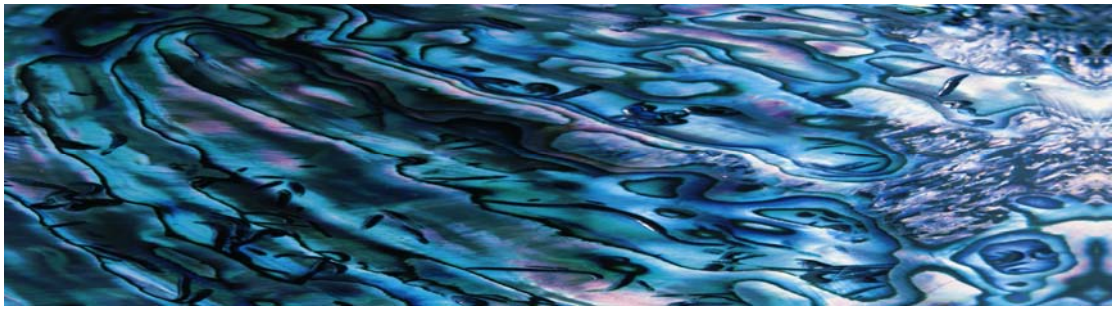
Health Needs Assessment for Maori



Waitemata District Health Board

2009

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He Mihi

E nga iwi, e nga reo, e karangarangatanga maha,

Tena koutou, tena koutou, tena katoa.

Tena koutou mea o tatou tini mate, hinga atu nei, hinga atu na,

E kore e taea e tatou, ki te karo erangi, haere atu ra koutou.

"Tatai whetu ki te rangi mau tonu, mau tonu, mau tonu,

Tatai tangata ki te whenua, ngaro noa, ngaro noa, ngaro noa."

Na kona koutou o te wahi ngaro takoto moe atu ra. Okioki atu katoa.

E te mate he aha i to wero e te wero he aha te mate

He pukapuka rangahau, he pukapuka kohinga korero, he pukapuka tapiri atu ki te pukapuka

Whakamatautia nga hiahia mo te hau ora Maori,

Panuitia, korerohia, kokirihia, e tatou hei huirahi mo tatou ake

Mauri tu, mauri ora, kia tatou katoa.

Executive Summary

This is the first Waitemata DHB health needs assessment to specifically focus on Maori. Undertaken in partnership with Tihi Ora MaPO, it provides an opportunity to begin to develop Waitemata DHB's approach to reviewing the evidence to inform decisions about Maori health priorities in a way that engages Maori and is consistent with a kaupapa Maori approach. The purpose of this HNA is to identify unmet health and healthcare needs for local Maori, to inform the determination of priorities for DHB service planning for Maori. This HNA is released in association with the overall Waitemata DHB HNA that assesses the health needs of the entire DHB population including Maori.

We acknowledge limitations of this report in terms of the capacity of conventional indicators to fully capture health and health care needs in Maori terms (that is, in accordance with holistic Maori models of health), the extent to which a kaupapa Maori approach has been operationalised in this HNA, and the availability of regional data sources. However, this HNA represents the most comprehensive effort so far to provide up-to-date and accessible information for Waitemata DHB and local Maori stakeholders on the health and health care needs of Maori within the Waitemata district. Importantly, this HNA was informed by a Maori consultation process that involved a Maori Steering Committee, two Maori provider hui and four Maori community hui and a linked submissions process. Feedback from the community consultation reinforced and complemented findings from data review, and offered insights that routinely collected data could not provide.

The selection of a Treaty of Waitangi based framework for this report was driven by the consultation process. The three articles of the Treaty provide the monitoring framework for the HNA. Article 1 – Kawanatanga (governance) is equated to health systems performance. That is, measures that provide some gauge of the provision of structures and systems that are necessary to facilitate Maori health gain and reducing inequalities. Article 2 – Tino Rangatiratanga (self-determination) is in this context concerned with opportunities for Maori leadership and participation in the sector. Article 3 – Oritetanga (equity) encapsulates indicators that measure progress towards reducing systematic inequalities in determinants of health, including access to health services, and health status.

Demography

The Waitemata DHB Maori population is large in size compared to most other DHBs (7.6% of the New Zealand Maori population), is diverse in terms of population iwi affiliations and is proportionately youthful, with over 50% of Waitemata Maori aged under 24 years. Over half of Maori in the region live in Waitakere City, with 29% and 18% living in North Shore City and Rodney District respectively.

Article 1 – Kawanatanga: Health system performance

A high performing health system involving quality data collection and monitoring and quality health care is fundamental to the elimination of health inequalities for Maori. There is

evidence that health system performance for Maori in Waitemata requires further improvement. While there have been improvements in the quality of ethnic data collection by WDHB, under-recording of Maori ethnicity in primary care is still a concern. High rates of self discharge and hospital readmissions for Maori patients indicate that there are issues with regard to responsiveness of services and quality of care. In this context, low levels of staff participation in free WDHB Maori cultural competency related training courses is of concern.

Maori community consultation identified ways in which health system performance could be improved to better support Maori wellbeing and related to: improved provider responsiveness (including cultural responsiveness which was considered to be fundamental to securing Maori trust in the health system) through organisational development; workforce cultural and clinical competency; improved continuity of care, particularly for those with multiple chronic conditions; use of Maori models of wellbeing (including increased incorporation of whanau-based approaches); an evidence-based approach that draws on kaupapa Maori research findings; and enhanced information provision to Maori**.**

Article 2 – Tino rangatiratanga: Maori participation and leadership

There are a number of mechanisms for Maori to participate in the governance and delivery of health services in the district. In terms of Maori controlled health services, there are a range of Maori providers who deliver a variety of health care services within a kaupapa Maori framework. Increased provision of kaupapa Maori services and local provision of services, including marae-based initiatives, and increased opportunities for iwi control of resources for service provision were identified through consultation as health care priorities.

Maori are involved in the governance of WDHB through: Treaty of Waitangi MOUs between the DHB and Te Runanga o Ngati Whatua and Te Whanau o Waipareira Trust; a Maori Health Gain Advisory Committee that is appointed by the WDHB Board and provides advice to the Board on Maori health issues; and, Maori membership on the DHB Board, the Community and Public Health Advisory Committee and the Hospital Advisory Committee.

Maori are under-represented in the DHB workforce, especially in medical and allied health professional roles. There is much work required in order to increase the capacity and capability of the Maori health workforce at all levels and in a variety of roles in order to best contribute to Maori health gain. Maori health workforce development was identified through consultation as a priority.

Article 3 – Oritetanga: Achieving health equity

Compared to Maori in the rest of New Zealand, Maori in Waitemata experience better health outcomes and longer lives. The percentage of Maori in the Waitemata living in the two most deprived socio-economic deciles is lower than the percentage of the overall New Zealand population (both Maori and non-Maori) living in the two most deprived deciles. Maori in Waitemata have lower rates of exposure to risk factors such as smoking and obesity than Maori elsewhere in New Zealand. Maori in Waitemata experience lower rates of avoidable mortality and a longer life expectancy than Maori in New Zealand overall, and the disparity in life expectancy for Maori in Waitemata is considerably less than the gap in life expectancy

between Maori and non-Maori nationally. However, it is also important to recognise that within the Waitemata district, inequalities still exist. The state of Maori health is poor relative to that of non-Maori, as measured by life expectancy, avoidable mortality, infant mortality, and self-reported health status.

The need for intersectoral collaboration to address access to the social, economic, cultural, political and environmental determinants of health including improving quality of care was highlighted in community consultation. There is clear evidence that Maori in the Waitemata district have poor access to the determinants of health, and this is reflected in, for example, income levels, employment status, occupational groups, home ownership rates, housing conditions, and education. There is an obvious potential role for the DHB in providing local leadership in intersectoral collaboration to address the determinants of health.

Given the current context, it is not surprising that local Maori have a greater exposure to risk factors than non-Maori. Over half of Waitemata Maori adults are exposed to health risks from smoking, and the figure is likely to be higher for Maori children. As well, over 60% of Maori in the Waitemata district are overweight or obese and only around 50% of Maori are consuming the recommended minimum amount of fruit and vegetables. Further, Maori are substantially under-represented in terms of utilisation of preventative care and screening (immunisation, breast screening, cervical screening). However, Maori in the Waitemata are more likely to be physically active than non-Maori.

These factors are modifiable and all have a major impact on conditions in which there are inequalities in mortality and morbidity, and that were identified through consultation as areas of high demand and need for health services for Maori: chronic conditions (e.g. diabetes, respiratory disease), cardiovascular disease, cancer, mental health, intentional and unintentional injury, hearing and eye care, and gout. Hui feedback aligns directly with findings from the data review reported in this document that demonstrate local ethnic disparities in diabetes, COPD, asthma, cardiovascular disease, cancer, mental health, and suicide. The leading causes of inequities in death and illness for Maori in Waitemata are: ischaemic heart disease, lung cancer, diabetes, COPD and breast cancer.

The importance of health promotion for whanau to reinforce protective factors (e.g. access to preventive services, increased physical activity, healthy nutrition and whanau support) and mitigate risk factors (e.g. smoking, alcohol and drug misuse, promotion and sale of unhealthy foods) was emphasised at the community hui. There is clearly huge potential for Maori to benefit from intervention to address identified modifiable risk factors and strengthen protective factors, including enhanced access to preventative care.

Much more also needs to be done to improve access to health services at all levels for Maori in the Waitemata region. This is evident from the review of patterns of health service utilisation for preventative care/screening, primary care, outpatient care, and hospital care. Maori in Waitemata report: higher levels of unmet need for GP care and oral health care compared to non-Maori; have lower rates of cardiovascular risk assessment and receive less medication for cardiovascular disease despite higher need; and Maori diabetics are less likely

to receive annual diabetes checks. The DNA rate for DHB outpatient appointments is three times higher than for NZ European. Maori health service contact for mental health issues is low relative to need, as are the rates of cardiovascular disease interventions. For Maori adults aged 45-64 years the rates of ambulatory sensitive hospitalisations are 33% higher than the national average.

Concluding comments

This HNA has identified that even though Maori in Waitemata experience better health status than the average for Maori in New Zealand, there are still substantial unmet health and healthcare needs for local Maori which have high potential to benefit from intervention. Further, multiple specific areas for DHB action are identified that may contribute to improving health system performance for Maori, increase Maori participation and leadership within the sector, and facilitate the achievement of equity in health outcomes for Maori.

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List of abbreviations

ASR	Age Standardised Rate
AUDIT	Alcohol Use Disorders Identification Test
CABG	Coronary Artery Bypass Grafting
CEO	Chief Executive Officer
CNOS	Canadian National Occupancy Standard
COPD	Chronic Obstructive Pulmonary Disease
CPHAC	Community Public Health and Disability Committee
DALY	Disability Adjusted Life Year
DAP	District Annual Plan
DHB	District Health Board
DNA	Did Not Attend
DSP	District Strategic Plan
FSA	First Specialist Appointment
FTE	Full Time Equivalent
GM	General Manager
HAC	Hospital Advisory Committee
HDIU	Health & Disability Intelligence Unit (in the Ministry of Health)
HNA	Health Needs Assessment
MaGAC	Maori Health Gain Advisory Committee
MaPO	Maori Co-purchasing Organisation
NCEA	National Certificate of Educational Achievement
NZCR	New Zealand Cancer Registry
NZDep 2006	New Zealand Index of Deprivation 2006
NZDS	New Zealand Disability Strategy
NZHIS	New Zealand Health Information Service
NZHS	New Zealand Health Strategy
NZHS	New Zealand Health Survey
PHO	Primary Health Organisation
PI	Pacific Islander
TLA	Territorial Local Authority
WDHB	Waitemata District Health Board
WINZ	Work and Income New Zealand

Glossary[1]

Hapu	Sub-tribe
Hui	Meeting
Iwi	Tribe, people
Kanohi ki te kanohi	In person or face to face
Kapa haka	Performances encompassing Maori song, poi and haka
Karakia	Prayer/incantation
Kaumatua	Older person
Kaupapa Maori	Maori based methodology, themes or strategies
Kawa	Maori customary protocol (varies according to hapu and iwi)
Kawanatanga	Governance
Kohanga Reo	Total immersion Maori language family programme for young children, 0-5 years.
Kuia/whaea	Older woman or women
Kura Kaupapa Maori	Maori language immersion schools within which the philosophy and practice reflect Maori cultural values
Manaakitanga	Show respect, hospitality, care
Marae	Meeting area that is a focal point for community, often used to include both meeting house and area in front of house
Mihi	Introducing oneself, greeting
Ngati Whatua	Iwi/tribe that is tangata whenua and manawhenua of the area covered by Waitemata DHB
Ora	Wellness
Oritetanga	Equity
Pou Manaaki	Maori Health Advisor
Rangatiratanga	Self-determination
Rohe/takiwa	Region /district
Rongoa	Traditional Maori medicines and healing practices
Tai tamariki/Rangatahi	Young person
Tamariki	Children
Tamariki ora	Well child
Tangata whaiora	Person with a mental health condition

[1] Glossary definitions reflect word usage within this document and are not intended to be definitive.

Tangi/tangihanga	Funeral/bereavement
Te Tiriti o Waitangi	The Treaty of Waitangi
Te Whare Tapa Wha	A specific Maori model of health
Tikanga	Maori custom and values
Tino rangatiratanga	Self-determination
Wairua	Spirituality
Whakapapa	Geneology
Whanau	Extended family

Introduction

What is a Health Needs Assessment?

A health needs assessment (HNA) is a systematic method to review a population's health issues. Health needs assessments provide a picture of the health status of a District Health Board (DHB) population at a given time, and are a foundation for the District Strategic Plans (DSP) that DHBs are required to prepare, or update, every three years.

The New Zealand Public Health and Disability Act 2000 identifies that one of the functions of DHBs is:

> To regularly investigate, assess, and monitor the health status of its resident population, any factors that the DHB believes may adversely affect the health status of the population, and the needs of that population for services (Clause 23(1)(g)).

HNAs are a way for DHBs to carry out this function, and provide evidence to underpin funding decisions to improve health and reduce inequities.

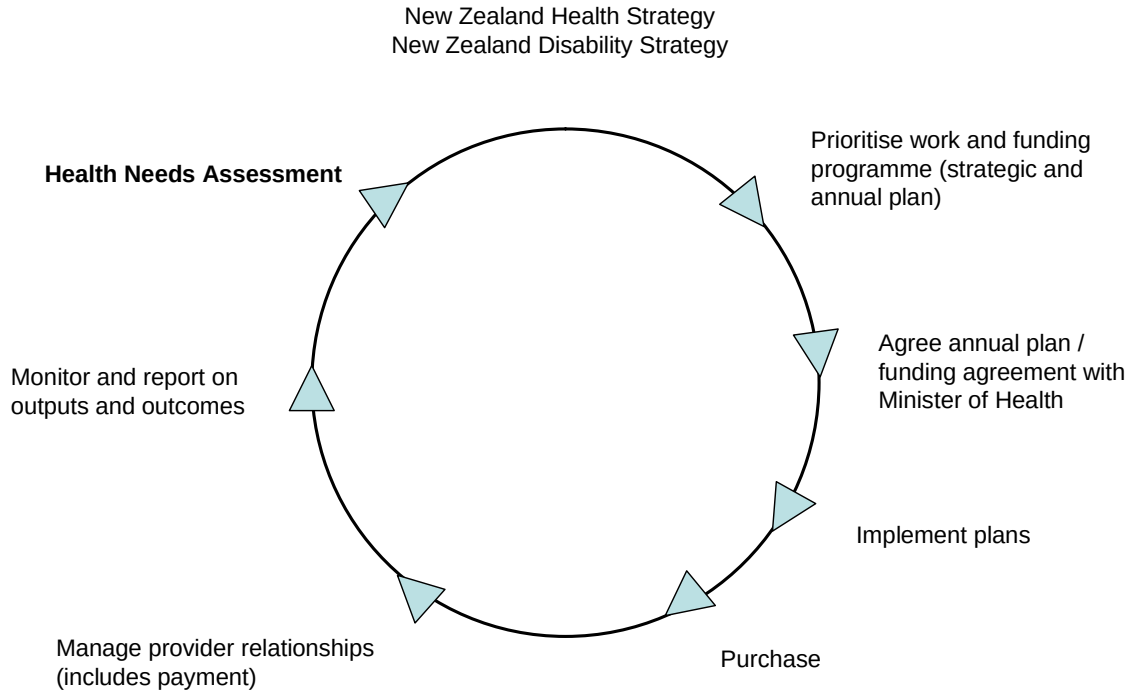
HNAs the DHB planning cycle

At a national level, priority areas for health and disability services such as those described in the Minister of Health's letter of expectations to DHBs, reflect the directions established by the two overarching health and disability sector strategies: the New Zealand Health Strategy (NZHS) and the New Zealand Disability Strategy (NZDS). These strategies are supported by other more targeted policy documents that provide strategic direction in specific areas. He Korowai Oranga, the Maori Health Strategy, sets the direction for Maori health development in the sector and is the framework for DHBs and other public sector agencies to take responsibility for their role in supporting Maori health.

At a DHB level, priorities for the population of the DHB area are determined within the context of national priorities. HNAs provide DHBs with evidence to inform decisions about the priorities for health and disability services for their population. DHBs develop District Strategic Plans (DSPs) using the evidence compiled in the HNAs. The District Annual Plans (DAP) are based on the DSP and outline how the DHB intends to provide health and disability services for people in their district over the coming year.

The following diagram locates health needs assessment within the DHB planning cycle.

Figure 1 - The DHB planning cycle (from Ministry of Health 2000)



Purpose

The purpose of this HNA is to:

1. identify the unmet health and healthcare needs of Maori living in the Waitemata DHB region;
2. identify those unmet needs for Maori with the greatest potential to benefit from intervention; and,
3. assist in determining priorities for DHB service planning for Maori, in the context of national health priorities and the Health Targets.

This document will inform the Waitemata DHB's planning processes and will be useful to Maori health providers, other health providers and the range of local Maori health stakeholders. It is intended that the HNA, as an evidence base for action, will contribute to the achievement of health gains and equity in health outcomes for the Waitemata DHB Maori population.

Equity and the HNA

There are wide and longstanding inequities between the state of Maori and non-Maori health in New Zealand as measured according to almost every major health indicator. Jones (2001) has suggested that the causes of ethnic inequalities in health can be attributed to three main pathways: differential access to determinants of health; differential access to health care; and differences in the quality of care received. There is evidence and general acceptance of the role of each of these pathways in causing and maintaining disparities between Maori and

non-Maori health. Government policy, as outlined in key health sector strategies including the New Zealand Health Strategy, the New Zealand Disability Strategy and He Korowai Oranga includes a clear and high level focus on reducing inequalities (differences) and achieving equity (fairness) through addressing each of the pathways.

Despite subtle differences in meaning, the terms inequalities and inequities are used interchangeably in this report. Health equity has been defined by Braveman and Gruskin (2003 p254) as 'the absence of systematic disparities in health (or in the determinants of health) between different social groups who have different levels of underlying social advantage/disadvantage – that is, different positions in a social hierarchy'. The concept of health equity draws attention to monitoring how health resources are distributed to the community, including processes for resource allocation (Reid & Robson, 2006). The concept of health equity has therefore been a central consideration in carrying out this HNA.

Maori models of health

A number of Maori models of health have been proposed to articulate Maori concepts and understandings of health and wellbeing. Two of the most well known models are Te Whare Tapa Wha (The Four Walls of a House) and Te Wheke (The Octopus). Te Whare Tapa Wha (Durie, 1998) is the most commonly quoted model of Maori health. The model proposes that health is the balance between four interacting dimensions: te taha wairua – spirituality; te taha hinengaro – thoughts and feelings; te taha tinana – the physical element; and te taha whanau – the extended family. Health is likened to the four walls of a house, each wall representing one of the four dimensions and being necessary to ensure the stability of the house.

A similar model, Te Wheke (Pere, 1984), proposes that good health is attained by achieving a balance between eight interacting dimensions: wairuatanga – spirituality; taha tinana – the physical side; hinengaro – the mind; whanaungatanga – kinship relationships; mana ake – the uniqueness of the individual and family; mauri – the life principle of people and objects; ha a koro ma, a kui ma – the link with the ancestors; and whatumanawa – the open and healthy expression of emotions.

Essentially, Maori models of health express what it is to achieve good health as Maori. Key features of these models are that health is holistic in nature, and therefore individuals are located within a wider whanau context, the impact of determinants of health is recognised, and emphasis is placed on continuity between the past and the present. According to these models spirituality, cultural integrity and whanau are fundamental.

A Treaty of Waitangi Framework

The Treaty of Waitangi is an agreement signed between Maori chiefs (representing iwi and hapu) and the British Crown in 1840. The Treaty's essential purpose was to provide the basis for a mutually beneficial relationship between iwi and the Crown and to govern the

relationship between Maori and British settlers (Orange, 1987). There is general recognition that the Treaty is the founding document of New Zealand.

The Treaty is divided into five parts: the Preamble, which contains its objectives (the protection of resources and people); Article One, which allowed for the transfer of governance or sovereignty; Article Two, which allowed for a continuation of tribal authority with regard to existing property rights; and Article Three, which provided for citizenship rights and therefore equal benefits of citizenship for Maori; and the Postscript, regarding freedom of religion and custom. Debate over the meaning of the Treaty stems from discrepancies between the Maori and English versions. In Article One, the English version provides for a transfer of sovereignty from Maori to the Crown, while the Maori version provides for a transfer of governance or administrative authority only. Both versions provide for the right of the Crown to govern. The English version of Article Two provides for the retention by Maori of pre-existing property rights. However, the Maori version went beyond property rights to include the confirmation of not only material properties but also tribal authority or self-determination with regard to existing cultural, social, and economic resources, including health. Article Three provides a guarantee for Maori of the rights of British citizenship and therefore the right to benefit equitably from society (Durie, 1998).

In 1985 the Standing Committee on Maori Health recommended that the Treaty of Waitangi be regarded as the foundation for good health in New Zealand (New Zealand Board of Health, 1987). This was the first formal Government recognition of the relevance of the Treaty to health. The Board later recommended that all health related legislation should incorporate recognition of the Treaty (New Zealand Board of Health, 1988). In 1988, the Royal Commission on Social Policy concluded that the Treaty was relevant to all social and economic policies, and to the future as much as to the past (Royal Commission on Social Policy, 1988). The Royal Commission on Social Policy identified Treaty principles that were intended to capture the intentions of the Treaty and be applicable to social policy - participation; partnership; and protection. The Public Health and Disability Act 2000 was the first social policy legislation to include reference to the Treaty, and places specific requirements on DHBs that are intended to be consistent with the Treaty principles.

The Treaty of Waitangi, and specifically the articles of the Treaty, has been selected as the monitoring framework for this HNA for four reasons:

- First, the purpose of the Treaty as outlined in the preamble includes the protection of Maori wellbeing and the notion of equity is central.
- Second, the Maori right to health is derived from three sources – human rights, indigenous rights and Treaty rights as tangata whenua. The Treaty therefore reinforces the Maori right to good health.
- Third, the Treaty is a framework that is recognised by government and Maori in general, and in particular is widely recognised and used within the health sector including by DHBs. It is therefore a known framework which can be easily understood by the range of Maori health stakeholders.

- Fourth, the Treaty is consistent with Maori models of health in that it takes a broad and holistic approach, seeks to protect Maori custom and therefore cultural integrity and whanau structures, and reinforces Maori control over Maori resources.

Structure

For the purposes of this report, the Treaty is used as the monitoring framework to capture key Maori health indicators for measuring the state of Maori health in the Waitemata DHB region. The articles of the Treaty provide three domains under which the indicators are classified.

Article 1 – Kawanatanga (governance) is equated to health systems performance. That is, measures that provide some gauge of the Government's provision of structures and systems that are necessary to facilitate Maori health gain and reducing inequalities.

Article 2 – Tino Rangatiratanga (self-determination) is in this context concerned with opportunities for Maori leadership and participation within the health sector.

Article 3 – Oritetanga (equity) encapsulates measures that gauge progress towards reducing systematic inequalities in determinants of health and health status, including access to health services.

The list of indicators is not definitive, but rather reflects the range of relevant identified measures for which data is currently being collected. Further, it should be noted that there is overlap between the three articles and therefore categories of indicators. That is, some categories of indicators may equally be listed under two of the articles. For example, while health outcome indicators provide a measure of progress in reducing disparities (Article 3 – Oritetanga: achieving equity), equally they can be considered as a measure of health systems performance (Article 1 – Kawanatanga: health systems performance). Therefore, while the divisions are to some extent artificial, the core value of presenting the indicators in this way is that using a known framework endorsed by and relevant to Maori and well understood by the sector allows for ready understanding and potentially a high degree of utility.

To supplement the information from available data sources, Maori community consultation was undertaken, in the form of a Maori Provider and PHO Summit followed by a series of four Maori community hui and a submissions process. The purpose of the community hui was to seek input from the Maori community with regard to their health need priorities in order to inform the HNA. The feedback from the Maori consultation process is summarised in a separate chapter.

What's next?

The starting point for this HNA was to use a framework, the Treaty of Waitangi, which was broad enough to encapsulate important aspects of the state of Maori health and Maori health

needs, as described by Maori in the Waitemata DHB region. However, at this time it is not possible to fully populate the framework with indicators that are able to capture the state of Maori health according to Maori concepts of health. Universal indicators, while useful, are limited in their capacity to measure Maori health in Maori terms and there is much work yet to be done to develop Maori-specific health indicators. Therefore, there are gaps in terms of the extent to which this document is able to report on the state of Maori health in a comprehensive way as there is no data available in some areas. Those Maori health needs that are not able to be measured due to lack of data will be highlighted as areas where additional work and specific data collection is required, to enable the next Maori HNA to offer a fuller description of Maori health needs.

The findings of this HNA will be used to inform the Waitemata DHB's planning processes and funding allocations in order to maximise the DHB's contribution to Maori health gain and achieving equity for Maori resident within the Waitemata DHB region.

Sources of data and methodological issues

Introduction

This section describes the key data sources used in this report and some of the relevant methodological issues. A number of surveys and studies that are specific to certain sections of the report are described in the relevant section.

Data and information sources

New Zealand Health Information Service (NZHIS)

The New Zealand Health Information Service (NZHIS) manages a number of databases including the National Minimum Data Set (NMDS), the Mortality Data Collection, National Non-Admitted Patient Data Collection, Cancer Registration and Mental Health Information National Collection. They are essentially a combination of existing public and some private morbidity data collections. All diagnoses are classified according to the International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-AM).

Hospital discharge data

Data on the morbidity of various diseases and conditions are primarily based on all discharges from public hospitals. The National Minimum Dataset (Hospital Events) is a collection of public and private hospital discharge information. Day cases are included in this data but attendances at outpatient clinics or emergency departments are not included. Analysis of hospitalisation data focuses on the number of episodes of care rather than the number of individual people. Hospital data include patients who die in hospital after formal admission.

A general issue with using hospitalisation rates for outcome measures is that reductions in such rates can reflect either a real decrease in incidence, improved primary health care (thus reducing the need for hospital care), or a decrease in access to (or provision of) hospital services. The relative importance of these factors is often not known.

Outpatient data

The National Non-Admitted Patient Data Collection was introduced in July 2006 and provides nationally consistent data on non-admitted patient activity. Information about the Waitemata population's use of outpatient clinics is drawn from this source.

Mortality data

The mortality statistics maintained by NZHIS are based on death certificates completed by medical practitioners, post-mortem reports, coroners' certificates, and death registration forms completed by funeral directors. Supplementary data are obtained from a variety of other sources (such as public hospitals and the National Cancer Registry). Mortality data for three years was used in an attempt to ensure sufficient numbers for analysis.

Cancer data

The National Cancer Registry was established in 1948 and is now maintained by NZHIS. It is a register of people who develop all types of cancer except basal and squamous cell skin

cancers. The Cancer Registry Act 1993 requires all pathology laboratories to supply the registry with a copy of any pathology report with a diagnosis of cancer and related conditions. This data is somewhat older than other NMDS data but is the most recent available.

Mental health data

The information collected by the Mental Health Information National Collection relates to the provision of secondary mental health and alcohol and other drug services, which are funded by the government. Providers include DHBs and, to a limited degree, non-government organisations (NGOs). The collection does not include information on primary mental health services.

The 2006/07 New Zealand Health Survey

This face-to-face survey was most recently completed over a one year period between 2006 and 2007. It had a sample size of 12,488 adults (15 years and older) and 4921 children (0-14 years). Approximately 1200 adults were sampled in the Waitemata district. The response rate was 68% for adults and 71% for children.

The survey provides information on:

- selected health risk behaviours (smoking, physical activity and alcohol use)
- the health status of New Zealanders, including their self reported physical and mental health status, and the prevalence of selected conditions including diabetes
- the utilisation of health services and,
- a number of demographic characteristics such as age, gender, ethnicity, and income.

Where estimates are provided for Waitemata populations they may be either direct survey estimates or synthetic estimates. Since the sample sizes for the overall Waitemata population was reasonably large direct estimates can be calculated using only the respondents from Waitemata District. However, for ethnic specific estimates, sample sizes were too small so estimates were derived by the Health & Disability Intelligence Unit (HDIU), Ministry of Health, from a statistical regression model. These estimates were only available for adults.

The Youth 2000 Survey

This survey was carried out at schools in 2001 using laptops and multimedia technology by the Adolescent Health Research Group who interviewed 9,699 young people from around the country. Only national data are available.

Census and demographic data

A New Zealand Census of Population and Dwellings is held every five years. Everyone in the country on census night, including visitors to the country, must fill out an individual census form. This census was carried out in March 2006. The New Zealand Census collects limited health information but contains much social and economic information that was useful in

describing the factors that determine health. In addition, the Census forms the basis for determining Waitemata's and New Zealand's denominator populations. Projections of population sizes for the years after 2006 and estimates of population sizes between the 2001 and 2006 Censuses have been made. Projections are made on the basis of assumptions about a number of factors including migration, fertility and mortality. However, projections are not always accurate.

Birth registrations

This includes all live and still births registrations from Births, Deaths, and Marriages (Department of Internal Affairs). Births, Deaths and Marriages registers and maintains birth, death, marriage and civil union information for New Zealand.

Other references used

A number of other publications have been heavily drawn upon in developing this health needs assessment. Three documents in particular need to be mentioned. Tables, figures and text have been directly taken from these publications. We acknowledge these sources and their authors here, in the acknowledgement section and in the text.

Waitemata DHB Health Needs Assessment (2008)

Health & Disability Intelligence Unit (HDIU), Ministry of Health was contracted by a number of DHBs, including Waitemata DHB, to undertake Health Needs Assessments on their behalf. The document prepared by HDIU is a standalone HNA. However, Waitemata DHB has used that document as a basis for developing our four HNAs (an overall HNA, and three ethic specific HNAs – Maori, Pacific, and Asian). Therefore, a considerable proportion of the analyses and interpretation in this document draws upon HDIU's work. In particular this includes some of the Census analysis, most of the NZ Health Survey work, and a good proportion of the mortality and hospitalisation analyses.

Demographic Profile of Waitemata DHB (2007)

Much of the demographic information in this HNA has been taken directly from a report by Dr. Ratana Walker and Sam Martin which was published in May 2007 (Walker & Martin, 2007). The full report can be found at:
http://www.waitematadhb.govt.nz/Publications/HealthStatusDocuments/tabid/305/Default.aspx

The Health of Children and Young People in the Waitemata Region (2007)

This document was developed for Waitemata DHB by the New Zealand Child and Youth Epidemiological Service (Craig, Jackson, & Yeo Han, 2007). It is a very comprehensive document with considerable interpretation and background material. The majority of our child and youth sections are taken directly from this document. In addition some of the determinants section has also used this report as a source. The original document can be accessed at:
http://www.waitematadhb.govt.nz/Publications/HealthStatusDocuments/tabid/305/Default.aspx

Methodological issues

Ethnicity data

Ethnicity data are presented in two ways; 'total response' and 'prioritised'. In 'total response', a respondent is counted in each of the ethnic groups they selected. This means that the sum of the ethnic group population will exceed the total population because people can select more than one ethnic group. In the 'prioritised' method, each respondent is allocated to a single ethnic group using the priority system (Maori > Pacific peoples > Asian >European/Other). For example, a person who selects (when asked their ethnicity) both Maori and European would only be included in the Maori grouping. For further information see *Ethnicity Data Protocols for the Health and Disability Sector* (Ministry of Health, 2004*) and Presenting Ethnicity: Comparing prioritised and total response ethnicity in descriptive analyses of New Zealand Health Monitor surveys* (Public Health Intelligence Occasional Bulletin 48. Ministry of Health, 2008)

Monitoring trends in health for Maori over time are made difficult because the definitions and ways of asking about ethnicity have changed over time. Even now, some sources ask about ethnicity using a different question than that used in the official census. This means that the numbers of people recorded as Maori in some health statistics (the numerator) may be different to the number of people recorded as Maori in the population census (the denominator). Historically, this discrepancy has served to under-estimate rates of morbidity and mortality for Maori.

Adjustment for undercounting of Maori

A number of data sources used for this report are known to under-count Maori, by inaccurately classifying some Maori as non-Maori when the ethnicity data is collected. This can serve to under-represent the true rates of diseases and hospitalisations for Maori, and make them appear lower than they really are. There are adjustors which can be applied to these particular datasets, to correct for the level of under-counting that has been identified for Maori at each age-group.

The New Zealand Cancer Register has been found (for 2000-2004) to undercount Maori by 2-15%, with the undercount increasing with older age (Robson & Harris, 2007). **This means that the true cancer rates in the Waitemata Maori population are likely to be 2-15% higher than the rates reported in this document.**

Hospitalisation data (2003-2005) has been found to undercount Maori by 5-15% across all ages, again highest in older age, but also high in children (Robson & Harris, 2007). **This means that the true hospitalisation rates in the Waitemata Maori population are likely to be 5-15% higher than the rates reported in this document.**

The death registrations from the NZHIS no longer need an adjuster, as this data set has most recently been found to have no difference in the recording of Maori compared with the census data. (Robson & Harris, 2007).

Age-standardisation

When making comparisons between the Maori and non-Maori population, the data must be age-standardised to account for the fact that the two populations have very different age-structures: the Maori population is a very young population, whereas the non-Maori population has a higher proportion of elderly people. Unless otherwise specified, all age-standardised data have been age-standardised to the WHO population.

Confidence intervals

The confidence intervals give an indication of the margin of error associated with the survey estimates. In this report 95% confidence intervals are presented, where appropriate, for both rates and rate ratios. When the 95% confidence intervals of two rates do not overlap, the difference in rates between the groups is said to be statistically significant with 95% confidence. If the two confidence intervals do overlap, the difference could be due to chance, and may not be statistically significant.

With rate ratios, if the 95% confidence interval does not include one, the two rates are said to be significantly different from each other. For example, a rate ratio of 1.5 with ninety-five percent confidence intervals of 1.2—1.8 means that the rate is 1.5 times higher in the particular DHB than the New Zealand average with 95% confidence. Larger populations and more common conditions usually have narrower confidence intervals and so have a greater likelihood of achieving a statistically significant difference than results with smaller numbers.

Demography

What is demography?

Demography is the study of the characteristics of populations, including size, composition (e.g. age and sex), distribution and factors that drive population change. Demography can inform both national and local level planning. For example, at a national level, the Maori population is relatively youthful compared to the total New Zealand population and is growing as a proportion of the population. According to Statistics New Zealand projections, by 2021 almost one third of New Zealand children will be Maori (Statistics New Zealand, 2004). Therefore, alongside moral and Maori development imperatives, it is becoming increasingly important for the future of New Zealand as a whole that Maori are healthy and vital and best equipped to contribute to all spheres of New Zealand society. At the local level, understanding the demography of Maori resident within the Waitemata DHB region is a necessary precursor to informed planning to address the health needs of Maori.

Size of Maori population

Waitemata DHB serves 7.6% of the Maori population in New Zealand. This represents the fifth highest number of Maori served by a DHB (Table 3). However, Maori make up only 8.9% of the total Waitemata DHB population and therefore compared to the other DHBs the proportion of Maori is relatively low, as show in Tables 1 and 2.

Table 1 – Total Maori Population by DHB, 2006

DHB	Maori	% NZ Maori
Waikato	67,476	11.9%
Counties Manukau	67,245	11.9%
Bay of Plenty	45,642	8.1%
Northland	43,530	7.7%
Waitemata	42,876	7.6%
Hawkes Bay	33,903	6.0%
Canterbury	33,417	5.9%
Lakes	31,377	5.6%
Auckland	29,847	5.3%
Midcentral	26,712	4.7%
Capital and Coast	26,493	4.7%
Hutt	21,480	3.8%
Tairawhiti	19,758	3.5%
Taranaki	15,816	2.8%
Whanganui	14,424	2.6%
Otago	11,466	2.0%
Southland	11,319	2.0%
Nelson Marlborough	10,950	1.9%
Wairarapa	5,496	1.0%
South Canterbury	3,156	0.6%
West Coast	2,916	0.5%
Total	565,329	100.0%

Source: 2006 Census, prioritised ethnicity

Table 2 – Percentage of Population in each DHB who are Maori, 2006

DHB	Maori	Total	% Maori
Tairawhiti	19,758	44,463	44.4%
Lakes	31,377	98,319	31.9%
Northland	43,530	148,440	29.3%
Bay of Plenty	45,642	194,931	23.4%
Whanganui	14,424	62,208	23.2%
Hawkes Bay	33,903	148,248	22.9%
Waikato	67,476	339,189	19.9%
Midcentral	26,712	158,841	16.8%
Hutt	21,480	136,101	15.8%
Counties Manukau	67,245	433,083	15.5%
Taranaki	15,816	104,274	15.2%
Wairarapa	5,496	38,613	14.2%
Southland	11,319	106,824	10.6%
Capital and Coast	26,493	266,658	9.9%
West Coast	2,916	31,326	9.3%
Waitemata	42,876	481,614	8.9%
Nelson Marlborough	10,950	130,062	8.4%
Auckland	29,847	404,619	7.4%
Canterbury	33,417	466,407	7.2%
Otago	11,466	179,397	6.4%
South Canterbury	3,156	53,877	5.9%
Total	565,329	4,027,947	14.0%

Source: 2006 Census, prioritised ethnicity

In terms of Territorial Local Authority (TLA) residence, a larger proportion of the Waitemata DHB Maori population is resident within Waitakere City (53%), followed by North Shore City (29%) and Rodney District (18%) respectively.

Table 3 - Waitemata DHB Maori population by TLA, 2006

Territorial Authority	Maori	Non-Maori	Total	Percentage of population who are Maori
Rodney District	7,470	78,375	85,845	8.7
North Shore City	12,519	187,572	200,091	6.3
Waitakere City	22,890	152,409	175,299	13.1
Total WDHB	42,879	418,356	461,235	9.3

Source: Census 2006, usually resident population

Projected population to 2026

The Maori population in Waitemata is growing faster than the non-Maori population in Waitemata, and faster than the Maori and non-Maori population nationally. In 2006, Maori made up 9.3% of the population in the Waitemata district, but by 2026 Maori are projected to make-up 11.8% of the Waitemata population.

Table 4: Projected population in the next 20 years by prioritised ethnicity, 2006 base

Ethnicity		2006	2011	2016	2021	2026	% increase 2006-2026
Waitemata DHB	Maori	48860	53870	58900	64130	69610	42.5
	Non-Maori	455850	490730	524100	557070	589330	29.3
New Zealand	Maori	624280	672220	717800	763780	810730	29.9
	Non-Maori	3559815	3729240	3873235	4007615	4129120	16.0

Note: Counts may not sum to total due to rounding
Source: Statistics NZ, projections were derived in September 2007.
Medium Projection: Assuming Medium Fertility, Medium Mortality, Medium Inter-Ethnic Mobility and Medium Migration

Birth rate

Maori birth rates are substantially higher than those of non-Maori in the Waitemata DHB region, consistent with national trends. This reflects higher Maori fertility rates, and the relatively youthful Maori population structure.

Table 5 - Live births registered in 2007, for mothers of all ages, Maori and non-Maori.

	Waitemata DHB			New Zealand		
	Live births	**Female population (15-49 years)**	**Rate (per 1000)**	**Live births**	**Female population (15-49 years)**	**Rate (per 1000)**
Maori	1155	11891	97.1	15289	153536	99.6
Non-Maori	6674	117167	57.0	49831	879574	56.7
Total	7829	129058	60.7	65120	1033110	63.0

Source: HDIU
Live births= the number of live births registered during 2007, for mothers of all ages (by DHB and ethnic group).
Female population, 15 - 49 years = the number of people in the female population aged 15-49 years in 2007, for the specified DHB and ethnic group.

Composition of the Maori population

Just over half of Maori residing within the Waitemata region were female, and just under half were male. These proportions are much the same as national level male-female ratios for both Maori and non-Maori (Table 6).

Table 6: Population distribution by prioritised ethnicity and gender, 2006 census

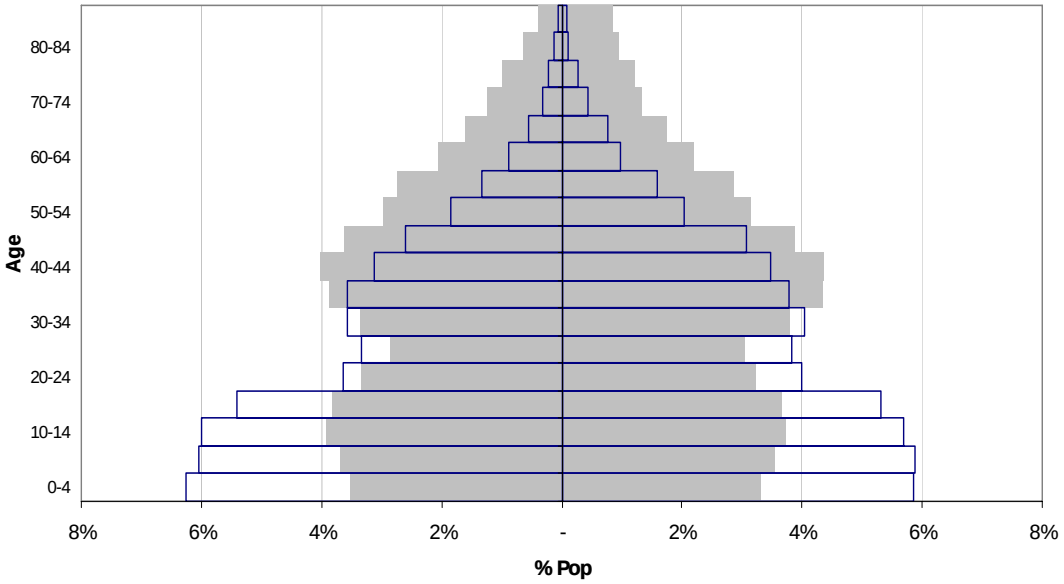
Ethnic Group	Waitemata DHB		
	Female Number (% of total)	Male Number (% of total)	Total
Maori	21798 (51.2%)	20772 (48.8%)	42570
Non-Maori	225360 (51.3%)	213669 (48.7%)	439050

Note: Counts may not sum to total due to rounding

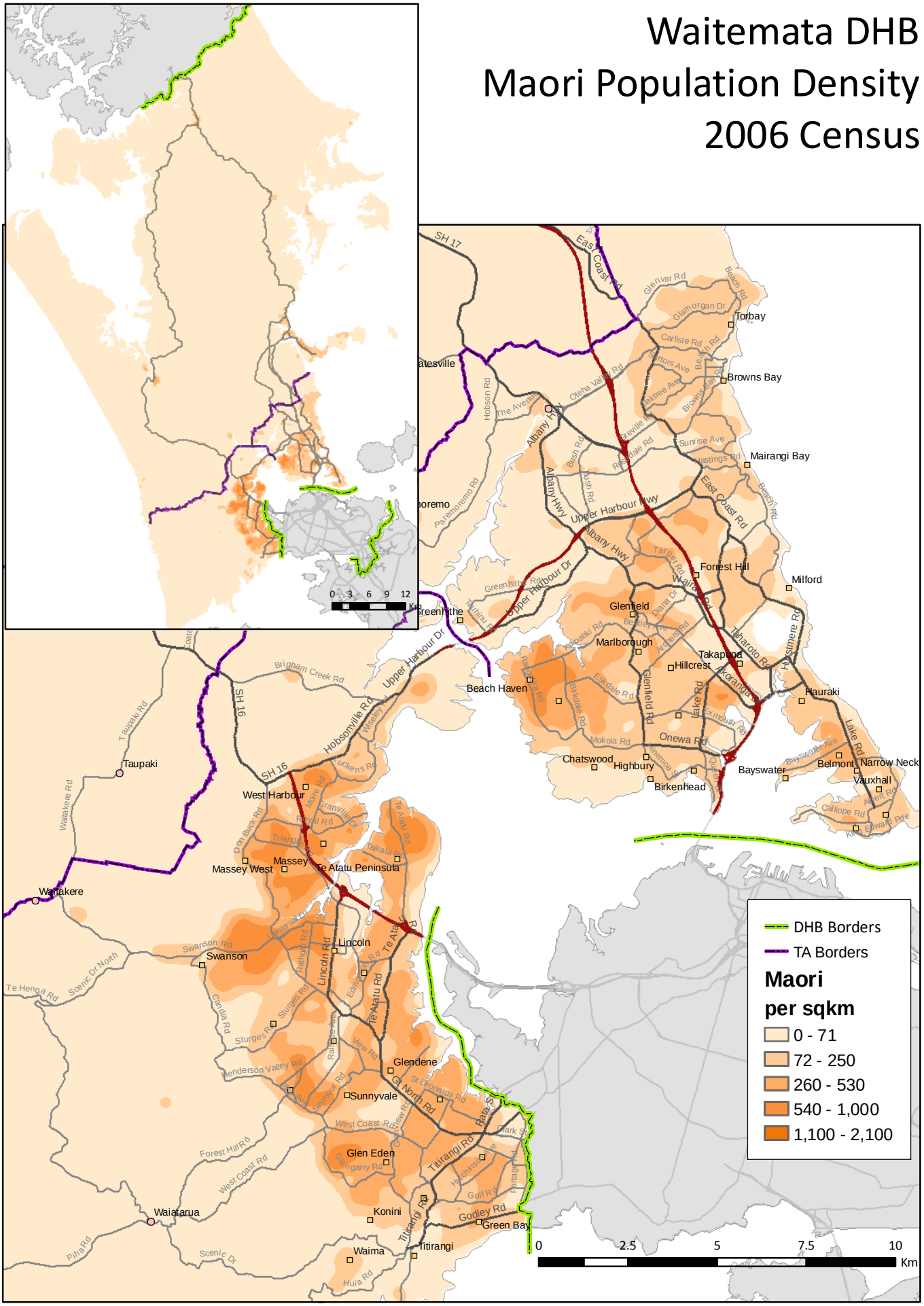
Source: 2006 Census

The Maori population in Waitemata is very young compared with the overall population, as shown in Figure 2. For Maori, 35.7% of the population are aged under 15 years, compared with 21.7% of the Waitemata population overall. The difference is even more marked among older people, with only 2.9% of the Maori population aged 65 years and over, compared with 11% of the total Waitemata population. This is in part reflective of the lower Maori life expectancy relative to non-Maori.

