Whānau Ora
Health Needs Assessment
Māori Living in Taranaki

27 February 2012

TARANAKI DISTRICT HEALTH BOARD

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Appendices

He Mihi

Kua poua ki runga, kua poua ki raro

kua poua iho rā te puna koropupū e kore nei e mimiti

E koropupū tonu ana te aroha ki a rātou

kua kopa i te ana o Rangitotohu o Rangikekero

Waiho ake rā rātou te hunga mate ki a rātou i te pō

Huri mai ki a tātou te puna e kore nei e mimiti i te ao tūroa nei

hei kawe i ngā tikanga i waihotia ake e rātou

Nei rā te karanga kia rarau mai tātou ki tēnei huihuinga o tātou

Oranga wairua, Oranga tinana, Oranga hinengaro, Oranga whānau

Ki te Whai Ao, ki te Ao Mārama

Tūturu o whiti whakamoua

Kia tina!

Tina!

Hui e! Tāiki e!

Nei rā te karanga ki a rātou

kua kopa i te ana o Rangikekero o Rangitotohu

Waiho ake rā te hunga mate ki a ratou i te pō, moe mai

Huri mai ki a tātou te puna e kore nei e mimiti

I te ao tūroa e kawe nei i ngā tikanga i waihotia ake e rātou

EXECUTIVE SUMMARY

FRAMEWORK AND DATA COLLECTION

A Whānau Ora Health Needs Assessment for Māori Living in Taranaki

Improving Māori health and contributing to Whānau Ora for Māori living in Taranaki are priorities for the Taranaki DHB. Understanding the Whānau Ora health needs of Māori living in Taranaki is necessary in order to determine priority areas for service planning for Māori that will lead to improved health outcomes and reduced inequalities in health. A Whānau Ora health needs assessment (HNA) provides a systematic method to assess the health needs of Māori living in Taranaki.

A Whānau Ora Health Needs Assessment Framework

In the context of extensive and current Māori and Government support for Whānau Ora, it has been a logical choice as the overarching framework for this HNA. While Whānau Ora has been widely used and variously defined by Māori over many years, the term gained greater currency within the Health and Disability Sector through the release of He Korowai Oranga, the Māori Health Strategy[1]. He Korowai Oranga sets the direction for Māori health development in the Health and Disability Sector.

The overarching Whānau Ora framework for the HNA has the following key elements:

- A Whānau Ora philosophy that gives Whānau Ora, as it relates to health, definition and distinctiveness.
- A conceptual foundation located within the context of the Treaty of Waitangi and theoretical understandings of the determinants of ethnic inequalities in health.
- Derived from He Korowai Oranga; an overall aim of Whānau Ora, two broad directions which acknowledge the partnership between Māori and the Crown, key threads which are consistent with the conceptual foundation and the four pathways which may be applied as a monitoring framework.
- A life-course orienting perspective.

The monitoring framework adopted for the HNA is comprised of five domains, four of which are based on the pathways identified in He Korowai Oranga. The monitoring framework is populated with indicators classified under each of the five domains. The first domain of the monitoring framework is 'Demography'. Aligned indicators measure the characteristics of the Māori population resident in Taranaki and relate to, for example, population size, composition and distribution.

Te Ara Tuatahi Pathway One – 'Development of whānau, hapū, iwi and Māori communities', as a domain is primarily concerned with Māori community development, and in the context of this HNA has a focus on whānau level development. Indicators in this domain are Māori-specific, and therefore progress in this domain is less likely to be funder/provider driven and instead will be characterised by whānau ownership – that is, whānau ownership of their own health development.

Te Ara Tuarua Pathway Two – 'Māori participation in the Health and Disability Sector' as a domain includes measures that provide some gauge of Māori participation in decision-making, Māori provider capacity and capability, and Māori health workforce development.

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[1] King A and Turia T. He Korowai Oranga: Māori Health Strategy (2002). Ministry of Health, Wellington.

Te Ara Tuatoru Pathway Three – 'Effective health and disability services' encapsulates measures that gauge progress towards addressing health inequalities for Māori, improving mainstream effectiveness, providing highest-quality service, and strengthening Māori health information.

Te Ara Tuawha Pathway Four – 'Working across sectors' is concerned with encouraging initiatives with other sectors that positively impact Whānau Ora. Indicators in this domain relate to determinants of health and intersectoral collaboration.

Data Collection

This Whānau Ora HNA draws on both quantitative and qualitative information sources. Quantitative data are, in the main, drawn from sources through which routinely collected data are available. Qualitative data are drawn primarily from engagement with local Whānau Ora stakeholders including Māori whānau living in Taranaki, Māori health providers, Māori health professionals and iwi representatives.

It is important to note that the wellbeing of whānau cannot be measured through the simple addition of measures of the health and wellbeing of individual members. That approach, instead, tells us about the health and wellbeing of a group of individuals. Similarly, the types of indicators of most relevance to measuring the vitality of other Māori social structures, such as iwi (e.g. representative iwi structures, assets held by iwi on behalf of its membership) are not necessarily a direct reflection of the wellbeing of whānau. Rather, while measures that relate to other levels (e.g. individuals, marae, hapū, iwi and Māori communities) will be relevant, in isolation they do not capture Whānau Ora. However, indicators have not yet been developed to measure many of the concepts that underpin Whānau Ora such as manaakitanga and kaitiakitanga. As well, it is unclear how to best capture the intergenerational transfer function of whānau, that is, for example, the capacity for intergenerational care and transmission of cultural values. Therefore, the extent to which Whānau Ora can be directly measured is constrained and there has been some reliance on proximate measures at a variety of levels while concurrently seeking to maintain a clear focus on the whānau collective.

For these and other reasons, indicators included in the monitoring framework are not definitive. While efforts have been made to include Whānau Ora indicators that extend beyond conventional health field measures, to include those that are linked to determinants of health, overall the measures reflect the range of regular data sources that were able to be identified. Given this limitation, data gleaned through engagement with Māori stakeholders have been important sources of information.

KEY FINDINGS

DEMOGRAPHY

At the 2006 Census, 15,816 Māori were resident in Taranaki; Māori make up 15.2% of the total Taranaki DHB population. The Māori population in Taranaki is growing much faster than the non-Māori population and is very young compared with the overall population. Just over half of Māori living in Taranaki affiliate with one of the eight iwi in the Taranaki Region.

TE ARA TUATAHI PATHWAY ONE
DEVELOPMENT OF WHĀNAU, HAPŪ, IWI AND MĀORI COMMUNITIES

This pathway is primarily concerned with Māori community development, and in the context of this HNA would ideally focus on whānau level development. However, indicators and associated regional data sources for this pathway are currently limited. This is not problematic for this Whānau Ora HNA to the extent that the development and use of these indicators is unlikely to be funder/provider driven but rather driven by Māori collectives as an expression of self-determination.

Māori community and stakeholder feedback in this pathway suggests that the Māori community has a limited capacity to engage with work around Whānau Ora, and in this context Māori community development at whānau, marae, hapū and iwi levels was important. A need to engage whānau in preventative and aspirational activities was identified. At the whānau level, there was recognition that work is required to strengthen whānau cohesion so that whānau are better positioned to exercise the positive functions of whānau such as collective responsibility, caring for whānau members and aspirational planning. Consultation feedback also indicated the importance of strengthening cultural identity as a mechanism to achieve health gain.

According to the 2006 Census 72% of Māori resident in Taranaki were able to name at least one iwi affiliation, which may reflect a felt connection among local Māori to iwi. Participation in Māori-medium education provides an indication of a level of interest among Māori living in Taranaki and others in strengthening te reo. More than 300 children were enrolled in Kōhanga Reo and Māori immersion early childhood education centres across Taranaki. Also, in Taranaki there are seven schools with 462 students enrolled in education at te reo immersion Levels 1 to 4a. According to 2006 Census data, 20.4% of Māori living in Taranaki can hold a conversation about everyday things in te reo Māori and other data indicate an increasing number of Māori adults with te reo proficiency at a range of levels. Preliminary findings from a Te Puni Kōkiri marae development survey indicate that marae are a key whānau resource that are regularly utilised by whānau. However, available data does not provide an indication of the proportion of whānau who actively engage with marae. While a number of marae offer wānanga to strengthen localised Māori knowledge and practices, there are widespread concerns for marae regarding the potential loss of history and tikanga/kawa. It is apparent that despite current efforts, much ongoing work is likely required to strengthen the whānau cultural knowledge and skill base required to best ensure the optimal functioning of marae as a repository of Taranaki Māori culture and an environment within which Taranaki Māori cultural values are given free expression.

In 2008, BERL Economics were commissioned by Venture Taranaki Trust and Tui Ora Limited to develop an economic profile of Māori in the Taranaki Region. The report estimated a total Māori asset base in Taranaki of around $770 million.

TE ARA TUARUA – PATHWAY TWO
MĀORI PARTICIPATION IN THE HEALTH AND DISABILITY SECTOR

There are a number of mechanisms for Māori to participate in the governance and delivery of health services locally. Te Whare Pūnanga Kōrero (TWPK), the Iwi Relationship Board, is the primary vehicle for the DHB's relationships with iwi of Taranaki. As well, Māori are represented on the TDHB Board, the Hospital Advisory Committee and the Community & Public Health Advisory Committee/Disability Support Advisory Committee. There are two PHOs operating in the Taranaki Region. The National Hauora Coalition is a national coalition of Māori-led PHOs and the Midlands Regional Health Network (which includes Tui Ora Limited a Māori development organisation that umbrellas 17 Māori providers). Māori providers in Taranaki deliver a variety of health care services within kaupapa Māori frameworks. Māori provider capacity and capability building was identified through consultation as a health care priority and feedback also indicated a demand for access to rongoa.

Taranaki DHB regularly collects information on its workforce. The proportion of Māori in the DHB workforce is 7%. Māori tend to be working in areas that require lower levels of formal qualifications and are particularly under-represented in key areas such as Medical, Nursing and Management categories. The highest proportions of Māori staff are found in Allied Health (10.9%) and Support (10.6%) categories. Māori health workforce development was identified through community engagement as a priority.

TE ARA TUATORU — PATHWAY THREE
EFFECTIVE HEALTH AND DISABILITY SERVICES

There are substantial ethnic inequalities in health between Māori and non-Māori living in Taranaki, as measured by life expectancy, avoidable mortality, and self-reported health status. For Māori in the Taranaki Region, the leading causes of avoidable mortality are ischaemic heart disease, lung cancer, diabetes, and chronic obstructive pulmonary disease (COPD). The leading causes of avoidable hospitalisation in Māori are angina and chest pain, asthma, dental conditions and respiratory infections. The leading causes of ambulatory sensitive hospitalisation among Māori children and young people are dental conditions, asthma and respiratory infections such as pneumonia. These leading causes differ between Māori and non-Māori, indicating that priorities for intervention will differ between the two population groups.

In this context, it is not surprising that Māori living in Taranaki have a greater exposure to risk factors than non-Māori. Some 47% of Māori females and 38% of Māori males are regular smokers. The New Zealand Health Survey 2006/07 indicates that 64% of Māori males and 62% of Māori females were classified as overweight or obese, compared to 55% of non-Māori males and 53% of non-Māori females. As well, only around 61% of Māori females and 45% of Māori males in the Taranaki Region are consuming the recommended minimum amount of fruit (two serves) and only 62% of Māori females and 51% of Māori males consume the recommended minimum amount of vegetables (three serves) each day. Māori mothers are also much less likely to exclusively breastfeed their infants than other ethnic groups. A higher proportion of Māori resident in the Taranaki Region reported potentially hazardous drinking behaviours compared to non-Māori from the New Zealand Health Survey 2006/07. Taranaki teenage pregnancy rates in Māori women aged 15–19 years are much higher than that of non-Māori (92 per 1,000 compared to 15.8 per 1,000). Furthermore, Māori are under-represented in terms of utilisation of preventative care such as breast screening and cervical screening.

For Taranaki around 58% of Māori females and 70% of Māori males in the New Zealand Health Survey (2006/07) reported at least 30 minutes of moderate physical activity on at least five days of the week (Figure 9). These levels are higher than non Māori but the differences are not statistically significant. The proportion of Māori children fully immunised at the age of 24 months in the Taranaki Region has increased due to proactive measures taken to reduce ethnic inequalities in this area.

These risk factors, protective factors, and patterns of health service utilisation are modifiable. Moreover, they all have a major impact on health conditions for which there are inequalities in morbidity and mortality and that were identified through data review as areas of demand and need for health services for Māori living in Taranaki: chronic conditions (e.g. diabetes, respiratory disease including COPD and asthma), cardiovascular disease, cancer, mental health, alcohol and drug issues, disability, hearing services, oral health care and ‘close contact’ infectious diseases. Maternity care, services for men and palliative care were also identified through community and stakeholder engagement as issues of concern for Māori.

Much more needs to be done to improve access to health services at all levels for Māori in the Taranaki Region. This is evident from the review of patterns of health service utilisation for preventative care/screening, primary care and outpatient care. Māori in Taranaki report: higher levels of unmet need for GP care compared to non-Māori; they are less likely to be enrolled with a PHO compared to those of 'Other' ethnicity; they are less likely to receive medication for high cholesterol and high blood pressure than non-Māori despite higher need in terms of cardiovascular disease; Māori diabetics are less likely to receive annual diabetes checks; and they have much higher "did not attend" (DNA) rates for outpatient appointments (although DNA rates for the Taranaki DHB population are consistently lower than for national figures). Acute readmission rates for Māori are also higher than for non-Māori in Taranaki.

Māori community and stakeholder feedback in this pathway identified improved access to quality health care across the Taranaki Region (i.e. addressing geographical barriers to access in Central and South Taranaki) and Whānau Ora service provision as high priorities. Consultation indicated very high support for Whānau Ora service provision as a response to the intensive practical support needs of whānau and a variety of service delivery issues (e.g. lack of current whānau oriented provision, poor access to information, fragmentation of services, the need for skilled advocates/navigators and the development of a culturally competent workforce). Furthermore, feedback from community engagement consistently raised strong concerns about access to primary health care and the need for strengthened health promotion activities was also noted. At the secondary level, surgical waiting times and early discharge from hospital (e.g. from maternity wards following delivery) were identified as concerns.

Improving the quality of Māori health information to enable effective service delivery and monitoring remains an area of ongoing attention.

TE ARA TUAWHA — PATHWAY FOUR
WORKING ACROSS SECTORS

Based on NZDep (2006), there are different patterns of deprivation for Māori and non-Māori in Taranaki. Non-Māori are over-represented in the wealthiest socio-economic deciles (1 and 2) and Māori are over-represented in the poorest socio-economic deciles (9 and 10). This is consistent with national data demonstrating systematic inequalities in access to social and economic determinants of health for Māori.

Māori are more likely to receive income from salaries and wages and benefits and less likely to receive income from being self-employed, receiving interest, dividends, rents, superannuation or other investments. Māori are over-represented among those earning less than $10,000 per annum and under-represented among those earning over $30,000 per annum compared to non-Māori.

Māori are more likely to be without access to a car at home. Even though some may have access to a car, transport may still be a barrier in accessing health and other services due, for example, to the costs of registration and warranting of vehicles. In Taranaki, 40% of Māori compared to 55% of non-Māori own their own homes and Māori are almost twice as likely as non-Māori to occupy rental accommodation.

At the time of the 2006 Census, 57% of Māori completed school compared to 71% of non-Māori and Māori demonstrated lower levels of educational attainment relative to non-Māori. National data demonstrate that Māori tend to have lower occupational status and the pattern for Māori in

Taranaki is the same, with the highest number in the labourers' category. Māori men and Māori women are more likely 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.

Engagement with whānau and other Māori stakeholders strongly emphasised the importance of addressing the determinants of health, particularly socio-economic determinants. Intersectoral collaboration was identified as one mechanism through which the Health and Disability Sector could contribute to work to increase Māori access to determinants of health. It was also acknowledged that due to limited access among local Māori to determinants of health, whānau living in Taranaki tended to be in survival mode rather than developmental mode. Therefore, broader aspirations were often not considered as whānau struggle to meet the requirements of basic living (e.g. food, quality housing). Addressing determinants of health was also often identified as a strategy to improve access to quality health care. Feedback from consultation frequently referred to poverty and financial barriers to health care and related needs.

DATA ISSUES

The challenge remains as to how community goals and aspirations for Whānau Ora can be translated into measureable targets that the DHB and other stakeholders can affect within reasonable timeframes (e.g. that enable progress to be tracked over a five-year period). Furthermore, consideration is required as to the levels at which indicators should be able to measure progress. Regional indicators will be important in order to ensure that measures capture progress for all whānau, including those who are 'hard to reach'. At the same time, the impacts of initiatives carried out by individual providers require measurement and much activity is already underway with regard to developing caseload indicators. While government agencies, including DHBs, will continue to be most effective in collecting data related to adverse events, iwi and other Māori groups may be more interested and take a leading role in the development of indicators that reflect positive Whānau Ora achievements such as health literacy or te reo Māori usage. Ideally, data should be collected in both of these domains in order to provide a balanced view of progress towards the achievement of Whānau Ora.

PRIORITY AREAS

The factors used to guide the Whānau Ora priority areas for intervention were identified as - responsiveness to intervention by the Taranaki DHB and service providers; burden on whānau; consistency with local Māori aspirations for Whānau Ora; Whānau Ora efficacy; extent of ethnic inequality and data quality. The evidence appraisal process is made explicit in the report in order to facilitate a transparent process for priority setting. Any process of priority setting relies on both best available evidence and the exercise of good judgement. Within the constraints of the project, this Whānau Ora HNA has sought to access the best available data and to draw on intersectoral and Māori stakeholder input throughout the Whānau Ora HNA in an effort to ensure that identified priorities are evidence-based and reflect community aspirations for Whānau Ora.

The following priority areas for action are identified.

Te Ara Tuatahi Pathway One – Development of whānau, hapū, iwi and Māori communities

Whānau, hapū, iwi and Māori community development as a basis for Whānau Ora was identified as a priority area through Māori engagement. However, progress in these areas will necessarily be characterised by Māori ownership and will be driven by Māori rather than by funders and providers.

The challenge for funders and providers will be identifying ways in which they may take a facilitating role, without taking leadership and therefore risking engendering dependency.

Te Ara Tuarua Pathway Two – Māori participation in the Health and Disability Sector
Building the capacity and capability of Māori providers and the Māori health workforce were identified through Māori engagement as priority areas. The need to strengthen the Māori health workforce was also supported through data review.

Te Ara Tuatoru Pathway Three – Effective health and disability services
Community engagement identified increased access to health services at all levels, and particularly at the primary health care level as a priority. This is supported by the review of data relating to patterns of health service utilisation for preventative care/screening, primary care, DNA rates for outpatient care, and ambulatory sensitive hospitalisations. Improving geographically equitable access to quality health care across the Taranaki Region and the implementation of Whānau Ora oriented service provision were also identified through community engagement as high priority areas.

The following have been identified as priorities in terms of protective and risk factors and preventative care; smoking, alcohol and drug issues, breastfeeding, immunisation, breast screening and cervical screening. The importance of health promotion for whānau to reinforce protective factors and mitigate risk factors was emphasised in community engagement. Priority health conditions identified in this Whānau Ora HNA were; diabetes, cardiovascular disease, lung cancer, breast cancer, respiratory disease (i.e. COPD and asthma), oral health, mental health and disability.

Te Ara Tuawhā Pathway Four – Working across sectors
There is clear evidence that Māori living in Taranaki have poor access to socio-economic determinants of health, and this is reflected in high relative levels of deprivation compared to non-Māori. It is also reflected in barriers to health care and related needs (e.g. ability to pay for service provision and access to transport) identified through community engagement. The importance of addressing determinants of health through intersectoral collaboration (e.g. to improve access to social services) was consistently highlighted as a priority area during community engagement. There is much potential for Taranaki DHB to actively participate in, and in some instances take a leadership role as champions or advocates, in intersectoral activities that contribute to Whānau Ora.

RECOMMENDATIONS

It is recommended that the Whānau Ora Health Needs Assessment is utilised by the Taranaki DHB, health and disability providers and intersectoral partners to inform priority setting and action to support the achievement of Whānau Ora for Māori living in Taranaki.

1. Introduction and Framework

1. INTRODUCTION

1.1 WHY CARRY OUT A WHĀNAU ORA HEALTH NEEDS ASSESSMENT FOR MĀORI LIVING IN TARANAKI?

District Health Boards (DHBs) are required under the New Zealand Public Health and Disability Act (2000) to regularly investigate, assess and monitor the health status of their resident population. This involves identifying factors that may adversely affect the health status of the population and assessing the health needs of the population (Clause 23(1) (g)).

A Health Needs Assessment (HNA) is a systematic method to identify a population's unmet health and health care needs, identify inequalities in health and access to services and determine priorities for the most effective use of resources taking into account the capacity of a population to benefit from intervention.[2] Therefore, HNAs are a way for DHBs to meet the requirements of the Act while providing evidence to inform decision-making with regard to health service planning, funding, contracting and provision.

Improving Māori health is a priority for the Taranaki DHB. Understanding the health needs of Māori living in Taranaki is necessary in order to determine priority areas for service planning for Māori that will lead to improved health outcomes and reduced inequalities in health. A Whānau Ora HNA provides a systematic method to assess the health needs of Māori living in Taranaki.

In the context of extensive and current Māori and Government support for Whānau Ora it has been a logical choice as the overarching framework for this HNA. While Whānau Ora has been widely used and variously defined by Māori over many years, the term gained greater currency within the Health and Disability Sector through the release of He Korowai Oranga, the Māori Health Strategy[3]. He Korowai Oranga sets the direction for Māori health development in the Health and Disability Sector. The Strategy makes explicit the responsibility of public sector agencies (including DHBs) for supporting the health of Māori not only as individuals, but as whānau. The overarching aim of He Korowai Oranga is defined as "Whānau Ora - whānau supported to achieve their maximum health and wellbeing". More recently, Whānau Ora has become embedded as a broader policy framework through the work of the Taskforce on Whānau-Centred Initiatives[4]. Further, it is reinforced through the Health and Disability Sector initiative Better, Sooner, More Convenient Primary Health Care which includes provision for Whānau Ora Centres and Te Ao Auahatanga Hauora Māori: The Māori Health Innovations Fund which supports innovative Whānau Ora driven health initiatives.

1.2 WHERE DO HEALTH NEEDS ASSESSMENTS FIT INTO THE DHB PLANNING CYCLE?[5]

At a National level, priority areas for health and disability services such as those described in the Minister of Health's Letter of Expectation to DHBs, reflect the directions established by the two overarching Health and Disability Sector Strategies — The New Zealand Health Strategy[6] and the

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[2] Wright J, Williams DRR, Wilkinson J. The Development and Importance of Health Needs Assessment. 1998;316:1310-1313.).

[3] King A and Turia T. He Korowai Oranga: Māori Health Strategy (2002). Ministry of Health, Wellington.

[4] Taskforce on Whānau Centred Initiatives (2010). Ministry of Social Development, Wellington.

[5] Health and Disability Intelligence Unit. 2008. Counties Manukau DHB Health Needs Assessment September 2008. Manukau: Counties Manukau District Health Board.

[6] New Zealand Health Strategy (2000). Ministry of Health, Wellington.

New Zealand Disability Strategy[7]. These strategies are supported by other more targeted policy documents, such as He Korowai Oranga, that provide strategic direction in specific areas.

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 Regional Health Plans, Annual Plans and specific Māori health planning documents using the evidence compiled in the HNAs.

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

Figure 1 The DHB Planning Cycle

Source: Ministry of Health. 2000. Health Needs Assessment for New Zealand: An Overview and Guide. Wellington: Ministry of Health p6.

1.3 VISION AND PURPOSE OF THIS HEALTH NEEDS ASSESSMENT

The vision for this HNA is to contribute to Whānau Ora – Whānau supported to achieve their maximum health and wellbeing.

The purpose of this HNA is to:

a) Identify the unmet health and healthcare needs of Māori living in the Taranaki Region, with a focus on whānau.
b) Identify those unmet needs with the greatest potential to benefit from intervention.
c) Identify priority areas for intervention as a basis for evidence-based planning, funding, contracting and service delivery that will maximise Taranaki DHBs contribution to Whānau Ora.

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[7] Minister for Disability Issues: The New Zealand Disability Strategy. Making a World of Difference. Whakanui Oranga (2001). Ministry of Health, Wellington.

Within the Whānau Ora framework, attention will be given to broad determinants of health and therefore findings will be of relevance to Māori health providers, other health providers, a range of Māori stakeholders and to other agency partners.

1.4 TARANAKI WHĀNAU ORA MĀORI HEALTH NEEDS ASSESSMENT FRAMEWORK

The overarching Whānau Ora framework for the HNA has the following key elements:

- A Whānau Ora philosophy that gives Whānau Ora, as it relates to health, definition and distinctiveness.
- A conceptual foundation located within the context of the Treaty of Waitangi and theoretical understandings of the determinants of ethnic inequalities in health.
- Derived from He Korowai Oranga; an overall aim of Whānau Ora, two broad directions which acknowledge the partnership between Māori and the Crown, key threads which are consistent with the conceptual foundation and the four pathways which may be applied as a monitoring framework.
- A life-course orienting perspective.

1.4.1 PHILOSOPHY

The Whānau Ora philosophy articulated by the Whānau Ora Taskforce[8], as it relates to health, provides the basis of the philosophical underpinning for this HNA. The core of the philosophy, from a Taranaki DHB perspective, is a concern for whānau ownership of their own health development.

The implication for Taranaki DHB is that every service offered by the DHB should contribute to the generation of self-management knowledge and skills that are owned by whānau such that whānau are empowered to understand the cause of health conditions and concurrently act to prevent or manage health issues. The transfer of knowledge and skills to whānau in a way that enables integration into routine whānau practices that contribute to self-management is a key function of Whānau Ora health service provision.

The characteristics of a Whānau Ora philosophy that give Whānau Ora definition and distinctiveness, as it relates to health, are outlined below.

- Recognises a collective entity (whānau). Whānau Ora is not simply about the sum total of collective measures, but is primarily concerned with the ways in which the group functions as a whole to achieve health and wellbeing for its people.
- Endorses a group capacity for self-management and self-determination. Therefore, Whānau Ora activities will transfer knowledge and skills to whānau so that the group develops critical awareness and are best able to manage their own health and wellbeing. In essence, Health and Disability Sector activities contribute to whānau ownership of their own health development.
- Has an intergenerational dynamic. That is, Whānau Ora is about ongoing intergenerational transfers towards the goal of increasing the intergenerational sustainability of improved health outcomes. For example, in managing diabetes health services may immediately treat the problems but will also support knowledge transfer and prevention activities among the next generation in order to avoid the development of diabetes among descendants.

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[8] Taskforce on Whānau-Centred Initiatives 2010) pp29-30

- Is built on a Māori cultural foundation. Wellbeing is closely linked to Māori cultural identity and the expression of Māori values. Therefore, identity-based whānau health development will be a central strategy.
- Asserts a positive role for whānau within society. Health institutions should have the capacity to respond positively to whānau, and whānau should be able to negotiate freely with these institutions to achieve the best results.
- Can be applied across a wide range of social and economic sectors. Whānau Ora is equally concerned with socio-economic wellbeing, and cultural and environmental integrity. Therefore, the Health and Disability Sector should actively participate, and in some instances take a leadership role in intersectoral activities that contribute to Whānau Ora. As an example, the Health and Disability Sector will have access to health intelligence regarding determinants and their impact on health and is therefore best positioned to draw attention to evidence-based concerns and to urge colleagues in other sectors to take action to address determinants that are linked to health issues (e.g. poor educational attainment and unemployment).

1.4.2 CONCEPTUAL FOUNDATIONS

Conceptually, the HNA is located within the context of the Treaty of Waitangi and theoretical understandings of the determinants of ethnic inequalities in health.

The Treaty of Waitangi

The Public Health and Disability Act (2000) was the first social policy legislation to include reference to the Treaty of Waitangi. The Act places specific requirements on DHBs that are intended to recognise and respect the principles of the Treaty of Waitangi. These requirements are acknowledged by the Taranaki DHB, which has made explicit its commitment to the Treaty of Waitangi. Features of the Treaty of Waitangi of high relevance to the HNA are provision for: the protection of Māori wellbeing; a Treaty-based Māori right to equity in health outcomes; Māori participation that is most relevant in terms of Māori input into priority settings and protection of Māori custom which includes whānau structures and cultural integrity. Indigenous rights as outlined in the Treaty are aligned to global understandings as expressed in the United Nations Declaration on the Rights of Indigenous Peoples[9] which is endorsed by New Zealand. Articles of the Declaration refer to the right of indigenous peoples to health.

Determinants of Ethnic Inequalities in Health

Health inequalities are differences in health status between groups that are avoidable, unfair and unjust (Kawachi, Subramanian et al. 2002). The drivers of ethnic inequalities in health can be described in terms of basic causes and surface causes (Figure 2). Basic causes are the fundamental drivers of health outcomes (e.g. racism and economic and legal structures), while surface causes are risk factors and resources which mediate between ethnicity and health status (e.g. health practices and medical care). A focus on surface causes alone will be insufficient to address ethnic inequalities in health, if basic causes are not addressed. The implication for the HNA is that, ideally, the monitoring framework and associated indicators should be broad enough to gauge change in terms of addressing not only the surface causes of health inequalities but also the basic structural causes.

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[9] United Nations Declaration on the Rights of Indigenous Peoples. A/RES/61/295-Articles 3-7, 8(2), 10, 11(2), 28

Figure 2 Drivers of Ethnic Inequalities in Health

Source: Mills 2010 p54[10] *adapted from Williams 1997.*

The 'Pathways to Inequalities' framework (Reid and Robson 2007, based on Jones 2001[11]) provides further theoretical explanation for ethnic inequalities in health which places a stronger emphasis on the need for access to quality health care. The following three key pathways to ethnic inequalities in health are identified:

a) Differential access to the determinants of health or exposures leading to differences in disease incidence.
b) Differential access to health care.
c) Differences in the quality of care received.

The implication for the HNA is that the monitoring framework and associated indicators should include measures of determinants of health, protective factors and risk factors, access to care, and quality of care.

1.5 HE KOROWAI ORANGA — AIM, DIRECTIONS, KEY THREADS AND PATHWAYS

He Korowai Oranga provides key elements of the overarching Whānau Ora HNA framework (Figure 3), the aim of achieving Whānau Ora, two broad directions which acknowledge the partnership between Māori and the Crown, key threads which are consistent with the conceptual foundation outlined earlier and the four pathways which may be applied in the monitoring framework.

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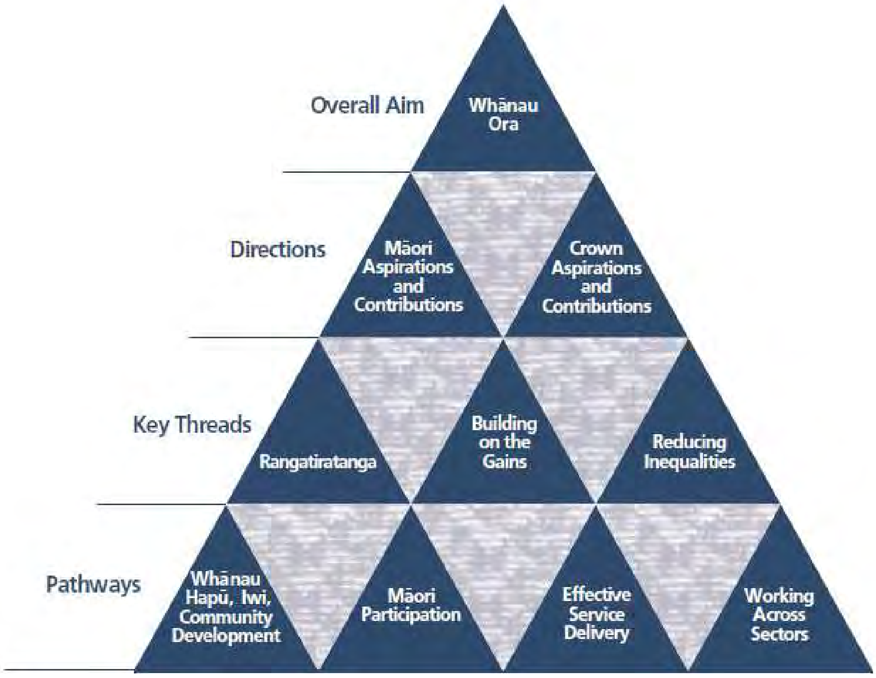
[10] Mills C. Health Employment and Recession: The Impact of the Global Crisis on Health Inequalities. Policy Quarterly 6(4), 53-59. (2010)

[11] Reid P. & Robson B. Understanding Health Inequalities. Hauora: Māori Stands of Health IV – A Study of the Years 2000-2005. Robson B., and Harris R. Te Ropu Rangahau Hauora a Eru Pomare: 3-10. Wellington.

Figure 3 An Overview of He Korowai Oranga



Source: Ministry of Health 2002 p4.

The rationale for drawing on He Korowai Oranga as a basis of the HNA framework is as follows:

- Firstly, Whānau Ora is the overarching aim of He Korowai Oranga, and therefore is consistent with the approach taken by the HNA. He Korowai Oranga is centred on Whānau Ora.
- Secondly, He Korowai Oranga sets the direction for Māori health development in the Health and Disability Sector and is therefore a known framework that is recognised and well understood within the Sector by the range of Māori health stakeholders.
- Thirdly, the Strategy makes explicit the public sector responsibility for supporting the health of whānau. "He Korowai Oranga places whānau at the centre of public policy." (piii)
- Lastly, the four pathways for action identified in the Strategy lend themselves as the core of a monitoring framework which may be populated with health indicators relevant to Whānau Ora.

The monitoring framework adopted for the HNA is comprised of five domains, four of which are based on the pathways identified in He Korowai Oranga. The monitoring framework is populated with indicators classified under each of the five domains. This monitoring framework used in the Whānau Ora HNA report may be readily adaptable for use within a variety of accountability frameworks. One such framework is Results Based Accountability (RBA). RBA is increasingly being adopted in the Health and Disability Sector and Appendix 4 makes explicit the way in which the Whānau Ora HNA Framework can be applied in a RBA model.

The first domain of the monitoring framework is 'Demography'. Aligned indicators measure the characteristics of the Māori population resident in Taranaki and relate to, for example, population size, composition and distribution.

Te Ara Tuatahi Pathway One – 'Development of whānau, hapū, iwi and Māori communities', as a domain is primarily concerned with Māori community development, and in the context of this HNA has a focus on whānau level development. Indicators in this domain are Māori-specific and therefore, progress in this domain is less likely to be funder/provider driven and instead will be characterised by whānau ownership – that is, whānau ownership of their own health development.

Te Ara Tuarua Pathway Two – 'Māori participation in the Health and Disability Sector' as a domain includes measures that provide some gauge of Māori participation in decision-making, Māori provider capacity and capability and Māori health workforce development.

Te Ara Tuatoru Pathway Three – 'Effective health and disability services' encapsulates measures that gauge progress towards addressing health inequalities for Māori, improving mainstream effectiveness, providing highest-quality service, and strengthening Māori health information.

Te Ara Tuawha Pathway Four – 'Working across sectors' is concerned with encouraging initiatives with other sectors that positively impact Whānau Ora. Indicators in this domain relate to intersectoral collaboration and determinants of health.

1.6 LIFE-COURSE ORIENTING PERSPECTIVE

The HNA applies a life-course orienting perspective in two ways. The first is by considering the health risks and protective factors that are linked to various life stages (e.g. pēpi, tamariki, pakeke, kaumātua) within the context of an integrated life-course continuum. That is, each life stage is influenced by preceding stages in a cumulative way. The HNA recognises the impacts of cumulative advantage and cumulative disadvantage that increase disparities between groups over time as some groups benefit from cumulative advantage over the lifetime and others are affected by cumulative disadvantage over time.[12] Therefore, where feasible indicators have aligned to various life stages they have been included in the monitoring framework.

Secondly, the HNA acknowledges the value of a life-course orienting perspective in terms of its application as a predictive tool that may be used to identify intervention points to address unmet health needs. For example, high rates of otitis media (infection of the middle ear) among Māori children will likely lead to under-achievement in education as hearing is impaired and limits the capacity of children to participate in educational settings. This, in turn, may have a range of implications in later life such as reduced or narrowed employment opportunities. Whānau access to, ownership and management of their health information through, for example, online whānau oriented software linked to individual member's health records, may provide a snapshot at any time to facilitate whānau planning in the short and longer term. At the whānau level, adopting a life-course orienting perspective enables whānau to plan and be proactive as opposed to laissez-faire and reactive. With regard to the HNA, a key value of a life-course orienting perspective is likely to be in considering how the HNA findings may be used to identify intervention points to address unmet whānau health needs both in terms of immediate issues and longer term consequences. Therefore, findings could be utilised to inform action to address the unmet health needs of populations within certain age bands immediately, but also to plan for the future health of the population.

1.7 DATA AND INFORMATION SOURCES

A range of data sources were identified to support the HNA. These are described in Appendix 3.

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[12] Edwards W. Taupaenui: Māori Positive Ageing – A Thesis Presented in Fulfilment of the Requirements for the Degree of Doctor of Philosophy in Public Health. (2010) School of Public Health, Massey University, Palmerston North.

1.8 METHODOLOGICAL ISSUES

It is important to acknowledge the limitations of data sources used in this report.

