Sales Workers	567	6.9%	7	5,457	7.0%	5
Clerical and Administrative Workers	549	6.7%	8	4,899	6.3%	7

Source: 2018 Census, Statistics New Zealand.
Note: Australian and New Zealand Standard Classification of Occupations (ANZSCO), major grouping.

Table 60 - Leading occupations in which Māori were employed, Hutt Valley DHB, 2018

ANZSCO Occupation	Māori			non-Māori		
	Number	%	Rank	Number	%	Rank
Females						
Professionals	1,275	23.1%	1	9,555	30.1%	1
Clerical and Administrative Workers	1,128	20.5%	2	6,906	21.7%	2
Community and Personal Service Workers	867	15.7%	3	4,155	13.1%	4
Sales Workers	744	13.5%	4	3,576	11.3%	5
Managers	636	11.5%	5	4,308	13.6%	3
Labourers	504	9.1%	6	1,566	4.9%	6
Technicians and Trades Workers	249	4.5%	7	1,353	4.3%	7
Machinery Operators and Drivers	111	2.0%	8	360	1.1%	8
Males						
Technicians and Trades Workers	1,164	19.7%	1	6,711	19.3%	3
Labourers	1,050	17.8%	2	3,219	9.2%	4
Machinery Operators and Drivers	855	14.5%	3	2,706	7.8%	5
Managers	810	13.7%	4	6,738	19.3%	2
Professionals	765	13.0%	5	8,631	24.8%	1
Community and Personal Service Workers	501	8.5%	6	2,079	6.0%	8
Sales Workers	387	6.6%	7	2,604	7.5%	6
Clerical and Administrative Workers	360	6.1%	8	2,160	6.2%	7

Source: 2018 Census, Statistics New Zealand.
Note: Australian and New Zealand Standard Classification of Occupations (ANZSCO), major grouping.

Unpaid work is very common, with 89.3% of Māori aged over 15 years in Ātiawa Toa in 2018 reporting they performed unpaid work (Table 61). Māori in Ātiawa Toa were significantly more likely than non-Māori to participate in unpaid work looking after a disabled or ill household (1.7 times) or non-household (1.3 times) member. These figures were very similar for Capital and Coast DHB (Table 62) and Hutt Valley DHB (Table 63).

Table 61 - Unpaid work, 15 years and over, Ātiawa Toa, 2018

Unpaid work	Māori		non-Māori		Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	Number	%			
Any unpaid work	29,025	89.3	258,066	90.1	**0.99**	**(0.99, 0.99)**	-0.8
Looking after disabled/ill household member	3,588	11.0	18,837	6.6	**1.68**	**(1.62, 1.74)**	4.5
Looking after disabled/ill non-household member	3,372	10.4	22,836	8.0	**1.30**	**(1.26, 1.35)**	2.4

Source: 2018 Census, Statistics New Zealand.
Notes: *Percentages are NOT age-standardised due to not having detailed age-group data available.*
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 62 - Unpaid work, 15 years and over, Capital and Coast DHB, 2018

Unpaid work	Māori		non-Māori		Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	Number	%			
Any unpaid work	17,499	90.0	179,442	90.3	1.00	(0.99, 1.00)	-0.3
Looking after disabled/ill household member	1,998	10.3	12,486	6.3	**1.64**	**(1.56, 1.71)**	4.0
Looking after disabled/ill non-household member	1,944	10.0	15,498	7.8	**1.28**	**(1.23, 1.34)**	2.2

Source: 2018 Census, Statistics New Zealand.
Notes: *Percentages are NOT age-standardised due to not having detailed age-group data available.*
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 63 - Unpaid work, 15 years and over, Hutt Valley DHB, 2018

Unpaid work	Māori		non-Māori		Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	Number	%			
Any unpaid work	11,526	88.2	78,624	89.6	**0.98**	**(0.98, 0.99)**	-1.4
Looking after disabled/ill household member	1,590	12.2	6,351	7.2	**1.68**	**(1.60, 1.77)**	4.9
Looking after disabled/ill non-household member	1,428	10.9	7,338	8.4	**1.31**	**(1.24, 1.38)**	2.6

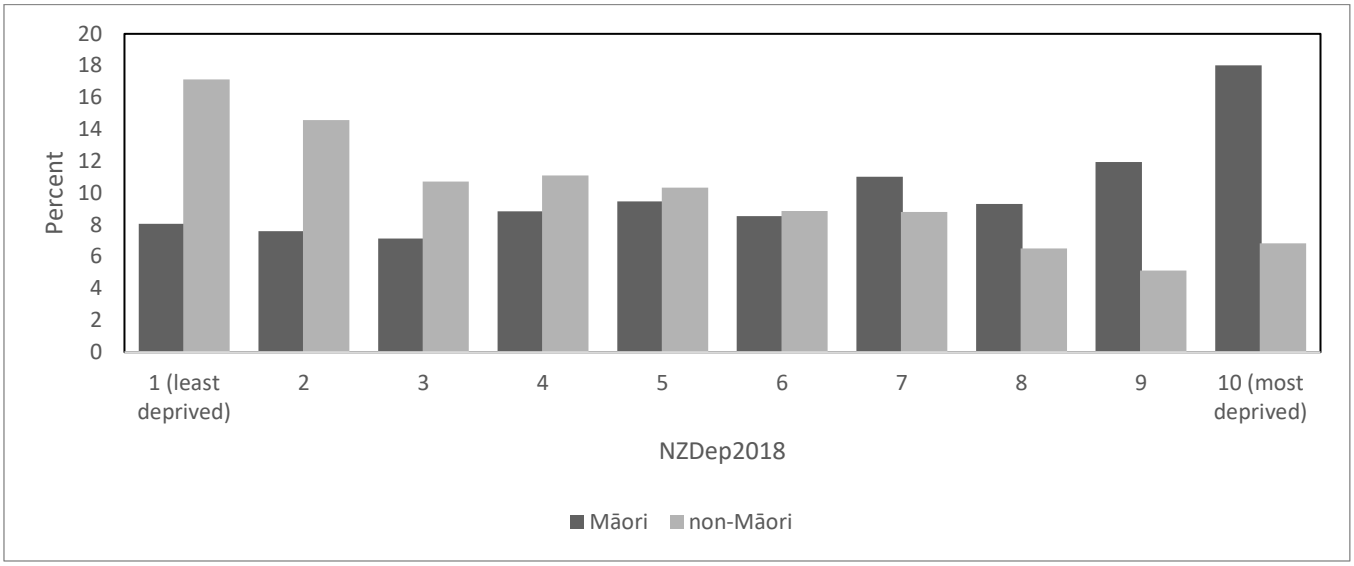
Source: 2018 Census, Statistics New Zealand.
Notes: *Percentages are NOT age-standardised due to not having detailed age-group data available.*
Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

5.3. Income and standard of living

NZDep2018 is a small-area-based measure of neighbourhood deprivation, by looking at the comparative socio-economic positions of small geographic areas and assigning them decile numbers from 1 (least deprived) to 10 (most deprived). The index is based on 9 socio-economic variables from the 2018 Census (Atkinson, Salmond et al. 2019). It describes the general socio-economic deprivation of an area. An area's decile score does not necessarily mean all individuals living in that area experience an equivalent level of deprivation.

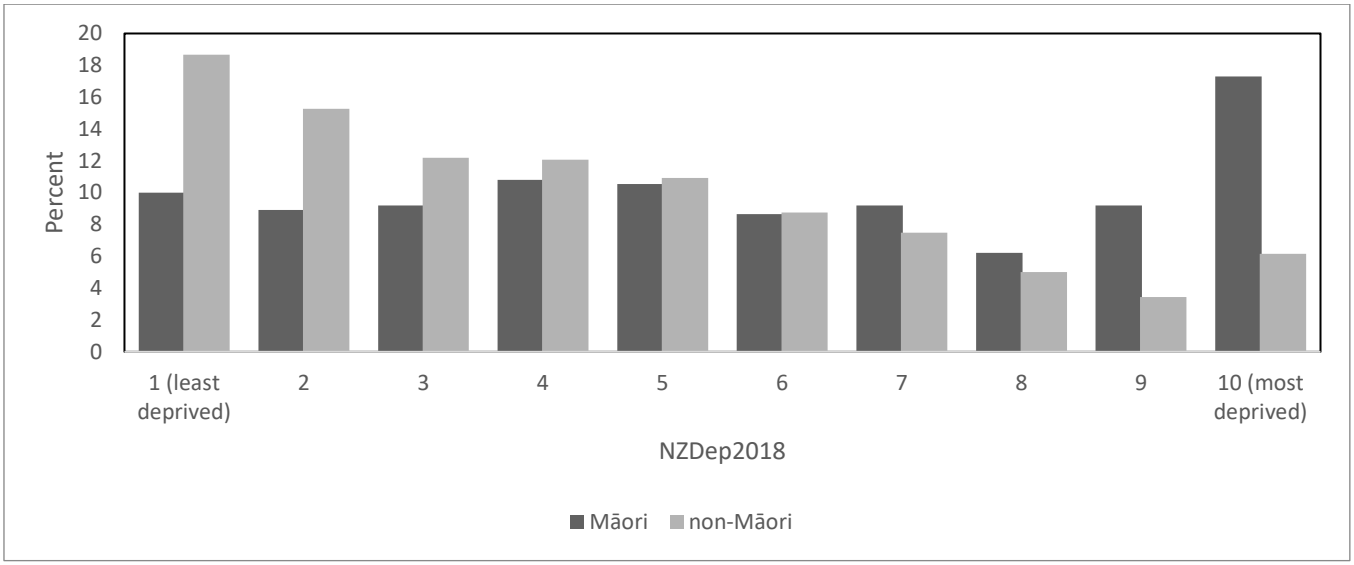
In Ātiawa Toa 30% of Māori lived in the two most deprived deciles in 2018, compared to 12% for non-Māori (Figure 7). A total of 16% of Māori in Ātiawa Toa lived in the two *least* deprived deciles in 2018, compared to 32% of non-Māori in Ātiawa Toa. This situation differs between the two DHBs. In Capital and Coast DHB, 26% of Māori lived in the two most deprived deciles in 2018, compared to 9% for non-Māori (Figure 8). A total of 19% of Māori in Capital and Coast lived in the two least deprived deciles in 2018, compared to 34% of non-Māori. In Hutt Valley DHB, 34% of Māori lived in the two most deprived deciles in 2018, compared to 17% for non-Māori (Figure 9). A total of 11% of Māori in Hutt Valley DHB lived in the two least deprived deciles in 2018, compared to 27% of non-Māori.

Figure 7 - NZDep2018 distribution of Māori and non-Māori by decile, Ātiawa Toa, 2018



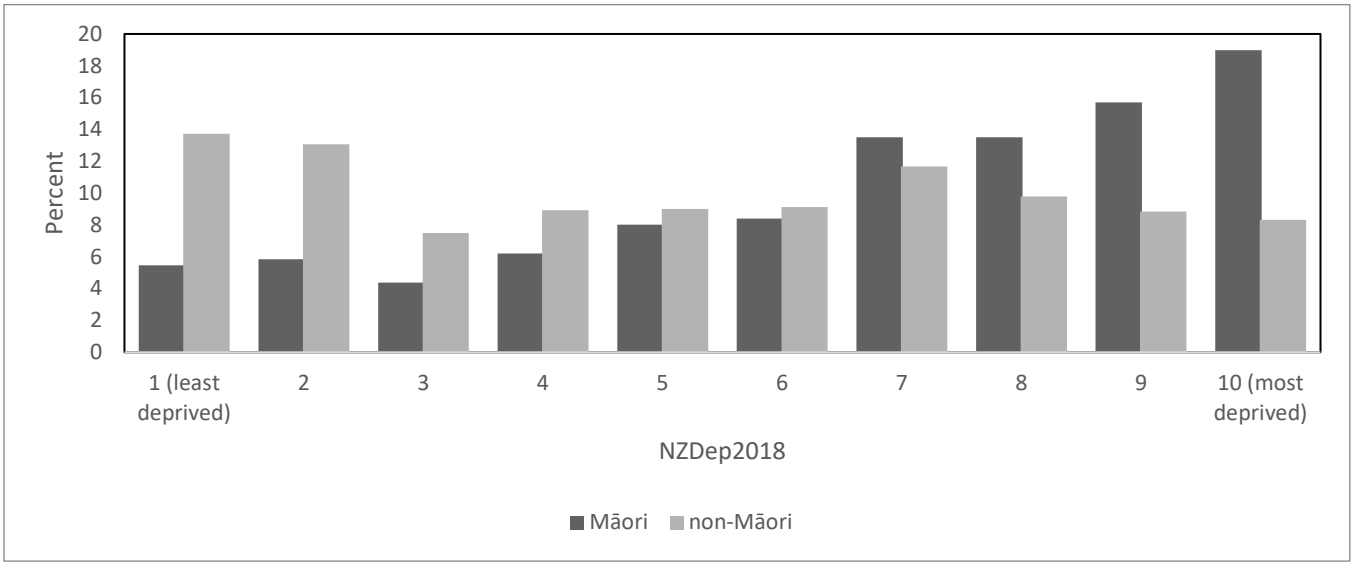
Source: Deprivation decile for estimated resident population (ERP), former DHB areas, prioritised ethnicity, provided by Stats NZ for Te Whatu Ora. Deprivation is derived according to the neighbourhood where the individual lives, based on University of Otago's NZDep2018 Socio-economic Deprivation Indices.