Figure 2 - Age structure of Waitemata DHB Maori Population (total Waitemata population shaded)



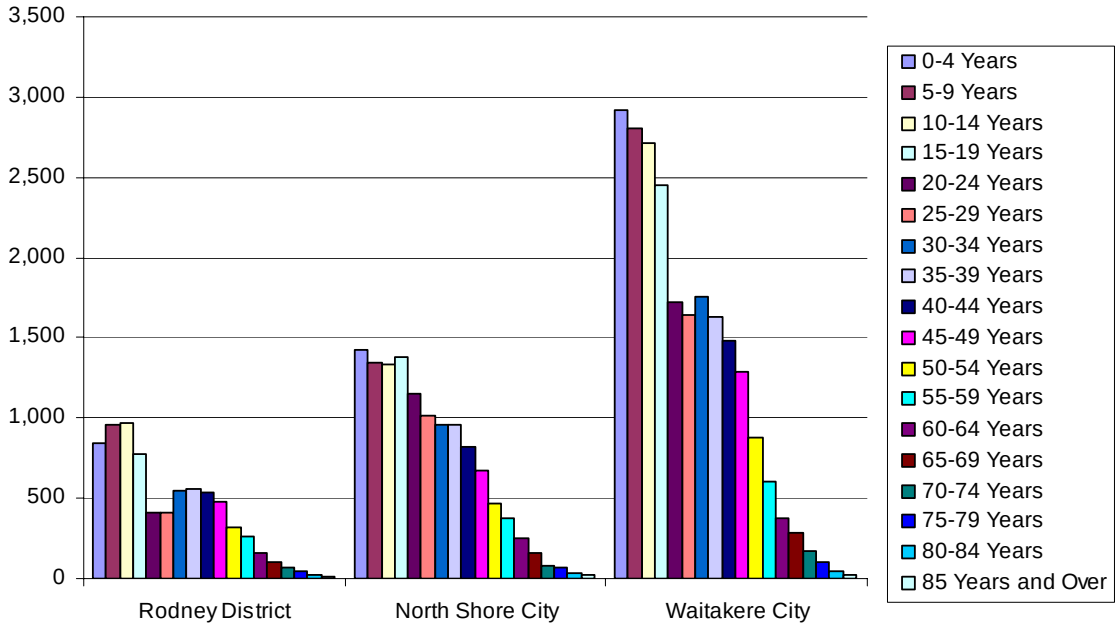
Waitemata DHB
Maori Population Density
2006 Census



Source: Statistics NZ 2006 Census

Figure 3 shows the number of Maori in each age-group living in the three TLAs in the region, revealing the particularly large number of Maori under the age of 20years living in Waitakere city. This graph also demonstrates the very small numbers of Maori over the age of 60 across all TLAs in the region.

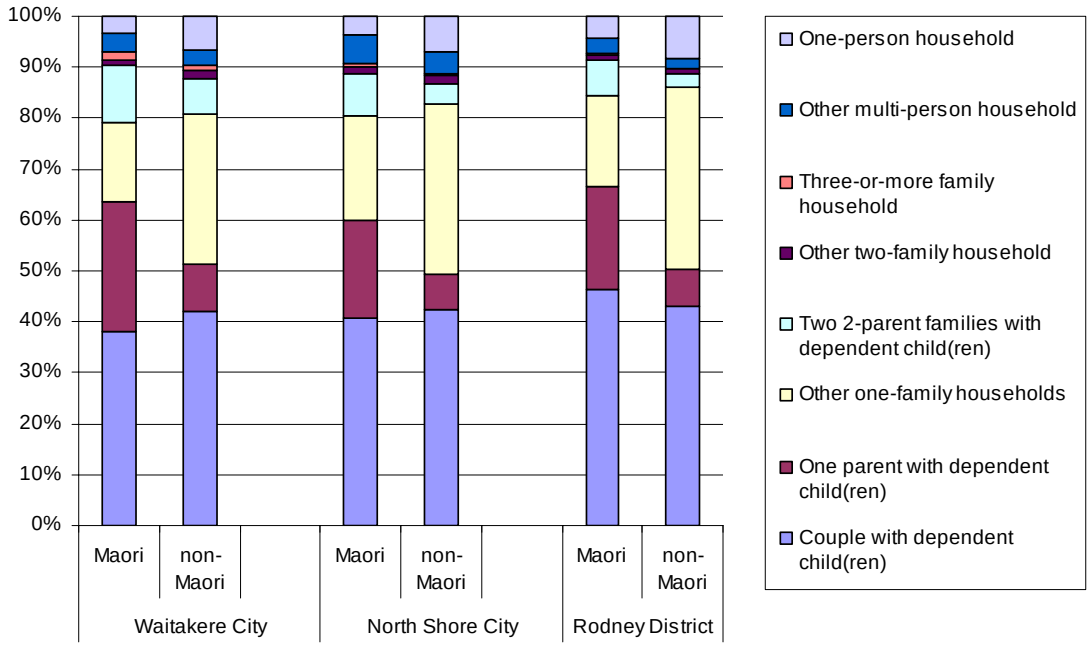
Figure 3 - Numbers of Maori living in each TLA, by age-group, 2006



Source: 2006 Census, usually resident population

Maori living arrangements within the Waitemata DHB, consistent with national trends, differ from that of non-Maori in ways that may indicate that Maori are experiencing the pressures of increased housing costs alongside possible preferences for intergenerational living. Maori are more likely to live in one parent households with dependent children, households with two 2-parent families with dependent children, and other multi-person households.

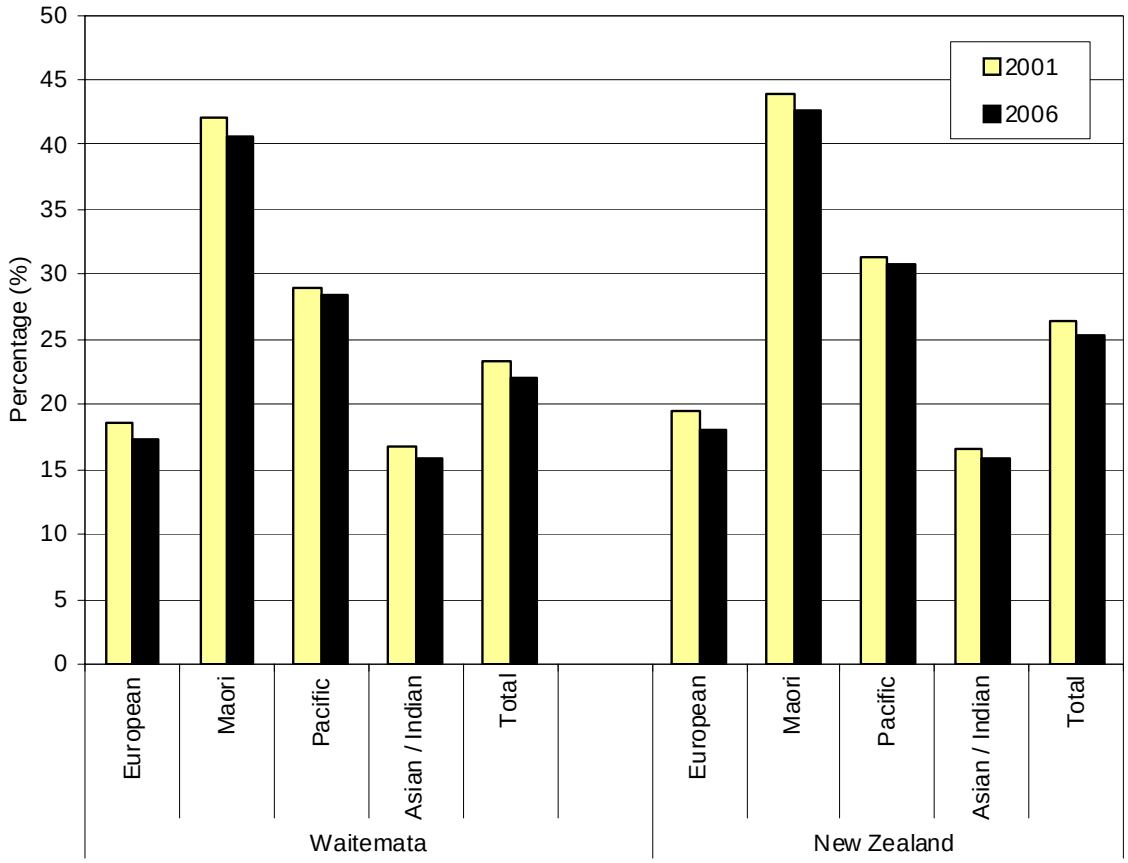
Figure 4 - Composition of households (%) in Waitemata DHB, Maori and non-Maori, by TLA, 2006



Source: Census 2006

In 2006 in the Waitemata DHB region, 40.6% of Maori children under 15 years were living in sole parent households compared to 28.4% of Pacific children, 17.4% of European children and 15.8% of Asian children (Figure 5). Less Maori children live in sole parent households in Waitemata DHB than nationally. While the proportion of children living in sole parent households increases with increasing NZDep2006 deprivation for each ethnic group, at every level of deprivation ethnic differences remained with higher proportions of Maori children living in sole parent households (Craig et al., 2007).

Figure 5 - Proportion of children <15 years living in one parent households by ethnicity, Waitemata vs. New Zealand, 2001 and 2006 Censuses



Source: (Craig et al., 2007)

Iwi region affiliations of Maori living in Waitemata

Iwi affiliation data was collected in the 2006 census. Iwi region/rohe affiliations for census respondents who identified as Maori and were resident in the Waitemata district are summarised below in Table 7. The most commonly identified iwi region affiliations for Maori living in Waitemata were Te Tai Tokerau/Tamaki-makaurau, Te Tai Rawhiti, Waikato/Te Rohe Potae, and Tauranga Moana/Mataatua. It should be noted that the 'iwi region' categories were used by Statistics New Zealand for summary purposes and are not intended to represent confederations.

Table 7 - Iwi region/rohe affiliations of Maori living in Waitemata, 2006

Iwi region/rohe	Waitakere City	North Shore City	Rodney District	Total WDHB
Te Tai Tokerau/Tamaki-makaurau (Northland/Auckland) Region	10,755	4,863	3,339	18,957
Te Tai Rawhiti (East Coast) Region	2,232	1,371	618	4,221
Waikato/Te Rohe Potae (Waikato/King Country) Region	2,190	1,302	585	4,077
Tauranga Moana/Mataatua (Bay of Plenty) Region	2,220	1,263	540	4,023
Te Arawa/Taupo (Rotorua/Taupo) Region	1,395	942	438	2,775
Te Matau-a-Maui/Wairarapa (Hawke's Bay/Wairarapa) Region	1,266	828	333	2,427
Te Waipounamu/Wharekauri (South Island/Chatham Islands) Region	858	738	348	1,944
Taranaki Region	639	588	225	1,452
Hauraki (Coromandel) Region	558	351	141	1,050
Manawatu/Horowhenua/Te Whanganui-a-Tara (Manawatu/Horowhenua/Wellington) Region	324	363	120	807
Whanganui/Rangitikei (Wanganui/Rangitikei) Region	234	195	60	489
Iwi Not Named, but Waka or Iwi Confederation Known	1,329	684	333	2,346
wi Named but Region Unspecified	309	273	111	693
Hapu Affiliated to More Than One Iwi	495	240	135	870
Not Elsewhere Included	3,372	1,653	1,179	6,204
Total	**21,315**	**11,790**	**6,900**	**40,005**

Source: Census 2006

Article 1 – Kawanatanga: health systems performance

Kawanatanga - health systems performance

Article One of the Treaty of Waitangi legitimates the right of the New Zealand Government to govern. Good governance encompasses many of the foundations for good health, including provision of a high performing health system that enables the elimination of ethnic inequalities in health and facilitates the realisation of Maori aspirations for their own health and wellbeing.

For the purposes of this report, Article One - Kawanatanga (Governance) is equated to health systems performance. Health systems performance is concerned with: improving health and reducing inequalities, sustainable and efficient resourcing; quality data collection and monitoring; quality, safe and accessible health care; public health action; and, responsiveness to expectations.

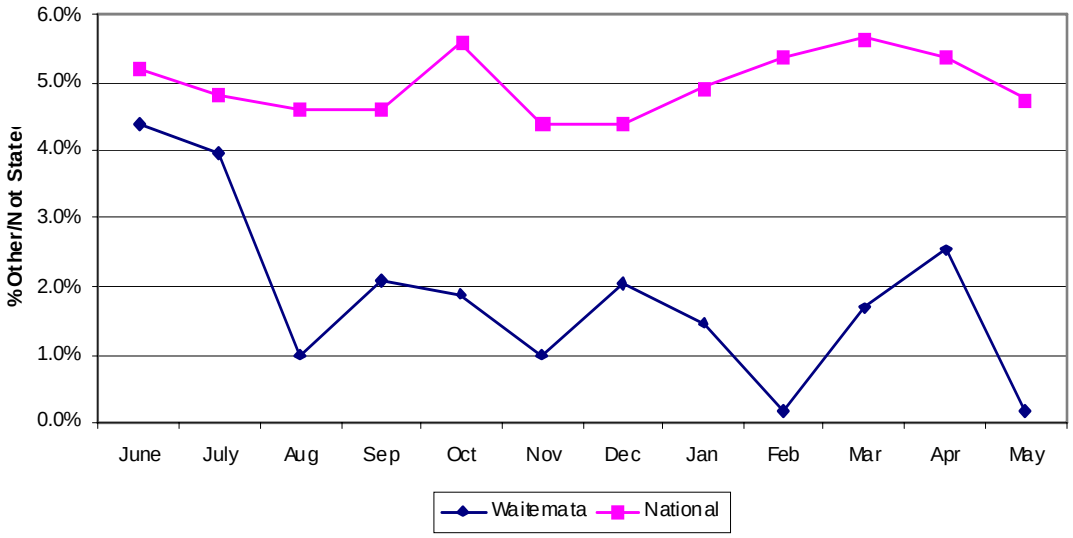
This section of the report will provide an overview, to the extent that is possible drawing on existing data sources, of health system performance for Maori within the Waitemata DHB region. Data are presented here with regard to the collection and reporting of Maori health information, services provided for Maori, and health service responsiveness. Data relating to health outcomes and health service utilisation, while a measure of health systems performance are equally a measure of progress towards reducing inequalities. Health outcome and health service utilisation data is presented later in this report in the section 'Article 3 – Oritetanga: achieving equity'.

Ethnicity data

The accurate, consistent and complete collection of ethnicity data and the use of appropriate methods for prioritising and analysing Maori data are necessary to give voice to Maori health needs and to monitor the performance of the health system in addressing Maori rights to health. A health information system which is better at counting or recording information about non-Maori will perpetuate inequalities for Maori by failing to accurately identify Maori health issues and priorities. Quality health information provides a sound basis for planning and action.

For the period June 2007 – May 2008, the proportion of new registrations on the National Health Index with an ethnicity of 'Other' or 'Not Stated' reduced for the Waitemata DHB, and remained lower than the national average. This likely reflects ongoing measures by the DHB to improve the quality of ethnicity data collection.

Figure 6 - Percentage of new registrations on the NHI with an ethnicity of "Other" or "Not stated", Waitemata DHB and New Zealand, Jun 07 -May 08



Health services for Maori and Maori responsiveness

Maori specific services

Waitemata DHB provides three Maori-led services within the provider arm:

1. Mo Wai Te Ora – a Maori service that provides support to inpatients of North Shore and Waitakere hospitals and some limited community social work and disability support following discharge through a small team of kaumatua, nurses and social workers. Services offered to inpatients and their whanau include cultural/clinical assessment and intervention; case management, social work support and advocacy; and, tikanga, te reo Maori and bereavement support. The service also delivers public health contracts for parenting and health promoting schools in conjunction with other agencies.
2. Whitiki Maurea – the Waitemata DHB Maori Mental Health and Addiction Services consists of two teams - MOKO Services (Maori Mental Health Team) and Te Atea Marino (Maori Alcohol and Drug Regional Team). Whitiki Maurea integrates Maori healing practices and Western clinical practice in providing whanau centred therapy, which is marae-focused and 'wairua driven'.
3. Forensic Mental Health Kaupapa Maori Unit (Te Papakainga o Tane Whakapiripiri) – a Maori inpatient unit at the Regional Forensic Psychiatry Service

There are currently no funded Rongoa Maori providers servicing the Waitemata DHB region.

Health service responsiveness

A priority for Waitemata DHB is to increase the cultural competence of staff in order to strengthen their capacity to integrate culture into the clinical context and thereby maximise health gains for Maori. A number of cultural competence related training courses are offered through the Waitemata DHB's Learning and Development Department. Table 8 lists the main courses relevant to Maori cultural competence currently offered at the DHB, and the numbers of staff who have completed these courses from Jan-Aug 2008 (the courses are provided free to WDHB staff, and enrolment is optional). In the same period, 404 staff completed the compulsory Corporate Orientation course for all new staff members. This provides a reference, to indicate the numbers of new staff commencing at WDHB in the same period.

These data do not provide any information about staff who have completed or are completing cultural competency training elsewhere. They also do not provide any assessment of the level of staff cultural competency.

Table 8 - Numbers of staff undertaking Maori-related training courses offered at WDHB, Jan-Aug 2008

	Number of staff (Jan-Aug 2008)	Number of sessions held (Jan-Aug 2008)	Number of sessions scheduled Sept-Dec 2008
Maori Pronunciation	67	6	2
Te Reo	31	5	1
Maori Cultural Perspectives	63	3	2
Practically Implementing the Treaty	51	4	2

Source: WDHB Learning & Development

Self-discharge rates

Quality health services for Maori must be culturally safe, meaning that they do not compromise the cultural rights, views, values and expectations of Maori (Anderson, Anderson, Smylie, Crengle, & Ratima, 2006). While this is difficult to measure, one indication is the number of people 'voting with their feet' and self-discharging against medical advice (Anderson et al., 2006). There is evidence of a ethnic bias in the acceptability of health services in Waitemata DHB, with more than twice as many Maori likely to self-discharge compared to non-Maori. Waitemata DHB is so far the only DHB to report on this data, so it is not known how self-discharge rates for Maori at Waitemata DHB compare with the rest of New Zealand.

Table 9 – Hospital self-discharge rates for Maori and non-Maori patients, Waitemata DHB, 2008

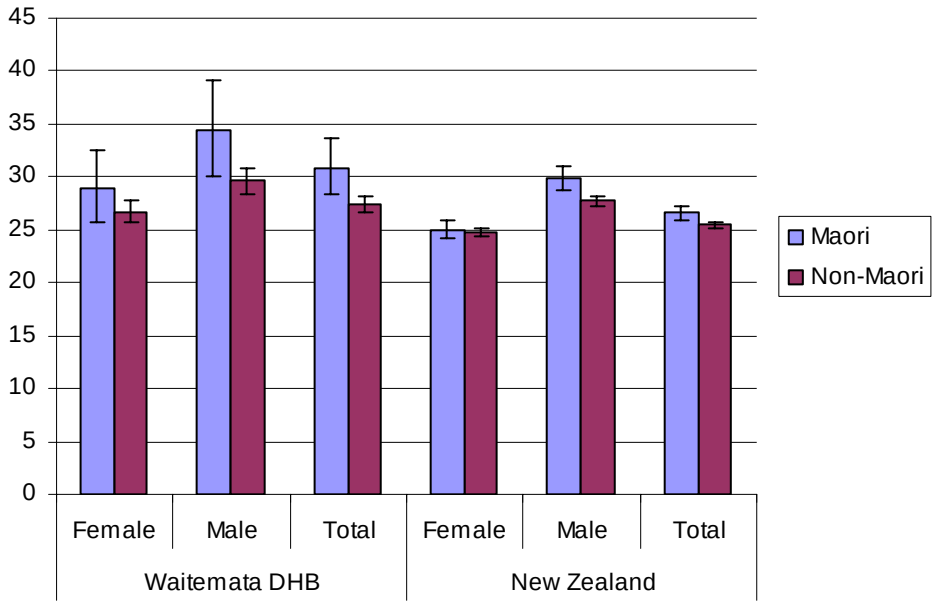
	North Shore		Waitakere		Total	
	Maori	non-Maori	Maori	non-Maori	Maori	non-Maori
Self-discharges	25	117	10	43	35	160
Total discharges	3618	52046	3344	22180	6962	74226
% of discharges that are self-discharges	0.69	0.22	0.3	0.19	0.5	0.22
					RR	**95% CI**
Risk of self-discharge for Maori vs non-Maori in WDHB					2.42	1.68 – 3.48

Source: Waitemata DHB, 2008 fiscal year

Hospital readmission rates

Hospital readmission rates measure patients returning to hospital within a short period of discharge due to a reoccurrence of health problems and the need for further care. These rates potentially provide one measure of the quality of hospital care and additional burden on patients and families (Ashton, Kuykendall, Johnson, Wray, & Wu, 1995; Daly, Douglas, Kelley, O'Toole, & Montenegro, 2005). Consistently higher acute readmissions for Maori (Figure 7) compared to the total population in the Waitemata DHB region are a cause for concern. This may be related to factors such as quality of care, as well as higher co-morbidity and complexity.

Figure 7 - Acute readmissions, all ages, age-standardised rate per 1000 admissions, Maori and non-Maori, Waitemata DHB, 2005-2007

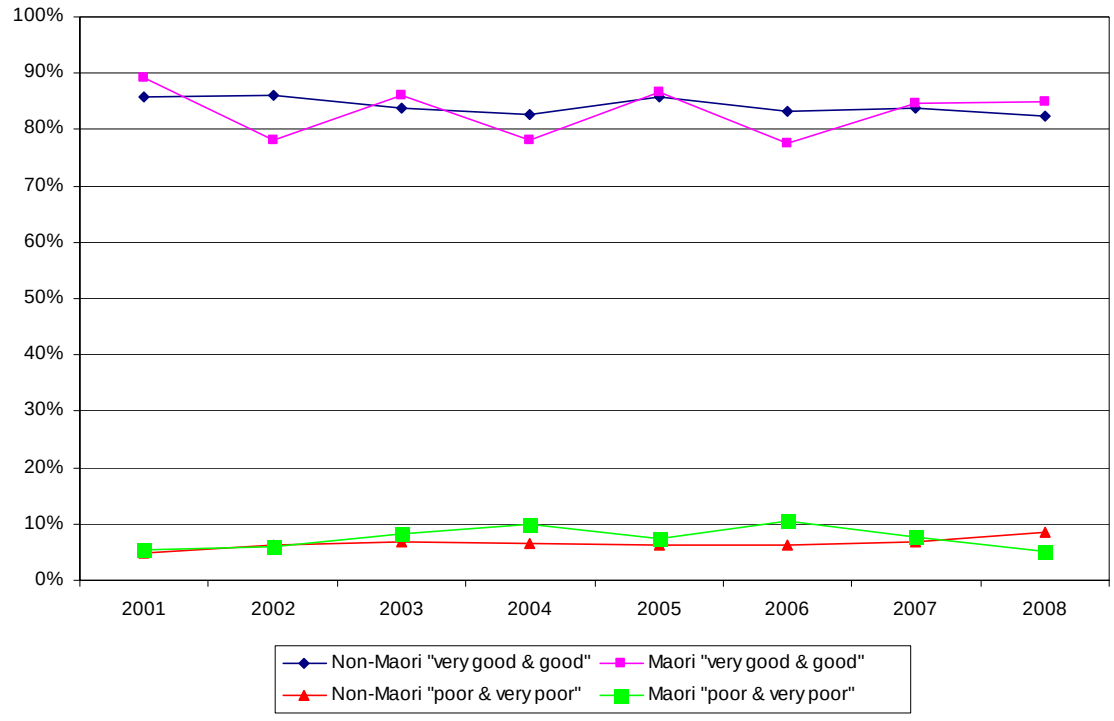


Patient satisfaction

Since 2000, a standardised patient satisfaction survey has been undertaken on a quarterly basis in all DHBs. The survey is designed to gauge both inpatient and outpatient satisfaction. The inpatient questions cover patient perceptions of the Emergency Department, the availability of staff, the manner in which they were treated by staff, their opinion of the hospital's facilities, discharge procedures and the adequacy of communication between different departments involved in their care (Health Services Consumer Research, 2008). The outpatient questionnaire covers topics such as the patients' perceptions of the appointment system, the manner in which they were treated by staff, their opinion of the clinic's facilities, the adequacy of communication between different departments involved in their care and their satisfaction with the organisation of their care with other service providers (Health Services Consumer Research, 2008).

The results of this survey in Waitemata DHB (Figure 8) do not show any significant difference between the level of patient satisfaction reported by Maori and non-Maori. There are limitations in interpreting this data for Maori, however, because it is based on small numbers of Maori respondents.

Figure 8 - Percentage of patient satisfaction survey respondents reporting "very good & good" and "very poor and poor" responses, Waitemata DHB, Maori and non-Maori, 2001-2008[1]



Source: New Zealand Patient Satisfaction Index (Health Services Consumer Research, 2008)

[1]2008 data up until end of second quarter.

Article 2 – Tino Rangatiratanga: Maori leadership and participation

Tino Rangatiratanga – Maori leadership and participation

The Maori version of Article Two of the Treaty of Waitangi recognises iwi authority over cultural, social and economic resources (an expansion of the English version which focused more on confirming existing property rights) (Durie, 1998). The use of the term 'tino rangatiratanga' in the Maori version refers to the Maori right to self-determination. Article Two – tino rangatiratanga, in the context of this report is concerned with opportunities for Maori leadership and participation in relation to health services, including Maori controlled health services, and Maori involvement in the governance, planning and delivery of health services generally.

This section of the report will summarise information relating to Maori providers funded by the Waitemata DHB and Maori involvement in DHB-related governance, planning and service delivery.

Maori controlled health services

There are a number of Maori health providers within Waitemata DHB that deliver a range of health services predominantly to Maori using a kaupapa Maori delivery framework. Key local providers include Hapai te Hauora Tapui Ltd, Te Kotuku ki te Rangi, Te Puna Hauora o te Raki Paewhenua, Te Ha o te Oranga o Ngati Whatua, and Wai Health.

- **Hapai te Hauora Tapui Ltd**

  Hapai te Hauora Tapui Ltd is a regional public health provider that operates within and promotes a kaupapa Maori approach. They provide and coordinate the delivery of a range of health promotion services, raise awareness of public health issues at whanau and hapu levels, and provide strategic advice on public health issues that directly impact on Maori health outcomes.

- **Te Kotuku ki te Rangi**

  Te Kotuku ki te Rangi provides mental health services to mainly Maori clients (88% of clients are Maori) in the Waitemata and Auckland DHB regions, although tangata whaiora also come from other areas. Te Kotuku provides four levels of core community based services – residential services, semi-independent living, 'kaupapa packages of care' and iwi support. The residential services are for high need clients and provide 24 hour supervised care. For those who can live independently flatting arrangements are available in two bedroom units with clinical and non-clinical support services as tangata whaiora transition to increased independence. The 'kaupapa packages of care' are for tangata whaiora who are almost entirely independent and their whanau. Tangata whaiora are able to access clinical and non-clinical support including a variety of measures that facilitate independent living and cultural integrity. Iwi support services are home

based and provide cultural support, regular assessment, and service coordination for tangata whaiora and their whanau.

- **Te Puna Hauora o te Raki Paewhenua**

Te Puna Hauora o te Raki Paewhenua, which is part of Te Puna PHO, is based on the North Shore of Auckland and delivers services between Devonport and Wellsford. Te Puna Hauora provides a wide range of health and social services including primary health care, community nursing, tamariki ora and disease management.

- **Te Ha o te Oranga o Ngati Whatua**

Te Ha o te Oranga o Ngati Whatua is contracted to provide a range of services including mobile nursing, general practice, tamariki ora, disease management, mental health, drug and alcohol and home based support services. Te Ha o te Oranga o Ngati Whatua provides services throughout the rohe of Ngati Whatua from Huapai in West Auckland to Waipoua in the North West, to Whangarei, following the coastline back to Hadfields Beach.

- **Wai Health**

Wai Health is part of the Waiora Healthcare PHO and is one entity within Te Whanau o Waipareira Trust (others include Wai Social Services, and Wai Tech). Wai Health deliver a wide range of primary health care and public health services including: community nursing, tamariki ora, oral health, disease management, mental health and home based support services. Wai Health services are predominantly in West Auckland and 80% of their clients are Maori.

The New Zealand Health Survey 2002/03 included a question about the reasons for respondents choosing to use a Maori provider. Generally, the main reasons given related to cultural factors including that providers take account of impacts on whanau, cost, and referral through social networks (Table 10). The most commonly cited reason (34.5%) for Maori adults choosing a Maori provider was that they felt more comfortable talking to someone who understands their culture.

Table 10 - Reasons given by Maori adults for choosing to use a Maori provider, New Zealand, 2002/2003

	%	95% CI
I feel more comfortable talking to someone who understands my culture	34.5	25.9–43.1
It was cheaper than going to another provider	27.3	21.2–33.4
I was referred to them by a friend or relative	25.9	19.3–32.5
They are interested in the impact that my health and its treatments has on my whanau or family	25.5	17.5–33.4
I find they are willing to spend more time discussing my health	18.3	12.6–24.1
They were the closest provider	14.9	10.0–19.7
They offer specialist services that I need	11.6	7.2–16.1
I was referred to them by my doctor	10	5.8–14.1

Source: New Zealand Health Survey 2002/03

Maori involvement in governance

Waitemata DHB governance

An effective Maori voice at the Waitemata DHB governance level is important in giving effect to the DHB's stated commitment to reducing inequalities and improving Maori health outcomes. There are a number of ways in which Maori are involved in the governance of Waitemata DHB (Figure 7):

1. Te Tiriti o Waitangi Memoranda of Understanding (MOU) between WDHB and:

    - Te Runanga o Ngati Whatua (signed 2001)

        The Runanga is led by an 11 member Board of Directors made up of representatives from the 32 marae within the Ngati Whatua rohe. The Runanga is the authorised voice for the iwi in respect to all issues affecting the Ngati Whatua rohe. The Runanga has delegated its day-to-day relationship to its agent Tihi Ora MaPO, which is a co-funder with Waitemata DHB.

    - Te Whanau o Waipareira Trust (signed 2003)

        Waipareira Trust was founded in 1984 through the collaboration of over 50 smaller pan-iwi organisations in West Auckland. The Trust's activities include provision of education, primary health care, and other social services to Maori from all iwi in the urban context.

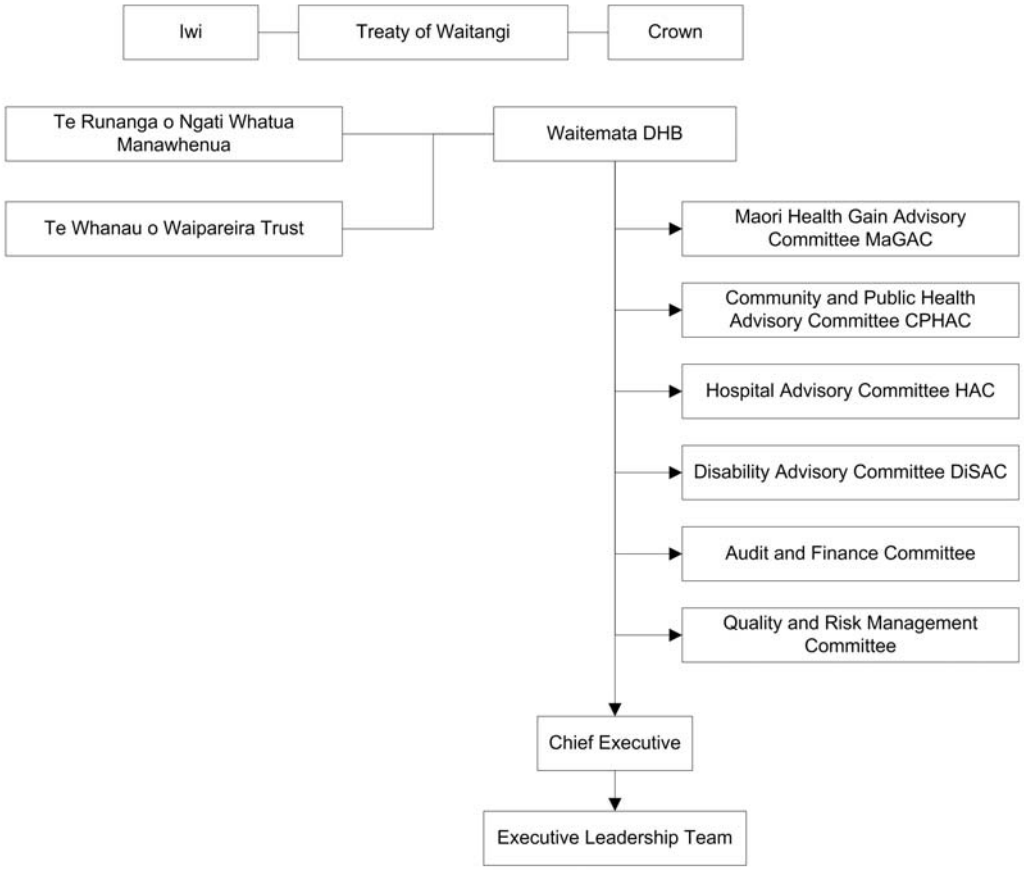
    The MOU are based on establishing working relationships, including the sharing of information, in accordance with the provisions and principles of the Treaty, in order to achieve mutually agreed Maori health objectives for all Maori iwi living in the Waitemata DHB region.

2. Maori membership on the DHB Board. The Minister of Health is required under section 29(4) of the New Zealand Public Health and Disability Act 2000 to seek to ensure that Maori board membership is proportional to the number of Maori in the DHB's resident population. Currently in Waitemata DHB there is one Maori member of the board, appointed by the Minister of Health.

3. The Maori Health Gain Advisory Committee (MaGAC), a committee appointed by the WDHB Board to advise on all issues relating to Maori health and development. The MaGAC consists of up to nine appointed members from a range of health-related organisations, including academic expertise and two tai tamariki/rangatahi (youth) representatives. MaGAC is chaired by the Maori member of the DHB Board, the secretariat is provided by Mo Wai te Ora, and there are ex-officio positions for the CEOs of Waitemata DHB and Tihi Ora MAPO.

4. Maori membership on the Community and Public Health Advisory Committee (CPHAC) and the Hospital Advisory Committee (HAC). The functions of the CPHAC are to give the Board advice on the needs, and any factors that may adversely affect the health status of the resident population of the DHB, and priorities for use of the funding provided. Specific Maori membership on CPHAC consists of a representative from Tihi Ora MAPO and the Maori Planning and Funding Manager. The functions of the HAC are to monitor the financial and operational performance of the DHB's hospitals (and related services) and provide advice and recommendations with regard to that monitoring and assessment, and to assess strategic issues relating to the DHB's provision of hospital services. The General Manager Maori Health is the specific Maori representative on HAC.

Figure 9 - Governance of Waitemata DHB



PHO governance

Six PHOs are contracted by the Waitemata DHB to deliver services within the DHB's region. PHOs are required under the 2001 'Minimum Requirements for Primary Health Organisations' (King, 2001) to demonstrate iwi involvement in governance processes and ensure the responsiveness of the PHO to the community. While the extent to which governance arrangements are inclusive of Maori varies, there is currently at least one Maori member on

the Boards of all PHOs in Waitemata DHB, appointed through iwi bodies. Four out of the six CEOs of PHOs in Waitemata DHB are Maori.

There are two PHOs within Waitemata DHB that are considered to be Maori-led, meaning they have a kaupapa Maori approach, Maori majority on their Board and significant Maori management:

- **Waiora Health Care Trust**

  Waiora Health Care Trust was formed in March 2003 as a not for profit PHO specifically to assist with delivery of health services to high needs populations of West Auckland. They have eight clinics in West Auckland, in Ranui, Waitakere hospital grounds, New Lynn, Massey and Kelston. Services provided include; primary care, Careplus, immunisation/flu vaccine, health promotion, free annual GP diabetic review, podiatry and nutrition/dietician services.

- **Te Puna PHO**

  Te Puna PHO is a primary care organisation based on the North Shore of Auckland. Currently it has two member providers based in Mairangi Bay and the North Shore. The services provided by Te Puna PHO include GP services, mobile nursing, community health services for certain conditions, health education, disease prevention and screening.

Waitemata DHB Maori workforce participation

The percentage of Maori in the DHB workforce is 4.8% overall, as shown in Table 11. Maori make up 1.2% of medical staff and 3.9% of nursing staff, with higher percentages in allied health (7.7%) and support roles (8.3%). Maori comprise 4.6% and 4.4% of management and administrative staff respectively. The accuracy of workforce ethnicity data is, however, limited due to low levels of recording of staff ethnicity on employment forms and that forms do not allow for the recording of multiple ethnicities. There are opportunities to improve staff ethnic data collection in order to inform Maori health workforce development action. However, despite data limitations, the information that is available is consistent with national data which indicates that Maori are under-represented in the health workforce and particularly in professional roles, and tend to be clustered in areas that require lower levels of formal qualifications such as support workers (Ratima M et al., 2007).

Table 11 - Maori participation in Waitemata DHB workforce, number of FTE staff by employment category, July 2008

	Maori	Non-Maori	Not Stated	Total	% Maori
Medical	6	335	147	488	**1.2%**
Nursing	74	1500	329	1903	**3.9%**
Allied	91	940	155	1186	**7.7%**
Support	9	75	25	109	**8.3%**
Management	12	222	27	261	**4.6%**
Admin	22	421	56	499	**4.4%**
Total	214	3498	737	4449	**4.8%**

Source: Waitemata DHB, Ministry of Health Reporting, July 2008
Prioritised ethnicity, from staff recruitment forms.

The degree of representation of Maori in the DHB workforce varies by area of DHB service (Table 12). Maori make up over 21% of staff in corporate services (which includes the majority of staff in Mo Wai te Ora), but only 2% of staff in adult health services and 3.7% of staff in child, women and family services. A higher percentage of the workforce in mental health services are Maori (9.6%).

Table 12 - Maori participation in Waitemata DHB workforce, number of FTE staff by service, July 2008

	Maori	Non-Maori	Not Stated	Total	% Maori
Adult Health Services	28	1158	255	1441	**2.0%**
Child, Women & Family Services	28	610	131	768	**3.7%**
Clinical Support Services	13	502	84	599	**2.2%**
Corporate Services	21	62	15	97	**21.2%**
Governance and Funding Administration	4	33	5	41	**8.9%**
Health of Older Adults Services	6	268	38	312	**2.0%**
Mental Health Services	114	865	211	1190	**9.6%**
Total	214	3498	737	4449	**4.8%**

Source: Waitemata DHB, Ministry of Health Reporting, July2008
Prioritised ethnicity, from staff recruitment forms.

Referring to Tables 13 and 14, it is possible to compare the percentage of Maori staff in each service to the percentage of patients in that service who are Maori. Even services with the highest proportion of Maori staff have a low level of Maori staff representation relative to the percentage of patients using that service who are Maori.

Table 13 - Average % of patient case-load who are Maori, by service, Waitemata DHB, 2008.

Service	Maori	non-Maori	Total
Allied Health	3.8%	96.2%	100%
Home and Older Adults Service	3.2%	96.8%	100%
Maternity	11.4%	88.6%	100%
Medical	7.4%	92.6%	100%
Surgery	7.1%	92.9%	100%
Mental Health	24.7%	75.3%	100%
Total	**12.0%**	**88.0%**	**100%**

Source: Waitemata DHB, Fiscal year 2008

In order to better contribute to achieving equitable health outcomes for Maori, the following nine Maori specific positions have been established within the Waitemata DHB.

- Programme Manager Maori Health
- Maori Funding and Planning Manager
- Child & Family Services - Te Pou Manaaki Maori
- Maori midwife
- Maori Hearing/Vision screening position
- Home and Older Adult Services - Maori Health Gain Manager
- Breastscreening Maori Specific Position
- Breastscreening Community Health Worker (0.8 FTE)
- Breastscreening Whaea role (0.2 FTE)

Article 3 – Oritetanga: achieving health equity

Oritetanga – achieving health equity

Article 3 of the Treaty of Waitangi provided new citizenship rights for Maori, promising Maori the same rights and privileges as British subjects. This implied that Maori could expect equitable outcomes to those of non-Maori, and that the Crown would actively intervene in order to address this obligation (Durie, 1998). For the purposes of this report, Article 3 is equated to Oritetanga – achieving health equity. Therefore, this section of the report encapsulates measures that gauge progress towards reducing systematic inequalities in the determinants of health, health outcomes and health service utilisation.

The use of the Maori model of health Te Whare Tapa Wha as a possible framework for considering progress towards achieving equity in health outcomes had been considered. However, due to data limitations and specifically measures that are able to capture te taha wairua (spiritual wellbeing), te taha whanau (whanau wellbeing) and te taha hinengaro (mental and emotional wellbeing), the use of this framework was not feasible.

Determinants of health

Ethnic inequalities in health are due to the unequal distribution of the social, economic, cultural, political and environmental determinants of health, including access to effective and quality health care (Ministry of Health, 2002; National Health Committee, 1998; Robson, 2004).

Socio-economic determinants of health include income, employment, occupation, housing conditions, locality of residence, and education (Robson, 2004). Cultural factors may impact positively or negatively on health outcomes. Examples of cultural factors include fluency in te reo Maori and access to the Maori world (e.g. access to Maori institutions such as marae) (Durie MH, 2001). Political determinants of health include government laws and policies and participation in political processes. Environmental determinants include water and air quality, quality of built environments, and climate change (Public Health Advisory Committee, 2002). Readily available data relating to determinants of health for Maori resident within the Waitemata DHB region are summarised in the following sections.

Socio-economic determinants

It is well documented that socio-economic status is a key factor contributing to health outcome disparities between Maori and non-Maori. The socio-economic advantages of non-Maori are responsible for approximately half of the increasing gap in mortality between non-Maori and Maori during the 1980s and 1990s (Ministry of Health & University of Otago, 2006).

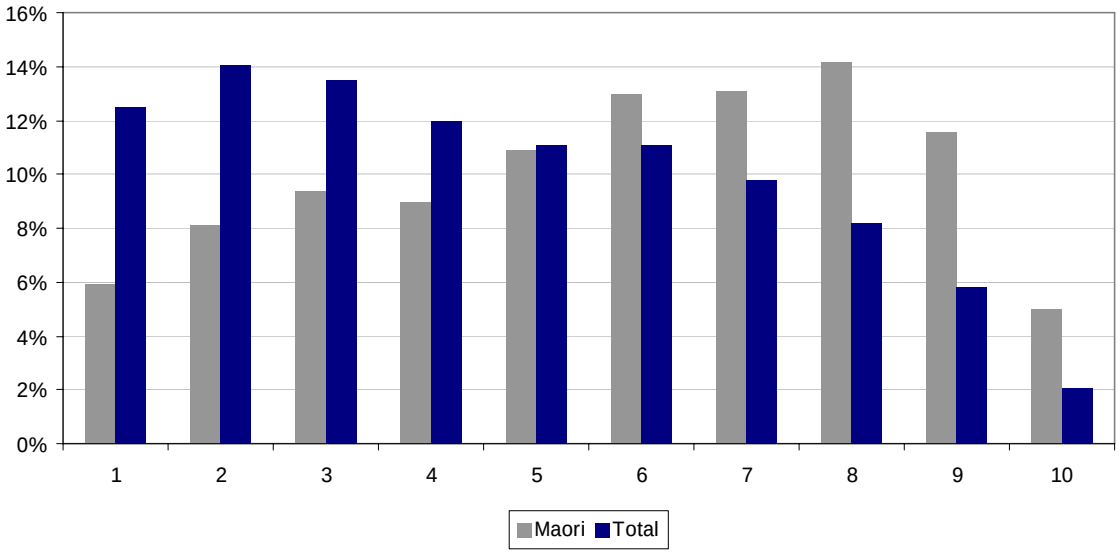
Maori population by the New Zealand Index of Deprivation 2006 (NZDep 2006)

NZDep2006 provides a numerical rating of socioeconomic status of a geographical area using nine variables related to the conditions of daily life from the 2006 Census. These variables relate to: receiving a means-tested benefit, household income, owning the home you live in, single-parent family, employment status, no school qualifications, household overcrowding, no access to a telephone and no access to a car. NZDep2006 creates a score of one to ten, a score of one is allocated to the 10% of areas which are least deprived and ten is allocated to the 10% of areas which are most deprived.