Measurement of Whānau Ora

The wellbeing of whānau cannot be measured through the simple addition of measures of the health and wellbeing of individual members. That approach, instead, tells us about the health and wellbeing of a group of individuals. Similarly, the types of indicators of most relevance to measuring the vitality of other Māori social structures, such as iwi (e.g. representative iwi structures, assets held by iwi on behalf of its membership) are not necessarily a direct reflection of the wellbeing of whānau. Rather, while measures that relate to other levels (e.g. individuals, marae, hapū, iwi and Māori communities) will be relevant, in isolation they do not capture Whānau Ora. However, indicators have not yet been developed to measure many of the concepts that underpin Whānau Ora such as manaakitanga and kaitiakitanga. As well, it is unclear how to best capture the intergenerational transfer function of whānau, for example, the capacity for intergenerational care and transmission of cultural values. Therefore, the extent to which Whānau Ora can be directly measured is constrained and there will be some reliance on proximate measures at a variety of levels while concurrently seeking to maintain a clear focus on the whānau collective.

For these and other reasons, indicators included in the monitoring framework are not definitive. While efforts have been made to include Whānau Ora indicators that extend beyond conventional health field measures, to include those that are linked to determinants of health, overall the measures reflect the range of regular data sources that were able to be identified. Given this limitation, information gleaned through consultation with Māori stakeholders has been an important source of largely qualitative supplementary information. Furthermore, stakeholder feedback has provided a key input to inform the prioritisation of health needs.

The challenge remains as to how community goals and aspirations for Whānau Ora can be translated into measureable targets that Taranaki DHB can affect within reasonable timeframes (e.g. that enable progress to be tracked over a five-year period). Consideration is required as to the levels at which indicators should be able to measure progress. Regional indicators will be important in order to ensure that measures capture progress for all whānau, including those who are 'hard to reach'. At the same time, the impacts of initiatives carried out by individual providers require measurement and much activity is already underway with regard to developing caseload indicators. While government agencies, including DHBs, will continue to be most effective in collecting data related to adverse events, iwi and other Māori groups may be more interested and take a leading role in the development of indicators that reflect positive Whānau Ora achievements such as health literacy or te reo Māori usage. Ideally, data should be collected in both of these domains in order to provide a balanced view of progress towards the achievement of Whānau Ora.

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 for the purposes of analysis to a single ethnic group using the priority system (Māori > Pacific peoples > Asian > European/Other). For example, a person who, when asked their ethnicity, selects both Māori and European, would only be included in the Māori 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 Māori over time is 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 number of people recorded as Māori in some health statistics (the numerator) may be different to the number of people recorded as Māori in the population Census (the denominator). Historically, this discrepancy has served to under-estimate rates of morbidity and mortality for Māori.

Adjustment for Undercounting of Māori

A number of data sources used for this report are known to undercount Māori, by inaccurately classifying some Māori as non-Māori when the ethnicity data are collected. This can serve to under-represent the true rates of diseases and hospitalisations for Māori 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 undercounting that has been identified for Māori at each age-group.

The New Zealand Cancer Register has been found (for 2000-2004) to undercount Māori by 2-15%, with the undercount increasing with older age (Robson & Harris, 2007). There is, therefore, potentially an underestimation of rates of Māori cancer registrations in the Taranaki Region.

Hospitalisation data (2003-2005) have been found to undercount Māori by 5-15% across all ages, again highest in older age, but also high in children (Robson & Harris, 2007). There is, therefore, potentially an underestimation of hospitalisation rates for Māori in the Taranaki Region.

The death registrations from the New Zealand Health Information Service (NZHIS) no longer need an adjuster, as this data set has most recently been found to have no difference in the recording of Māori compared to the Census data (Robson & Harris 2007).

Age Standardisation

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

Confidence Intervals

The confidence intervals give an indication of the precision associated with the survey point estimates. In this report, 95% confidence intervals are presented, where appropriate, for proportions, 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. If the two confidence intervals do overlap, the difference in point estimates 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 95% 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 population sample sizes 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.

Some data are based on small numbers of events, for example, infant mortality rates and suicide, and should be interpreted with caution. In some data sources, estimates have been prepared due to the small sample size for Taranaki and the under-representation of certain population groups in the Region. For example, the sample size for Taranaki DHB was small in the New Zealand Health Survey 2006/07, so data have been grouped with Bay of Plenty and MidCentral DHBs.

2. Demography

2. DEMOGRAPHY

2.1 INTRODUCTION

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 Māori population is relatively youthful compared to the total New Zealand population and is growing as a proportion of the total population. Therefore, alongside moral and Māori development imperatives, it is becoming increasingly important for the future of New Zealand as a whole that Māori are healthy and vital and best equipped to contribute to all spheres of New Zealand society. At the local level, understanding the demography of Māori living in the Taranaki DHB Region is a necessary precursor to informed planning to support Whānau Ora.

This section provides measures of the characteristics of the Māori population living in Taranaki and relates to population size, composition and distribution.

2.2 SIZE OF MĀORI POPULATION

Taranaki DHB serves 2.8% of the Māori population of New Zealand. At the 2006 Census, 15,816 Māori were resident in Taranaki; this represents the 14th highest number of Māori served by any of the 21 DHBs. However, Māori make up 15.2% of the total Taranaki DHB population which is slightly higher than the national proportion of 14%.

Table 1 Māori Population Living in Each DHB Region, 2006

DHB	Total Number Māori	% NZ Māori	Total Number Population	% DHB Population Māori
Auckland	29,847	5.3%	404,619	7.4%
Bay of Plenty	45,642	8.1%	194,931	23.4%
Canterbury	33,417	5.9%	466,407	7.2%
Capital and Coast	26,493	4.7%	266,658	9.9%
Counties Manukau	67,245	11.9%	433,083	15.5%
Hawke's Bay	33,903	6.0%	148,248	22.9%
Hutt	21,480	3.8%	136,101	15.8%
Lakes	31,377	5.6%	98,319	31.9%
Midcentral	26,712	4.7%	158,841	16.8%
Nelson Marlborough	10,950	1.9%	130,062	8.4%
Northland	43,530	7.7%	148,440	29.3%
Otago	11,466	2.0%	179,397	6.4%
South Canterbury	3,156	0.6%	53,877	5.9%
Southland	11,319	2.0%	106,824	10.6%
Tairawhiti	19,758	3.5%	44,463	44.4%
Taranaki	**15,816**	**2.8%**	**104,274**	**15.2%**
Waikato	67,476	11.9%	339,189	19.9%
Wairarapa	5,496	1.0%	38,613	14.2%
Waitemata	42,876	7.6%	481,614	8.9%
West Coast	2,916	0.5%	31,326	9.3%
Whanganui	14,424	2.6%	62,208	23.2%
Total	**565,329**	**100.0%**	**4,027,947**	**14.0%**

Source: 2006 Census Prioritised Ethnicity. Figures may not add up due to rounding.
NB: Otago and Southland DHBs have merged into the Southern DHB

2.3 POPULATION BY TERRITORIAL AREA

Taranaki DHB includes three Territorial Local Authorities (TLAs). The largest number of Māori are resident in the New Plymouth District (9,369). A larger proportion of the South Taranaki District population are Māori (20.7%).

Table 2 Māori Population by Territorial Authority, Taranaki, 2006

Territorial Authority	Māori	Non-Māori	Total	Percentage of the Population who are Māori
New Plymouth District	9369	59529	68898	13.6%
Stratford District	969	7923	8892	10.9%
South Taranaki District	5478	21006	26484	20.7%
Total TDHB	15816	88458	104274	15.2%

Source: 2006 Census, usually resident population. Prioritised Ethnicity. Figures may not add up due to rounding

2.4 POPULATION PROJECTION

The Māori population in Taranaki is growing much faster than the non-Māori population, which is projected to decline. By 2026 Māori are projected to make up 20.6% of the total Taranaki population. The Māori population in Taranaki is also growing faster than the Māori and non-Māori population nationally.

Table 3 Projected Population in the Next 20 Years by Prioritised Ethnicity, Taranaki and New Zealand, 2006 Base

Ethnicity		2006	2011	2016	2021	2026	% Increase 2006-2026
Taranaki DHB	Māori	17,280	18,730	20,160	21,410	22,730	31.54
	Non-Māori	90,125	91,115	90,605	89,445	87,690	-2.70
New Zealand	Māori	624,280	674,220	722,790	767,410	810,890	29.89
	Non-Māori	3,559,840	3,730,515	3,888,965	4,033,365	4,166,795	17.05

Source: Statistic NZ, Projections derived Sept 2011

Notes: Counts may not add up due to rounding. Medium Projections Assuming Medium Fertility, Medium Mortality, Medium Inter-ethnic Mobility and Medium Migration.: Statistics may differ from Table 2 as Table 3 is a projection not a census count.

2.5 BIRTH RATE

Māori birth rates are substantially higher than those of non-Māori in the Taranaki DHB region and consistent with national trends. This reflects higher Māori fertility rates and the relatively youthful Māori population structure and therefore greater number of Māori women of reproductive age. Birth Rates in Taranaki for the year ending June 2011 are higher than for New Zealand as a whole.

Table 4 **Live Births Registered Year Ending June 2011 and Live Birth Rate Per 1000 Female Population Aged 15-49 Years by Ethnicity of Mother**

	Taranaki DHB			New Zealand		
	Live Births - By Ethnicity of Child	**Female Population 15-49 years by ethnicity of Mother**	**Rate per 1000**	**Live Births- By Ethnicity of Child**	**Female Population 15 -49 years by ethnicity of Mother**	**Rate per 1000**
Māori	538	4385	122.7	18121	171995	105.4
Non Māori	1034	20007	51.7	44518	909498	48.9
Total	1572	24392	64.4	62639	1081493	57.9

Source: Statistics New Zealand.

2.6 GENDER COMPOSITION OF MĀORI POPULATION

Just under half of the Māori population residing within the Taranaki Region were female and just over half were males. These proportions are similar to the New Zealand male-female ratios.

Table 5 **Population Distribution by Prioritised Ethnicity and Gender, Taranaki, 2006**

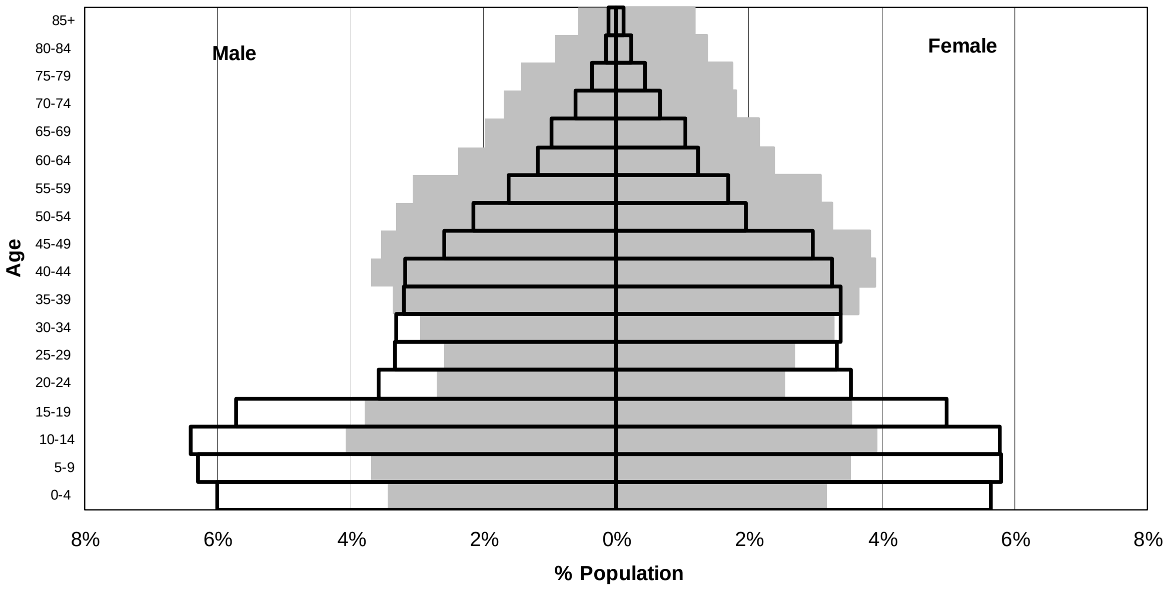
Ethnic Group	**Taranaki DHB**					
	Female Number	**Male Number**	**Total**		**Female % of Total**	**Male % of Total**
Māori	7,806	8,010	15,816		49.4%	50.6%
Non-Māori	45,249	43,212	88,461		51.2%	48.8%
Total	53,055	51,222	104,277		50.9%	49.1%

Source: 2006 Census Note: Counts may not sum to total due to rounding.

2.7 AGE COMPOSITION OF MĀORI POPULATION

The Māori population in Taranaki is very young compared to the overall populations as shown in Figure 4 below. For Māori, 35.9% of the population resident in Taranaki is under 15 years of age compared to 21.8% for the total population. The difference is even more marked for older Māori, with 4.7% of the Māori population resident in Taranaki aged over 65 years compared to 14.8% for the total population. This is, in part, a reflection of the lower Māori life expectancy relative to non-Māori.

Figure 4 **Age Structure of Taranaki DHB, 2010**
Māori Population (Black line) and Total Taranaki Population (Gray Shadow)



Source: Statistics NZ, Estimated Territorial Local Authority Population June 2010.

2.8 COMPOSITION OF HOUSEHOLDS IN TARANAKI

Māori living arrangements within the Taranaki DHB Region, although consistent with national trends, differ from that of non-Māori in ways that may indicate that Māori are experiencing the pressures of increased housing costs alongside possible preferences for intergenerational living.

Māori are more likely to live in households with three or more residents compared to non-Māori. (Figure 5) In 2006, in the Taranaki DHB region, 10.7% of children and young people (aged 0-24 years) lived in crowded households as compared to 16.5% nationally. There are marked ethnic differences in household crowding in Taranaki with 21.9% of Māori children and young people living in crowded households as compared to 6% of European children and young people. Crowding is defined using the Canadian Household Occupancy Standard (Craig et al 2007). Household overcrowding is more common in low income households[13] and is associated with a range of health problems including rheumatic fever (Baker M & Chakaborty, 1996[14]), meningococcal disease, (Baker M, McNicholas A, Garrett N, & et al, 2000[15]) and mental illness (Gabe J & Williams P, 1993[16]).

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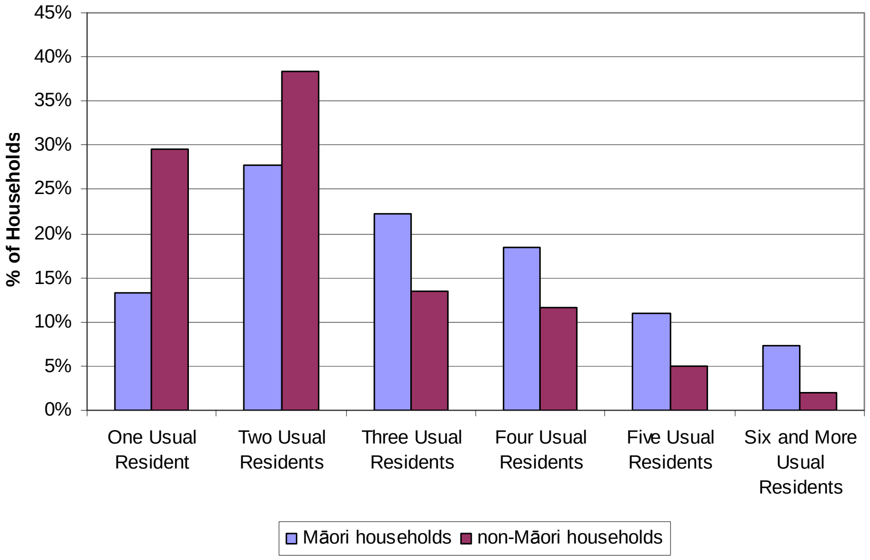
[13] Baker M., Zhang J., Howden-Chapman P. (2010). Health Impacts of Social Housing: Hospitalisations in Housing New Zealand Applicants and Tenants, 2003-2008. University of Otago, Wellington.

[14] Baker M., & Chakraborty M. (1996). Rheumatic Fever in New Zealand in the 1990s: Still Cause for Concern. *N Z Public Health Rep, 3*(3), 17-19.

[15] Baker M., McNicholas A., Garrett N., & et al. (2000). Household Crowding a Major Risk Factor for Epidemic Meningococcal Disease in Auckland Children. *The Pediatric Infectious Disease Journal, 19*, 983-990.

[16] Gabe J., & Williams P., (1993). Women, Crowding and Mental Health. In Burridge R & D. Ormandy (Eds.), Unhealthy Housing: Research, Remedies and Reform (pp. 191-208). New York: Spon Press

Figure 5 **Taranaki Household Composition by Ethnicity, 2006**



Source: Census 2006. Note (1) Ethnicity is a personal indicator and as such people stated each ethnic group, whether as their only ethnic group or as one of several ethnic groups. Where a person reported more than one ethnic group, they have been counted in each applicable group. Based on this definition any household with at least one person indicating Māori ethnicity meets the criteria used.

2.9 IWI AFFILIATIONS

Just over half of Māori living in Taranaki affiliate with one of the eight iwi in the Taranaki Region – Ngā Ruahine, Ngāti Ruanui, Taranaki Iwi, Ngā Rauru, Te Atiawa, Ngāti Maru, Ngāti Mutunga and Ngāti Tama. Most Taranaki iwi are not large compared to major iwi in other regions, with membership ranging from less than 1,000 to around 13,000. The largest iwi is Te Atiawa, with 12,852 individuals identifying their affiliation in the last Census. Most Taranaki Māori currently reside outside of the Taranaki Region. The Taranaki Region iwi boundaries are indicated in the map listed as Figure 6. There are eight commonly recognised iwi in Taranaki. For the purposes of this report only data for Tangahoe and Pakakohi in the South Taranaki District are included with Ngāti Ruanui.

Table 6 **Māori Iwi Affiliations, Taranaki, 2006**

Iwi	Iwi Population Resident in Taranaki	Total Iwi Population	Percentage of Iwi Population Taranaki
Ngā Ruahine	1, 449	3,726	25.4%
Ngāti Ruanui	1,614	7,035	12.8%
Taranaki	1,473	5,352	27.5%
Ngā Rauru	726	4,047	17.9%
Te Atiawa (Taranaki)	2,721	12,852	21.2%
Ngāti Tama (Taranaki)	306	1,167	26.2%
Ngāti Mutunga (Taranaki)	516	2,094	24.6%
Ngāti Maru (Taranaki)	192	735	26.1%

Source: Census 2006.
Note: Individuals are able to identity more than one iwi affiliation and therefore may be counted more than once where there are multiple Taranaki iwi affiliations.

Census data are also collected on people who affiliate to iwi derived from Taranaki as shown in Table 7.

Table 7 Other Taranaki Māori Iwi Affiliations

Iwi	**Total Iwi Population**
Te Ati Awa ki Whakarongotai	615
Te Ati Awa (Wellington)	1,728
Te Ati Awa (South Island)	2,433
Ngāti Tama ki te Upoko o te Ika	210
Ngāti Mutunga ki Wharekauri	1,389
Ngāti Tama (South Island)	381
Te Ati Awa (Not further defined)	4,644
Ngāti Mutunga (Not further defined)	729
Ngāti Tama (Not further defined)	606

Source: Census 2006.

Note: Individuals are able to identify more than one iwi affiliation and therefore may be counted more than once where there are multiple Taranaki iwi affiliations.

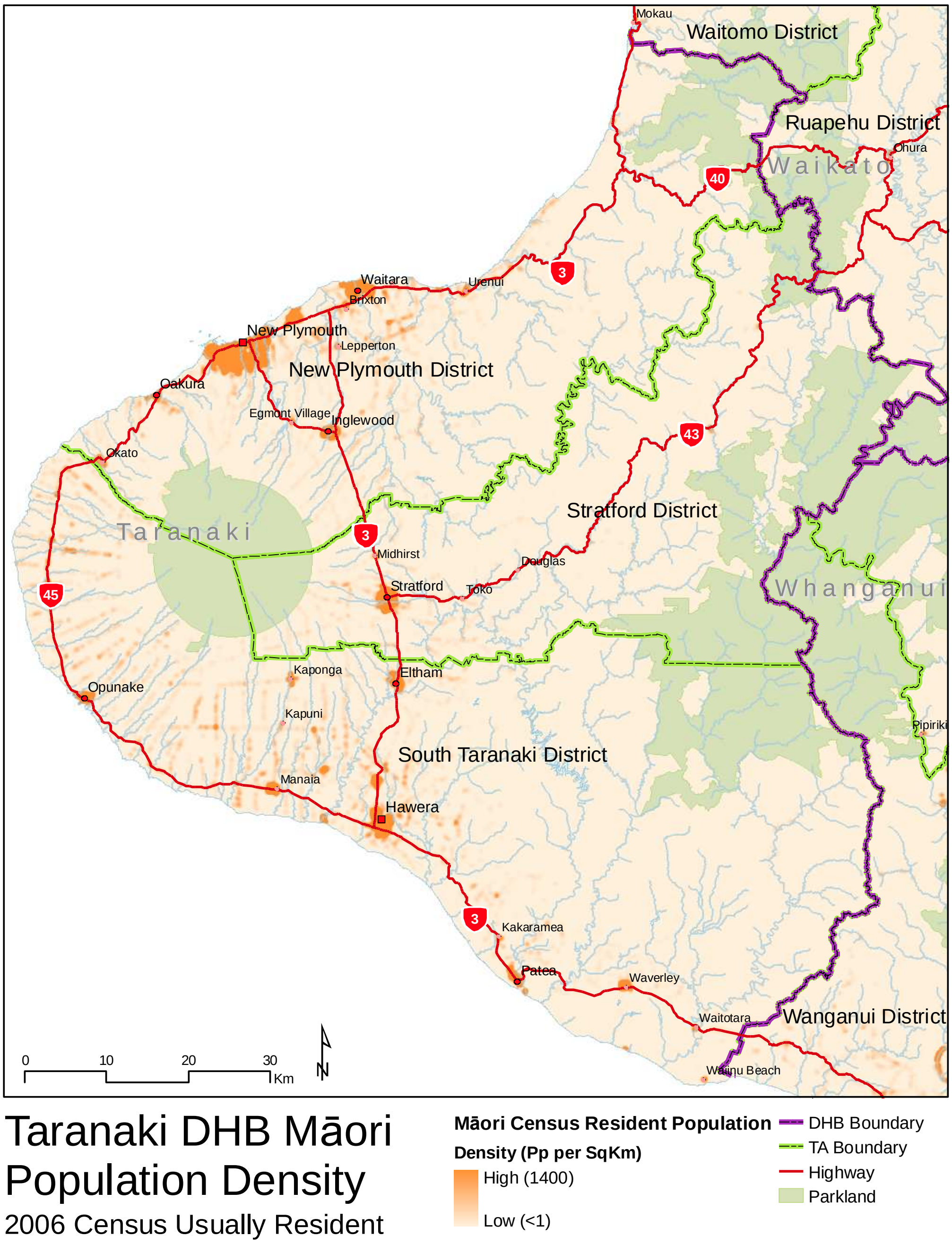
Figure 6 **Iwi Rohe and Marae in Taranaki**

Source: TDHB Māori Health Team. Extracted from Community Action Project Evaluation Report (2010).

2.10 POPULATION DENSITY

Figure 7 shows the Māori population density within the Taranaki Region. The population is most concentrated in New Plymouth followed by a number of towns — Waitara, Inglewood, Stratford, Eltham, Hawera, Patea, Waverley, Normanby, Manaia, Kaponga, Opunake, Okato and Oakura. The rohe of Te Atiawa and Ngāti Ruanui have the most concentrated Māori population.

Figure 7 **Māori Population Density, Taranaki, 2006**



3. TE ARA TUATAHI PATHWAY ONE

Development of Whānau, Hapū, Iwi and Māori Communities

3. TE ARA TUATAHI – PATHWAY ONE
Development of Whānau, Hapū, Iwi and Māori Communities

3.1 INTRODUCTION

'Te Ara Tuatahi Pathway One – Development of whānau, hapū, iwi and Māori communities' as a monitoring framework domain is primarily concerned with Māori community development at a range of levels. In the context of this HNA there is a particular interest in whānau level development or whakawhanaungatanga (the nurturing of kinship relationships, whānau cohesion and the reinforcement of whānau obligations and commitments[17]). Indicators in this domain are Māori-specific, and therefore progress in this domain is less likely to be funder/provider driven and instead will be characterised by whānau ownership – that is, whānau owning their own development. Funder/provider leadership in this area may risk engendering dependency.

The associated indicator set includes measures that are relevant at the whānau, hapū, iwi, and Māori community levels. For some of these indicators, regularly available regional data sources are able to be identified and therefore there is the potential to track progress over time. For others, there is no consistent data source currently available and so information is included from one-off pieces of work. There are also a number of potential indicators for which data would need to be collected in order for the information to be included and this is beyond the scope of this report. For example, accessing data that relates to iwi vitality (such as service provision to whānau by iwi, representative iwi structures/decision-making bodies, extent to which iwi have a proactive role in environmental protection) would in most circumstances require direct approaches to iwi.

Ideally, specific whānau-level indicators would be used that are able to gauge the wellbeing of the whānau collective at the whānau level. For example, the indicator domain 'Whakawhanaungatanga/Whānau Cohesion'[18] might include: measures of tātau tātau/collective responsibility (e.g. degree and quality of whānau contact, mechanisms for accountability to whānau, mechanisms for internal conflict resolution), mana tiaki/guardianship (e.g. reo Māori and culture practiced to transmit values and knowledge, whānau marae, whānau trusts, whānau assets increase in value), manaakitanga – caring (e.g. kaumātua housing, shared responsibility for childcare, tangihanga) and whakatakato tūtoro/planning (e.g. planning hui, provision of access to vocational guidance and pursuit of Waitangi Tribunal claims). There are no regional data sources currently available that enable use of these indicators for the purpose of the HNA. However, this is not problematic to the extent that the development and use of these indicators is unlikely to be funder/provider driven but rather driven by Māori collectives as an expression of self-determination. Therefore, the purpose of identifying these measures at this stage is to provide an example of indicator sets that may be further developed in the future by other groups.

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[17] Ratima MM, Allan GR, Durie MH, Edwards WJ, Gillies A, Kingi Te K, Waldon J. 1996. Oranga Whānau – Māori Health and Well-being and Whānau. Massey University, Palmerston North.

[18] Ratima MM, Allan GR, Durie MH, Edwards WJ, Gillies A, Kingi Te K, Waldon J. 1996. Oranga Whānau – Māori Health and Well-being and Whānau. Massey University, Palmerston North.

3.2 MĀORI COMMUNITY DEVELOPMENT

3.2.1 KNOWLEDGE OF IWI AFFILIATION

In the 2006 Census, 72% of Māori resident in Taranaki were able to name at least one iwi affiliation compared to 79% in New Zealand.

Table 8 Iwi (Total Responses) for Māori Descent, Taranaki and New Zealand, 2006

	Taranaki		New Zealand	
Area	**Number**	**Percent**	**Number**	**Percent**
Stated at least one Iwi	13,191	72.5%	512,328	79.6%
Iwi not known	3,906	21.5%	102,366	15.9%
Not elsewhere included	1,110	6.1%	29,328	4.6%
Total People, Iwi	18,204	100.0%	643,977	100.0%

Source: Census 2006. Figures may not add up due to randomised rounding

3.2.2 TE REO MĀORI

The Taranaki reo dialect is distinct with the most noticeable feature being that the 'H' is pronounced as a 'glottal' stop. As well, there are some words and sentence structures that are unique to the region[19]. Te Reo o Taranaki Trust has developed a number of initiatives to support and strengthen the distinctive reo of Taranaki.[20] According to the 2006 Census, 20.4% of Māori living in Taranaki could hold a conversation about everyday things in te reo Māori[21]. Census data indicate that there has been little change in the proportion of Māori living in Taranaki with conversational fluency in te reo over the ten year period from 1996-2006. However, regional data for Te Taihauāuru (Taranaki, Whanganui and Manawatū) from the 2001 and 2006 Surveys of the Health of the Māori Language, which involved face-to-face interviews, measurement of language proficiency and aspects of language usage, were promising. The surveys demonstrated that the amount of reo spoken in the home is increasing. This is a critical finding given that intergenerational language transmission (the process of language transfer between generations in daily interactions within whānau) underpins language revitalisation.[22]

The surveys also demonstrated an increasing number of Māori adults with te reo proficiency at a range of levels. For example, amongst Māori who can speak te reo Māori, at least fairly well, speaking proficiency increased from 16% to 25%, and listening proficiency increased from 29% to 41% between 2001 and 2006. As well, around half of Māori adults were dissatisfied with their proficiency level and indicated the desire to increase their language competency. The 2006 survey found that the level self-assessed proficiency in te reo varied by iwi, within the range of 17% to 34%. Table 9 considers the number of speakers belonging to an iwi from Te Taihauāuru that reside across

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[19] Sundgren, H. and R. Hond (2003). Towards a Strategic Development Plan for Taranaki Māori Language Report 1. Ngāmotu, Te Reo o Taranaki Charitable Trust.

[20] Edwards, W. and M.M.Ratima (2010). Review of Te Reo o Taranaki Trust Māori Language Revitalisation Strategies. New Plymouth: Te Reo o Taranaki Trust.

[21] Ministry of Social Development (2010). The Social Report 2010 Regional Indicators. Ministry of Social Development, Wellington.

[22] Spolsky, B. (2003). Reassessing Māori Regeneration. Language in Society, 32(4), 553-578.

the entire country. Because many people affiliate with more than one iwi some speakers will be included in a number of iwi groupings.

Table 9 Self-Assessed Proficiency in Te Reo Māori by Iwi in the Taranaki Region, 2006

Iwi Affiliation	Numbers Able to Converse in Māori[23]	Total Iwi Membership	Percentage Able to Converse in Māori
Taranaki Region	33	105	31
Ngāti Tama (Taranaki)	201	1,167	17
Ngāti Mutunga (Taranaki)	450	2,091	22
Te Ātiawa (Taranaki)	2,307	12,852	18
Ngāti Maru (Taranaki)	180	732	25
Taranaki	1,446	5,352	27
Ngā Ruahine	1,155	3,726	31
Ngāti Ruanui	2,259	7,590	30
Ngā Rauru	1,380	4,047	34

Source: Te Puni Kōkiri, 2008, The Health of the Māori Language in 2006, Wellington: Te Puni Kōkiri.

3.2.3 PARTICIPATION IN MĀORI-MEDIUM EDUCATION — PRESCHOOL

Participation in Māori-medium education provides an indication of the level of interest among Māori living in Taranaki and others in strengthening te reo. Te Kōhanga Reo is a Māori language and culture total immersion whānau programme for young children from birth to the age of six years. Approximately 300 children were enrolled in Kōhanga Reo across Taranaki as at July 2010. A list of Kōhanga Reo in Taranaki is provided in Table 11. Individual Kōhanga enrolment numbers are not routinely available. In addition to Kōhanga Reo, there are also Māori immersion early childhood education centres (ECEs) in Taranaki. Te Kopae Piripono, based in New Plymouth, is committed to the retention and enrichment of te reo me ngā tikanga Māori in Taranaki. In December 2011, it had 28 tamariki on the roll. Te Puawaitanga o Ngati Ruanui is an iwi Māori immersion early childhood education centre based in Hawera.

Table 10 Māori ECE Enrolments in Te Kōhanga Reo in all Service Types, Taranaki, July 2010

Territorial Authority	Te Kōhanga Reo Enrolments
New Plymouth District	119
Stratford District	14
South Taranaki District	166
Total	299

Source: Ministry of Education.

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[23] *People who can hold a conversation about everyday things in Māori.*

Table 11 Kōhanga Reo in the Taranaki Region, July 2011

Ngā Kōhanga Reo	Location	Local Authority
Nga Pekanga Te Kōhanga Reo	Waitara	New Plymouth District
Te Kōhanga Reo o Waitara	Waitara	New Plymouth District
Te Kopae Tamariki kia U Te Kōhanga Reo	New Plymouth	New Plymouth District
Te Rangiora Te Kōhanga Reo	Inglewood	New Plymouth District
Waiwhakaiho Te Kōhanga Reo	New Plymouth	New Plymouth District
Whakaahurangi Te Kōhanga Reo	Stratford	Stratford District
Kaikaapo Te Kōhanga Reo	Kakaramea	South Taranaki District
Kautu ki te Rangi Te Kōhanga Reo	Hawera	South Taranaki District
Manaia Te Kōhanga Reo	Manaia	South Taranaki District
Ngati Patea Te Kōhanga Reo	Patea	South Taranaki District
Ngati Ruanui Te Kōhanga Reo	Hawera	South Taranaki District
Ngatiki Te Kōhanga Reo	Hawera	South Taranaki District
Te Hunga Ririki Te Kōhanga Reo	Waverley	South Taranaki District
Te Namu (Teina) Te Kōhanga Reo	Opunake	South Taranaki District
Te Wai-o-Turi Te Kōhanga Reo	Patea	South Taranaki District
Te Taura Here i te Ao Kōhanga Reo	Eltham	South Taranaki District

Source: Ministry of Education.

3.2.4 PARTICIPATION IN MĀORI-MEDIUM EDUCATION— PRIMARY SCHOOLING

Enrolments in Māori immersion primary schooling provide an indication of, among other things, community commitment to fostering te reo. Māori-medium education refers to education where the medium of instruction at least 51% of the time is in te reo Māori. This is comprised of immersion Levels 1 and 2 as shown below. There is evidence that high quality provision of at least 50% immersion for a period of six years or more is the minimum level of immersion able to deliver reo Māori fluency for students.[24]

- Level 1: Curriculum taught in te reo Māori is used 81-100% of the time.
- Level 2: Curriculum taught in te reo Māori is used 51-80% of the time.

Bilingual education or lower level immersion refers to education at immersion Levels 3 and 4a.

- Level 3: Curriculum taught in te reo Māori 31-50% of the time.
- Level 4a: Curriculum taught in te reo Māori 12-30% of the time.

Where only some students are learning at these levels the school is defined as having immersion and/or bilingual classes. In Taranaki, there are seven schools with 462 students enrolled in education at immersion Levels 1 to 4a. These are shown in Table 12 below, and include Kura Kaupapa Māori, rumaki in English-medium schools (i.e. Level 1 or 2 immersion classes), and bilingual and/or lower level immersion classes. Kura Kaupapa Māori provides language total immersion education in a learning environment within which the philosophy and practice reflect Māori culture and values. The

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[24] May, S., Hill, R. and Tiakiwai S. 2004 Bilingual/Immersion Education: Indicators of Good Practice Wellington, Research Division, Ministry of Education.

purpose is the retention of te reo Māori, strengthening Māori identity and improving education outcomes among Māori children. There are currently no wharekura (Māori-medium secondary schooling) in Taranaki.

Table 12 Taranaki Schools with Students Enrolled in Education at Immersion Levels 1-4a, July 2011

Name	Student Level					
	Level 1	Level 2	Level 3	Level 4a	In Immersion	Total School Roll
Te Kura o Nga Ruahine Rangi	37				37	37
Manukorihi Intermediate		21	53	94	168	168
Ramanui School			67		67	67
Waitara East School		64			64	187
Te Kura Kaupapa Māori o Ngati Ruanui	47				47	47
Te Pi'ipi'inga Kakano Mai Rangiatea	59				59	59
Te Kura Kaupapa Māori o Tamarongo	20				20	20
Total	**163**	**85**	**120**	**94**	**462**	**585**

Source: Ministry of Education.
Notes: Schools are classified as Māori Medium schools based on roll data as at 1 March 2011.

3.2.5 SIZE OF THE MĀORI ASSET BASE

In 2008, BERL Economics were commissioned by Venture Taranaki Trust and Tui Ora Limited to develop an economic profile of Māori in the Taranaki Region.[25] The report included an estimate of the size of the Māori asset base and examined a number of asset types — Māori-owned businesses and proceeds from Treaty of Waitangi settlements. Other assets that contribute to the Māori asset base (e.g. land administered by the Māori Trustee) were not included in the more detailed analysis.

Calculation of the assets of Māori businesses is based on Māori who are employers or self-employed as identified in the 2006 Census combined with Annual Enterprise Survey data. This enables determination of the average assets per full-time equivalent (FTE) person by each industry.

Table 13 summarises the contribution to the Taranaki Māori asset base of Māori who are employers or are self-employed. Industries where there is no Māori activity have been omitted. There are 147 Māori employers and 287 Māori who are self-employed. Based on the analysis, Māori employers and self-employed Māori contribute $337 million to the Māori asset base.

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[25] Leung-Wai J. And K Sanderson. (2008). Report to: Venture Taranaki Trust/Tui Ora Limited Partnership. Māori in the Taranaki region: an economic profile – final report. Wellington: Berl Economics.

Table 13 **Māori Business Contribution to Māori Asset Base**

	Maori Employers (N)	Maori Self-Employed (N)	Maori Business Assets ($)
A Agriculture, Forestry and Fishing	32	62	109,834,013
C Manufacturing	6	24	33,474,716
E Construction	21	56	16,351,143
G Retail Trade	18	12	5,435,294
H Accommodation, Cafes and Restaurants	9	6	2,713,926
IJ Transport and Storage and Communication Services	9	6	52,150,823
L Property and Business Services	18	35	91,214,747
N Education	0	6	502,162
O Health and Community Services	6	9	9,036,286
Q Personal and Other Services	9	12	7,217,771
R Not Elsewhere Included	6	27	9,336,828
All Industries	**147**	**287**	**337,267,709**

Source: BERL (2008).