Figure 8 - NZDep2018 distribution of Māori and non-Māori by decile, Capital and Coast DHB, 2018



Source: Deprivation decile for estimated resident population (ERP), former DHB areas, prioritised ethnicity, provided by Stats NZ for Te Whatu Ora. Deprivation is derived according to the neighbourhood where the individual lives, based on University of Otago's NZDep2018 Socio-economic Deprivation Indices.

Figure 9 - NZDep2018 distribution of Māori and non-Māori by decile, Hutt Valley DHB, 2018



Source: Deprivation decile for estimated resident population (ERP), former DHB areas, prioritised ethnicity, provided by Stats NZ for Te Whatu Ora. Deprivation is derived according to the neighbourhood where the individual lives, based on University of Otago's NZDep2018 Socio-economic Deprivation Indices.

In 2018, 8.7% of Māori aged 15 years and over in Ātiawa Toa reported often putting up with feeling cold, 3.9% often went without fresh fruit and vegetables, and 9.1% often put off doctor's visits, because of cost (Table 64). These figures were similar for Māori in Capital and Coast DHB (Table 65) and Hutt Valley DHB (Table 66) although small sample numbers make it difficult to be certain about the figures for each DHB separately.

Table 64 - Unmet need reported by Māori aged 15 years and over to keep costs down in the last 12 months, Ātiawa Toa and Aotearoa, 2018

Actions taken a lot to keep costs down	Ātiawa Toa		Aotearoa	
	%	(95% CI)	%	(95% CI)
Put up with feeling the cold	8.7	(6.6, 10.7)	9.9	(9.1, 10.7)
Go without fresh fruit and vegetables	3.9 *	(2.4, 5.4)	6.2	(5.6, 6.9)
Postpone or put off visits to the doctor	9.1 *	(6.4, 11.9)	9.7	(8.8, 10.6)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Note: An asterisk (*) shows the sampling error is 30% or more but less than 50%. Participants were asked if they did any of these "a lot", "a little" or "not at all" to keep costs down. Only those who answered "a lot" are shown here.

Table 65 - Unmet need reported by Māori aged 15 years and over to keep costs down in the last 12 months, Capital and Coast DHB and Aotearoa, 2018

Actions taken a lot to keep costs down	Capital and Coast		Aotearoa	
	%	(95% CI)	%	(95% CI)
Put up with feeling the cold	7.6	(5.5, 9.7)	9.9	(9.1, 10.7)
Go without fresh fruit and vegetables	S	(NA, NA)	6.2	(5.6, 6.9)
Postpone or put off visits to the doctor	9.1 *	(6.0, 12.2)	9.7	(8.8, 10.6)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%, NA = Not Available, S = suppressed: number too small for reliable estimate. Participants were asked if they did any of these "a lot", "a little" or "not at all" to keep costs down. Only those who answered "a lot" are shown here.

Table 66 - Unmet need reported by Māori aged 15 years and over to keep costs down in the last 12 months, Hutt Valley DHB and Aotearoa, 2018

Actions taken a lot to keep costs down	Hutt Valley		Aotearoa	
	%	(95% CI)	%	(95% CI)
Put up with feeling the cold	10.0 *	(5.7, 14.2)	9.9	(9.1, 10.7)
Go without fresh fruit and vegetables	5.5 **	(2.6, 8.4)	6.2	(5.6, 6.9)
Postpone or put off visits to the doctor	9.2 *	(4.8, 13.6)	9.7	(8.8, 10.6)

Source: Te Kupenga 2018, Statistics New Zealand customised report.
Notes: An asterisk (*) shows the sampling error is 30% or more but less than 50%, ** shows a sampling error of 50% or more but less than 100%. Participants were asked if they did any of these "a lot", "a little" or "not at all" to keep costs down. Only those who answered "a lot" are shown here.

Māori in Ātiawa Toa are 1.3 times more likely than non-Māori to receive an income of $20,000 or less (Table 67). This equates to 31.7% of Māori aged 20 years and over living on an income of $20,000 or less compared to 25.4% of non-Māori in 2018. In Capital and Coast DHB, 30.4% of Māori aged 20 years and over received an income of $20,000 or less (Table 68). In Hutt Valley DHB, 33.4% of Māori aged 20 years and over received an income of $20,000 or less (Table 69).

Table 67 - People 20 years and over whose total annual personal income in $20,000 or less, Ātiawa Toa, 2018

	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Total income $20,000 or less	12,003	31.7	(31.1, 32.3)	76,626	25.4	(25.2, 25.6)	**1.25**	**(1.23, 1.27)**	6.3

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 68 - People 20 years and over whose total annual personal income in $20,000 or less, Capital and Coast DHB, 2018

	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Total income $20,000 or less	6,753	30.4	(29.6, 31.1)	51,936	25.0	(24.7, 25.2)	**1.22**	**(1.19, 1.24)**	5.4

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 69 - People 20 years and over whose total annual personal income in $20,000 or less, Hutt Valley DHB, 2018

	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Total income $20,000 or less	5,250	33.4	(32.5, 34.3)	24,690	26.1	(25.7, 26.5)	**1.28**	**(1.25, 1.31)**	7.3

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Māori in Ātiawa Toa are 1.4 times more likely than non-Māori to be without access to a motor vehicle (Table 70). This equates to 8.8% of Māori living in Ātiawa Toa with no access to a motor vehicle compared to 6.3% of non-Māori in 2018. Māori in Capital and Coast DHB were 1.2 times more likely than non-Māori to be without access to a vehicle (Table 71), and Māori in Hutt Valley DHB were 2.4 times more likely than non-Māori to be without access to a motor vehicle (Table 72).

Table 70 - People with no access to a motor vehicle, Ātiawa Toa, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	4,614	8.8	(8.6, 9.1)	25,707	6.3	(6.2, 6.4)	**1.40**	**(1.36, 1.45)**	2.5

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 71 - People with no access to a motor vehicle, Capital and Coast DHB, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	2,817	9.0	(8.7, 9.4)	20,484	7.3	(7.2, 7.5)	**1.23**	**(1.19, 1.28)**	1.7

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 72 - People with no access to a motor vehicle, Hutt Valley DHB, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	1,797	8.4	(8.0, 8.8)	5,223	3.5	(3.4, 3.7)	**2.37**	**(2.25, 2.49)**	4.8

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Māori in Ātiawa Toa are 2.0 times more likely than non-Māori to have no access to telecommunications (Table 73). This equates to 1.2% of Māori (630 people) who had no access to any form of telecommunications (a functional cellphone, telephone, or the Internet) compared to 0.6% of non-Māori in 2018. This percentage is slightly higher for Māori in Hutt Valley DHB (1.4%) (Table 75) than in Capital and Coast DHB (1.0%) (Table 74).

Table 73 - People with no access to telecommunications, Ātiawa Toa, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	630	1.2	(1.1, 1.3)	2,043	0.6	(0.5, 0.6)	**2.02**	**(1.84, 2.20)**	0.6

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 74 - People with no access to telecommunications, Capital and Coast DHB, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	330	1.0	(0.9, 1.2)	1,344	0.6	(0.5, 0.6)	**1.88**	**(1.67, 2.12)**	0.5

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 75- People with no access to telecommunications, Hutt Valley DHB, 2018

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2018	300	1.4	(1.2, 1.5)	699	0.6	(0.6 0.7)	**2.11**	**(1.84, 2.41)**	0.7

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

5.4. Housing

Māori in Ātiawa Toa are less likely than non-Māori to own their home (Table 76). In 2018, 65.7% of Māori aged 20 years and over in Ātiawa Toa lived in a home they did not own/partly own or hold in a family trust compared to 51.8% of non-Māori. These figures are similar for Māori in Capital and Coast (Table 77) and Hutt Valley (Table 78) DHBs.

Table 76 - Housing tenure, 20 years and over, Ātiawa Toa, 2018

Housing tenure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Owned or partly owned	8,973	29.8	(29.2, 30.5)	126,429	40.4	(40.1, 40.6)	**0.74**	**(0.73, 0.77)**	-10.5
Held in a family trust	1,452	4.5	(4.3, 4.7)	29,067	7.8	(7.7, 7.9)	**0.58**	**(0.55, 0.61)**	-3.3
Not owned; not held in a family trust	18,036	65.7	(64.7, 66.7)	111,360	51.8	(51.5, 52.1)	**1.27**	**(1.26, 1.28)**	13.9

Source: 2018 Census, Statistics New Zealand.
Note: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 77 - Housing tenure, 20 years and over, Capital and Coast DHB, 2018

Housing tenure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Owned or partly owned	5,067	28.8	(28.0, 29.6)	82,965	38.2	(37.9, 38.5)	**0.75**	**(0.74, 0.77)**	-9.4
Held in a family trust	951	5.1	(4.7, 5.4)	20,013	8.0	(7.8, 8.1)	**0.64**	**(0.60, 0.68)**	-2.9
Not owned; not held in a family trust	10,932	66.1	(64.8, 67.4)	81,306	53.8	(53.5, 54.2)	**1.23**	**(1.21, 1.24)**	12.3

Source: 2018 Census, Statistics New Zealand.
Note: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 78 - Housing tenure, 20 years and over, Hutt Valley DHB, 2018

Housing tenure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Owned or partly owned	3,906	31.4	(30.3, 32.4)	43,464	45.7	(45.2, 46.2)	**0.69**	**(0.67, 0.71)**	-14.3
Held in a family trust	501	3.7	(3.4, 4.1)	9,054	7.6	(7.4, 7.8)	**0.49**	**(0.45, 0.53)**	-3.9
Not owned; not held in a family trust	7,104	65.0	(63.4, 66.5)	30,054	46.7	(46.1, 47.3)	**1.39**	**(1.37, 1.41)**	18.3

Source: 2018 Census, Statistics New Zealand.
Note: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Living in an overcrowded home was 1.9 times more common for Māori than non-Māori in Ātiawa Toa in 2018 (Table 79). In the 2018 Census, 19.6% of Māori (10,083 people) in Ātiawa Toa lived in overcrowded homes compared to 10.5% of non-Māori. A higher proportion of Māori in Hutt Valley DHB (22.2%) (Table 81) than Capital and Coast DHB (17.7%) (Table 80) lived in overcrowded homes in 2018.

Table 79 - People living in crowded households (requiring at least one more bedroom), Ātiawa Toa, 2018

Measure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Household crowding	10,083	19.6	(19.2, 20.0)	31,545	10.5	(10.4, 10.7)	**1.86**	**(1.82, 1.90)**	9.1

Source: 2018 Census, Statistics New Zealand.
Note: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 80 - People living in crowded households (requiring at least one more bedroom), Capital and Coast DHB, 2018

Measure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Household crowding	5,316	17.7	(17.2, 18.2)	21,525	10.3	(10.1, 10.4)	**1.72**	**(1.67, 1.77)**	7.4

Source: 2018 Census, Statistics New Zealand.
Note: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 81 - People living in crowded households (requiring at least one more bedroom), Hutt Valley DHB, 2018

Measure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Household crowding	4,767	22.2	(21.6, 22.8)	10,020	11.1	(10.8, 11.3)	**2.00**	**(1.94, 2.07)**	11.1

Source: 2018 Census, Statistics New Zealand.
Note: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

In 2018, 38.2% of Māori in Ātiawa Toa lived in a home that was sometimes or always damp, and 30.6% of Māori lived in a house with mould (Table 82). Māori in Ātiawa Toa were 1.5 times more likely than non-Māori to live in a damp home and 1.5 times more likely to live in a mouldy home. These rates were similar for Māori living in Capital and Coast DHB (Table 83), but were even higher for Māori living in Hutt Valley DHB: 40.4% of Māori in Hutt Valley DHB lived in a home that was sometimes or always damp, and 31.7% of Māori lived in a house with mould (Table 84).

Table 82 - People experiencing housing quality issues sometimes or always, Ātiawa Toa, 2018

Housing quality issues	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Dampness	18,168	38.2	(37.6, 38.7)	78,954	25.4	(25.2, 25.6)	**1.51**	**(1.49, 1.52)**	12.8
Mould	14,721	30.6	(30.1, 31.1)	63,363	20.1	(20.0, 20.3)	**1.52**	**(1.50, 1.54)**	10.5

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.
Dampness indicator shows % people who stated their house experienced dampness sometimes or always.
Mould indicator shows % people who stated their house experienced mould (of approximately A4-size or larger) sometimes or always.