NZDep2006 data demonstrates that non-Maori are advantaged in terms of access to socio-economic resources. In contrast, Maori are clustered in areas of high relative deprivation and therefore are disproportionately impacted by the health consequences of low socio-economic status(Ministry of Health & University of Otago, 2006). Further, at each level of deprivation Maori experience worse health outcomes than non-Maori (Reid, Robson, & Jones, 2000; Towns, Watkins, Salter, Boyd, & Parkin, 2004), indicating that ethnicity is independently related to poorer health, above and beyond socioeconomic status. In the 10 years from 1996 to 2006 there has been no shift in the distribution of wealth by ethnicity (Tobias M, Bhattacharya A, & White P, 2008).

It is important to note that the percentage of Maori in the Waitemata living in the two most deprived deciles (16.5%), is considerably lower than the national percentage of the total New Zealand population (both Maori and non-Maori) living in the two most deprived deciles (20%). Within Waitemata DHB, Non-Maori are over-represented in the wealthiest socio-economic deciles and Maori are over-represented in the lowest socio-economic deciles, as shown in Figure 10. For Maori, 16.5% live in the two most deprived socio-economic deciles, compared with only 7.9% of the total population.

Figure 10 - Waitemata DHB population, by NZDep 2006, Maori & total



Source: NZDep 2006

Income

Income is a measure of access to goods and services, and is an important predictor of health status (Blakely T, Tobias M, Atkinson J, Yeh L-C, & Huang K, 2007). Generally, higher incomes are associated with lower morbidity and mortality from a range of conditions. Just over 20% of Maori over 15 years of age in the Waitemata region reported an annual income of $10,000 or less in the 2006 Census. This is less than the percentage of Pacific and Asian adults reporting a low income, but greater than the percentage of New Zealand European/Other on low incomes (Table 14). Further, Maori were much more likely in Waitakere, North Shore City and Rodney District to be receiving a government benefit (Figure 11). Less Maori are in the lower income bracket in Waitemata than in New Zealand as a whole.

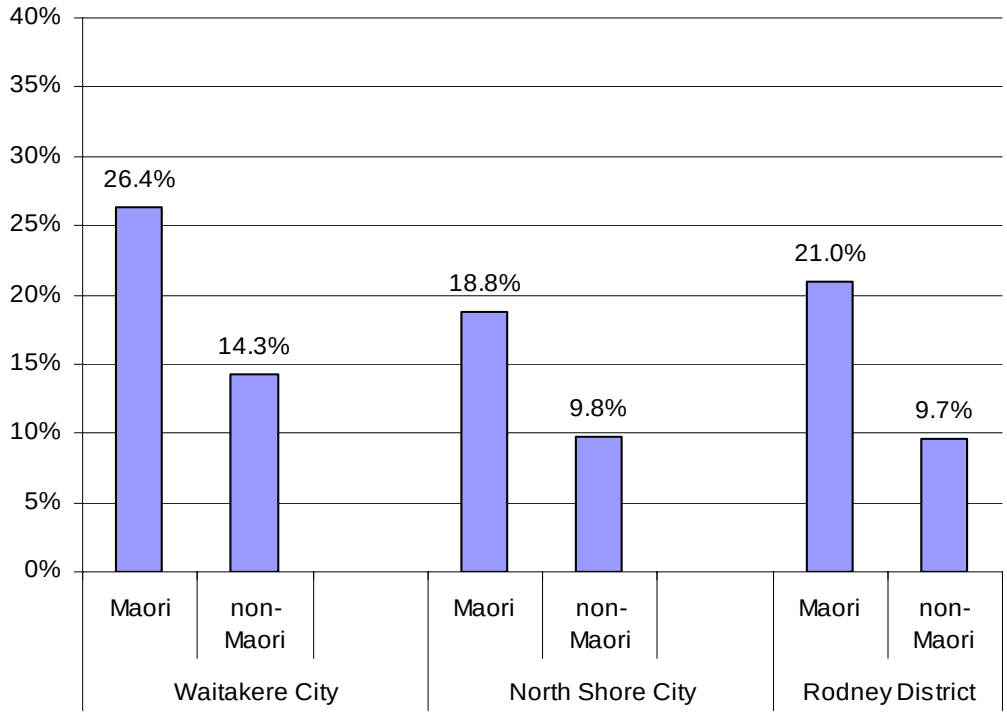
Table 14 - Adults over 15 years, in low income bracket, age-standardised rate (ASR) Waitemata and New Zealand, 2006

Ethnicity	Waitemata ASR, percent	New Zealand ASR, percent
Maori	21.1 (20.6-21.7)	24.0 (23.8-24.2)
Pacific	27.1 (26.4-27.9)	29.7 (29.4-30.0)
Asian	44.6 (43.9-45.2)	42.2 (41.9-42.4)
Other	20.3 (20.1-20.5)	21.1 (21.0-21.2)

Source: Census 2006

Low income = total personal income for individuals aged 15 years and over who earn $10,000 or less and who are usually resident in New Zealand. Personal Income is based on the before tax income for the 12 months prior to the census.

Figure 11 - Percentage of people 15 years and over receiving government benefit[1], Maori and non-Maori, by TLA, 2006



Source: Census 2006

[1] Includes unemployment, sickness, domestic purposes, invalids, student allowance, other govt benefits and payments

Access to a car

Household access to a car provides an indication of access to resources such as the labour market and social services and also is a facilitator of social integration (Ministry of Health & University of Otago, 2006). At a more practical level, having a car makes it easier to access the benefits of society, including health services. Compared to non-Maori, Maori are twice as likely to be without access to a car at home (5.9% compared to 2.5%) as shown in Table 15. A higher percentage of Maori in the Waitemata region have access to a car, than in New Zealand as a whole.

Even though someone may have access to a car, transport may still be a barrier in accessing health and other services. Additional factors such as the ability to afford petrol and running costs, the condition of the car, the number of other people who share the car and the ability/license to drive are all relevant in considering car access. These factors may explain why Maori experience transport barriers, despite over 90% reporting access to a car.

Table 15 - Adults over 15 years without access to a motor vehicle at home, age-standardised rate (ASR), Waitemata DHB and New Zealand, 2006.

Ethnicity	Waitemata ASR, percent	New Zealand ASR, percent
Maori	5.9 (5.6- 6.2)	9.4 (9.3- 9.5)
Non- Maori	2.5 (2.5- 2.6)	4.2 (4.2- 4.3)

Source: Census 2006

Access to communication

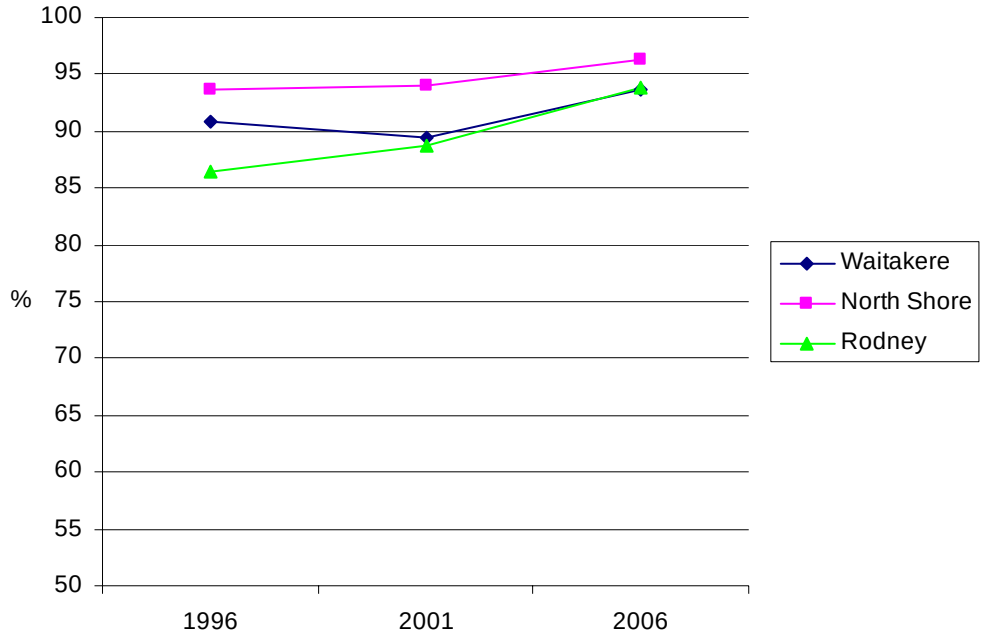
Household access to a telephone provides an indication of access to resources and telephones also facilitate social integration. Significantly more Maori than non-Maori in Waitemata do not have access to a telephone or cell phone, as shown in Table 16. Figure 12 shows that the percentage of Maori without telephone access is higher in Rodney and Waitakere than in North Shore City, and that the percentage of Maori with telephone access has been increasing since the 1996 Census. Maori are more than three times more likely to live in households without access to a telephone. A higher percentage of Maori in the Waitemata region have access to a telephone, than in New Zealand as a whole.

Table 16 - Adults over 15 years of age living in households without access to a telephone age-standardised rate (ASR), Waitemata DHB and New Zealand, 2006

Ethnicity	Waitemata ASR, percent	New Zealand ASR, percent
Maori	3.1 (2.8- 3.3)	5.3 (5.2- 5.4)
Non- Maori	0.9 (0.9- 0.9)	1.3 (1.3- 1.3)

Source: Census 2006

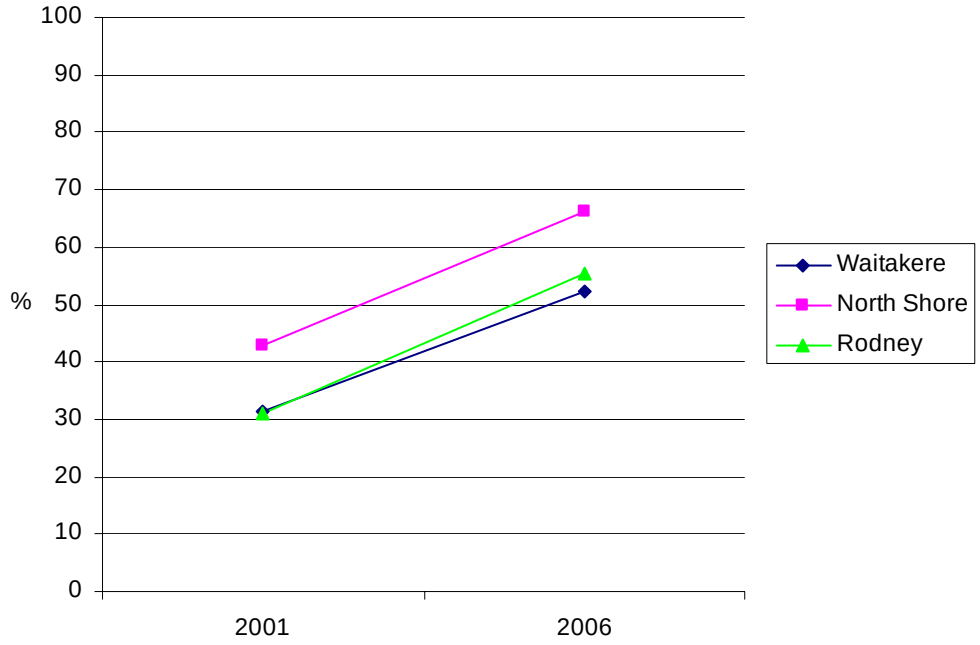
Figure 12 - Percentage of Maori with telephone access, by TLA, 2006



Source: Social Report 2008 (Census 2006)

There has been a steep rise in the percentage of Maori with access to the internet at home, as shown in Figure 13. In 2001, less than half of Maori in the Waitemata DHB region had home internet access, yet according to the 2006 Census over 50% of Maori had access to the internet. The trend in internet access by TLA follows the trend seen with telephone access, with more Maori in North Shore City having access than Maori in Rodney and Waitakere.

Figure 13 - Percentage of Maori with internet access, by TLA, 2006



Source: Social Report 2008 (Census 2006)

Home ownership

It is well documented that the quality of housing affects population health (Howden-Chapman P et al., 2007; Howden-Chapman P & Wilson, 2000). Substandard housing, including inadequate insulation and overcrowding, can expose people to health problems. Home ownership, which is generally a proxy for household wealth, is associated with improved health.

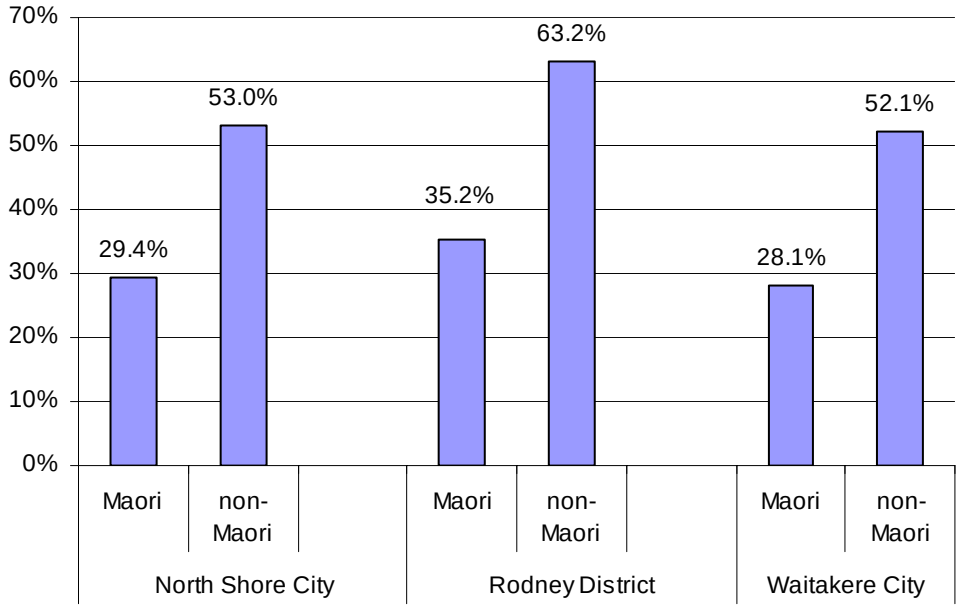
In Waitemata a higher percentage of Maori compared with non-Maori do not own their own home, although home-ownership rates are slightly higher in Waitemata than the New Zealand average for both Maori and non-Maori (Table 17). Home ownership rates for Maori are lowest in Waitakere, followed by North Shore City then Rodney District (Figure 14).

Table 17 - Adults over 15 years not owning their home, age-standardised rate (ASR), Waitemata DHB and New Zealand, 2006

Ethnicity	Waitemata ASR, percent	New Zealand ASR, percent
Maori	64.4 (63.5-65.4)	66.3 (65.9-66.5)
Non- Maori	49.6 (49.3-49.9)	50.0 (49.7-50.1)

Source: Census 2006

Figure 14 - Percentage of people 15 years and over who own or partially own their current residence, Maori and non-Maori, crude rates, by TLA, 2006



Source: Census 2006

Overcrowding

A commonly employed measure of household overcrowding is the Canadian National Occupancy Standard (CNOS) developed by the Canada Mortgage and Housing Corporation (Canada Mortgage and Housing Corporation, 1991). The CNOS uses a classification system based on the number of bedrooms in a house per number of occupants. Household overcrowding is associated with a range of health problems including rheumatic fever (Baker M & Chakraborty, 1996) meningococcal disease (Baker M, McNicholas A, Garrett N, & et al, 2000) and mental illness (Gabe J & Williams P, 1993). Almost twice as many Maori as non-Maori live in overcrowded housing in Waitemata DHB, although the rates are lower than for Maori in the rest of New Zealand.

Table 18 - People of all ages living in overcrowded households, age-standardised rate (ASR) Waitemata DHB and New Zealand, 2006.

Ethnicity	Waitemata ASR, percent	New Zealand ASR, percent
Maori	16.8 (16.4-17.2)	21.2 (21.0-21.3)
Non- Maori	9.4 (9.3- 9.5)	9.6 (9.5- 9.6)

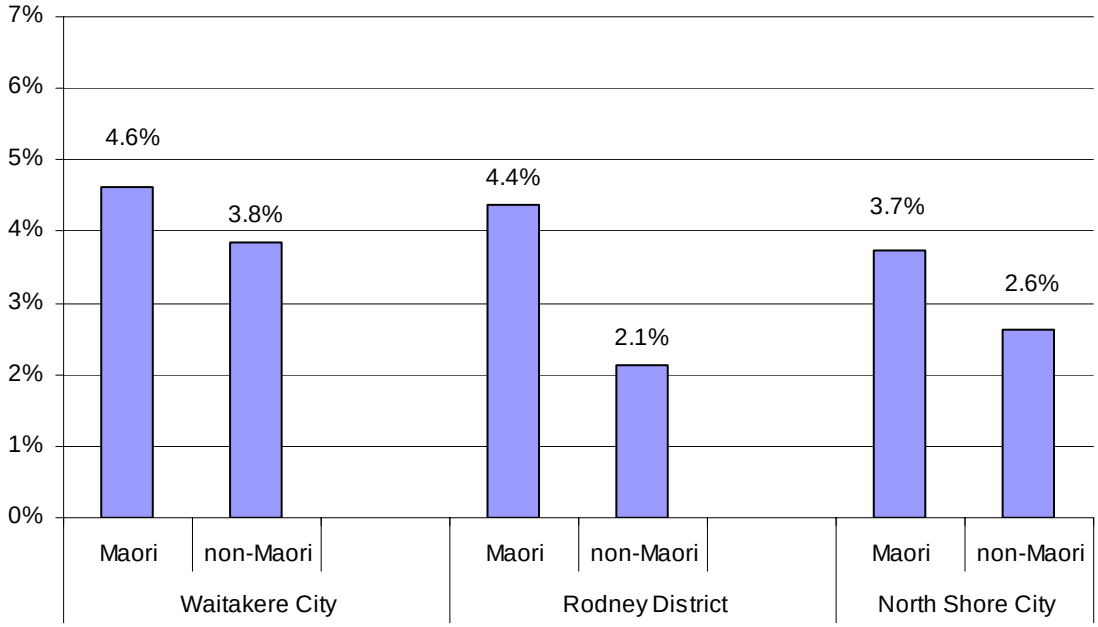
Source: Census 2006

Access to heating

Inadequate household warmth is linked to adverse health impacts (Boardman, 1991; P. Wilkinson, Landon, & et al, 2001) and colder homes place greater stress on the most vulnerable members of households (e.g. older people, the ill and infants) (Curwen, 1990/91).

The percentage of people in Waitemata reporting in the last Census that they had no form of heating in their homes is shown in Figure 15. More Maori than non-Maori in each TLA are living without heating, with the highest rate for Maori in Waitakere (4.6%), followed by Rodney (4.4%), then North Shore City (3.7%).

Figure 15 - Percentage of people without any form of home heating, Maori and non-Maori, by TLA, 2006

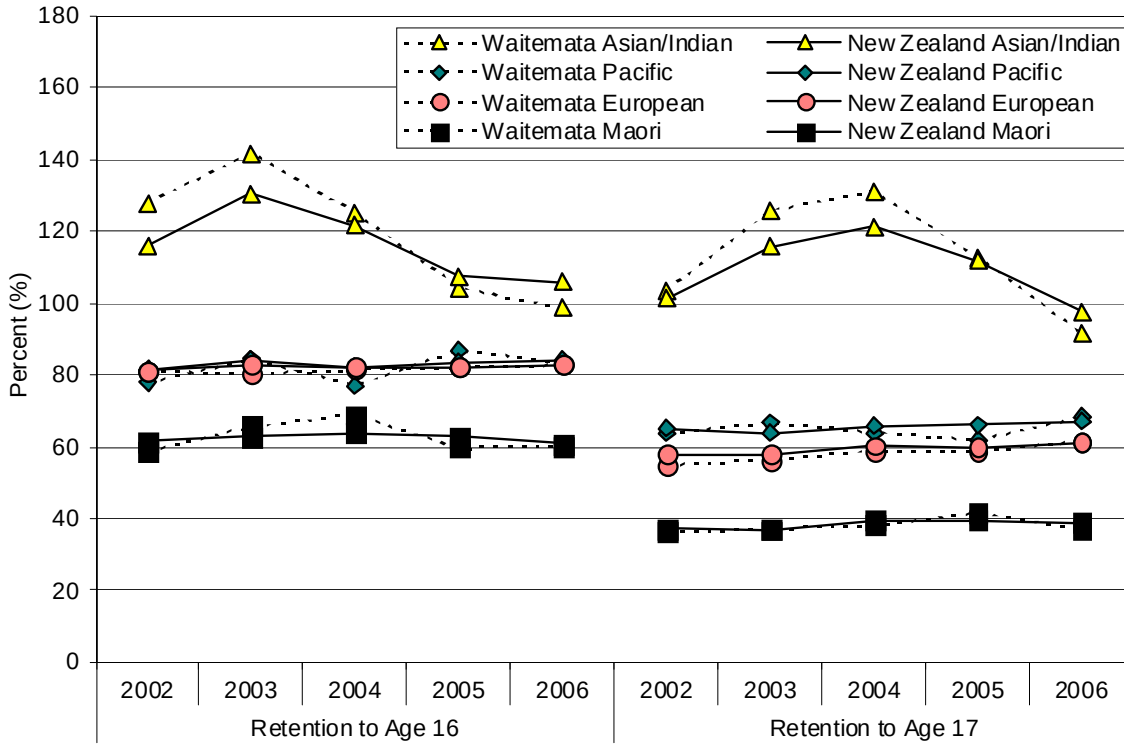


Source: Census 2006

Secondary school educational attainment

Education is a key determinant of health, with increasing educational levels corresponding to improvements in health status (R. Wilkinson & Marmot, 2003). As Figure 16 shows, around 60% of Maori in Waitemata are in school at age 16, and 40% at age 17, which is lower than all other ethnicities in Waitemata. There was very little change in these figures from 2002 to 2006, and the Waitemata rates are consistent with national trends.

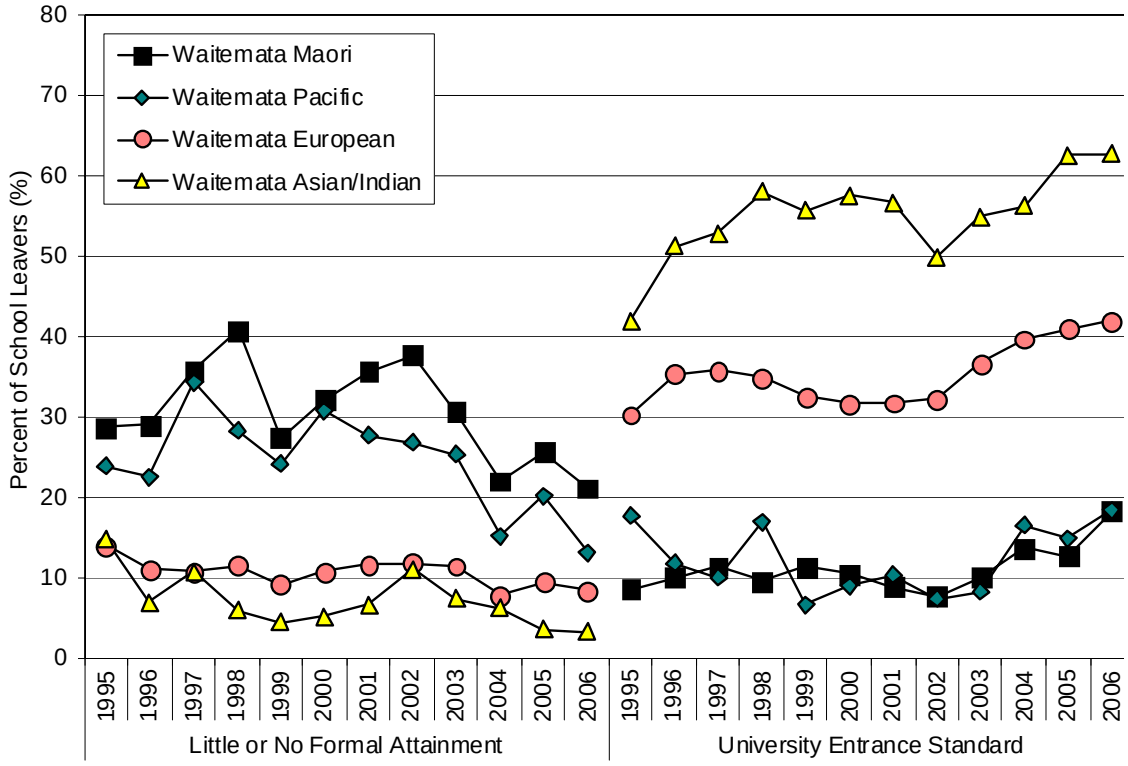
Figure 16 - Apparent senior secondary school retention rates at 16 & 17 years by ethnicity, Waitemata and New Zealand 2002-2006



Source: Ministry of Education

There was a decline in the number of Waitemata Maori leaving school with little or no formal attainment and a corresponding rise in the number leaving with a University Entrance Standard qualification. However, care must be taken in interpreting these figures, as the staged introduction of NCEA which began in 2002 means that the qualification structures before and after this date may not be directly comparable (Craig et al., 2007).

Figure 17 - Highest level of education attained by school-leavers, by ethnicity, Waitemata DHB, 1996-2006



Source: Ministry of Education.

Maori in the Waitemata district have a substantially lower level of attainment of NCEA Level 2 or higher relative to non-Maori, consistent with national trends (Table 19). A higher percentage of Maori in the Waitemata region attain NCEA Level 2, than Maori in New Zealand as a whole.

Table 19 - Adults over 15 years, with NCEA Level 2 or higher, age-standardised rate (ASR), Waitemata and New Zealand, 2006

Ethnicity	Waitemata ASR, percent	New Zealand ASR, percent
Maori	47.1 (46.3-47.9)	42.1(41.8-42.3)
Non- Maori	69.9 (69.4-70.1)	65.0 (64.6-65.1)

Source: Census 2006

Employment

Unemployment is associated with poor health (Blakely T, Collings S, & Atkinson J, 2003) and occupational gradients in health status are well documented (Shaw M, Dorling D, Gordon D, & Davey Smith G, 1999). There is evidence of a causal relationship between inequalities in Maori participation in the labour market in terms of both unemployment and occupations,

and mortality rate disparities between Maori and non-Maori (Ministry of Health & University of Otago, 2006).

Within the Waitemata district, Maori experience almost twice the unemployment rate of non-Maori (Table 21), although unemployment is lower for Maori in the Waitemata region, than for Maori nationally.

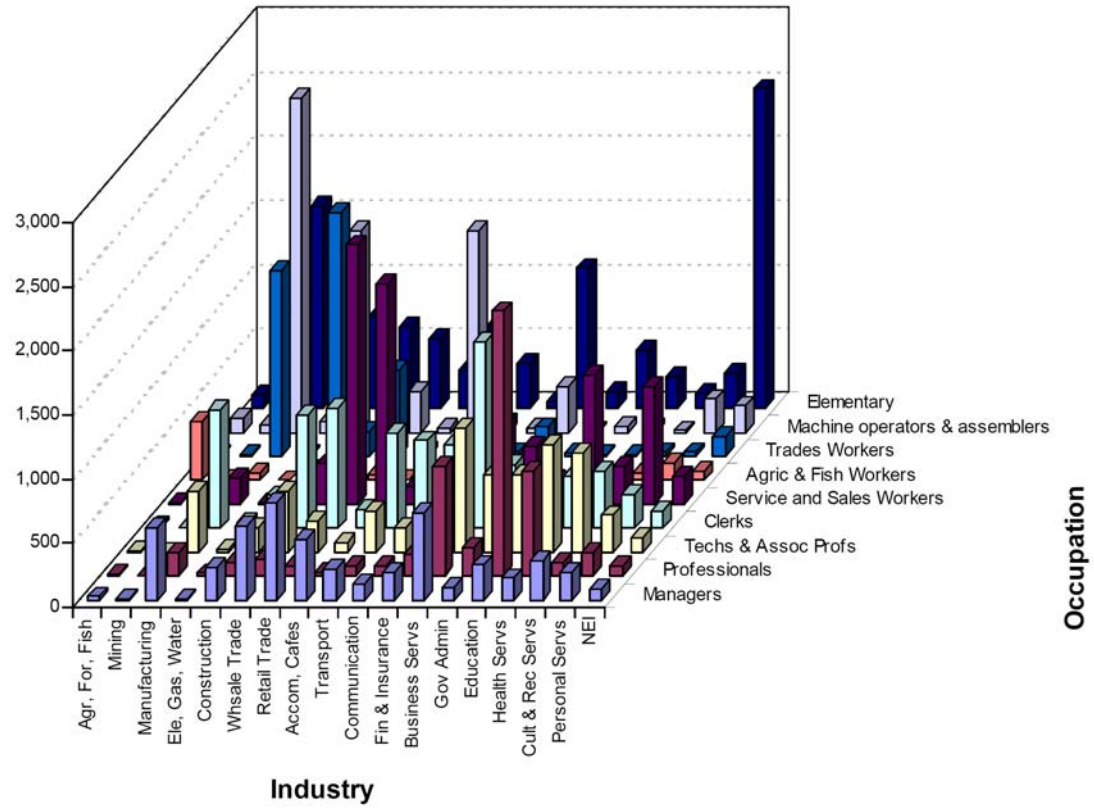
Table 20 - Unemployment rate in adults over 15 years, age-standardised rate (ASR), Waitemata DHB and New Zealand, 2006

Ethnicity	Waitemata ASR, percent	New Zealand ASR, percent
Maori	5.6 (5.3- 5.9)	6.9 (6.8- 6.9)
Non- Maori	3.4 (3.4- 3.5)	3.5 (3.4- 3.5)

Source: Census 2006

Figure 18 shows the distribution of the Maori workforce in the greater Auckland region. There are differences in the occupational distribution of Maori, with Maori clustered in lower occupational levels. The main industry in which Maori were employed was manufacturing, with 8,053 Maori employees. Other main industries employing Maori were property & business services (6,330), retail trade (5,620) and construction (5,159) (Leung-Wai & Nana, 2005).

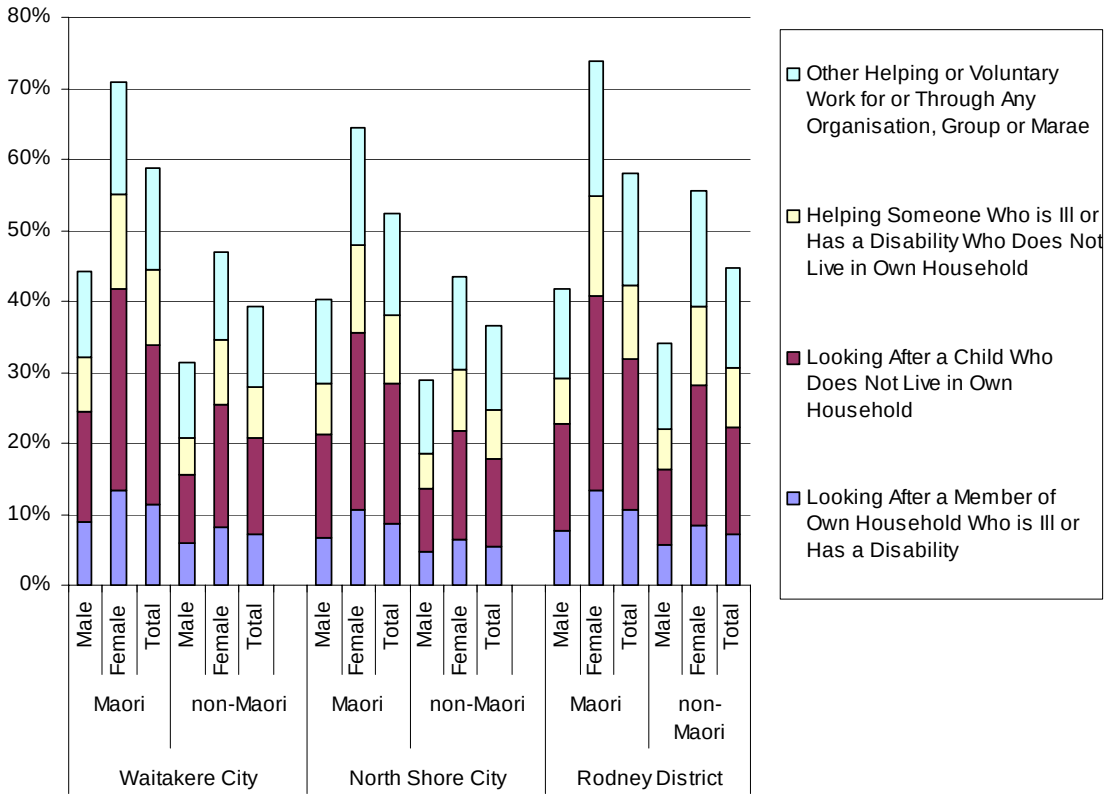
Figure 18 - Maori employment in Auckland region, by industry and occupation level 2005



Source: Te Puni Kokiri (Leung-Wai & Nana, 2005)

Maori men and Maori women are more likely than non-Maori in Waitemata to be engaged in unpaid work, such as caring for children, looking after people who are ill or have a disability or working at the marae (Figure 19). The participation in unpaid work is highest for Maori women across all three TLAs.

Figure 19 - Unpaid activities, Maori and non-Maori, by gender and TLA, 2006



Source: Census 2006

Racism

International research suggests that racism is a major determinant of health and inequalities (Jones, 2001; Nazroo, 2003). In the New Zealand context, using data from the New Zealand Health Survey, it has been shown that relative to other ethnic groups Maori have the highest self-reported prevalence of 'ever' experiencing racial discrimination (Harris et al., 2006). The link between self-reported experience of interpersonal racial discrimination and poor relative health outcomes (e.g. lower physical functioning, poorer mental health, smoking and cardiovascular disease) has been demonstrated using the same dataset (Harris et al., 2006b). Further, Maori were more likely to report 'ever' being treated unfairly by a health professional due to ethnicity (Harris et al., 2006a).

Cultural determinants of health

Maori models of health emphasise the importance of access to cultural resources, such as the Maori language and marae, and the value of a secure cultural identity consistent with Maori aspirations to be healthy as Maori.

Te Kohanga Reo and Kura Kaupapa Maori

Te Kohanga Reo is a Maori language and culture total immersion whanau programme for young children from birth to age six. Kura Kaupapa Maori provides Maori language total immersion education in a learning environment within which the philosophy and practice reflect Maori cultural values. The purpose of these initiatives is retention of te reo Maori, strengthening of Maori identity and improved educational outcomes among Maori children.

Table 21 and Table 22 show the numbers of Maori students enrolled in Kohanga Reo and Kura Kaupapa by TLA. Overall, 12.4% of Maori preschoolers attending early childhood education in the region are enrolled in Kohanga Reo, and 3.1% of primary school students are attending Kura Kaupapa Maori. These figures vary by TLA within the region, with higher numbers attending Kohanga Reo and Kura Kaupapa in Waitakere. The lack of Kohanga Reo and Kura Kaupapa Maori in Rodney may mean that some children living in this area travel to another TLA to attend school. In addition, these figures do not capture the numbers of Maori students attending bilingual units in mainstream schools.

Table 21 - Numbers of Maori enrolled in Early Childhood Education, and Kohanga Reo, by TLA, July 2007

Territorial Authority	Total Maori Enrolments in Early Childhood services	Maori Enrolments in Kohanga Reo	% Maori students in enrolled in Kohanga Reo
Rodney	348	0	0.0%
North Shore	789	94	11.9%
Waitakere	1257	203	16.1%
Waitemata DHB	**2394**	**297**	**12.4%**

Source: Ministry of Education, July 2007 Roll Return

Table 22 - Numbers of Maori students enrolled in Kura Kaupapa Maori and total enrolments, by TLA, July 2007

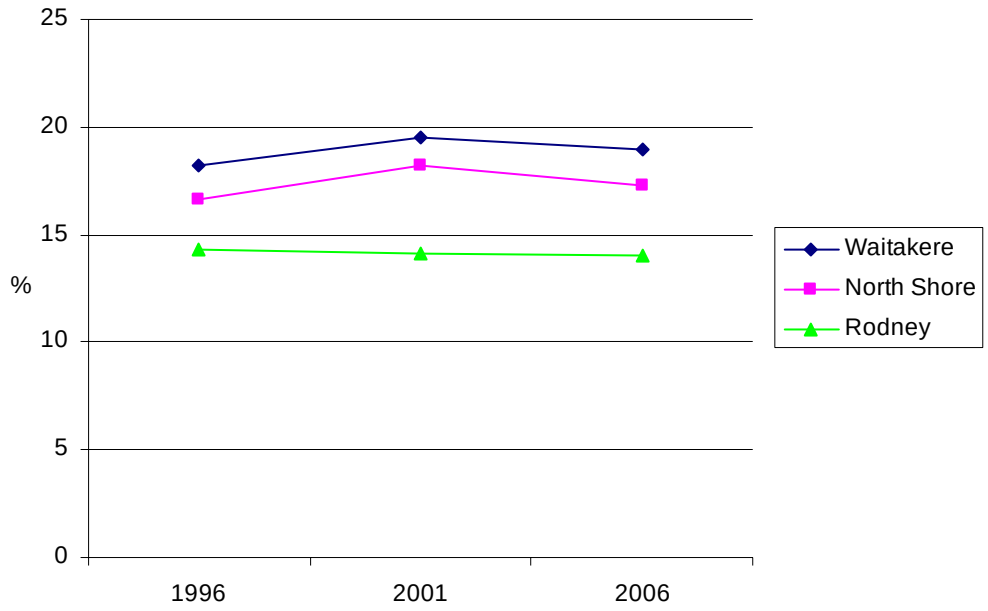
Territorial Authority	Total Maori Enrolments	Maori Enrolments (Te Kura Kaupapa)	% Maori students in enrolled in Kura Kaupapa
Rodney	1807	0	0.0%
North Shore	2998	46	1.5%
Waitakere	6426	307	4.8%
Waitemata DHB	**11231**	**353**	**3.1%**

Source: Ministry of Education, July 2007 Roll Return

Te reo Maori/Maori language

Approximately 15-20% of Maori in Waitemata can hold a conversation in te reo Maori (Figure 19). There is some variation between TLAs, with a higher percentage of Maori in Waitakere fluent in te reo Maori than in the North Shore or Rodney. According to 2006 Census data there has been little change in the percentage of Maori with conversational fluency in te reo over the last 10 years. However, national data from the 2001 and 2006 Maori language surveys, which involved face-to-face interviews and measurement of language proficiency and aspects of language usage, were promising. The surveys demonstrated increasing numbers of Maori adults with te reo proficiency at a range of levels and that the amount of spoken te reo in the home is increasing (Te Puni Kōkiri, 2007).

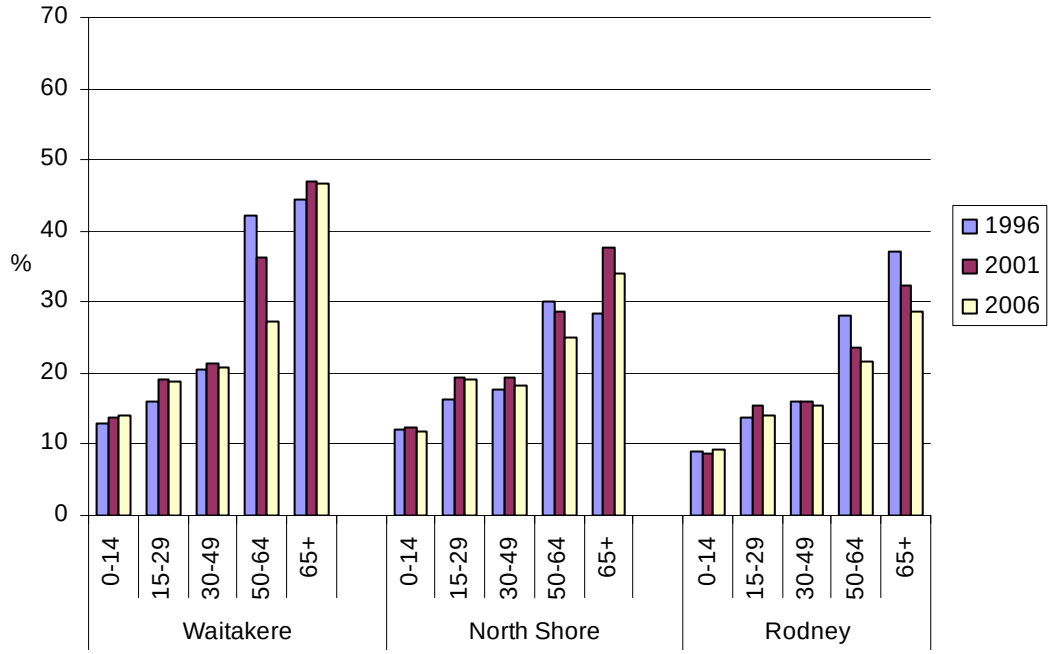
Figure 20 - Percentage of Maori who can hold a conversation about a lot of everyday things in Maori, by TLA, 2006



Source: Census 2006, in Social Report 2008

While Figure 20 shows that the highest proportion of Maori adults with conversational fluency in te reo are concentrated in the older age groups, data from the 2001 and 2006 Maori Language Surveys indicate that there are increasing numbers of young people with high proficiency.

Figure 21 - Percentage of Maori who can speak about a lot of everyday things in Maori, by age-group and TLA, 2006



Source: Census 2006

Tikanga amongst youth

The national Youth 2000 survey of young people aged 12-18 years found that 90% of Maori youth could speak at least some Maori, and 94% could understand at least some Maori (Adolescent Health Research Group - University of Auckland, 2004). The survey also found that most Maori youth are proud of being Maori (Table 23). The majority of tamariki (60.3%) knew their iwi and most tamariki (84.6%) stated Maori values were important to them (Adolescent Health Research Group - University of Auckland, 2004).

Further findings from the 2003 survey of attitudes, values and beliefs about the Maori language found a high level of support among Maori for te reo, and increasing support among non-Maori (Te Puni Kōkiri, 2006).

Table 23 – Responses of Maori students 12-18 years, to questions regarding Maori culture and identity, New Zealand, 2000.