The majority of Māori employers in the Taranaki Region are in the primary industry, mainly agriculture, followed by construction, retail trade, and property and business services. Māori employers have business assets of $244 million in the Taranaki economy. The largest asset base is owned by the property and business services sector ($68.2 million), followed by the primary sector with $62.5 million of assets.

There are 287 Māori in Taranaki who are self-employed, as shown in Table 14 below. The majority of these are in the primary sector followed by construction, property and business services and manufacturing. Combined, self-employed Māori in Taranaki contribute $93.2 million worth of assets to the Taranaki Māori asset base. Just over half of the self-employed asset base is in the primary sector. The next largest asset base is in property and business services, with $23 million.

Table 14 **Asset Base of Māori Self-Employed**

Taranaki Maori Self-Employed	Maori Self-Employed (N)	Maori Mean Income ($)	Total Mean Income ($)	Maori Income Ratio (%)	Maori Business Assets ($)
A Agriculture, Forestry and Fishing	62	38,800	46,188	84.00	47,353,321
C Manufacturing	24	35,700	38,964	91.62	5,272,080
E Construction	56	35,100	37,362	93.95	5,647,705
G Retail Trade	12	29,200	27,354	106.75	847,126
H Accommodation, Cafes and Restaurants	6	30,400	22,713	133.85	467,718
IJ Transport and Storage and Communication Services	6	52,700	44,650	125.97	2,563,725
L Property and Business Services	35	41,700	52,400	85.49	23,048,646
N Education	6	30,500	45,400	114.84	502,162
O Health and Community Services	9	31,700	26,558	73.81	420,374
Q Personal and Other Services	12	25,000	31,400	95.68	925,473
R Not Elsewhere Included	27	24,000	26,128	73.45	6,148,403
All Industries	**287**	**35,000**	**32,675**	**85.60**	**93,196,731**

Source: BERL (2008)

Parininihi ki Waitotara Incorporation (PKW) is the largest Māori land incorporation in Taranaki and has 8,420 owners, the majority of whom are descendants of Taranaki Māori whose lands were confiscated by the Crown in 1865 (http://www.pkw.co.nz). PKW owns 20,000 hectares of productive farmland, and actively farms 10% of that land (operating dairy farms). The remaining 18,000 hectares remains perpetually leased. Therefore, while PKW administers the leases, the Māori owners do not have control over this land and apart from the 1997 amendments to the rental review rate and the review period and first right of refusal, the perpetual terms of the lease remain in place as they have since the early 1880s. PKW has aspirations to gain active control of the 18,000 hectares currently leased to farmers throughout Taranaki. Alongside investments in dairy farming, PKW also has commercial properties, forestry, and investments in crayfishing. PKW invests its profits in new assets, distributes dividends to its shareholders and contributes to other community initiatives and education scholarships through the PKW Trust. While a major portion of Taranaki Māori land assets are captured through PKW, there is still a significant amount of multiple Māori owned land in the region.

A further major component of the Māori asset base in the Taranaki Region is proceeds from Treaty of Waitangi settlements. Of the iwi in the Taranaki Region negotiating settlements with the Crown, four have settled (2008), one is at the advanced negotiations stage and one has begun negotiations. Table 15 below shows the settlements or stage of negotiation for the eight Taranaki Region iwi at 2008. Since this time Ngaruahine has commenced negotiations.

Table 15 Summary of Settlements for Iwi in the Taranaki Region

Nga Iwi o Taranaki	Settlement Status 2008	Date Settlement Legislated	Settlement Quantum
Ngati Tama	Settled	2003	$14,500,000
Ngati Ruanui	Settled	2003	$41,000,000
Ngaa Rauru Kiitahi	Settled	2005	$31,000,000
Ngati Mutunga	Settled	2006	$14,900,000
Te Atiawa (Taranaki)	*In advanced negotiations*		*$34,000,000*
Taranaki	*Negotiations begun*		
Ngati Maru (Taranaki)			
Ngaruahine			
Total Settled			**$101,400,000**

Source: Office of Treaty Settlements

The economic redress component of the four Treaty of Waitangi settlements concluded by 2008 was $101.4 million. The settlement quantum gives an indication of the capital asset available initially. For accuracy and conservatism, the contribution to the current asset base is the $101 million from actual settlements. Taking account of the assets discussed above, and other assets which are more difficult to quantify in terms of cash value (e.g. fisheries quota and marae), BERL Economics estimated a total Māori asset base in Taranaki of around $770 million.

3.3 MARAE DEVELOPMENT AND WHĀNAU

Te Puni Kōkiri's Marae Development Project has produced a Marae Development Questionnaire to collect information from participating marae. Taranaki marae representatives have been invited to participate in the project by completing the questionnaire. The questionnaire looks into everything from governance to how marae store, record and maintain their mātauranga and taonga, as well as the physical condition of marae and associated buildings. A summary of information from the Taranaki Region to date which is of particular relevance to whānau is provided below.

Of the 27 participating marae, most (25) identified as whānau marae (Table 16). Marae representatives identified a variety of ways in which information was communicated by marae to whānau, most commonly at hui (25), through newspapers (20), by email (19), by mail (15) and through word of mouth (12). All of the participating marae had been used by whānau during the previous 12 months (Table 16). Most marae were used at least twice per month (19), with five marae being used more than 11 times per month.

Inadequacies in marae human resource capacity are an area of concern. A substantial proportion of marae indicated inadequate availability of kaikaranga (ceremonial caller) (26%), kaikōrero (formal orator) (48%) and/or ringawera (host and caterer) (26% did not have enough ringawera for weekend hui and 48% did not have enough ringawera for weekday hui) to fulfil marae functions. In efforts to address this issue, some marae had held wānanga (group learning in accordance with Māori process) within the previous 12 months for kaikaranga and kaikōrero (19% and 81% respectively) (Table 16).

Responses to the survey indicated a high level of concern among marae at the potential of loss of areas of history or tikanga/kawa (70% were concerned). In apparent efforts to address these concerns, most marae (22) had held wānanga for whānau and hapū members about their history or tikanga/kawa (Table 16).

Overall these results indicate that marae are a key whānau resource that are regularly utilised by whānau. However, available data does not provide an indication of the proportion of whānau who actively engage with marae. While a number of marae offer wānanga to strengthen localised Māori knowledge and practices, there are widespread concerns for marae regarding the potential loss of history and tikanga/kawa. It is apparent that despite current efforts, much ongoing work is likely required to strengthen the whānau cultural knowledge and skill base required to best ensure the optimal functioning of marae as a repository of Taranaki Māori culture and an environment within which Taranaki Māori cultural values are given free expression.

Table 16 Selected Reponses from TPK Marae Development Survey 2011

	Yes	No	Don't Know	Percentage Yes
How many marae identified as whānau marae?	25	2	0	93%
Over the last 12 months have whānau used the marae?	27	0	0	100%
Does the marae have enough kaikaranga to conduct a hui without using kaikaranga from outside the marae	20	7	0	74%
Does the marae have enough kaikōrero?	14	13	0	52%
Does the marae have enough ringawera for weekend hui?	20	7	0	74%
Does the marae have enough ringawera for weekday hui?	14	13	0	52%
In the last 12 months has the marae had any wānanga for kaikaranga?	10	16	1	37%
In the last 12 months has the marae had any wānanga for kaikōrero?	5	21	1	19%
Is the marae concerned that I might lose any area of history or tikanga/kawa?	19	8	0	70%
Does the marae ever have wānanga for whānau and hapū members about their history or tikanga/ kawa?	22	5	0	81%

Source: TPK Marae Development Survey 2011

4. TE ARA TUARUA – PATHWAY TWO

Māori Participation in the Health and Disability Sector

4. TE ARA TUARUA – PATHWAY TWO
Māori Participation in the Health and Disability Sector

4.1 INTRODUCTION

DHBs are required under the provisions of the New Zealand Public Health and Disability Act (2000) "...to establish mechanisms to enable Māori to contribute to decision making and participate in the delivery of health and disability services." *Te Ara Tuarua Pathway Two* – Māori participation in the Health and Disability Sector includes the domains of increasing Māori participation in decision-making, increasing Māori provider capacity and capability and developing the Māori health workforce. This section of the report will summarise information relating to Māori involvement in DHB and PHO governance, investment in Māori providers and Taranaki DHB Māori health workforce profiles.

4.2 MĀORI INVOLVEMENT IN GOVERNANCE

An effective Māori voice at the Taranaki DHB governance level is important in giving effect to the DHB stated commitment to Whānau Ora. Figure 8 provides an overview of the Taranaki DHB governance structure, and the key mechanisms for Māori involvement in the governance of the DHB are outlined below.

a) Te Whare Pūnanga Kōrero

Te Whare Pūnanga Kōrero (TWPK), the Iwi Relationship Board, was established in 1993 as a local partner to the Central Regional Health Authority, and subsequently to the Ministry of Health. Since 2006, that relationship has been with Taranaki DHB as the primary vehicle for the DHB's relationships with iwi of Taranaki. It comprises of representatives from each of the eight iwi of Taranaki; Ngāti Tama, Ngāti Mutunga, Te Atiawa, Ngāti Maru, Taranaki, Ngā Ruahine, Ngāti Ruanui and Ngā Rauru. A Memorandum of Understanding between Taranaki DHB and TWPK enables Taranaki Māori to contribute to decision-making and performance monitoring, and participate in the delivery of health and disability services with a view to improving health outcomes for Māori living in Taranaki.

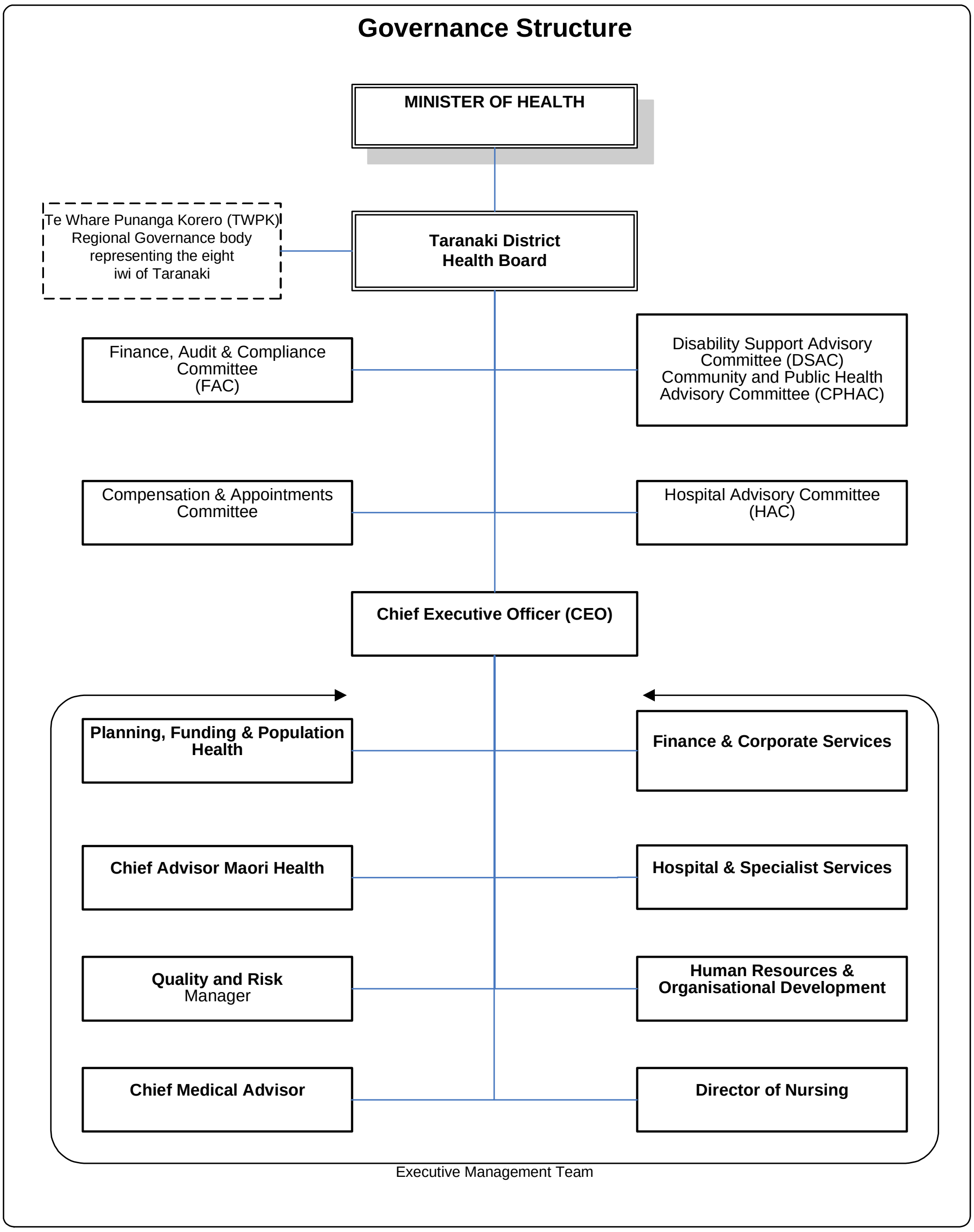
TWPK meets on a monthly basis, and is supported by the Chief Advisor Māori Health (TDHB) and Te Roopu Paharakeke Hauora (TDHB's Māori Health Unit). The Chair of the Taranaki DHB and the Chief Executive Officer meet formally with the Chair and other members of TWPK on a quarterly basis. The TDHB Board and TWPK met for the first time in three years in October 2011 and again in December 2011. A recommitment to meeting annually to discuss Māori health improvement monitoring has been made.

b) Māori Membership on the TDHB Board and Committees

The Minister of Health is required under Section 29(4) of the New Zealand Public Health and Disability Act 2000 to ensure that Māori Board membership is proportionate to the number of Māori in the DHB resident population. Currently in Taranaki DHB there are two Māori members of the Board appointed by the Minister of Health, and one elected Māori Board member.

TWPK is represented on the Hospital Advisory Committee (HAC http://www.tdhb.org.nz/dhb/hac.shtml) and the Community & Public Health Advisory Committee/Disability Support Advisory Committee (CPHAC/DSAC http://www.tdhb.org.nz/dhb/cphac.shtml). These are vehicles for TWPK to contribute to the strategic agenda of Taranaki DHB. The HAC is responsible for advising the DHB on the hospitals' performance, it is not involved in day-to-day hospital management. The function of CPHAC is to give the Board advice on the needs of the population of Taranaki and any factors that the Committee believes may adversely affect the health status of the population. The Committee will also give advice on priorities for use of the funding provided by the Crown. The DSAC gives advice to the Board on the disability support needs of the population of Taranaki and priorities for the use of funding provided by the Crown. CPHAC/DSAC is a single combined committee in Taranaki DHB.

Figure 8 Governance of Taranaki DHB



c) Primary Health Organisation Governance

The Primary Health Organisation (Alliance) Agreement (which funds primary care services) refers specifically to 'Māori participation'. Primary Health Organisations (PHOs) are expected to integrate Māori participation in all levels of governance, service planning, development and implementation. This includes the following:

- Consultation with Māori and ensuring that key Māori stakeholders contribute to decision making.
- Development of a monitoring strategy, that reviews and evaluates whether Māori needs are being met, including:
    - reducing barriers to Māori access to all primary care services
    - facilitation of the involvement of whānau
    - integration of Māori values, beliefs and cultural practices
    - availability of Māori staff to reflect the enrolled population at a PHO and practice level
    - existence, knowledge and use of referral protocols with Māori services within the region
    - education and training for staff on Māori health policy and strategies
    - education and training of staff in Māori values, beliefs and cultural practices
    - support and development of Māori workforce

There are two PHOs and one independent general practitioner operating in the Taranaki area.

i. Te Tihi Hauora o Taranaki PHO and Te Waipuna Medical Clinic in Waverley are now part of the National Hauora Coalition, a national coalition of Māori-led PHOs. Whānau Ora is identified by the Coalition as its 'driving force' and 'ideology'. For the Coalition this means:

   a) Māori led, Māori owned and Māori protected
   b) A Whānau-centred approach that anticipates how health sector activities interact with whānau activities
   c) An integrated approach for improved outcomes across sectors
   d) Offering Whānau-centred services (http://www.hauoracoalition.Māori.nz/)

   The PHO Agreement for the National Hauora Coalition is held by Counties Manukau DHB as lead DHB. Taranaki DHB is working closely with the National Hauora Coalition to implement the three programmes as outlined in their successful *Better, Sooner, More Convenient* (BSMC) *Primary Health Care* Business Case. The three programmes are Mama, Pepi and Tamariki (Mother, Babies and Children), Oranga ki Tua (the management of long term conditions) and Whānau Ora. The National Hauora Coalition BSMC Business Case achieved the support of the local providers to move to a single integrated contract of all non-PHO contracts. The impact of this will be to create maximum scope for innovation and cost-effectiveness in delivery of services to high needs populations. In the meantime, the request for proposals (RFP) process to integrate local Māori health service contracts under a single provider has overtaken the developments initiated with the National Hauora Coalition.

ii. Hauora Taranaki and Peak Health PHOs are now part of the Midlands Regional Health Network which commenced under its new structure on 1 October 2010. The Midlands Regional Health Network has no specific Māori Health Plan in place. It has an enrolled Māori population in Taranaki of 11,371 which is around 75% of the Taranaki Māori population. Tui Ora Limited is a founding partner of Midland Health http://www.tuiora.co.nz/providers/hauorataranaki.php

4.3 MĀORI PROVIDERS

There are a number of Māori health providers within the Taranaki DHB region that deliver a range of health services predominantly to Māori using a kaupapa Māori delivery framework. In the period 2008/9, 2009/10 and 2010/11 the following key Māori health services have been provided through contracts with Taranaki DHB.

Table 17 Māori Health Service Providers Funded Through Taranaki DHB

Name	Description
Ngati Ruanui Tahua Society Incorporated	Offers programmes to support whānau development. Whānau have the opportunity to gain skills and knowledge that will assist them to function well and support their children's growth and development.
Manaaki Oranga Ltd	Provides Primary Health, Mental Health, Whānau Ora and Public Health services focusing on early intervention for families in the Taranaki Region.
Ngaruahine Iwi Authority Charitable Trust	Kaumātua (Older Persons) Services. Transport to medical appointments. Kaiawhina services supporting whānau to navigate their way through health and social services.
Te Atiawa Health Runanga Medical Trust	Contributes to improving the health outcomes of whānau, hapū, iwi and Māori within the Taranaki rohe.
Te Hauora Pou Heretanga	Home based support services (including Hospice, ACC, and elderly), disability support, elder protection services, whānau/family carer support programme, kaumātua services and asthma/diabetes advocacy.
Te Ihi Rangi Trust	Supported residential care for Māori and people of other cultures disadvantaged by mental illness.
Te Whare Puawai o Te Tangata	Mental Health Services including a Recovery Centre Programme, and a voluntary supported accommodation service for ngā tangata whaiora.
Tui Ora Ltd	An established Māori Development Organisation operating as a 'Lead Contractor' with a 'for Māori by Māori' focus on the specific needs of Māori in Taranaki. It is an umbrella organisation for Māori health and social service providers, providing support in contract negotiations, and for Māori workforce development.
Piki Te Ora Nursing Service Ltd	A mobile Primary Health Care nursing service. All services are delivered in the home, at marae, Te Kōhunga and community clinic settings.
Te Rau Matatini	A national organisation that aims to progress Māori workforce development to enhance whānau ora, mental health and wellbeing.
Te Waipuna Medical Centre	Provides comprehensive health care for all age groups and is the primary medical service of Te Oranganui Iwi Health Authority.
Te Waireka Residential Care	A kaupapa youth alcohol and other drug residential rehabilitation service.
Te Oranganui Trust Incorporated	A kaupapa Māori health care provider delivering services that contribute to the mana motuhake of whānau, hapū, iwi and other peoples.

Tu Tama Wahine o Taranaki	Kaupapa Māori service providing a range of initiatives including counselling, social work, and family violence education programmes.
Te Tihi Hauora o Taranaki	Te Tihi Hauora o Taranaki forms part of the National Hauora Coalition, a national coalition of 11 Māori-led Primary Health Organisations (PHOs) which support a range of primary care services for over 200,000 Māori and non-Māori high needs whānau throughout New Zealand

In 2010/11 the Taranaki DHB developed a RFP process for Māori health provider services which resulted in the development of the Strategic Alliance. The Strategic Alliance is between Tui Ora Ltd and the National Hauora Coalition for the provision of these services from 1 January 2012. This is likely to result in a change to provider arrangements and is currently being worked through. The RFP for a single Māori health provider and integration of contracts under a results or outcomes-based accountability (RBA) framework is significant. The anticipated benefits are of capacity building, broadening the scope for service innovation, and economies of scale to support high service performance built around the needs of whānau. Increasing investment in Māori health services is reflected in the current RFP pricing. The increase is required to support current innovation in the Māori Sector while also increasing the scope for new innovation.

4.4 EXPENDITURE ON MĀORI SPECIFIC SERVICES

The Ministry of Health released an update on District Health Board Funding of Health Services to Māori Health Providers 2006/7 to 2010/11 in January 2012[26]. The data used in this report relates to an analysis of data collected through the Ministry of Heath's contract management systems and clients claims processing systems and may not include all local expenditure on Māori Health Providers.

Taranaki DHB increased funding in Māori Health Providers from $6.0m in 2006/07 to $6.6m in 2010/11 (9.5%). This is compared to a 27% average increase across District Heath Boards

Between 2008/09 and 2010/11 on average Māori health providers were funded at $248 per Māori person. Taranaki has the second highest funding per Māori person at $385 of all DHBs.

In Taranaki the percentage of appropriation funding to Māori health providers reduced by 0.3% from 2.7% in 2006/07 to 2.4% in 2010/11.

Between 2008/09 and 2010/11, on average Māori health providers in New Zealand were funded at 1.7% of DHB appropriations. When adjusted for the percentage of Māori in the population, the Taranaki average appropriation is 1.9%.

4.5 MĀORI HEALTH AND DISABILITY WORKFORCE PARTICIPATION

A Taranaki Māori Health and Disability Workforce Survey was conducted amongst 14 Taranaki Māori health provider organisations and the Taranaki DHB in late 2005.[27] Eighty-two respondents who

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[26] Measuring District Health Board Funding of Health Services to Māori Health Providers 2006/7 — 2010/11. July 2012. Ministry of Health.

[27] Aatea Consultants Ltd. (2006). Taranaki Māori Health and Disability Workforce Development Project: Māori Health workforce survey carried out in Māori provider organisations and Taranaki District Health Board. Unpublished report

identified themselves as being of Māori descent responded to the survey. Of that number, 59.7% (n=49) worked for a Māori health provider, and 40.3% (n=33) worked for Taranaki DHB. Limitations of the study included providers not holding information on personnel ethnicity, limited Taranaki DHB data on contracting organisations, and a lack of clarity in terms of what constitutes a Māori health provider and who is considered a Māori health and disability worker.

Questions asked in the survey related to age, gender, iwi, occupation, qualification, length of service in their organisation and the Taranaki Health and Disability Sector, likelihood of remaining in the Sector and reasons to stay and/or leave the Sector. The survey found that the workforce was largely female (84%) and that many respondents (70%, n=57) had whakapapa (genealogical connections) to iwi of the Taranaki Region. Survey responses indicated that the workforce is aging, with 63% of participants 40 years of age or older and 26% aged 50 years or older. While most respondents were confident that they would be working in the Sector in five years time, one in five was either neutral or less confident that they would remain in the Sector in five years time. One third of respondents had worked in the Sector for two years or less while the 10 longest serving respondents had a mean service duration in the Sector of 20 years. The mean service duration of all other respondents was only three years and seven months. Around one in five respondents indicated that they worked more hours than they were paid.

In terms of employment categories, no Medical staff were identified, 18 participants were identified in Nursing, and seven respondents were in Management. A high number of respondents were clustered in roles that required low levels of formal qualification such as kaimahi/kaiawhina/kaitumu, assistant, health worker, cleaner, and support worker.

These findings indicate that while moderate levels (80%) of five year retention may be likely, planning will be required to strengthen the capacity of the local Māori health workforce in the longer term given the aging workforce profile. Further work will also be required to strengthen workforce capacity given indications of clustering of the workforce in areas requiring low levels of formal qualification, short service duration among most of the workforce, and inadequate resourcing in terms of paid hours available to support work requirements.

Taranaki DHB regularly collects information on its workforce. A total of 1,168 full time equivalent (FTE) staff were employed by Taranaki DHB as at November 2011, of which 83.3 FTE stated Māori ethnicity on employment forms. The proportion of Māori in the DHB workforce is 7% overall as shown in Table 18.

Māori make up 1.3% of FTE of medical staff (equivalent to 1.5 FTE), 5.6% of FTE of nursing staff, and 5.8% of FTE of management staff, and are therefore vastly under-represented in some occupational groups. Māori tend to be working in areas that require lower levels of formal qualification. The highest proportions of Māori staff are found in Allied Health (10.9%) and Support (10.6%) categories. The highest numbers are in Nursing, Allied and Administration. The extent of representation of Māori in the DHB workforce varies by area of DHB service (Table 19). By service area the highest proportion of Māori staff are in the Māori Health Team (100%, though this equates to only 5.9 FTE), Public Health (17.1%) and Mental Health Services (14.4%). The lowest proportion are in Corporate (9.5%) and Hospital Services (4.2%). The proportion of staff in each area compared to caseload (Table 20) also indicates that Māori are under-represented in the workforce relative to the proportion of Māori patients using the service.

The accuracy of workforce ethnicity data is, however, limited due to low levels of recording of staff ethnicity on employment forms and because forms do not allow recording of multiple ethnicity. Of the Taranaki DHB workforce, 9% did not state ethnicity. However, despite the data limitations the information that is available is consistent with national data which indicate that Māori are under-represented in the health workforce and particularly in professional roles and tend to be clustered in areas that require a lower level of formal qualification such as support workers.[28]

Table 18 **Māori Participation in Taranaki DHB Workforce, Number of Full Time Equivalent Staff by Employment Category, November 2011**

	Māori	Non Māori	Not Stated	Total	Proportion Māori
Medical	1.5	109.5	18.5	129.5	1.3%
Nursing	28.7	425.6	49.9	504.2	5.6%
Allied	24.3	180.8	13.2	218.3	10.9%
Support	8.4	59.4	11.7	79.6	10.6%
Management	2.0	30.7	2.0	34.7	5.8%
Admin	18.4	173.3	10.3	202.0	9.1%
Total	**83.3**	**979.3**	**105.6**	**1,168.3**	**7.1%**

Source: Taranaki District Health Board Human Resources Department, 2011.

Table 19 **Māori Participation in Taranaki DHB Workforce, Number of Full Time Equivalent Staff by Service, November 2011**

	Māori	Non Māori	Not Stated	Total	Proportion Māori
Corporate Services	7.8	71.1	3.4	82.3	9.5%
Hospital Services	34.5	703.6	80.9	818.0	4.2%
Māori Health	5.9			5.9	100.0%
Mental Health	23.5	129.1	10.1	162.7	14.4%
Non Health Support	6.9	52.8	11.1	70.8	9.8%
Public Health	4.7	22.8		27.5	17.1%
Total	**83.3**	**979.4**	**105.6**	**1,168.3**	**7.1%**

Source: Taranaki District Health Board Human Resources Department, 2011.

Table 20 **Relative Proportion of Patient Case Load Who Are Māori, by Service, Taranaki, 2010/11**

Service	**Māori**	**Non-Māori**
Allied Health	10.3%	89.7%
Home & Older Adults Service	8.8%	91.2%
Maternity	21.9%	78.1%
Medical	16.4%	83.6%
Surgery	12.2%	87.8%
Mental Health	Data not available	
	15.6%	84.4%

Source: Taranaki District Health Board.

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[28] Mihi M Ratima, Rachel M Brown, Nick K G Garrett, Erena I Wikaire, Renei M Ngawati, Clive S Aspin and Utiku K Potaka Strengthening Māori participation in the New Zealand health and disability workforce
MJA 2007; 186 (10): 541-543

In order to better contribute to achieving equitable health outcomes for Māori, a number of Māori-specific positions have been established within Taranaki DHB, including the senior role of Chief Advisor Māori Health (CAMH). The CAMH forms part of the Executive Management Team of the TDHB and manages Te Roopu Paharakeke Hauora (TDHB Māori Health Unit). The role is required to influence all parts of the Taranaki DHB funder and provider arm activities in relation to Māori health gain, Māori health strategic focus, partnership and provider relationships and the responsiveness of Māori health initiatives to the needs of Māori.

The role of the CAMH is largely advisory. Its contribution to decision-making is as a member of the Planning and Prioritisation Panel which considers all service funding proposals and contracts. The role is recommendatory to the General Manager (GM) Planning and Funding, and the CAMH is a member of a variety of Steering Groups established to oversee service development initiatives. The role also acts as co-sponsor with the GM Planning and Funding, for those projects set up to deliver Māori-specific outcomes. Decision-making, however, generally rests with the GM Planning and Funding.

The CAMH also participates in the Planning and Funding as well as Hospital and Specialist Services Managers meetings where there is the opportunity to raise Māori health issues and discuss solutions and also to keep up-to-date with significant activities and identify those to which specific input is required. Regular one-on-one meetings with the GM's Planning and Funding and Hospital Services are also forums where strategic issues are discussed and planned.

The CAMH has had direct responsibility for Māori specific programmes such as service development projects undertaken under the Māori Health Investment Plan and oversight of the Community Action Fund. Māori Health Workforce Development is a key priority with around 50% of the team's activities focused on workforce development.

5. TE ARA TUATORU
PATHWAY THREE

Effective Health and Disability Services

5. TE ARA TUATORU – PATHWAY THREE Effective Health and Disability Services

5.1 INTRODUCTION

'Te Ara Tuatoru Pathway Three – Effective health and disability services' includes the domains of addressing health inequalities for Māori, improving mainstream effectiveness, providing highest-quality service, and improving Māori health information. Health indicator sets of high relevance in these domains include protective and risk factors, health status, important health conditions, health service utilisation, health system factors, health services designed to meet Māori needs, quality services and health information. It should be noted that understandings of determinants of health are particularly important in interpreting the patterns of protective and risk factors among Māori. That is, the prevalence of protective and risk factors are driven by underlying basic causes such as economic structures and racism that are beyond the control of the individual. Therefore efforts to maximise protective factors and reduce exposure to risk factors will rely on addressing not only surface causes but also the broader determinants of health which drive inequalities.

5.2 ADDRESSING HEALTH INEQUALITIES FOR MĀORI

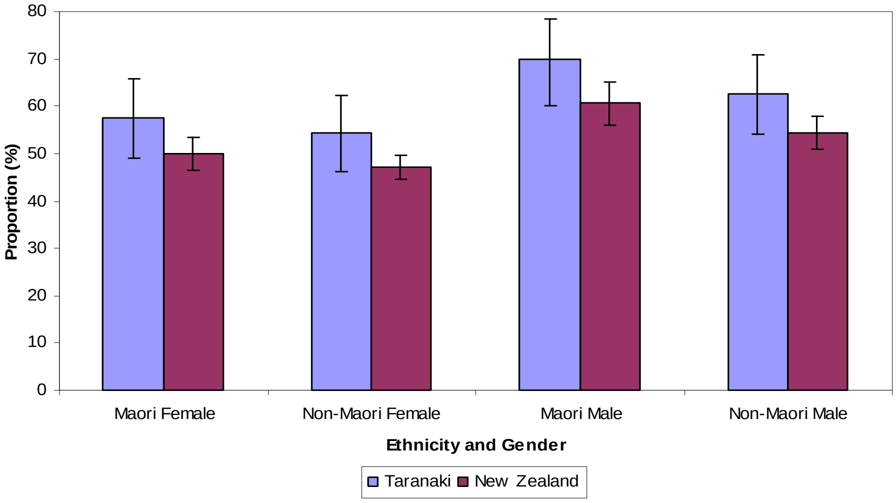
5.2.1 PROTECTIVE FACTORS

Physical Activity

For Taranaki around 58% of Māori females and 70% of Māori males in the New Zealand Health Survey (2006/07) reported at least 30 minutes of moderate physical activity on at least five days of the week (Figure 9). These differences between Māori and non-Māori are not statistically significant

Māori in Taranaki report slightly higher levels of physical activity than Māori in New Zealand, although confidence intervals are wide and the differences between Māori and non-Māori are not statistically significant

Figure 9 **Age-standardised Prevalence of Regular Physical Activity in Taranaki and NZ Adults, 15 Years of Age and Over**



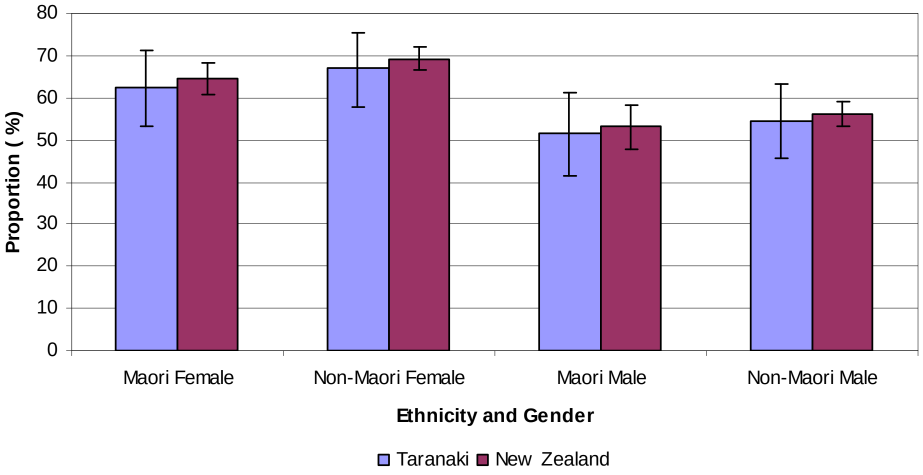
Source: New Zealand Health Survey 2006/07.

Nutrition

Over 62% of Māori females and 51% of Māori males, consume the recommended minimum amount of vegetables (three serves) each day. The vegetable intake is higher for Māori women than for Māori men but this difference is not statistically significant (Figure 10).

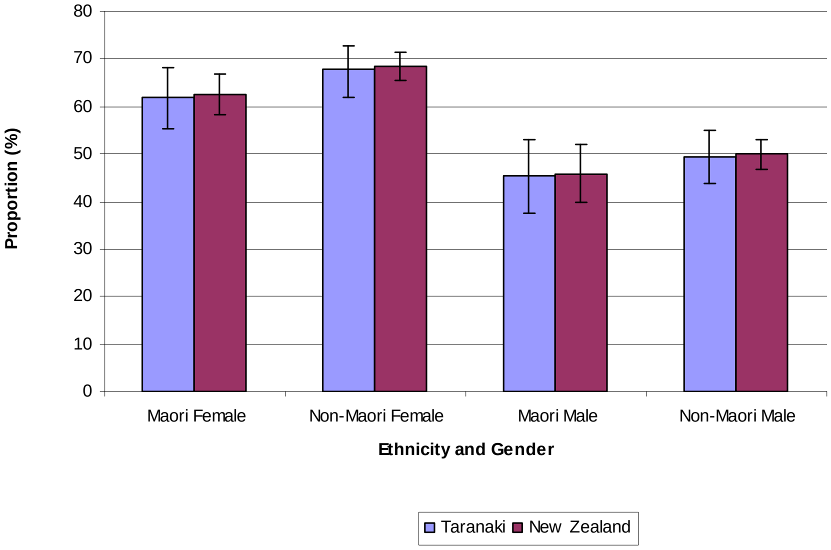
According to the New Zealand Health Survey 2006/07 over 61% of Māori females and 45% of Māori males in the Taranaki District are consuming the recommended minimum amount of fruit (two serves) Fruit intake is higher for Māori women than for Māori men (Figure 11).

Figure 10 **Age-standardised Prevalence of Vegetable Consumption in Taranaki and NZ Adults, 15 Years of Age and Over**



Source: New Zealand Health Survey 2006/07.

Figure 11 **Age-standardised Prevalence of Consuming Two or More Servings of Fruit Per Day, Taranaki and NZ Adults 15 Years of Age and Over**



Source: New Zealand Health Survey 2006/07.

Breastfeeding

Breastfeeding contributes significantly to infant, maternal, and whānau health in both the short and long term. In the short term, breastfeeding reduces the risk of infectious diseases such as gastroenteritis, acute otitis media and respiratory diseases. It also reduces the risk of Sudden Unexplained Death of an Infant (SUDI) and lowers the risk of hospitalisation in the first year of life. The long-term benefits include reductions in the risks of chronic conditions such as obesity, type 2 diabetes, asthma, and cardiovascular disease. Breastfeeding benefits for the mother include a reduction in the risk of post-partum haemorrhage, type 2 diabetes and breast and ovarian cancers (Ip et al 2007, Horta et al 2007, León-Cava et al 2002).[29]

The prevalence of breastfeeding for Māori mothers has continued to decrease since 2008 and remains below the annual target (Plunket Statistics 2010). National targets are 74% at six weeks, 57% at three months and 27% at six months. While Māori mothers are much less likely to exclusively breastfeed their infants than other ethnic groups (Table 21), there is strong evidence for the effectiveness of interventions to protect, promote and support breastfeeding. Published evidence regarding breastfeeding interventions specifically relating to Māori is limited. However, barriers to breastfeeding for Māori and intervention points have been identified (Glover et al 2007a, Glover et al 2007b, Glover et al 2009, Ellison-Loshmann 1997).[30]

Breastfeeding is therefore an area that is responsive to intervention by Taranaki DHB through health promotion, antenatal and postnatal care, that is, where provider activities are able to make a measurable difference (Jenkins and Ratima).[31] With appropriate intervention this is an area where whānau may readily take 'ownership' and self-manage. There implication, therefore, is that much more can be done by providers to reduce inequalities in breastfeeding rates.