Table 83 - People experiencing housing quality issues sometimes or always, Capital and Coast DHB, 2018

Housing quality issues	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Dampness	10,209	36.6	(35.8, 37.3)	54,552	25.2	(25.0, 25.5)	**1.45**	**(1.42, 1.47)**	11.3
Mould	8,391	29.8	(29.2, 30.5)	44,136	20.1	(19.9, 20.4)	**1.48**	**(1.45, 1.51)**	9.7

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.
Dampness indicator shows % people who stated their house experienced dampness sometimes or always.
Mould indicator shows % people who stated their house experienced mould (of approximately A4-size or larger) sometimes or always.

Table 84 - People experiencing housing quality issues sometimes or always, Hutt Valley DHB, 2018

Housing quality issues	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
Dampness	7,959	40.4	(39.5, 41.3)	24,402	25.4	(25.0, 25.8)	**1.59**	**(1.56, 1.62)**	15.0
Mould	6,330	31.7	(30.9, 32.5)	19,227	20.0	(19.7, 20.3)	**1.59**	**(1.55, 1.63)**	11.7

Source: 2018 Census, Statistics New Zealand.
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.
Dampness indicator shows % people who stated their house experienced dampness sometimes or always.
Mould indicator shows % people who stated their house experienced mould (of approximately A4-size or larger) sometimes or always.

Māori in Ātiawa Toa were 1.1 times more likely than non-Māori to live in homes without any source of heating in 2018 (Table 85). This equates to 3.6% of Māori (1,878 people) in Ātiawa Toa who were without heating compared to 1.4% of non-Māori in 2018. Of these Māori without heating, 1,332 are in Capital and Coast DHB (Table 86), and 546 are in Hutt Valley DHB (Table 87).

Table 85 - People living in households where there is no source of heating, Ātiawa Toa, 2018

Measure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
No source of heating	1,878	3.6	(3.4, 3.7)	10,776	3.3	(3.2, 3.4)	**1.08**	**(1.03, 1.13)**	0.3

Source: 2018 Census, Statistics New Zealand
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 86- People living in households where there is no source of heating, Capital and Coast DHB, 2018

Measure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
No source of heating	1,332	4.1	(3.9, 4.4)	9,237	4.0	(3.9, 4.0)	1.05	(0.99, 1.11)	0.2

Source: 2018 Census, Statistics New Zealand
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 87 - People living in households where there is no source of heating, Hutt Valley DHB, 2018

Measure	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
No source of heating	546	2.6	(2.3, 2.8)	1,539	1.5	(1.5, 1.6)	**1.66**	**(1.51, 1.83)**	1.0

Source: 2018 Census, Statistics New Zealand
Notes: Percentages are age-standardised to the 2001 Māori population. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

5.5. Primary Care Enrolment

In October 2023, 16.2% of Māori in Ātiawa Toa were not enrolled with primary health care, compared to 3.2% for non-Māori (Table 88). This figure is similar for Māori in Capital and Coast DHB (15.6%) (Table 89) and Hutt Valley DHB (17.0%) (Table 90).

Nationally, 16.2% of Māori were not enrolled with primary health care, compared to 1.3% of non-Māori in October 2023. One partial explanation for the lower enrolment for Māori may be related to poor ethnicity data quality - this primary care enrolment data uses the ethnicity recorded in a person's National Health Index (NHI) record, and previous research has found that compared to the ethnicity that people report in the Census, the NHI undercounts Māori by 15.7%, with higher undercounts for Māori men (Harris, Paine et al. 2022). The poor ethnicity data quality makes it difficult to assess how many Māori in Ātiawa Toa are actually missing out on being enrolled with primary health care, and how many are actually enrolled but misclassified with a non-Māori ethnicity. It is likely that both of these factors make a contribution to the inequity in primary care enrolment data.

Table 88 - People enrolled with primary care, Ātiawa Toa, October 2023

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2023	59,743	83.8	(83.1, 84.5)	398,937	96.8	(96.5, 97.1)	**0.87**	**(0.86, 0.87)**	-13.0

Source: Te Whatu Ora Primary Care Enrolment data; denominator is 2023 ERP from Te Whatu Ora Population Web Tool
Notes: *Percentages are crude (not age-standardised)*. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 89 - People enrolled with primary care, Capital and Coast DHB, October 2023

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2023	34,263	84.4	(83.5, 85.3)	271,521	96.5	(96.1, 96.9)	**0.87**	**(0.87, 0.88)**	-12.1

Source: Te Whatu Ora Primary Care Enrolment data; denominator is 2023 ERP from Te Whatu Ora Population Web Tool
Notes: *Percentages are crude (not age-standardised)*. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Table 90 - People enrolled with primary care, Hutt Valley DHB, October 2023

Year	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		difference in percentage
	Number	%	(95% CI)	Number	%	(95% CI)			
2023	25,480	83.0	(82.0, 84.0)	127,416	97.4	(96.9, 97.9)	**0.85**	**(0.85, 0.86)**	-14.4

Source: Te Whatu Ora Primary Care Enrolment data; denominator is 2023 ERP from Te Whatu Ora Population Web Tool
Notes: *Percentages are crude (not age-standardised)*. Ratios in **bold** show a statistically significant difference between Māori and non-Māori.

Ngā āpitihanga
Appendices

Appendix 1: IMPB Māori population projections

Table 91 - Māori population projections, single year, Ātiawa Toa (mapped to DHB geographic boundaries), by 5-year age band, 2018 to 2043

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2018			2019			2020			2021			2022		
00-04	2,950	3,130	6,090	2,930	3,130	6,070	2,980	3,190	6,180	3,020	3,230	6,250	3,040	3,240	6,270
05-09	3,130	3,340	6,470	3,110	3,300	6,420	3,050	3,250	6,310	3,060	3,280	6,330	3,050	3,290	6,340
10-14	2,880	3,110	5,990	2,970	3,190	6,160	3,160	3,330	6,490	3,250	3,410	6,660	3,280	3,400	6,690
15-19	3,020	2,990	6,000	3,000	3,030	6,030	2,930	3,060	5,990	2,940	3,100	6,040	2,980	3,210	6,200
20-24	3,250	3,200	6,450	3,320	3,280	6,600	3,420	3,320	6,740	3,460	3,330	6,790	3,490	3,350	6,830
25-29	2,780	2,940	5,720	2,880	3,020	5,910	2,950	3,030	5,980	3,040	3,110	6,150	3,160	3,120	6,280
30-34	2,180	2,070	4,250	2,330	2,230	4,560	2,500	2,560	5,060	2,710	2,790	5,490	2,830	2,960	5,800
35-39	1,960	1,890	3,840	1,950	1,850	3,800	2,030	1,830	3,850	2,070	1,840	3,900	2,130	1,950	4,080
40-44	2,000	1,840	3,850	2,010	1,840	3,850	2,000	1,870	3,870	2,030	1,920	3,950	2,010	1,940	3,960
45-49	1,980	1,870	3,850	2,010	1,890	3,890	2,010	1,900	3,900	1,980	1,890	3,880	1,960	1,860	3,830
50-54	1,720	1,720	3,450	1,790	1,740	3,530	1,820	1,710	3,530	1,870	1,770	3,640	1,910	1,780	3,700
55-59	1,580	1,420	2,980	1,570	1,490	3,060	1,610	1,560	3,170	1,660	1,580	3,220	1,680	1,610	3,280
60-64	1,090	990	2,070	1,200	1,030	2,230	1,290	1,100	2,390	1,370	1,190	2,560	1,420	1,260	2,690
65-69	750	720	1,470	770	760	1,530	840	780	1,610	870	800	1,670	940	850	1,790
70-74	440	400	840	460	420	890	490	470	960	550	520	1,060	580	530	1,120
75-79	300	250	550	300	270	560	300	280	590	310	280	590	310	290	600
80-84	160	110	270	170	110	280	170	110	290	170	130	300	200	150	340
85+	90	60	150	90	60	160	110	80	190	120	80	200	120	90	220
All Ages	**32,300**	**32,000**	**64,300**	**32,900**	**32,700**	**65,500**	**33,600**	**33,500**	**67,100**	**34,400**	**34,300**	**68,700**	**35,100**	**34,900**	**70,000**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2023			2024			2025			2026		
00-04	3,080	3,270	6,340	3,110	3,290	6,420	3,140	3,320	6,460	3,170	3,350	6,530
05-09	3,050	3,240	6,280	3,020	3,240	6,270	3,060	3,280	6,340	3,080	3,290	6,360
10-14	3,260	3,480	6,740	3,260	3,440	6,690	3,160	3,370	6,540	3,150	3,370	6,530
15-19	3,100	3,320	6,420	3,190	3,400	6,590	3,340	3,530	6,870	3,420	3,590	7,010
20-24	3,410	3,380	6,790	3,390	3,420	6,810	3,290	3,430	6,720	3,270	3,430	6,710
25-29	3,260	3,190	6,440	3,340	3,260	6,600	3,420	3,290	6,720	3,450	3,290	6,740
30-34	2,950	3,050	6,000	3,030	3,140	6,170	3,080	3,120	6,200	3,140	3,170	6,320
35-39	2,290	2,150	4,430	2,440	2,300	4,740	2,610	2,620	5,220	2,790	2,830	5,630
40-44	2,000	1,910	3,910	1,980	1,880	3,860	2,050	1,830	3,880	2,070	1,830	3,890
45-49	1,980	1,820	3,800	1,990	1,830	3,810	1,960	1,850	3,810	1,990	1,880	3,870
50-54	1,930	1,820	3,750	1,950	1,840	3,800	1,940	1,850	3,780	1,900	1,820	3,730
55-59	1,660	1,630	3,300	1,720	1,660	3,390	1,750	1,630	3,370	1,780	1,680	3,460
60-64	1,490	1,310	2,800	1,480	1,390	2,880	1,520	1,460	2,980	1,550	1,460	3,010
65-69	1,000	880	1,870	1,110	920	2,030	1,180	980	2,180	1,260	1,070	2,320
70-74	650	590	1,240	670	630	1,300	720	650	1,370	750	680	1,420
75-79	330	290	620	350	320	680	380	340	720	420	390	810
80-84	200	160	360	210	170	370	210	180	400	230	190	400
85+	130	80	210	150	80	230	150	100	240	150	110	260
All Ages	**35,800**	**35,600**	**71,300**	**36,300**	**36,200**	**72,600**	**37,000**	**36,800**	**73,800**	**37,600**	**37,400**	**75,000**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2027			2028			2029			2030		
00-04	3,210	3,390	6,580	3,240	3,420	6,660	3,260	3,450	6,710	3,270	3,470	6,740
05-09	3,080	3,300	6,370	3,120	3,310	6,420	3,150	3,340	6,490	3,190	3,370	6,550
10-14	3,140	3,380	6,520	3,130	3,320	6,460	3,110	3,330	6,430	3,150	3,360	6,510
15-19	3,460	3,570	7,030	3,420	3,640	7,060	3,410	3,600	7,010	3,330	3,530	6,860
20-24	3,310	3,550	6,850	3,410	3,640	7,050	3,500	3,720	7,220	3,670	3,850	7,520
25-29	3,460	3,310	6,770	3,390	3,330	6,720	3,360	3,360	6,720	3,270	3,370	6,630
30-34	3,260	3,180	6,440	3,340	3,240	6,590	3,430	3,320	6,740	3,520	3,350	6,860
35-39	2,920	3,010	5,910	3,010	3,090	6,090	3,090	3,160	6,250	3,130	3,150	6,280
40-44	2,120	1,940	4,060	2,290	2,140	4,420	2,440	2,290	4,730	2,610	2,610	5,210
45-49	1,960	1,890	3,870	1,940	1,860	3,800	1,920	1,820	3,740	1,990	1,780	3,760
50-54	1,880	1,790	3,670	1,900	1,760	3,660	1,900	1,750	3,650	1,890	1,770	3,660
55-59	1,830	1,690	3,510	1,840	1,720	3,560	1,860	1,740	3,600	1,850	1,750	3,600
60-64	1,580	1,490	3,070	1,560	1,520	3,080	1,630	1,540	3,170	1,650	1,510	3,150
65-69	1,300	1,130	2,430	1,370	1,180	2,550	1,370	1,250	2,620	1,410	1,320	2,730
70-74	820	710	1,540	870	740	1,610	980	780	1,760	1,050	840	1,890
75-79	460	400	860	520	460	980	520	500	1,020	590	520	1,100
80-84	220	190	410	230	190	420	250	210	450	250	230	480
85+	180	130	300	180	140	320	200	140	340	210	160	370
All Ages	**38,100**	**38,100**	**76,200**	**38,800**	**38,600**	**77,400**	**39,400**	**39,300**	**78,700**	**39,900**	**39,900**	**79,900**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2031			2032			2033			2034		
00-04	3,290	3,480	6,770	3,300	3,490	6,810	3,320	3,510	6,840	3,330	3,530	6,870
05-09	3,210	3,410	6,620	3,250	3,440	6,690	3,290	3,480	6,760	3,310	3,500	6,820
10-14	3,160	3,370	6,540	3,170	3,390	6,550	3,210	3,390	6,600	3,250	3,430	6,670
15-19	3,310	3,530	6,840	3,300	3,550	6,840	3,290	3,480	6,780	3,270	3,480	6,750
20-24	3,740	3,910	7,650	3,780	3,890	7,680	3,750	3,960	7,710	3,740	3,920	7,660
25-29	3,240	3,380	6,620	3,280	3,490	6,770	3,390	3,590	6,980	3,480	3,670	7,150
30-34	3,540	3,350	6,890	3,560	3,360	6,930	3,490	3,390	6,870	3,460	3,420	6,880
35-39	3,200	3,210	6,410	3,320	3,220	6,530	3,410	3,280	6,690	3,490	3,360	6,850
40-44	2,790	2,830	5,620	2,920	3,000	5,910	3,010	3,080	6,090	3,100	3,160	6,250
45-49	2,000	1,780	3,780	2,070	1,890	3,960	2,230	2,090	4,320	2,390	2,240	4,630
50-54	1,910	1,810	3,720	1,890	1,820	3,720	1,870	1,790	3,650	1,850	1,750	3,600
55-59	1,810	1,740	3,550	1,790	1,700	3,500	1,820	1,660	3,480	1,820	1,660	3,490
60-64	1,690	1,560	3,240	1,730	1,570	3,310	1,740	1,610	3,360	1,760	1,630	3,390
65-69	1,430	1,320	2,760	1,460	1,350	2,820	1,440	1,380	2,830	1,510	1,410	2,920
70-74	1,120	920	2,030	1,160	980	2,140	1,220	1,030	2,250	1,220	1,100	2,310
75-79	610	530	1,140	680	570	1,240	710	590	1,310	810	620	1,440
80-84	310	260	560	330	270	590	390	320	710	390	350	750
85+	210	160	370	220	160	380	230	170	410	230	190	430
All Ages	**40,600**	**40,500**	**81,100**	**41,200**	**41,100**	**82,400**	**41,900**	**41,800**	**83,600**	**42,400**	**42,500**	**84,900**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2035			2036			2037			2038		
00-04	3,350	3,540	6,910	3,370	3,550	6,930	3,380	3,570	6,960	3,390	3,590	7,000
05-09	3,330	3,530	6,860	3,350	3,550	6,890	3,360	3,560	6,930	3,380	3,580	6,960
10-14	3,280	3,460	6,750	3,310	3,500	6,810	3,340	3,530	6,890	3,380	3,580	6,950
15-19	3,310	3,510	6,820	3,320	3,530	6,850	3,320	3,540	6,870	3,370	3,550	6,910
20-24	3,650	3,860	7,500	3,640	3,860	7,490	3,620	3,870	7,490	3,610	3,800	7,410
25-29	3,640	3,800	7,440	3,720	3,860	7,580	3,750	3,840	7,610	3,720	3,920	7,640
30-34	3,370	3,430	6,790	3,350	3,440	6,780	3,390	3,550	6,940	3,500	3,650	7,150
35-39	3,590	3,400	6,980	3,630	3,400	7,010	3,640	3,420	7,050	3,570	3,430	7,000
40-44	3,140	3,140	6,280	3,210	3,210	6,410	3,320	3,220	6,540	3,420	3,280	6,710
45-49	2,560	2,560	5,110	2,740	2,780	5,520	2,870	2,950	5,820	2,970	3,030	6,000
50-54	1,910	1,710	3,620	1,930	1,720	3,650	1,990	1,830	3,820	2,160	2,020	4,180
55-59	1,810	1,680	3,500	1,830	1,720	3,550	1,810	1,730	3,550	1,790	1,700	3,490
60-64	1,760	1,640	3,390	1,730	1,620	3,350	1,700	1,590	3,300	1,730	1,560	3,280
65-69	1,540	1,370	2,910	1,570	1,430	3,000	1,620	1,440	3,050	1,640	1,480	3,110
70-74	1,260	1,160	2,420	1,290	1,160	2,460	1,320	1,190	2,520	1,300	1,220	2,530
75-79	870	680	1,550	940	750	1,680	970	810	1,780	1,040	840	1,890
80-84	440	370	820	470	380	850	530	420	950	560	430	990
85+	260	210	470	290	230	520	310	240	550	370	280	640
All Ages	**43,000**	**43,000**	**86,100**	**43,700**	**43,700**	**87,300**	**44,300**	**44,300**	**88,600**	**44,900**	**45,000**	**89,800**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2039			2040			2041			2042			2043		
00-04	3,420	3,620	7,040	3,430	3,650	7,080	3,460	3,660	7,120	3,480	3,690	7,160	3,520	3,710	7,210
05-09	3,390	3,590	7,000	3,420	3,620	7,020	3,430	3,630	7,060	3,450	3,650	7,090	3,460	3,660	7,130
10-14	3,400	3,600	7,010	3,430	3,630	7,050	3,450	3,650	7,090	3,460	3,670	7,130	3,480	3,680	7,160
15-19	3,400	3,580	7,000	3,440	3,620	7,060	3,470	3,660	7,130	3,510	3,700	7,210	3,540	3,740	7,280
20-24	3,590	3,800	7,390	3,620	3,830	7,470	3,640	3,850	7,500	3,640	3,870	7,510	3,700	3,870	7,560
25-29	3,710	3,870	7,580	3,620	3,810	7,430	3,610	3,810	7,420	3,590	3,820	7,410	3,580	3,750	7,340
30-34	3,590	3,730	7,320	3,760	3,860	7,620	3,830	3,920	7,750	3,860	3,920	7,780	3,830	3,990	7,820
35-39	3,540	3,470	7,010	3,440	3,480	6,920	3,430	3,490	6,930	3,470	3,610	7,080	3,580	3,710	7,290
40-44	3,500	3,370	6,870	3,600	3,400	7,000	3,640	3,400	7,040	3,660	3,420	7,080	3,590	3,450	7,040
45-49	3,050	3,110	6,160	3,100	3,100	6,190	3,160	3,160	6,330	3,270	3,180	6,460	3,380	3,250	6,630
50-54	2,320	2,170	4,490	2,480	2,490	4,980	2,670	2,710	5,380	2,800	2,880	5,680	2,900	2,960	5,860
55-59	1,770	1,670	3,440	1,830	1,620	3,450	1,850	1,620	3,480	1,910	1,730	3,660	2,080	1,930	4,010
60-64	1,740	1,560	3,290	1,730	1,580	3,300	1,740	1,620	3,370	1,730	1,630	3,370	1,710	1,600	3,310
65-69	1,650	1,500	3,150	1,650	1,520	3,160	1,610	1,510	3,120	1,600	1,470	3,070	1,630	1,440	3,060
70-74	1,370	1,250	2,620	1,400	1,210	2,610	1,430	1,270	2,700	1,480	1,280	2,750	1,490	1,320	2,800
75-79	1,040	920	1,960	1,080	970	2,050	1,110	980	2,090	1,140	1,010	2,150	1,120	1,030	2,160
80-84	640	450	1,090	690	500	1,190	750	560	1,310	770	620	1,390	830	650	1,480
85+	380	310	690	420	340	750	450	350	820	510	370	880	570	410	990
All Ages	**45,500**	**45,600**	**91,100**	**46,100**	**46,300**	**92,400**	**46,700**	**46,800**	**93,600**	**47,300**	**47,400**	**94,900**	**48,000**	**48,100**	**96,200**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Table 92 - Māori population projections, single year, Capital and Coast DHB, by 5-year age band, 2018 to 2043