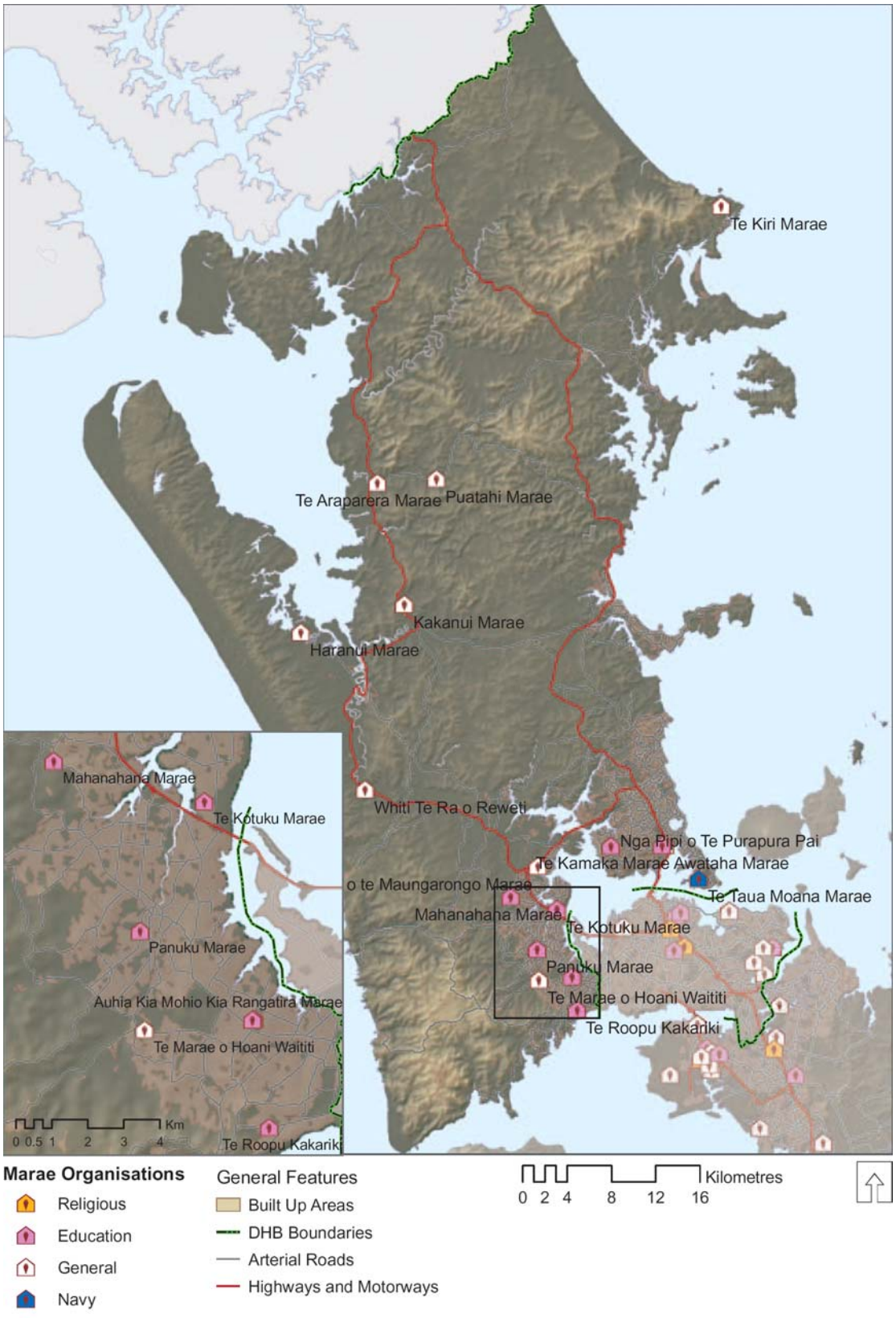
	% Maori students	95% CI
How important is it to you to be recognised as a Maori person?		
Not at all important	28.2	24.8 - 31.7
Somewhat important	38.3	36.1 - 40.5
Very important	33.5	29.8 - 37.2
Do you feel accepted by other Maori people?		
Not at all	2.3	1.7 - 3.0
Some	28.1	26.1 - 30.1
Quite a bit	27.4	25.7 - 29.1
A lot	32	29.6 - 34.5
Don't know	10.1	8.8 - 11.5
How satisfied are you with your knowledge of things Maori?		
Very satisfied	11.8	10.3 - 13.4
Satisfied	59	57.1 - 61.0
Unsatisfied	24.2	22.0 - 26.4
Very unsatisfied	4.9	4.0 - 5.9
Are Maori values important to you e.g. whanau and hui (family gatherings), karakia (pray), wairua (spirituality) and whakapapa (family history)?		
Not at all important	15.4	13.0 - 17.7
Somewhat important	39.3	36.5 - 42.2
Very important	45.3	41.2 - 49.4
Have you ever been to a tangi or unveiling?		
Yes	73.9	69.8 - 78.0
No	17.6	14.7 - 20.6
Don't know	8.5	6.8 - 10.2
How much of the kawa/protocol did you understand (how much of what was going on did you understand)?		
All or most	36.9	33.8 - 39.9
About half	23.8	21.9 - 25.7
Some	32.3	29.5 - 35.2
None	7	5.6 - 8.3
How comfortable do you feel in Maori social surroundings?		
Very uncomfortable	11.1	9.8 - 12.4
Uncomfortable	4.1	3.2 - 5.0
Slightly uncomfortable	15.4	13.5 - 17.4
Comfortable	43.4	41.3 - 45.5
Very comfortable	26	23.4 - 28.6

Source: Youth 2000 survey

Access to marae

Figure 22 shows the location of marae in the Waitemata DHB region, though this data is incomplete. Nationally, the 2002 Cultural Experiences Survey found that more than two-thirds of Maori adults (69%) had made at least one visit to a marae during the preceding 12 months (Statistics New Zealand & Ministry for Culture and Heritage, 2003).

Figure 22 - Location of marae in the Waitemata region, 2003



Source: Auckland Regional Public Health Service (Auckland Regional Public Health Service, 2005)

Kapa haka

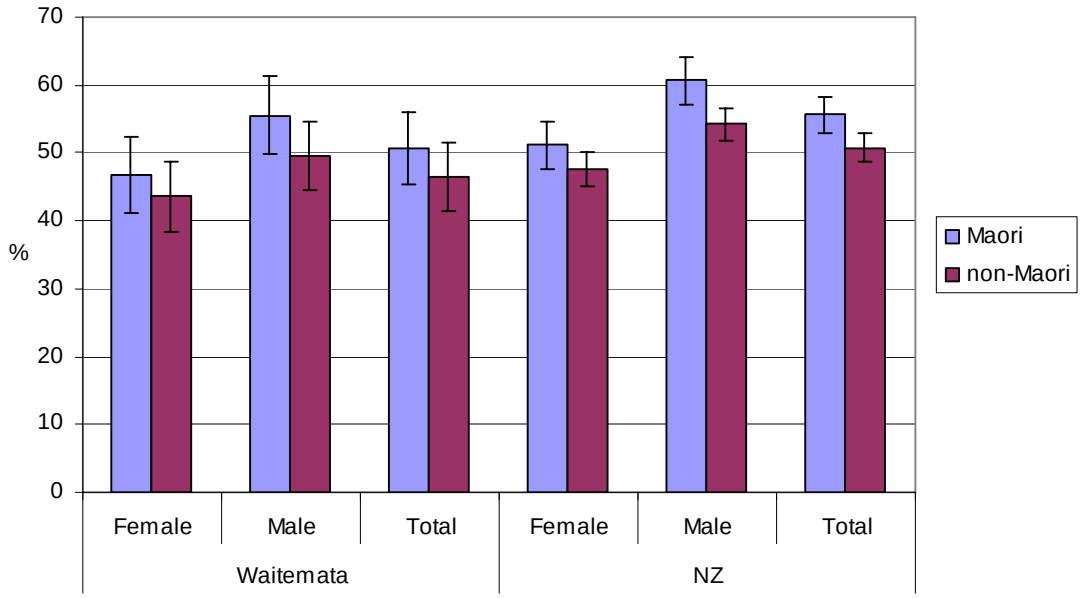
The 2002 Cultural Experiences Survey found that nationally 45% of the Maori population aged 15 and over had attended kapa haka in the 12 months before the survey (Statistics New Zealand & Ministry for Culture and Heritage, 2003). The survey also found that 39% of Maori indicated they would have liked to attend more often. Major reasons for not attending kapa haka more often were lack of time (41%) and performances not being available locally (28%). Other reasons given by small numbers of people included lack of information about events, transport problems, caregiver responsibilities and the cost of tickets.

Protective factors

Physical activity

Maori in the Waitemata district are more likely to be physically active than non-Maori, with just over 50% of local Maori in the New Zealand Health Survey reporting at least 30 minutes of moderate physical activity on at least 5 days of the week. More Maori males reported regular physical activity than females. Maori in Waitemata appear to report slightly lower levels of physical activity than Maori in New Zealand, although confidence intervals are wide.

Figure 23 - Percentage of adults over 15 years doing regular physical activity, Waitemata DHB and New Zealand, age-standardised, by ethnicity, 2006/07

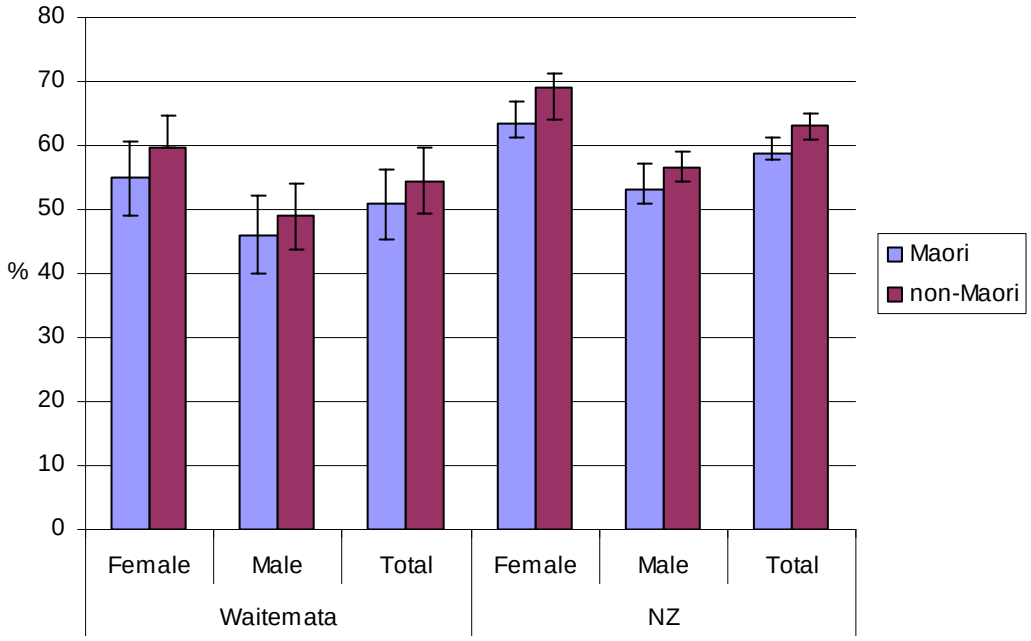


Source: New Zealand Health Survey, 2006/07

Nutrition

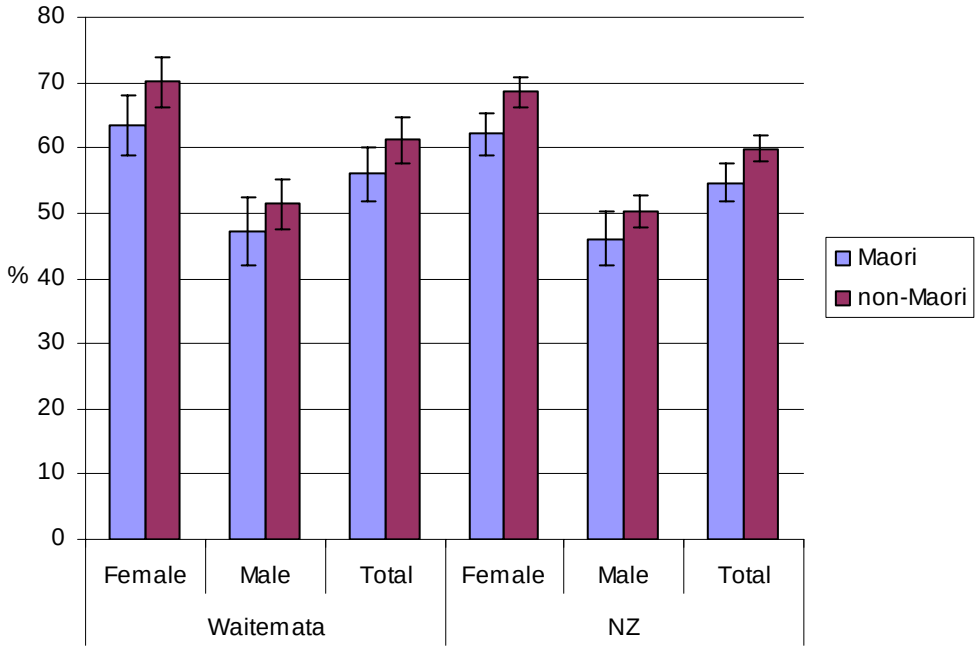
According to the New Zealand Health Survey 2006/07, just over 50% of Maori in the Waitemata district are consuming the recommended minimum amount of fruit (two servings) and vegetables (three servings) each day. The rates are much higher for Maori women than for Maori men – less than half of Maori men in Waitemata are eating the recommended daily amount of fruit and vegetables.

Figure 24 - Percentage of adults over 15 years consuming 3 or more servings of vegetables per day, Waitemata DHB and New Zealand, age-standardised, by ethnicity, 2006/07



Source: New Zealand Health Survey, 2006/07

Figure 25 - Percentage of adults over 15 years consuming 2 or more servings of fruit per day, Waitemata DHB, age-standardised, by ethnicity, 2006/07



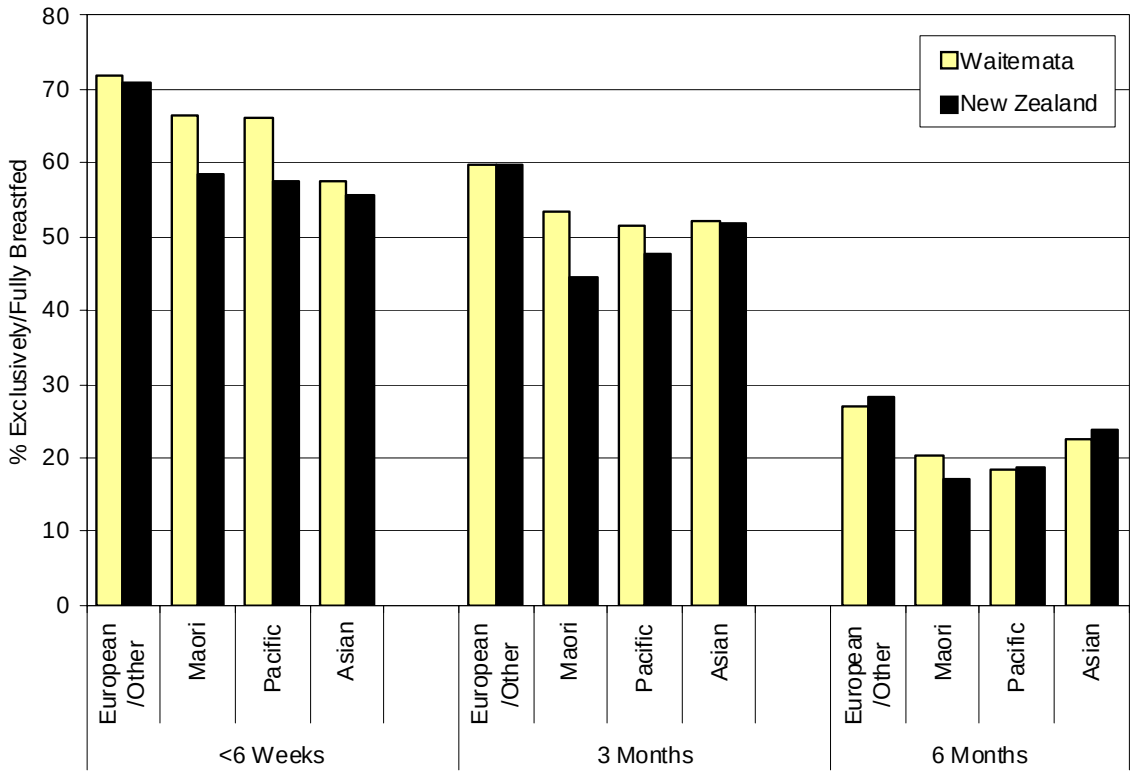
Source: New Zealand Health Survey, 2006/07

Breastfeeding

Breastfeeding meets a term infant's nutritional needs for the first six months of life, as well as providing protection against conditions such as diarrhoea, respiratory infections, otitis media, SIDS, diabetes, Crohn's disease, asthma and atopy (Duncan et al., 1993; Holberg et al., 1991; Wright, Holberg, Martinez, Morgan, & Taussig, 1989; Wright, Holberg, Taussig, & Martinez, 2001) The WHO recommends "…*exclusive breastfeeding for 6 months, with the introduction of complementary food and continued breastfeeding thereafter…"* (WHO 2001). Barriers to continued breastfeeding include paternal attitudes, socioeconomic factors, returning to work, lack of workplace support, poor initiation of breastfeeding, and perceived inadequate milk supply (Craig et al., 2007; Ministry of Health., 2002).

Figure 26 shows that rates of exclusive breastfeeding among Maori in Waitemata are lower than for NZ European. Further, between three and six months there is a substantial drop in exclusive breastfeeding rates. However, rates of exclusive breastfeeding are higher for Maori living in the Waitemata region than for Maori nationally, and the disparity between European and Maori rates is narrower in Waitemata DHB than nationally.

Figure 26 - Percentage of Plunket babies who were exclusively or fully breastfed by age and ethnicity, Waitemata vs. New Zealand in the year ending June 2006



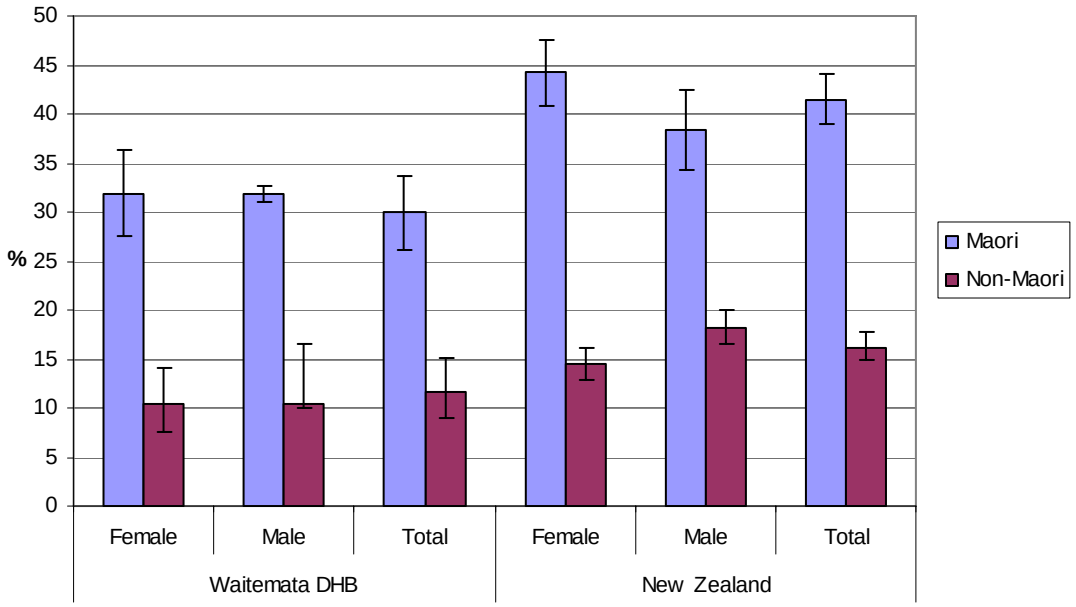
Source: (Craig et al., 2007)

Risk factors

Smoking

In the Waitemata region, a much lower percentage of Maori are current daily smokers (30%) compared to Maori in New Zealand overall (42%), as shown in Figure 27.

Figure 27 - Percentage of adults, 15 years and over, who are daily smokers, by ethnicity, Waitemata DHB and New Zealand, 2006/07.

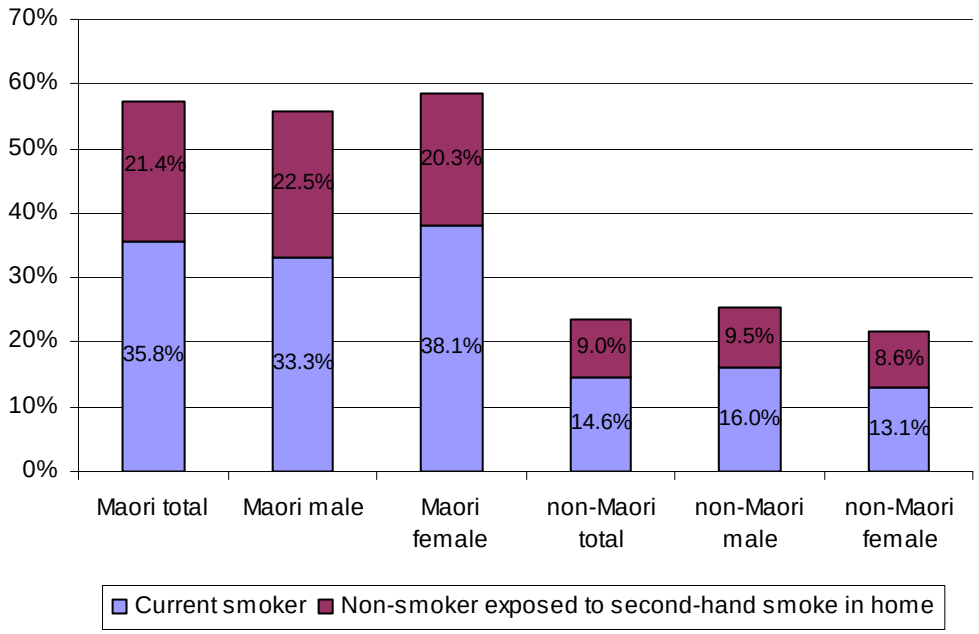


Source: New Zealand Health Survey 2006/07, synthetic DHB predictions

However smoking is still a significant health risk factor for Maori in the Waitemata region. As shown in Figure 28, over half the Maori adults in Waitemata DHB (57.2%) are exposed to health risks from smoking. This figure is made up of both those who are current smokers (33.3% of Maori men, and 38.1% of Maori women) and those who are non-smokers but exposed to second-hand smoke inside their home (22.5% of Maori men and 20.3% of Maori women).

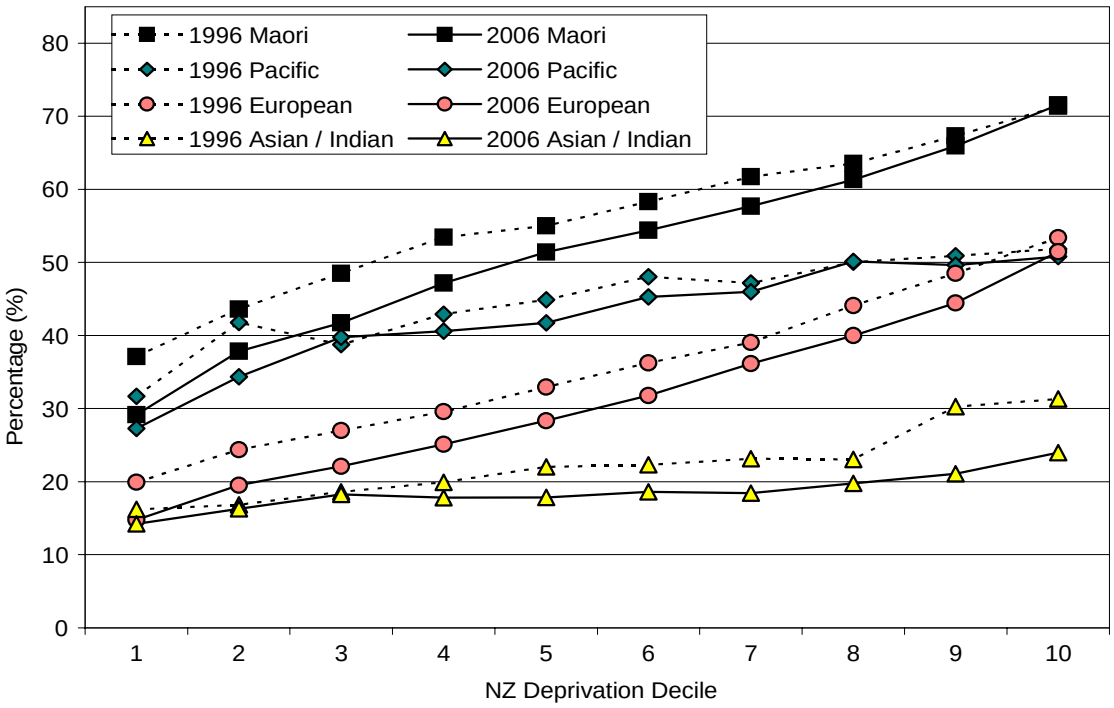
The percentage of Maori children exposed to cigarette smoke at home is likely to be higher than in adults, as shown by the national data in Figure 29. This figure also shows that the percentage of Maori children exposed to smoke at home rises steeply with increasing socioeconomic deprivation – from 30% in the least deprived decile, to over 70% in the most deprived decile. Since the 1996 Census, there has been some reduction in the proportion of Maori children exposed to smoking at home in the wealthiest deciles, however there has been no decrease for Maori children in the poorest deciles.

Figure 28 - Percentage of adults who are current smokers or non-smokers but exposed to smoking in the home, Waitemata DHB, by ethnicity, age standardised, 2006/07



Source: New Zealand Health Survey 2006/07, synthetic DHB predictions

Figure 29 - Proportion of children 0-14 years living in a household with a smoker by ethnicity and NZ Deprivation index decile, New Zealand at the 1996 & 2006 Censuses



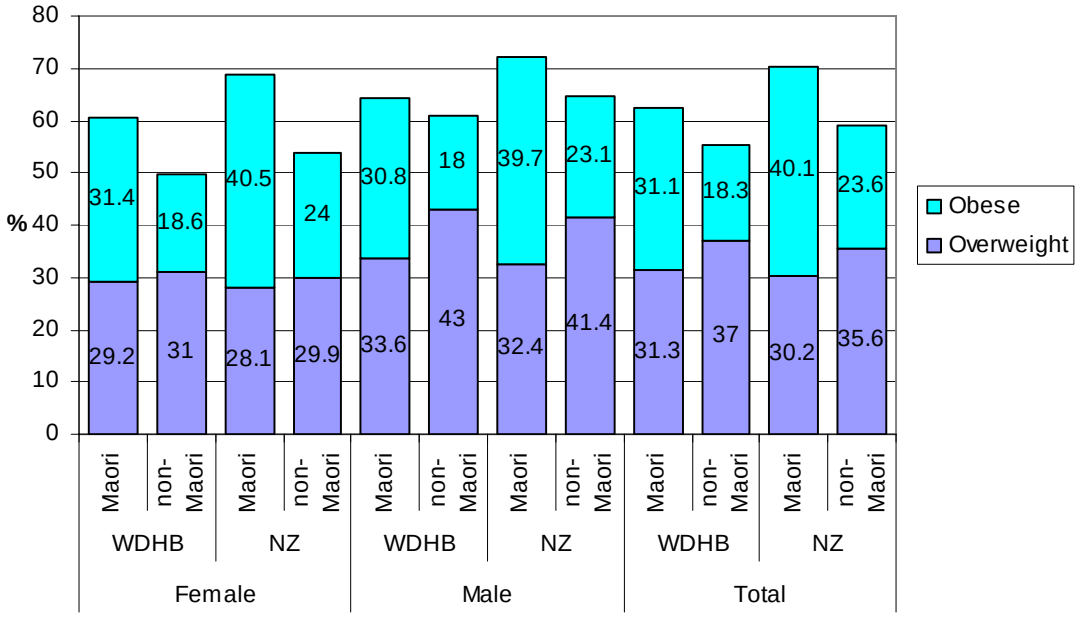
Source: (Craig et al., 2007)

Overweight and obesity

Information about obesity and overweight is drawn from the 2006/07 New Zealand Health Survey. Participants in the survey were weighed and had their height measured. From these measurements, body mass index (BMI) was calculated (weight in kilograms divided by height in metres squared), and international cut-off points were used to classify participants as overweight or obese (International Obesity Taskforce BMI cut-off points were used for participants aged 2-17 years) (Cole TJ, Bellizzi MC, Flegal KM, & Dietz, 2000; Cole TJ, Flegal KM, Nicholls D, & Jackson, 2007).

Less Maori were either obese or overweight in Waitemata (62%) than Maori in New Zealand overall (70%). In Waitemata DHB, the mean BMI for Maori adults was higher than that of non-Maori adults. Overall, 62.4% of Waitemata Maori in the New Zealand Health Survey 2006/07 were classified as overweight or obese, compared with 55.3% of non-Maori.

Figure 30 - Percentage of adults 15 years and over classified as overweight or obese, Waitemata DHB and New Zealand, by ethnicity, age standardised, 2006/07



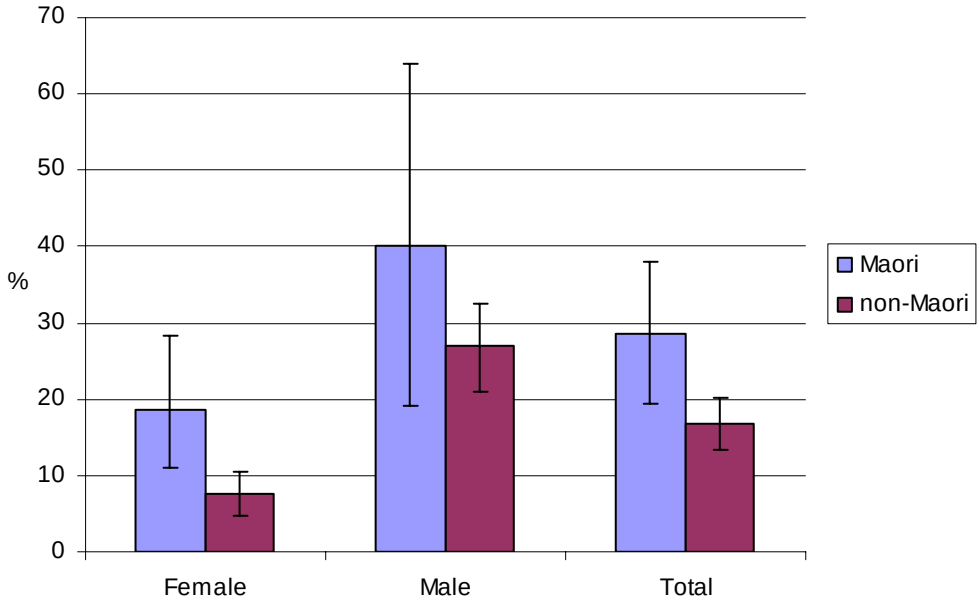
Source: New Zealand Health Survey, 2006/07

Alcohol and drug use

In the 2006/07 New Zealand Health Survey, adult participants who had an alcoholic drink in the previous twelve months were asked ten questions about their alcohol use, covering the volume and frequency of alcohol consumed, alcohol related problems and abnormal drinking behaviour. These ten questions were developed by WHO and comprise the Alcohol Use Disorders Identification Test (AUDIT) (Saunders JB, Aasland OB, Babor TF, de la Fuente JR, & Grant, 1993). The international definition of hazardous drinking is defined as an AUDIT score

greater than or equal to eight, and represents an established pattern of drinking that carries a high risk of future damage to physical or mental health. A higher proportion of Maori resident in the Waitemata district reported potentially hazardous drinking behaviour.

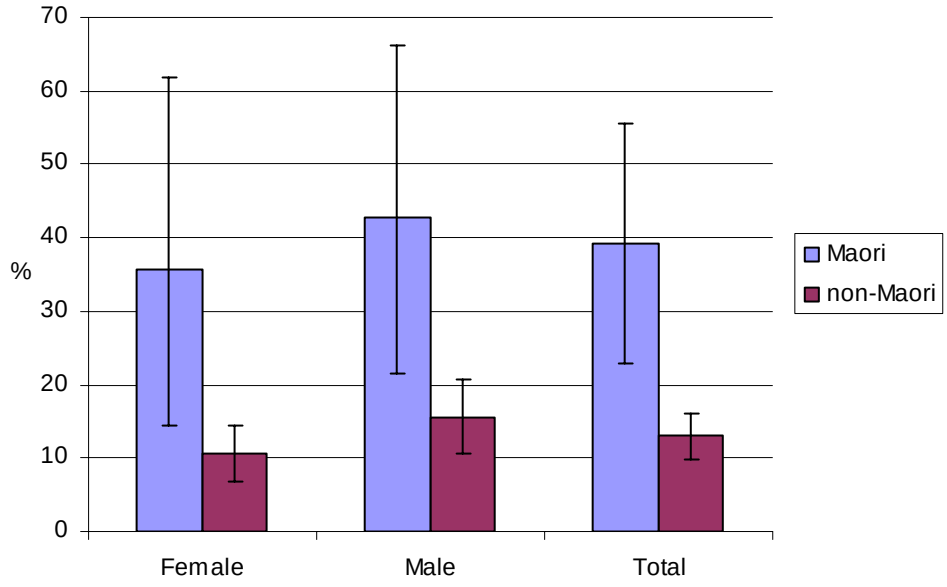
Figure 31 - Percentage of adults 15 years and over, reporting hazardous alcohol drinking, Waitemata DHB, by ethnicity, age standardised, 2006/07



Source: New Zealand Health Survey, 2006/07

The prevalence of marijuana use over a twelve month period in Waitemata DHB was similar to national patterns, with the prevalence among Maori significantly higher than among non-Maori after adjusting for age (Figure 32).

Figure 32 - Percentage of adults 15 years and over, reporting marijuana use in the previous 12 months, Waitemata DHB, by ethnicity, age standardised, 2002/03



Source: New Zealand Health Survey, 2002/03

Health outcomes

Life expectancy

Life expectancy provides a summary measure of the health of a population, and comparison of life expectancy between population groups provides an indication of the extent of health disparities. Maori in Waitemata experience a longer life expectancy than Maori in New Zealand overall, although marked inequalities between Maori and non-Maori persist. The life expectancy at birth of Maori women in the Waitemata district is 3.2 years shorter than for non-Maori women. The life expectancy at birth of Maori men is 6.6 years shorter than for non-Maori men. However, the disparity in life expectancy for Maori in Waitemata is considerably less than the gap in life expectancy between Maori and non-Maori nationally, for both women (8.1 years) and men (8.8 years).

Table 24 - Life expectancy at birth (years) in Waitemata and New Zealand, by gender, Maori and non-Maori, 2002-2005 usually resident, prioritised

Ethnicity	Waitemata		New Zealand	
	Female	Male	Female	Male
Maori	80.7	73.5	74.8	69.9
Non-Maori	83.9	80.1	82.9	78.7

Source: WDHB

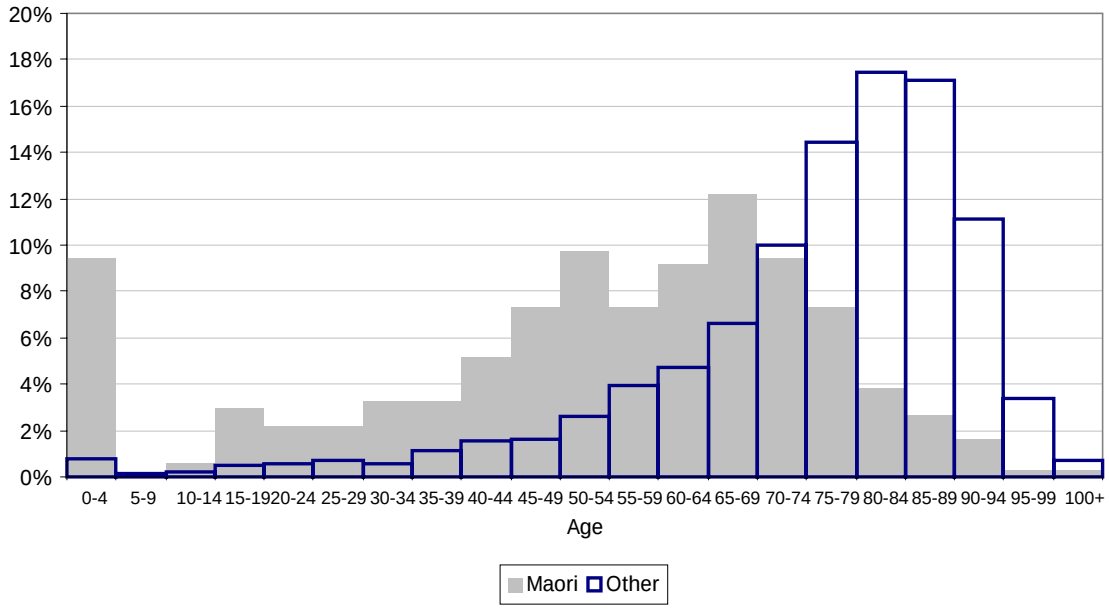
Table 25 - Life expectancy at birth (years) in Waitemata and NZ, by gender and ethnicity, 2002-2005 usually resident, prioritised

Ethnicity	Waitemata		NZ	
	Female	Male	Female	Male
Maori	80.7	73.5	74.8	69.9
Pacific	77.0	71.0	76.9	72.1
Asian	92.5	89.8	87.8	84.5
European/other	84.1	80.3	82.9	76.8

Source: WDHB

Low Maori life expectancy and high infant mortality compared to the non-Maori non-Pacific population in the Waitemata district are strikingly evident in Figure 33 below. This is reflective of national patterns. For the period 2000-2004, one third of Maori deaths occurred among middle aged Maori (45-64 years) and 40% among older Maori (65 years or more). For non-Maori during the same period, 80% of deaths occurred in the older age group (65 years or more). The differences are due both to Maori dying at a younger age than non-Maori and the more youthful age structure of the Maori population. During 2000-2004, infant death rates among Maori were 64% higher than for non-Maori.

Figure 33 – Percentage of Maori and non-Maori deaths by age group, Waitemata DHB, 2002-2004

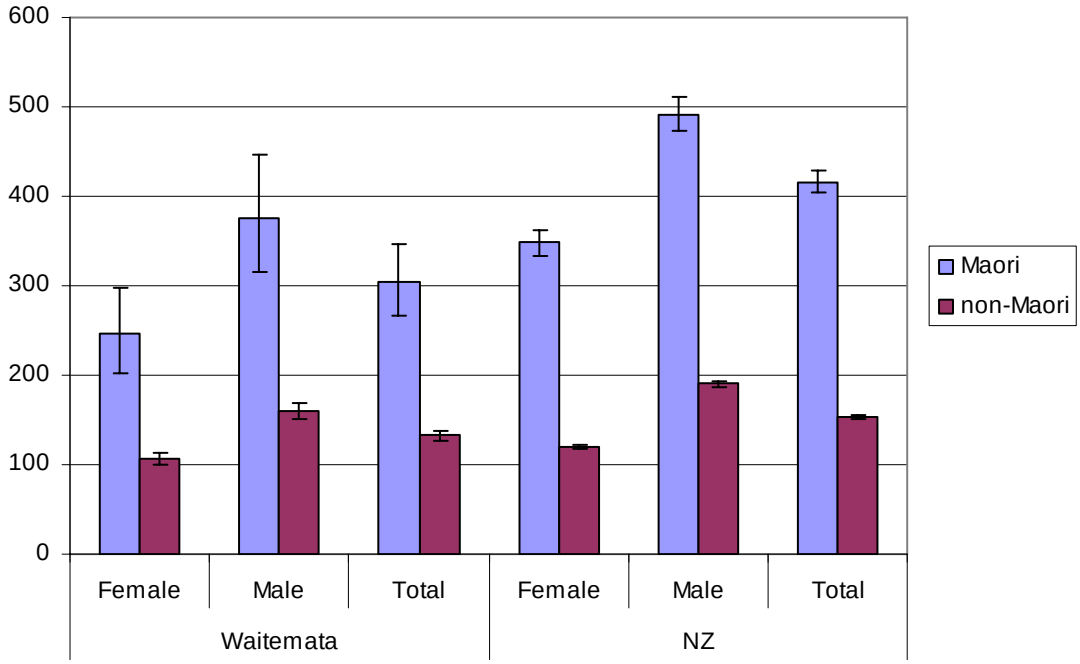


Note: population divided into 3 ethnic groups – Maori, Pacific, and Other. Total deaths = 7,922, Maori death = 370

Leading causes of avoidable mortality

Avoidable mortality refers to deaths occurring under age 75 years that could potentially have been avoided through population-based interventions, or through preventive and curative interventions at an individual level (Ministry of Health, 1999). Nationally and in Waitemata, Maori rates of avoidable mortality are much higher than those of non-Maori. However, Maori in Waitemata region have much lower rates of avoidable mortality (305/100,000) than Maori in New Zealand overall (416/100,000), as shown in Figure 34.

Figure 34 - Avoidable mortality, 0–74 years, age-standardised rates per 100,000 (and 95% confidence intervals), Maori and non-Maori, 2003–05



Source: HDIU

For Maori in Waitemata, ischaemic heart disease is the leading cause of avoidable mortality, followed by lung cancer, diabetes and COPD. The leading causes of avoidable mortality differ for Maori and non-Maori generally, and when analysed by gender (Table 26 - Table 28). Therefore, priorities for intervention will differ between population groups.

Table 26 - Leading causes of avoidable mortality, Maori and non-Maori, 0-74 years, Waitemata DHB, 2003-05

	Total					
	Maori			Non-Maori		
Rank	Condition	Number	% of avoidable deaths for Maori	Condition	Number	% of avoidable deaths for non-Maori
1	Ischaemic heart disease	53	22.3%	Ischaemic heart disease	399	20.5%
2	Lung cancer	30	12.6%	Lung cancer	187	9.6%
3	Diabetes	17	7.1%	Colorectal cancer	167	8.6%
4	COPD	13	5.5%	Cerebrovasular diseases	143	7.3%
5	Breast cancer	12	5.0%	Suicide and self inflicted injuries	128	6.6%
6	Suicide and self inflicted injuries	12	5.0%	Breast cancer	126	6.5%
7	Cerebrovasular diseases	11	4.6%	COPD	121	6.2%
8	Complications of perinatal period	10	4.2%	Road traffic injuries	75	3.8%
9	Birth defects	9	3.8%	Diabetes	68	3.5%
10	Road traffic injuries	9	3.8%	Birth defects	44	2.3%

Source: WDHB

Table 27 - Leading causes of avoidable death in Waitemata, for males, 0-74 years, by ethnicity, 2003-05

	Males					
	Maori			Non-Maori		
Rank	Condition	Number	% of avoidable deaths for Maori	Condition	Number	% of avoidable deaths for non-Maori
1	Ischaemic heart disease	42	31.3%	Ischaemic heart disease	301	26.5%
2	Lung cancer	18	13.4%	Lung cancer	111	9.8%
3	Diabetes	10	7.5%	Suicide and self inflicted injuries	98	8.6%
4	Suicide and self inflicted injuries	10	7.5%	Colorectal cancer	82	7.2%
5	Road traffic injuries	7	5.2%	Cerebrovasular diseases	75	6.6%
6	Lip, Oral cavity and pharynx cancer	6	4.5%	COPD	62	5.5%
7	Birth defects	5	3.7%	Road traffic injuries	53	4.7%
8	COPD	4	3.0%	Diabetes	40	3.5%
9	Complications of perinatal period	4	3.0%	Alcohol related disease	27	2.4%
10	Drownings	4	3.0%	Melanoma of skin	27	2.4%

Source: WDHB

Table 28 - Leading causes of avoidable death in Waitemata, for females, 0-74 years, by ethnicity, 2003-05

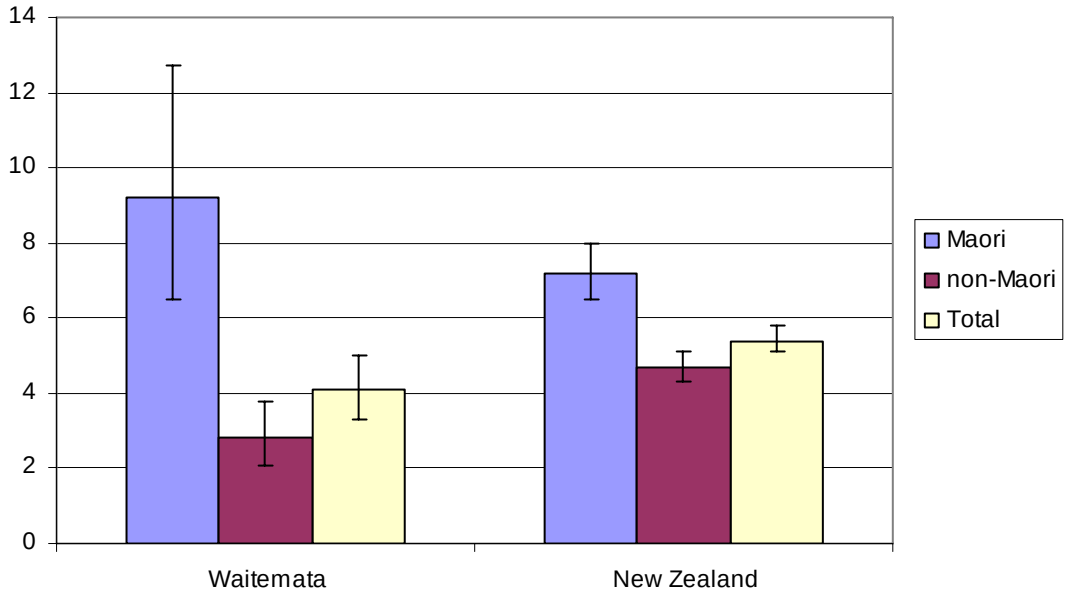
	Females					
	Maori			Non-Maori		
Rank	Condition	Number	% of avoidable deaths for Maori	Condition	Number	% of avoidable deaths for non-Maori
1	Breast cancer	12	11.5%	Breast cancer	126	15.5%
2	Lung cancer	12	11.5%	Ischaemic heart disease	98	12.1%
3	Ischaemic heart disease	11	10.6%	Colorectal cancer	85	10.5%
4	COPD	9	8.7%	Lung cancer	76	9.3%
5	Cerebrovasular diseases	9	8.7%	Cerebrovasular diseases	68	8.4%
6	Diabetes	7	6.7%	COPD	59	7.3%
7	Complications of perinatal period	6	5.8%	Suicide and self inflicted injuries	30	3.7%
8	Colorectal cancer	5	4.8%	Diabetes	28	3.4%
9	Birth defects	4	3.8%	Cervical cancer	23	2.8%
10	Nephritis and nephrosis	3	2.9%	Road traffic injuries	22	2.7%

Source: WDHB

Infant mortality

Infant mortality refers to deaths that occur from birth until one year of age. In Waitemata, the infant mortality rate for non-Maori is significantly lower than the national rate, however for Maori, it appears that the infant mortality rate in Waitemata is higher than the New Zealand rate (although small numbers mean this difference is not statistically significant).