Table 21 Full/Exclusive Breastfeeding by Ethnicity in Taranaki, 2010

	6 Weeks	3 Months	6 Months
Māori	60%	48%	13%
Other	73%	60%	23%

Source: 2010 Plunket Data.

Medical Insurance

Individuals with medical insurance may have more timely access to medical treatment than those without insurance, particularly in the case of surgery for non-acute conditions. Medical insurance can also pay for GP visits and prescription costs, and may also include dental and optical care. In the New Zealand Health Survey 2006/07, adult participants and the parents of child participants were

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[29] Horta, B.L., Bahl, R., Martines, J., Victora, C. (2007). Evidence on the Long-term Effects of Breastfeeding: Systematic Reviews and Meta-analyses. Geneva: World Health Organization; Ip, S., Chung, M., Raman, G., Chew, P., Magula, N., DeVine, D., et al. (2007). Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries. Evidence Report/Technology; León-Cava, N., Lutter, C., Ross, J., Martin L. (2002). Quantifying the Benefits of Breastfeeding: A Summary of the Evidence. Washington DC: Pan American Health Organization.

[30] Ellison-Loschmann, L. 1997. Māori Women's Experiences of Breastfeeding. A Thesis in Partial Fulfilment of the Requirements for the Degree of Master of Arts (Applied) in Midwifery. Victoria University of Wellington, Wellington; Glover, M., Manaena-Biddle, H., Waldon, J. (2007a). Influences that Affect Māori Women Breastfeeding in Breastfeeding Review: vol15 no.2, pp5-14.; Glover, M., Manaena-Biddle, H., Waldon, J. (2007b). The Role of Whānau in Māori Women's Decisions about Breastfeeding in Alternative: pp143-159.; Glover, M., Waldon, J., Manaena-Biddle, H., Holdaway, M., Cunningham, C. (2009). Barriers to Best Outcomes in Breastfeeding for Māori: Mothers' Perceptions, Whānau Perceptions, and Services. Journal of Human Lactation 0:0890334409332436v1.

[31] Jenkins, B and M.M. Ratima (2009). Working Paper 5.3 Breastfeeding: Summary of Evidence Base for Effective Interventions. Taranaki District Health Board, New Plymouth.

asked whether they/their child were covered by any health or medical insurance scheme. Adult participants were also asked what type of insurance they had.

Around one-third of children (31%) and almost 40% of adults were covered by medical insurance. One in five (19.4%) adults had comprehensive medical insurance and slightly less (18.3%) had medical insurance that covered their hospital bills only. European/Other children were significantly more likely to have medical insurance cover than all children, while Māori children were significantly less likely to have such insurance.

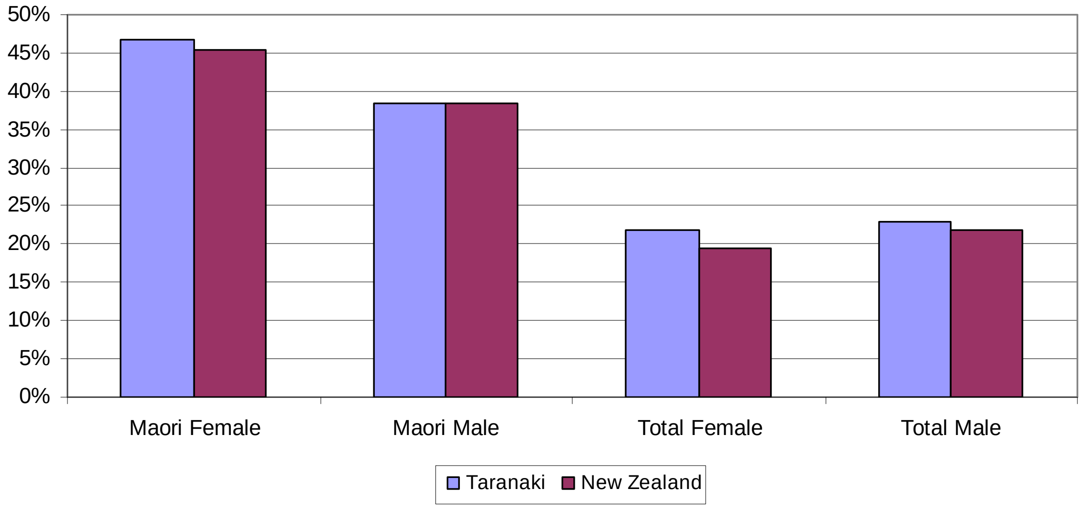
European/Other men and women were significantly more likely to have medical insurance cover than men and women in the total adult population, while Māori men and women were significantly less likely to have such insurance. This is not surprising given that non- Māori are socioeconomically advantaged relative to Māori.

5.2.2 RISK FACTORS

Tobacco Smoking

Smoking is a significant risk factor for Māori in the Taranaki Region. Māori have a higher prevalence of smoking than other New Zealanders. Some 47% of Taranaki Māori females and 38% of Māori males are regular smokers, compared to around 21% of New Zealand Europeans. The prevalence of regular smoking in Taranaki Māori females is also higher than the national average.

Figure 12 Percentage of Regular Smokers (Aged 15 and over) Taranaki and New Zealand, 2006



Source: Census 2006.

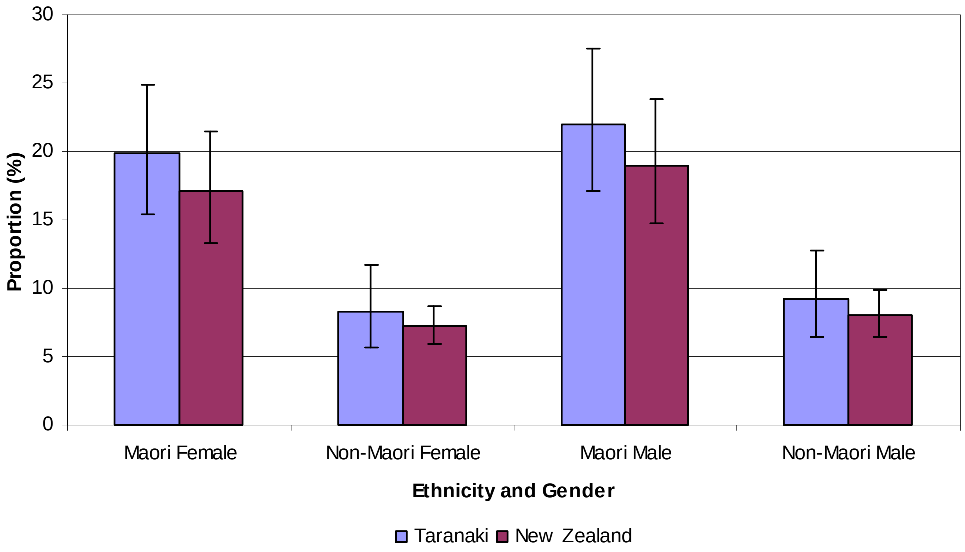
Smoking prevalence and exposure to risk factors for smoking are likely to be substantially higher for Taranaki Māori students than for non-Māori students, as shown by national data. The report of the 1999—2010 National Year 10 Smoking Survey of students aged 14 and 15 years shows that smoking prevalence is higher in Māori than in European/Other populations. Daily smoking (14.1%) and regular smoking (20.9% compared to 7.2% for NZ European students) was highest among Māori students, with Māori girls reporting a higher smoking prevalence than boys. Almost one in five Māori girls smoke daily (17.4%) compared to less than one in twenty NZ European girls (3.3%). However, the proportion of Māori girls who report that they have never smoked is increasing, up from 18.1% in

2005 to 34% in 2010. Furthermore, regular smoking among Māori students has declined from 43.0% in 2000 to 20.9% in 2010.

Parental smoking and smoking in the home are risk factors for student smoking. In 2010, 62.7% of Māori students reported that one or both of their parents smoke compared to 31.6% of NZ European students. In the same year, the survey found that 31.7% of Māori students reported that people smoke inside their home, compared to 16.1% of NZ European students.

Overall, the proportion of Māori children exposed to cigarette smoking at home is higher than for non-Māori in Taranaki and nationally. Māori adults also have greater exposure to second-hand smoke at home than non-Māori adults (Figure 13).

Figure 13 Age-standardised Prevalence of Adults who are Exposed to Smoking in the Home Taranaki DHB and New Zealand

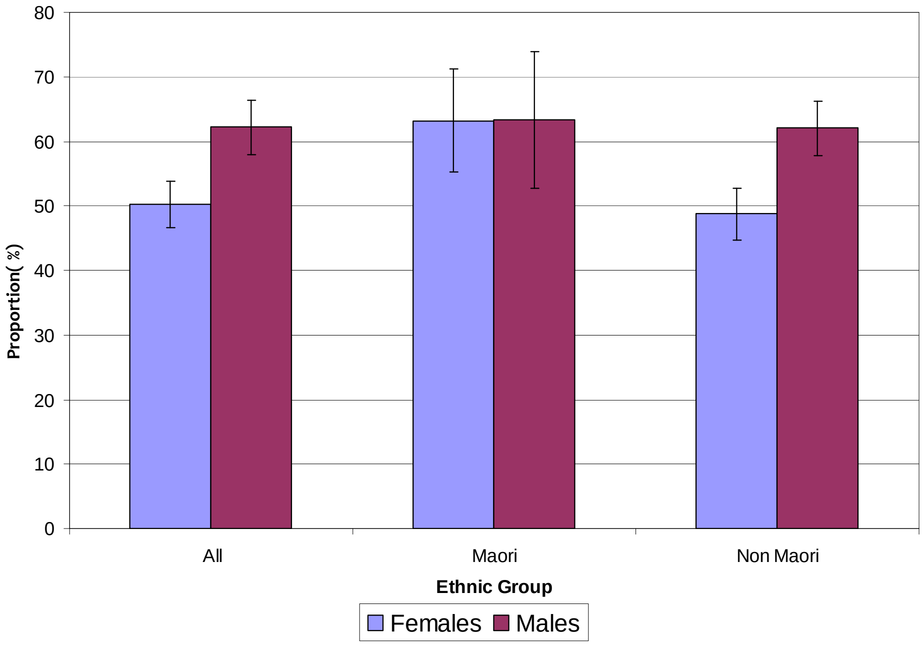


Source: New Zealand Health Survey 2006/07.

Obesity and Overweight

Information about obesity and overweight is drawn from the New Zealand Health Survey 2006/07. 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 an international cut-off point (BMI≥25) used to categorise participants as overweight or obese. Some 63% of Māori were classified as overweight or obese, compared to 63% of non-Māori males and 49% of non-Māori females. Obesity and overweight is a major problem in New Zealand across ethnic groups, and is of epidemic proportions internationally.

Figure 14 **Age-standardised Prevalence of Overweight and Obesity in Taranaki by Ethnicity**



Source: New Zealand Health Survey 2006/07.

Alcohol and Drug Use

Alcohol and drug use was measured in the New Zealand Health Survey 2006/07. Adult participants who reported consuming an alcoholic drink in the previous 12 months were asked 10 questions about their alcohol use. These questions covered the volume and frequency of alcohol consumption, alcohol related problems and abnormal drinking behaviour. These 10 questions were developed by the World Health Organisation (WHO) and comprise the Alcohol Use Disorders Test. The international definition of 'hazardous drinking' is defined as a score of ≥8, and represents an established pattern of drinking that carries a high risk of future damage to physical or mental health. Hazardous drinking is linked to socio-economic status, that is, those of lower socio-economic status are at greater risk of hazardous drinking patterns. Given that Māori are disproportionately represented in lower socio-economic groups they are therefore at higher risk, and this is reflected in Māori alcohol consumption patterns which, according to national data, are markedly different from those of non-Māori.[32]

A higher proportion of Māori resident in the Taranaki Region reported potentially hazardous drinking behaviours compared to non-Māori (Figure 15).

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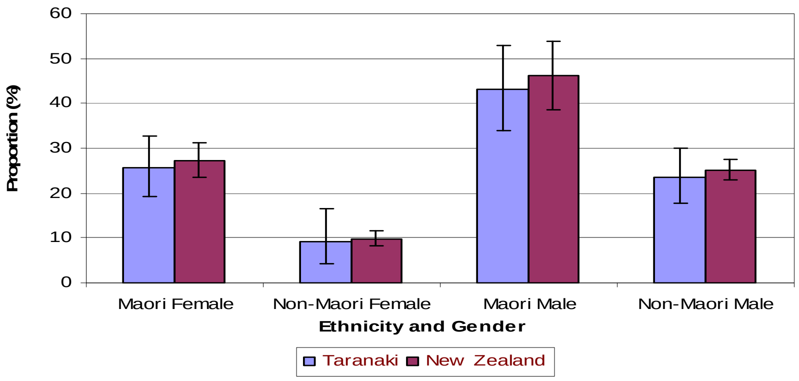
[32] Bramley D.M., Broad J.B., Harris R., Reid P., Jackson R., Differences in Patterns of Alcohol Consumption Between Māori and Non-Māori in Aotearoa (New Zealand). NZ Medical Journal 2003;116(1184). URL:http://www.nzma.org.nz/journal/116-1184/645/

Figure 15 **Age-Standardised Prevalence of Hazardous Alcohol Drinking in Taranaki by Ethnicity Adults Age 15 and Over**



Source: New Zealand Health Survey 2006/07.

Teenage Pregnancy

Māori women have higher prevalences of maternal risk factors than other women, including having babies at a very young age.[33] Taranaki teenage pregnancy rates in Māori women aged 15–19 years are 92 per 1,000 compared to 15.8 per 1,000 among non-Māori. These rates are higher than the national figures of 77.6 per 1,000 for Māori and 14 per 1,000 for non-Māori (Table 22).

Table 22 **Teenage Birth Rate Per 1,000 Population, Year Ending June 2011**

	Taranaki DHB			**New Zealand**		
	Live births for Under 20 Year-Olds By Ethnicity of Child	**Female Population 15-19 Years By Ethnicity of Mother**	**Rate Per 1000**	**Live births for Under 20 Year-Olds By Ethnicity of Child**	**Female Population 15-19 Years By Ethnicity of Mother**	**Rate Per 1000**
Māori	81	880	92.0	2,528	32,570	77.6
Non Māori	44	2,780	15.8	1,719	122,520	14.0
Total	**125**	**3,660**	**34.2**	**4,247**	**155,090**	**27.4**

Source: Statistics New Zealand.

5.2.3 PREVENTATIVE CARE AND SCREENING

Immunisation

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

The proportion of Māori children fully immunised at the age of two years in the Taranaki Region has increased from 86% at June 2010 to 91% in November 2011 due to proactive measures taken to

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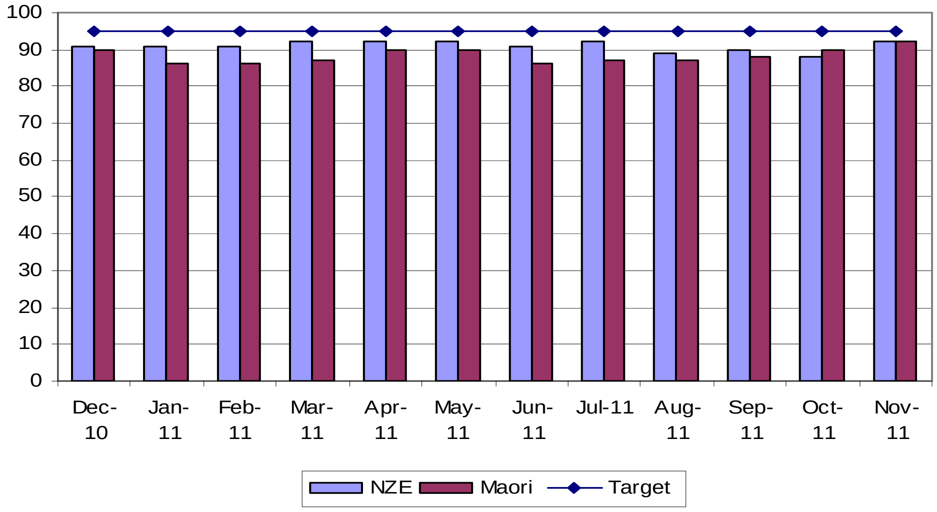
[33] Ministry of Health (2011). Maternity Snapshot 2009. Wellington, Ministry of Health. National Health Committee (1999). Review of Maternity Services in New Zealand. Wellington, National Health Committee.

reduce ethnic inequalities in this area. The current immunisation rate for Māori is now around the same as that for the total population. In Taranaki, for the period September–November 2011, 91% of the Māori child population were fully immunised at two years compared to 92% of New Zealand Europeans. Figure 16 shows the pattern of immunisation coverage over the last 12 months.

Figure 16 **Immunisation Coverage in Taranaki Children Aged 24 Months**



Source: National Immunisation Register. November 2011.

Breast Screening

The purpose of Breast Screening is to detect breast cancer at an early stage, in order to reduce breast cancer morbidity and mortality. In Taranaki, the screening coverage rate among Māori women is lower than for other ethnicities (Table 23). Achieving high rates of breast screening coverage for Māori women is important, given that according to national data, Māori women are more likely to be diagnosed at a later stage of breast cancer spread than non-Māori and that for many cancers at each stage Māori-specific mortality rates post diagnosis are higher.[34]

Table 23 **Breast Screening Coverage, Proportion (%) of Women Aged 50-69 years Screened by TLA and Ethnicity for the 24 Months to 30 April 2011**

Service	Other	Māori	Pacific	Total
New Plymouth District	78.1	55.6	74.3	76.4
Stratford District	73.1	48.3	74.3	71.6
South Taranaki District	65.3	53.6	-	64.1

Source: National Screening Unit November 2011.

Cervical Screening

Although cervical screening coverage for both Māori and non-Māori in the Taranaki Region is higher than the national figures, the cervical screening coverage for Māori women in Taranaki (67.5%) is far lower than for non-Māori (92%) as shown in Table 24. This is particularly concerning given that cervical cancer is largely preventable through regular three yearly cervical smear tests (which can

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[34] Cormack D, Robson B, Purdie G, Ratima M, Brown R. Access to Cancer Services for Māori. Ministry of Health, Wellington 2005.

reduce a women's risk of developing cervical cancer by 90%) (http://www.nsu.govt.nz/current-nsu-programmes/ 564.asp).

Table 24 Cervical Screening Coverage in Taranaki for Māori and Non-Māori, December 2010

	3-Year Coverage	
	Number	**Percent**
Taranaki DHB Māori	2,862	67.5%
Taranaki DHB non-Māori	21,777	92.4%
National Māori	96,747	53.4%
National Overall	937,539	76.1%

Source: National Cervical Screening Programme, December 2010.
Note Coverage is estimated using Statistics New Zealand projections for 2010 and adjusted for hysterectomy.

Hearing Tests
During 2010-11, hearing testing for children was conducted through two main processes. The first is during the Before School Check (B4SC), and the second occurs if a child has not completed the new entrant school check. In 2010-11, a large number of new entrant school checks were done in children aged 5-7 years to clear a long waiting list. As such, 2010-11 was not a typical year for hearing testing activity.

Before School Checks – Hearing Checks
In 2010-11, 1,455 hearing tests were completed as part of the B4SC programme and of these, 293 were on Māori children (Table 25). Some 62.5% of Māori children passed all components of the hearing check compared to 75.5% of non-Māori. Māori children are rescreened as a higher proportion of checks (20%). This could be due to a number of factors such as inconclusive results, temporary impairment due to recent illness, directions not comprehensible to the child, non-compliant behaviour, or shyness. Rescreened children are routinely booked for a test in three months time, or if very close to school, may be discharged to a school-based programme. Decline rates for the hearing test in Māori were 2% compared to 1.2% among non-Māori. These children were provided with a further opportunity for vision and hearing testing at the new entrant check. Referral to audiology, GP, or Ear Nose and Throat (ENT) is higher (8%) in Māori than non-Māori (4%). A higher proportion of Māori children who are already under care for hearing problems are excluded from hearing screening.

Table 25 Outcome of Hearing Tests Undertaken as Part of a Before School Check, 2010-2011

	Number		**Percentage**	
Outcome	**Māori**	**Non Māori**	**Māori**	**Non Māori**
Decline VHT	6	14	2.0%	1.2%
Pass Bilaterally	183	877	62.5%	75.5%
Referred	24	46	8.2%	4.0%
Rescreen	60	161	20.5%	13.9%
Under care	12	27	4.1%	2.3%
Not Stated	8	37	2.7%	3.2%
Total	**293**	**1162**		

Source: TDHB Before School Check Programme, November 2011.

New Entrant Hearing Test

A similar pattern emerges with hearing testing as new entrants, with a higher proportion of referrals and retests for Māori children undergoing hearing screening (Table 26).

Table 26 Outcome of Hearing Tests Undertaken as Part of New Entrant Hearing Test, 2010-2012

	Māori	Non-Māori	Māori	Non-Māori
Test	442	1115	79.1%	85.0%
Retest	105	175	18.8%	13.3%
Refer	12	22	2.1%	1.7%
Total	559	1312		

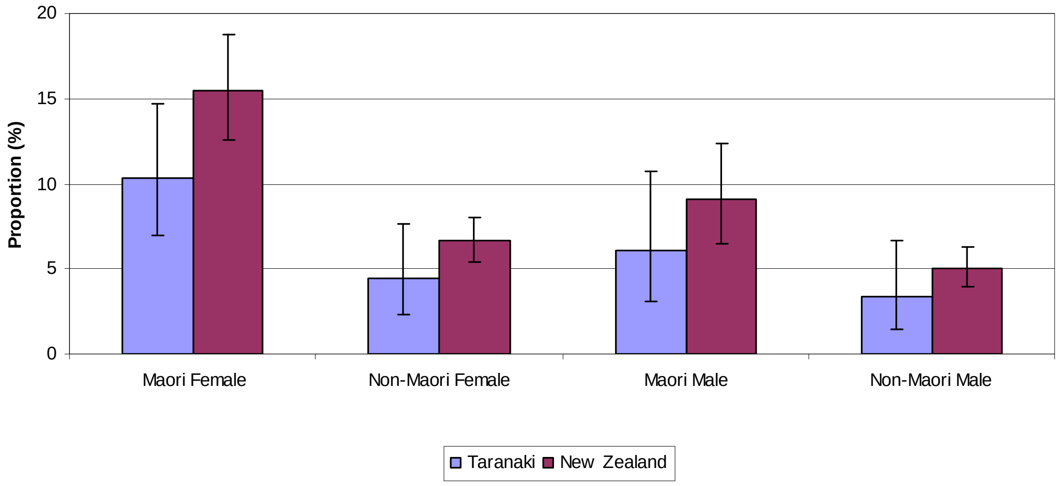
Source: TDHB Public Health Nursing Services November 2011.

5.2.4 PRIMARY CARE

Unmet GP Need

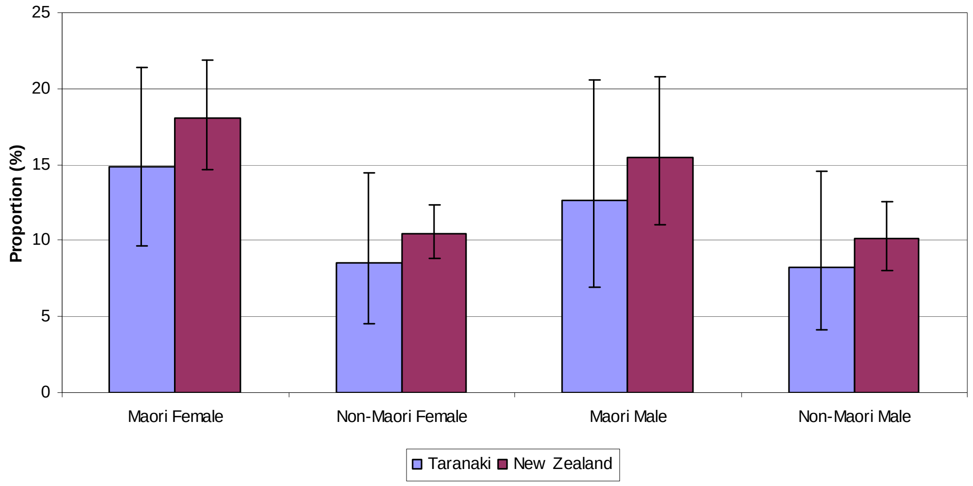
Data from the New Zealand Health Survey 2006/07 show that Māori in Taranaki are more likely than non-Māori to have an unmet need for a GP visit within the previous 12 months (Figure 17). This disparity is most marked for Māori women. This is despite the fact that Māori women in Taranaki were more likely than non-Māori to report that their last GP visit was free (Figure 18) suggesting that while access to free GP service is important, it does not address all the barriers to care and should be considered alongside other financial and non-financial barriers such as cost of travel, time off work, GP cultural competency and difficulty getting an appointment.

Figure 17 Age-standardised Prevalence of Adults with Unmet Need for GP Visit in the Past 12 Months, Taranaki DHB and New Zealand



Source: New Zealand Health Survey 2006/07.

Figure 18 Age-standardised Prevalence of Adults Whose Last Visit to the GP in Last 12 Months was Free, Taranaki DHB and New Zealand



Source: New Zealand Health Survey 2006/07.

Primary Health Organisation Enrolment

Data on enrolment with a PHO by ethnicity are shown in Table 27. The proportion of Māori enrolled with a PHO is estimated to be 84% compared to 99% of "Other" ethnicity.

Table 27 Taranaki DHB Population Enrolled with a PHO by Ethnicity, 2011

	Māori	Pacific	Other	Total
Taranaki DHB domiciled population 2011/12 *	18,890	1,133	89,950	109,973
PHO Enrolments by Taranaki DHB domiciled population:				
In Taranaki DHB PHOs	12,302	876	85,732	98,910
In other DHB PHOs	3,580	95	3,189	6,864
Total enrolments by Taranaki DHB domiciled population	15,882	971	88,921	105,774
Enrolment percentage by ethnicity	84%	86%	99%	96%
New Zealand domiciled population 2011/12 *	679,355	287,623	3,457,468	4,424,445
Total New Zealand PHO enrolments	585,881	306,469	3,342,916	4,235,266
Enrolment percentage by ethnicity	86%	107%	97%	96%

**Statistics New Zealand Population Projections 2011 release.*
Source: PHO Enrolment Registers as at 01 October 2011.

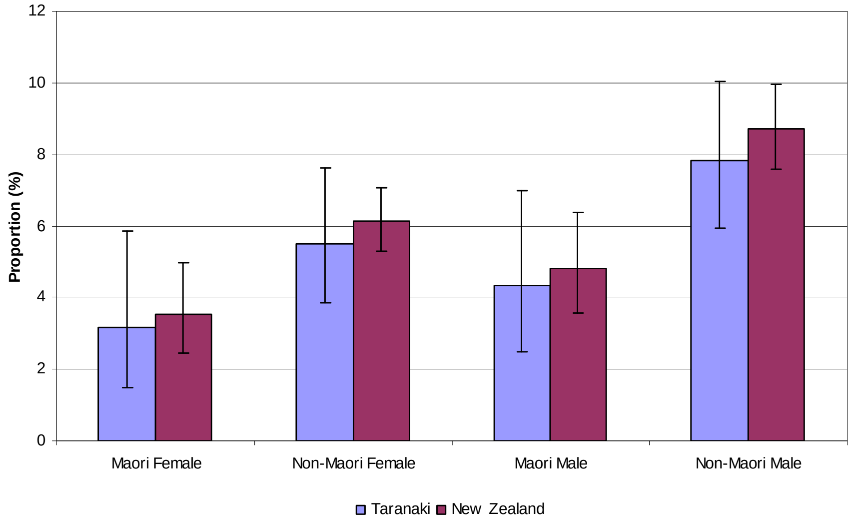
Access to Cardiovascular Risk Assessment

Given the extent of the burden of cardiovascular disease for Māori and wide ethnic inequalities in cardiovascular health outcomes, access to risk assessment is important as a starting point for discussion with health professionals. Cardiovascular disease risk assessment involves measurement of cardiovascular risk factors including blood pressure, lipid profiles (ie cholesterol check), fasting serum glucose, height and body mass.

Medication for Cardiovascular Disease

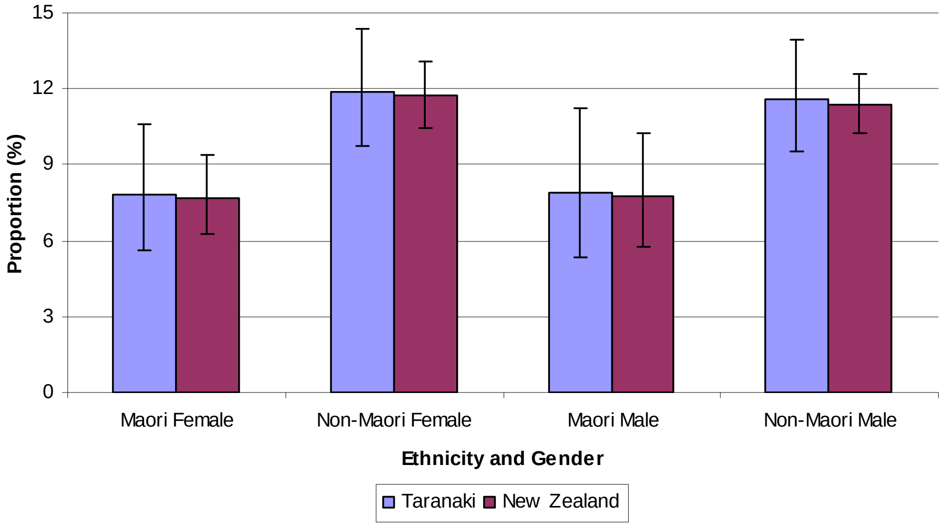
The New Zealand Health Survey 2006/7 asked participants whether they were currently taking medication for high cholesterol (Figure 19) and blood pressure (Figure 20). The results for Taranaki show that Māori appear to be less likely to be taking medication for high cholesterol and blood pressure than non-Māori, although these differences are not statistically significant. The New Zealand Guidelines Group has recommended medication where there is high risk. Given that Māori have higher rates of cardiovascular diseases, there are wide ethnic inequalities in cardiovascular health outcomes for Māori and according to national data, Māori have higher age-standardised rates of self-reported high blood pressure than European New Zealanders, the indications are that they have greater need for these medications to prevent illness and death.

Figure 19 **Age-standardised Prevalence (%) of Adults 15 Years and Over Taking Medications for High Cholesterol, Taranaki and New Zealand**



Source: New Zealand Health Survey 2006/07.

Figure 20 **Age-standardised Prevalence (%) of Adults 15 Years and Over taking Medications for High Blood Pressure, Taranaki and New Zealand**



Source: New Zealand Health Survey 2006/07.

Smoking Cessation Advice in Primary and Secondary Care

Midland Health Network has asked over 90% of enrolled patients about their smoking status at September 2011. A smaller proportion were offered brief advice or smoking cessation. Figures are not available separately for Māori.

Taranaki DHB has provided brief advice and support to quit smoking for over 88% of hospitalised smokers as at December 2011, and 87% for Māori. Taranaki DHB is not currently achieving the 95% target in this area (Table 28).

Table 28 **Better Support for Smokers to Quit in Secondary Care. Percentage of Hospitalised Patients Provided with Advice and Support to Quit Smoking**

	TOTAL		MĀORI	
Period	**Percentage of Smokers**	**Percentage Given Brief Advice**	**Percentage of Smokers**	**Percentage Given Brief Advice**
Q3 2009 -10	16.50%	18.68%	32.72%	40.93%
Q4 2009 -10	16.63%	40.23%	34.98%	19.61%
Q1 2010 -11	16.59%	66.12%	34.49%	63.57%
Q2 2010 -11	15.06%	56.10%	34.18%	49.59%
Q3 2010 -11	15.70%	59.34%	32.70%	60.00%
Q4 2010 -11	17.43%	82.55%	33.33%	84.75%
Q1 2011 -12	18.47%	93.28%	37.12%	90.57%
Q2 2011 -12	17.82%	90.25%	35.67%	89.29%

Source: Taranaki District Heath Board COGNOS 2012

Access to Diabetes Checks

Access to regular diabetes checks is essential for effective diabetes management and to reduce disparities in the burden of complications that disproportionately impact Māori. All New Zealanders diagnosed with diabetes are entitled to a free annual diabetes check with their GP Practice Nurse. Some 90% of Māori diagnosed with diabetes in Taranaki undertake this check compared to 99% of "Other" ethnicity (Table 29). While Taranaki has very high coverage compared to other DHBs, the extent of ethnic inequalities between Māori and "Other" is similar to or higher than most DHBs.

Table 29 **Proportion of DHB Population with Diagnosed Diabetes Who Had a Free Annual Diabetes Check in the 12 Months to March 2011**

DHB	Total	Māori	Other	Pacific*
Auckland	54%	60%	48%	73%
Bay of Plenty	69%	66%	70%	n/a
Canterbury	49%	46%	50%	48%
Capital & Coast	68%	64%	68%	67%
Counties Manukau	83%	105%	72%	94%
Hawke's Bay	75%	77%	75%	n/a
Hutt Valley	75%	62%	80%	59%
Lakes	68%	65%	71%	n/a
MidCentral	76%	77%	76%	n/a
Nelson Marlborough	59%	57%	59%	n/a
Northland	66%	79%	61%	n/a
South Canterbury	68%	38%	69%	n/a
Southern	52%	43%	54%	n/a
Tairawhiti	63%	65%	65%	n/a

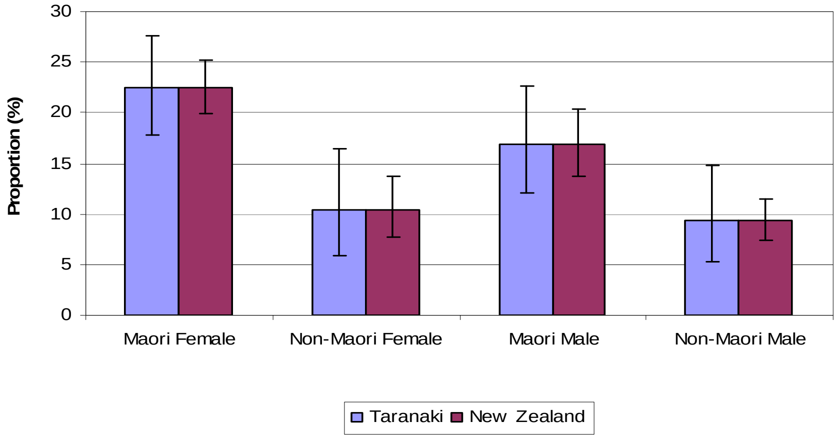
DHB	Total	Māori	Other	Pacific*
Taranaki	**97%**	**90%**	**99%**	**n/a**
Waikato	71%	67%	74%	60%
Wairarapa	76%	71%	78%	n/a
Waitemata	63%	67%	62%	60%
West Coast	64%	50%	66%	n/a
Whanganui	78%	70%	82%	n/a

Pacific data only presented for selected DHB where Pacific population is relatively higher than in the rest of New Zealand.
Source: 2010/11 Quarter Four Health Target data, Ministry of Health.

Unmet Oral Health Need

Data from the New Zealand Health Survey 2006/07 show that Māori in Taranaki are more likely than non-Māori to have unmet oral health need although these difference are not statistically significant. As with unmet GP need the prevalence and disparity in unmet oral health need in Taranaki is most marked for Māori women.

Figure 21 Age-standardised Prevalence (%) of Adults 15 Years with Unmet Dental Need in the Last 12 Months, Taranaki and New Zealand



Source: New Zealand Health Survey 2006/07.

5.2.5 OUTPATIENT CARE

Did Not Attends (DNAs)

Did Not Attends or DNAs is a term used to describe an outpatient who has missed an appointment. While the term itself is patient focused 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 Māori access.

An analysis of hospital outpatient appointment DNA rates for the three year period 2008/09 to 2010/11 shows that Māori have double the DNA rate for first specialist outpatient appointment compared to "Other" ethnic groups in Taranaki (Table 30) and around three times the DNA rate for follow-up specialist outpatient appointments (Table 31). While DNA rates for the Taranaki DHB population are consistently lower than the national figures they have been increasing over the three year period and the extent of ethnic inequalities between Māori and non-Māori is similar.

Table 30 **Proportion of First Specialist Outpatient Appointments that Did Not Attend Taranaki DHB and New Zealand**

	NZ		Taranaki DHB	
Year	**Māori**	**Non-Māori**	**Māori**	**Non-Māori**
2008/09	5.6%	2.6%	1.9%	0.9%
2009/10	5.5%	2.5%	3.1%	1.5%
2010/11	5.8%	2.6%	3.3%	1.7%

Source: Outpatient Data File Ministry of Health.

Table 31 **Proportion of Follow-Up Specialist Outpatient Appointments that Did Not Attend Taranaki DHB and New Zealand**

	NZ		Taranaki DHB	
Year	**Māori**	**Non-Māori**	**Māori**	**Non-Māori**
2008/09	13.0%	5.4%	10.4%	3.7%
2009/10	12.7%	5.2%	11.7%	4.2%
2010/11	13.0%	5.4%	12.2%	4.7%

Source: Outpatient Data File Ministry of Health.