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2018			2019			2020			2021			2022		
00-04	1,610	1,670	3,290	1,590	1,640	3,230	1,610	1,660	3,280	1,620	1,700	3,320	1,620	1,720	3,330
05-09	1,750	1,870	3,620	1,690	1,870	3,560	1,660	1,830	3,490	1,670	1,800	3,470	1,670	1,760	3,430
10-14	1,620	1,750	3,370	1,710	1,770	3,480	1,790	1,860	3,650	1,810	1,870	3,680	1,790	1,890	3,690
15-19	1,800	1,700	3,500	1,720	1,700	3,420	1,650	1,680	3,330	1,630	1,740	3,370	1,680	1,780	3,470
20-24	2,130	1,990	4,120	2,210	2,040	4,250	2,290	2,050	4,340	2,280	2,030	4,310	2,240	2,020	4,260
25-29	1,710	1,740	3,450	1,810	1,840	3,650	1,850	1,870	3,720	1,950	1,940	3,890	2,050	1,970	4,020
30-34	1,220	1,150	2,370	1,310	1,230	2,540	1,420	1,430	2,850	1,570	1,570	3,130	1,680	1,690	3,380
35-39	1,090	1,030	2,110	1,070	1,010	2,070	1,120	1,000	2,120	1,140	1,020	2,150	1,180	1,060	2,250
40-44	1,190	1,020	2,220	1,190	1,000	2,190	1,160	1,000	2,160	1,150	1,030	2,180	1,100	1,040	2,150
45-49	1,170	1,060	2,230	1,180	1,090	2,260	1,180	1,070	2,250	1,160	1,050	2,220	1,140	1,020	2,170
50-54	990	990	1,990	1,020	1,020	2,040	1,060	1,010	2,070	1,080	1,020	2,100	1,110	1,010	2,120
55-59	900	780	1,670	910	830	1,740	920	880	1,800	960	910	1,860	960	930	1,890
60-64	610	540	1,140	650	540	1,190	700	560	1,260	760	600	1,360	790	660	1,460
65-69	420	390	810	440	410	850	480	430	910	490	460	940	520	480	1,000
70-74	260	220	480	270	230	510	280	260	540	310	280	590	330	280	610
75-79	180	150	330	180	160	340	180	150	340	190	150	340	190	150	340
80-84	100	60	160	110	60	170	110	70	190	110	80	190	130	90	210
85+	60	30	90	60	30	90	70	40	110	70	40	120	80	50	130
All Ages	**18,800**	**18,100**	**37,000**	**19,100**	**18,500**	**37,600**	**19,500**	**18,900**	**38,400**	**19,900**	**19,300**	**39,200**	**20,300**	**19,600**	**39,900**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2023			2024			2025			2026			2027		
00-04	1,640	1,740	3,370	1,660	1,760	3,440	1,690	1,790	3,480	1,710	1,810	3,530	1,740	1,840	3,570
05-09	1,640	1,700	3,330	1,610	1,670	3,290	1,630	1,690	3,320	1,630	1,710	3,340	1,620	1,730	3,350
10-14	1,790	1,910	3,700	1,740	1,910	3,650	1,690	1,870	3,560	1,700	1,830	3,530	1,690	1,790	3,480
15-19	1,730	1,850	3,580	1,820	1,870	3,690	1,880	1,960	3,840	1,900	1,960	3,860	1,880	1,980	3,860
20-24	2,140	2,040	4,180	2,050	2,040	4,100	1,970	2,010	3,980	1,940	2,050	3,990	1,990	2,100	4,090
25-29	2,160	2,000	4,150	2,250	2,050	4,300	2,320	2,050	4,380	2,310	2,030	4,340	2,260	2,030	4,290
30-34	1,790	1,790	3,580	1,880	1,890	3,770	1,910	1,910	3,820	2,000	1,970	3,970	2,100	2,000	4,100
35-39	1,260	1,180	2,430	1,350	1,250	2,600	1,460	1,450	2,900	1,590	1,580	3,180	1,710	1,710	3,410
40-44	1,080	1,020	2,100	1,060	1,000	2,060	1,110	980	2,090	1,120	990	2,110	1,160	1,040	2,200
45-49	1,160	990	2,150	1,160	970	2,130	1,120	970	2,090	1,110	990	2,100	1,060	1,000	2,070
50-54	1,120	1,020	2,140	1,130	1,040	2,180	1,130	1,030	2,150	1,100	1,000	2,110	1,090	970	2,060
55-59	940	930	1,880	970	960	1,940	1,010	960	1,960	1,020	960	1,980	1,050	950	2,000
60-64	840	710	1,550	850	770	1,620	860	820	1,680	890	840	1,730	900	860	1,760
65-69	550	470	1,020	590	480	1,070	630	490	1,130	690	540	1,220	720	590	1,310
70-74	360	320	680	380	340	720	410	360	770	420	390	800	450	400	860
75-79	200	160	360	210	180	390	220	190	410	240	210	450	260	210	470
80-84	130	100	220	130	100	230	130	100	230	140	100	230	140	100	240
85+	90	40	130	100	40	140	100	60	160	100	70	170	120	80	190
All Ages	**20,600**	**20,000**	**40,600**	**20,900**	**20,300**	**41,300**	**21,300**	**20,700**	**42,000**	**21,600**	**21,000**	**42,600**	**21,900**	**21,400**	**43,300**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2028			2029			2030			2031			2032		
00-04	1,760	1,860	3,620	1,770	1,880	3,650	1,780	1,890	3,670	1,790	1,890	3,680	1,790	1,900	3,700
05-09	1,640	1,750	3,390	1,670	1,780	3,450	1,700	1,800	3,500	1,720	1,830	3,550	1,750	1,850	3,600
10-14	1,660	1,720	3,390	1,640	1,700	3,330	1,660	1,710	3,370	1,650	1,730	3,390	1,650	1,760	3,400
15-19	1,870	2,000	3,870	1,820	2,000	3,820	1,780	1,950	3,730	1,780	1,910	3,700	1,780	1,880	3,650
20-24	2,030	2,160	4,190	2,120	2,180	4,300	2,190	2,270	4,460	2,200	2,270	4,470	2,190	2,290	4,480
25-29	2,170	2,040	4,210	2,080	2,040	4,120	2,000	2,010	4,000	1,960	2,050	4,010	2,020	2,090	4,110
30-34	2,200	2,030	4,230	2,300	2,080	4,380	2,380	2,090	4,460	2,360	2,070	4,430	2,320	2,060	4,380
35-39	1,810	1,800	3,600	1,900	1,890	3,790	1,920	1,920	3,840	2,010	1,980	4,000	2,120	2,010	4,130
40-44	1,240	1,160	2,390	1,330	1,230	2,560	1,440	1,430	2,860	1,570	1,570	3,140	1,690	1,690	3,380
45-49	1,040	980	2,020	1,010	960	1,970	1,060	940	2,000	1,070	950	2,020	1,120	1,000	2,120
50-54	1,100	950	2,050	1,100	920	2,020	1,070	920	1,990	1,060	940	2,000	1,010	950	1,970
55-59	1,060	960	2,020	1,070	980	2,060	1,070	970	2,040	1,040	950	1,990	1,030	920	1,950
60-64	880	870	1,750	910	890	1,810	950	890	1,830	960	890	1,850	990	880	1,880
65-69	770	640	1,410	780	690	1,470	790	740	1,530	820	760	1,580	830	780	1,610
70-74	480	400	880	520	400	920	560	410	970	610	460	1,060	640	510	1,150
75-79	290	250	540	300	270	570	340	290	630	340	310	650	380	330	700
80-84	140	110	250	150	120	270	150	130	280	180	140	320	190	140	330
85+	120	80	200	130	80	210	130	90	220	130	90	220	140	90	230
All Ages	**22,300**	**21,700**	**44,000**	**22,600**	**22,100**	**44,700**	**22,900**	**22,400**	**45,400**	**23,300**	**22,800**	**46,100**	**23,600**	**23,100**	**46,800**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2033			2034			2035			2036			2037		
00-04	1,800	1,900	3,710	1,800	1,910	3,720	1,810	1,910	3,730	1,810	1,910	3,730	1,810	1,910	3,730
05-09	1,770	1,880	3,640	1,780	1,890	3,680	1,800	1,910	3,700	1,810	1,920	3,720	1,810	1,920	3,740
10-14	1,670	1,770	3,440	1,700	1,800	3,500	1,730	1,830	3,560	1,750	1,860	3,610	1,770	1,880	3,660
15-19	1,750	1,810	3,560	1,720	1,780	3,500	1,740	1,790	3,530	1,740	1,820	3,550	1,730	1,840	3,570
20-24	2,180	2,310	4,490	2,130	2,310	4,440	2,080	2,270	4,350	2,090	2,230	4,320	2,080	2,190	4,270
25-29	2,060	2,160	4,220	2,150	2,180	4,330	2,210	2,270	4,480	2,230	2,270	4,500	2,210	2,290	4,510
30-34	2,230	2,080	4,300	2,140	2,080	4,210	2,060	2,050	4,100	2,030	2,090	4,110	2,080	2,130	4,210
35-39	2,230	2,040	4,270	2,320	2,100	4,420	2,410	2,110	4,510	2,400	2,090	4,480	2,350	2,090	4,440
40-44	1,790	1,780	3,570	1,880	1,880	3,760	1,910	1,900	3,810	2,000	1,970	3,960	2,100	2,000	4,100
45-49	1,190	1,120	2,310	1,290	1,190	2,480	1,400	1,390	2,780	1,530	1,530	3,060	1,650	1,650	3,300
50-54	990	930	1,920	960	910	1,870	1,010	890	1,900	1,020	910	1,930	1,060	960	2,020
55-59	1,050	890	1,940	1,050	870	1,920	1,020	860	1,890	1,010	890	1,900	960	900	1,860
60-64	1,000	890	1,900	1,010	920	1,930	1,010	910	1,910	990	880	1,870	970	860	1,830
65-69	810	790	1,600	840	820	1,660	880	810	1,690	890	820	1,710	920	810	1,730
70-74	680	560	1,240	700	610	1,300	710	650	1,360	740	670	1,410	750	690	1,440
75-79	390	320	720	430	320	750	460	330	790	510	370	880	540	420	960
80-84	220	180	400	230	190	430	260	210	480	270	230	500	300	250	550
85+	150	100	250	150	110	260	160	120	280	180	120	300	190	120	310
All Ages	**24,000**	**23,500**	**47,500**	**24,300**	**23,900**	**48,200**	**24,600**	**24,200**	**48,800**	**25,000**	**24,600**	**49,500**	**25,300**	**24,900**	**50,200**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2038			2039			2040			2041		
00-04	1,810	1,910	3,730	1,810	1,920	3,730	1,810	1,930	3,740	1,810	1,930	3,740
05-09	1,820	1,930	3,750	1,820	1,930	3,760	1,830	1,940	3,760	1,830	1,940	3,770
10-14	1,800	1,910	3,700	1,810	1,920	3,740	1,830	1,940	3,760	1,840	1,950	3,780
15-19	1,750	1,850	3,600	1,780	1,880	3,670	1,810	1,910	3,720	1,830	1,940	3,770
20-24	2,050	2,120	4,170	2,030	2,090	4,120	2,040	2,100	4,150	2,040	2,120	4,170
25-29	2,200	2,320	4,520	2,150	2,310	4,460	2,100	2,270	4,370	2,110	2,230	4,340
30-34	2,120	2,200	4,320	2,210	2,220	4,430	2,280	2,310	4,590	2,290	2,310	4,600
35-39	2,260	2,100	4,360	2,170	2,100	4,270	2,090	2,070	4,160	2,060	2,110	4,180
40-44	2,210	2,030	4,250	2,310	2,090	4,400	2,400	2,100	4,500	2,390	2,080	4,470
45-49	1,750	1,740	3,490	1,840	1,840	3,680	1,870	1,860	3,730	1,960	1,930	3,890
50-54	1,140	1,070	2,210	1,240	1,140	2,380	1,340	1,340	2,690	1,480	1,480	2,960
55-59	940	880	1,820	910	860	1,770	960	840	1,800	970	850	1,820
60-64	990	830	1,820	1,000	810	1,800	970	810	1,770	950	830	1,790
65-69	940	820	1,750	940	850	1,790	940	840	1,780	920	820	1,740
70-74	730	700	1,430	760	730	1,490	800	720	1,520	810	730	1,540
75-79	580	460	1,050	600	510	1,110	610	550	1,160	640	570	1,210
80-84	310	240	550	340	230	570	360	240	600	410	270	680
85+	220	160	370	240	170	410	260	190	450	270	210	490
All Ages	**25,600**	**25,300**	**50,900**	**26,000**	**25,600**	**51,600**	**26,300**	**26,000**	**52,300**	**26,600**	**26,300**	**52,900**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total
	2042			2043		
00-04	1,820	1,930	3,740	1,830	1,930	3,750
05-09	1,830	1,940	3,770	1,830	1,940	3,770
10-14	1,840	1,960	3,800	1,850	1,960	3,810
15-19	1,860	1,970	3,830	1,880	1,990	3,870
20-24	2,030	2,150	4,180	2,060	2,160	4,220
25-29	2,100	2,190	4,290	2,070	2,120	4,190
30-34	2,270	2,340	4,610	2,260	2,360	4,620
35-39	2,120	2,160	4,280	2,160	2,230	4,390
40-44	2,350	2,080	4,430	2,260	2,100	4,360
45-49	2,060	1,960	4,030	2,180	2,000	4,180
50-54	1,600	1,600	3,200	1,700	1,690	3,390
55-59	1,010	900	1,920	1,090	1,020	2,110
60-64	910	840	1,760	890	820	1,710
65-69	910	790	1,700	930	770	1,690
70-74	840	720	1,560	850	730	1,580
75-79	650	590	1,240	630	590	1,230
80-84	430	320	750	470	360	830
85+	300	210	510	330	230	560
All Ages	**26,900**	**26,600**	**53,600**	**27,300**	**27,000**	**54,300**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Table 93 - Māori population projections, single year, Hutt Valley DHB, by 5-year age band, 2018 to 2043