Figure 35- Infant mortality, rate per 1000 live births, Maori and non-Maori, Waitemata DHB and New Zealand, 2003-05



Source: HDIU/NZHIS

Leading causes of avoidable hospitalisations

Avoidable hospitalisations are hospitalisations of people aged less than 75 years that fall into three sub-categories:

- preventable hospitalisations – hospitalisations resulting from diseases preventable through population-based health promotion strategies
- ambulatory-sensitive hospitalisations – hospitalisations resulting from diseases sensitive to prophylactic or therapeutic interventions deliverable in a primary health care setting
- injury-preventable hospitalisations – hospitalisations avoidable through injury prevention (Ministry of Health, 1999)

Nationally, Maori rates of avoidable hospitalisations are much higher than those of non-Maori. For Maori in Waitemata, respiratory infections are the leading causes of avoidable hospitalisation, followed by cellulitis, angina and chest pain, ENT infections and dental conditions. The leading causes of avoidable mortality differ for Maori and non-Maori generally, and when analysed by gender (Table 29 to Table 31). Therefore, priorities for intervention will differ between population groups.

Table 29 - Leading causes of avoidable hospitalisations total population, Maori and non-Maori, 0-74 years, Waitemata DHB, 2005-07

	Total					
	Maori			Non-Maori		
Rank	Condition	Number	% of avoidable hospitalisation for Maori	Condition	Number	% of avoidable hospitalisation for non-Maori
1	Respiratory infections	666	8.4%	Angina and chest pain	8510	13.4%
2	Cellulitis	654	8.3%	Respiratory infections	4254	6.7%
3	Angina and chest pain	585	7.4%	Cellulitis	3733	5.9%
4	Asthma	529	6.7%	Ischaemic heart disease	3081	4.9%
5	ENT infections	457	5.8%	ENT infections	2313	3.6%
6	Dental conditions	340	4.3%	Road traffic injury	2104	3.3%
7	Road traffic injury	301	3.8%	Asthma	1933	3.0%
8	COPD	268	3.4%	Dental conditions	1833	2.9%
9	Ischaemic heart disease	216	2.7%	Gastroenteritis	1716	2.7%
10	Kidney/urinary infection	216	2.7%	COPD	1689	2.7%

Source: WDHB

Table 30 - Leading causes of avoidable hospitalisations in males, Maori and non-Maori, 0-74 years, Waitemata DHB, 2005-07

	Males					
	Maori			Non-Maori		
Rank	Condition	Number	% of avoidable hospitalisation for Maori	Condition	Number	% of avoidable hospitalisation for non-Maori
1	Cellulitis	378	9.2%	Angina and chest pain	4823	13.7%
2	Respiratory infections	313	7.6%	Respiratory infections	2251	6.4%
3	Asthma	272	6.6%	Ischaemic heart disease	2249	6.4%
4	Angina and chest pain	262	6.4%	Cellulitis	2211	6.3%
5	ENT infections	257	6.2%	Road traffic injury	1400	4.0%
6	Road traffic injury	186	4.5%	ENT infections	1335	3.8%
7	Dental conditions	180	4.4%	Dental conditions	996	2.8%
8	Ischaemic heart disease	129	3.1%	Asthma	858	2.4%
9	Gastroenteritis	108	2.6%	Ruptured appendix	774	2.2%
10	COPD	100	2.4%	COPD	762	2.2%

Source: WDHB

Table 31 - Leading causes of avoidable hospitalisations in females, Maori and non-Maori, 0-74 years, Waitemata DHB, 2005-07

	Females					
	Maori			Non-Maori		
Rank	Condition	Number	% of avoidable hospitalisation for Maori	Condition	Number	% of avoidable hospitalisation for non-Maori
1	Respiratory infections	353	9.3%	Angina and chest pain	3687	13.1%
2	Angina and chest pain	323	8.5%	Respiratory infections	2003	7.1%
3	Cellulitis	276	7.3%	Cellulitis	1522	5.4%
4	Asthma	257	6.8%	Kidney/urinary infection	1231	4.4%
5	ENT infections	200	5.3%	Asthma	1075	3.8%
6	Kidney/urinary infection	174	4.6%	ENT infections	978	3.5%
7	Sexually-transmitted diseases	170	4.5%	Gastroenteritis	963	3.4%
8	COPD	168	4.4%	Sexually-transmitted diseases	936	3.3%
9	Dental conditions	160	4.2%	COPD	927	3.3%
10	Road traffic injury	115	3.0%	Dental conditions	837	3.0%

Source: WDHB

Child hospitalisations

The leading causes of hospitalisation among Maori and non-Maori children in Waitemata are summarised in Table 32 below, and there are differences between the ethnic groups. This indicates that priorities for tamariki ora may be different for Maori compared to non-Maori.

Table 32- Leading causes of hospitalisations in children, Maori and non-Maori, Waitemata DHB, 2005-07.

	Maori	Rank	Non-Maori
0-4 years	Respiratory infections	1	Respiratory infections
	Asthma	2	Health supervision and care of other healthy infant and child [2]
	ENT infections[1]	3	Disorders related to length of gestation and foetal growth
	Disorders related to length of gestation and foetal growth	4	ENT infections
	Health supervision and care of other healthy infant and child[2]	5	Gastroenteritis
5-14 years	Falls	1	Falls
	ENT infections	2	Dental conditions
	Dental conditions	3	Disorders related to length of gestation and foetal
	Cellulitis	4	ENT infections
	Disorders related to length of gestation and foetal	5	Chronic diseases of tonsils and adenoids

[1] ENT infections = Ear, nose and throat infections

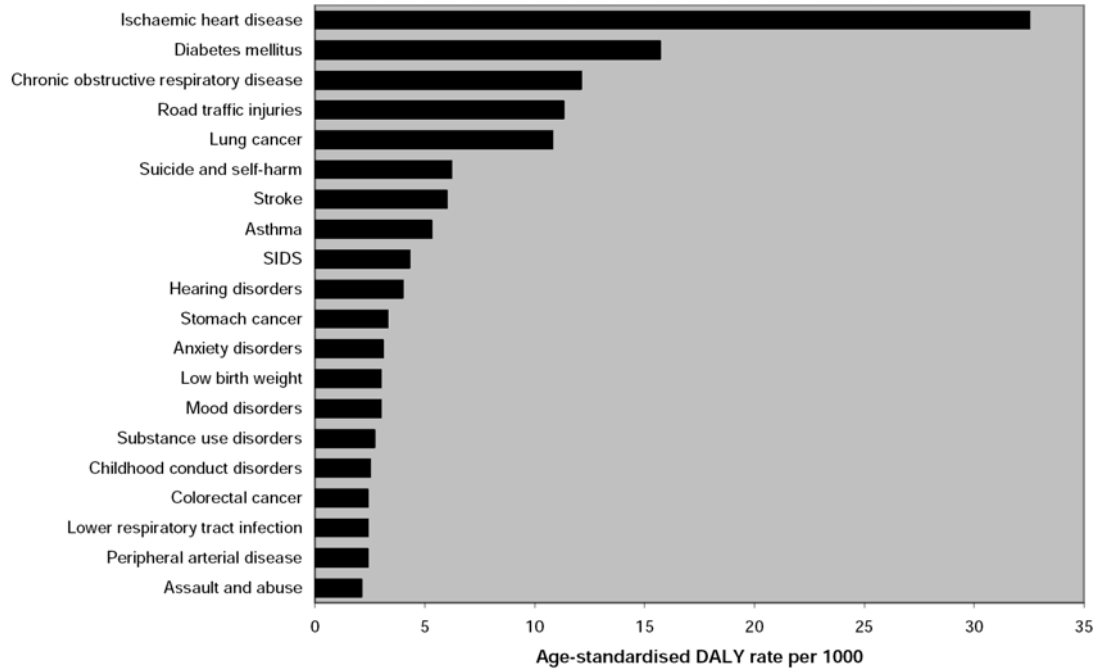
[2] Health supervision and care of other healthy infant and child = (ICD10 code Z762) Medical or nursing care or supervision of healthy infant under circumstances such as: adverse socioeconomic conditions at home, awaiting foster or adoptive placement, maternal illness, number of children at home preventing or interfering with normal care.

Source: HDIU/NZHIS

Leading causes of lost years of life

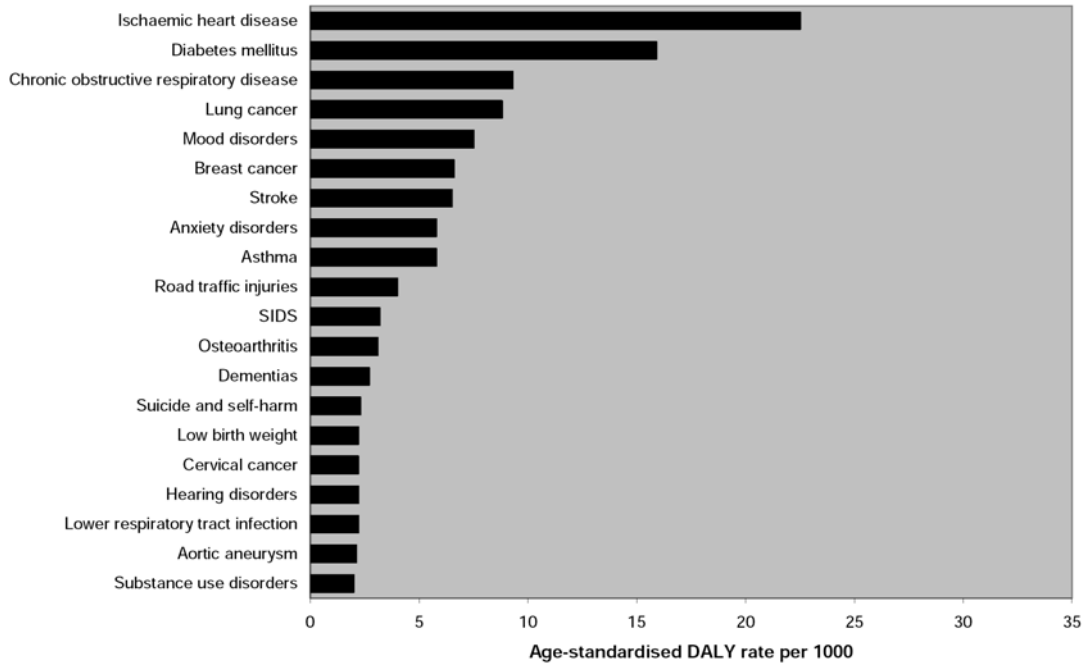
Comparing leading causes of death provides an incomplete picture. It is unclear as to whether some of the common causes of death affect people in old age, or are impacting younger people who might have expected many more years of healthy life. As well, these data do not indicate whether some of these conditions cause disability and reduction in the quality of life for a period of time before death. A disability adjusted life year (DALY) is a measure that takes these factors into account. One DALY is equivalent to one healthy year of life lost (Ministry of Health, 2001). This information is not available for Maori in the Waitemata district, but it is likely to be similar to national data for Maori. National data indicates that the leading causes of lost years of healthy life are, in this order, ischemic heart disease, diabetes, COPD, road traffic injuries, lung cancer, suicide and self-harm, stroke, asthma and SIDS (Figure 36 and Figure 37). Of note is that this list is dominated by adult conditions.

Figure 36 - Top 20 causes of lost DALY for Maori males, New Zealand, 2001



Source: Ministry of Health (Ministry of Health, 2001)

Figure 37 - Top 20 causes of lost DALY for Maori females, New Zealand, 2001

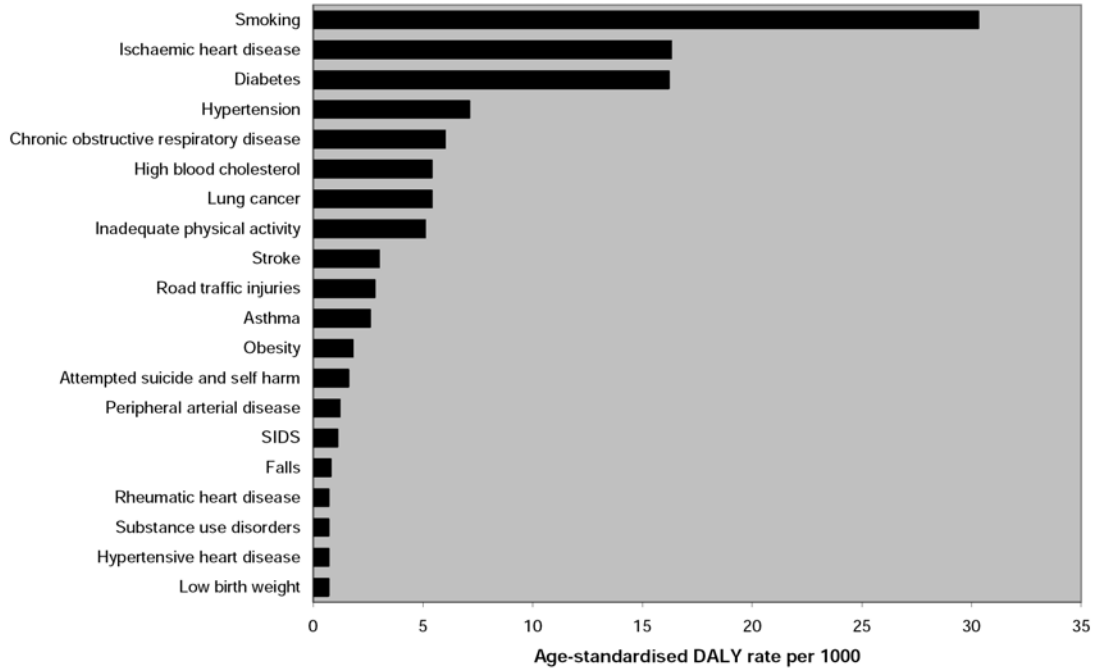


Source: Ministry of Health (Ministry of Health, 2001)

Causal factors have been identified for some of these diseases (Ministry of Health, 2001). Evidence of causal factors, combined with available data on the rates of these various risk factors among Maori, enabled compilation of a list of the major modifiable causes of lost

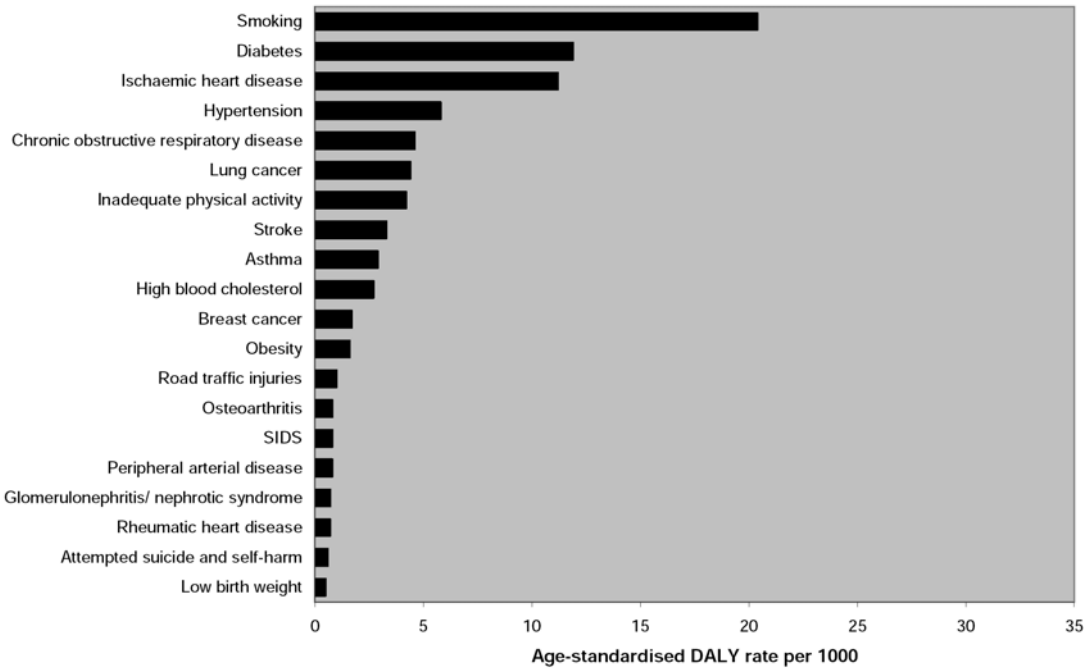
years of healthy life in Maori. For both Maori men and women, smoking is by far the biggest cause of lost healthy life, followed by diabetes and ischemic heart disease (Figures 38 & 39).

Figure 38 - Top 20 causes of modifiable lost DALY for Maori males, New Zealand, 2001



Source: Ministry of Health (Ministry of Health, 2001)

Figure 39 - Top 20 causes of modifiable lost DALY for Maori females, New Zealand, 2001

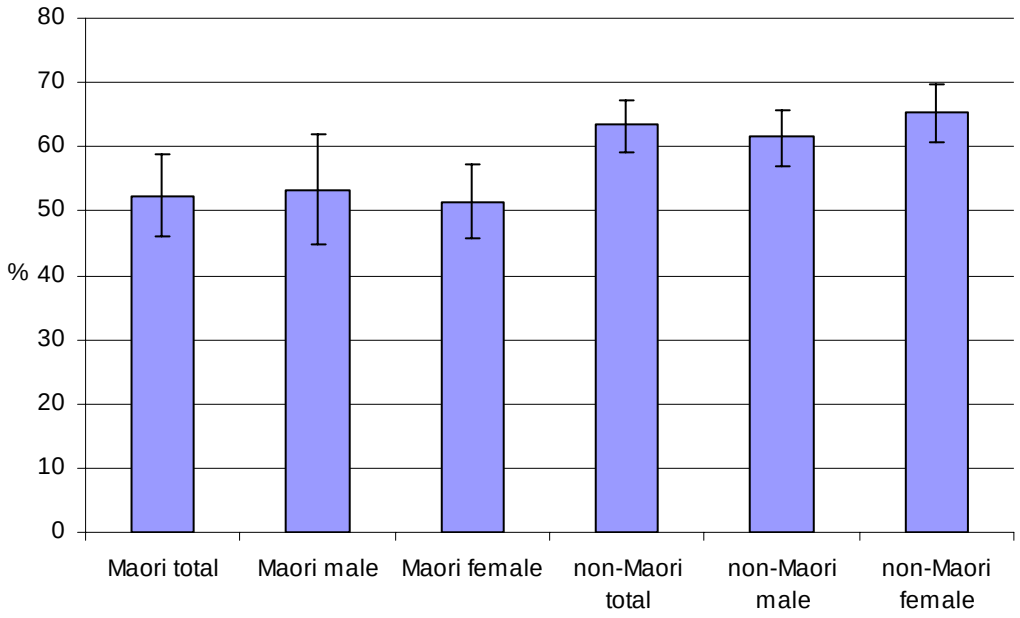


Source: Ministry of Health (Ministry of Health, 2001)

Self-reported health status

Data from the 2006/07 New Zealand Health Survey show that in Waitemata significantly less Maori report a health status of excellent or very good compared to non-Maori, as shown in Figure 40. Overall, 52.4% (95% CI 46.0-58.8) of Maori adults reported their health as excellent or very good, compared to 63.4% (95% CI 59.2-67.4) of non-Maori adults.

Figure 40 - Percentage of adults reporting health status as excellent or very good, by ethnicity, Waitemata DHB, age standardised, 2006/07



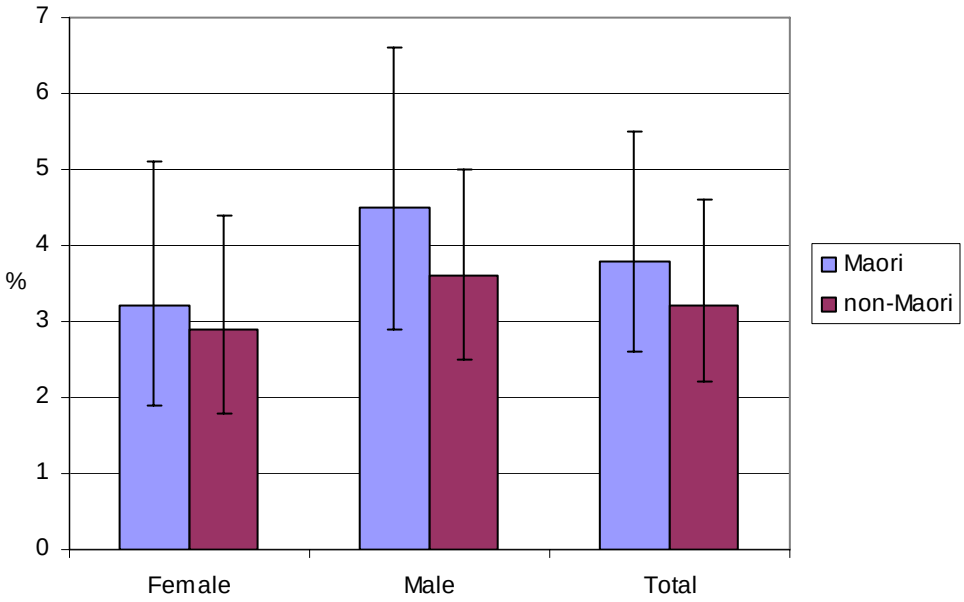
Source: New Zealand Health Survey 2006/07, synthetic DHB predictions.

Important conditions

Diabetes

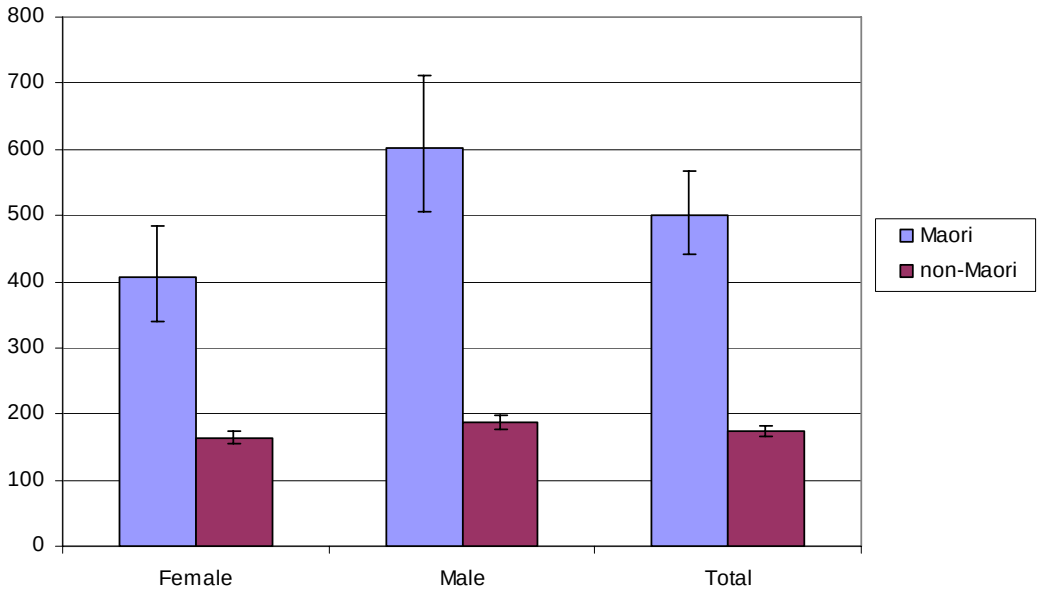
The three figures below show diabetes prevalence, hospitalisations and end-stage complications, for Maori compared to non-Maori in the Waitemata district. Although the numbers are small, it appears that the gap between Maori and non-Maori widens at each stage. Maori show a slightly higher prevalence relative to non-Maori, though undiagnosed diabetes in the community makes accurate estimates difficult. However, Maori who have been diagnosed are much more likely than non-Maori to be hospitalised for diabetes complications, and there is an even more startling disparity in terms of end-stage complications from diabetes.

Figure 41 - Self-reported prevalence of diabetes in adults 15 years and over, by ethnicity, age-standardised, Waitemata DHB, 2006/07



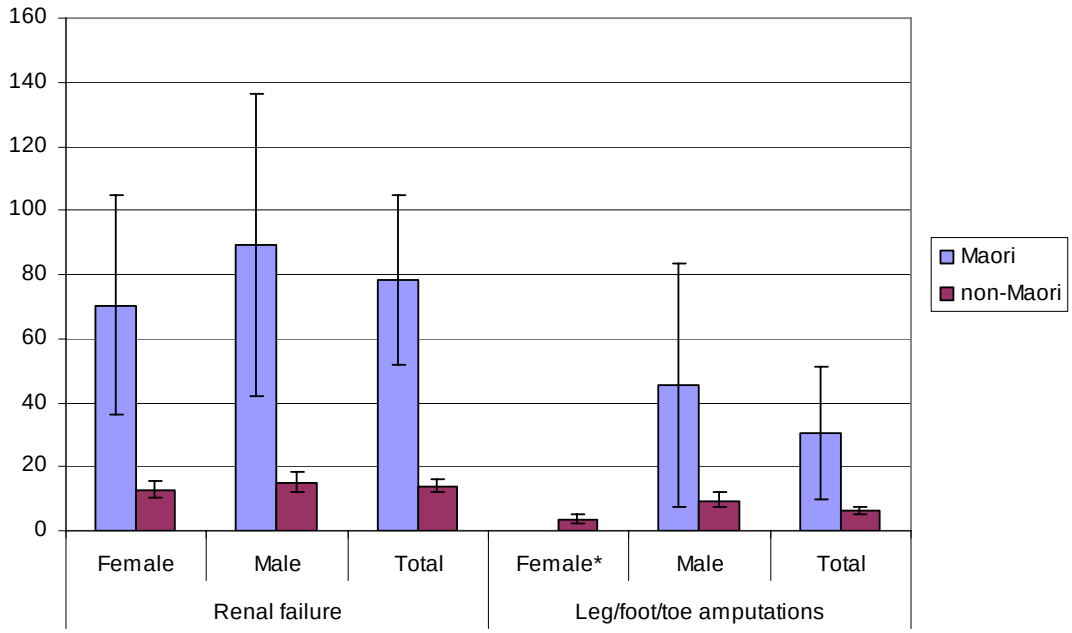
Source: New Zealand Health Survey 2006/07

Figure 42 - Hospitalisations for diabetes in adult 15 years and over, age-standardised rate per 100,000, by ethnicity, Waitemata DHB, 2005-07



Source: NZHIS

Figure 43 - Diabetes complications - renal failure and leg/toe/foot amputations hospitalisations, adults 15+ years, age-standardised rate per 100,000 by ethnicity, Waitemata DHB, 2005-07



Source: NZHIS

* Numbers for Maori women were too small to calculate a rate per 100,000

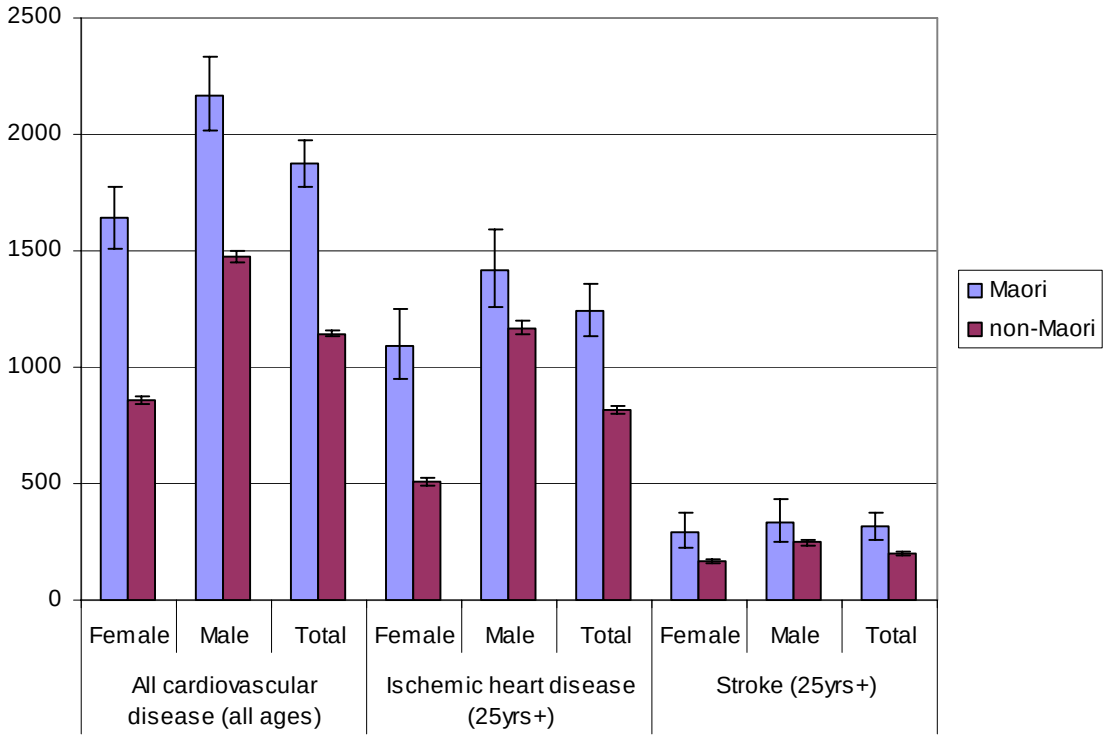
While there are many factors that lead to ethnic inequalities in diabetes complications and mortality rates, there is evidence that differential access to and quality of diabetes care may be an important factor (Harwood & Tipene-Leach, 2007)

Cardiovascular disease

The rate of cardiovascular disease, and in particular ischaemic heart disease (the leading cause of death for Maori), is higher for Maori than non-Maori in Waitemata. This disparity is more extreme for Maori men, who suffer the highest rate of ischemic heart disease of any group in Waitemata.

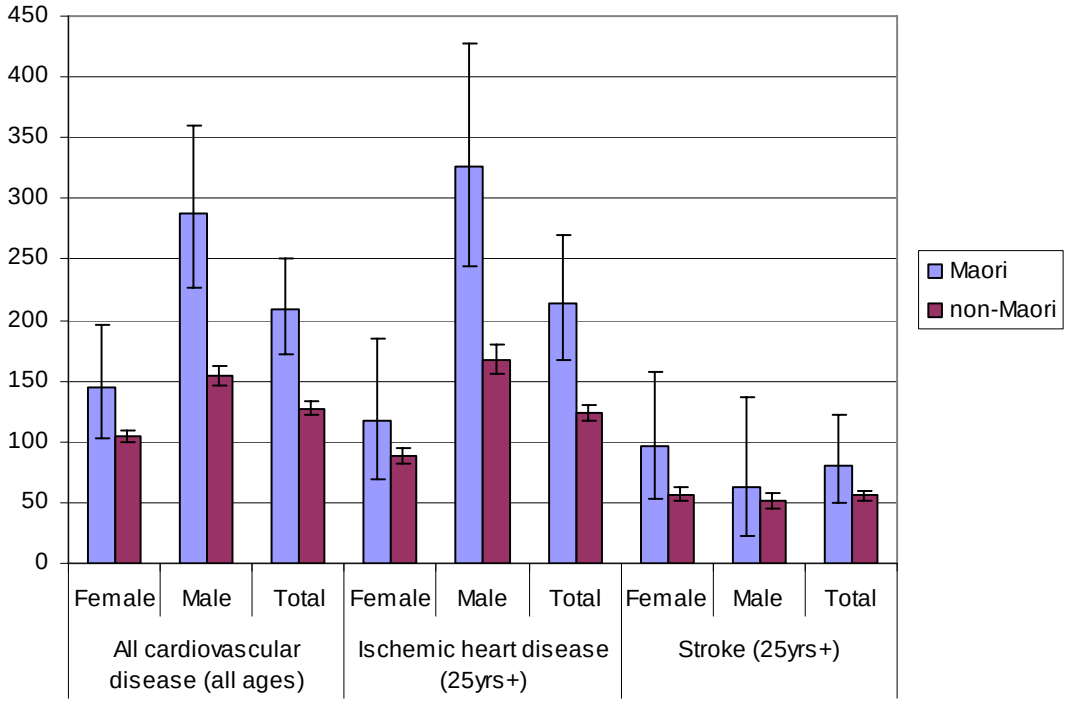
In Waitemata there are ethnic disparities in cardiovascular disease hospitalisation and mortality rates (Figures 44 and 45) in terms of overall cardiovascular disease, ischaemic heart disease, and stroke.

Figure 44 - Cardiovascular disease hospitalisations, age-standardised rates per 100,000 by ethnicity, Waitemata DHB, 2005-07



Source: NZHIS

Figure 45 - Cardiovascular disease mortality, age-standardised rates per 100,000 by ethnicity, Waitemata DHB, 2003-05

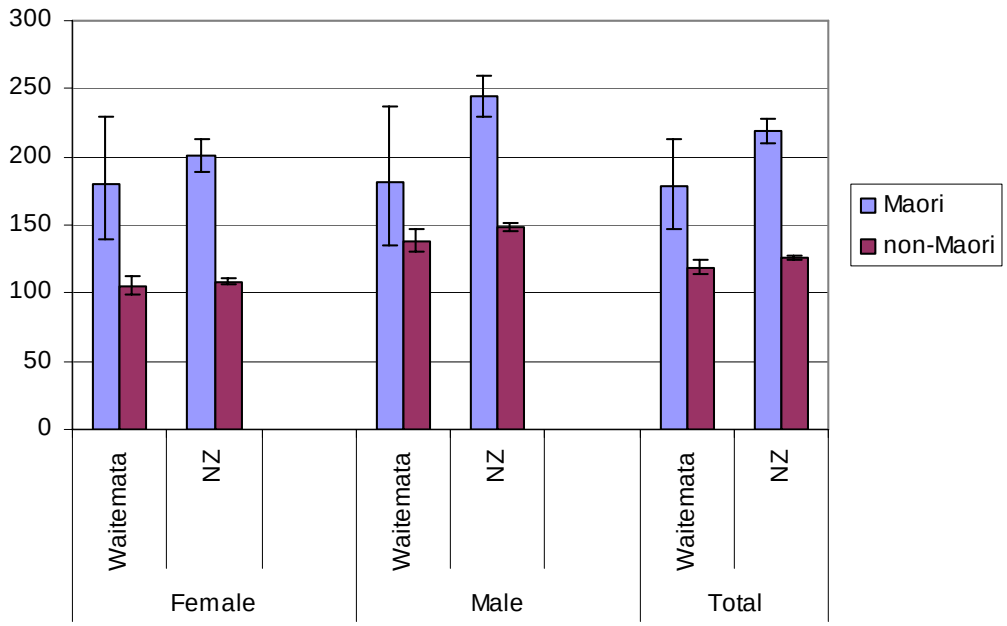


Source: NZHIS

Cancer

National data demonstrates substantial disparities between Maori and non-Maori in cancer incidence and outcomes (Cormack, Purdie, & Robson, 2007). Figure 46 compares the mortality rates for cancer for Maori and non-Maori in Waitemata with the New Zealand rates for females, males and both males and females. The mortality rates are higher for Maori in all categories. Mortality rates for Maori living in the Waitemata region seem to be lower than for Maori nationally, but small numbers mean it is not possible to be more conclusive. The disparity between Maori and non-Maori also appears less in Waitemata than in New Zealand overall.

Figure 46 - All cancer mortality, all ages, age-standardised rates per 100,000 by ethnicity, Waitemata DHB and New Zealand, 2003-05



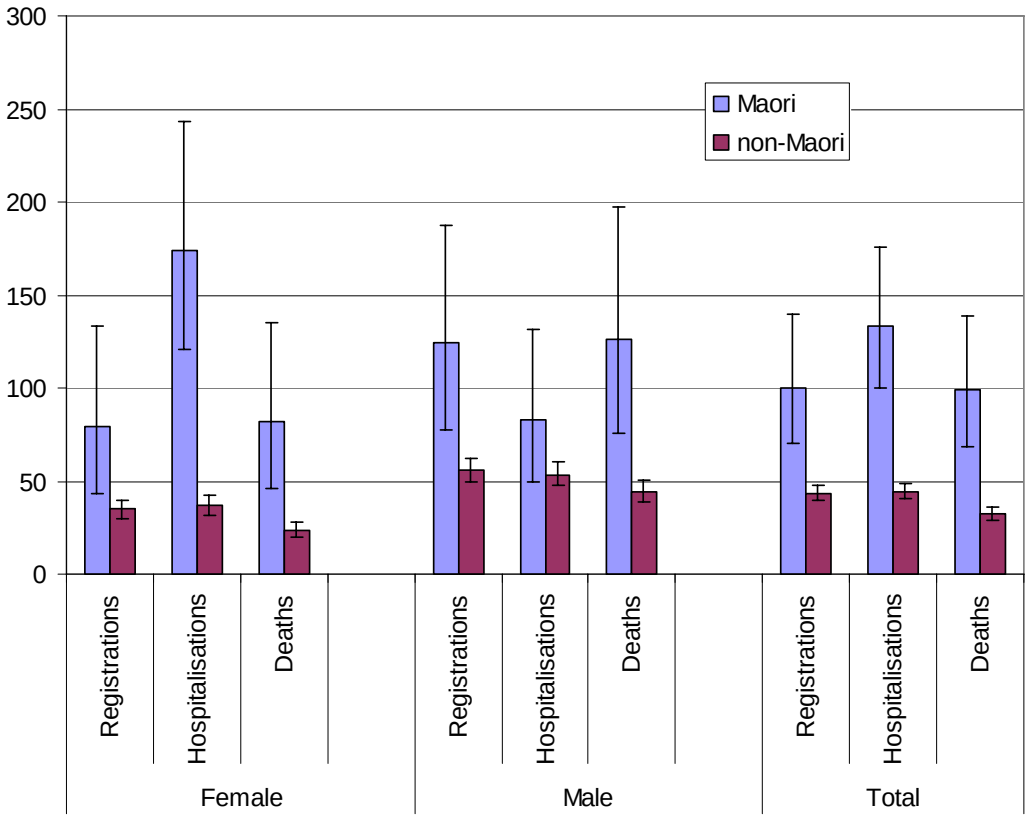
Source: NZHIS

Lung cancer

Lung cancer is the leading cause of cancer incidence and death for Maori. Nationally, between 2000-2004, lung cancer accounted for 20.4% of all new cancer registrations in Maori and over 30% of Maori cancer deaths (Cormack et al., 2007). The incidence of lung cancer in Maori is the highest of any group worldwide (Harwood, Aldington, & Beasley, 2005).

Figure 47compares the new lung cancer registrations, hospitalisations and deaths for Maori and non-Maori in Waitemata. The rates of lung cancer are much higher in Maori compared with non-Maori, for both men and women. The numbers are too small in the Waitemata data to determine whether there is an ethnic difference in lung cancer survival, although nationally, once diagnosed, Maori have poorer survival from lung cancer than non-Maori. This may be explained by a combination of factors, including later stage at diagnosis, barriers to access for diagnosis and investigation, differential treatment, co-morbidity and lower socio-economic status (Harwood et al., 2005; Robson B, Purdie G, & Cormack D, 2006.).

Figure 47 - Lung cancer registrations, hospitalisations and deaths, for adults 25 years + by ethnicity, age standardised rate per 100,000, Waitemata DHB, 2003-05*



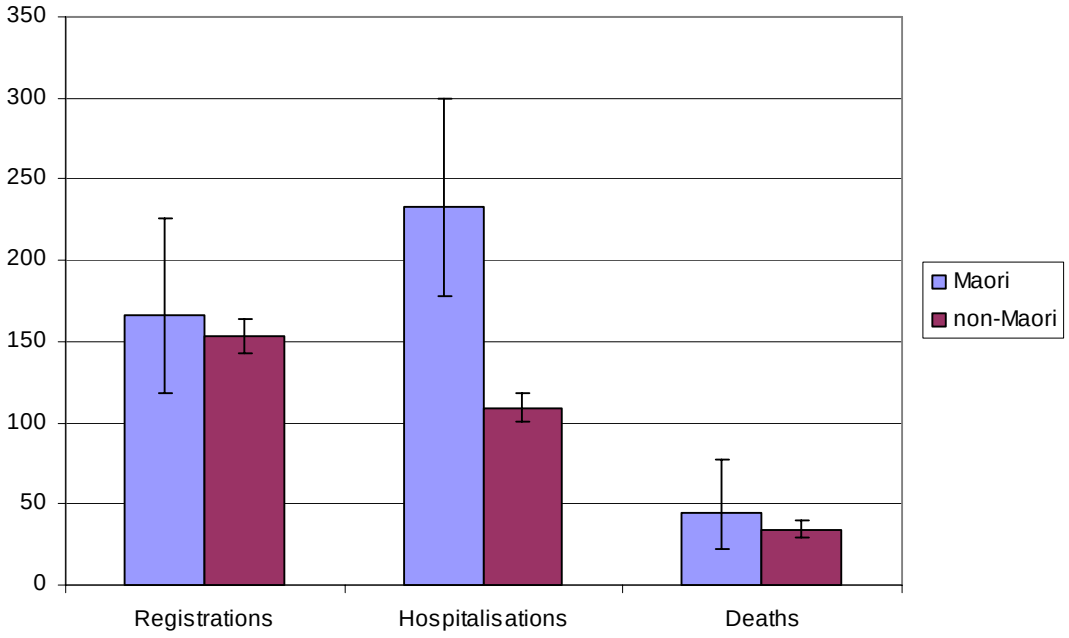
Source: NZHIS and NCZR

* Hospitalisation data from 2005/07

Breast cancer

Female breast cancer is one of the leading causes of cancer incidence and death for Maori. Nationally, between 2000-2004, female breast cancer accounted for 16.0% of all new cancer registrations in Maori and over 15.1% of Maori cancer deaths (Cormack et al., 2007). Female breast cancer has one of the largest cancer incidence and mortality risk differences between Maori and non-Maori (Cormack D, Robson B, Purdie G, Ratima M, & Brown, 2005). In the Waitemata district Maori appear to have a similar rate of breast cancer registration compared to non-Maori, but much higher rates of breast cancer hospitalisations (Figure 48). Small numbers mean the difference in mortality between Maori and non-Maori is not statistically significant. National data demonstrate that Maori are more likely to be diagnosed at a later stage of disease spread for breast cancer compared to non-Maori, but that for many cancers at each stage Maori cancer specific mortality post diagnosis is greater than that of non-Maori. This is likely reflective of disparities in access to cancer diagnostic procedures and care (Cormack D et al., 2005).

Figure 48 - Breast cancer registrations, hospitalisations and deaths, for women 25 years + by ethnicity, age standardised rate per 100,000, Waitemata DHB, 2003-05*



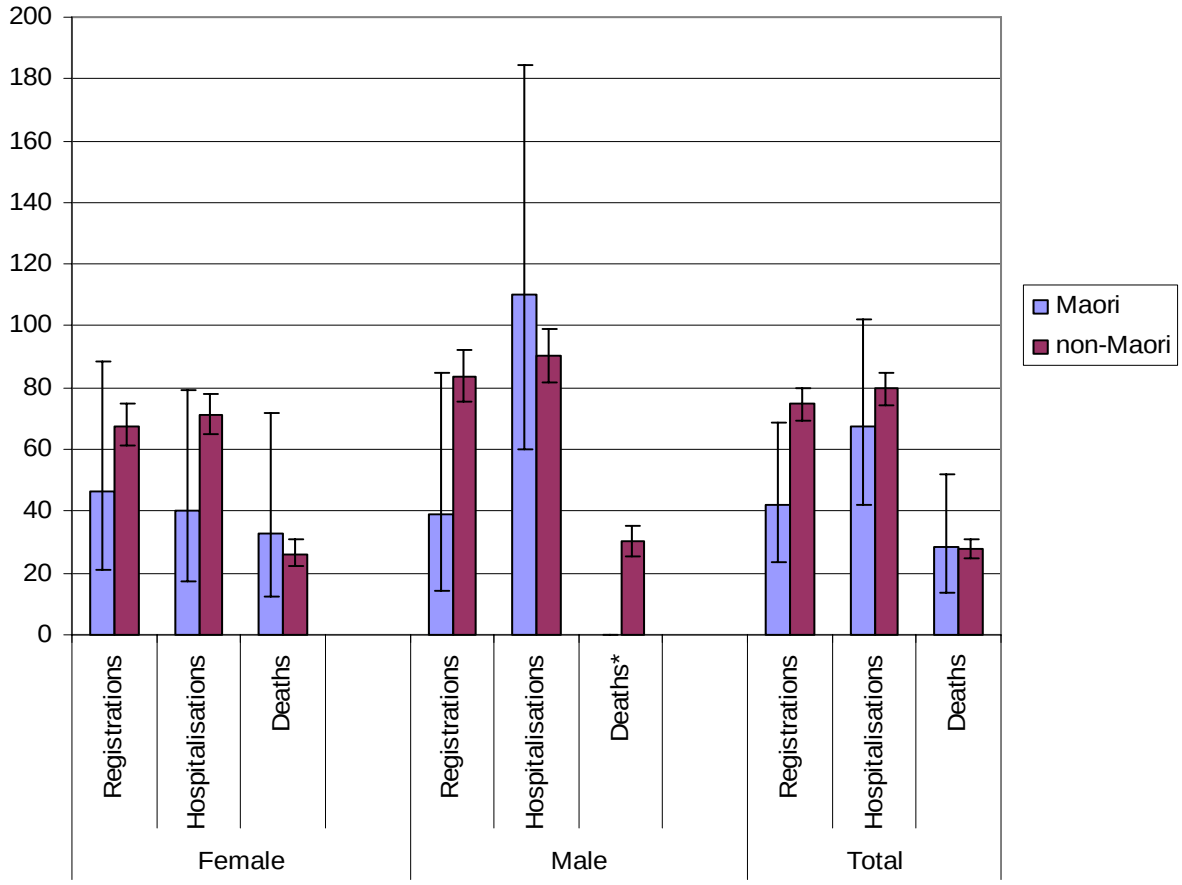
Source: NZHIS and NCZR

* Hospitalisation data from 2005/07

Colorectal cancer

Nationally, colorectal cancer is less common among Maori than non-Maori but is still a leading cancer site for registrations and deaths (Cormack D et al., 2005). In Waitemata, Maori have a lower incidence than non-Maori (Figure 49) but further conclusions from this data are limited by the wide confidence intervals, as these rates are based on small numbers.