A breakdown of DNAs by selected specialties is shown in Table 32. Outpatient DNA rates for Māori are consistently higher across specialities, but vary by speciality. For example, Māori DNA rates are highest in Gynaecology (22.0%) and Anaesthesiology (21.1%) and are lowest in Mental Health and Support (0%) and Oncology (0.3%). The extent of ethnic inequality also varies by speciality.

Table 32 **Proportion of First and Follow-Up Specialist Outpatient Appointments that Did Not Attend Taranaki DHB and New Zealand for Selected Specialities**

	Taranaki DHB		NZ (excl TDHB)	
Health Specialty	**Non-Māori**	**Māori**	**Non-Māori**	**Māori**
Anaesthesiology	6.4%	21.1%	8.3%	19.4%
ATR	3.0%	10.2%	3.0%	7.7%
Cardiology	3.4%	12.2%	5.3%	14.3%
Dental Surgery	6.6%	16.4%	10.4%	19.9%
Dermatology	5.8%	16.3%	7.1%	19.5%
Endocrinology	8.5%	19.2%	6.5%	16.2%
General Medicine	7.5%	19.4%	4.8%	12.2%
General Surgery	5.2%	15.8%	5.5%	14.9%
Gynaecology	8.7%	22.0%	6.8%	17.4%
Haematology	1.7%	6.4%	3.4%	7.7%
Maternity	6.1%	14.6%	4.4%	14.5%
Mental health & support	0.0%	0.0%	0.2%	0.8%
Neurology	7.0%	16.5%	4.5%	13.1%
Nursing & Allied health	4.7%	13.2%	7.6%	16.1%
Oncology	0.1%	0.3%	0.9%	2.0%
Ophthalmology	4.4%	12.1%	4.8%	13.8%
Orthopaedic Surgery	2.5%	7.7%	6.0%	16.5%
Otorhinolaryngology (ENT)	8.4%	18.5%	7.6%	20.0%
Paediatrics (Neonatal, Medicine & Surgery)	4.8%	13.3%	6.8%	15.0%
Plastic Surgery [excluding burns]	8.0%	16.4%	7.9%	24.2%
Renal Medicine	0.8%	1.6%	1.7%	2.6%
Respiratory Medicine	5.5%	17.7%	6.6%	17.9%
Rheumatology	4.5%	11.4%	6.0%	14.7%
Urology	4.6%	16.0%	6.0%	15.8%

Source: Outpatient Data File Ministry of Health.

Data on the DNA rate for colposcopy appointments is presented in Table 33 for a three year period. Māori women were much more likely not to attend this service than non-Māori, with around 25% of colposcopy appointments in Taranaki for Māori women not attending compared to 10% of non-Māori. DNA rates for colposcopy in Taranaki are generally higher than the national figures. Reasons for the disproportionally high rates of non-attendance among Māori women requiring this service are not fully understood and given that Māori women already suffer a higher incidence of and mortality from cervical cancer, ensuring equitable access to this service is important.

Table 33 **Proportion of Colposcopy Appointments that Did Not Attend, Taranaki DHB and New Zealand**

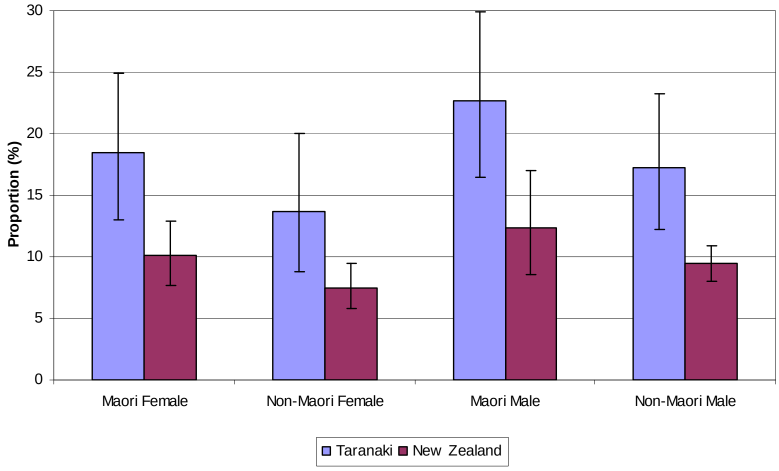
	NZ (Exc TDHB)		Taranaki DHB	
Colposcopy DNA rate	**Māori**	**Non-Māori**	**Māori**	**Non-Māori**
2008/9	16%	6%	26%	8%
2009/10	16%	6%	22%	9%
2010/11	21%	7%	28%	11%

Source: Outpatient Data File Ministry of Health.

5.2.6 EMERGENCY DEPARTMENT USE

Māori appear to be more likely to have visited the emergency department than non-Māori in Taranaki, although the sample size is small (Figure 22). While this is likely to be related to higher rates of health crisis, it is also likely that poor access to primary health care is a key driver and that a high proportion of Māori emergency department visits could have been avoided or managed through improved access to primary care.

Figure 22 **Age-standardised Prevalence (%) of Adults 15 Years Who Visited a Public Hospital Emergency Department in the Last 12 Months, Taranaki and New Zealand**



Source: New Zealand Health Survey 2006/07.

5.3 SUMMARY MEASURES OF HEALTH

5.3.1 LIFE EXPECTANCY AT BIRTH

Life expectancy provides a summary measure of the health of a population and comparisons of life expectancy between population groups provide an indication of the extent of health disparities. Māori in Taranaki experience a shorter life expectancy than non-Māori. Māori females have a life expectancy of 75.5 years compared to 82.5 years for non-Māori, a difference of 6.9 years. Māori males have a life expectancy of 72.4 years compared to 79.0 years for non-Māori, a difference of 6.6 years (Table 34). This difference is less than that for the general New Zealand population at 7.7 years for females and 7.9 years for males.

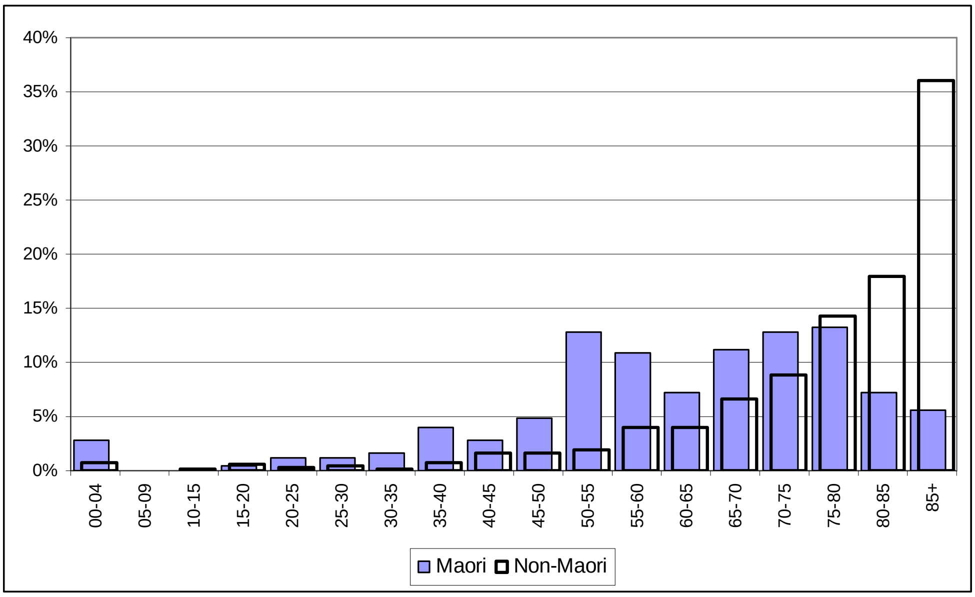
Table 34 **Life Expectancy at Birth (Years) in Taranaki and New Zealand by Gender, Māori and Non-Māori. Usually Resident, Prioritised, 2007-2010**

	Taranaki		New Zealand	
Ethnicity	**Female**	**Male**	**Female**	**Male**
Māori	75.5	72.4	75.96	71.9
Non-Māori	82.5	79.0	83.62	79.8

Source: Mortality Data Set – Ministry of Health.

Low Māori life expectancy is strikingly evident in Figure 23. For the period 2007-2010, 36% of Māori deaths occurred among middle-aged Māori (45-64 years) and 50% among older Māori (65 years or more). For non-Māori, during the same period, 84% of deaths occurred in the older age group (65 years or more). These differences show that Māori die at a younger age than non-Māori.

Figure 23 **Proportion (%) of Māori and Non-Māori Deaths by Age Group, Taranaki DHB, 2006-2008**

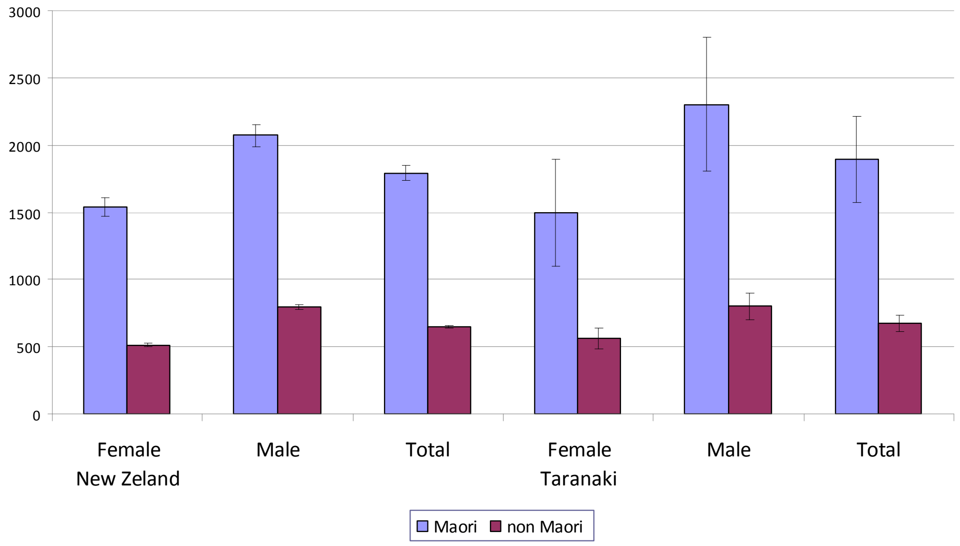


Source: Mortality Data Set – Ministry of Health.

5.3.2 LEADING CAUSE OF AVOIDABLE MORTALITY

Avoidable mortality refers to deaths occurring under the age of 75 years that could potentially have been avoided through population based interventions, or through preventative and curative interventions at an individual level. National and Taranaki rates of avoidable mortality are much higher among Māori than those in non-Māori (Figure 24).

Figure 24 **Age-standardised Avoidable Mortality Per 100,000 Under 75 Years, Taranaki and New Zealand, 2006-2008**



Source: Mortality Data Set – Ministry of Health.

For Māori in the Taranaki District, the leading causes of avoidable mortality are ischaemic heart disease (24.4%), lung cancer (10.2%), diabetes (8.3%) and chronic obstructive pulmonary disease (COPD) (7.8%). The difference in leading causes of avoidable mortality for Māori and non-Māori overall and when analysed by gender are shown in Table 35. This indicates that priorities for intervention will differ between population groups.

Table 35 Proportions of Avoidable Death in Taranaki for Māori and Non-Māori, Males and Females, Taranaki DHB, 2006-2008

MĀORI-MALES			MĀORI - FEMALES		
Condition	**Number**	**%**		**Number**	**%**
Ischaemic heart disease	34	29.1%	Ischaemic heart disease	16	18.2%
Diabetes	13	11.1%	Lung cancer	10	11.4%
Lung cancer	11	9.4%	Breast cancer	9	10.2%
COPD	9	7.7%	COPD	7	8.0%
Colorectal cancer	8	6.8%	Cerebrovascular diseases	5	5.7%
Suicide and self inflicted injuries	6	5.1%	Diabetes	4	4.5%
Road traffic injuries, other transport injuries	5	4.3%	Suicide and self inflicted injuries	3	3.4%
Cerebrovascular diseases	5	4.3%	Stomach cancer	3	3.4%
Birth defects	5	4.3%	Falls	3	3.4%
Stomach cancer	4	3.4%	SUDI	2	2.3%
NON-MĀORI-MALES			**NON-MĀORI - FEMALES**		
Major Condition Group	**Number**	**%**		**Number**	**%**
Ischaemic heart disease	295	34.6%	Ischaemic heart disease	279	31.4%
COPD	83	9.7%	Cerebrovascular diseases	129	14.5%
Lung cancer	66	7.7%	COPD	67	7.5%
Cerebrovascular diseases	55	6.4%	Breast cancer	63	7.1%
Colorectal cancer	48	5.6%	Colorectal cancer	53	6.0%
Diabetes	39	4.6%	Lung cancer	48	5.4%
Nephritis and nephrosis	35	4.1%	Selected invasive infections	29	3.3%
Suicide and self inflicted injuries	28	3.3%	Diabetes	28	3.2%
Road traffic injuries, other transport injuries	23	2.7%	Nephritis and nephrosis	27	3.0%
Selected invasive. infections	22	2.6%	Aortic Aneurysm	16	1.8%

Source: Mortality Data Set – Ministry of Health.

5.3.3 LEADING CAUSE OF AVOIDABLE HOSPITALISATION 0-74 Years

Avoidable hospitalisations are hospitalisations of people aged less than 75 years that fall into the following groups:

- Preventative hospitalisation – 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 care setting.
- Injury preventable hospitalisations – hospitalisations avoidable through injury prevention.

The leading causes of avoidable hospitalisation in Māori are angina and chest pain, asthma, dental conditions and respiratory infections. These leading causes differ between Māori and non-Māori and between males and females (Table 36). This indicates that priorities for intervention will differ between population groups.

Table 36 Proportions of Avoidable Hospitalisation Including Ambulatory Sensitive Hospitalisation (ASH) by Gender 0-74 Years, Māori and Non-Māori, Taranaki DHB, 2009-2011

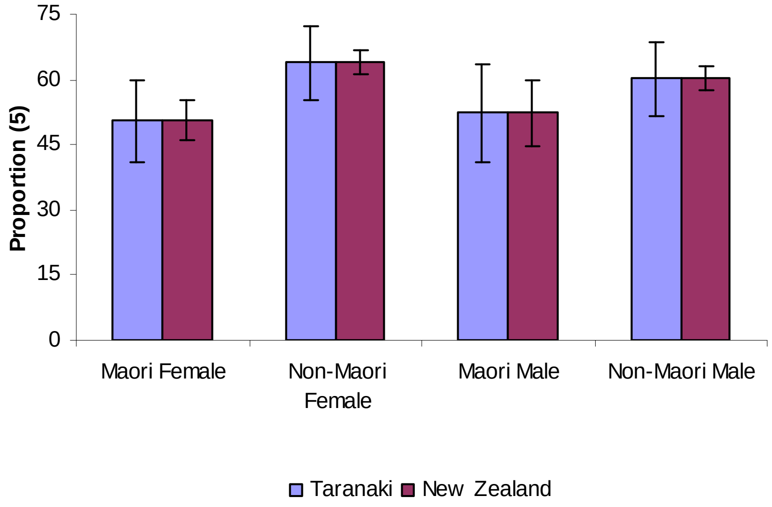
	MĀORI MALES			NON-MĀORI MALES		
Rank	**Condition**	**Number**	**%**	**Condition**	**Number**	**%**
1	Angina and chest pain	203	13.6%	Angina and chest pain	1204	23.0%
2	Cellulitis	143	9.6%	Dental conditions	381	7.3%
3	Dental conditions	136	9.1%	Cellulitis	375	7.2%
4	Ear Nose and Throat Infections	131	8.8%	Skin cancers	322	6.1%
5	Asthma	124	8.3%	Myocardial infarction	307	5.9%
6	Respiratory infections - Pneumonia	108	7.2%	Respiratory infections - Pneumonia	299	5.7%
7	Chronic Obstructive Respiratory Disease (CORD)	105	7.0%	Diabetes	284	5.4%
8	Respiratory infections - Acute bronchiolitis	95	6.4%	Ear Nose and Throat Infections	267	5.1%
9	Diabetes	79	5.3%	Chronic Obstructive Respiratory Disease (CORD)	209	4.0%
10	Epilepsy	64	4.3%	Asthma	178	3.4%
	MĀORI FEMALES			**NON-MĀORI FEMALES**		
Rank	**Condition**	**Number**	**%**	**Condition**	**Number**	**%**
1	Angina and chest pain	202	12.1%	Angina and chest pain	1071	21.1%
2	Dental conditions	160	9.6%	Dental conditions	439	8.7%
3	Asthma	151	9.0%	Chronic Obstructive Respiratory Disease (CORD)	338	6.7%
4	Chronic Obstructive Respiratory Disease (CORD)	132	7.9%	Cellulitis	272	5.4%
5	Respiratory infections - Pneumonia	119	7.1%	Asthma	251	4.9%
6	Ear Nose and Throat Infections	103	6.2%	Diabetes	245	4.8%
7	Epilepsy	90	5.4%	Skin cancers	238	4.7%
8	Kidney/urinary infection	87	5.2%	Respiratory infections - Pneumonia	230	4.5%
9	Cellulitis	78	4.7%	Ear Nose and Throat Infections	226	4.5%
10	Diabetes	73	4.4%	Kidney/urinary infection	222	4.4%

Source: Inpatient Data Files Ministry of Health.

5.3.4 SELF REPORTED HEALTH STATUS

Data from the New Zealand Health Survey 2006/07 show that in Taranaki, less Māori report a health status of ‘excellent’ or ‘very good’ compared to non-Māori. Overall, 50% of adult Māori females and 52% of non-Māori males reported their health as excellent or very good, compared to 64% of non-Māori females and 60% of non-Māori males (Figure 25). These differences were not statistically significant.

Figure 25 **Age-standardised Prevalence (%) of Adults 15 Years Reporting Health Status as Excellent or Very Good, Taranaki and New Zealand**



Source: New Zealand Health Survey 2006/07.

5.3.5 DISABILITY

Caution should be exercised when comparing disability prevalence rates between Māori and non-Māori, because the two ethnic groups have very different age distributions. It is important that comparisons take account of the different age structures and national age-standardised data from the Household Disability Survey (2006) indicate that compared to non-Māori, Māori experience higher rates of impairment, of both single and multiple impairment, and more severe impairment and there are wide disparities in the Māori experience of impairment and disability relative to non-Māori.

Māori have greater disability than other ethnic groups in every age group and experience a much earlier age of onset of impairment compared to non-Māori. The higher proportion of young people in the Māori population means that the majority of Māori with disability (63%) were aged less than 45 years. Nearly one-third of children with disability (31%) and nearly one-quarter of adults aged 15 to 44 years with disability (23%) were Māori.

An estimated 14% of Māori children had a disability. Five percent of Māori children had special education needs and this was the most common type of disability for Māori children. Other common disability types were chronic conditions or health problems (5% of Māori children) and psychiatric or psychological disabilities (3% of Māori children).

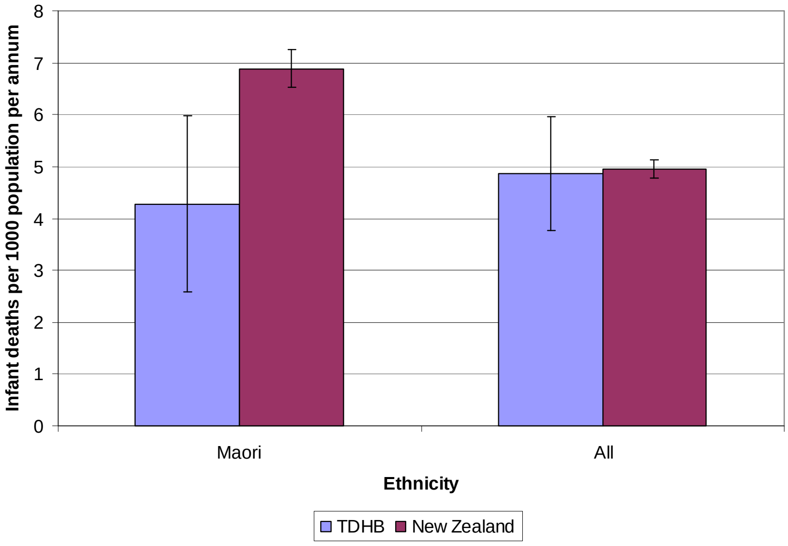
Nineteen percent of Māori adults had a disability. Two-thirds of Māori adults with disability (12% of all Māori aged 15 years and over) had physical disabilities. Forty-five percent of Māori adults with disability had ‘other’ disability types such as difficulty speaking, learning, remembering or doing everyday activities. Other common disability types included sensory (hearing and/or seeing) disabilities (37% of people with impairments) and psychiatric or psychological disabilities (26% of people with impairments). The most common causes of disability for Māori adults were disease or illness (34%) followed by accidents or injuries (32%). The most common types of accidents or injuries occurred in the workplace or at home, or involved motor vehicle crashes. Thirty-eight percent of Māori adults with disability had a single disability and 62% had multiple disabilities.

5.4 SUMMARY MEASURES OF CHILD HEALTH

5.4.1 INFANT MORTALITY

Infant mortality refers to deaths that occur between birth and attaining one year of age. In Taranaki, the infant mortality rate for non-Māori is similar to the national average, however for Māori it appears that the infant mortality rate in Taranaki is lower than the New Zealand (Figure 26).

Figure 26 Infant Mortality Rate Per 1000 Live Births, Taranaki and New Zealand Māori and Non-Māori, 2006-2008



Source: Mortality Data Set – Ministry of Health.

5.4.2 LEADING CAUSES OF HOSPITALISATION - CHILDREN AND YOUNG PEOPLE

The leading causes of ambulatory sensitive hospitalisation among Māori children and young people are dental conditions, asthma and respiratory infections such as pneumonia. These leading causes differ between Māori and non-Māori and for children and young people (Table 37), indicating that priorities for intervention will differ between population groups.

Table 37 **Leading Causes of Ambulatory Sensitive Hospitalisations (ASH) for Children Aged 0-15 Years, Māori and on-Māori Taranaki DHB, 2009-2011**

		Māori Children			Non-Māori Children		
		Condition	No	%	Condition	No	%
0-4 years	1	Dental conditions	187	25.8%	Gastroenteritis/dehydration	273	22.0%
	2	Asthma	166	22.9%	Dental conditions	263	21.2%
	3	Respiratory infections - Pneumonia	95	13.1%	Asthma	238	19.2%
	4	Upper respiratory tract and ENT infections	84	11.6%	Upper respiratory tract and ENT infections	150	12.1%
	5	Cellulitis	73	10.1%	Respiratory infections - Pneumonia	117	9.4%
5-14 years	1	Asthma	109	24.5%	Gastroenteritis/dehydration	196	27.4%
	2	Dental conditions	91	20.4%	Asthma	135	18.9%
	3	Respiratory infections - Pneumonia	71	16.0%	Upper respiratory tract and ENT infections	129	18.0%
	4	Upper respiratory tract and ENT infections	60	13.5%	Dental conditions	102	14.3%
	5	Gastroenteritis/dehydration	59	13.3%	Respiratory infections - Pneumonia	72	10.1%

Source: Inpatient Data Files Ministry of Health.

5.4.3 LOW BIRTH WEIGHT

There is sound evidence that low birth weight impacts on a babies' health outcomes across the life-course. For example, there is an association between low birth weight and hypertension[35] and type 2 diabetes[36] in adulthood. National data indicate persistent inequalities in terms of low birth weight for Māori babies compared to non-Māori babies.[37] In the three-year period 2008/9-2010/11, the proportions of low birth weight babies born at Taranaki Base and Hawera Hospitals was 2.7% for Māori and 2.2% for non-Māori.

5.4.4 ORAL HEALTH

Māori have higher average counts of decayed, missing and filled deciduous (dmft) and permanent (DMFT) teeth than non-Māori. The mean number of dmft for Māori children aged 5 years in Taranaki DHB in 2004 in fluoridated areas was 3.4 compared to 1.7 for non-Māori. These are higher than national dmft scores of 2.9 and 1.2 respectively. By 2009 these figures had improved somewhat with Māori Children aged 5 years in Taranaki DHB in fluoridated areas having a dmft score of 2.8 compared to 1.4 for non-Māori children. National dmft scores in 2009 were 2.7 and 1.2. In non-fluoridated areas the mean number of dmft in Māori children aged 5 years in Taranaki DHB in 2004 was 4.4 compared to 1.9 for non-Māori children. In 2009 these figures had improved with Māori

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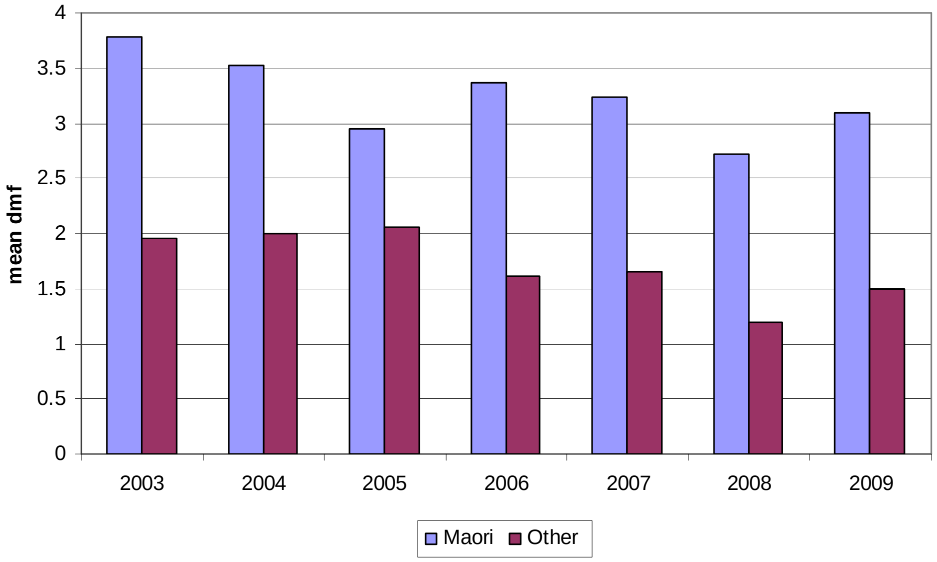
[35] Huxley, R. R., A. W. Shiell, et al. (2000): The Role of Size at Birth and Postnatal Catch-up Growth in Determining Systolic Blood Pressure: A Systematic Review of the Literature. Journal of Hypertension 18(7): 815-831.

[36] Newsome, C. A., A. W. Shiell, et al. (2003).: Is Birthweight Related to Later Glucose and Insulin Metabolism? - A Systematic Review. Diabetes Medicine 20(5): 339-48.

[37] Craig, E., C. Jackson, et al. (2007). Monitoring the Health of New Zealand Children and Young People: Indicator Handbook. Auckland, Pediatric Society of New Zealand Smylie, J., S. Crengle, et al. (2010). "Indigenous Birth Outcomes in Australia, Canada, New Zealand and the United States - An Overview." The Open Women's Health Journal 4: 7-17.

children aged 5 years in Taranaki DHB in fluoridated areas having a dmft score of 4.0 and non-Māori children a dmft score of 1.4. Some reduction in disparity by school year 8 (12 year olds) is evident although Māori children still had a higher DMFT score than non-Māori and were less likely to be caries-free. In 2003, 27% of Māori and 36% of non-Māori examined were free of dental caries. In 2009 these figures were 44% for Māori and 51% for non-Māori 12 year-olds examined by the Community Oral Health Service (Figure 27).

Figure 27 **Percentage of Children Examined with Decayed, Missing or Filled Teeth Aged 5 Years. Taranaki DHB**



Source: Taranaki DHB Dental Services.

A study describing dental caries status in permanent dentition in a cohort of 430 Taranaki adolescents initially examined at age 13 and re-examined at age 16 found that over one third of the cohort (37%) presented with decayed surfaces at follow-up. Māori adolescents had significantly higher rates of presenting with decayed surfaces at follow-up[38].

5.5 IMPORTANT CONDITIONS

5.5.1 DIABETES

The three figures below show diabetes prevalence, hospitalisation and end stage complications for Māori compared to non-Māori for Taranaki and for New Zealand. Although the numbers are small for Taranaki, it appears the gap between Māori and non-Māori widens at each stage. The prevalence of diabetes in Taranaki, as reported in the New Zealand Health Survey 2006/07, is slightly higher among Māori relative to non-Māori (Figure 28), although undiagnosed diabetes in the community makes accurate estimates difficult. Māori who have diagnosed diabetes are much more likely to be hospitalised for complications of the disease than non-Māori in Taranaki (Figure 29). There is an even more startling disparity in terms of end stage complications from diabetes such as requiring leg, toe

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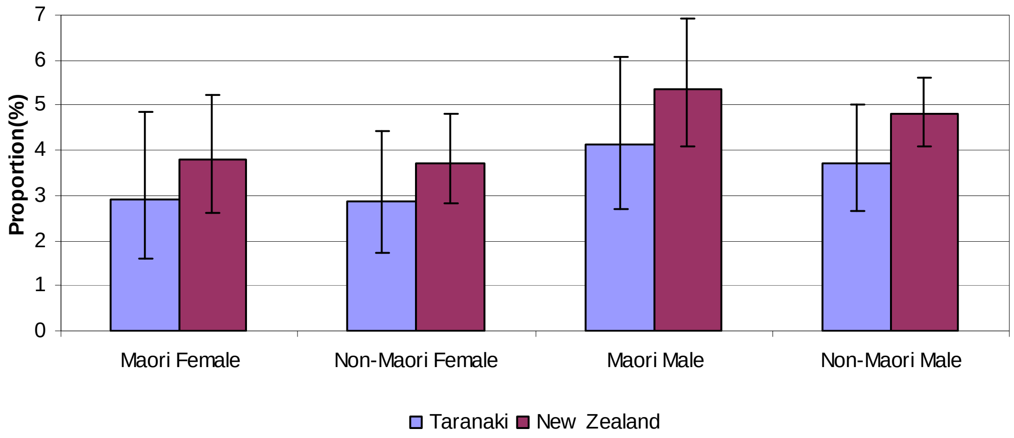
[38] Page LA, Thomson WM. Dental caries in Taranaki adolescents: a cohort study. New Zealand Dental Journal, 2011 Sep; 107(3):91-6.

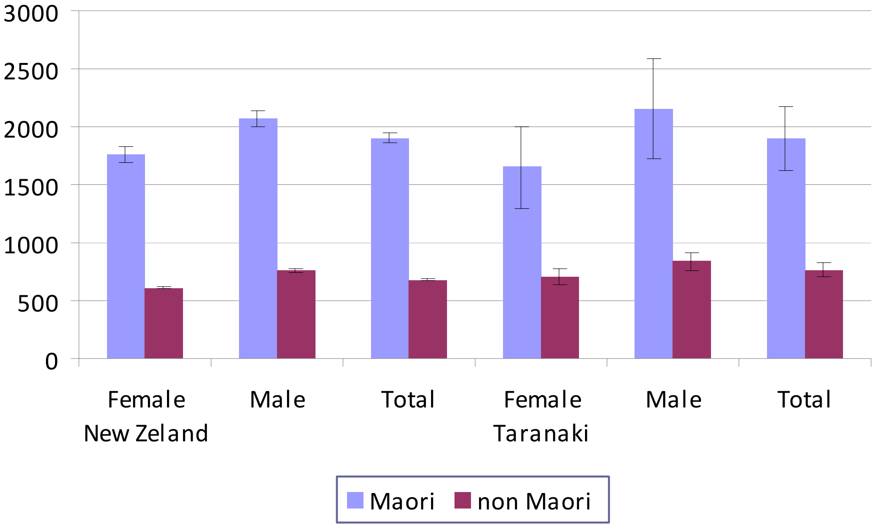
and foot amputations (Figure 30) and renal failure (Figure 31). The small sample size associated with the survey in Taranaki leads to wide confidence intervals for the data and the differences in results between Taranaki and New Zealand are not statistically significant.

Figure 28 **Age-standardised Self-Reported Prevalence (%) of Diabetes in Adults 15 Years and Over, Taranaki and New Zealand.**



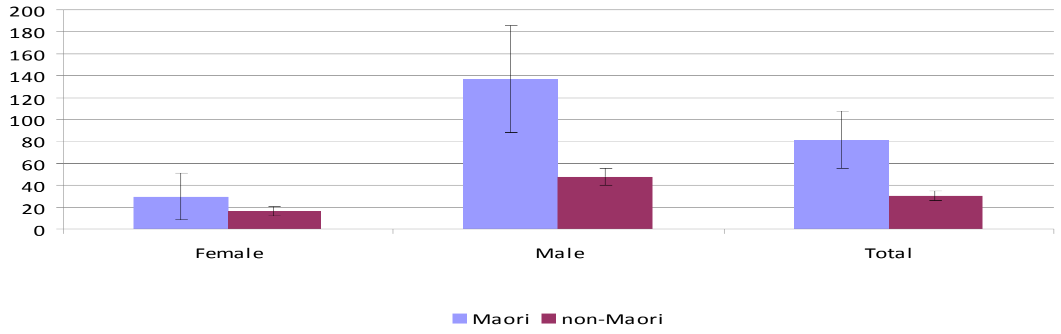
Source: New Zealand Health Survey 2006/07.

Figure 29 **Age-standardised Diabetes Hospitalisation Rate Per 100,000 in Adults 15 Years and Over, Taranaki and New Zealand, 2009-2011**



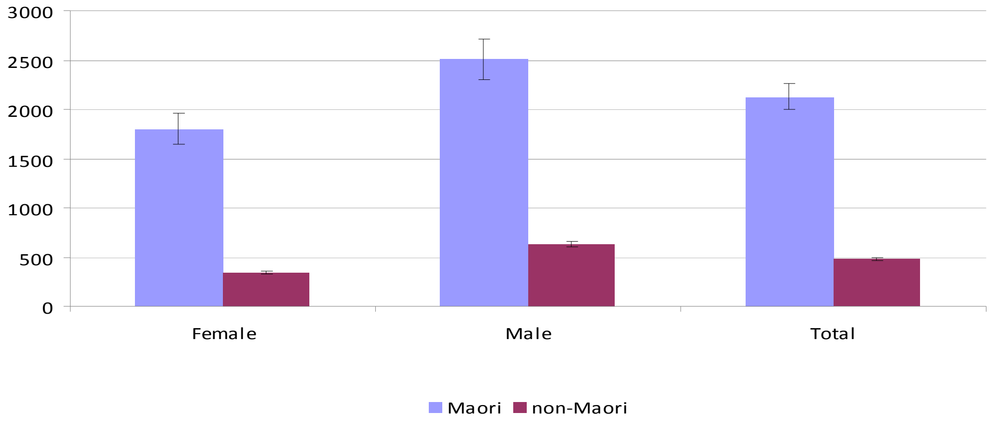
Source: NMDS Admissions Ministry of Health.

Figure 30 **Age-standardised Diabetes and Lower Limb Amputation Hospitalisation Rate Per 100,000, Taranaki and New Zealand, 2009-2011**



Source: NMDS Admissions Ministry of Health.
Notes: Casemix discharge that that have primary or secondary diagnosis code (E10, E11, E12 ,E13 ,E14) and amputation procedure codes ('4433800','4435800','4436700','4436702','4436100','4436400','4436401').

Figure 31 **Age-standardised Diabetes and Renal Failure Hospitalisation Rate Per 100,000, Taranaki and New Zealand, 2009-2011**



Source: NMDS Admissions Ministry of Health.
Notes Casemix discharge that have primary or secondary diagnosis code (E10, E11, E12 ,E13 ,E14) and primary or secondary diagnosis codes of renal failure (N17,'N18','N19').

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 important factors.[39]

5.5.2 CARDIOVASCULAR DISEASE AND STROKE

The rate of cardiovascular disease hospitalisation (Figure 32) and mortality (Figure 33) are higher for Māori than non-Māori in Taranaki and the extent of disparities is greater for mortality. The rates are highest in Māori men.

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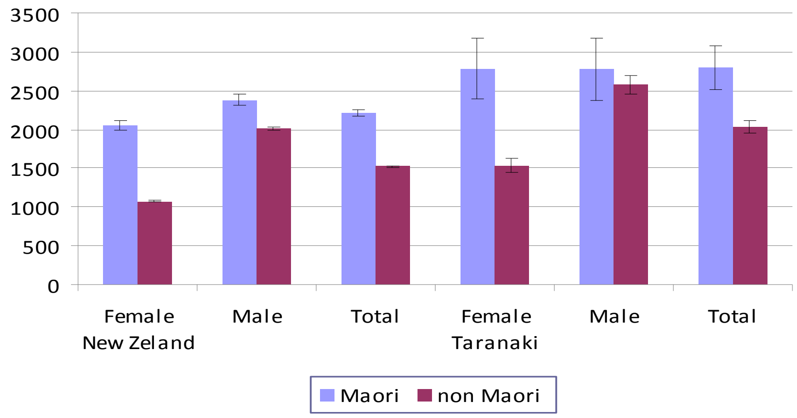
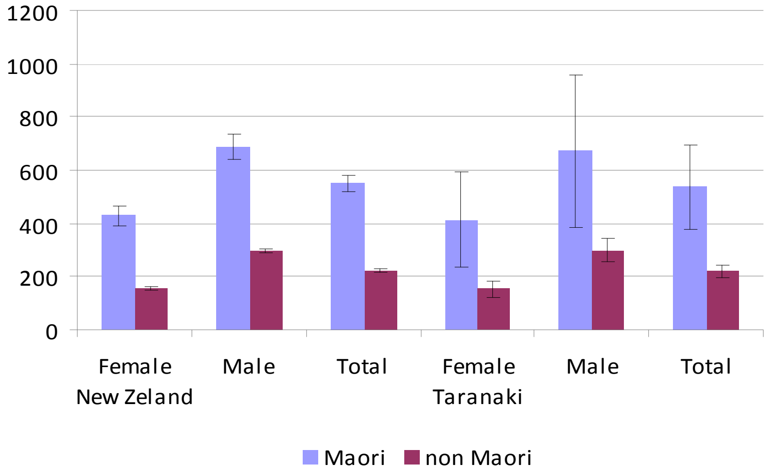
[39] Harwood, M., & Tipene-Leach, T. (2007). Diabetes.; R. B & R. Harris (Eds.), Hauora: Māori Standards of Health IV. A Study of the Years 2000-2005. Wellington: Te Ropu Rangahau Hauora a Eru Pomare.