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2018			2019			2020			2021			2022		
00-04	1,340	1,460	2,800	1,340	1,490	2,840	1,370	1,530	2,900	1,400	1,530	2,930	1,420	1,520	2,940
05-09	1,380	1,470	2,850	1,420	1,430	2,860	1,390	1,420	2,820	1,390	1,480	2,860	1,380	1,530	2,910
10-14	1,260	1,360	2,620	1,260	1,420	2,680	1,370	1,470	2,840	1,440	1,540	2,980	1,490	1,510	3,000
15-19	1,220	1,290	2,500	1,280	1,330	2,610	1,280	1,380	2,660	1,310	1,360	2,670	1,300	1,430	2,730
20-24	1,120	1,210	2,330	1,110	1,240	2,350	1,130	1,270	2,400	1,180	1,300	2,480	1,250	1,330	2,570
25-29	1,070	1,200	2,270	1,070	1,180	2,260	1,100	1,160	2,260	1,090	1,170	2,260	1,110	1,150	2,260
30-34	960	920	1,880	1,020	1,000	2,020	1,080	1,130	2,210	1,140	1,220	2,360	1,150	1,270	2,420
35-39	870	860	1,730	880	840	1,730	910	830	1,730	930	820	1,750	950	890	1,830
40-44	810	820	1,630	820	840	1,660	840	870	1,710	880	890	1,770	910	900	1,810
45-49	810	810	1,620	830	800	1,630	830	830	1,650	820	840	1,660	820	840	1,660
50-54	730	730	1,460	770	720	1,490	760	700	1,460	790	750	1,540	800	770	1,580
55-59	680	640	1,310	660	660	1,320	690	680	1,370	700	670	1,360	720	680	1,390
60-64	480	450	930	550	490	1,040	590	540	1,130	610	590	1,200	630	600	1,230
65-69	330	330	660	330	350	680	360	350	700	380	340	730	420	370	790
70-74	180	180	360	190	190	380	210	210	420	240	240	470	250	250	510
75-79	120	100	220	120	110	220	120	130	250	120	130	250	120	140	260
80-84	60	50	110	60	50	110	60	40	100	60	50	110	70	60	130
85+	30	30	60	30	30	70	40	40	80	50	40	80	40	40	90
All Ages	**13,500**	**13,900**	**27,300**	**13,800**	**14,200**	**27,900**	**14,100**	**14,600**	**28,700**	**14,500**	**15,000**	**29,500**	**14,800**	**15,300**	**30,100**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2023			2024			2025			2026			2027		
00-04	1,440	1,530	2,970	1,450	1,530	2,980	1,450	1,530	2,980	1,460	1,540	3,000	1,470	1,550	3,010
05-09	1,410	1,540	2,950	1,410	1,570	2,980	1,430	1,590	3,020	1,450	1,580	3,020	1,460	1,570	3,020
10-14	1,470	1,570	3,040	1,520	1,530	3,040	1,470	1,500	2,980	1,450	1,540	3,000	1,450	1,590	3,040
15-19	1,370	1,470	2,840	1,370	1,530	2,900	1,460	1,570	3,030	1,520	1,630	3,150	1,580	1,590	3,170
20-24	1,270	1,340	2,610	1,340	1,380	2,710	1,320	1,420	2,740	1,330	1,380	2,720	1,320	1,450	2,760
25-29	1,100	1,190	2,290	1,090	1,210	2,300	1,100	1,240	2,340	1,140	1,260	2,400	1,200	1,280	2,480
30-34	1,160	1,260	2,420	1,150	1,250	2,400	1,170	1,210	2,380	1,140	1,200	2,350	1,160	1,180	2,340
35-39	1,030	970	2,000	1,090	1,050	2,140	1,150	1,170	2,320	1,200	1,250	2,450	1,210	1,300	2,500
40-44	920	890	1,810	920	880	1,800	940	850	1,790	950	840	1,780	960	900	1,860
45-49	820	830	1,650	830	860	1,680	840	880	1,720	880	890	1,770	900	890	1,800
50-54	810	800	1,610	820	800	1,620	810	820	1,630	800	820	1,620	790	820	1,610
55-59	720	700	1,420	750	700	1,450	740	670	1,410	760	720	1,480	780	740	1,510
60-64	650	600	1,250	630	620	1,260	660	640	1,300	660	620	1,280	680	630	1,310
65-69	450	410	850	520	440	960	550	490	1,050	570	530	1,100	580	540	1,120
70-74	290	270	560	290	290	580	310	290	600	330	290	620	370	310	680
75-79	130	130	260	140	140	290	160	150	310	180	180	360	200	190	390
80-84	70	60	140	80	70	140	80	80	170	90	90	170	80	90	170
85+	40	40	80	50	40	90	50	40	80	50	40	90	60	50	110
All Ages	**15,200**	**15,600**	**30,700**	**15,400**	**15,900**	**31,300**	**15,700**	**16,100**	**31,800**	**16,000**	**16,400**	**32,400**	**16,200**	**16,700**	**32,900**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2028			2029			2030			2031			2032		
00-04	1,480	1,560	3,040	1,490	1,570	3,060	1,490	1,580	3,070	1,500	1,590	3,090	1,510	1,590	3,110
05-09	1,480	1,560	3,030	1,480	1,560	3,040	1,490	1,570	3,050	1,490	1,580	3,070	1,500	1,590	3,090
10-14	1,470	1,600	3,070	1,470	1,630	3,100	1,490	1,650	3,140	1,510	1,640	3,150	1,520	1,630	3,150
15-19	1,550	1,640	3,190	1,590	1,600	3,190	1,550	1,580	3,130	1,530	1,620	3,140	1,520	1,670	3,190
20-24	1,380	1,480	2,860	1,380	1,540	2,920	1,480	1,580	3,060	1,540	1,640	3,180	1,590	1,600	3,200
25-29	1,220	1,290	2,510	1,280	1,320	2,600	1,270	1,360	2,630	1,280	1,330	2,610	1,260	1,400	2,660
30-34	1,140	1,210	2,360	1,130	1,240	2,360	1,140	1,260	2,400	1,180	1,280	2,460	1,240	1,300	2,550
35-39	1,200	1,290	2,490	1,190	1,270	2,460	1,210	1,230	2,440	1,190	1,230	2,410	1,200	1,210	2,400
40-44	1,050	980	2,030	1,110	1,060	2,170	1,170	1,180	2,350	1,220	1,260	2,480	1,230	1,310	2,530
45-49	900	880	1,780	910	860	1,770	930	840	1,760	930	830	1,760	950	890	1,840
50-54	800	810	1,610	800	830	1,630	820	850	1,670	850	870	1,720	880	870	1,750
55-59	780	760	1,540	790	760	1,540	780	780	1,560	770	790	1,560	760	780	1,550
60-64	680	650	1,330	720	650	1,360	700	620	1,320	730	670	1,390	740	690	1,430
65-69	600	540	1,140	590	560	1,150	620	580	1,200	610	560	1,180	630	570	1,210
70-74	390	340	730	460	380	840	490	430	920	510	460	970	520	470	990
75-79	230	210	440	220	230	450	250	230	470	270	220	490	300	240	540
80-84	90	80	170	100	90	180	100	100	200	130	120	240	140	130	260
85+	60	60	120	70	60	130	80	70	150	80	70	150	80	70	150
All Ages	**16,500**	**16,900**	**33,400**	**16,800**	**17,200**	**34,000**	**17,000**	**17,500**	**34,500**	**17,300**	**17,700**	**35,000**	**17,600**	**18,000**	**35,600**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2033			2034			2035			2036			2037		
00-04	1,520	1,610	3,130	1,530	1,620	3,150	1,540	1,630	3,180	1,560	1,640	3,200	1,570	1,660	3,230
05-09	1,520	1,600	3,120	1,530	1,610	3,140	1,530	1,620	3,160	1,540	1,630	3,170	1,550	1,640	3,190
10-14	1,540	1,620	3,160	1,550	1,630	3,170	1,550	1,630	3,190	1,560	1,640	3,200	1,570	1,650	3,230
15-19	1,540	1,670	3,220	1,550	1,700	3,250	1,570	1,720	3,290	1,580	1,710	3,300	1,590	1,700	3,300
20-24	1,570	1,650	3,220	1,610	1,610	3,220	1,570	1,590	3,150	1,550	1,630	3,170	1,540	1,680	3,220
25-29	1,330	1,430	2,760	1,330	1,490	2,820	1,430	1,530	2,960	1,490	1,590	3,080	1,540	1,550	3,100
30-34	1,260	1,310	2,570	1,320	1,340	2,670	1,310	1,380	2,690	1,320	1,350	2,670	1,310	1,420	2,730
35-39	1,180	1,240	2,420	1,170	1,260	2,430	1,180	1,290	2,470	1,230	1,310	2,530	1,290	1,330	2,610
40-44	1,220	1,300	2,520	1,220	1,280	2,490	1,230	1,240	2,470	1,210	1,240	2,450	1,220	1,220	2,440
45-49	1,040	970	2,010	1,100	1,050	2,150	1,160	1,170	2,330	1,210	1,250	2,460	1,220	1,300	2,520
50-54	880	860	1,730	890	840	1,730	900	820	1,720	910	810	1,720	930	870	1,800
55-59	770	770	1,540	770	790	1,570	790	820	1,610	820	830	1,650	850	830	1,690
60-64	740	720	1,460	750	710	1,460	750	730	1,480	740	740	1,480	730	730	1,470
65-69	630	590	1,230	670	590	1,260	660	560	1,220	680	610	1,290	700	630	1,320
70-74	540	470	1,010	520	490	1,010	550	510	1,060	550	490	1,050	570	500	1,080
75-79	320	270	590	380	300	690	410	350	760	430	380	800	430	390	820
80-84	170	140	310	160	160	320	180	160	340	200	150	350	230	170	400
85+	80	70	160	80	80	170	100	90	190	110	110	220	120	120	240
All Ages	**17,900**	**18,300**	**36,100**	**18,100**	**18,600**	**36,700**	**18,400**	**18,800**	**37,300**	**18,700**	**19,100**	**37,800**	**19,000**	**19,400**	**38,400**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
	2038			2039			2040			2041		
00-04	1,580	1,680	3,270	1,610	1,700	3,310	1,620	1,720	3,340	1,650	1,730	3,380
05-09	1,560	1,650	3,210	1,570	1,660	3,240	1,590	1,680	3,260	1,600	1,690	3,290
10-14	1,580	1,670	3,250	1,590	1,680	3,270	1,600	1,690	3,290	1,610	1,700	3,310
15-19	1,620	1,700	3,310	1,620	1,700	3,330	1,630	1,710	3,340	1,640	1,720	3,360
20-24	1,560	1,680	3,240	1,560	1,710	3,270	1,580	1,730	3,320	1,600	1,730	3,330
25-29	1,520	1,600	3,120	1,560	1,560	3,120	1,520	1,540	3,060	1,500	1,580	3,080
30-34	1,380	1,450	2,830	1,380	1,510	2,890	1,480	1,550	3,030	1,540	1,610	3,150
35-39	1,310	1,330	2,640	1,370	1,370	2,740	1,350	1,410	2,760	1,370	1,380	2,750
40-44	1,210	1,250	2,460	1,190	1,280	2,470	1,200	1,300	2,500	1,250	1,320	2,570
45-49	1,220	1,290	2,510	1,210	1,270	2,480	1,230	1,240	2,460	1,200	1,230	2,440
50-54	1,020	950	1,970	1,080	1,030	2,110	1,140	1,150	2,290	1,190	1,230	2,420
55-59	850	820	1,670	860	810	1,670	870	780	1,650	880	770	1,660
60-64	740	730	1,460	740	750	1,490	760	770	1,530	790	790	1,580
65-69	700	660	1,360	710	650	1,360	710	680	1,380	690	690	1,380
70-74	570	520	1,100	610	520	1,130	600	490	1,090	620	540	1,160
75-79	460	380	840	440	410	850	470	420	890	470	410	880
80-84	250	190	440	300	220	520	330	260	590	340	290	630
85+	150	120	270	140	140	280	160	150	300	180	140	330
All Ages	**19,300**	**19,700**	**38,900**	**19,500**	**20,000**	**39,500**	**19,800**	**20,300**	**40,100**	**20,100**	**20,500**	**40,700**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Age Groups	Female	Male	Total	Female	Male	Total
	2042			2043		
00-04	1,660	1,760	3,420	1,690	1,780	3,460
05-09	1,620	1,710	3,320	1,630	1,720	3,360
10-14	1,620	1,710	3,330	1,630	1,720	3,350
15-19	1,650	1,730	3,380	1,660	1,750	3,410
20-24	1,610	1,720	3,330	1,640	1,710	3,340
25-29	1,490	1,630	3,120	1,510	1,630	3,150
30-34	1,590	1,580	3,170	1,570	1,630	3,200
35-39	1,350	1,450	2,800	1,420	1,480	2,900
40-44	1,310	1,340	2,650	1,330	1,350	2,680
45-49	1,210	1,220	2,430	1,200	1,250	2,450
50-54	1,200	1,280	2,480	1,200	1,270	2,470
55-59	900	830	1,740	990	910	1,900
60-64	820	790	1,610	820	780	1,600
65-69	690	680	1,370	700	670	1,370
70-74	640	560	1,190	640	590	1,220
75-79	490	420	910	490	440	930
80-84	340	300	640	360	290	650
85+	210	160	370	240	180	430
All Ages	**20,400**	**20,800**	**41,300**	**20,700**	**21,100**	**41,900**