Figure 49 - Colorectal cancer registrations, hospitalisations and deaths, for adults 25 years + by ethnicity, age standardised rate per 100,000, Waitemata DHB, 2003-05



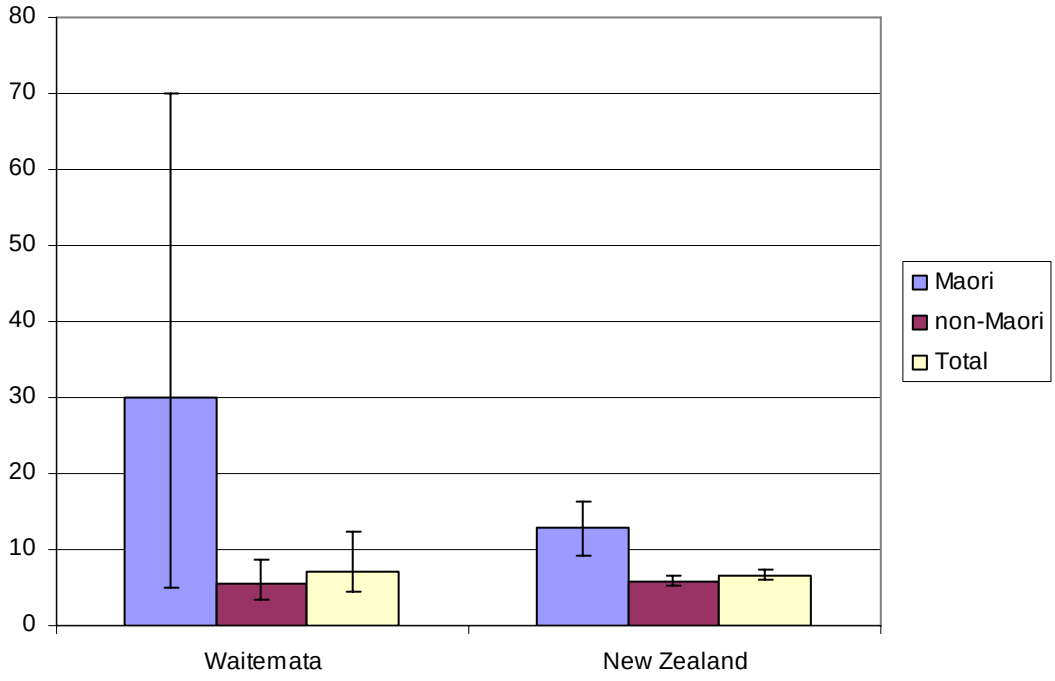
Source: HDIU, NZHIS and NZCR

Respiratory conditions

Chronic Obstructive Pulmonary Disease (COPD)

The national self-reported prevalence of COPD among Maori aged 45 years or over is approximately twice that of non-Maori in the same age group (Figure 50). There appears to be similar disparity in COPD prevalence between Maori and non-Maori in Waitemata, however, the confidence intervals are very wide, limiting the conclusions that can be made from this data. These rates are likely to be an underestimate, as there is evidence to suggest that COPD is substantially under-diagnosed. A review of the literature in 2003 (Broad & Jackson, 2003) found surveys that measure actual airflow identified more than twice as many cases of COPD as surveys using self-reported diagnosis. Applying this to the prevalence data reported in the New Zealand Health Survey 2006/07, the true proportion of Maori adults who have COPD may be over 25%. This theory is supported by a Wellington study which found a COPD prevalence of 23.1% (95%CI 9.0-43.7) in a small Maori population sample (Shirtcliffe et al., 2007).

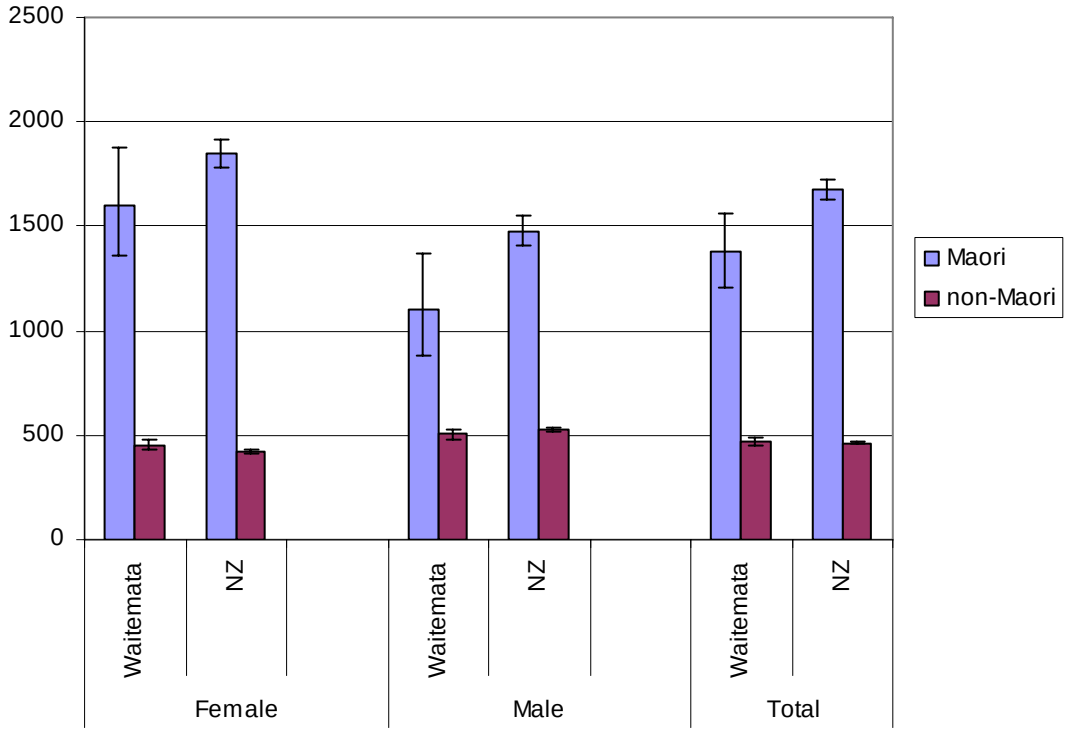
Figure 50 - Age-standardised prevalence of self-reported chronic obstructive pulmonary disease, 45+ years, Maori and non-Maori, Waitemata DHB and New Zealand 2006/07



Source: New Zealand Health Survey 2006/07

There are very wide disparities in hospitalisation rates for COPD between Maori and non-Maori nationally and locally, as shown in Figure 51. National data reveals that not only are hospitalisations from COPD higher for Maori at all ages, with the gap widening with age, COPD hospitalisations occur in Maori 15-20 years earlier than non-Maori (Robson & Harris, 2007). A similar age pattern was found in a recent audit of COPD admissions in Waikato, which found the mean age of COPD admission for Maori was 57 years, compared to 72 years for New Zealand European patients with COPD (Chang et al., 2007).

Figure 51 - COPD hospitalisation, 45+ years, age-standardised rates per 100,000, Maori and non-Maori, Waitemata DHB and New Zealand, 2005-07



Source: HDIU

Nationally, the COPD mortality rate for Maori is 2.65 times the rate for non-Maori (Robson & Harris, 2007). Deaths from COPD are also likely to be underestimated, though misclassification of COPD deaths as conditions such as asthma, and the fact that COPD is more frequently listed as a contributing cause rather than the primary cause of death (Broad & Jackson, 2003).

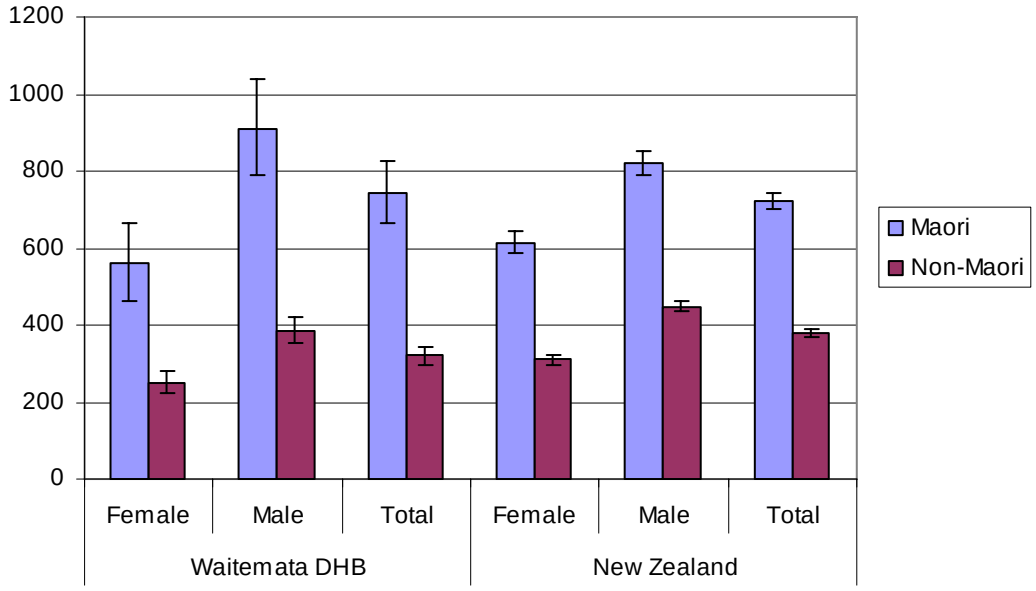
Asthma

Although the prevalence of asthma in Maori and non-Maori children is the same, Maori children have been shown to report more severe symptoms (Pattemore et al., 2004). In New Zealand during the past decade the rate of asthma hospital admissions amongst children and young people overall has been steadily declining for New Zealand European children, but it has not been decreasing for Maori children (Craig et al., 2007). Asthma is the most common respiratory cause of hospital admission for Maori children. As Figure 52 shows, locally Maori children have much higher rates of hospitalisation for asthma than non-Maori. In Waitemata, while non-Maori children have lower rates of asthma hospitalisation than the national rate, Maori children are more likely to be hospitalised for asthma than Maori in New Zealand overall.

National data indicates Maori have the highest unmet need for inhaled corticosteroid treatment (Asher, 2008; Metcalfe, 2004) and are more likely to depend on a short-acting asthma reliever (such as Ventolin), and less likely to use a long-acting reliever (like Serevent or

Oxis) than European New Zealanders (PHARMAC (Pharmaceutical Management Agency), 2006). Asthma education is critical to good self-management of the condition, however Maori have been less likely to receive adequate asthma education than non-Maori (Garrett, Fenwick, Taylor, & et al, 1994). A 1999-2001 study of 2-14 year olds found differences in asthma education provision, parental asthma knowledge and medication between Maori compared to European/Other (Crengle S, 2005). These findings indicate disparities in access to quality of primary care for Maori children with asthma.

Figure 52 - Asthma hospitalisation, 0-14 years, age-standardised rates per 100,000, Maori and non-Maori, Waitemata DHB and New Zealand, 2005-07



Source: HDIU/NZHIS

Mental health

Te Rau Hinengaro (the New Zealand Mental Health Survey) 2003/2004 (Baxter, 2008; Oakley Browne, Wells, & Scott, 2006) found that more than half of Maori had experienced a mental disorder during their lifetime, and that within the previous 12 months almost one third had experienced a mental disorder. Anxiety disorders were the most common group, with one in three Maori experiencing these disorders at some time during their life. Mood or substance use disorders were experienced by one in four Maori during their lifetime. Maori overall rates of mental disorder and of serious mental disorders were higher than those of non-Maori.

Table 33 - Lifetime, 12-month and 1-month prevalence of mental disorders for Maori, by disorder group, New Zealand, 2003/2004

	Lifetime prevalence		12-month prevalence		1-month prevalence	
Disorder group	**%**	**95% CI**	**%**	**95% CI**	**%**	**95% CI**
Anxiety disorders	31.3	28.4-34.3	19.4	17.2-21.8	13.4	11.6-15.4
Mood disorders	24.3	22.4-26.3	11.4	10.0-13.1	4.1	3.3-5.1
Substance use disorders	26.5	24.3-28.7	8.6	7.1-10.4	4.2	3.3-5.4
Eating disorders	3.1	2.3-4.1	1.0	0.5-1.6	0.5	0.2-1.0
Any disorders	50.7	47.0-54.4	29.5	26.7-32.5	18.3	16.2-20.6

Source: Te Rau Hinengaro: The New Zealand Mental Health Survey, (in Baxter, 2008)

Table 34 - Lifetime prevalence of mental disorders in Maori, by age-group and gender, New Zealand, 2003/2004

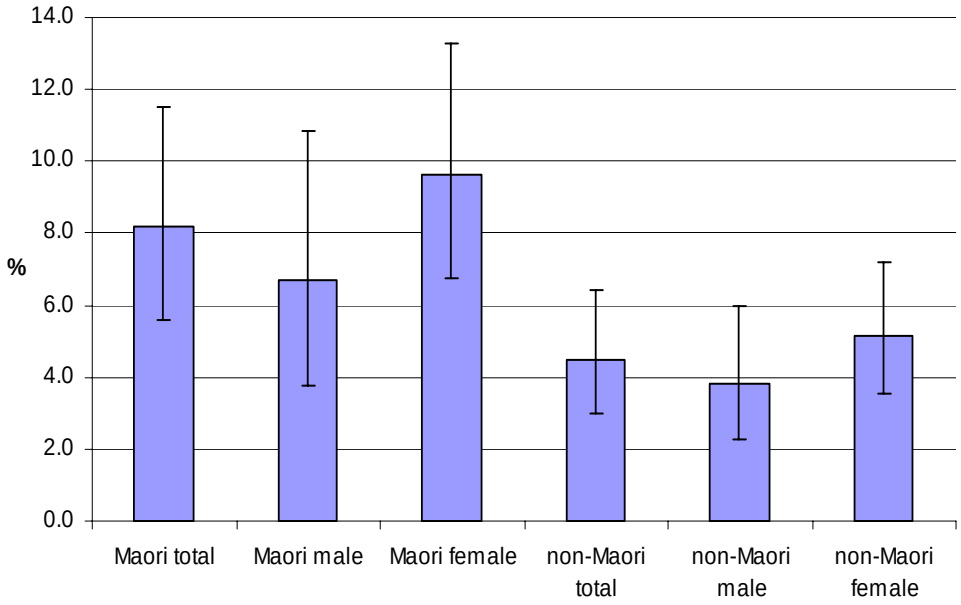
	Total	Age-group								Sex			
Disorder group		**16-24**		**25-44**		**45-64**		**65 and over**		**Male**		**Female**	
		%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Anxiety disorders	31.3	26.3	21.1-32.3	37.6	33.2-42.2	27.3	22.6-32.5	14.5	7.9-23.7	25.0	20.9-29.5	36.7	32.9-40.7
Mood disorders	24.3	23.8	19.2-29.1	27.5	25.0-30.1	22.1	18.8-25.7	7.8	4.2-13.0	18.5	15.6-21.7	29.3	26.8-32.0
Substance use disorders	26.5	33.7	28.6-39.2	28.3	25.3-31.5	17.3	14.2-20.9	16.0	9.8-25.1	31.8	28.4-35.5	21.8	19.3-24.4
Eating disorders	3.1	3.0	1.3-5.7	3.6	2.4-5.4	2.9	1.5-5.0	0.4	0.0-4.9	1.6	0.8-3.0	4.4	3.1-6.1
Any disorders	50.7	47.7	40.0-55.4	58.1	52.9-63.2	45.0	38.2-52.1	22.7	13.9-33.7	48.4	42.8-54.0	52.7	48.0-57.3

Source: Te Rau Hinengaro: The New Zealand Mental Health Survey, (in Baxter, 2008)

The 2006/07 New Zealand Health Survey asked participants a set of questions (Kessler Psychological Distress Scale, K-10) used internationally to screen populations for non-specific psychological distress and serious mental illness. International studies have confirmed there is a strong likelihood that people reporting a K-10 score of 12 or more, have a mental disorder, particularly anxiety or depression (Ministry of Health, 2008b). While the tool has not been validated among Maori, the results in Figure 53 indicate that just over 8% of Maori adults in Waitemata were likely to have an anxiety or depressive disorder, with higher rates for Maori women than men. Again, conclusions from this data are limited by the small sample

size, and the overlapping confidence intervals indicate that these differences between Maori and non-Maori are not statistically significant.

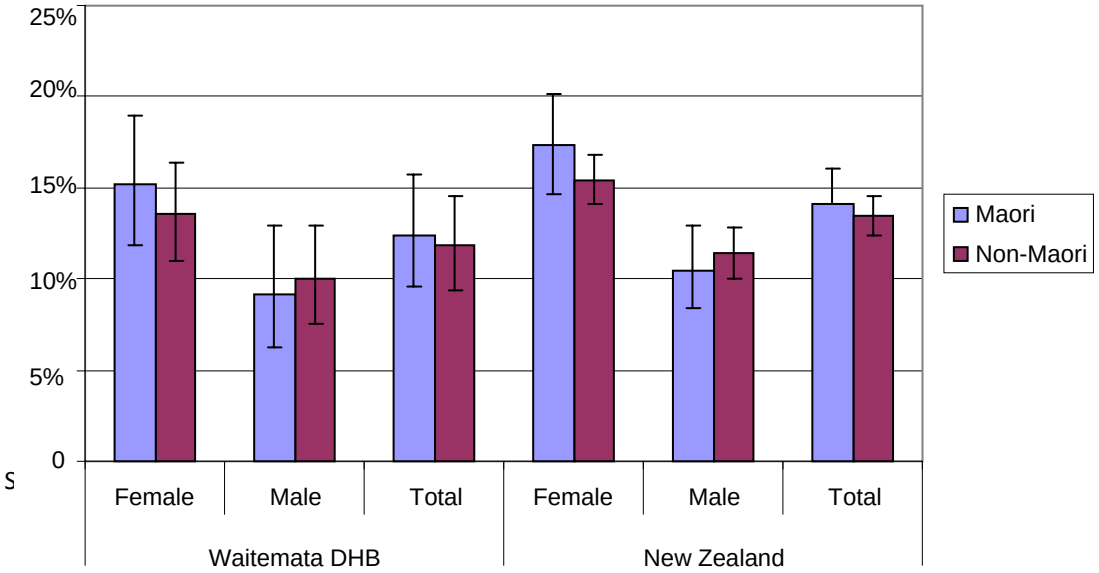
Figure 53 - Percentage of adults in Waitemata DHB with high or very high probability of having an anxiety or depressive disorder (K-10 score of 12 or more), age-standardised prevalence, 2006/07



Source: New Zealand Health Survey 2006/07

New Zealand Health Survey data presented in Figure 54 below shows that, consistent with national trends, overall Maori within the Waitemata district self-report a higher prevalence of chronic mental health conditions compared to non-Maori.

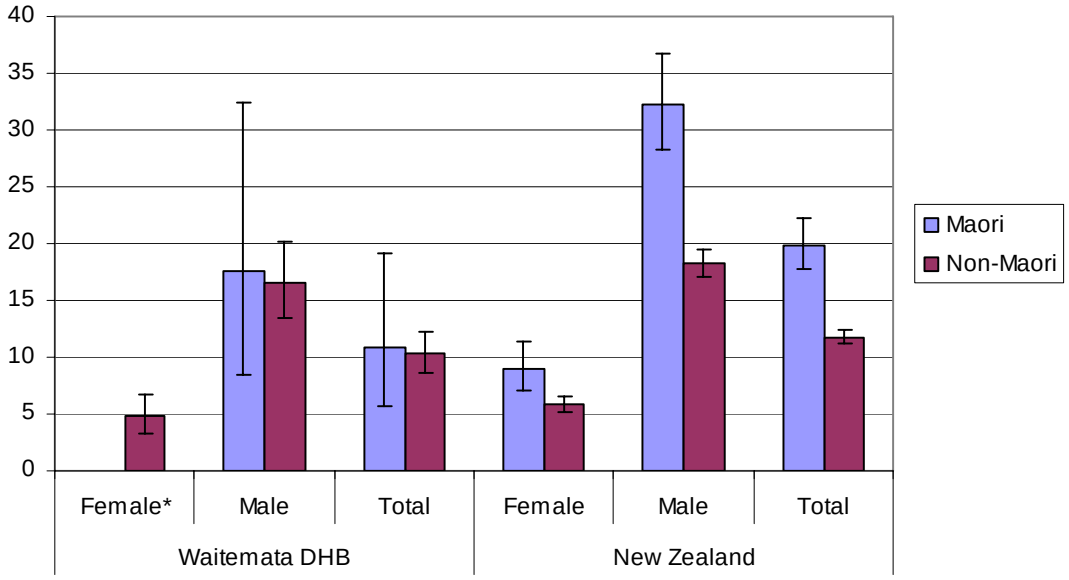
Figure 54 - Age-standardised prevalence of any self-reported chronic mental health condition, adults 15+ years, Maori and non-Maori, Waitemata DHB and New Zealand 2006/07



Suicide & self-harm

Nationally Maori suicide rates were lower than those of non-Maori prior to the 1980s (Robson & Harris, 2007). However, increased rates have now resulted in ethnic disparities with Maori experiencing the highest three year moving average of suicide rates between 2000 and 2003 (Ministry of Health, 2006). As the actual numbers of suicides within the Waitemata region for the period 2003-05 are small, it is difficult to discern patterns (Figure 55).

Figure 55 - Suicide, 5+ years, age-standardised rates per 100,000, Maori and non-Maori, Waitemata DHB and New Zealand, 2003-05

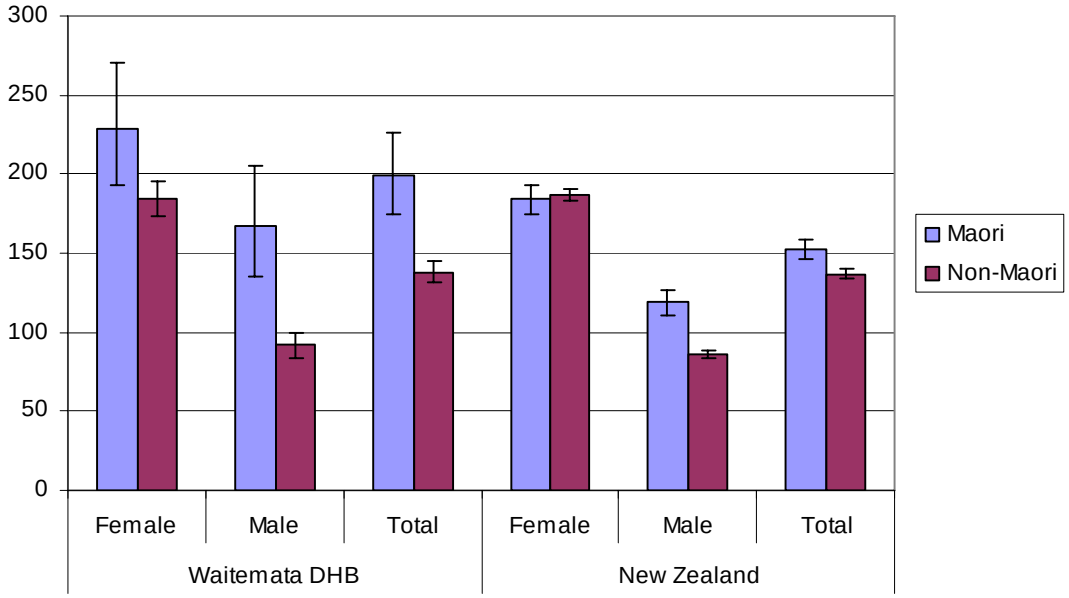


Source: HDIU/NZHIS

* Numbers for Maori women were too small to calculate a rate per 100,000

Nationally, from 1978 to 2004, Maori three year moving averages of intentional self-harm hospitalisation rates were higher than for other ethnic groups (Ministry of Health, 2006). Locally, there are disparities in rates of hospitalisation for intentional self-harm in the Waitemata district, with higher rates among Maori. For the period 2005 - 2007 non-Maori rates were much the same as national figures, while Maori rates were higher. Therefore, ethnic disparities appear to be more pronounced in the Waitemata region than nationally.

Figure 56 - Self-harm hospitalisations, 5+ years, age-standardised rates per 100,000, Maori and non-Maori, Waitemata DHB and New Zealand, 2005-07



Source: HDIU/NZHIS

Maori living with disability

In this section, disabled adults include people with physical, sensory, neurological, psychiatric and intellectual impairments. Disabled children includes children with hearing, seeing, speaking, intellectual, psychiatric, or psychological impairment, or children who use specialised or technical equipment, or who receive special education, or who have a chronic condition.

The disability rates provided in the table below were calculated based on the estimated number of people with an impairment divided by the estimated number of people with and without impairment from the 2006 Household Disability Survey. Due to survey design and sample issues, data cannot be broken down to DHB level. Instead, estimates were provided by four combined DHB regions.

The rates are provided by age group breakdown, however caution should be exercised when comparing the rates between Maori and non-Maori, particularly for age groups with a wider age range, because the two ethnic groups have different age distributions. For the 65+ years age group, comparisons should not be made between different ethnic groups as Maori in this age group are much younger than non-Maori. However, it is also true that Maori experience a much earlier age of onset of impairment compared to non-Maori. For example, nationally Maori women aged 45 years and over have a similar profile of impairment caused by disease/illness to that of non-Maori aged 65 years and over (Ministry of Health, 2004).

Further, Maori have a shorter life expectancy than non-Maori, and therefore fewer Maori live to an older age (Ajwani, Blakely, Robson, Tobias, & Bonne, 2003).

National age-standardised data from the New Zealand 2006 Household Disability Survey indicates that compared to non-Maori, Maori experience higher rates of age-standardised impairment, of both single and multiple impairment, and more severe impairment – and therefore that there are wide disparities in the Maori experience of impairment and disability relative to non-Maori. Consistent with national trends, Maori resident within the Northern region experience disproportionately high rates of impairment compared to non-Maori.

Table 35 - Disability prevalence of residents living in private households, crude percent, by age group, by sex and ethnicity, 2006

	Northern region*				New Zealand			
	0-14 yrs	15-44 yrs	45-64 yrs	65+ yrs	0-14 yrs	15-44 yrs	45-64 yrs	65+ yrs
Total	9.2	6.5	14.8	36.8	10.4	8.9	19.9	41.1
Maori	12.2	9.8	23.1	42.2	14.2	13.2	27.9	46.6
Non-Maori	8.5	6.0	14.2	36.5	9.3	8.1	19.2	40.8

* * Northern region includes Northland, Waitemata, Auckland, and Counties Manukau DHBs
Source: 2006 Household Disability Survey

Health service utilisation for Maori

Preventative care/screening

Immunisation coverage

Immunisation coverage for Maori children is slightly higher in Waitemata than in New Zealand overall, however, Maori children still have the lowest level of protection by immunisation than any other ethnic group in Waitemata. The current level of Maori children fully immunised at two years (66.9%) is much lower than the national target of 95%.

Fully immunised at age two years means that, by the age of two, a child has had four doses of diphtheria, tetanus and acellular pertussis vaccine, three doses of polio vaccine, three doses of Haemophilus influenzae type b vaccine, three doses of hepatitis B vaccine (or four doses including neonatal doses if required), and one dose of measles, mumps and rubella vaccine.

Table 36 – Percentage of children fully immunised at age two years, by ethnicity*, Waitemata DHB and New Zealand 2007

Ethnicity	Waitemata	New Zealand
Maori	66.9	62.7
Pacific	75.6	67.6
Asian	78.7	75.2
European/Other	81.8	75.0
Total	78.6	71.2

* Ethnicity is prioritised ethnicity.

Source: WDHB reporting

Breast screening

The purpose of breast screening is to detect breast cancers at an early stage, in order to reduce breast cancer morbidity and mortality. Compared to non-Maori women, Maori women are screened less, are more likely to be recalled due to technical issues, have higher rates of false positives, have more detected cancers and invasive cancers, and receive treatment later (Simmonds, 2008). In Waitemata, the screening coverage rate among Maori women is about the same as the national rate for Maori women (Table 37). Locally, Maori women are screened less than non-Maori women, though the disparity is slightly less than at the national level.

Table 37 - Breast screening coverage rate (percent, and 95% confidence interval), women 45-69 years, Maori and non-Maori, Waitemata DHB and New Zealand, 2006-2007.

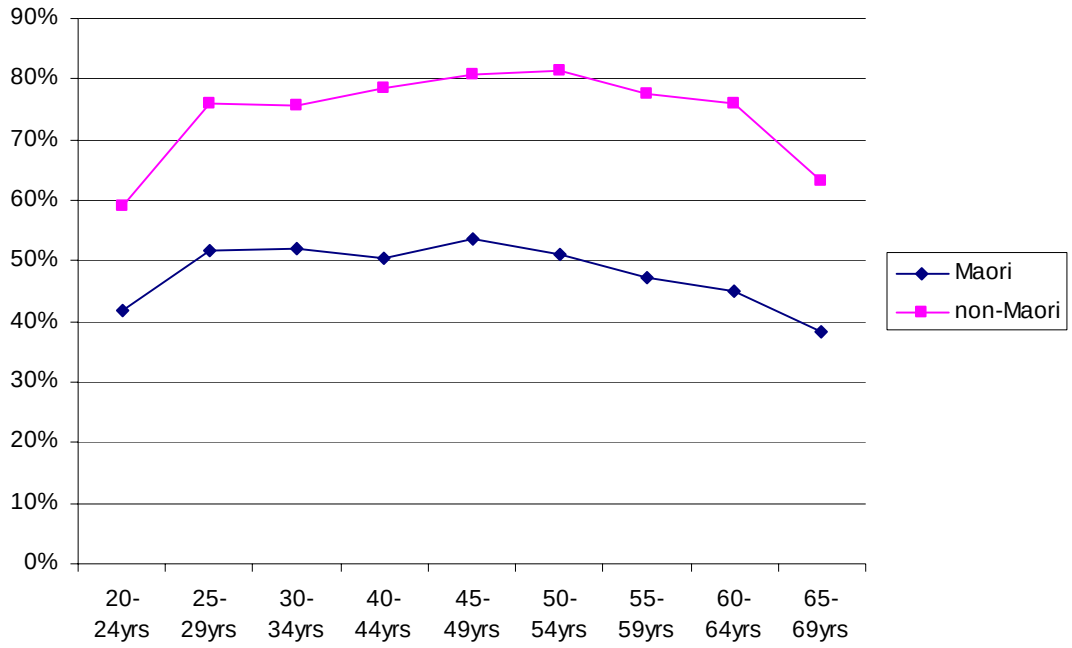
	Maori	Non-Maori	Total
Waitemata	45.5 (43.4 - 47.7)	54.3 (53.7 - 54.8)	53.8 (53.3 - 54.3)
New Zealand	43.9 (43.4 - 44.5)	58.9 (58.6 - 59.1)	57.6 (57.2 - 57.8)

Source: HDIU

Cervical screening coverage

Nationally, cervical screening coverage is lower for Maori than non-Maori in every age group (Figure 57).

Figure 57 - National cervical screening coverage, by age group, for Maori and non-Maori, New Zealand, 2007



Source: National Cervical Screening Programme, April 2008

The screening rate for Maori women in Waitemata is much lower than for non-Maori Table 38). In Waitemata, Maori women are half as likely to be screened for cervical cancer as non-Maori (RR 0.56, 95% CI 0.55-0.57) and the disparity is wider than the differences nationally.

Table 38 - Cervical screening coverage in Waitemata, for Maori and non-Maori, 2008

	Eligible population (Hysterectomy Adjusted*‡) n	3-Year Coverage for Cervical Screening (Hysterectomy Adjusted) n (%)	
Waitemata Maori	13,226	5,411	40.9%
Waitemata Non-Maori	136,201	100,040	73.5%
National overall	**1,204,298**	**861,944**	**71.6%**

Source: National Cervical Screening Programme, April 2008
* Based on 2001 Census population projections for the month of April 2008.
‡ Adjusted for 2005 hysterectomy prevalence modelled from 1964-2003 hysterectomy hospital separation data.

Hearing test failure of 5 year olds starting school

Hearing screening is conducted with new entrant school children (5 years old) to identify children with hearing loss. Maori in Waitemata district experienced higher rates of hearing loss at school entry (14.1%) than non-Maori (9.4%) (Table 39). The rates in the Waitemata

district were higher for both Maori and non-Maori than the national rates, but the extent of the disparity between Maori and non-Maori remained about the same.

Table 39 - Hearing failure at school entry, percent, 2005/2006

Ethnicity	Waitemata	New Zealand
Maori	14.1	8.4
Non-Maori	9.4	4.8
Total	10.0	6.6

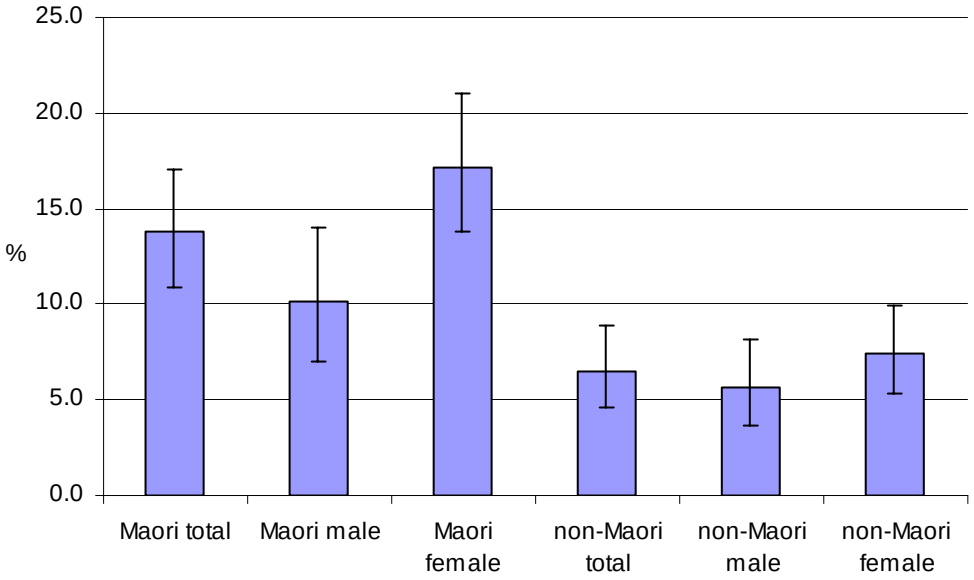
Source: Audiometry screening, school calendar year July 2005–June 2006.
Hearing failure includes audiometry failure only.

Primary care

Unmet GP need

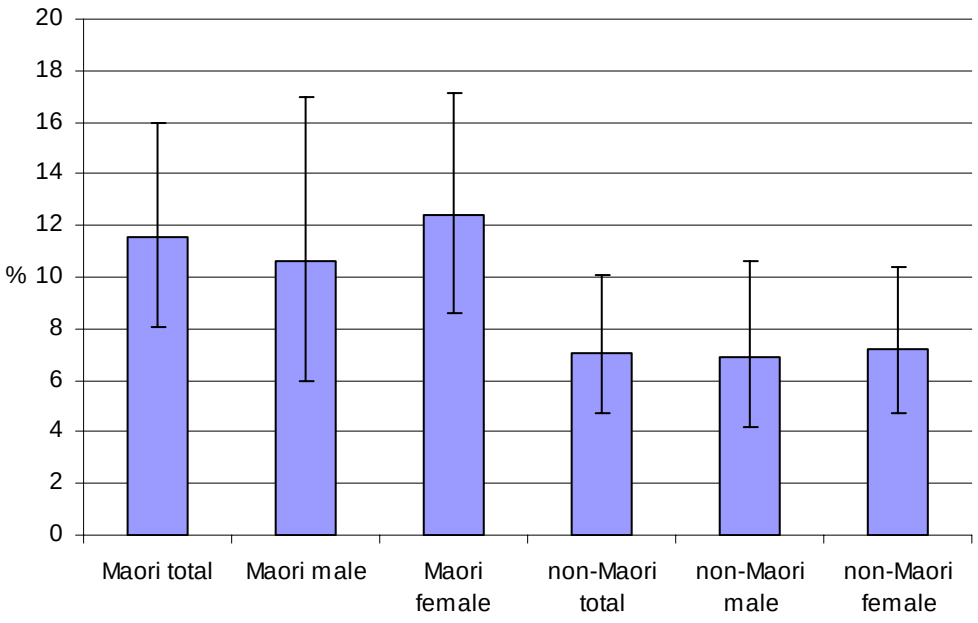
Data from the 2006/07 New Zealand Health Survey show that Maori in Waitemata are significantly more likely than non-Maori to have an unmet need for a GP visit within the last 12 months, 13.8% (95% CI 10.9-17.1) compared with 6.5% (95% CI 4.6-8.9). The prevalence and disparity in unmet GP need in Waitemata is most marked for Maori women, as shown in Figure 58. This is despite the fact that Maori in Waitemata were more likely than non-Maori to report that their last GP visit was free (Figure 59) suggesting that while access to free GP services is important, it does not address all financial barriers to care (e.g. cost of travel and time off work) and should be considered alongside non-financial barriers such as GPs' cultural competence and difficulty getting an appointment.

Figure 58 - Unmet need for GP visit in past 12 months, by ethnicity for adults in Waitemata DHB, 2006/07, age standardised prevalence.



Source: New Zealand Health Survey 2006/07, synthetic DHB predictions.

Figure 59 - Percentage of adults in Waitemata DHB whose last visit to GP in past 12 months was free, 2006/07, age standardised



Source: New Zealand Health Survey 2006/07, synthetic DHB predictions.

PHO enrolment

PHO enrolment

Data on enrolments with PHOs by ethnicity (provided to Waitemata DHB by the PHOs) are presented in Table 40. This shows that the number of Maori enrolled in primary care is only 68% of the number of Maori recorded in the 2006 census. This figure is dramatically lower than the percentage of the population enrolled for other ethnicities in Waitemata.

Table 40 - Percentage of population enrolled with a PHO, by ethnicity, Waitemata DHB, 2008.

	Maori	Pacific	Other	Total
Waitemata DHB domiciled population 2008	50,860	36,470	433,770	521,100
PHO enrolments by WDHB domiciled population				
In WDHB PHOs	30,786	25,952	353,856	410,594
In other DHB PHOs	3,940	9,915	57,153	71,008
Total enrolments by WDHB domiciled population	34,726	35,867	411,009	481,602
Enrolment percentage by ethnicity	68%	98%	95%	92%

Source: WDHB, July 08 - September 08 (2008 Q3) reporting

However, New Zealand Health Survey data on self-reported enrolment in primary care showed quite different results (Table 41). According to the survey over 90% of Maori in Waitemata DHB reported that they were enrolled with a PHO, a rate similar to other ethnicities. One explanation for the huge discrepancy between the numbers of Maori in Waitemata who say they are enrolled and the numbers of Maori who are recorded by the PHOs as enrolled is that Maori ethnicity is not accurately recorded in the PHO enrolment. This theory is supported by recent research in the Waitemata district, linking PHO register ethnicity data with ethnicity data of children aged 5-15 years on the National Immunisation Register (NIR). The research found that for children recorded as Maori on the NIR, 62.9% were recorded as Maori on the PHO register, 23.3% were misclassified as European, and a further 9.6% were misclassified as Unknown (Bramley & Latimer, 2007). The accurate, comprehensive and consistent collection of ethnicity data by PHOs is fundamental to monitoring the quality of primary health care, including ethnic inequalities in health, as a basis for improving services for Maori.

Table 41 – Self-reported PHO enrolment coverage, 15+ years, age-standardised percent, by ethnicity, Waitemata DHB, 2006/07

	Waitemata DHB
Maori	90.5 (87.7 - 92.8)
Pacific	90.7 (87.1 - 93.6)
Asian	82.8 (79.2 - 86.0)
European/Other	92.6 (90.1 - 94.7)

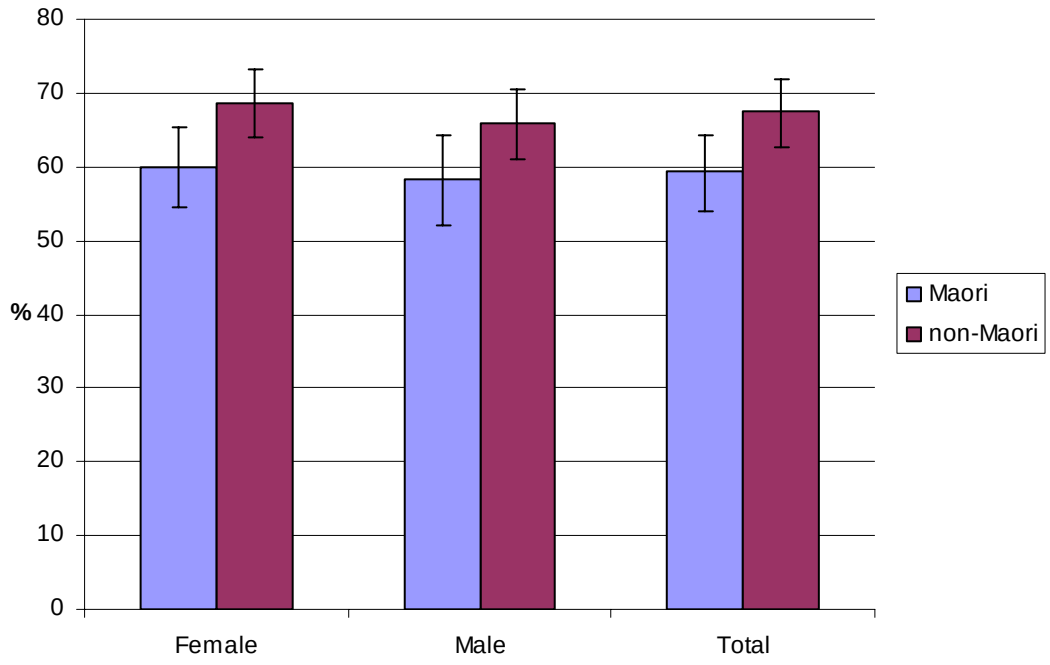
* Ethnicity is based on total response.

Source: New Zealand Health Survey, 2006/07

Maori access to cardiovascular risk assessment

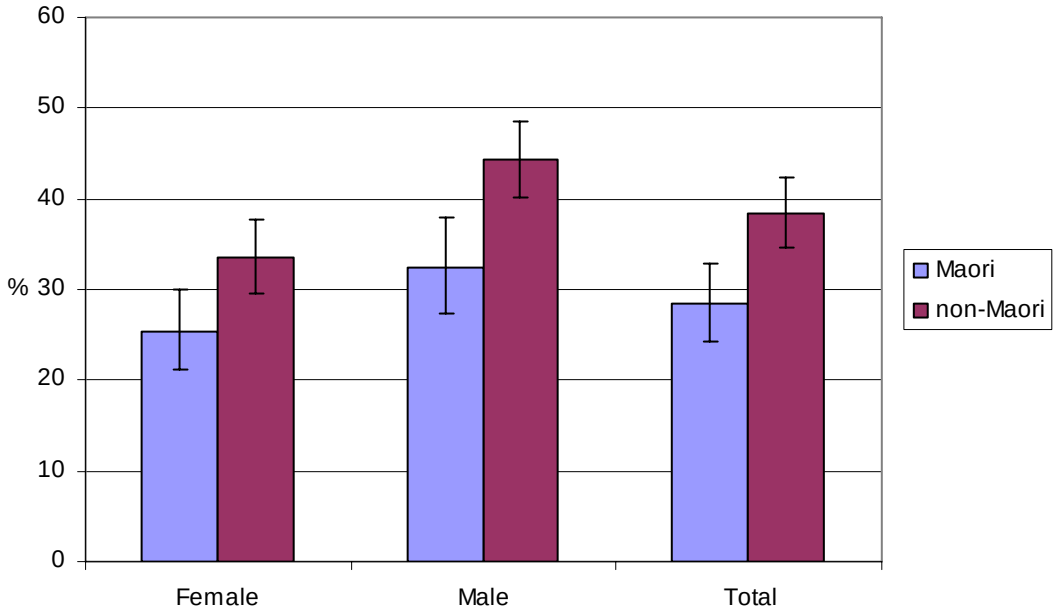
Given the extent of the burden of cardiovascular disease for Maori, Maori access to risk assessment is important as a start point for discussions with health professionals. Cardiovascular disease risk assessment involves measurement of cardiovascular risk factors, including blood pressure, lipid profiles (i.e. cholesterol checks), fasting plasma glucose, waist circumference and body mass index. The New Zealand Health Survey findings suggest that Maori in Waitemata have lower rates of cholesterol checks (Figure 61) and also appear to have lower rates of blood pressure checks (Figure 60) and than non-Maori.