Figure 32 **Age-standardised Cardiovascular Disease Hospitalisation Rate Per 100,000, Taranaki and New Zealand, 2009-2011**



Source: Inpatient file Ministry of Health.

Figure 33 **All Cardiovascular Disease Age-standardised Mortality Rate Per 100,000 (95% Confidence Intervals), Māori and Non-Māori, 2006-2008**



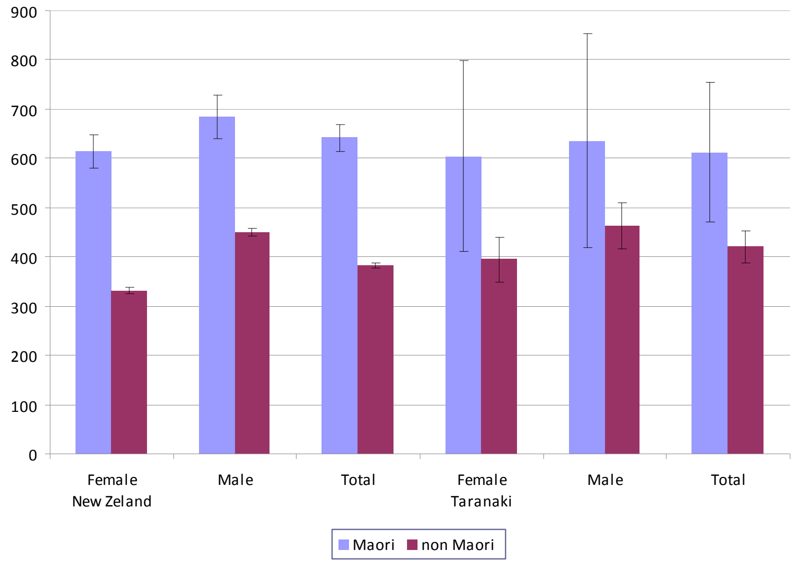
Source: Mortality Data Set – Ministry of Health.

5.5.3 CANCER

All Cancers

National data demonstrate disparities between Māori and non-Māori in cancer incidence and outcomes (Cormack, Purdie & Robson 2007). In Taranaki, and New Zealand as a whole, the mortality rates for cancer are higher for Māori (Figure 34). In Taranaki, rates of Māori cancer mortality are significantly higher than for non-Māori.

Figure 34 **All Cancers Age-standardised Mortality Rate Per 100,000 (95% Confidence Intervals), Māori and Non-Māori, 2006-2008**

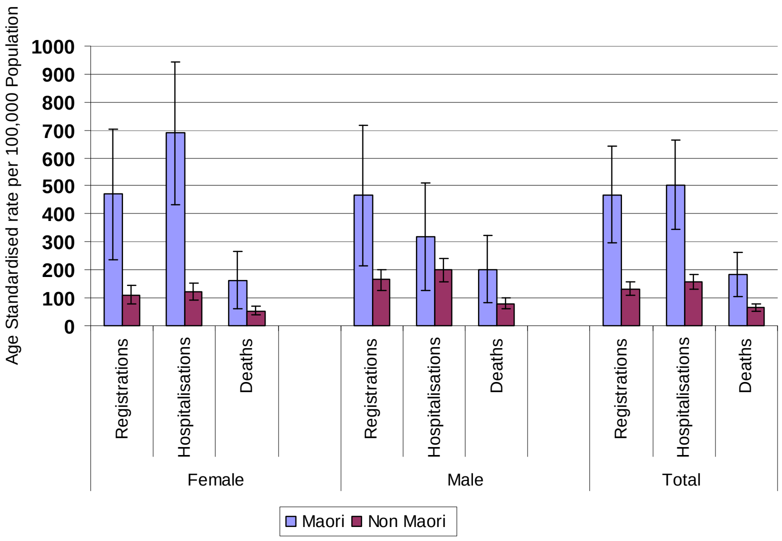


Source: Mortality Data Set – Ministry of Health.

Lung Cancer

Lung cancer is the leading cause of cancer and death for Māori. The incidence of lung cancer in Māori is the highest of any group worldwide (Harwood, Aldington and Beasley, 2005). Figure 35 compares lung cancer registrations, hospitalisations and deaths for Māori and non-Māori in Taranaki. Rates of lung cancer registration, hospitalisation and death are much higher in Māori than for non-Māori, amongst both men and women.

Figure 35 **All Lung Cancer Age-standardised Registration, Mortality and Hospitalisation Rate Per 100,000 (95% Confidence Intervals), Māori and Non-Māori**

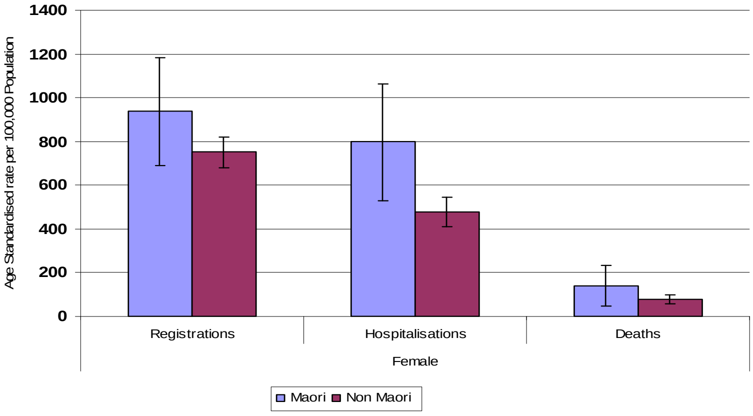


Source: Mortality Data Set– Ministry of Health (2006-2008) Cancer Registration (2009-2011) and NMDS Admission Data Set.

Breast Cancer

Breast cancer is an important cause of cancer and death for Māori females. In New Zealand, the incidence of breast cancer in Māori is the highest of any ethnic group. In Taranaki, Māori have a higher rate of breast cancer registration, hospitalisation and mortality, but small numbers mean that the difference between Māori and non-Māori is not statistically significant. Figure 36 compares breast cancer registration, hospitalisation and death for Māori and non-Māori in Taranaki.

Figure 36 **All Breast Cancer Age-standardised Registration, Mortality and Hospitalisation Rate Per 100,000 (95% Confidence Intervals), Māori and Non-Māori**

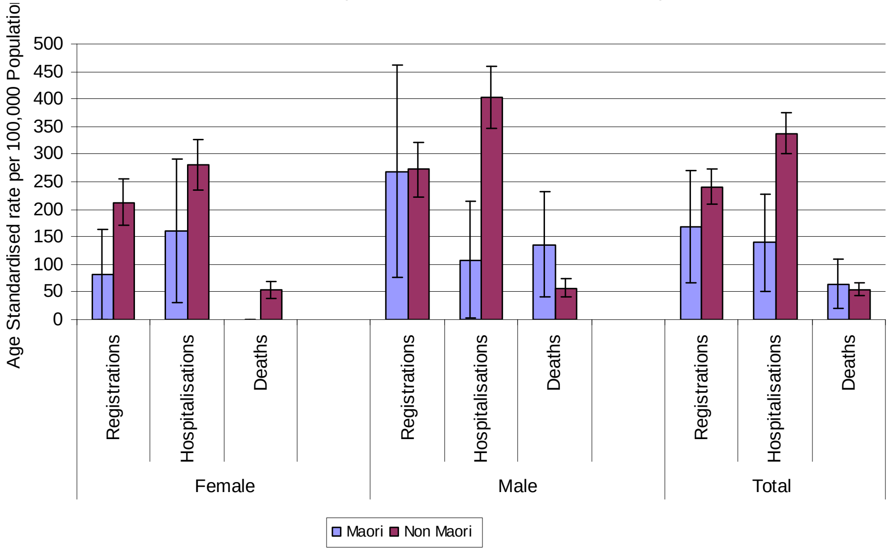


Source: Mortality Data Set– Ministry of Health (2006-2008) Cancer Registration (2009-2011) and NMDS Admission Data Set.

Colorectal Cancer

In New Zealand, colorectal cancer incidence is lower for Māori compared to non-Māori. However, it is a leading cancer registration site. Colorectal cancer mortality for Māori has increased over time. Colorectal cancer mortality rates are not lower for Māori[40] and Māori have poorer survival (controlling for demographics and disease characteristics).[41] In Taranaki, Māori have a lower incidence of colorectal cancer than non-Māori (Figure 37) but further conclusions from these data are limited by the wide confidence intervals as these rates are based on small numbers.

Figure 37 **All Colorectal Cancer Age-standardised Registration, Mortality and Hospitalisation Rate Per 100,000 (95% Confidence Intervals), Māori and Non-Māori**



Source: Mortality Data Set – Ministry of Health (2006-2008) Cancer Registration (2009-2011) and NMDS Admission Data Set.

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[40] Blakely T, Shaw C, Atkinson J. et al. (2010). Cancer Trends: Trends in Incidence by Ethnic and Socio-economic Group, New Zealand 1981-2004. Wellington: University of Otago and Ministry of Health.

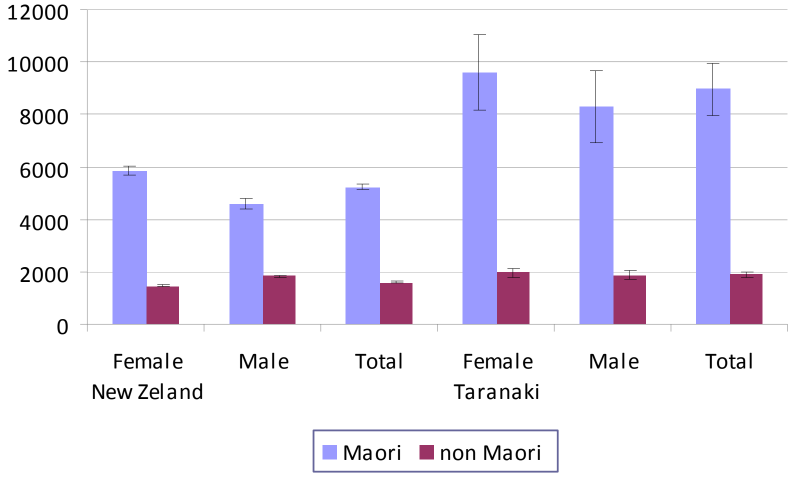
[41] Hill S, Sarfati D, Blakely T, et al. (2010). Survival Disparities in Indigenous and Non-Indigenous New Zealanders with Colon Cancer: The Role of Patient Comorbidity, Treatment and Health Service Factors. *JECH,* 64: 117-123.

5.5.4 RESPIRATORY CONDITIONS

Chronic Obstructive Pulmonary Disease (COPD)

The national self-reported prevalence of COPD among Māori aged 45 years or over is approximately twice that of non-Māori for the same age range (New Zealand Health Survey 2006/07). 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[42] 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 Māori adults who have COPD may be over 25%. This is supported by a Wellington study which found a COPD prevalence of 23.1% (95%CI: 9.0-43.7) in a small Māori population sample.[43] Where the prevalence of COPD is standardised for age, there is a wide disparity in hospitalisation rates for COPD between Māori and non-Māori nationally and even larger disparities locally (Figure 38). COPD is a leading cause of avoidable hospitalisation for Māori in Taranaki.

Figure 38 **Age-standardised Chronic Obstructive Pulmonary Disease Hospitalisation Rate Per 100,000. Taranaki and New Zealand, 2009-2011**



Source: NMDS Admissions Ministry of Health.

Death rates from COPD are likely to be underestimated through misclassification of COPD deaths as conditions such as asthma and the fact that COPD is more frequently listed as a contributing rather than the primary cause of death (Broad and Jackson 2003). Māori mortality rates (Figure 39) are also higher than for non-Māori for COPD in New Zealand and in Taranaki, but the small local numbers mean that these differences are not statistically significant. National data indicate that Māori experience an earlier age of onset of COPD than non-Māori by 15-20 years, and therefore morbidity and mortality rates alone do not reveal the true extent of the disparity in terms of lost years of healthy life.[44]

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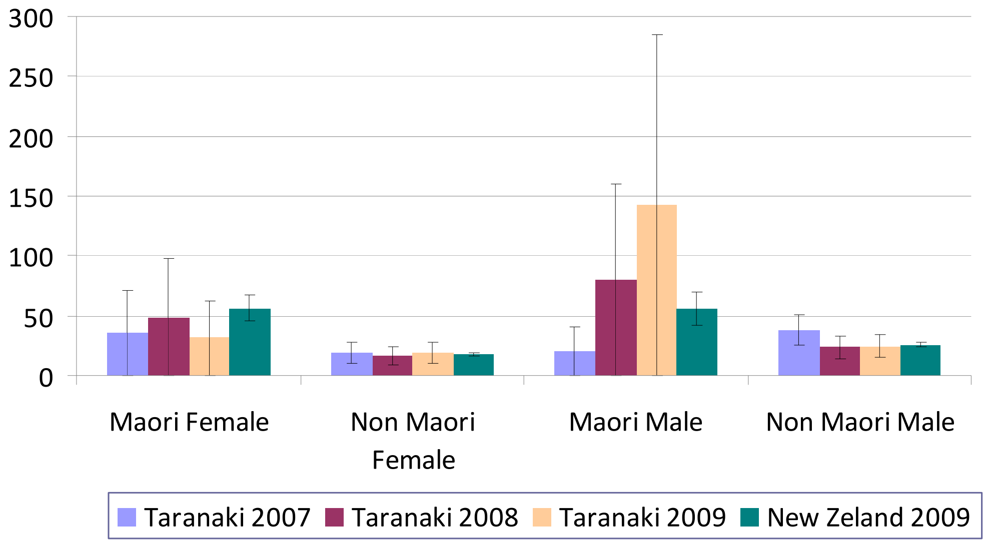
[42] Broad, J., & Jackson, R. (2003). Chronic Obstructive Pulmonary Disease and Lung Cancer in New Zealand. Auckland UniServices Limited, University of Auckland.

[43] Shirtcliffe, P., Weatherall, M., Marsh, S., Travers, J., Hansell, A., McNaughton, A., et al. (2007). COPD Prevalence in a Random Population Survey: A Matter of Definition. *European Respiratory Journal, 30*(2), 232-239.

[44] TMG Associates. (2009). Literature Review – Respiratory Health for Māori. The Asthma and Respiratory Foundation of New Zealand (Inc.). Wellington.

Figure 39 **Age-standardised Mortality Rate Chronic Obstructive Pulmonary Disease Per 100,000, Taranaki and New Zealand**



Source: Mortality Data Set – Ministry of Health.

Asthma

Asthma is a common and severe illness among Māori, with around one in four reporting asthma symptoms in a 12-month period. Māori experience more frequent hospitalisation for asthma than non-Māori in every age group, and particularly in childhood. Although the prevalence of asthma in Māori and non-Māori children is the same, Māori children have been shown to report more frequent and severe symptoms (Pattemore et al 2004) and this is not explained by exposure to known risk factors such as parental smoking. In New Zealand, during the past decade, the rate of asthma hospitalisation amongst European children and young people has been steadily declining, but it has not been decreasing for Māori (Craig et al 2007). Asthma is the most common respiratory cause of hospitalisation for Māori children. Asthma mortality increases with age, and is more common among Māori at every age. There is a stronger association between socio-economic deprivation and risk of death from respiratory disease among Māori than for non-Māori. There is also evidence that poor access to preventative health care and differential asthma treatment by ethnicity contribute to ethnic inequalities in asthma for Māori.[45]

National data indicate that Māori have the highest unmet need for inhaled corticosteroid treatments (Asher 2008) and are more likely to depend on short acting asthma relievers (such as Salbutamol) and less likely to use long acting relievers (like Beclomethasone) than European New Zealanders (PHARMAC 2006). Asthma education is critical to good self-management of the condition, however, Māori have been less likely to receive adequate asthma education than non-Māori (Garret et al 1994).

In Taranaki, Māori children have a higher rate of hospitalisation with asthma than nationally and a significantly higher rate than non-Māori (Figure 40). Rates for Māori females age 0-14 years are double that of non-Māori.

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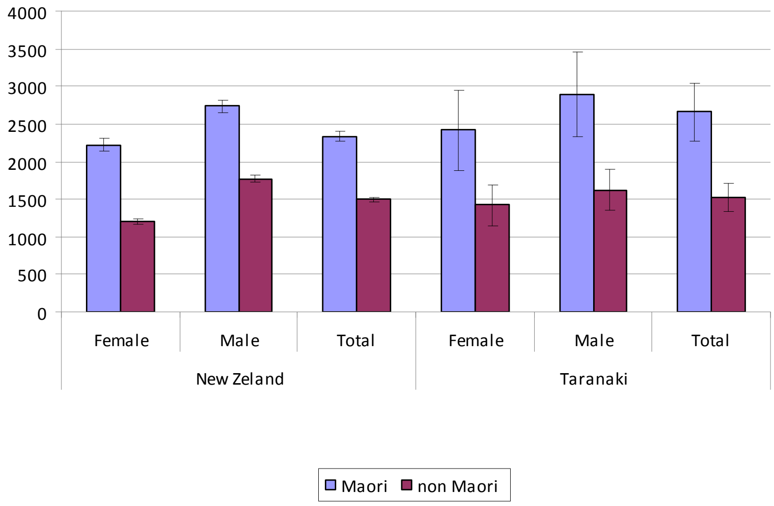
[45] TMG Associates. (2009). Literature Review – Respiratory Health for Māori. The Asthma and Respiratory Foundation of New Zealand (Inc.). Wellington

Figure 40 **Age-standardised Asthma Hospitalisation Rate Per 100,000 aged 0-14 Years Taranaki and New Zealand, 2009-2011**



Source: NMDS Admissions Ministry of Health.

5.5.5 MENTAL HEALTH

Mental Disorders

Te Rau Hinengaro (the New Zealand Mental Health Survey 2003/4) found that more than half of Māori had experienced a mental disorder in their lifetime and that within the previous month almost one third had experienced a mental disorder (Tables 38 and 39). Anxiety disorders were the most common group with one in three Māori experiencing these disorders at some time during their life. Mood or substance use disorders were experienced by one in four Māori during their lifetime. For Māori, the overall rate of mental disorder and of serious mental disorders was higher than those of non-Māori.

Table 38 **Lifetime, 12-month and 1-month Prevalence of Mental Disorders for Māori, 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).

The New Zealand Health Survey 2006/2007 asked participants a set of questions used internationally to screen populations for non-specific psychological distress and serious mental illness (Kessler Psychological distress scale K 10). International studies have confirmed that there is a strong likelihood that those people with a K 10 score of 12 or more have a mental disorder, particularly anxiety or depression. In Taranaki, 14.3% of Māori females and 7.6% of Māori males were likely to have an anxiety or depressive disorder compared to 9.9% of non-Māori females and 5.7% of non-

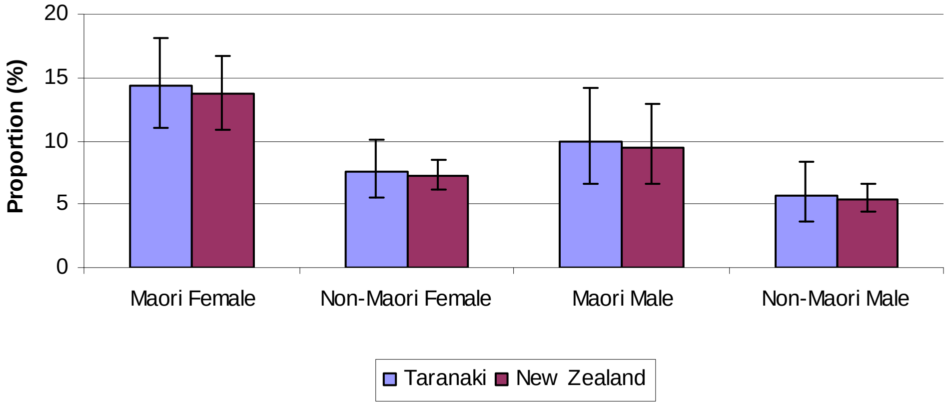
Māori males. The small numbers in the survey at the Taranaki level mean the differences are not statistically significant (Figure 41).

Table 39 **Lifetime, Prevalence of Mental Disorders in Māori, by Age-Group and Gender, New Zealand, 2003-2004**

	All	Age-Group								Sex			
Group		16-24		25-44		45-64		65 and over		Male		Female	
		%	CI	%	CI	%	CI	%	CI	%	CI	%	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).

Figure 41 **Proportion of Adults with a High or Very High Probability of Having Anxiety or Depressive Disorder (K-10 Score of 12 or more), Taranaki and New Zealand,**

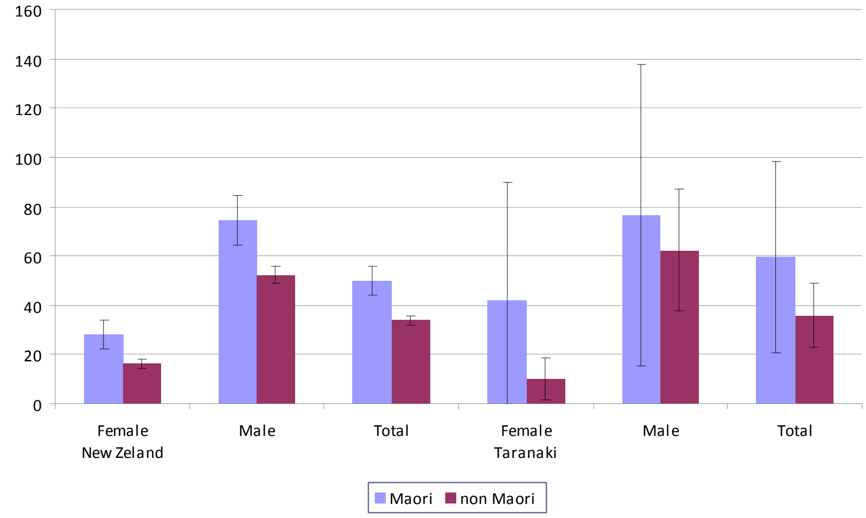


Source: New Zealand Health Survey 2006/07.

Suicide and Self Harm

Nationally, for the period 2006-2008, rates of suicide among Māori were higher than for non-Māori and for males than females. In Taranaki, the number of suicides is small and so it is difficult to provide a clear picture.

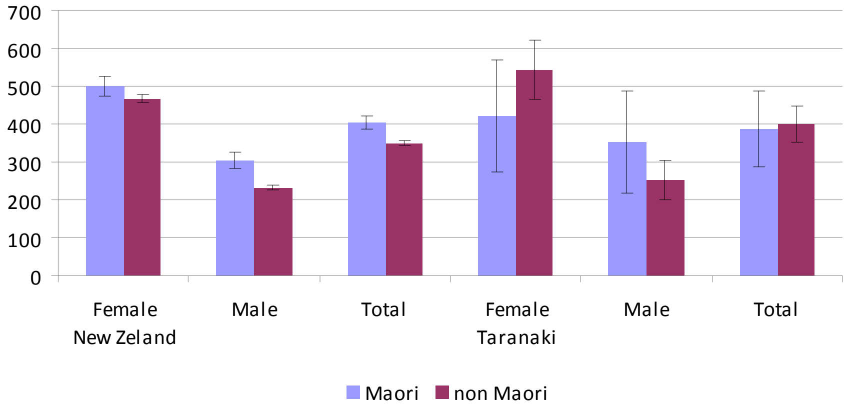
Figure 42 **Age-standardised Suicide Mortality Rate Per 100,000, Taranaki and New Zealand, 2006-2008**



Source: Mortality Data Set – Ministry of Health.

In the Taranaki Region, there are disparities in rates of hospitalisation for intentional self harm with higher rates amongst Māori males compared to non-Māori males.

Figure 43 **Age-standardised Self Harm Hospitalisations Rate Per 100,000, Taranaki and New Zealand, 2008-2010**



Source: NMDS Admissions Ministry of Health.

5.5.6 COMMUNICABLE DISEASE

A range of approximately 50 diseases are notifiable by medical practitioners to the Medical Officer of Health for Taranaki. Data for elected notifiable diseases for Taranaki from 2002 to 2010 were pooled and are shown in Table 40. Māori are under-represented in the incidence of the enteric diseases (intestinal diseases such as giardiasis, salmonellosis, yersiniosis, cryptosporidiosis, campylobacteriosis, verocytotoxic *E. coli* infection) with Māori making up 8.4% of cases (yet constitute 15% of the population). This finding is consistent with national data and is likely to reflect reduced health service utilisation for acute, self-limiting diseases. However, also consistent with national data,[46] Māori are over-represented in notifications of some important ‘close contact’ infectious diseases such as tuberculosis (43.3%) and rheumatic fever (50.0%) although the absolute number of cases of these diseases is low in the Region.

Table 40 Selected Communicable Diseases Notifications, Taranaki, 2002-2010.

	Māori	Proportion Māori (%)	Non Māori	Not Stated	Total
All enteric disease	321	8.4	3023	458	3802
Campylobacteriosos	259	8.5	2405	376	3040
Salmonellosis	21	7.1	242	33	296
Pertussis	20	14.5	109	9	138
Giardiasis	16	9.2	149	9	174
Cryptosporidiosis	14	7.0	153	34	201
Tuberculosis	13	43.3	14	3	30
Yersiniosis	11	12.1	74	6	91
Invasive pneumococcal disease	8	21.6	28	1	37
Verotoxic *E coli* infection	3	6.4	40	4	47
Rheumatic Fever	3	50.0	3	0	6
Total	**689**	**8.8**	**6240**	**933**	**7862**

Source: TDHB Public Health Unit

Viral Hepatitis Carriage

Chronic viral hepatitis B and C infection are important conditions as they are transmissible through close contact and a proportion of cases will go on to chronic active liver disease and its sequelae which include cirrhosis, liver cancer and liver failure. The downstream costs of inadequately managed hepatitis B and C cases, in terms of requiring treatment and liver transplantation, are potentially huge. The chronic carrier state for hepatitis B and C is technically not notifiable to the Medical Officer of Health (only acute infections are notifiable) but since 2006 there have been regular notifications of these and since 13 January 2006 a Hepatitis Carriage Register has been run for Taranaki. Notification of hepatitis carriers has been more systematic since December 2007 when the Taranaki laboratory service began reporting them to the Medical Officer of Health. There are currently 248 hepatitis B carriers and 207 hepatitis C carriers registered. Māori are over-represented in the carriage statistics, comprising 40% of hepatitis B virus carriers and 21% of hepatitis C carriers in the Region**.**

5.6 IMPROVING MAINSTREAM EFFECTIVENESS

5.6.1 CULTURAL COMPETENCE TRAINING FOR STAFF

In 2010-11, as shown in Table 41 below, 210 Taranaki DHB staff undertook specific Māori related training. In addition, a number of staff (over 50) have completed Tikanga Best Practice Training.

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[46] Baker M, Telfar Barnard L, Zhang J, Verrall A, Howden-Chapman P. 2010. Close-contact Infectious Diseases in New Zealand: Trends and Ethnic Inequalities in Hospitalisations, 1989 to 2008. Wellington: Housing and Health Research Programme, University of Otago

Table 41 **Number of Staff Undertaking Māori Related Training Courses Offered at Taranaki DHB 1 July 2010 to 30 June 2011**

Course Name	No. of Attendees
Cultural Safety - Kawa Whakaruruhau Mental Health Staff	8
Culture and the "Code" Workshop	16
Māori Health Models	13
MH Kawa Whakaruru Cultural Safety	3
Takarangi Champions and Evaluation	11
Te Kokiritanga o Te Rau Pani Workshop	21
Te Pumaomao – Marae based cultural awareness training	12
Treaty of Waitangi Workshop - Hawera 2010	6
Treaty of Waitangi Workshop Base 2010	48
Treaty of Waitangi Workshop Base 2011	72
Total	**210**

Source: TDHB Training and Development.

5.6.2 MONITORING PERFORMANCE

The Taranaki DHB Māori Health Plan and Annual Plan 2011-12 incorporate support for the development of Whānau Ora Centres and Results Based Accountability. These planning documents identify key Māori health priorities that have been identified at the national, regional and local levels. The documents also detail the activities that the DHB will carry out in order to address these priority areas and the rationale for them. Aligned performance indicators are identified that will be monitored to track progress in improving Māori health outcomes and reducing health inequalities for Māori over time, an approach that has been standardised nationally for the first time for the 2011-12 year. Discussed and agreed in principle with PHOs and representatives of the Māori Sector, the approach heralds a new style of engagement with the Sector to plan and implement changes to improve Māori health. All PHO's and providers in the Sector are required to develop and submit plans of action to specifically address the Māori health priorities established under Taranaki DHB's Māori Health Plan. While it may appear that the Plan does too little and is inadequately resourced, in fact the value of being able to engage both the Māori and mainstream sectors to explicitly plan to address Māori health and be held accountable for delivery against it, cannot be overstated.

5.6.3 WHĀNAU ORA SERVICE DEVELOPMENT

The concept of Whānau Ora has been widely used in a variety of ways by Māori and Government. There is no one shared understanding of the meaning of Whānau Ora and how best Government agencies generally, and DHBs in particular, may advance Whānau Ora. A number of Government agencies are developing distinct Whānau Ora initiatives and further work is required in order to clarify how these approaches will work together, based on a shared understanding of Whānau Ora. Further work is required by Māori and other stakeholders to best ensure mechanisms are in place that enable meaningful Māori community input, including from whānau, as opposed to input from Māori representing Government agencies. Much attention and resource during this developmental phase appears to have been directed to infrastructure development. While this is important, there needs to be a balance between Whānau Ora development and delivery of services to whānau and maintaining the focus on how all activities will benefit whānau.

In 2009, the Ministry of Health called for Expressions of Interest for delivery of BSMC primary health care. Two business cases, shown in Table 42 below, cover Taranaki.

Table 42 Better, Sooner, More Convenient Business Cases

BSMC PHO	Local PHO	Providers
Midlands Regional Health Network	• Formerly Hauora Taranaki PHO • Formerly Peak Health PHO	• Large number of GP clinics • Tui Ora and its affiliated providers
National Hauora Coalition	Te Tihi Hauora PHO	• Te Atiawa Medical Services Trust • Ngati Ruanui Tahua

The Midlands Regional Health Network Business Case covers 95% of the Taranaki population and 75% of the Māori population, while the National Hauora Coalition covers 23% of the Māori population, based on Census 2006 assumptions. Both Business Cases include Whānau Ora Centres — Tui Ora based at the Maru Wehi site in New Plymouth and Te Tihi/National Hauora Coalition based around the services of Ngāti Ruanui Tahua in Hawera, South Taranaki. Integrated Family Health Centres are a feature of the Midlands Network Business Case.

In September 2009, Te Ao Auahatanga Hauora Māori: Māori Health Innovations Fund was launched by the Ministry of Health. The overall goal of the fund is to advance Whānau Ora by affirming Māori approaches that improve Māori health outcomes. Tui Ora Ltd was successful with its project proposal to, over three years, research and develop a Whānau Ora model of care.

In April 2010, under the Taranaki DHB Te Haumi - Māori Health Investment Fund, local providers were invited to submit proposals to implement innovative Whānau Ora focused services. More kaiawhina/service navigation positions were established as a result of this RFP under Tui Ora and Ngāti Ruanui Tahua, as was a regional cancer navigation and support service under Tui Ora. The Fund also implemented significant Māori workforce development activity and up-graded the IT capacity of Māori providers to bring them to a common operating platform for improved collaboration and infrastructure support. A small minority of providers chose not to take up this opportunity.

In June 2010, TPK, as lead agency on behalf of the TPK, Ministry of Health and the Ministry of Social Development, sought expressions of interest from providers/provider collectives to develop and deliver whānau-centred services following the release of the document 'Whānau Ora: Report of the Taskforce on Whānau-centred Initiatives'. This is commonly known as the TPK-led Whānau Ora Initiative. Twenty-five providers/provider collectives around the country were selected in 2010, and as at early 2012 a number have completed Business Cases and are at varying stages of contract negotiations. Tui Ora Ltd and Tu Tama Wahine were separate proposers, but were asked to work jointly as a provider collective. This partnership, the Taranaki Ora Collective, is the only current Whānau Ora provider in Taranaki under the TPK-led Whānau Ora Initiative. Work in the next year will extend Whānau Ora to Kaipara, Hauraki, South Waikato, Taupō and Tūrangi, Palmerston North, Wairarapa, Levin and Kapiti Coast, and Murihiku (Southland).

In July 2010, the Minister responsible for Whānau Ora, the Honourable Tariana Turia, appointed 10 Regional Leadership Groups (RLGs) based on TPK regions. Made up of TPK, MSD, DHB and community representatives, the role of the RLGs is to provide recommendations to the National Whānau Ora Governance Group (the group responsible or overseeing the implementation of the TPK-led Whānau Ora Initiative) on the selection of Whānau Ora service providers and the development and implementation of programmes and initiatives. Taranaki is within the Taihauauru RLG region which covers the western side of the lower North Island, from the Mohakatino River in the north to the Manawatū River in the south. The role of 'health' in this initiative is to ensure the nominated Whānau Ora provider is fit for purpose and that issues of informed consent and privacy are addressed. Health will also have a funder role in relation to Health and Disability Sector funding, ensuring integrated delivery of services and that clinical considerations are taken into account.

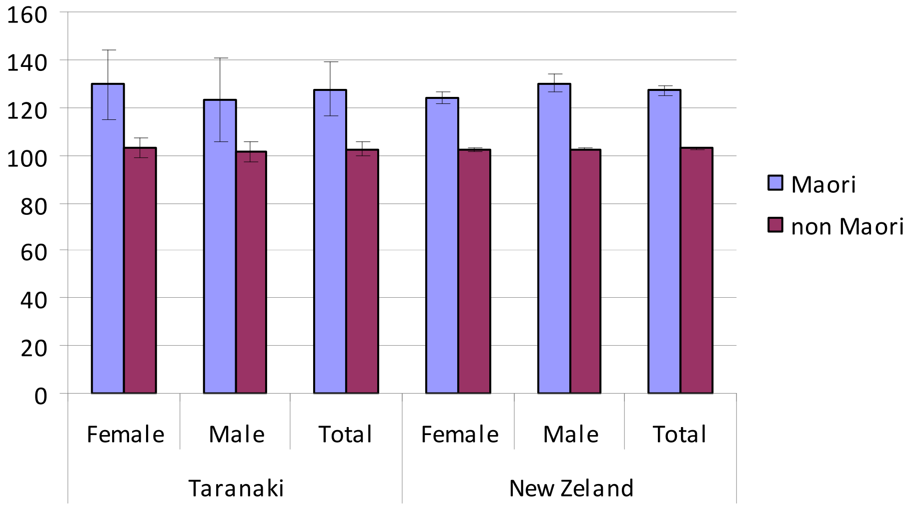
Between June 2010 and February 2011, Te Whare Pūnanga Kōrero convened five open meetings for whānau, iwi, providers and government agencies to discuss what Whānau Ora means for Taranaki. The initial meeting was called in response to the Taskforce's report and the proposal to appoint RLGs. It was felt that the RLG would require support to better understand and respond to the needs of the Taranaki community given the geographic coverage of Te Taihauauru region and the limited representation on the RLG. The outcome of the series of hui was agreement on Taranaki Whānau Ora Strategy Principles and the intention to establish a Taranaki Leadership Forum (TLF) to inform local, regional and national Whānau Ora strategy development and implementation by government agencies.

5.6.4 PROVIDING HIGH QUALITY SERVICES

READMISSIONS

Acute readmission rates for Māori are higher than for non-Māori in Taranaki and New Zealand as a whole. This may indicate issues with regard to responsiveness of services and quality of care.

Figure 44 Age Standardised Acute Readmission Rate / 1000 Admission 2009-2011



Source: Inpatient file Ministry of Health.

PATIENT SATISFACTION

Patient satisfaction surveys have been undertaken within the Taranaki DHB on a regular basis for the past 10 years for both inpatient and outpatient services.

In the 2010 Inpatient Survey Māori are under-represented as respondents at 9% compared to 15% of the Māori in the Taranaki population.

- Māori had a slightly lower mean overall satisfaction rating of 4.41, compared to 4.52 for non-Māori.
- Māori respondents overall mean rating of 'offering choices specific to your culture' was 4.15, compared to 4.34 for non-Māori.

Findings from the 2010 Outpatient Survey show a similar pattern with Māori under-represented as respondents at 8.6% compared to 15% of the Māori in the overall Taranaki population.

- Average mean overall satisfaction ratings were similar for Māori (4.54) and non-Māori (4.53).
- Māori respondents overall mean rating of 'offering choices specific to your culture' was 4.28, compared to 4.32 for non-Māori.

These differences in satisfaction were not statistically significant.