Source: Te Whatu Ora Population Webtool (Best Available Populations).

Appendix 2: Technical notes

1. Explanation of statistical terms used in this report

95% confidence interval

Technical definition

A 95% confidence interval represents a range from a lower to an upper value that is likely to include the true average figure for the entire population. It suggests that if a similar sample of the total population was taken 100 times, the true value would be found within this range 95 times. This confidence interval can vary in size: a larger number of survey responses or participants, typically results in a narrower range, indicating more precise estimates, while a smaller number of responses may result in a broader range, indicating less certainty about the exact figure.

Plain English definition

When a health study gives a number, like how many people feel healthy, it's often not just one number but a range. This range is what's called a 95% confidence interval. It's like a safety net that says, 'We think the real number is in here.' And if we did the study over and over, 95 times out of 100, we'd get a number in this range. The more people we include in our sample, the smaller and more accurate this net becomes. So, if we ask only a few people, the net is wide, and we're less sure. If we ask a lot of people, the net gets tighter, and we're more sure we've got the right number.

Example from the report

In a survey assessing health status among residents of Te Moana a Toi[9] (see table below), 13.0% of the sampled Māori population considered their health to be 'Excellent'. However, this percentage is an estimate from a sample of people in Te Moana a Toi, not the entire population. The 95% confidence interval, shown in brackets as “(9.8, 16.2)”, indicates that there is a 95% probability that the actual percentage of all Māori residents who would rate their health as 'Excellent' falls within this range. If this survey were to be conducted 100 times with different sample groups, it is expected that 95 of those surveys would yield a true percentage that falls between 9.8% and 16.2%.

Table 6 - Health status reported by Māori aged 15 years and over, Te Moana a Toi, 2018

Health Status	Te Moana a Toi			Aotearoa		
	%	(95% CI)		%	(95% CI)	
Excellent	13.0	(9.8,	16.2)	15.1	(14.0,	16.2)
Very Good	40.2	(35.6,	44.9)	36.9	(35.4,	38.3)
Good	30.1	(25.3,	35.0)	30.3	(29.0,	31.7)
Fair/poor	16.6	(12.9,	20.3)	17.7	(16.6,	18.8)

Source: Te Kupenga 2018, Statistics New Zealand customised report.

[9] The example tables in this technical appendix are all taken from the Te Moana a Toi IMPB profile, and are presented purely as an example to facilitate understanding across all IMPB data profiles.

Age standardisation

Technical definition

Age-standardisation is a statistical method used to compare rates of events across different populations by adjusting for age differences in the two groups. This method is particularly useful when comparing health outcomes between groups like Māori and non-Māori, where there are significant differences in age distribution; for example only 8% of Māori are aged 65 and over in Te Moana a Toi compared with 26% of non-Māori (see the table below).

Because of these age differences, comparing crude rates (actual observed rates) can be misleading. By applying the age-specific rates from the populations being compared to a standard population, age-standardised rates provide a clearer comparison as if the populations had the same age distribution. Almost all data in this report has been age-standardised to the 2001 Māori population. Where crude rates are presented instead, this is noted beneath the table.

Table 2 – Population estimate by age group, Te Moana a Toi, 2023

Age group (years)	Māori			non-Māori		Total IMPB number
	Number	Age distribution	% of IMPB	Number	Age distribution	
0–14	20,255	30%		30,670	15%	50,925
15–24	12,285	18%		16,810	8%	29,095
25–44	16,465	24%		50,870	25%	67,335
45–64	13,030	19%		52,935	26%	65,965
65+	5,575	8%		51,760	26%	57,335
Total	**68,000**	**100%**	**25%**	**202,740**	**100%**	**270,740**

Plain English definition

Age-standardisation is a method used to compare health between two groups fairly. It adjusts the numbers to consider how young or old the people in each group are. This way, when looking at health data, it is more likely that any differences between the groups are not just because one has more young people or more old people. It helps give a more accurate picture of health when comparing two groups with a different spread of ages.