Figure 60 - Age-standardised prevalence rates of blood pressure checks in the last 12 months, 15+ years, Maori and non-Maori, Waitemata DHB, 2006/07



Source: New Zealand Health Survey 2006/07

Figure 61 - Age-standardised prevalence rates of cholesterol checks in the last 12 months, 15+ years, Maori and non-Maori, Waitemata DHB, 2006/07

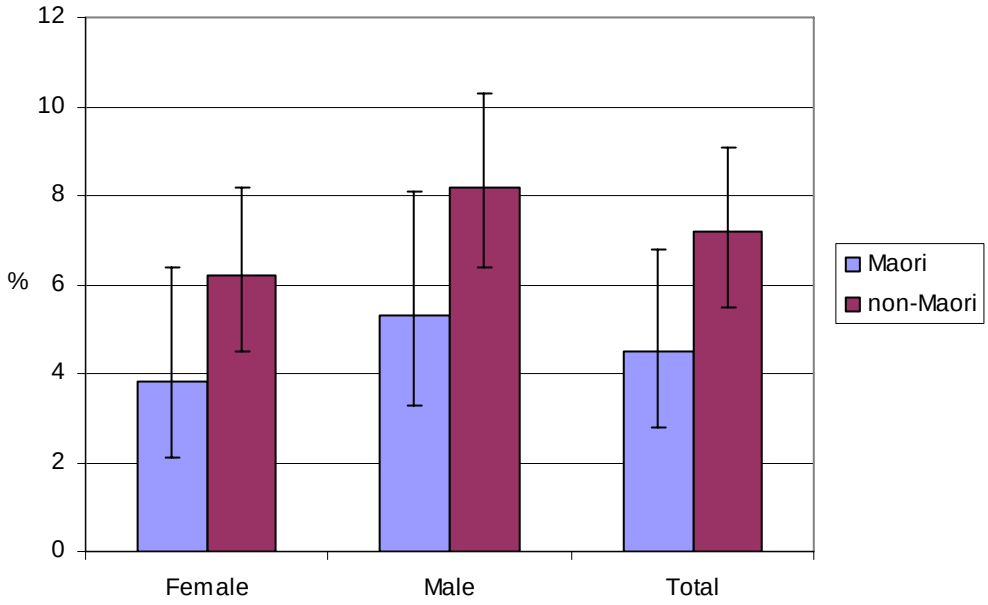


Source: New Zealand Health Survey 2006/07

Medication for cardiovascular disease

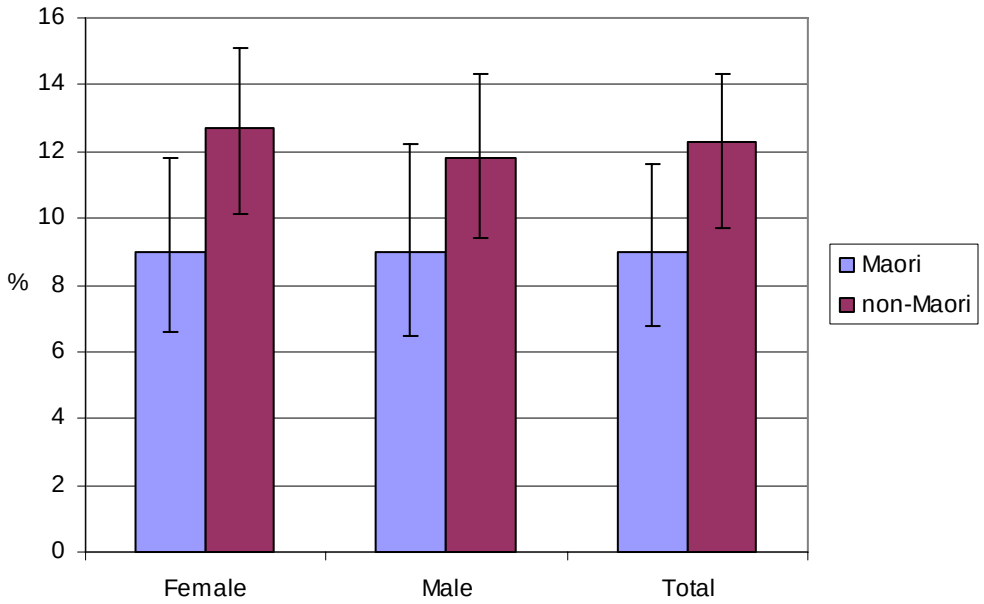
The New Zealand Health Survey 2006/07 asked participants whether they were currently taking medication for high cholesterol and high blood pressure. The results in Figure 62 and Figure 63 below show that Maori in Waitemata appeared to be less likely to be taking medication for high cholesterol or blood pressure than non-Maori, although the wide confidence intervals indicate that these differences are not statistically significant in this sample. Given that Maori have higher rates of cardiovascular disease, they are likely to have greater need for these medications to prevent illness and death from heart disease.

Figure 62 - Percentage of adults 15 years and over taking medication for high cholesterol, by ethnicity, age-standardised, Waitemata DHB, 2006/07



Source: New Zealand Health Survey 2006/07

Figure 63 - Percentage of adults 15 years and over taking medication for high blood pressure, by ethnicity, age-standardised, Waitemata DHB, 2006/07



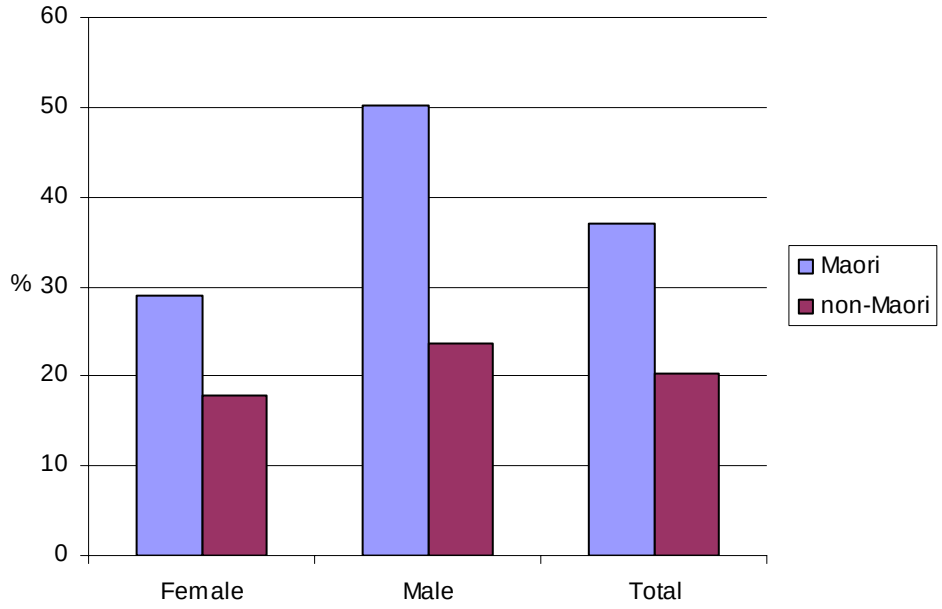
Source: New Zealand Health Survey 2006/07

Access to diabetes checks

It is important that people at risk of developing diabetes are tested, as symptoms may not be present. According to the New Zealand Health Survey, Maori adults in Waitemata had a higher self-reported rate of being screened for diabetes than non-Maori, though overall less than 40% of eligible Maori were tested.

All New Zealanders with diagnosed diabetes are entitled to a free annual diabetes check with their GP or practice nurse. However, Ministry of Health figures report that the percentage of Maori in the Waitemata district who are checked (29%) is less than the percentage of the estimated overall Waitemata diabetic population who receive a diabetes check (47%) (2007/08 Quarter Two Health Target data, Ministry of Health).

Figure 64 - Age-standardised self-reported prevalence rates of diabetes checks in the last 12 months, 15+ years, Maori and non-Maori, Waitemata DHB, 2006/07



Source: New Zealand Health Survey 2006/07

Table 42 - Percentage of DHB population estimated to have diagnosed diabetes who had free annual diabetes checks in the twelve months to December 2007

DHB	Total	Maori	Other	Pacific*
Northland	56%	51%	60%	n/a
Waitemata	47%	29%	49%	62%
Auckland	72%	32%	72%	102%
Counties Manukau	97%	62%	95%	133%
Waikato	57%	33%	69%	62%
Lakes	68%	46%	86%	n/a
Bay of Plenty	61%	32%	76%	n/a
Tairawhiti	48%	41%	59%	n/a
Hawkes Bay	69%	49%	79%	n/a
Taranaki	89%	45%	102%	n/a
MidCentral	47%	25%	54%	n/a
Whanganui	72%	46%	86%	n/a
Capital & Coast	71%	38%	77%	77%
Hutt	69%	38%	79%	77%
Wairarapa	78%	51%	86%	n/a
Nelson Marlborough	62%	29%	67%	n/a
West Coast	70%	38%	76%	n/a
Canterbury	60%	29%	64%	49%
South Canterbury	81%	32%	85%	n/a
Otago	77%	28%	82%	n/a
Southland	69%	27%	78%	n/a

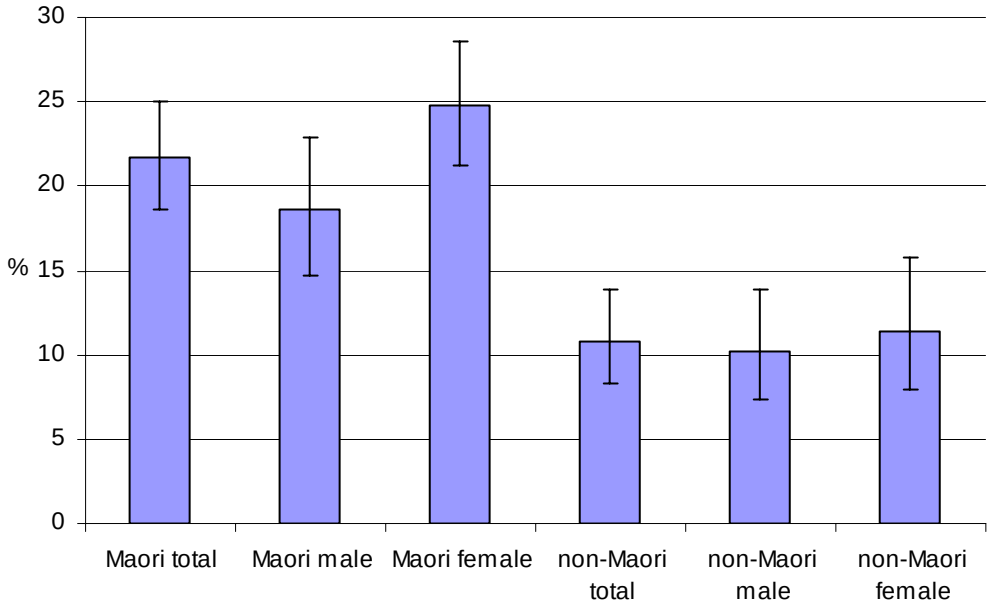
*Pacific data only presented for selected DHB where Pacific population is relatively higher than in the rest of NZ.

Source: 2007/08 Quarter Two Health Target data, Ministry of Health.

Unmet oral health need

Data from the 2006/07 New Zealand Health Survey show that Maori in Waitemata are significantly more likely than non-Maori to have unmet oral health need, with 21.7% (95% CI 18.7-25.1) of Maori adults reporting unmet need for oral health care in the last 12 months, compared with 10.8% (95% CI 8.3-13.8) for non-Maori adults. As with unmet GP need, the prevalence and disparity in unmet oral health need in Waitemata is most marked for Maori women (Figure 65).

Figure 65 - Percentage of adults in Waitemata DHB with unmet dental need in last 12 months, by ethnicity, age standardised, 2006/07



Source: New Zealand Health Survey 2006/07, synthetic DHB predictions.

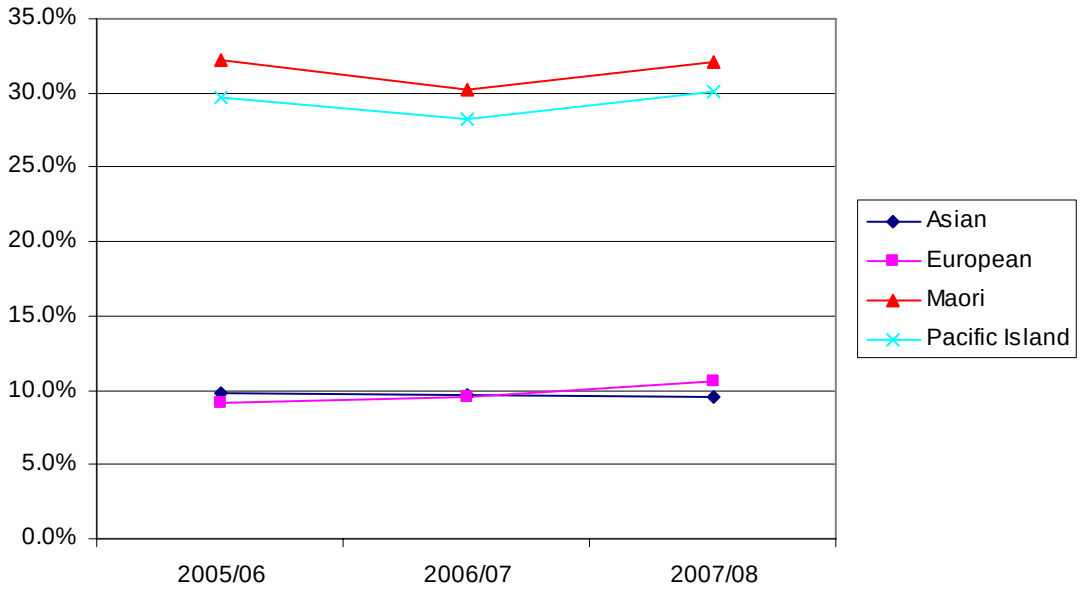
Outpatient care

DNA rates for specialist appointments

'DNA' is the abbreviation for 'did not attend', a term used to describe a patient who missed an appointment. While the term itself is patient focussed, it may not capture the cause of high DNA rates – that is the extent to which rates are determined by the quality of services and the capacity of services to address barriers to Maori access.

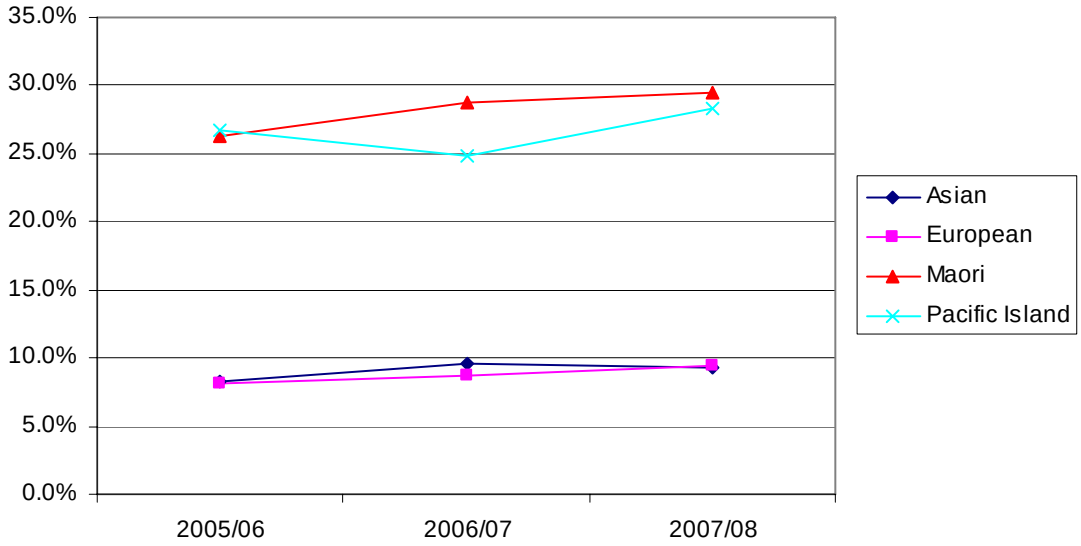
As shown in the graphs below, Maori have substantially higher DNA rates for specialist outpatient appointments than other ethnic groups in Waitemata. These graphs also show that the DNA rates by ethnicity have been relatively stable in Waitemata over the last three years, and that first specialist appointments are slightly more likely to be DNA (just over 30% for Maori) than subsequent appointments (just under 30% for Maori). Much more needs to be done to understand and address the factors contributing to high DNA rates for Maori. Potential barriers to equitable access to outpatient services may include the cultural competence of health professionals, transport, securing time off work in low skill occupations, competing priorities within the whanau and other socio-economic factors.

Figure 66 - Percentage of first specialist appointments (FSA) that were DNA, by ethnicity, Waitemata DHB, 2005-2008



Source: WDHB

Figure 67 - Percentage of follow-up specialist appointments that were DNA, by ethnicity, Waitemata DHB, 2005-2008



Source: WDHB data

The outpatient DNA rate for Maori is higher for all services across Waitemata DHB, but varies by service as shown in Table 43. The DNA rates for Maori are lowest in antenatal (11%) and oncology/radiotherapy services (12%) and highest in diabetes (57%), general medical (46%), infectious diseases (48%) and paediatric medical clinics (48%).

Table 43 - Percentage of outpatient appointments for each service that were DNA, by ethnicity, Waitemata DHB, 2005-2008

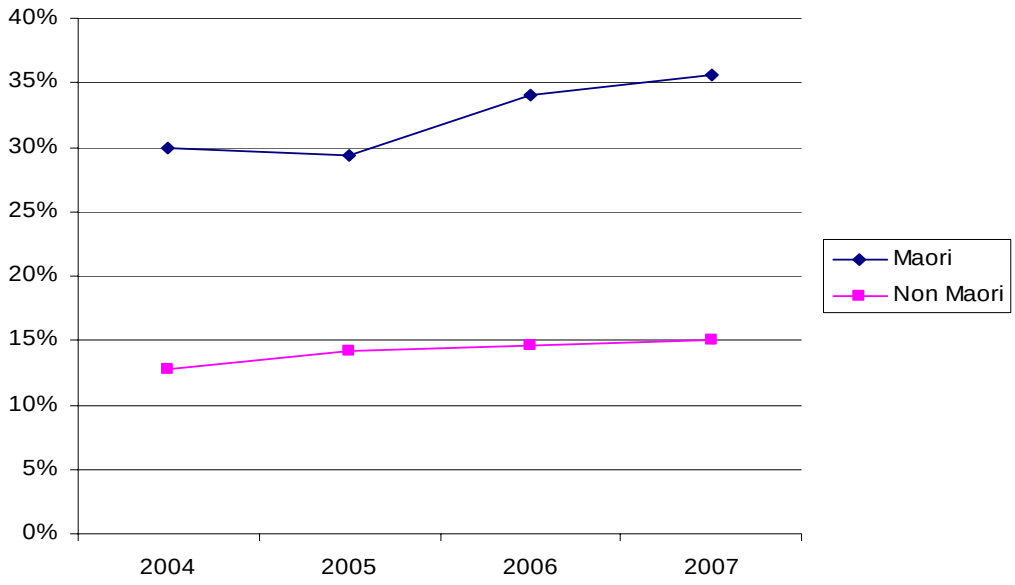
Outpatient service	Maori	Pacific Island	Asian	European	Grand Total
Antenatal Services	11.4%	9.0%	5.0%	5.3%	6.7%
Cardiology Services	26.4%	28.1%	8.2%	6.4%	8.9%
Dermatology	24.2%	12.9%	7.3%	6.8%	7.8%
Diabetology	57.3%	54.5%	22.8%	20.9%	27.4%
Ear, Nose and Throat Surgical Services	35.6%	33.9%	9.1%	9.9%	14.1%
Endocrinology	47.3%	35.8%	14.1%	13.0%	16.7%
Endocrinology & Diabetic Services	39.9%	39.3%	16.4%	14.6%	19.3%
Gastroenterological Services	19.1%	27.2%	6.4%	8.7%	9.5%
General Internal Medical Services	46.4%	43.0%	12.7%	12.0%	15.8%
General Surgery	31.9%	34.7%	11.2%	9.4%	11.7%
Gynaecology Services	32.6%	27.9%	7.8%	11.9%	14.5%
Haematology Services	20.4%	23.4%	11.5%	9.8%	10.5%
Infectious Diseases	47.9%	41.9%	9.3%	26.0%	25.1%
Neurology Services	23.7%	10.0%	5.0%	3.8%	4.7%
Oncology and Radiotherapy Services	12.2%	14.5%	4.2%	3.8%	4.5%
Orthopaedic Services	25.8%	20.1%	7.5%	7.9%	9.7%
Paediatric Medical Services	47.9%	47.2%	14.8%	19.6%	24.1%
Renal Medicine Services	27.2%	41.9%	15.9%	5.8%	12.5%
Respiratory Services	34.3%	32.2%	11.9%	9.2%	12.3%
Rheumatology	30.2%	26.9%	6.3%	6.5%	9.0%
Urology Services	30.2%	40.1%	13.8%	10.5%	12.9%
Grand Total	**30.2%**	**28.2%**	**9.4%**	**9.4%**	**12.0%**

Source: WDHB data, aggregate numbers for 3 year period (2005-8), includes both FSA and follow-up appointments

Colposcopy & gynaecology appointments

Data on the number of DNA appointments for WDHB colposcopy services from 2004 to 2007 is shown in Figure 68. Maori women were much more likely to not attend this service than non-Maori, with 35.5% of colposcopy appointments in 2006 for Maori not attended, compared to 15.1% for non-Maori. Reasons for the disproportionately high rates of non-attendance among Maori women requiring this service are not fully understood, and given that Maori women already suffer higher incidence and mortality from cervical cancer, ensuring that this service is acceptable and proactive measures to better support equitable access for Maori in Waitemata is crucial.

Figure 68 - Percentage of colposcopy appointments that were DNA by ethnicity, Waitemata DHB, 2004-2007



Source: WDHB Maternity & Gynaecology Services

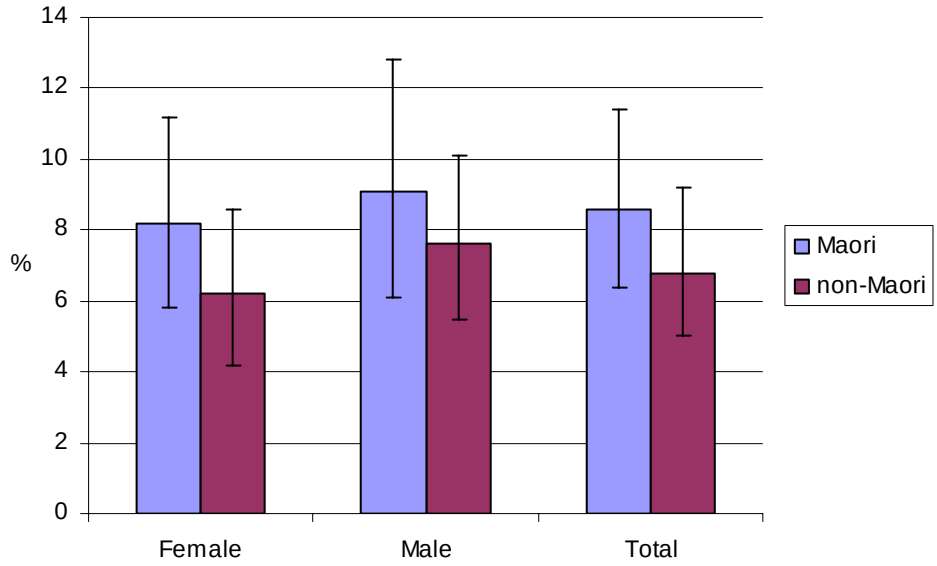
The figures are similar for general gynaecology appointments, with 19.7% of appointments for Maori women DNA, compared with 8.4% for non-Maori (Waitemata District Health Board, 2007). There was a higher number of DNA appointments for Maori women at both first appointment and subsequent follow up appointments (Waitemata District Health Board, 2007).

Hospital care

Emergency department use

Maori appear to be more likely to have visited the emergency department than non-Maori in Waitemata (Figure 69), although sample numbers are small. While this is likely to be related to higher rates of health crisis, it is also likely that poorer access to primary health care is a key driver and that a high proportion of Maori emergency department visits could have been avoided by or managed through adequate primary care. There is evidence that a high proportion of the emergency department workload generally may have been managed through primary care (Elley CR, Randall P, Bratt D, & Freeman P, 2007).

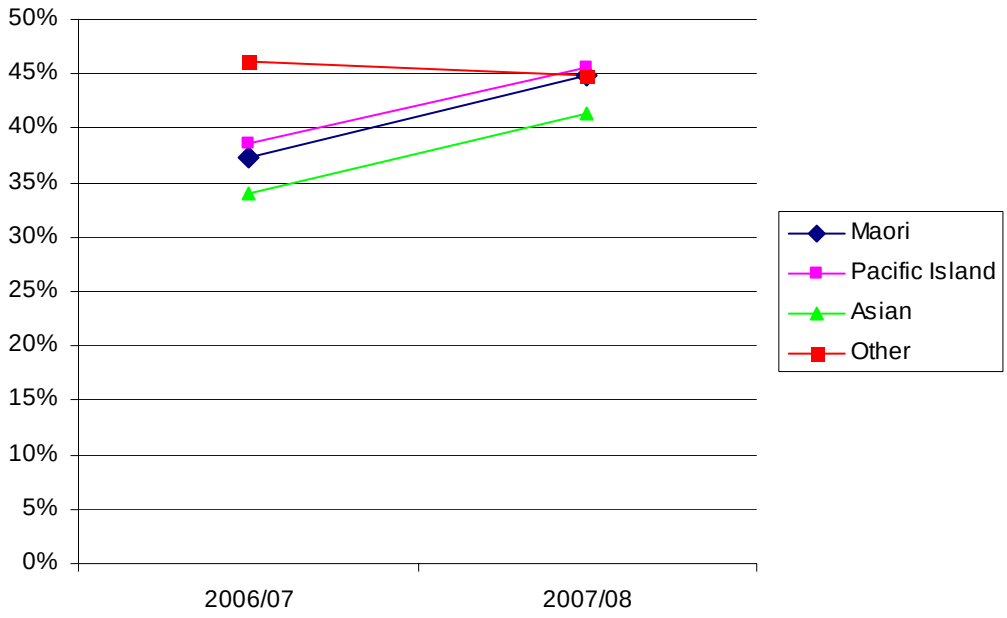
Figure 69 - Age-standardised prevalence rates of public hospital emergency department visit in last 12 months, 15+ years, Maori and non-Maori, Waitemata DHB, 2006/07



Source: New Zealand Health Survey 2006/07

Figure 70 shows the percentage of emergency department visits, by ethnicity, that were triage category 4 and 5 - these are considered low priority conditions that could usually have been treated in primary care. This graph shows that for all ethnicities, 40-45% of all emergency department visits in Waitemata are for low priority conditions. Whilst the rate in 2007/08 for NZ European/Other has declined from 2006/07, for Maori, Pacific and Asian the rate of low priority presentations has increased. This may signal a worsening of access to primary care and after-hours general practice for Maori and these other ethnic groups.

Figure 70 - Percentage of emergency department visits that are low priority (triage 4 & 5), by ethnicity, Waitemata DHB, 2006-2008



Source: WDHB ECC Triage data

Mental health service utilisation

Maori in the Waitemata district have a higher utilisation of secondary mental health and addiction services than non-Maori, which is not surprising given ethnic disparities in the prevalence of mental illness. However, national data shows that despite higher rates of health service utilisation Maori health service contact for mental health issues was low relative to need (Baxter, 2008).

Table 44 - Access to secondary mental health and addiction services, for people aged 0-64 years, Maori and non-Maori, Waitemata DHB and New Zealand, 2007

		Maori	non-Maori	Total
Waitemata	Number of people seen	1709	8683	10392
	Access rate (%)	4.1	2.2	2.4
	Age-standardised rate (per 100,000) and 95% CI	4235.6	2098.8	2289.1
		(4037.1 - 4441.3)	(2054.9 - 2143.4)	(2245.3 - 2333.5)
New Zealand	Number of people seen	17784	67833	85617
	Access rate (%)	3.2	2.2	2.4
	Age-standardised rate (per 100,000) and 95% CI	3354.8	2143.7	2310.3
		(3305.7 - 3404.5)	(2127.6 - 2159.9)	(2294.8 - 2325.8)

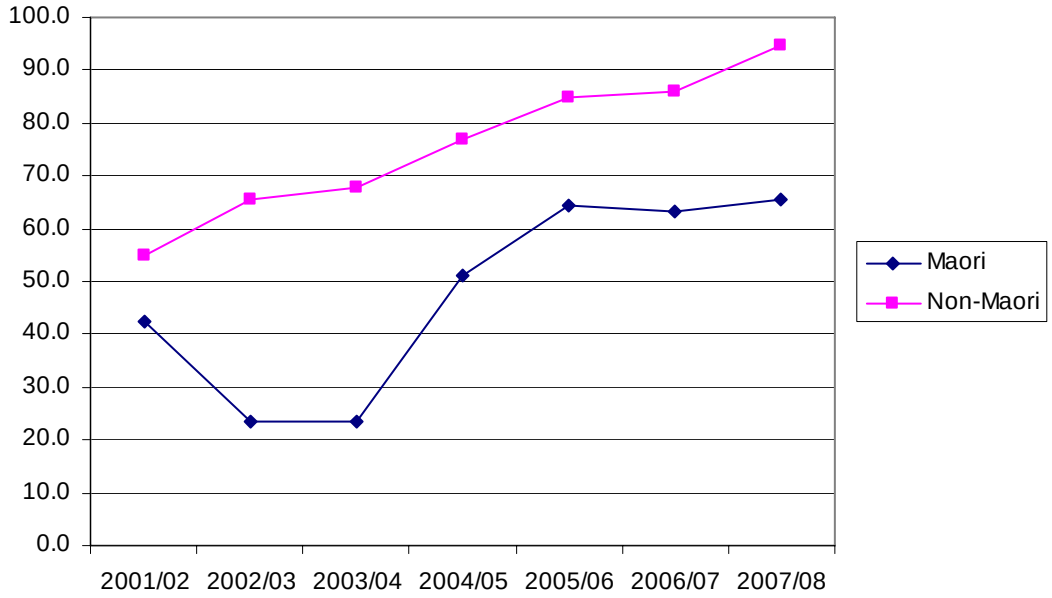
Source: Mental Health Information National Collection (MHINC), Ministry of Health.
Analysis by HDIU
Access rate (%) = The percentage (crude rate) of the population seen during the year (of people living in the specified DHB district aged 0-64 years) by secondary mental health and addiction services.

CVD intervention rate

Nationally, Maori were less likely than non-Maori to receive publicly funded cardiovascular procedures prior to the year 2000 (Robson & Harris, 2007). Since then Maori rates have exceeded non-Maori rates for angiography and CABG, although it is unlikely this improvement in access is adequate to meet the higher need for cardiovascular procedures among Maori (Curtis, Harwood, & Riddell, 2007).

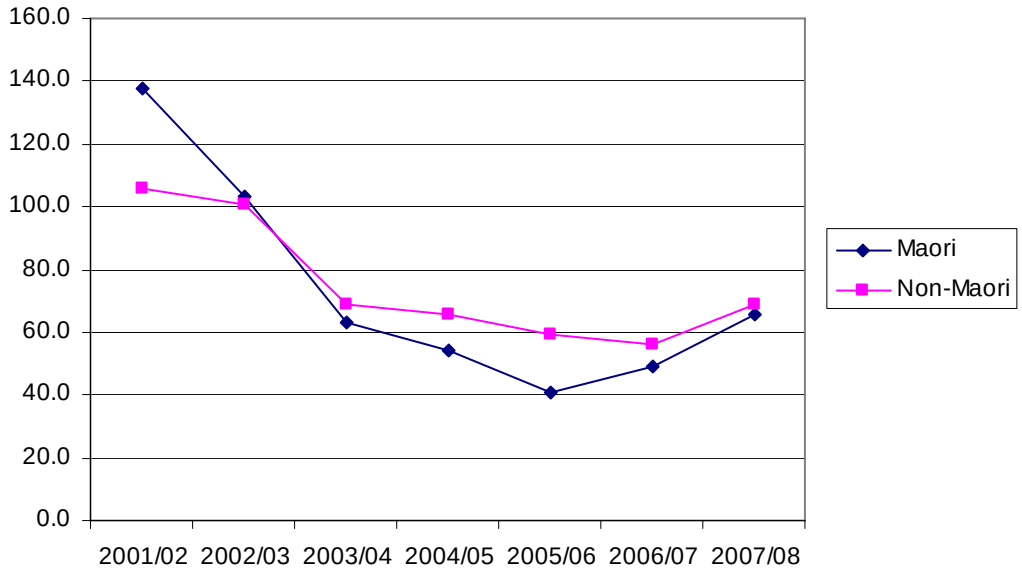
Figures 71-73 show the age-standardised rate of coronary angiography, angioplasty and coronary artery bypass grafting (CABG) for Maori and non-Maori resident in Waitemata DHB. These figures do not include the cardiovascular procedures performed in the private sector, so are likely to under-estimate the real disparity between Maori and non-Maori. In Waitemata, age-standardised rates of angioplasty are substantially lower for Maori, and rates for CABG and angiography are similar to non-Maori, despite Maori having a higher need for these procedures as evidenced by the substantially higher incidence and death rate from cardiovascular disease among Maori.

Figure 71 - Angioplasty rates for Maori and non-Maori, age standardised, per 100,000, Waitemata DHB, 2001-2008



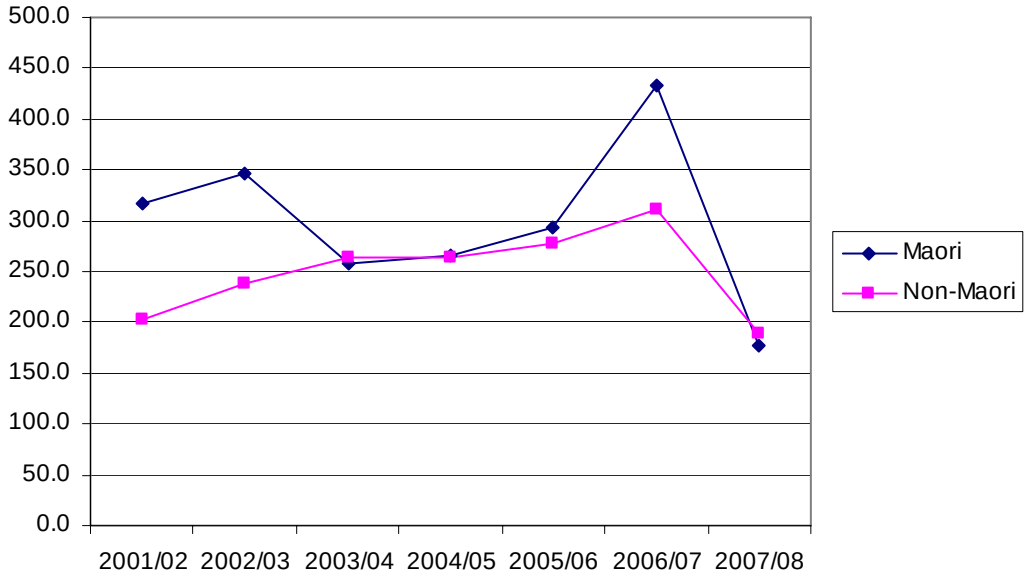
Source: National Minimum Dataset, age standardised to 2006 NZ Census population

Figure 72 - Coronary Artery Bypass Grafting (CABG) procedure rates for Maori and non-Maori, age standardised, per 100,000, Waitemata DHB, 2001-2008



Source: National Minimum Dataset, age standardised to 2006 NZ Census population

Figure 73 - Angiography rates for Maori and non-Maori, age standardised, per 100,000, Waitemata DHB, 2001-2008



Source: National Minimum Dataset, age standardised to 2006 NZ Census population

Ambulatory sensitive hospitalisations

Ambulatory-sensitive hospitalisations (ASH) are admissions that might have been avoided if services had been delivered more effectively or patients had accessed services provided in the community setting, including primary health care (Ministry of Health, 2008a). The rate of ASH for Maori in Waitemata DHB was higher than the national average for both children and adults, however, there has been some progress towards reducing ASH rates among Maori, as shown in Figure 74. Over the 2007/08 year, the rate of ASH in Maori children aged 0-4 years has decreased to below the national average. For Maori adults aged 45-64 years, however, the target reduction in the ASH rate was not achieved in Waitemata, and the rate remains 33% higher than the national average.

Figure 74 - Waitemata DHB progress towards Ambulatory Sensitive Hospitalisation target for Maori, 2007/08

Population	Age Group (years)	Agreed Target	2007/08 Quarter One	2007/08 Quarter Two	2007/08 Quarter three	2007/08 Quarter Four
Maori	**0-4**	Remain at or below national average (100)	100.2	92.8	88.3	89.2
	45-64	116.2	119.9	125.6	128.3	132.8
	0-74	112.5	113.0	111.9	109.3	110.2

Source: Ministry of Health, health target reporting.
Unit for ASH target is "indirectly standardised discharge ratio" (ISDR), where national average = 100

Maori community consultation

Introduction

In August 2008 a hui was held with Maori providers and PHOs to seek input into the overall approach that should be taken to the current Maori health needs assessment (HNA). The hui proposed a Treaty of Waitangi based framework as the basis for the HNA, and direction was given as to how that framework might be operationalised in the context of an HNA. The Maori Health Needs Assessment Steering Committee, with input from Tihi Ora MaPO, Maori providers and Mo Wai te Ora, made the decision to proceed with the Treaty based framework. The Committee provided further direction and detail for the development of the framework.

In October, a Maori Provider and PHO Summit followed by a series of four Maori community hui were held to further engage Maori stakeholders in the HNA.

The Maori community hui were hosted by the Waitemata DHB in Beach Haven, Helensville, Oruawharo and Waitakere. The purpose of the series of hui was to seek input from the Maori community with regard to their health need priorities in order to inform the HNA. Hui participants were also invited to provide input through written submissions on the HNA.

The Maori Provider and PHO Summit was a Tihi Ora MaPO initiative, and participating organisations included Wai Health, Waiora PHO, Te Puna Hauora o te Raki Pae Whenua, Te Puna PHO, Te Kotuku ki te Rangi, Te Haa o te Oranga, and Habour Health. The purpose of the Summit was to facilitate Maori provider and PHO input into the HNA. The Waitemata DHB Maori Planning and Funding Manager presented an overview and update on the HNA to the Summit. Summit participants gave feedback on the HNA in four workshops which focused on three areas identified by Tihi Ora MaPO: strengths of the HNA, gaps in the HNA and how they may be addressed, and Maori provider and PHO expectations of the DHB response to feedback arising from the hui.

This section of the report summarises Maori input into the HNA through the Maori community hui, the submissions process and the Maori Provider and PHO Summit.

Maori health priorities: feedback from Maori community hui and submissions

The input provided through the Maori community hui and submissions process focused on the identification of Maori health need priorities, and can be broadly grouped according to the Treaty-based framework underpinning the HNA. The feedback is integrated under the following three categories:

Article 1 – Kawanantanga: health system performance;

Article 2 – Tino Rangatiratanga: Maori leadership and participation; and,

Article 3 – Oritetanga: achieving health equity.

The health need priorities identified by participants in the Maori community engagement process were wide-ranging, reflective of the variety of factors influencing Maori health, the range of health challenges facing Maori, and the importance of prevention and access to quality health care. There was some indication that all of the issues identified were valid and that to some extent identification of priorities is artificial. Generally, there was a preference for a strengths based approach to addressing Maori health need, whereby those factors that promote Maori wellness are emphasised. As well, it was noted that there is a need for the DHB to commit to finding innovative solutions to Maori health issues.

Article 1 – Kawanatanga: health system performance

Health need priorities were identified that related to health system performance, these were: provider organisational development; workforce development; continuity of care; use of Maori models of wellbeing; an evidence-based approach; and, information provision. At one of the hui it was suggested that fundamental change in the system may be required in order to produce desired outcomes for Maori.

A number of dimensions of provider development that required further action in the Waitemata district were identified. Cultural competence at the organisational level was noted as important, and is likely a factor in facilitating trust in the health system (which some participants identified as a determinant of access). Organisational commitment to cultural competence is a precursor to creating environments that support the cultural competence of individual health professionals, enables the use of Maori models of health, and supports the provision of appropriate health care for Maori. It was also suggested that partnerships with Maori organisations may broaden service options for Maori. More generally, enhancement of organisational processes and protocols and improved adoption of new technology were considered to be important. At the primary care level, hui participants noted the need to increase the number of Maori enrolled with PHOs, and that this should be linked to an increased capacity of PHOs to provide services for Maori. Waiting times for elective surgery were also identified as an area of concern, particularly for cataracts and hip surgery.

The development of a culturally appropriate workforce was identified as an important area for action, this includes both the recruitment and retention of Maori as well as cultural competence issues. Emphasis was given to the need for workforce development to strengthen health professional capability, with both cultural and clinical competence considered to be necessary. This should better enable health professionals to gain the trust of Maori patients. Specific concerns were raised with regard to the need for strengthened cultural competence among general practitioners to facilitate effective communication.

While it was suggested that complacency among Maori in terms of seeking health care may be an issue, a non-deficit approach would focus on the role of other factors including the health system, services and professionals in perpetuating barriers to care. Enhanced cultural

competence of health service providers and the workforce is one mechanism to facilitate engagement with Maori individuals and whanau.

Fragmentation of services was identified as a problem. It was considered that greater attention is required to enabling service collaboration and coordination, and continuity of care through the provision of seamless and wrap around health and social services, particularly among those with co-morbidities. The use of 'navigators' was identified as one measure that may support whanau to access services from a range of agencies.

It appears that some value is placed on evidence-based approaches, with recognition of the need for a focus on research and development and the use of local data to inform interventions.

Participants noted that greater attention is required to information provision to Maori with regard to, for example, entitlements to health and social services and service availability. Information provision should take account of limited access to computers.

Article 2 – Tino rangatiratanga: Maori leadership and participation

Health need priorities were identified that related to Maori leadership and participation with regard to health services. The priorities were: iwi control of resources, kaupapa Maori service provision, marae-based services, and Maori health workforce development.

The need for self-determination at the iwi level was noted, with a call for iwi access to health service funding and opportunities to administer that funding. The importance and value of locally accessible kaupapa Maori health services was highlighted, and the need to support Maori providers which are vulnerable to burn out was identified. Attention was also drawn to the need to provide access to rongoa Maori.

Hui participants consistently supported the provision of marae-based services to broaden service options for whanau. It was noted that marae based services could enable service delivery in an environment conducive to good health for Maori on Maori terms, and therefore consistent with Maori values (e.g. manaakitanga). A marae location was considered to facilitate service delivery that is holistic in nature and addresses multiple health issues, and that brings together urban Maori and provides opportunities to strengthen cultural identity. A specific concern raised at the Beach Haven hui was that the lack of a marae was a particular disadvantage to the local Maori community.

Feedback indicated that increasing the capacity of the Maori workforce (such as in the area of aged care), in particular through the recruitment of local people, may facilitate enhanced service responsiveness.

Hui feedback identified a need to balance the delivery of services using a life cycle approach with whanau models of service delivery. A preference was indicated for the use of whanau ora and other Maori models that support holistic approaches to service delivery. Some hui

participants identified a lack of whanau centred health services as an issue. These types of services were considered to be necessary in the context of heavily stressed whanau and the risk of breakdown of whanau. At the same time, value was seen in the use of a life cycle approach whereby specific services are provided for children (e.g. well child services), youth (e.g. sexual health and suicide prevention services, interventions for at risk boys, alcohol and drug services, positive local programmes that reinforce cultural identity and self-esteem, use of mentoring schemes and role models, support for teenage parents, community constables that focus on youth, and smoking prevention), and older people (e.g. culturally appropriate rest home care which includes greater numbers of Maori as caregivers), as well as for women and men. For Maori women, the provision of home-based support and mental health services particularly to address the impacts of isolation were highlighted. Maori men were identified as a group with which services had difficulty engaging. Mental health services for Maori men, health promotion generally, and access to male counsellors were identified as areas of need.

Article 3 – Oritetanga: achieving health equity.

Hui participants and submissions identified a range of health need priorities that related to determinants of health, protective and risk factors, and, access to services generally and for specific conditions and health issues.

Determinants of health

Hui discussion and submissions reflected recognition of the need to address (e.g. cost of afterhours services) to the social, economic, cultural, political and environmental determinants of health, including improving access to quality health care.

Participants frequently referred to financial barriers to health care and related needs, including dental care, GP services, prescriptions, hearing aids, and sign language classes. The linked concern of poor access to transport to facilitate use of health services was repeatedly raised, in particular the cost of transport. It was recommended that services be delivered in community settings, such as areas of high Maori population, on marae, and in homes. The value of well resourced mobile clinics was reinforced, and a suggestion was made that mobile clinics could provide services at regular marae-based health hui. The need for increased nursing services to enable home visits was identified.