5.6.5 IMPROVING MĀORI HEALTH INFORMATION

TDHB is committed to improving the accuracy of ethnicity data collection and this is reflected in its organization-wide Ethnicity Data Policy. The mechanism for monitoring ethnicity data capture is through the quarterly analysis of National Minimum Data Sets (NMDS) of ethnicity "not stated", stated as "other" or "unidentifiable". While this shows ethnicity data capture, it does not show the accuracy of the data, i.e. that Māori are in fact Māori and not recorded as European or some other ethnicity. The Māori Health Plan 2011-12 includes an action to undertake ethnicity data audits in two departments and to support PHO's to undertake a similar exercise.

The quality of ethnicity data is important for the monitoring and development of health services. This includes the accuracy of the data and the extent to which data collection is complete, and how ethnicity data are used.

Two indicators of ethnicity data quality within the health sector are:

- Primary Health Organisation data accuracy. The percentage of records with ethnicity as "not-stated". This is sourced from capitation files received from Ministry of Health on patients enrolled with a Taranaki Primary Health Organisations. At December 2010, 0.82% of Primary Health Organisation capitation records in Taranaki did not have ethnicity stated.
- DHB data accuracy: The percentage of records within the DHB with "not stated" or “response unidentifiable" aims to be in the region of 0.5%—2%. At December 2010, 1.55% of records had ethnicity "not stated" or "response unidentifiable".

6. TE ARA TUAWHA
PATHWAY FOUR

Working Across Sectors

6. TE ARA TUAWHA – PATHWAY FOUR
Working Across Sectors

6.1 INTRODUCTION

Whānau Ora is equally concerned with socio-economic wellbeing and cultural and environmental integrity as it is with 'health' in a more narrow sense. Therefore, the Health and Disability Sector should actively participate, and in some instances take a leadership role as champions or advocates, in intersectoral activities that contribute to Whānau Ora. *Te Ara Tuawha Pathway Four* – Working across sectors is concerned with encouraging initiatives with other sectors that positively impact Whānau Ora. Proposed indicator sets in this domain relate to intersectoral collaboration (including with the Māori Sector, such as iwi) and socio-economic determinants of health.

6.2 INTERSECTORAL COLLABORATION

Taranaki DHB, as local health leadership, has an important role to play in facilitating intersectoral collaboration and action to address the determinants of health. As an example, Taranaki DHB has access to health intelligence regarding determinants and their impact on health and is therefore best positioned to draw attention to evidence-based concerns and to urge colleagues in other sectors to take action to address determinants that are linked to health issues (e.g. educational attainment, unemployment, and housing). While Taranaki DHB recognises the need for intersectoral collaboration to contribute to addressing the determinants of health, there are currently a limited number of activities underway which tend to focus more directly on health-specific issues but involve a range of intersectoral stakeholders and much scope remains for broader intersectoral action to address health determinants. Key activities that incorporate a focus on intersectoral collaboration are identified below.

Some examples of include:

- Whakatipuranga Rima Rau is a Māori Health and Disability Workforce Development project established in 2010 by partners Te Whare Punanga Kōrero, the Ministry of Social Development and Taranaki DHB. The project, which aims to increase the capacity and competency of the Taranaki Māori Health and Disability workforce involves interventions across the workforce pipeline. It places emphasis on supporting secondary school students in an education system which, to date, has generated significant and disproportionate Māori educational under-achievement. As an example, the project includes the Incubator Programme which provides mentoring and exposes Year 12 and 13 secondary school students to a range of health careers by connecting them with Health and Disability Sector workers. In 2011, the Incubator Programme was delivered to 111 students in six of the 12 Taranaki secondary schools. This is a Health and Disability Sector project that involves intersectoral stakeholders.
- Healthy Eating, Health Action (HEHA) - Oranga Kai, Oranga Pumau is a multi-agency approach to improving the health of New Zealanders through increased physical activity, improved nutrition and reduced obesity. Despite reduced Government support for HEHA activities in recent years, significant projects within this strategy have been implemented. The Community Action Fund is, in particular, a key support to resource Māori communities at grass roots to engage with the issues and to carry out small projects and activities that will reduce obesity, improve nutrition and increase physical activity.
- The Family Violence Intervention and Prevention Project brings a wide range of Government and NGO stakeholders together to discuss and agree family violence interventions and

referral protocols for people who present to hospital services. The network is a vehicle for multiple stakeholders to identify and develop solutions to address family violence. The aim of the Programme is to improve the response to family violence by Taranaki DHB and community-based family violence organisations, and to work towards reducing the health impacts of violence on families and communities.

- The Kaiawhina Project provides advocacy for whānau in high needs communities to access support across multiple sectors and services, not just health. The support needed may range from transport assistance, to advocacy within school systems, to getting budgetary advice, to helping with child-minding to enable attendance at appointments, or addressing a range of other barriers to whānau accessing timely health care. The kaiawhina role involves supporting whānau to access services and supporting them on a journey to being able to self-manage. Importantly, kaiawhina must have the networks and skills to enable them to work across sectors with a range of stakeholders to facilitate seamless and coherent intersectoral service delivery.

6.3 SOCIO-ECONOMIC DETERMINANTS OF HEALTH

It is well documented that there are systematic inequalities in access to social and economic determinants of health for Māori and that socio-economic status is a key factor contributing to health outcome disparity between Māori and non-Māori. The socio-economic advantages of non-Māori are responsible for approximately half of the increasing gap in mortality between non-Māori and Māori during the 1980s and 1990s (Ministry of Health and University of Otago 2006). Socio-economic determinants include income, employment, occupation, housing conditions, locality of residence, and education.[47]

6.3.1 NEW ZEALAND INDEX OF DEPRIVATION 2006 (NZDep2006)

NZDep2006 provides a numerical rating of socio-economic status of geographical areas using nine variables related to the conditions of daily life from the 2006 Census. These variables are shown in Table 43. 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.

Table 43 NZDep2006 Variables

Dimension of Deprivation	Variable Description (in order of decreasing weight)
Income	People aged 18—64 receiving a means tested benefit
Income	People living in equivalised households with income below an income threshold
Owned home	People not living in own home
Support	People aged <65 living in a single parent family
Employment	People aged 18—64 unemployed
Qualifications	People aged 18—64 without any qualifications
Living space	People living in equivalised households below a bedroom occupancy threshold
Communication	People with no access to a telephone
Transport	People with no access to a car

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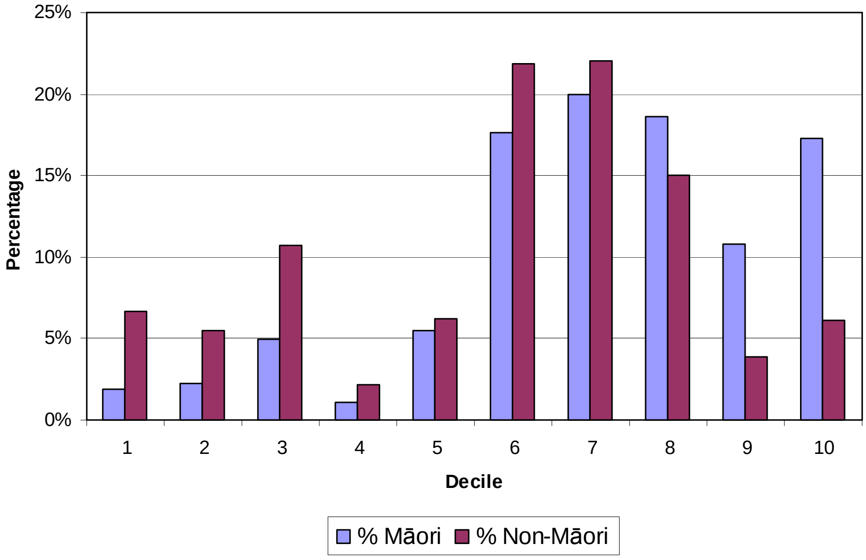
[47] Robson, B. (2004). Economic Determinants of Māori Health and Disparities: A Review for Te Ropu Tohutohu i te Hauora Tumatanui (Public Health Advisory Committee of the National Health Committee). Wellington: Te Ropu Rangahau Hauora a Eru Pomare.

National NZDep2006 data demonstrate that non-Māori are advantaged in terms of access to socio-economic resources. In contrast, Māori are clustered in areas of high relative deprivation and therefore are disproportionately impacted by the health consequences of low socio-economic status.[48] Furthermore, at each level of deprivation, Māori experience worse health outcomes than non-Māori,[49] indicating that ethnicity is independently related to poorer health, above and beyond socio-economic status. In the 10 years from 1996 to 2006, there has been no shift in the distribution of wealth by ethnicity.[50]

Figure 47 shows the different pattern of deprivation for Māori and non-Māori in Taranaki. Non-Māori are over-represented in the wealthiest socio-economic deciles and Māori are over-represented in the lowest socio-economic deciles. Within Taranaki, 28% of Māori live in the most deprived 20% of areas compared to 10% of non-Māori. In contrast, 4.2 % of Māori live in the 20% of the most affluent areas compared to 12.2% of non-Māori**.**

Figure 45 Proportion of Māori and Non-Māori in NZDep 2006 Deciles, Taranaki DHB



Source: NZDep 2006.

6.3.2 INCOME

Income is a measure of access to goods and services and is an important predictor of health status. Source of income is shown in Figure 46. Māori are more likely to receive income from salaries, wages and benefits and less likely to receive income from being self employed, receiving interest, dividends, rents, superannuation or other investments.

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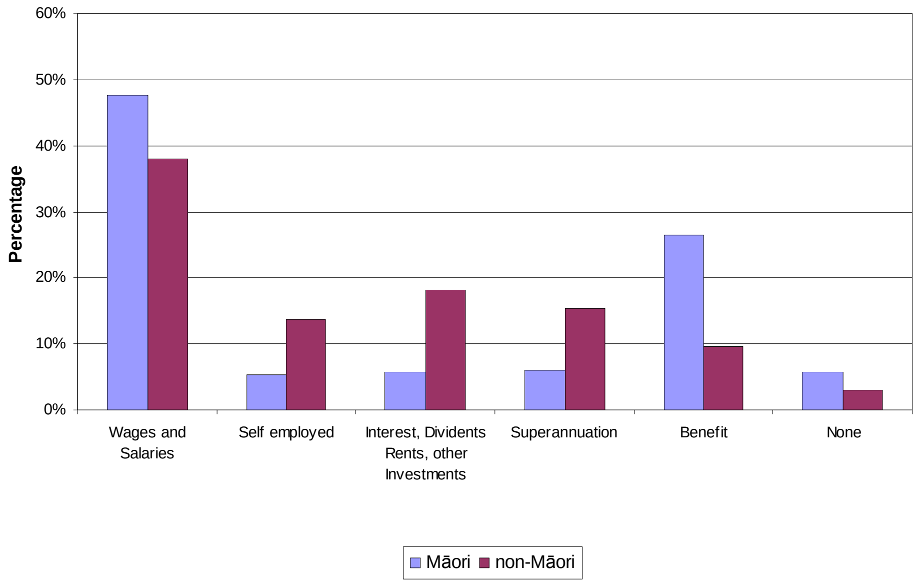
[48] Ministry of Health & University of Otago. (2006). Decades of Disparity III: Ethnic and Socio-economic Inequalities in Mortality, New Zealand 1981-1999. Wellington: Ministry of Health.

[49] Reid, P., Robson, B., & Jones, C. P. (2000). Disparities in Health: Common Myths and Uncommon Truths. Pacific Health Dialog, 7(1), 38-47.

[50] Towns, C., Watkins, N., Salter, A., Boyd, P., & Parkin, L. (2004). The Orewa Speech: Another Threat to Māori Health? New Zealand Medical Journal, 117(1205), U1145 Tobias M, Bhattacharya A, & White P. (2008). Cross Classification of the New Zealand Population by Ethnicity and Deprivation: Trends from 1996 to 2006. Australian and New Zealand Journal of Public Health, 32(5), 431-436.

Figure 46 **Source of Income of Adults 15 Years and Over, Taranaki and New Zealand, 2006**



Source: Census 2006.

Generally, higher incomes are associated with lower morbidity and mortality from a range of conditions. Just over 22% of Māori over 15 years of age in the Taranaki DHB area reported an annual income of $10,000 or less in the 2006 Census compared to 17% of non-Māori. The New Zealand Income Survey (June 2007) indicated that for Māori the median weekly income was $516 compared to $524 for NZ Europeans and that average incomes were $553 and $652 respectively (Table 44).

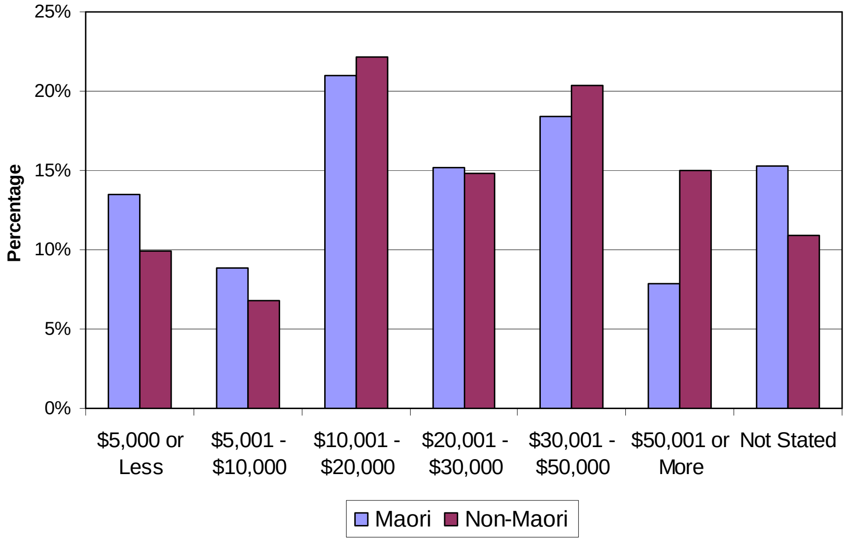
Table 44 **Average and Median Weekly Income by Ethnicity, Taranaki**

Ethnic Group	**Weekly Income ($)**		**Number of People**
	Average	*Median*	
European/Pakeha	$652	$524	73,500
Māori	$553	$516	10,500
Other Ethnic Groups	$610	$540	1,700
All Ethnic Groups	$637	$523	86,400

Source: New Zealand Income Survey June 2007.

The distribution of total personal income is shown in Figure 47. Māori are over-represented among those earning less than $10,000 per annum and under-represented among those earning over $30,000 per annum compared to non-Māori.

Figure 47 **Total Annual Personal Income $NZ Persons aged 15 years and over Taranaki, 2006**

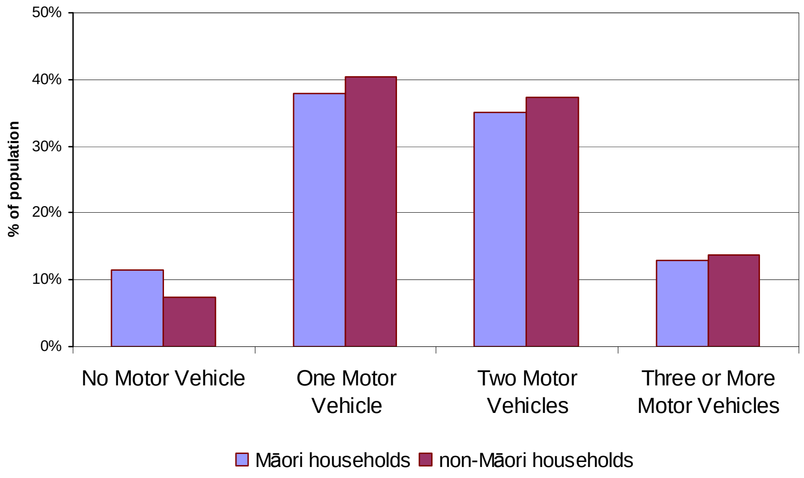


Source: Census 2006.

6.3.3 ACCESS TO A CAR

Household access to a car provides an indication of access to resources such as the labour markets and social services and is also 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. Māori are more likely to be without access to a car at home. Some 11.5% of Māori have no access to a car, compared to 7.4% of non-Māori (see Figure 48). Even though some 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 people who share the car and the ability/licence to drive are all relevant in considering car access. These factors may explain why Māori experience transport barriers despite almost 90% reporting access to a car.

Figure 48 **Access to a Motor Vehicles within Taranaki Private Households, 2006**

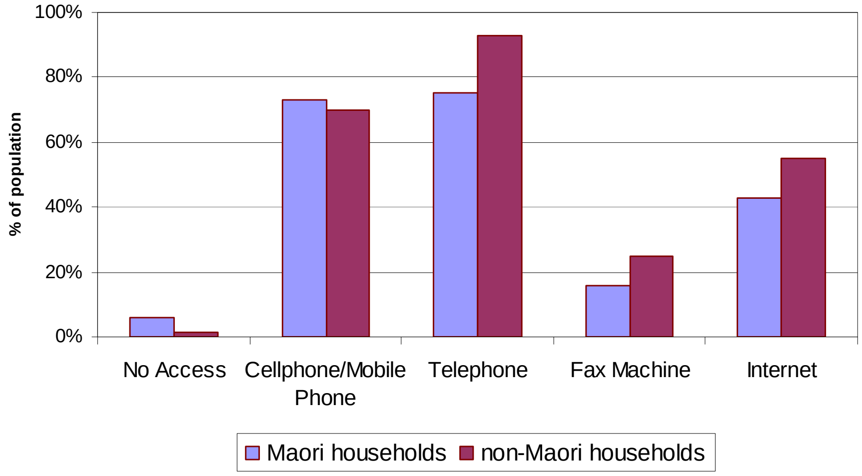


Source: 2006 Census.

6.3.4 ACCESS TO COMMUNICATION

Household access to a telephone provides an indication of access to resources and telephones also facilitate social integration. More Māori than non-Māori in Taranaki do not have access to a telephone or fax as shown in Figure 49. Māori have higher access to a mobile/cell phone than non-Māori. More Māori than non-Māori in Taranaki do not have access to the internet with 43% of Māori having access to the internet at home compared to 55% of non-Māori households.

Figure 49 Access to Telecommunication in Taranaki Private Households, 2006

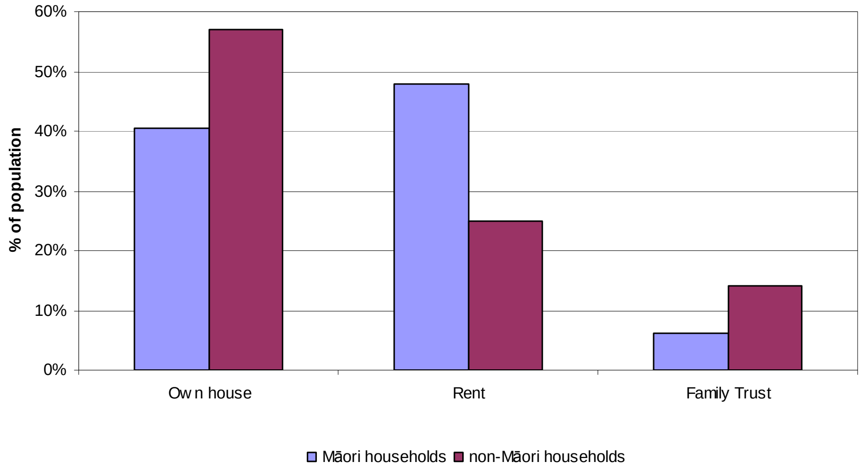


Source: 2006 Census

6.3.5 HOME OWNERSHIP

It is well documented that the quality of housing affects population health (Howden-Chapman et al. 2007). Substandard housing, inadequate insulation and overcrowding can predispose occupants to illness. Home ownership, which is generally a proxy of household wealth, is associated with improved health. In Taranaki, 40% of Māori compared to 55% of non-Māori own their own homes. Māori are almost twice as likely as non-Māori to occupy rental accommodation (see Figure 50).

Figure 50 Tenure of Housing, Taranaki, 2006

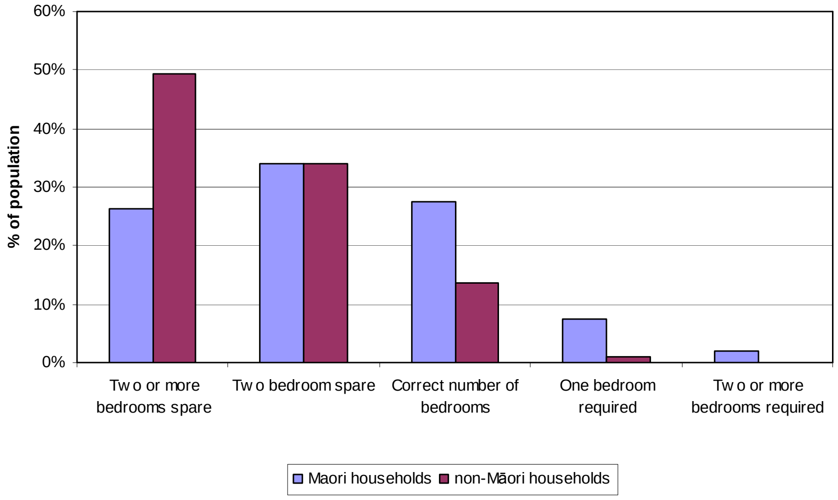


Source: 2006 Census.

6.3.6 OVERCROWDING

Household overcrowding is associated with a range of health issues including close contact infectious diseases (Baker et al. 2010).[51] A commonly employed measure of household overcrowding is the Canadian National Occupancy Standard developed by the Canada Mortgage and Housing Corporations. This measure uses a classification system based on the number of bedrooms in a house divided by the number of occupants. In Taranaki, Māori are much less likely to have two or more spare bedrooms, and are more likely to have the correct number of bedrooms and to require one or more additional bedrooms (see Figure 51).

Figure 51 Overcrowded Households, Taranaki, 2006



Source: 2006 Census.

6.3.7 ACCESS TO HEATING

Inadequate household warmth is linked to adverse health effects[52] and colder homes place greater stress on the most vulnerable members of the household such as older people, the ill and infants. In Taranaki, 2.3% of Māori people did not have any form of heating, compared to 1% of non-Māori. Māori use bottled gas, coals and 'other fuels' proportionally more than non-Māori (Figure 52).

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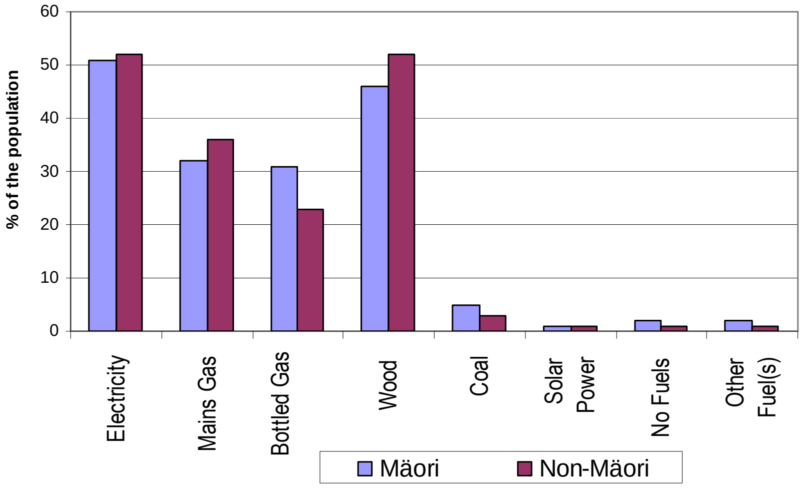
[51] Baker M, Barnard LT, Zhang J, Verrall A, Howden-Chapman P. Close-Contact Infectious Diseases in New Zealand: Trends and Ethnic Inequalities in Hospitalisations, 1989 to 2008; University of Otago, Wellington, June 2010.

[52] Howden-Chapman, P., Pierse, N., Nicholls, S., Gillespie-Bennett, J., Viggers, H., Cunningham, M., Phipps, R., Boulic, M., Fjallstrom, P., Free, S., et al. Effects of Improved Home Heating on Asthma in Community Dwelling Children: Randomised Controlled Trial. British Medical Journal (BMJ). 2008; 337: a1411. Published online 2008 September 23. doi: 10.1136/bmj.a1411. PMCID: PMC2658826

Figure 52 Forms of Heating in the Home, Taranaki, 2006

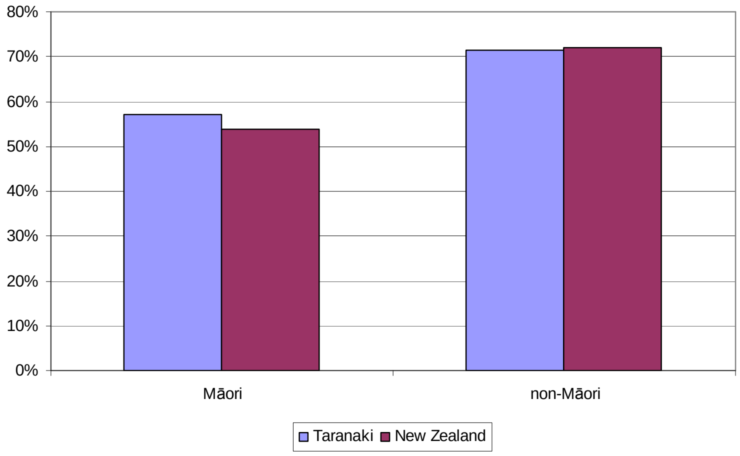


Source: 2006 Census.

6.3.8 EDUCATION

Education is a key social determinant of health with increasing education levels corresponding to improvements in health status (Wilkinson and Marmot 2003). Information from the BERL Report indicated that in the Taranaki Region 57% of Māori completed high school compared to 71% of non-Māori (Figure 53).

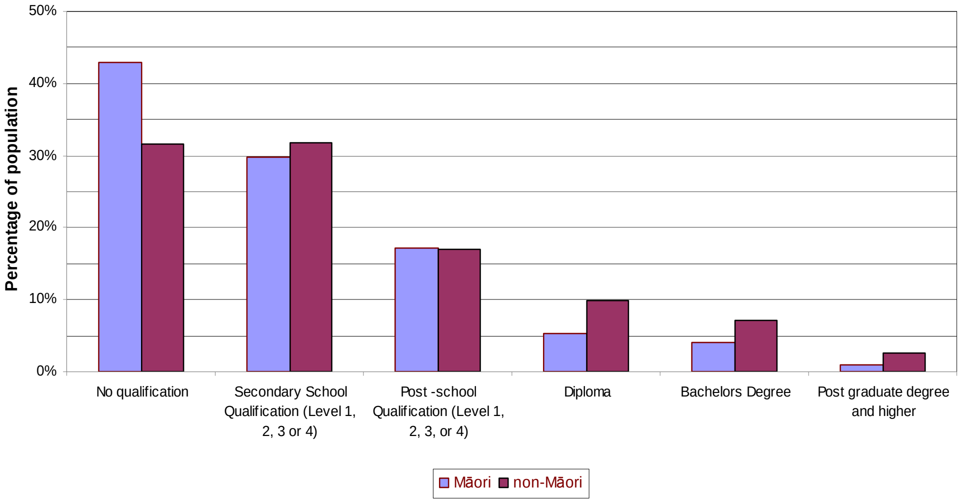
Figure 53 School Completion, Taranaki and New Zealand



Source: BERL

At the time of the 2006 Census, the highest level of educational attainment for Māori living In Taranaki is shown in Figure 54 with 43% having no qualifications, 30% a secondary school qualification (Level 1, 2, 3 or 4), 17% a post school qualification (Level 1, 2, 3, or 4), 5% held a diploma, 7% a bachelors degree and 1% held a post graduate degree or higher.

Figure 54 **Highest Level of Educational Attainment, Taranaki, 2006**



Source: Census 2006.

In 2006, there were 1,344 Māori students enrolled in the Taranaki Region. Most enrolments are clustered in programmes and courses at the pre-degree level.

Table 45 **Number of Māori Students Enrolled with a Tertiary Education Provider in Taranaki Region by Level of Study, 2006**

Level	Students
Certificates 1-3	681
Certificates 4	326
Diplomas 5-7	310
Bachelors degrees	25
Graduate certificates/diplomas	2
Total	**1,344**

Source:

Note: *Data relates to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 FTEs (more than one week's duration). Data excludes all non-formal learning and on-job industry training. Students who were enrolled at more than one qualification level have been counted in each level. Consequently, the sum of the students by level may not add to the total number of students.*

In 2010, there were 1090 Taranaki Māori students (students who identified affiliations to iwi of Taranaki) enrolled in universities, 1320 in polytechnics and 1030 in wānanga (Table 46). While there were high numbers of students enrolled in wānanga, most enrolments were for pre-degree qualifications. Most university level enrolments were at the bachelors and postgraduate levels. Generally, the proportion of students decrease with increasing qualification levels and few Taranaki Māori students are progressing to masters and doctoral level studies.

Table 46 **Number of Taranaki Māori Students Enrolled by Sub-Sector and Level of Study, 2010**

Sub-sector	Universities	Polytechnics	Wānanga
Certificates 1-3	Na	560	560
Certificates 4	20	320	230
Diplomas 5-7	70	280	150
Bachelors degrees	740	140	70
Graduate certificates/diplomas	50	10	Na
Honours and postgraduate certificates/diplomas	110	10	10
Masters	70	Na	10
Doctorates	30	na	Na
Total	1090	1320	1030

Source:

Note: *Data relates to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 FTEs (more than one week's duration). Data excludes all non-formal learning and on-job industry training. Students who were enrolled at more than one qualification level have been counted in each level. Consequently, the sum of the students by level may not add to the total number of students. Na= not applicable.*

6.3.9 EMPLOYMENT

Unemployment is associated with poor health (Blackley et al. 2003) and occupational gradients in health status are well documented (Shaw et al. 1999). There is evidence of a causal relationship between inequalities in Māori participation in the labour market (in terms of both unemployment and type of occupation) and mortality rate disparities between Māori and non-Māori (Ministry of Health and University of Otago, 2006). At the time of the 2006 Census, the proportion of Māori unemployed was more than twice that for the total Taranaki population, and the proportion of Māori in employment in Taranaki was lower than for the total Taranaki population (Figure 55).

Figure 55 **Percentage Unemployed and Employed, Taranaki, 2006**

Source: Census 2006.

Table 47 Employment – Working Aged Unemployed Benefit Recipients (Age 18-64 Years) in Taranaki Region and Nationally, September 2011

	Taranaki		New Zealand
	Number	**Percentage**	**(%)**
Māori	479	42.4	36.2
Non-Māori	650	57.6	63.8
Total	1129	100.0	100.0

Source: Ministry of Social Development
Notes: Rounding errors mean these figures may differ slightly from official MSD fact sheets. These values occur against a backdrop of significant reductions in the number of current unemployment benefits over time at the national level.

The occupational distribution of the Māori workforce in Taranaki is shown in Table 48. National data demonstrate that Māori tend to be clustered in lower occupational levels, and the pattern for Māori in Taranaki is the same with the highest numbers in the Labourers' category.

Table 48 Occupation(1) of Employed Māori in Taranaki Region and New Zealand,(2) 2006 Census

	Taranaki Region	New Zealand
Managers	636	23,937
Professionals	639	28,977
Technicians and trades workers	741	25,626
Community and personal service workers	510	22,617
Clerical and administrative workers	399	22,452
Sales workers	435	17,610
Machinery operators and drivers	516	21,630
Labourers	1,581	43,749
Not elsewhere included(3)	645	18,759
Total(4)	**6,108**	**225,360**

1. Australian and New Zealand Standard Classification of Occupations (ANZSCO V1.0).
2. All figures are for the employed Māori ethnic group census usually resident population count aged 15 years and over.
3. Includes responses classified as 'response unidentifiable', 'response outside scope.'
4. Rounding errors mean these figures may differ slightly from official MSN fact sheets. These values occur against a backdrop of significant reduction in the number of current unemployment benefits over time at the national level.
5. Figures may not add up exactly due to rounding

6.3.10 UNPAID ACTIVITIES

Māori men and Māori women are more likely 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.

Table 49 Unpaid Activities Among Adults Aged 15 Years and Over, 2006

Unpaid Activity	Māori Number	Total Number	Māori %	Total %
No Activities	1002	8049	9.9%	9.9%
Household Work, Cooking, Repairs, Gardening, etc, for Own Household	7524	62268	74.3%	76.4%
Looking After a Child Who is a Member of Own Household	3804	23382	37.6%	28.7%
Looking After a Member of Own Household Who is Ill or Has a Disability	1059	5628	10.5%	6.9%
Looking After a Child Who Does Not Live in Own Household	2310	13164	22.8%	16.2%
Helping Someone Who is Ill or Has a Disability Who Does Not Live in Own Household	1128	7233	11.1%	8.9%
Other Helping or Voluntary Work for or Through Any Organisation, Group or Marae	1848	12021	18.2%	14.8%
Total People Stated	8868	72273	87.6%	88.7%
Total People, Not Elsewhere Included	1260	9177	12.4%	11.3%
Total People, Unpaid Activity	10128	81450		

Source: 2006 Census

6.3.11 RACISM

International research suggests that racism is a major determinant of health and inequalities (Jones et al. 2001). In the New Zealand context, using data from the New Zealand Health Survey, it has been shown that Māori have the highest self-reported prevalence of 'ever' experiencing discrimination (Harris et al. 2006). This link between self-reported experience of racial discrimination and poor relative health outcomes has been demonstrated from the same databases. Furthermore, Māori were more likely to report 'ever' being treated unfairly by a health professional due to their ethnicity (Harris et al. 2006).

7. MĀORI STAKEHOLDER/COMMUNITY FEEDBACK

7. MĀORI STAKEHOLDER/COMMUNITY FEEDBACK

7.1 INTRODUCTION

Nationally and regionally, at least since October–November 2009 (the period during which the Whānau Ora Taskforce held regional Whānau Ora hui), there has been extensive consultation with whānau, iwi, Māori communities and service providers in relation to Whānau Ora. Given the extent of Whānau Ora consultation that has been undertaken in Taranaki and the level of Māori community consultation fatigue, this project drew on documented findings from already completed local consultation exercises with whānau and other Māori stakeholders and engagement with a limited number of local Māori stakeholders. Where possible, in order to minimise disruption and time requirements for participants, engagement activities took place alongside hui and meetings that were already arranged for related purposes.

A Steering Group was established in October 2011 to oversee the Whānau Ora Health Needs Assessment Project. The Steering Group met four times during the project period, and provided a regular source of Māori stakeholder input into the project through membership that included representation from Te Whare Pūnanga Kōrero and Taranaki Māori health providers.

In November, HNA project team members met with Strategic Alliance partners (Tui Ora Ltd and the National Hauora Coalition) to seek input into the HNA. In early December, a hui of Māori service providers who work directly with whānau in their everyday service provision was held in Hawera, South Taranaki. Participating organisations included the Ruanui Health Centre, Raumano Health Trust, Tui Ora Ltd, Ngaruahine Iwi Health Service and Ngaruahine Iwi Authority. In mid-December, Taranaki DHB hosted a hui of the Taranaki DHB Board, Te Whare Pūnanga Kōrero, and Te Taihauauru Regional Leadership Group. A forum was provided at that hui to enable the project team to engage Te Whare Pūnanga Kōrero and the RLG in the HNA.

Key documented Whānau Ora consultation exercises that informed this section of the report included engagement with whānau and other Māori stakeholders undertaken as part of: the Tui Ora Whānau Ora Health Impact Assessment on the proposed Maru Wehi Hauora Integrated Whānau Ora Centre; the Taranaki DHB Public Health Unit Community Profile Projects; and the Bishop's Action Foundation work with Māori to contribute to the 'South Taranaki – alive with opportunities for better health care' Project and a Taranaki DHB funded project to better understand regional whānau health service needs.

7.2 WHĀNAU ORA HEALTH NEEDS PRIORITIES FOR MĀORI LIVING IN TARANAKI

This section of the report summarises Māori stakeholder views on Whānau Ora health needs priorities gleaned from direct engagement with stakeholders and the review of recently documented Whānau Ora consultation carried out by other groups with Māori whānau living in Taranaki and other local Māori stakeholders. The input from Māori stakeholders can be broadly grouped according to the following four categories used in the monitoring framework for this HNA:

- *Te Ara Tuatahi Pathway One* – 'Development of whānau, hapū, iwi and Māori communities'
- *Te Ara Tuarua Pathway Two* – 'Māori participation in the Health and Disability Sector'
- *Te Ara Tuatoru Pathway Three* – 'Effective health and disability services'
- *Te Ara Tuawhā Pathway Four* – 'Working across sectors'

The Whānau Ora health need priorities identified were wide-ranging, reflective of the variety of factors influencing Whānau Ora, the range of health challenges facing Māori, and the importance of preventative care 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 specific priorities would be difficult. Overall, however, there was a strong preference for Whānau Ora service provision.

Te Ara Tuatahi Pathway One – 'Development of whānau, hapū, iwi and Māori communities'

Whānau Ora health need priorities were identified that related to the development of whānau, marae, hapū, iwi and Māori communities. There was recognition that there are many stakeholders seeking to work in the 'Whānau Ora space' and limited clarity around how best to engage with whānau. Furthermore, the Māori community has a limited capacity to engage with Whānau Ora and in this context Māori community development at whānau, marae, hapū and iwi levels was identified as important. As an example, iwi have limited capacity to broker Whānau Ora activity and for some iwi this may be due to the priority given to ongoing Treaty of Waitangi settlement processes and broader human and other resource constraints. As well, iwi in the Taranaki Region are at different stages of development and this contributes to difficulties in agreeing a Taranaki-wide Whānau Ora strategy that is enabling and supportive of iwi strategy.