Example from the report

The table below shows an age-standardised rate of 28.4 per 100,000 per year ischaemic heart disease events among Bay of Plenty DHB Māori women between 2014 and 2018. Without age standardisation calculations, crude rates would be lower than 28.4 among Māori women. The lower rate would be simply because a larger proportion of the Māori population is younger and ischaemic heart disease is more frequent in older people.

Table 6 - Leading causes of death for Māori, all ages, Bay of Plenty DHB, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Ischaemic heart disease	19	28.4	(16.2, 45.5)	98	8.3	(6.2, 10.9)	**3.40**	**(1.95, 5.93)**	20.1

Rate ratios

Technical definition

Rate ratios, often referred to as relative risks, are a measure of the relationship between the occurrence of a certain event in two different groups, typically standardised for age (see section on age standardisation above) to allow fair comparison. It is the result of the rate of the event in the first group (for example, Māori) divided by the rate in the second group (non-Māori), which serves as the reference group. rate ratio of 1 indicates parity between groups, above 1 indicates a higher rate in the first group, and below 1 indicates a lower rate. In general, the data presented in this report uses Māori as the first group and compares it with non-Māori as the second group.

Plain English definition

A rate ratio compares how common something, like a disease, is between two different groups of people, like Māori and non-Māori. If the ratio is exactly 1, both groups are equally affected. If it's higher than 1, it means that the first group, in this case Māori, has the event happen more often. If it's lower, Māori have it happen less often. It tells us the relative disparity between two groups.

Example from the report

In the table below, the rate ratio for ischaemic heart disease is 3.40. This tells us that Māori females are more than three times as likely to suffer from this condition compared to non-Māori females after considering the age distribution in each group.

The 95% confidence interval (see section on confidence intervals above) of 1.95 to 5.93 for this rate ratio indicates that we are very sure that the true rate ratio is significantly different from 1, indicating a genuine disparity in risk between the two populations. In this report, a statistically significant difference between groups is evident when the confidence interval for the rate ratio does not cross 1. These results are shown in **bold** type.

Table 6 - Leading causes of death for Māori, all ages, Bay of Plenty DHB, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Ischaemic heart disease	19	28.4	(16.2, 45.5)	98	8.3	(6.2, 10.9)	**3.40**	**(1.95, 5.93)**	20.1

Rate difference

Technical definition

Rate differences, also known as absolute differences, quantify the disparity between two groups by showing the additional number of events occurring in one group compared to another, per population unit (like per 100,000 people). This is calculated by subtracting the event rate of the reference group from that of the comparison group.

Plain English definition

Rate difference tells us how much more often something happens in one group compared to another. If you take the number of times an event happens per 100,000 people in one group and subtract the same from another group, you get the rate difference. This number shows if one group is experiencing more of a certain event, like a disease or death, and by how much. It's a simple way to see the actual impact of a problem on one group over another.

Example from the report

The table below show that Māori females in Bay of Plenty DHB have an age-standardised rate of ischaemic heart disease at 28.4 events per 100,000 per year, while the rate for non-Māori females is 8.3. This gives a rate difference of 20.1 events per 100,000 per year, which tells us that in a population of 100,000 Māori women and 100,000 non-Māori women there are 20.1 more cases of ischaemic heart disease among Māori females than non-Māori females each year. This figure is crucial because it doesn't just show the relative disparity (like a rate ratio does), but it tells us how many additional events are affecting Māori females, highlighting the actual impact of the disease on the population and where health resources might be most needed to address the disparity.

Table 6 - Leading causes of death for Māori, all ages, Bay of Plenty DHB, 2014 to 2018

Cause	Māori			non-Māori			Māori/non-Māori rate ratio (95% CI)		Rate difference
	Av. no. per year	Age-standardised rate per 100,000 (95% CI)		Av. no. per year	Age-standardised rate per 100,000 (95% CI)				
Female									
Ischaemic heart disease	19	28.4	(16.2, 45.5)	98	8.3	(6.2, 10.9)	**3.40**	**(1.95, 5.93)**	20.1

2. Key methods and quality limitations of key data sources

This section describes in more detail the specific methods, and key limitations, used for each of the main data sources used in this report.

Numerators

Data in this first volume of IMPB profiles are sourced from Te Whatu Ora, Manatū Hauora (the Ministry of Health), and Statistics New Zealand (StatsNZ). Where administrative data (e.g. national mortality data) are used, the most recent five years of non-provisional data were aggregated to provide more stable rate estimates for smaller areas. Census data were taken from the 2018 Census, and data from the Te Kupenga survey were from the 2018 Te Kupenga survey, undertaken after the 2018 Census.

Denominators

StatsNZ mid-year (at 30 June) estimated resident population was used as denominator data in the calculation of population rates for deaths and Primary Healthcare Organisation (PHO) enrolment. For census variables, the denominator is the people for whom there is a response / relevant information from the census dataset for the question asked ('people stated'). This differs for each question, and is a subset of the total usually resident population identified by the census for the relevant rohe (region). For Te Kupenga survey data, the denominator is the total stated population, this means that people who refuse to answer/ don't know their answer/ answer with an invalid answer are excluded.

Ethnicity data

Ethnicity data quality

Although high quality ethnicity data are critical for Māori health improvement, ethnicity data quality in the health sector remains poor (Harris, Paine et al. 2022). It is the responsibility of the entire health system to collect, record and report ethnicity data in the ways set out in the HISO 10001:2017 Ethnicity Data Protocols (Ministry of Health. 2017). Despite the protocols being in existence for nearly 20 years, there is evidence that they are not being adhered to and Māori have continued to be systematically undercounted (Cormack D and McLeod M 2010, Harris, Paine et al. 2022). Self-identified ethnicity recorded on the Census is considered to be the "gold-standard" for ethnicity data, so this is used as the denominator for most variables in this report.

To understand what impact the ethnicity data quality is likely to have, on the accuracy of the results presented in this report, we need to consider the ethnicity data quality in both the numerator and the denominator. For some measures, it may underestimate the true number of, or rate of, a particular outcome for Māori. The potential impact of ethnicity data weaknesses is discussed for each data source later in this Appendix.

Ethnicity classification

When analysing data, there are different ways to classify people who report multiple ethnicities. The two main ways are *total response (overlapping) output* and *prioritised output.* In total response output, each respondent is counted in each of the ethnic groups they reported. So, individuals who indicate more than one ethnic group are counted more than once, and the sum of the ethnic group populations will exceed the total population of NZ. For example, using total response classification, a death from lung cancer in an individual who identifies as Māori and New Zealand European, will be reported as a lung cancer death for both ethnicities.

In prioritised output, each respondent is allocated to a single ethnic group using a prioritisation order, with Māori first, to ensure that ethnic groups of policy importance or of small size, are not swamped by the New Zealand European ethnic group. Under this method, a person is classified as Māori if any one of their recorded ethnicities are Māori. For example, using prioritised classification, a death from lung cancer

in a person recorded as both Māori and New Zealand European, would be counted as a lung cancer death for Māori, and not in non-Māori.

In this report, the method of ethnicity classification is noted under each table or figure. Wherever possible, prioritised ethnicity classification was used when people identified with more than one ethnic group.

Comparison group

Most indicators compare Māori with non-Māori. Non-Māori includes all people who do not identify as Māori and represent a comparative or reference group. Some indicators in this report (e.g. life expectancy) use non-Māori non-Pacific (all people who do not identify as either Māori or Pacific or both) as the comparison group. This is done because in areas where there are large Pacific populations, grouping the Pacific population with the non-Māori group skews the result for the comparison group toward the Māori population. This is particularly necessary in regions where there is a high Pacific population such as South Auckland.

Age-standardised and crude rates

This report uses direct age-standardisation; most rates (unless noted otherwise) are standardised to the 2001 Census Māori population. Where data were not available with sufficient age group breakdown to allow age standardisation, or data for a specific age were presented, crude rates were calculated. In this case, caution should be taken when comparing Māori with non-Māori results. Crude rates accurately portray a situation in each population, but make comparisons difficult, because they do not consider the different age distributions in each of the populations (e.g., the Māori population is much younger than the non-Māori population). Rates were not calculated for counts fewer than five in data from national collections. For Te Kupenga data, if the weighted count (estimate) was less than 1000 then the data was supressed.

Confidence intervals

This report has endeavoured where possible to provide local data specific to IMPBs and their relevant DHB areas. Some of these areas have small populations. As the size of the group becomes smaller, the confidence interval (CI) becomes wider, and there is less certainty about the rate. This means the degree of confidence and certainty about the numbers diminishes for rohe (regions) with smaller populations. Thinking of the data as ‘indicative’ rather than precise is important in these rohe, as well as considering Māori-specific regional and national data, which will have greater certainty around rates, because of the larger sample size.

When the CIs of two groups do not overlap, the difference in rates between the groups is considered statistically significant. Sometimes, even when there are overlapping CIs, the difference between the groups may be statistically significant. Determining that would require further statistical testing which has not been undertaken for this report.

Rate ratios

Age-standardised rate ratios are used in this report to compare age-standardised rates between Māori and non-Māori. The rate ratio (RR) is equal to the age-standardised Māori rate divided by the age-standardised non-Māori rate. The non-Māori population is used as the reference population. For example, an age-standardised RR of 1.5 means that the rate is 50 percent higher (or 1.5 times as high) in Māori than in non-Māori, after taking into account the different age structures of these two populations. This report gives rate ratios and their 95 percent CIs. In this profile, if the CI of the rate ratio does not include the number 1, the ratio is said to be statistically significant. Differences presented in this profile in **bold** are statistically significant.

Demography data

Indicators on population demography and projections use the estimated resident population (ERP) and projections provided by StatsNZ for the health sector, from a 2018 base. The ERP is an estimate designed to adjust for the undercount for various groups in the census response rate, people temporarily overseas or elsewhere in NZ from their usual residence on census night, and key population changes (births, deaths, mobility) since the 2018 census.

In the estimates and projections prioritised ethnicity was used to identify Māori individuals (any person who identified Māori as any of their ethnic groups in the base census data on which the estimates and projections are built) and non-Māori included people who had at least one valid ethnic response, none of which was/were Māori.

The Census of Population and Dwellings

Indicators using data from the 2018 Census of Population and Dwellings are derived from the census usually resident (UR) population (residents of an area living in the area on census night and people living elsewhere in Aotearoa from their usual residence on census night). Data used in this report were sourced from the publicly available UR data provided on the StatsNZ website, and for some indicators, from a custom data extract produced by StatsNZ for the previous Northern Region DHBs (which included data for the whole of Aotearoa).

StatsNZ apply confidentiality rules to census data to protect the confidentiality of individuals, families, households, dwellings, and undertakings in 2018 Census data. Counts are calculated using a method called fixed random rounding to base 3, and suppression of 'sensitive' counts less than six, where tables report multiple geographic variables and/or small populations. This means individual figures may not always sum to stated totals[10].

Due to changes in the 2018 Census methodology and lower than anticipated response rates, as described further below, time series data for census variables should be interpreted with care.

Most census variables in the Wai Ora chapter have been age-standardised to the 2001 Māori population. The unpaid work variables were not able to be age-standardised for this report, and crude rates are presented. In this case, caution should be taken when comparing Māori with non-Māori results.

The 2018 Census was the first 'digital-first' census undertaken in Aotearoa, as a part of modernising and streamlining the census process. Unfortunately, the 2018 Census had a very low response rate overall, and especially for Māori and Pacific peoples - approximately 68% for Māori and 65% for Pacific peoples. Adjustments were made to improve the quality of the data (for example, using data from previous censuses and other administrative datasets), and the overall quality of the 2018 Census data is now considered moderate/good. However, the adjustments do not affect the Māori and non-Māori population in the same way. For example, in the 2018 Census, 29% or more of the ethnicity data for Māori came from other sources. This means that the ethnicity data in the 2018 census for Māori is not of the same quality as the data for the NZ European ethnic population, for example, which had only 11.5% of their responses from these other sources.

Further details on the adjustment methods used in the 2018 Census can be found online via Stats NZ[11]. In summary, the core self-response data from the 2013 Census was combined with administrative data (e.g. from the education or health system), and in some situations data derived by statistical models to predict what the missing data would have been (called imputation). In addition to different levels of self-response, people identified as living in NZ at the time of the census have different levels of information from other sources available to StatsNZ to draw on.

[10] More info on Census confidentiality rules: Applying confidentiality rules to 2018 Census data and summary of changes since 2013 | Stats NZ

[11] https://www.stats.govt.nz/assets/Uploads/Reports/Final-report-of-the-2018-Census-External-Data-Quality-Panel/Downloads/Final-report-of-the-2018-Census-External-Data-Quality-Panel-corrected.pdf

However, on the other hand, the census is a key source for population level data about factors that are important for health, such as income, employment, and housing. StatsNZ has provided quality ratings for the 2018 Census data to help users determine how to interpret the data. Along with StatsNZ's own quality ratings, they also engaged an External Data Quality Panel which included Māori population experts, who provided their assessment of the census data quality. The table below shows the ratings of both for the data variables used in this report. The overall message from these ratings is that the data can provide insights into the situation for Māori whānau, but it should be seen as indicative, rather than precise.