Access to quality housing was considered an issue, with concerns raised that families are living in substandard housing due, for example, to high rents or temporary housing when families move back to whanau land. Further, it was noted that not all areas have access to insulation retrofitting initiatives. Another aspect of the physical environment identified as an area of concern was water quality, particularly in rural areas.

Hui discussion indicated the importance of strengthening cultural identity as a mechanism to achieve health gain, and practical measures such as increased marae-based services and cultural initiatives for youth were identified as potential initiatives. There was support for

Maori kaupapa (Maori issues) to be integrated within the curricula of all preschools and primary schools, including teaching children about Maori models of health. These measures may contribute to the identified need to instil in Maori children a strong sense of Maori identity. Greater self-determination for iwi with regard to access to health service funding and opportunities to administer that funding was identified as a health need. The likely health benefits of resolution to Treaty claims were noted. Strengthening and improving access to health and social services was frequently raised.

Protective and risk factors

The importance of health promotion (including health education) for whanau to reinforce protective factors and mitigate risk factors was discussed at the hui and raised in submissions. The value of using Maori sports personalities as role models and enlisting the kuia leadership in promoting positive messages for cervical screening promotion were suggested, as was the potential of schools as a location for health promotion initiatives.

Protective factors identified were: access to preventive services including oral health care, asthma education particularly for parents of asthmatic children, smoking prevention, injury prevention, podiatry services and sexual health services; increased participation in physical activity; healthy nutrition (including activities to foster food gathering) and support for whanau (e.g. access to accommodation for patients' whanau to enable them to provide support, assistance for dysfunctional whanau, availability of free childcare, child development programmes in rural areas).

Risk factors identified were smoking (particularly among youth) and alcohol and drug misuse. Discussion indicated a need to increase capacity in the area of drug and alcohol services. Concerns were also raised about advertising of unhealthy foods and food outlets that sell unhealthy food to communities with disregard for community health (particularly child health). A need for food and advertising regulation was indicated.

Access to services for specific conditions and health issues

Hui participants and submissions identified a number of specific conditions or health issues for which there is a high demand and need for health services for Maori. There was also recognition of the burden placed on whanau due to the extent of health need among Maori. The breadth of issues raised here reflects the high health needs of Maori communities and disparities in almost every major disease category. The conditions and health issues raised were:

- Diabetes – diabetes prevention, chronic disease management (including podiatry services for older adults and mobile services), dialysis issues such as access to dialysis locally and provision of transport for dialysis
- Cardiovascular disease, including stroke – improved access to services (e.g. through enhanced service responsiveness to Maori)
- Cancer – early detection for prostate cancer, breast cancer screening, colon cancer. Dissatisfaction with age restrictions for breast screening programmes highlighted a need for greater information for communities regarding the rationale and evidence for age-related cut off points. Palliative care services are currently not responsive to Maori
- Respiratory disease – asthma among children
- Mental health – kaupapa Maori residential services particularly for youth, greater integration of and improved understanding of mental health focus within health services, interagency collaboration with respect to mental health issues
- Intentional and unintentional injury - family violence, suicide especially among youth
- Disability – residential and respite care availability
- Hearing and eye care services – waiting lists for cataracts surgery and for hearing services, the affordability of hearing services, wider range of hearing services required including local sign language classes
- Gout – reference was made to a successful project to address this issue that was provided in the Counties Manukau DHB region.

Highest ranked priorities

Through a facilitated process at each of the Maori community hui, participants, either individually or collectively, decided on the three highest ranked health need priorities for their region. Identified prioirites are listed below:

Helensville:

1. Seamless and wrap around provision of accessible health and social services, particularly for those with multiple chronic conditions
2. Quality of service including access, affordability, consistency, and cultural appropriateness
3. Workforce development that focuses on training local Maori to deliver health service

Oruawharo:

1. Local provision of dialysis
2. Residential kaupapa Maori mental health services locally, particularly for youth
3. Bringing services to people through, for example, mobile clinics and service delivery in homes

Beach Haven:

1. Quality of service, including cultural appropriateness
2. A local marae, as a site for health service provision and to bring together a fragmented urban Maori community

3. Diabetes care, and in particular local provision of dialysis

Waitakere:

1. Access to services
2. Integrating kaupapa Maori/Maori issues into school curricula
3. Health promotion, workforce development and co-coordinated/integrated services were equally ranked.

Maori Provider and PHO Summit

Input received from the Maori Provider and PHO Summit (Sharon Shea, 23 October 2008, Report on the Maori Provider & PHO Hauora Summit) is discussed under the following three categories: HNA strengths, addressing HNA gaps, and expectations of Waitemata DHB.

HNA strengths

Participants in the Summit were asked to identify strengths of the HNA, in order to identify positive aspects of the current HNA to enable the DHB to build on these strengths when undertaking future Maori HNAs.

The importance of a distinct Maori HNA was emphasised, as a basis for specific actions to address ethnic inequalities in health and improve Maori health outcomes. Maori leadership and participation were identified as key strengths. This included: opportunities for Maori stakeholder input through the Summit and consultation hui; the establishment of the Maori Health Needs Assessment Steering Committee with representation from Maori providers and other Maori stakeholders; involvement of the MaPO (as members of the Steering Committee and in hosting the Summit); the participation of Maori DHB staff in the HNA project team; and participation of a Maori academic as a kaupapa Maori project advisor.

Participants placed high value on the role of the HNA in drawing together and making accessible up-to-date and relevant data on Maori health demands, needs and services.

Addressing HNA gaps

Participants identified a range of ways in which current and future HNAs may better assess Maori health demand and need, which generally were concerned with strengthening the kaupapa Maori framework for the HNA. Key areas identified were:

- use of an explicit kaupapa Maori process to underpin the HNA;
- working with Maori stakeholders to develop broader Maori 'wellness' indicators that are able to capture health according to Maori models;
- strengthen the community engagement model for the HNA and mechanisms for kaupapa Maori academic feedback;

- greater use of the kaupapa Maori research evidence base;
- increased utilisation of community datasets (including PHO data); and,
- a stronger focus on the distinctiveness of Maori and non-Maori models of funding and service delivery and their differential impacts on Maori health outcomes; and,
- strengthened emphasis on Maori models of practice.

Expectations of Waitemata DHB

Hui participant expectations of the DHB related to maximising the value and use of the HNA and fostering and reinforcing positive relationships with Maori.

Participants strongly supported efforts to maximise the value of the HNA in terms of influencing DHB prioritisation and investment, and thereby impact on improved Maori health outcomes. The importance of measuring the impact of the HNA in terms of funding levels and Maori health outcomes was also noted. The HNA is a potential tool for providers and PHOs to participate in and influence the DHB's investment cycle. Ongoing opportunities for provider and PHO input were considered to be of high importance, including in the development of agreed Maori purchasing strategies. Participants indicated that further clarity is required with regard to the relationship between demonstrated inequalities and need, and DHB funding formulas, prioritisation and decision making processes, and also how the HNA fits within the DHB's investment cycle.

According to participants, there is much potential to strengthen relationships between Waitemata DHB and the range of Maori stakeholders. It was recommended that the further development of mutually beneficial relationships be founded on the principles of mutual respect and valuing tikanga. Strengthening of the community engagement model for future HNAs was strongly recommended to enable continuous quality improvement.

Issues outside the scope of the HNA

A number of issues were raised that are outside the scope of the current HNA, but are concerned with action to improve Maori health outcomes. There issues are briefly summarised here.

Participants indicated a need to strengthen DHB Maori health capacity, particularly in terms of Maori participation at the highest decision-making levels. It was also recommended that a kaupapa Maori approach be integrated within DHB processes, and that this may be expressed through: increased use and investment in kaupapa Maori research including comparative analysis of the impact of kaupapa Maori and generic providers on Maori health; increased support for kaupapa Maori providers; strengthened training with regard to kaupapa Maori issues; and, increased production of kaupapa Maori resources.

The Summit supported further work, in collaboration with Maori stakeholders, to identify and utilise broader indicators that are able to capture the state of Maori health in Maori terms. This work would be useful to inform future HNAs. Strengthened community education to facilitate whanau empowerment was also supported.

Participants also identified potential topics for future Summits: research and development, conceptualising and operationalising kaupapa Maori, Maori health indicators ('wellness' indicators that are relevant to iwi and Maori who are in rural or urban locations), the DHB investment cycle (the relationship between needs, solutions, funding and performance), and sector strategies, with an emphasis on investment priorities.

Summary of key findings

Introduction

This section briefly summarises the main findings from each section of this report.

Demography

- In 2006, Waitemata DHB region included 42,876 Maori - 7.6% of the Maori population in New Zealand.
- Maori make up 8.9% of the total Waitemata DHB population
- The Maori population in Waitemata DHB is a very young population, - over 50% are under 24 years of age, and less than 3% are over 65 years of age.
- The largest number of Maori live in Waitakere City (53%), followed by North Shore City (29%) and Rodney District (18%) respectively.
- The Maori population is growing faster than the overall population in Waitemata DHB, and the Maori birth rate is higher.
- In the Waitemata DHB region, 40.6% of Maori children under 15 years were living in sole parent households compared to 28.4% of Pacific children, 17.4% of European children and 15.8% of Asian children
- Maori in the region are living with disability at a higher rate than non-Maori

Article 1 – Kawanatanga: health systems performance

- There is evidence that the quality of ethnicity data collection by Waitemata DHB is improving (the proportion of new registrations on the NHI with an ethnicity of Other or Not Stated has reduced)
- Under-recording of Maori ethnicity in primary care is still a concern within Waitemata DHB
- There is no government funded rongoa provider serving the needs of Maori in Waitemata DHB
- A number of optional courses are offered to DHB staff to improve cultural competency (currently the numbers enrolling in these courses each quarter are 10-15% of the number of new staff commencing)
- Cultural appropriateness of services is still likely to be a problem - Maori in Waitemata DHB are 2.4 times more likely than non-Maori to self-discharge early from hospital and readmission rates are higher for Maori.

Article 2 – Tino Rangatiratanga: Maori leadership and participation

- There are a number of Maori health providers in the DHB, providing a range of primary care, public health, mental health drug and alcohol and nursing services.
- Maori involvement in governance at Waitemata DHB includes
    - 2 Te Tiriti o Waitangi Memoranda of Understanding
    - A Maori Health Gain Advisory Committee appointed by the WDHB Board to advise on all issues relating to Maori health and development

    - Maori membership on the DHB Board and key DHB committees (CPHAC & HAC)
- Maori are also represented in PHO governance with at least one Board member. Currently, 4 out of 6 PHOs have Maori CEOs and there are 3 Maori led PHOs in the DHB.
- Maori make up 4.8% of the DHB workforce. Maori make up 1.2% of medical staff and 3.9% of nursing staff.
- Maori are significantly under-represented in the DHB workforce, in all services, when compared to the proportion of patients who are Maori.
- Waitemata DHB workforce ethnicity data is currently poor

Article 3 – Oritetanga: achieving health equity

Determinants of Maori health

Socio-economic determinants

- The percentage of Maori in the Waitemata living in the two most deprived socio-economic deciles (16.5%), is lower than the national percentage of the New Zealand population (both Maori and non-Maori) living in the two most deprived deciles (20%).
- 21% of Maori over 15 years of age in the region have an income of $10,000 or less
- 5.9% of Maori over 15 years of age do not have access to a car, compared to 2.5% of non-Maori
- 3.1% of Maori over 15 years of age do not have access to a telephone, compared to 0.9% of non-Maori.
- 64.4% of Maori over 15 years of age do not own their own home, compared to 49.6% of non-Maori
- 16.8% of Maori in the region live in overcrowded homes, compared to 9.4% of non-Maori
- 3.7-4.6% of Maori in the region live in homes without heating, compared to 2.1-3.8% of non-Maori.
- Around 60% of Maori in Waitemata DHB are in school at age 16, and 40% at age 17.
- 47.1% of Maori over 15 years of age have an NCEA qualification or higher, compared to 69.9% of non-Maori.
- 5.3% of Maori are unemployed (compared to 3.4% of non-Maori) and Maori in employment are more likely to be clustered in lower occupational levels.
- Maori are more likely than non-Maori in Waitemata DHB to be engaged in unpaid work, such as caring for children, looking after people who are ill or have a disability or working at the marae.

Cultural determinants of health

- 12.4% of Maori attending early childhood education in the region are enrolled in Kohanga Reo, and 3.1% of primary school students are attending Kura Kaupapa Maori.

- 15-20% of Maori in Waitemata DHB can hold a conversation in te reo Maori, with a higher percentage in Waitakere than in North Shore or Rodney. Proficiency is higher in older Maori.
- Analysis of 2001-2006 trends reveals there are increasing numbers of young people with high proficiency in te reo.

Risk and Protective factors

- Maori in the district are more likely to be physically active (>50%) than non-Maori. Physical activity is higher in Maori men.
- Over 50% of Maori in the district are consuming the recommended amount of fruit and vegetables each day. These rates are higher for Maori women than men.
- Two-thirds of Maori babies are fully breastfed at 6 weeks. Over 50% are still fully breastfed at 3 months, and 20% at 6 months.
- Maori in Waitemata have lower smoking rates (30%) than Maori nationally (42%).
- 57.2% of Maori adults are exposed to health risks from smoking. This figure is made up of both people who are current smokers (33.3% of Maori men, and 38.1% of Maori women) and non-smokers exposed to second-hand smoke inside their home (22.5% of Maori men and 20.3% of Maori women).
- 62.4% of Waitemata Maori in the New Zealand Health Survey 2006/07 were classified as overweight or obese, compared with 55.3% of non-Maori
- Less Maori were either obese or overweight in Waitemata (62.4%) than Maori in New Zealand overall (70.3%)
- A higher proportion of Maori than non-Maori in the Waitemata district reported potentially hazardous drinking behaviour and marijuana use.

Health outcomes

- The life expectancy at birth of Maori women (80.7 years) in the Waitemata district is 3.2 years shorter than for non-Maori women (83.9 years).
- The life expectancy at birth of Maori men (73.5 years) is 6.6 years shorter than for non-Maori men (80.1 years).
- The disparity in life expectancy for Maori in Waitemata is considerably less than the gap in life expectancy between Maori and non-Maori nationally, for both women (8.1 years) and men (8.8 years).
- Maori in Waitemata region have much lower rates of avoidable mortality (305/100,000) than Maori in New Zealand overall (416/100,000)
- The leading cause of avoidable mortality for Maori in Waitemata DHB is ischaemic heart disease, followed by lung cancer, diabetes and COPD.
- Infant mortality in Waitemata DHB is higher for Maori than non-Maori
- The leading cause of avoidable hospitalisation for Maori adults in Waitemata DHB is respiratory infection followed by cellulitis, angina and chest pain, ENT infections and dental conditions.

- The leading causes of avoidable hospitalisation for Maori aged 0-4 years are respiratory infections, asthma and ENT infections. For Maori children aged 5-14 years the most common causes are falls, ENT infections, dental conditions and cellulitis.
- Nationally, smoking is the single-most important modifiable cause of lost years of healthy life for Maori
- Maori in Waitemata experience higher diabetes prevalence, hospitalisations and end-stage complications, compared to non-Maori, and the gap between Maori and non-Maori widens at each stage
- Rates of hospitalisation and death from all types of cardiovascular disease are higher for Maori than non-Maori. Maori men suffer the highest rate of ischaemic heart disease of any group in Waitemata.
- Maori in Waitemata have higher rates of cancer registrations and deaths, especially for lung cancer, which is the leading cause of cancer death in Maori.
- Maori in Waitemata experience 3-4 times the burden of COPD, with an onset 15-20 years earlier than non-Maori.
- Non-Maori children in Waitemata have lower rates of asthma hospitalisation than the national rate, but Maori children are more likely to be hospitalised for asthma than Maori in New Zealand overall.
- More than 50% experience a mental illness at some stage, and Maori in Waitemata have poorer self-reported mental health status and higher rates of self-harm hospitalisations and suicide than non-Maori.

Health service utilisation for Maori

Preventative care/screening

- 66.9% of maori children in Waitemata are fuly immunisaed at 2 years, compared to 81.8% for NZ European/Other children
- Breast screening coverage in Waitemata is 45.5% for Maori women and 54.3% for non-Maori women.
- Cervical screening coverage in Waitemata is 40.9% for Maori women and 73.5% for non-Maori women.
- Maori children in Waitemata experience higher rates of hearing loss at school entry (14.1%) than non-Maori (9.4%)

Primary care

- Maori in Waietmata are more likely than non-Maori to report unmet need for GP care (13.8% vs 6.5%), and are less likely to be enrolled with a PHO, although ethncity data is poor.
- Maori in Waitemata have lower rates of CV risk assessment and receive less medication for CVD, despite having a higher incidence and mortality from carviovascular disease.
- 29% of Maori diabetics received an annual diabetes check, compared to 49% of non-Maor non-Pacific diabetics.

- 21.7% of Maori adults report unmet need for oral health care compared with 10.8% for non-Maori.

Outpatient care

- The DNA rate for DHB outpatient appointments is 30% for Maori overall, compared to 10% for NZ European and Asian. The rate is higher for Maori across all services.

Hospital care

- Maori are more likely to have visited the emergency department than non-Maori in Waitemata DHB
- Maori in Waitemata have a higher utilisation of secondary mental health and addiction services than non-Maori. However, national data shows that despite higher rates of health service utilisation Maori health service contact for mental health issues was low relative to need.
- In Waitemata, age-standardised rates of angioplasty are substantially lower for Maori, and rates for CABG and angiography are similar to non-Maori, despite Maori having a higher need
- The rate of ASH in Maori children aged 0-4 years has decreased to below the national average. For Maori adults aged 45-64 years the ASH rate remains 33% higher than the national average.

Maori community consultation

The health need priorities identified by participants in the Maori community hui and submissions were wide-ranging, reflective of the variety of factors influencing Maori health, the range of health challenges facing Maori, and the importance of prevention and access to quality health care. Almost all of the conditions identified as priorities at hui and in submissions were conditions from which Maori in Waitemata have a disproportionately high burden of morbidity and/or mortality relative to non-Maori. These conditions are inequitably impacting on Maori quality of life and/or leading to premature death. Importantly, most of these conditions are largely preventable and/or manageable through early intervention and quality health care.

Article 1 – Kawanatanga: health system performance

Maori community consultation identified ways in which health system performance could be improved to better support Maori wellbeing, these were provider organisational development; workforce development; continuity of care; use of Maori models of wellbeing; an evidence-based approach; and information provision.

Article 2 – Tino rangatiratanga: Maori leadership and participation

Health need priorities were identified that related to Maori leadership and participation with regard to health services as a mechanism to enhance quality of care for Maori. The priorities were: increased opportunities for iwi control of resources, kaupapa Maori service provision, marae-based services, and Maori health workforce development.

Article 3 – Oritetanga: achieving health equity.

Hui participants identified a range of health need priorities that related to determinants of health, protective and risk factors, and, access to services generally for specific conditions and health issues.

The need to address access to the social, economic, cultural, political and environmental determinants of health including improving quality of care was highlighted. The importance of health promotion (including health education) for whanau to reinforce protective factors (e.g. access to preventive services, increased physical activity, healthy nutrition and whanau support) and mitigate risk factors (e.g. smoking, alcohol and drug misuse, promotion and sale of unhealthy foods) was emphasised. Hui participants and submissions identified a number of specific conditions or health issues for which there is a high demand and need for health services for Maori. The conditions and health issues raised included chronic conditions (e.g. diabetes and respiratory disease), cardiovascular disease, cancer, mental health, intentional and unintentional injury, hearing and eye care services, and gout.

Highest ranked priorities

The highest ranked health need priorities identified across the Maori community hui are listed below.

1. Health service quality, including access, affordability, consistency and cultural appropriateness
2. Seamless and wrap around provision of accessible health and social services, particularly for those with multiple chronic conditions
3. Bringing services to people through, for example, mobile clinics and service delivery in homes
4. Health promotion
5. Integrating kaupapa Maori/Maori issues into school curricula
6. A local marae, as a site for health service provision and to bring together a fragmented urban Maori community (this issue was specific to the Beach Haven hui)
7. Workforce development that focuses on training local Maori to deliver health services
8. Residential kaupapa Maori mental health services locally, particularly for youth
9. Diabetes care, and in particular local provision of dialysis

Maori Provider and PHO Summit

Participants in the Summit identified a number of strengths of the current HNA which provide a foundation for future WDHB HNAs, these were: undertaking a distinct Maori HNA; Maori leadership and participation in the process and preparation of the HNA; and that the HNA draws together and makes accessible up-to-date and relevant data on Maori health demands, needs and services.

Participants identified a range of ways in which current and future HNAs may better assess Maori health demand and need which mainly related to strengthening the kaupapa Maori framework for the HNA. For example through, collaborative development of broader Maori

'wellness' indicators and strengthened community engagement processes and mechanisms for kaupapa Maori academic feedback.

Hui participants expressed expectations of the DHB that related to maximising the value and use of the HNA in terms of influencing DHB prioritisation and investment and thereby impacting Maori health outcomes, and fostering and reinforcing positive relationships with Maori.

Appendix 1 – Community consultation feedback

Feedback from community hui

Date of hui:	30th October 2008, 12.30-3.30pm
Location of hui:	**Heartlands, Helensville**
Purpose of hui:	To seek feedback from Maori community regarding their most important health needs, to inform the 2008 WDHB Maori Health Needs Assessment
General issues raised:	
Avoidable mortality	Need to be given as rates, not just raw figures
Youth	How can we hear their health needs, given they are >50% of Maori population?
Representation at hui	Felt this was a very important discussion, and to properly give voice to whanau needs, there should be discussion at a wider forum. Felt that notice of hui was insufficient to mobilise all whanau
Health needs raised:	
Trust	• Both in the health system and in individual doctors • An important determinant of access to health services • Privacy and confidentiality important, sometimes a reason Dr preferred to Maori Provider
Consistency/continuity of care	• Need ongoing supply of competent, appropriate and fully qualified GPs • Whanau often need multiple visits with same person to build relationships and enough trust to answer questions
Complacency	• Complacency among some Maori ('it'll come right') about seeking health care
Quality of services	• Need both cultural and clinical competence • Need for cultural competence in health providers • Co-partnerships could provide better choices • Poorer you are the less likely a GP will listen
Cost of services	• Prescriptions • $30 for GP was considered by some as too much to spend on themselves • Leads to tendency to try and get by at home, with own rongoa, and delay seeking GP care • Visiting hospital is not a cheaper option for Maori in South Kaipara (petrol and prescription costs) • Cost of service can explain why Maori present late or use own remedies
Poor quality housing	• Retro-fitting and healthy housing programmes only in

	Waitakere • Helensville gets classed at part of wealthy Rodney, although it is not like the rest of Rodney • Lots of windows blown out because of rotten putty • New, poor quality, temporary housing (or caravans) being built on land, by whanau moving back to their whenua • Haranui – Marae itself in need of development • Area in general not well served by Housing NZ, Transport or WDHB
Water quality	• Haranui especially – lines for bore water are deteriorating, and not working all the time • Many reliant on tank water – concern that tanks/filters are not regularly cleaned or checked
Multiple conditions	• Many Maori have more than one chronic condition, which often interact • Services for each condition are not co-ordinated (separate trip for diabetes, and for chest etc) • Person not treated holistically • These could all be addressed in one visit
Tino rangatiratanga as an iwi	• Being able to access funding and administer it for themselves • Difference between Maori population in Waitakere and manawhenua in Kaipara • Treaty claims are hope for the future • Many moving home to live on own land for tribal identity and whenua affinity – live in poor quality homes • Rents are too high in town
Mobile clinics	• Needs proper resourcing to maximise full benefit of these services • Could be linked with regular (eg four times a year) health hui on Marae, with WDHB
Rangatahi	• Sexual health • Missed group – they receive health education at school, but then don't engage with health services • Being active costs money
Whanau focused services	• Lack of services that consider the whole whanau unit (rather than just "youth" services etc) • Whanau units breaking down – can't cope • Service delivery from other agencies is lacking
Men's health	• Depression/suicide • Need for Maori counsellors • Maori men don't use 'Men's Centre' • Colon cancer • Maori men don't take part
Dental health	• Too expensive for whanau
Health education for whanau	• Preventative measures, • Holistic wellness, • Chronic disease management • Nutrition/healthy kai
Podiatry	• For kaumatua

	• Mobile service
Cardiovascular disease	
Diabetes	

Workforce development	• Need for training (? could be provided by WDHB) opportunities for local Maori health workforce
	• To develop capacity of local people to provide for health needs
	• Need:
	  o Resource (access to funding)
	  o Education
	  o Relationships/links

Drug services	• Especially for rangatahi • P and marijuana
Nursing	• More district nurses • More practice nurses

Top three priorities:

1. Seamless health service particularly for those with multiple chronic conditions ie. Diabetes, CVD, Cancer - wrap around services required such as podiatry, water quality (ARPHS), insulation of homes, mobile clinic, drug services.
2. Quality of Service ie. Access, transport, affordability, consistency, relationships with Drs
3. Education ie training local people to deliver services. Can they access WDHB training.

Date of hui:	31st October 2008, 10am-3.30pm
Location of hui:	**Oruawharo Marae**
Purpose of hui:	To seek feedback from Maori community regarding their most important health needs, to inform the 2008 WDHB Maori Health Needs Assessment
General issues raised:	
Responsibility for Eastern Kaipara	• Parts of Eastern Kaipara fall outside Rodney District • However, it was stated that WDHB is the lead DHB for Eastern Kaipara, at least for primary care, and that WDHB receive funding from Northland DHB to provide services to this area (eg Kaiwaka)
Health needs raised:	
Shops selling unhealthy kai	• Shops don't care about healthy eating • They will sell our kids things that could end up killing them just to make a buck • Who has responsibility for controlling advertising of unhealthy food • Can its importation be controlled? • What role can the DHB play in this issue? • What is sprayed on our imported food?
Dialysis	• Have to travel 3 times a week from Wellsford in a taxi for dialysis at Auckland (2 hours each way) • At least five residents have to do this – wouldn't it be cheaper to pay for a local machine? • Huge burden on whole whanau • Strong support for a local dialysis machine (based at Wellsford, or mobile) • Is this WDHB's area, or do they need to talk to ADHB?

Breast cancer	• Why is the breast screening cut-off at age 70? Couldn't we make an exception for women who want to continue screening, or have not been screened?
	• Also concern about breast cancer in women under age 45
	  o Why can't breast screening age be lowered?
	  o If can't be screened, need more education/awareness for young wahine around breast self-examination and importance of getting lumps checked early

Bringing services to the people	• Strong support for bringing services to the people, rather than making people travel to the services • Travelling to the city to services is traumatic for those not used to city driving • It is an imposition on the whole whanau • Especially for isolated (and growing) rural communities that are not on SH1 – travel/transport difficult • Mobile clinics to homes or marae based clinics
Residential kaupapa	• Need for local residential care facility for mental health and drug and alcohol problems

Maori mental health services	• Especially for rangatahi • Needs to be kaupapa Maori • Need for this service is likely to increase even more in the future
Elective surgery	• Shorter waiting times for surgery, especially for cataracts and hips
Rangatahi	• More health promotion • Role models/mentoring for rangatahi
Palliative care	• Palliative care services do not meet Maori needs • Better understanding that once a Maori knows there is no more hope, they want to be home with their people.
Dental health	• Especially for rural kids
Prostate cancer`	• Early detection for men
Housing	• Retro-fitting of housing, like "Warm and Well" project • Why not in Oruawharo, when same level of need?
Local employment	• Why doesn't the DHB employ local people to conduct this work?
Hearing	• More services for those with hearing problems (from whaea afterwards – she was deaf and couldn't hear the hui properly)
Top three priorities: 1. Dialysis locally 2. Residential kaupapa Maori mental health services locally (esp. for rangatahi) 3. Bringing services to the people (mobile clinics to marae and homes)	

Date of hui:	4th November 2008, 10am-1.30pm
Location of hui:	**Beach Haven Ratepayers and Community Hall**
Purpose of hui:	To seek feedback from Maori community regarding their most important health needs, to inform the 2008 WDHB Maori Health Needs Assessment
General issues raised:	
Nil	
Health needs raised:	
Dialysis	• Had to travel to Waitakere three times a week for dialysis – long way from Beach Haven • Driving oneself to dialysis not safe – transport should be provided
Dental health	• Needs more dental health promotion among tamariki (eg toothbrushing, hygiene, dental care) • Better dental services, especially for school children
Old age care	• More appropriate care for Maori, especially in mainstream rest home • More Maori care-givers
No local marae	• Fragmented Maori community • A local marae would provide appropriate forum/ meeting place to focus on multiple issues like health • Could bring urban Maori together and overcome loss of cultural identity and loss of mana within ourselves – cultural health – health of culture • Awataha (Northcote) not appropriate – too far away • Tangihanga having to occur in homes • Part of getting the environment right for health (Te Whare Tapa Wha – all elements together are important for wellness) • Values of whanau – pressures of everyday and we lose mana, manaakitanga and whakapapa – marae would help to keep these things
Women's health	• More home-based support needed • Especially for mental health and isolated wahine
Men's health	• Unmet need for health promotion • Difficult to get them to a meeting
Hearing	• More services for those with hearing problems (including testing/early detection) • Sign language classes needed (some run by Te Wananga o Aotearoa, however had to travel to Mangere). Can't afford to keep going out there
Lack of awareness of local health services	• Community health newsletter could be mailed out (lot of community don't use computers), explaining health services that are available and clinic times etc
Nursing services	• Need more nursing services to visit homes • Need home nursing services to be on time – people sometimes

	wait for hours
Rangatahi	• Problems when kids hit puberty/intermediate level = drinking, vandalism • Early intervention programme just started for at risk boys at primary school • Youth want to be part of activities that everyone else is doing, not activities that are exclusive to them • 'Lost youth' – lack of personal identity, self-esteem, coping skills. Need wairua, manaaki, aroha. Need to nurture aspirations and dreams – to promote wellness. • Access to services for youth are hard • They need services earlier so that they can cope with society
Geographical isolation	• Barrier • Nothing in the area for youth • Have to leave the community to be a participant • Eg waka ama – bought boats, but local tides made it difficult, so have to take people out of the area for the activity
Suicide	• Especially youth
Physical activity	• Need more
Ability to gather kai	• Kai gathering way to bring community together, but uncertain where to gather kai locally – either not possible, or no knowledge • Is water/environment safe here to gather kai?
Rongoa	• Want ability to access traditional Maori rongoa locally
Quality of local care	• Especially GP and local labs • Need to educate providers about whanau ora model
Smoking	• More health promotion • Especially among role-models for children (eg kohanga reo teachers who are smoking)
Asthma	• In tamariki • More education/awareness for parents about asthma and how to manage it
Celebration of life	• Everything on the board is what we know makes us sick – what about what can make us well – there is nothing
Top three priorities: 1. Quality of service (including cultural appropriateness) 2. Local marae 3. Diabetes/dialysis care	

Date of hui:	7th November 2008, 10am-3pm
Location of hui:	**Lincoln Green, Henderson, Waitakere City**
Purpose of hui:	To seek feedback from Maori community regarding their most important health needs, to inform the 2008 WDHB Maori Health Needs Assessment
General issues raised:	
Why three priorities?	• All of the issues we will raise will be valid, and we all contribute a valuable service in different areas. Superficial to choose between them.
How will this be used?	• How will what we say actually link with DHB funding decisions?
More of a difference to be made outside this process	• We have heard all of these issues before – they are not unknown and not new • The evidence on Maori health needs is already strong • The current system needs a complete overhaul – current system is set-up to produce the results that it does • Perhaps we have a more constructive role in encouraging and supporting our Maori colleagues within the DHB to be stronger advocates for radical and courageous change • Need DHB commitment to innovative solutions
Health needs raised:	
Rangatahi	• The age group 10-19years is a gap in our focus • This is the age-group that are having children of their own • More needs to be done to help this age keep themselves and their babies well
Access	• Access to: o Services o Information o Funding • Overcoming whakama
Enrolment with PHOs	• Need to increase the number of Maori enrolled with PHOs, but also associate with an increase in capacity to provide service
Collaboration/integration of services	• Including navigators to let whanau know what services are available and help whanau deal with multiple agencies
Education of tamariki	• Maori kaupapa needs to be mandatory in all preschools and primary schools • Te Whare Tapa Wha model needs to be taught to tamariki in schools • Instilling tamariki with strong sense of Maori values and whakapapa will give them increased knowledge – knowledge is power. • Adults need to educate themselves about how to communicate better with tamariki so they can teach them

Accommodation	• For whanau to stay, especially in Auckland while kids in Starship
Cervical screening promotion	• Needs to be a positive message led by kuia, similar to recent campaign featuring Pacific Islander women
Rongoa	• No local service – why not?
Injury prevention	• Lack of attention to this - want to get this on WDHB agenda
Local data	• Need local data to support local interventions, eg Waitakere Hospital data not national data
Information sharing	• Need to be able to share information between services, to facilitate networking and better links between services, eg Epilepsy Association does not know about other services operating in the local area – limits ability to refer patients
Family violence	
Whanau support	• Promoting increased whanau involvement is good, but we need to recognise diverse Maori realities and that not everyone has a functional whanau • Dysfunctional whanau with no-one who can fill functional family roles • Grandparents raising children so parents can work • Family violence • Whanau as wealth
Suicide	• Especially in youth • Isolation, drugs and alcohol, pride/reluctance to ask for help • Often related to dysfunctional whanau – need to give a lot more support to kids/youth in these situations, as early intervention is important to prevent later problems. • Disconnected from tribal base
User-friendly services	• Culturally appropriate services for Maori
Burnout	• In Maori providers • Especially from trying to access the system
Drugs and alcohol	• Growing problem, needs growing capacity
Mental health integration	• Mental health needs to be integrated within health • Needs inter-agency collaboration • Better understanding of the effects of trauma on other aspects of life and society
Workforce development	• Culturally appropriate workforce
Substance control	• Tobacco, drugs, alcohol, bad food
Gout	• eg same successful project as CMDHB
Stroke	• How to improve access for Maori to stroke services? • Especially for people not admitted to hospital • How to make mainstream stroke services more appropriate/responsive to needs of Maori with stroke?
Top three priorities: 1. Access to services 2. Tamariki – school education of tikanga Maori 3. Equal: =3. Health promotion =3. Workforce development	

=3. Coordinated/integrated services

Feedback from written submissions

Geographic origin of feedback	Health needs raised:
Beach Haven	Access and transport to services (eg dialysis)
	Better communication around what people are entitled to
	Communication about patients' conditions to main provider and whanau
	Communication with Maori networks
	Eyes - long cataract waiting list
	Ears- long wait for appointment, hearing aids too expensive, more accessible sign language training
	Teeth – cheaper dental care
	Seeing doctors in outpatients who are not familiar with your case, and talk to the computer.
	Eye contact from hospital staff
	Transport for the elderly
Waitakere	Access to services
	Shorter waiting lists
	Affordability (dental care, GP visits, prescriptions)
	Plunket services for children, based in local areas (eg next to schools) so they can see what's going on in homes, newborn up to 10 years
	Good information for community about services available (who, what, when, where, how to contact)
	Customer service (friendly, prompt, professional behaviour towards patients/clients/visitors)
	Housing made more available to young families
	More community constables, with focus on young people
	Tamariki
	Prevention
	Equity
	Collaboration/integration of services (especially when transferring care from hospital setting to home)
	Workforce development/up-skilling

	Organisation development (improvement of processes, protocols etc)
	Adopting contemporary technologies
	Local research and development into health & social services
	Health promotion and education to reduce heart disease, diabetes and stroke
Oruawharo	Mobile diabetes services locally
	Kaupapa Maori mental health in local area
	More local health promotion and information (eg marae based, school-based)
	Greater attention to Wellford/Te Hana – highest % of Maori in Rodney district therefore greatest opportunity to benefit
	Long waiting times for surgery (eg cataract surgery - up to 18 months)
	Youth smoking (male and female)
	Drug and alcohol abuse (especially counselling for those under 18)
	Dental health and hygiene (especially in schools)
	Well known Maori sports role models – could promote healthy lifestyles in schools
	Breast cancer diagnosis and screening for women under 45
	Child violence (need for free child care and child development programmes in rural areas)
	Affordable after hours service
	Good information about services and entitlements (eg IRD, WINZ)
	Residential/respite care for families with disabilities
	More transport and cheaper transport
	Lack of parenting ability due to lack of education
	Poor diets because of low income

Appendix 2 – List of indicators

Waitemata DHB Maori Health Needs Assessment 2008 Maori health indicators and data sources			
Indicator sets	**Descriptors**		**Source**
Demography	*Characteristics of the Waitemata district Maori population*		
Population size	Number of Maori		Census
	Projected population of to 2026		Stats NZ
	Birth rate		HDIU
Composition of the population	Age structure		Census
	Geographic distribution		Census
	Family composition of households		Census
	Iwi region/rohe affiliations		Census
	Maori living with disability		Census/Household Disability Survey
Article 1 – Kawanatanga: health systems performance	*Government's provision of the structures and systems necessary for Maori health gain and reducing inequalities including health services and Maori health information*		
Health information	Ethnicity data	% of new NHI registrations with ethnicity not stated	DHB reporting
		Primary care ethnicity data (linked with NIR)	Specific DHB project
Health services designed to meet Maori needs	Maori specific services		DHB reporting
	Cultural competence of staff	No. of staff completing Maori cultural/te reo training, compared with no. of new staff	DHB reporting
	Self-discharge rates		DHB reporting
	Hospital readmission rates		DHB reporting
	Patient satisfaction		Health Services Consumer Research survey
Article 2 – Tino Rangatiratanga: Maori leadership and participation	*Opportunities for Maori leadership and participation within the local health sector.*		
Maori controlled health services	No. and type of Maori providers		DHB reporting
	Reasons for choosing Maori provider		NZHS 2002/03

Maori involvement in governance and planning of health services	Maori involvement in Waitemata DHB governance	Structures and pathways for Maori involvement in governance	DHB reporting
		No. of Maori on DHB Board	DHB reporting
	Maori involvement in PHO governance	No. of Maori on PHO Boards No of Maori led PHOs	PHOs
Maori involvement in health service delivery	Waitemata DHB Maori workforce	% of staff in each service who are Maori	DHB reporting
	Maori specific positions		DHB reporting
Article 3 - Oritetanga: achieving health equity	*Progress towards reducing systematic inequalities in determinants of health, including access to health services, and health status*		
Determinants of health			
Socio-economic determinants	Maori population by NZDep 2006		NZDep2006
	Income	Adults over 15 years in low income bracket	Census
	Access to car	Adults over 15 years without access to a motor vehicle at home	Census
	Access to communication (home phone, internet)	Adults over 15 years of age living in households without access to a telephone and internet	Census
	Home ownership	Adults over 15 years not owning their home	Census
	Overcrowding	People of all ages living in overcrowded households	Census
	Access to heating	Percentage of people without any form of home heating	Census
	Educational qualification	Adults over 15 years, with NCEA Level 2 or higher	Census
	Employment	Unemployment rates in adults over 15 years	Census
		Maori employment in Auckland region, by industry and occupation level	TPK Report
Cultural determinants	Te reo/Maori language	Percentage of Maori who can hold a conversation about a lot of everyday things in Maori, by TLA, age-group.	Census
		Maori language competency in youth	Youth 2000 survey
	Kura Kaupapa Maori and Kohanga Reo	Numbers of Maori enrolled in Early Childhood Education, and Kohanga Reo, by TLA,	Ministry of Education
		Numbers of Maori students enrolled in Kura Kaupapa Maori, by TLA,	Ministry of Education
	Attitudes to cultural issues and	National data only	Youth 2000 Survey

	identity amongst youth		
	Access to marae	Map of marae locations within Waitemata district	ARPHS
	Rongoa Maori	No of adults reporting using rongoa Maori in the last 12 months (National data only)	NZHS 2006/07
		No of funded rongoa Maori providers in DHB	DHB reporting
	Kapa haka	No of adults attending kapa haka in last 12 months (National data only)	2002 Cultural Experiences Survey
		Reasons for not attending kapa haka more often (National data only)	2003 Cultural Experiences Survey
Protective factors and risk factors			
Protective factors	Physical activity	Percentage of adults over 15 years doing regular physical activity	NZHS 2006/07
	Nutrition	Percentage of adults over 15 years consuming 3+ vegetables per day,	NZHS 2006/07
		Percentage of adults over 15 years consuming 2+ fruit per day	NZHS 2006/07
	Breast-feeding	Percentage of Plunket babies exclusively or partially breastfed	NZCYES/Plunket
Risk factors	Smoking	Percentage of adults who are current smokers or non-smokers but exposed to smoking in the home	NZHS 2006/07
	Obesity & overweight	Percentage of adults over 15 years classified as overweight or obese	NZHS 2006/07
	Alcohol and drug use	Percentage of adults over 15 years reporting hazardous alcohol drinking	NZHS 2006/07
		Percentage of adults over 15 years reporting marijuana use in the previous 12 months	NZHS 2006/07
Health outcomes			
Health status	Life expectancy	Life expectancy at birth	DHB
	Leading causes of avoidable mortality	Leading causes of avoidable mortality in adults, by gender	DHB
		Infant mortality	HDIU
	Leading causes of avoidable hospitalisations	Leading causes of avoidable mortality in adults, by gender	DHB
		Leading causes of avoidable mortality in children, by age	HDIU
	Leading causes of lost years of life	Leading causes of lost DALY, by gender	PHI Bulletin 2001

		Leading causes of modifiable lost DALY, by gender	PHI Bulletin 2001
	Self-reported health status	Prevalence of people reporting health status as good or very good	NZHS 2006/07
Important conditions	Diabetes	Diabetes - self reported prevalence	NZHS 2006/07
		Diabetes - hospitalisations, adults over 15 years	NZHIS
		Diabetes - hospitalisations for complications (renal failure & amputations)	NZHIS
	Cardiovascular disease	Cardiovascular disease mortality	HDIU
		Cardiovascular disease hospitalisations	HDIU
	Cancer	All cancer mortality	HDIU
		Lung cancer registrations, hospitalisations and deaths	HDIU
		Breast cancer registrations, hospitalisations and deaths	HDIU
		Colorectal cancer registrations, hospitalisations and deaths	HDIU
	COPD	COPD - self-reported prevalence	NZHS 2006/07
		COPD hospitalisation, 45+ years	HDIU
	Asthma	Asthma hospitalisation, 0-14 years	HDIU
	Mental health	Lifetime, 12-month and 1-month prevalence of mental disorders for Maori, by disorder group, age and gender.	New Zealand Mental Health Survey 2003/2004
		Percentage of adults with high or very high probability of having an anxiety or depressive disorder (K-10 score of 12 or more)	NZHS 2006/07
		Prevalence of any self-reported chronic mental health condition, adults 15+ years	NZHS 2006/07
		Suicide, 5+ years, per 100,000	PHI/NZHIS
		Self-harm hospitalisations, 5+ years, per 100,000	PHI/NZHIS
Health service utilisation			
Preventative care/screening	Immunisation coverage	Percentage of children fully immunised at age two years	NIR
	Breast screening	Breast screening coverage	NSU/BSA
	Cervical screening	Cervical screening coverage	NSU/NCSP
		National cervical screening coverage, by age & ethnicity	NSU/NCSP

	Hearing screening	Hearing test failure of 5 year olds starting school	Audiometry screening
Primary care	GP access	Unmet need for GP visit in past 12 months	NZHS 2006/07
		Percentage of adults whose last visit to GP in past 12 months was free	NZHS 2006/07
	PHO enrolment	Percentage of population enrolled with a PHO by ethnicity	DHB reporting
		Self-reported PHO enrolment	NZHS 2006/07
	CVD risk assessment	Blood pressure checks in the last 12 months,	NZHS 2006/07
		Cholesterol checks in the last 12 months	NZHS 2006/07
	Medication for CVD	Adults 15 years and over taking medication for high cholesterol	NZHS 2006/07
		Adults 15 years and over taking medication for high blood pressure	NZHS 2006/07
	Access to diabetes checks	Self-reported prevalence rates of diabetes checks in the last 12 months	NZHS 2006/07
		DHB population estimated to have diagnosed diabetes who had free annual diabetes checks in the twelve months	DHB health target reporting
	Oral health care access	Percentage of adults in Waitemata DHB with unmet dental need in last 12 months	NZHS 2006/07
Outpatient care	DNA rate for specialist appointments	DNA rate for all FSA, by service	DHB reporting
		DNA rate for all follow-up appointments, by service	DHB reporting
		DNA rate for colposcopy	DHB reporting
		DNA rate for gynaecology outpatients	DHB reporting
	Emergency department use	Self-reported prevalence of ED visit in last 12 months, by ethnicity	NZHS 2006/07
		No. of Triage 4&5 (low priority) visits, by ethnicity	DHB reporting
Hospital care	Mental health service utilisation	Access to secondary mental health and addiction services	MHINC
	CVD intervention rate	Maori and non-Maori age-standardised rate of selected CVD procedures	DHB
	Ambulatory sensitive hospitalisations	Ratio of WDHB ASH rate in Maori children and adults compared to national average	DHB - health target reporting

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