Table 94 - Quality ratings 2018 Census variables included in this report

Variable name	StatsNZ quality rating	External Data Quality Panel quality rating	Notes
Census usually resident population count	Very high	Very high	
Ethnicity	High	Moderate	
Number of bedrooms	High	High	Number of bedrooms is used to help derive estimates of household crowding. There were over 300,000 people who could not be placed into households in the 2018 data. This means the number of people who lived in a crowded house may be undercounted.
Number of rooms	Moderate	Poor	
Housing quality: dwelling dampness and mould indicators	Moderate	Moderate	This is a self-evaluated assessment of whether the home has mould that is larger than an A4 sheet of paper (in total).
Main types of heating and fuel types used to heat dwellings	Moderate	Moderate	This question was first introduced in the 2018 Census. Each type of heating reported was recorded once only.
Tenure of household	Moderate	Moderate	
Access to telecommunication systems	Moderate	Moderate	The online data collection methodology of the 2018 Census may have affected this variable. The proportion of households with no access to telecommunications was lower than expected. The proportion of households with access to a telephone was higher than expected. This data provides information on access to telecommunication systems at the household level. It does not show whether a particular household member has access to those amenities. In some cases, not every member of a household has equal access to particular telecommunication systems.
Number of motor vehicles	Moderate	Moderate	
Industry	High	High	Industry is the type of activity undertaken by the organisation or business where people work.
Occupation	Moderate	Poor	An occupation is a set of jobs that require the performance of similar or identical sets of tasks. Occupations are organised based on skills, using the ANZSCO classification. The significant use of imputation may have inflated the total number of respondents in all categories.

Variable name	StatsNZ quality rating	External Data Quality Panel quality rating	Notes
Qualifications: highest qualification	Moderate	Moderate/poor	
Total personal income	High	High	Total personal income received is the total before-tax income of a person in the 12 months ended 31 March 2018. The information is collected as income bands rather than in actual dollars. This includes all possible sources of income.
Status in employment	High	Moderate	Employment is described as full-time (30 hours or more / week) or part-time (< 30 hours per week). A person not employed is described as either 'unemployed' or 'not in the labour force'. Not in the labour force means not employed and not actively seeking work or not available for work
Unpaid activities	Poor	Not applicable	Because of the low quality ratings, Stats NZ recommend very careful use of this data particularly for Māori and Pacific peoples and at small geographies. No alternative data source or imputation was available to replace missing responses.

Geographical alignment between IMPB and DHB areas

This report has endeavored to report data specific to each IMPB health planning area and has used several slightly different methods to do this in different chapters of the report.

For population estimates, and Te Kupenga survey data, the population for an IMPB has been calculated using geographies (SA2 areas or Territorial Authority/Local Boards) that are smaller than the previous DHB districts, to be able to better align with the IMPB health planning areas. This means the Te Taura Ora o Waiariki and Tūwharetoa IMPBs have been able to be split out separately, and Ōtāhuhu has been included as part of Ngaa Pou Hauora oo Taamaki Makaurau, rather than Te Taumata Hauora o Te Kahu o Taonui (historically Ōtāhuhu was part of Auckland DHB rather than Counties Manukau DHB, so the Auckland Council Local Board Māngere-Ōtāhuhu spanned the boundary between the DHBs)[12]. In some cases, for example at the Nelson-Marlborough/Te Tauraki border, the IMPB health planning area did not align completely with SA2 areas.

There may be some variation between the IMPB population estimates presented here compared to estimation using data from the previous DHB. This is due to there being a higher level of uncertainty around the SA2 population estimates and they will not always sum to exactly the same population by age, sex and ethnicity as the district population estimates.

For other measures, including mortality data, NZDep2018 and PHO enrolment, the IMPB population has been calculated using the sum of the main DHBs it contains. So, for example IMPB mortality data for Te Taumata Hauora o Te Kahu o Taonui will include all of Northland, Auckland and Waitematā DHBs, even though that includes communities such as Ōtāhuhu which are not part of the IMPB.

[12] Ōtāhuhu has a population of approximately 16,000 people, the majority of whom identify as Pacific and Asian (Indian). The area is classified as NZDep2018 deciles 9 and 10 - the most socio-economically challenged areas.

Life expectancy

There are two parts to the life expectancy data provided in this report. There is a 'standard' calculation of life expectancy at birth for each IMPB, using mortality data from Manatū Hauora and population data from StatsNZ and presented as the gap between Māori and non-Māori. It uses five years of data to be able to provide ethnicity and male/female information.

There is also information on what conditions contribute to those life expectancy gaps, from an analysis completed by the Service Innovation and Improvement Directorate, Te Whatu Ora in May 2023 titled "The Contribution of Avoidable Mortality to the Life Expectancy Gap among the Māori and Pacific population. Regional Summary." This analysis compared Māori with the non-Māori, non-Pacific population, so that is why this comparator group is used for this section in this IMPB report.

The Arriaga method—a life table decomposition technique accounting for both age and cause of death—was used. The analyses and calculations are based on official death data from the Te Whatu Ora mortality collection, while population data are derived from official StatsNZ population estimates.

The analysis hinges on the principal underlying cause of death classification, which simplifies the reality that multiple factors can contribute to a single death. This may result in an underestimation of the effects of prevalent conditions contributing to, but not the final causes of death. As it requires cause of death information, these are often two years delayed to allow coronial processes to be completed. As such, the life expectancy figures here may not be the most recent available, but are the most recent that allows this type of gap analysis.

Causes of death are divided into 50 potentially avoidable conditions. Avoidable deaths encompass those deemed amenable to high-quality healthcare, preventable through public health interventions, or both. A comprehensive list of the conditions used in this analysis, along with their corresponding ICD codes, can be found in the Te Whatu Ora report. Most are limited to those under 75 years, except leukemia which is only considered avoidable under the age of 45 years and external injuries which includes all ages.

Mortality data

Indicators on cause of death and mortality come from the national Mortality Collection. This classifies the underlying cause of death for all deaths registered in Aotearoa and all registered fetal deaths (stillbirths). Aotearoa is currently using the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM) classification and the World Health Organization (WHO) ICD Rules and Guidelines for Mortality Coding. Mortality data 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. The year range of 2014 to 2018 was used as complete mortality data records were not available for 2019 and 2020 at the time of writing. The DHB of residence was determined from the domicile code attached to the death registration (so even if a person passed away at a tertiary hospital outside their home region, their death would be recorded as one in their home DHB). In tables presenting data on causes of death, data is not presented where there were fewer than five Māori events during the period represented by the data. There are several different methods of classifying causes of death as "potentially avoidable", "preventable" or "amenable". The ICD-10-AM codes used for potentially avoidable death tables in this report are listed in the next Appendix.

Te Kupenga Survey

Te Kupenga 2018 is StatsNZ's survey of Māori wellbeing. A survey of almost 8,500 adults (aged 15 years and over) of Māori ethnicity and/or descent, Te Kupenga gives an overall picture of the social, cultural, and economic wellbeing of Māori people in Aotearoa.

Te Kupenga is a post-census survey. This means the survey sample was selected from people who identified as having Māori ethnicity and/or descent on their 2018 census form, so only those who completed the census were able to be selected. Given that a lower proportion of Māori people completed the 2018 Census than planned or anticipated, StatsNZ investigated the potential impact this may have

had on the Te Kupenga sample. They found some bias in the sample frame (the group of people who could have been selected to participate) compared with the total Māori population. However, this bias was small, and they were able to remove most of the effect of the bias through the statistical weighting process. See StatsNZ website for more information on this[13].

In this IMPB profile, all estimates of numbers, percentages, and confidence intervals for data presented from Te Kupenga were calculated by StatsNZ and provided in a customised extract. Estimates of counts were rounded to the nearest thousand. Estimates of proportions were rounded to 1 decimal point. All percentages were calculated from unrounded data. If the weighted count (estimate) was less than 1000 then the data was supressed. Further details on the survey measures are available in the Te Kupenga 2018 report and can be found at the StatsNZ website[14].

Primary care enrolment

Primary care enrolment data is based on the National Enrolment System using the National Health Index (NHI). Ethnicity data in the NHI is known to undercount Māori by 15.7% compared to the ethnicity people report in the census, with higher undercounts for Māori men (Harris, Paine et al. 2022). The denominator for calculating the percentage of people enrolled in a PHO is the estimated resident population, which uses ethnicity based on the 2018 Census. The poor ethnicity data quality in the NHI makes it difficult to assess how many Māori are actually missing out on being enrolled with primary health care, and how many are actually enrolled but misclassified with a non-Māori ethnicity. It is likely that both of these factors make a contribution to the inequity in primary care enrolment data. Primary care enrolment data presented in this report are not age-standardised. In this case, caution should be taken when comparing Māori with non-Māori results. Crude rates make comparisons difficult, because they do not take into account different age distributions in each of the populations.

NZ Index of Deprivation 2018

NZDep2018 is an area-based measure of relative socio-economic deprivation. It is based on nine variables from the 2018 Census which cover eight different dimensions of socio-economic hardship. These variables relate to home internet access, receipt of welfare benefits, household income, employment, qualifications, home ownership, family structure, household crowding and housing quality. NZDep2018 gives a deprivation score for small area geographies (i.e. meshblocks, and SA1s) (Atkinson, Salmond et al. 2019). These scores are aggregated into deciles (1-10, 1 being areas with the least socio-economic challenge and 10 being those the most disadvantage). This report uses NZDep2018 information supplied by StatsNZ for the health sector, applying the scores to estimated resident populations to estimate the number of people living in each decile.

Geographic Classification of Health

The Geographic Classification for Health (GCH) is a rural-urban geographic classification designed to allow Aotearoa's health researchers and policy makers to accurately monitor rural-urban variations in health outcomes. The GCH classifies all areas of Aotearoa as rural or urban according to their proximity to larger urban areas with respect to health (Whitehead, Davie et al. 2021).

The GCH is composed of five categories, two urban and three rural, that reflect degrees of reducing urban influence and increasing rurality. 'Urban 1' to 'Urban 2' are based on population size, and 'Rural 1' to 'Rural 3' based on drive time to their closest major, large, medium, and small urban areas. The population and drive time thresholds used in the GCH were developed from a health perspective and tested in partnership with a wide range of rural health stakeholders.

[13] https://www.stats.govt.nz/methods/assessment-of-potential-bias-in-the-te-kupenga-sample-frame-2018

[14] https://www.stats.govt.nz/information-releases/te-kupenga-2018-final-english/

Appendix 3: ICD-10-AM Codes

The International Classification of Diseases (ICD-10-AM) codes used for the calculation of potentially avoidable mortality are presented below.

Table 95 - Potentially avoidable mortality ICD-10-AM codes

Condition	ICD10-AM Code
Tuberculosis	A15-A19, B90
Selected invasive bacterial and protozoal infection	A38-A41, A46, A481, B50-B54, G00, G03, J020, J13-J15, J18, L03
Hepatitis	B15-B19
HIV/AIDS	B20-B24
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
Melanoma of skin	C43
Non-melanotic skin cancer	C44
Breast cancer (female only)	C50
Cervical cancer	C53
Uterine cancer	C54-C55
Bladder cancer	C67
Thyroid cancer	C73
Hodgkin's disease	C81
Leukaemia	C910-C911
Benign tumours	D10-D36
Thyroid disorders	E00-E07
Diabetes	E10-E14
Alcohol-related diseases	F10, I426, K292, K70
Illicit drug use disorders	F11-F16, F18-F19
Epilepsy	G40-G41
Birth defects	H311, P00, P04, Q00-Q99
Rheumatic and other valvular heart disease	I01-I09
Hypertensive heart disease	I10-I15
Nephritis and nephrosis	I12-I13, N00-N09, N17-N19

Condition	ICD10-AM Code
Ischaemic heart disease	I20-I25
Deep vein thrombosis with pulmonary embolism	I26, I802
Cerebrovascular diseases	I60-I69
Aortic aneurysm	I71
Viral pneumonia and influenza	J10, J12, J171, J21
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, K915
Chronic liver disease (excluding alcohol-related disease)	K73-K74
Obstructive uropathy and prostatic hyperplasia	N13, N20-N21, N35, N40, N991
Complications of perinatal period	P03, P05-P95
Motor vehicle accidents	V01-V04, V06, V09-V80, V87, V89, V99
Falls	W00-W19
Drownings	W65-W74
Fires, burns	X00-X09
Accidental poisonings	X40-X49
Suicide and self-inflicted injuries	X60-X84, Y870
Violence	X85-Y09, Y871

Appendix 4: Māori 2001 Population

The table below shows the 2001 Māori population standard used for age-standardisation in this report, including the weightings applied to each age-group.

Table 96 - 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	8043	1.53
70-74	5046	0.96
75-79	2736	0.52
80-84	1251	0.24
85+	699	0.13

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