While much discussion of Whānau Ora activities is concerned with reactive measures to address critical need among communities in wide-ranging domains, equally there is a need to engage whānau in preventative and aspirational activities. At the whānau level, there was recognition that work is required to strengthen whānau cohesion so that whānau are better positioned to exercise the positive functions of whānau such as collective responsibility, caring for whānau members and aspirational planning. Elements of excellent Whānau Ora services identified included strengthening whānau cohesion, the expression of Māori values (e.g. manaakitanga/caring and whakamana/ enablement or empowerment) and consistency with Māori process.

Consultation feedback indicated the importance of strengthening cultural identity as a mechanism to achieve health gain and practical measures such as a core focus on Māori culture, values and tikanga in Whānau Ora service delivery.

Te Ara Tuarua Pathway Two – 'Māori participation in the Health and Disability Sector'

Whānau Ora health need priorities were identified that related to Māori participation in the Health and Disability Sector. Identified priorities were Māori provider capacity and capability building and Māori health workforce development.

The importance and value of well-resourced locally accessible kaupapa Māori health services was consistently highlighted as a means to improve Māori access to services. The need to promote among communities the range of kaupapa Māori services available locally was identified. In South Taranaki, the need for devolution of contracts to local providers was also noted. As well, feedback indicated a demand for access to rongoa (traditional Māori medicines and healing practices).

Feedback indicated that increasing the capacity and capability of the Māori health workforce is an area that requires ongoing attention (e.g. ensuring well qualified personnel are available to work with kaumātua). Furthermore, that succession planning is in place to ensure a sustainable professional Māori health workforce in the long term. It was suggested that transport support may be required in order to encourage South Taranaki Māori to undertake health field training as one measure to build a sustainable local health workforce.

Te Ara Tuatoru Pathway Three – 'Effective health and disability services'

Whānau Ora health need priorities were identified that related, in the main, to access to quality health care across the Taranaki Region and Whānau Ora service provision.

Feedback from community engagement consistently raised strong concerns about access to primary health care. Concerns focused on difficulties in securing appointments with GPs and long waits (particularly in South Taranaki), lack of continuity of care, poor access to after-hours care leading to high use of accident and emergency services and a lack of effective communication between GPs and whānau. Comments indicated that doctor-centred care was considered to be over-emphasised and an increased role for nurse-led care was recommended. At the secondary level, surgical waiting times and early discharge from hospital (e.g. from maternity wards following delivery) were identified as concerns.

Engagement with whānau and other Māori stakeholders identified a number of preventative activities, specific conditions or health issues for which there is a high demand and need for services for Māori. The breadth of issues raised reflects the high health needs of Māori communities and disparities in almost every major disease category. The issues raised were as follows:

- Health promotion (including health education) – health promotion for whānau to reinforce protective factors and mitigate risk factors (e.g. with regard to weight loss and healthy lifestyles).
- Preventative health care for whānau.
- Alcohol and drug issues – existing services are substantially inadequate for addressing demand, child and youth services including early intervention programmes in primary schools, travel required to New Plymouth for intensive counselling, services only available for those with high needs, long waiting times for programmes, rehabilitation only available outside the Taranaki Region.
- Diabetes – diabetes prevention and education, chronic disease management, access to dialysis locally and provision of transport for dialysis.
- Mental health – early intervention services, access to mental health services where stringent criteria are not met as mental health issues are not deemed to be sufficiently high risk or acute (e.g. 'mild' cases of postnatal depression that require support), major gaps in child and youth mental health services, free counselling services, specialist mental health services, Mental Health Crisis Team is based in North Taranaki and this is a barrier to access in terms of response time etc for South Taranaki (it was suggested that some FTE be allocated to South Taranaki to support local providers who are by default fulfilling this role), strengthen understanding among providers of the differences between mainstream and kaupapa Māori mental health service options.
- Disability support– regular health checks by health professionals, local respite care, local services in South Taranaki only equipped to cater for those who are mildly disabled, disability access (e.g. lack of facilities and transport options), resources for specialist care and rehabilitation.
- Maternity care – adequate postnatal care, particularly home visits by midwives.
- Hearing services – strengthened preventative services, local provision of hearing services, access to specialists, waiting times (e.g. for grommets).
- Health services for men – support for new fathers, mechanisms to facilitate access for young men to primary health care.
- Palliative care – local provision of palliative care in terms of both facilities and increased access to palliative care nurses in communities.

Consultation indicated very high support for Whānau Ora service provision as a response to the intensive practical support needs of whānau. The following specific concerns were identified:

- Current lack of family/whānau oriented health service provision that aligns with the provision of agencies in other sectors, and works in a holistic way towards the achievement of positive outcomes for whānau (shaped by whānau needs and aspirations) and wider Māori community social outcomes.
- Poor access to information about, and poor communication by providers with regard to, health issues and health and social service availability and entitlements.
- 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 (e.g. between social services, community health services, primary care and secondary care).
- The need for skilled and networked advocates/navigators to support whānau to access health services across organisations and services in other sectors.
- Integration of a life-course approach with an emphasis on provision of specific services for children (e.g. well child services, alcohol and drug prevention and child mental health services), youth (e.g. youth development that takes a multidisciplinary approach and develops the skills and talents of young people, sexual health education, drug and alcohol services, chronic disease prevention), new mothers (e.g. mental health services and postnatal care) and older people.
- The development of a culturally competent health workforce remains an important area for action. Enhanced cultural competence will be important to facilitate face-to-face and telephone communication between Māori patients, particularly kaumātua, and the health workforce (including not only health professionals, but also the range of other roles such as front desk staff).
- Ensuring that Whānau Ora for Māori is the responsibility of all parts of the Health and Disability Sector (e.g. mainstream and Māori-specific providers).
- The importance of well developed IT infrastructure for providers and information flows (including for whānau) and consideration of how the Results Based Accountability framework is supported by Taranaki DHB systems and processes.

A consistently raised issue related to disparities in access to services within the Taranaki Region, with whānau and providers in South and Central Taranaki expressing strong concerns at geographical inequalities in service coverage. There was some support for devolution of services to communities, and in particular to South and Central Taranaki providers.

Te Ara Tuawhā Pathway Four – 'Working across sectors'

The importance of addressing determinants of health was consistently highlighted. Intersectoral collaboration was identified as one mechanism through which the Health and Disability Sector could contribute to work to increase Māori access to determinants of health. It was also acknowledged that due to limited access among local Māori to determinants of health, whānau living in Taranaki tended to be in survival mode rather than development mode and therefore broader aspirations were often not considered as whānau struggle to meet the requirements of basic living (e.g. food and shelter). Much priority was accorded to the need to address the determinants of health, particularly the socio-economic determinants. Addressing determinants of health was also often identified as a strategy to improve access to quality health care.

Feedback from consultation frequently referred to poverty (due to, for example, debt levels, unemployment, low income and large families) and financial barriers to health care and related needs. Specific health service related costs were identified as a barrier to access (e.g. ability to pay for service provision including follow-up visits and prescription costs) and racism in health service provision (e.g. attitudes of personnel).

The linked issue of lack of transport to facilitate access to health services was one of the most frequently raised concerns. This issue was linked to reductions in Māori participation in health checks and early access to required treatment for chronic conditions. The lack of dedicated transport to attend ongoing treatments outside of South Taranaki (e.g. dialysis) was identified as forcing individuals to move to New Plymouth, away from their communities and support structures. Cost and affordability of travel was a major issue for whānau due to distance to health services (particularly for those living in South Taranaki who needed to travel to Hawera or New Plymouth, but also for others living in both urban and rural areas) and poverty (i.e. no vehicle, vehicles unwarranted and/or unregistered). It was suggested that transport barriers could be overcome by:

- Increased local provision of services (as the cost of not having local services is borne by communities).
- Group ambulance subscriptions made available for older people.
- Improved discharge policies to avoid late night discharges particularly for kaumātua with no access to transport.
- Alignment of New Plymouth based specialist appointments with free shuttle transport services provided by Taranaki DHB from South Taranaki (scheduling does not currently take account of travel and transport requirements).
- Collaboration between providers to support transport for mutual clients.
- Improved public transport (this will also facilitate access to education and employment opportunities).

High value was accorded to mobile service provision in rural communities (i.e. services provided from mobile buses and district nursing which was considered to be substantially under resourced), provision of services in homes (particularly postnatal care for mothers and babies), provision of services by visiting specialists in Hawera and the range of services provided by Hawera Hospital (e.g. accident and emergency, maternity services and blood laboratory).

Access to quality housing was considered an issue, with concerns raised that families are living in substandard rental properties which lack insulation and adequate heating, compounding whānau health issues. For others, lack of access to short-term emergency accommodation was identified as problematic.

Financial concerns were raised in relation to education for children, including the cost of food so that children were not sent to school hungry and the cost of school uniforms. Programmes such as Fruit in Schools and the provision of breakfast in schools were considered to be of high value. Educational settings were identified as a positive environment for health promotion among young children with regard to, for example, healthy eating and drug and alcohol issues (i.e. prior to the development of drug and alcohol problems).

Strengthening and improving access to social services was often raised including, for example, provision by Better Homes and Housing New Zealand and access to quality education for children and educational opportunities for young mothers. Specific concerns were identified about the perceived reluctance of WINZ personnel to share information regarding entitlements and eligibility for financial assistance and that when individuals are accompanied to appointments by professionals they have a better chance of receiving additional benefit assistance. It was also suggested that initiatives are required to provide employment opportunities for communities, for example:

- Through increased apprenticeships.
- Increased access to childcare.
- Providing parenting support (e.g. for young boys with behavioural problems, for single parents and for grandparents who are primary caregivers of children).
- Addressing family violence and supporting youth (including the provision of youth-focused activities in South Taranaki and a wide range of other health and social services).

Strengthened intersectoral collaboration was identified as a requirement, with ‘health’ more involved in intersectoral initiatives (including the Māori Sector) that incorporate a strong Māori focus in terms of objectives, content and consistency with Māori aspirations and thereby providing seamless opportunities for whānau to engage with the range of services.

8. SUMMARY OF KEY FINDINGS

8. SUMMARY OF KEY FINDINGS AND PRIORITIES

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

8.1 DEMOGRAPHY

- At the 2006 Census, 15,816 Māori were resident in Taranaki; Māori make up 15.2% of the total Taranaki DHB population which is slightly higher than the national proportion of 14%.
- The Māori population in Taranaki is growing much faster than the non-Māori population, which is projected to decline by 2026. Māori are projected to make up 20.6% of the Taranaki DHB population by 2026.
- Māori birth rates are substantially higher than those of non-Māori in the Taranaki DHB Region, consistent with national trends. The largest numbers of Māori are resident in the New Plymouth District (9,369). A larger proportion of the South Taranaki District population are Māori (20.7%).
- The Māori population in Taranaki is very young compared to the overall population. For Māori, 35.9% of the population resident in Taranaki is aged under 15 years compared to 21.8% of the total population. The difference is even more marked for older Māori, with 4.7% of the Māori population resident in Taranaki aged over 65 years compared to 14.8% of the total population.
- Just over half of Māori living in Taranaki affiliate with one of the eight iwi in the Taranaki Region: Ngāti Tama, Ngāti Mutunga, Ngāti Maru, Te Atiawa, Taranaki Iwi, Ngā Ruahine, Ngāti Ruanui and Ngā Rauru.
- The population is most concentrated in New Plymouth followed by a number of towns — Waitara, Inglewood, Stratford, Eltham, Hawera, Patea, Waverley, Manaia, Kaponga, Opunake, Okato and Oakura. The rohe of Te Atiawa and Ngāti Ruanui have the most concentrated Māori populations.

8.2 TE ARA TUATAHI PATHWAY ONE DEVELOPMENT OF WHĀNAU, HAPŪ, IWI AND MĀORI COMMUNITIES

- Regional data sources for this pathway are currently limited. However, this is not problematic to the extent that the development and use of these indicators is unlikely to be funder/provider driven but rather driven by Māori collectives as an expression of self-determination.
- In the 2006 Census, 72% of Māori resident in Taranaki were able to name at least one iwi affiliation.
- Some 20.4% of Māori living in Taranaki can hold a conversation about everyday things in te reo based on 2006 Census data. Census data also indicate that there has been little change in the proportion of Māori living in Taranaki with conversational fluency in te reo over the ten year period from 1996-2006. However, regional data for Te Taihauāuru (Taranaki, Whanganui and Manawatū) from the 2001 and 2006 Surveys of the Health of the Māori Language demonstrated that the amount of reo spoken in the home is increasing and that the number of Māori adults with te reo proficiency at a range of levels was also increasing
- Approximately 300 children were enrolled in Kōhanga Reo across Taranaki as at July 2010. There are also Māori immersion Early Childhood Education Centres in Taranaki.
- In Taranaki, there are seven schools with 462 students enrolled in education at immersion Levels 1 to 4a. Of that number, 163 children are enrolled in Kura Kaupapa Māori which provide total immersion education (Level 1) in a learning environment within which the philosophy and practice reflect Māori culture and values. There are currently no wharekura (Māori-medium secondary schooling) in Taranaki.
- In 2008, BERL Economics were commissioned by Venture Taranaki Trust and Tui Ora Limited to develop an economic profile of Māori in the Taranaki Region. The report included an estimate of

the size of the Māori asset base. This work indicated that there are 147 Māori employers and 287 Māori who are self-employed.

- Based on the BERL analysis, Māori employers and self-employed Māori contribute $337 million to the Māori asset base.
- Parininihi ki Waitotara Incorporation (PKW) is the largest Māori land incorporation in Taranaki and has 8,420 owners, the majority of whom are descendants of Taranaki Māori whose lands were confiscated by the Crown in 1865. PKW owns 20,000 hectares of productive farmland, and actively farms 10% of that land (operating dairy farms). The remaining 18,000 hectares remains perpetually leased. PKW also has commercial properties, forestry, and investments in crayfishing.
- Of the iwi in the Taranaki Region negotiating settlements with the Crown, four have settled (2008), one is at the advanced negotiations stage and one has begun negotiations. The total settlement quantum to date is around $101,400,000.
- Marae are a key whānau resource that are regularly utilised by whānau. However, available data does not provide an indication of the proportion of whānau who actively engage with marae. While a number of marae offer wānanga to strengthen localised Māori knowledge and practices, there are widespread concerns for marae regarding the potential loss of history and tikanga/kawa. It is apparent that despite current efforts, much ongoing work is likely required to strengthen the whānau cultural knowledge and skill base required to best ensure the optimal functioning of marae as a repository of Taranaki Māori culture and an environment within which Taranaki Māori cultural values are given free expression.

8.3 TE ARA TUARUA – PATHWAY TWO MĀORI PARTICIPATION IN THE HEALTH AND DISABILITY SECTOR

8.3.1 MĀORI INVOLVEMENT IN GOVERNANCE

- Te Whare Pūnanga Kōrero, the Iwi Relationship Board, is the primary vehicle for the DHB's relationships with iwi of Taranaki. It is comprised of representatives from each of the eight iwi of Taranaki.
- Māori are represented on the Taranaki DHB Board, Hospital Advisory Committee and the Community & Public Health Advisory Committee/Disability Support Advisory Committee. Currently in Taranaki DHB there are two Māori members of the Board appointed by the Minister of Health, and one elected Māori Board member.
- There are two PHOs and one independent general practitioner operating in the Taranaki area. Te Tihi Hauora o Taranaki PHO and Te Waipuna Medical Clinic in Waverley are now part of the National Hauora Coalition, a national coalition of Māori-led PHOs. The remainder of GP practices form part of the Midland Health Network. Tui Ora Limited and 17 affiliated Māori providers are founding partners of the Midland Health Network.
- There are a number of Māori health providers within the Taranaki DHB region that deliver a range of health services predominantly to Māori using a kaupapa Māori delivery framework.
- In 2010/11, the Taranaki DHB developed a RFP process for Māori health provider services which resulted in the development of a Strategic Alliance. The Strategic Alliance is between Tui Ora Ltd and the National Hauora Coalition for the provision of these services from 1 January 2012.

8.3.2 MĀORI HEALTH AND DISABILITY WORKFORCE PARTICIPATION

- Taranaki DHB regularly collects information on its workforce. Some 1,168 full time equivalent (FTE) staff were employed by Taranaki DHB as at November 2011, of which 83.3 FTE stated Māori ethnicity on employment forms. The proportion of Māori in the DHB workforce is 7%.

- Māori make up 1.3% of FTE medical staff (equivalent to 1.5 FTE), 5.6% of FTE nursing staff, and 5.8% of FTE management staff, and are therefore vastly under-represented in some occupational groups. Māori tend to be working in areas that require lower levels of formal qualification. The highest proportions of Māori staff are found in Allied Health (10.9%) and Support (10.6%) categories.

8.4 TE ARA TUATORU — PATHWAY THREE EFFECTIVE HEALTH AND DISABILITY SERVICES

8.4.1 PROTECTIVE FACTORS

- For Taranaki around 58% of Māori females and 70% of Māori males in the New Zealand Health Survey (2006/07) reported at least 30 minutes of moderate physical activity on at least five days of the week. These levels are higher than non Māori but the differences are not statistically significant.
- Over 62% of Māori females and 51% of Māori males, consume the recommended minimum amount of vegetables (three serves) each day. The vegetable intake is higher for Māori women than for Māori men but this difference is not statistically significant.
- According to the New Zealand Health Survey 2006/07 over 61% of Māori females and 45% of Māori males in the Taranaki District are consuming the recommended minimum amount of fruit (two serves) Fruit intakes is higher for Māori women than for Māori men.
- While Māori mothers are much less likely to exclusively breastfeed their infants than other ethnic groups there is strong evidence for the effectiveness of interventions to protect, promote and support breastfeeding.
- Around one-third of children (31%) and almost 40% of adults were covered by medical insurance. One in five (19.4%) adults had comprehensive medical insurance and slightly less (18.3%) had medical insurance that covered their hospital bills only. European/Other children were significantly more likely to have medical insurance cover than all children, while Māori children were significantly less likely to have such insurance.

8.4.2 RISK FACTORS

- Smoking is a significant risk factor for Māori in the Taranaki Region. Māori have a higher prevalence of smoking than other New Zealanders. Some 47% of Taranaki Māori females and 38% of Māori males are regular smokers, compared to around 21% of New Zealand Europeans. The prevalence of regular smoking in Taranaki Māori females is also higher than the national average.
- The 1999—2010 National Year 10 Smoking Survey of students aged 14 and 15 years shows that smoking prevalence is higher in Māori than European/Other populations. Daily smoking (14.1%) and regular smoking (20.9% compared to 7.2% for NZ European students) was highest among Māori students, with Māori girls reporting a higher smoking prevalence than boys. Almost one in five Māori girls smoke daily (17.4%) compared to less than one in twenty NZ European girls (3.3%).
- The proportion of Māori children exposed to cigarette smoking at home is higher than for non-Māori, both in Taranaki and nationally. Māori adults also have greater exposure to second-hand smoke at home than non-Māori adults.
- The New Zealand Health Survey 2006/07 indicates that 64% of Māori males and 62% of Māori females were classified as overweight or obese, compared to 55% of non-Māori males and 53% of non-Māori females.
- A higher proportion of Māori resident in the Taranaki Region reported potentially hazardous drinking behaviours compared to non-Māori from the New Zealand Health Survey 2006/07.

- Taranaki teenage pregnancy rates in Māori women aged 15–19 years are 92 per 1,000 compared to 15.8 per 1,000 among non-Māori. These rates are higher than the national figures of 77.6 per 1,000 for Māori and 14 per 1,000 for non-Māori.

8.4.3 PREVENTATIVE CARE AND SCREENING

- The proportion of Māori children fully immunised at the age of 2 years in the Taranaki Region has increased from 86% at June 2010 to 91% in November 2011 due to proactive measures taken to reduce ethnic inequalities in this area.
- The purpose of breast screening is to detect breast cancer at an early stage, in order to reduce breast cancer morbidity and mortality. In Taranaki, the breast screening coverage rate among Māori women is lower than for other ethnicities.
- Cervical screening coverage for both Māori and non-Māori in the Taranaki Region is higher than the national figures. The cervical screening coverage for Māori women in Taranaki (67.5%) is far lower than for non-Māori (92%).
- In 2010-11, 1,455 hearing tests were completed as part of the B4SC programme and of these, 293 were on Māori children. Some 62.5% of Māori children passed all components of the hearing check compared to 75.5% of non-Māori. A higher proportion of Māori children require rescreening (20%).

8.4.4 PRIMARY CARE

- In 2009, the Ministry of Health called for Expressions of Interest for delivery of “Better, Sooner, More Convenient” primary health care. Two Business Cases cover Taranaki — Midlands Regional Health Network and the National Hauora Coalition
- Data from the New Zealand Health Survey 2006/7 show that Māori in Taranaki are significantly more likely than non-Māori to have an unmet need for a GP visit within the previous 12 months.
- The proportion of Māori enrolled with a PHO is estimated to be 84% compared to 99% of those of “Other” ethnicity.
- New Zealand Health Survey 2006/7 asked participants whether they were currently taking medication for high cholesterol and high blood pressure. The results for Taranaki show that Māori appear to be less likely to be taking medication for high cholesterol and high blood pressure than non-Māori, although these differences are not statistically significant.
- Access to regular diabetes checks is essential for effective diabetes management and to reduce disparities in the burden of complications that disproportionately impact Māori.
- Some 90% of Māori in Taranaki undertake a free diabetes check compared to 99% of those of “Other” ethnicity. While Taranaki has very high coverage compared to other DHBs, the extent of ethnic inequalities between Māori and “Other” ethnicity is similar to or higher than most other DHBs.
- Data from the New Zealand Health Survey 2006/7 show that Māori in Taranaki are more likely than non-Māori to have unmet oral health need although these difference are not statistically significant.

8.4.5 OUTPATIENT AND EMERGENCY DEPARTMENT CARE

- An analysis of hospital outpatient appointment Did Not Attend (DNA) rates for the three year period 2008/09 to 2010/11 shows that Māori have double the DNA rate for first specialist outpatient appointments compared to “Other” ethnic groups in Taranaki and around three times the DNA rate for follow-up specialist outpatient appointments.

- DNA rates for the Taranaki DHB population are consistently lower than the national figures. However, they have been increasing over the three year period and the extent of ethnic inequalities between Māori and non-Māori is similar to that seen nationally.
- Outpatient DNA rates for Māori are consistently higher across the specialities, but vary by speciality. Māori DNA rates are highest in Gynaecology (22.0%) and Anaesthesiology (21.1%) and are lowest in Mental Health and Support (0%) and Oncology (0.3%).
- Māori women were much more likely not to attend colposcopy than non-Māori, with around 25% of colposcopy appointments in Taranaki for Māori women not attending compared to 10% of non-Māori women. DNA rates for colposcopy in Taranaki are generally higher than the national figures.
- Māori appear to be more likely to have visited the emergency department than non-Māori in Taranaki, although sample size is small.

8.4.6 SUMMARY MEASURES OF HEALTH

- Māori in Taranaki experience a shorter life expectancy than non-Māori. Māori females have a life expectancy of 75.5 years compared to 82.5 years for non-Māori, a difference of 6.9 years. Māori males have a life expectancy of 72.4 years compared to 79.0 years for non-Māori, a difference of 6.6 years.
- This difference is less than that for the general New Zealand population at 7.7 years for females and 7.9 years for males. For the period 2007-2010, 36% of Māori deaths occurred among middle-aged Māori (45-64 years) and 50% among older Māori (65 years or more). For non-Māori during the same period, 84% of deaths occurred in the older age group (65 years or more).
- National and Taranaki rates of avoidable mortality are much higher among Māori than those of non-Māori.
- For Māori in the Taranaki DHB Region, the leading causes of avoidable mortality are ischaemic heart disease (24.4%), lung cancer (10.2%), diabetes (8.3%) and chronic obstructive pulmonary disease (COPD) (7.8%). These leading causes differ between Māori and non- Māori.
- The leading causes of avoidable hospitalisation in Māori are angina and chest pain, asthma, dental conditions and respiratory infections. These leading causes differ between Māori and non-Māori.
- Data from the New Zealand Health Survey 2006/07 show that in Taranaki, less Māori report a health status of ‘excellent’ or ‘very good’ compared to non-Māori. Overall, 50% of adult Māori females and 52% of non-Māori males reported their health as excellent or very good, compared to 64% of non-Māori females and 60% of non-Māori males. These differences were not statistically significant.
- Overall, national age-standardised data from the Household Disability Survey (2006) indicate that compared to non-Māori, Māori experience higher rates of impairment, of both single and multiple impairment, and more severe impairment and that there are wide disparities in the Māori experience of impairment and disability relative to non-Māori. Māori have greater disability than other ethnic groups in every age group and experience a much earlier age of onset of impairment compared to non-Māori. The higher proportion of young people in the Māori population meant that the majority of Māori with disability (63%) were aged less than 45 years. Nearly one-third of children with disability (31%) and nearly one-quarter of adults aged 15 to 44 years with disability (23%) were Māori. The most common causes of disability for Māori adults were disease or illness (34%) followed by accidents or injuries (32%).

8.4.7 SUMMARY MEASURES OF CHILD HEALTH

- In Taranaki, the infant mortality rate for non-Māori is similar to the national average. However, for Māori it appears that the infant mortality rate in Taranaki is lower than the New Zealand rate, although the absolute number of deaths was small.
- The leading causes of ambulatory sensitive hospitalisation among Māori children and young people are dental conditions, asthma and respiratory infections, such as pneumonia. These leading causes differ between Māori and non-Māori and for children and young people.
- Māori have higher average counts of decayed, missing and filled deciduous (dmft) and permanent (DMFT) teeth than non-Māori.

8.4.8 IMPORTANT CONDITIONS

DIABETES

- The prevalence of diabetes in Taranaki, as reported in the New Zealand Health Survey 2006/07, shows a slightly higher prevalence among Māori relative to non-Māori, although undiagnosed diabetes in the community makes accurate estimates difficult.
- Māori who have diagnosed diabetes are much more likely to be hospitalised for complications of the disease, with an age-standardised hospitalisation rate of 1894 per 100,000 compared to 766 per 100,000 for non-Māori in Taranaki.
- There is an even more startling disparity in terms of end stage complications from diabetes in Taranaki, such as requiring leg, toe and foot amputations (age-standardised rate of 82 ASR per 100,000 for Māori compared to 31 per 100,000 for non-Māori) and renal failure (2126 per 100,000 for Māori compared to 476 per 100,000 for non-Māori).

CARDIOVASCULAR DISEASE

- The rate of cardiovascular disease hospitalisation is higher for Taranaki Māori than for non-Māori (age-standardised rate 2786 per 100,000 compared to 2032 per 100,000).
- The rate of cardiovascular mortality is higher for Māori (537 per 100,000) than for non-Māori (220 per 100,000) in Taranaki. Mortality rates are highest in Māori men (617 per 100,000).

CANCER

- In Taranaki, rates of Māori cancer mortality are significantly higher than for non-Māori. (613 per 100,000 among Māori in Taranaki compared to 420 per 100,000 among non-Māori).
- Lung cancer is the leading cause of cancer and death for Māori. Rates of lung cancer registrations, hospitalisations and deaths are much higher in Māori than for non-Māori, for both men and women.
- In Taranaki, Māori have a higher rate of breast cancer registration, hospitalisation and mortality, but small numbers mean that the difference between Māori and non-Māori is not statistically significant.
- In Taranaki, Māori have a lower incidence of colorectal cancer than non-Māori but further conclusions from these data are limited.

RESPIRATORY DISEASE

- The national self-reported prevalence of Chronic Obstructive Pulmonary Disease (COPD) among Māori aged 45 years or over is approximately twice that of non-Māori for the same age range

(New Zealand Health Survey 2006/07). These rates are likely to be an underestimate, as there is evidence to suggest that COPD is substantially under-diagnosed.

- When the prevalence of COPD is standardised for age, there is a wide disparity in hospitalisation rates between Māori and non-Māori nationally and even larger disparities locally (9598 per 100,000 among Māori in Taranaki compared to 1972 per 100,000 for non-Māori).
- COPD is a leading cause of avoidable hospitalisation for Māori in Taranaki.
- Death rates from COPD are likely to be underestimated through misclassification of COPD deaths as conditions such as asthma and the fact that COPD is more frequently listed as a contributing factor rather than the primary cause of death.
- Māori mortality rates are also higher than for non-Māori for COPD in New Zealand and in Taranaki, but the small local numbers mean that these differences are not statistically significant.
- In Taranaki, Māori children have a higher rate of hospitalisation than nationally and a significantly higher rate than non-Māori. Rates for Māori females aged 0-14 years are double that of non-Māori.

MENTAL HEALTH

- Te Rau Hinengaro (New Zealand Mental Health Survey 2003/4) found that more than half of Māori had experienced a mental disorder in their lifetime and that within the previous month almost one third had experienced a mental disorder.
- Anxiety disorders were the most common group with one in three Māori experiencing these disorders at some time during their life. Mood or substance use disorders were experienced by one in four Māori during their lifetime. For Māori, the overall rate of mental disorder and of serious mental disorders was higher than those of non-Māori.
- In Taranaki, 14.3% of Māori females and 7.6% of Māori males were likely to have an anxiety or depressive disorder compared to 9.9% of non-Māori females and 5.7% of non-Māori males. The small numbers in the survey at the Taranaki level mean the differences are not statistically significant.
- Nationally, for the period 2006-2008 rates of suicide among Māori were higher than for non-Māori with higher rates in males than females. In Taranaki, the number of suicides is small and so it is difficult to provide a clear picture.

COMMUNICABLE DISEASE

- A range of approximately 50 diseases are notifiable by medical practitioners to the Medical Officer of Health for Taranaki. Data for elected notifiable diseases for Taranaki from 2002 to 2010 shows Māori are under-represented in the incidence of the enteric diseases (giardiasis, salmonellosis, yersiniosis, cryptosporidiosis, campylobacteriosis, verocytotoxic *E. coli* infection) with Māori making up 8.4% of cases. This finding is consistent with national data and is likely to reflect reduced health service utilisation for acute, self-limiting diseases. However, also consistent with national data, Māori are over-represented in notifications of some important ‘close contact’ infectious diseases such as tuberculosis (43.3%) and rheumatic fever (50.0%) although the absolute number of cases of these diseases is low in the Region.

8.4.9 IMPROVING MAINSTREAM EFFECTIVENESS

- Patient satisfaction surveys are undertaken within the Taranaki DHB on a regular basis.
- Acute readmission rates for Māori are higher than for non-Māori in both Taranaki and New Zealand as a whole. This may indicate issues with regard to responsiveness of services and quality of care.

- Improving the quality of Māori health information to enable effective service delivery and monitoring remains an area of ongoing attention.

8.5 TE ARA TUAWHA — PATHWAY FOUR WORKING ACROSS SECTORS

- Based on NZDep (2006), an index of deprivation, non-Māori are over-represented in the wealthiest socio-economic deciles and Māori are over-represented in the lowest socio-economic deciles. Within Taranaki, 28% of Māori live in the most deprived 20% of areas compared to 10% of non-Māori. In contrast, 4.2 % of Māori live in the 20% of the most affluent areas, compared to 12.2% of non-Māori.
- Māori are more likely to receive income from salaries and wages and benefits and less likely to receive income from being self employed, receiving interest, dividends, rents, superannuation or other investments.
- Generally, higher incomes are associated with lower morbidity and mortality from a range of conditions. Just over 22% of Māori over 15 years of age in the Taranaki DHB area reported an annual income of $10,000 or less in the 2006 Census, compared to 17% of non-Māori. The New Zealand Income Survey (June 2007) indicated that the Māori median weekly income was $516 compared to $524 for NZ Europeans, and that average incomes were $553 and $652 respectively.
- Māori are over-represented among those earning less than $10,000 per annum and under-represented among those earning over $30,000 per annum compared to non-Māori.
- Māori are more likely to be without access to a car at home. Some 11.5% of Māori have no access to a car, compared to 7.4% of non-Māori. Even though some 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 people who share the car and the ability/licence to drive are all relevant in considering car access. These factors may explain why Māori experience transport barriers despite almost 90% reporting access to a car.
- More Māori than non-Māori in Taranaki do not have access to a telephone. However, Māori have higher access to a mobile/cell phone than non-Māori. More Māori than non-Māori in Taranaki do not have access to the internet with 43% of Māori having access to the internet at home compared to 55% of non-Māori households.
- In Taranaki, 40% of Māori compared to 55% of non-Māori own their own homes. Māori are almost twice as likely as non-Māori to occupy rental accommodation.
- In Taranaki, 2.3% of Māori did not have any form of home heating, compared to 1% of non-Māori. Māori use bottled gas, coals and 'other fuels' proportionally more than non-Māori.
- Education is a key social determinant of health with increasing education levels corresponding to improvements in health status. At the time of the 2006 Census, 57% of Māori completed school compared to 71% of non-Māori.
- National data demonstrate that Māori have lower occupational status and the pattern for Māori in Taranaki is the same with the highest numbers in the Labourers' category.
- Māori men and Māori women are more likely 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.

8.6 MĀORI STAKEHOLDER/COMMUNITY FEEDBACK

The Whānau Ora health need priorities identified were wide-ranging, reflective of the variety of factors influencing Whānau Ora, the range of health challenges facing Māori, and the importance of preventative care 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 specific priorities would be difficult. Overall, however, there was a strong preference for Whānau Ora service provision.

Te Ara Tuatahi Pathway One – 'Development of whānau, hapū, iwi and Māori communities'

- Māori community has a limited capacity to engage with work around Whānau Ora, and in this context Māori community development at whānau, marae, hapū and iwi levels was identified as important.
- While much discussion of Whānau Ora activities is concerned with reactive measures to address critical need among communities in wide-ranging domains, equally there is a need to engage whānau in preventative and aspirational activities.
- At the whānau level, there was recognition that work is required to strengthen whānau cohesion so that whānau are better positioned to exercise the positive functions of whānau such as collective responsibility, caring for whānau members and aspirational planning.

Te Ara Tuarua Pathway Two – 'Māori participation in the Health and Disability Sector'

- Identified priorities were Māori provider capacity and capability building and Māori health workforce development.
- The importance and value of well resourced locally accessible kaupapa Māori health services was consistently highlighted as a means to improve Māori access to services. As well, the need for wider promotion of these services was identified.
- Increasing the capacity and capability of the Māori health workforce is an area that requires ongoing attention. Furthermore, succession planning is needed to ensure a sustainable professional Māori health workforce in the long term.
- Consultation feedback indicated a demand for access to rongoa (traditional Māori medicines and healing practices).

Te Ara Tuatoru Pathway Three – 'Effective health and disability services'

- Whānau Ora health need priorities were identified that related, in the main, to access to quality health care across the Taranaki Region and Whānau Ora service provision.
- Feedback from community engagement consistently raised strong concerns about access to primary health care. Concerns focused on difficulties in securing appointments with general practitioners and long waits (particularly in South Taranaki), lack of continuity of care, poor access to after hours care leading to high use of accident and emergency services, and a lack of effective communication between GPs and whānau. Comments indicated that doctor-centred care was considered to be over-emphasised and an increased role for nurse-led care was recommended. At the secondary level, surgical wait times and early discharge from hospital (e.g. from maternity wards following delivery) were identified as concerns.
- Engagement with whānau and other Māori stakeholders identified a number of preventative activities, specific conditions or health issues for which there is a high demand and need for services for Māori. Examples given were; health promotion, preventative care for whānau, alcohol and drug issues, diabetes, mental health, disability support, maternity care, hearing services, health services for men, and palliative care. The breadth of issues raised reflects the high health needs of Māori communities and disparities in almost every major disease category.
- Consultation indicated very high support for Whānau Ora service provision as a response to the intensive practical support needs of whānau and a variety of service delivery issues (e.g. lack of current whānau oriented provision, poor access to information, fragmentation of services, the need for skilled advocates/navigators, and the development of a culturally competent workforce).
- A consistently raised issue related to disparities in access to services within the Taranaki Region, with whānau and providers in South and Central Taranaki expressing strong concerns at

geographical inequalities in service coverage. There was some support for devolution of services to communities, and in particular to South and Central Taranaki providers.

Te Ara Tuawhā Pathway Four – 'Working across sectors'

- The importance of addressing determinants of health, particularly socio-economic determinants, was consistently highlighted. Intersectoral collaboration was identified as one mechanism through which the Health and Disability Sector could contribute to work to increase Māori access to determinants of health. It was also acknowledged that due to limited access among local Māori to determinants of health, whānau living in Taranaki tended to be in survival mode rather than development mode and therefore broader aspirations were often not considered as whānau struggle to meet the requirements of basic living (e.g. food, quality housing). Addressing determinants of health was also often identified as a strategy to improve access to quality health care.
- Feedback from consultation frequently referred to poverty (due to, for example, debt levels, unemployment, low income and large families) and financial barriers to health care and related needs. Specific health service related costs were identified as a barrier to access (e.g. ability to pay for service provision including follow-up visits and prescription costs), as was racism in health service provision (e.g. attitudes of personnel).
- Lack of transport was identified as a key barrier to accessing services. High value was accorded to initiatives to improve local access to services in Central and South Taranaki (e.g. service provision in homes, through mobile services, through Hawera hospital and by visiting specialists).
- The need for improved access to social services was consistently identified as an issue of concern.

9. PRIORITIES AND RECOMMENDATIONS

9. PRIORITIES

9.1 PROCESS FOR IDENTIFICATION OF PRIORITIES

This Whānau Ora HNA draws on both quantitative and qualitative information sources. Quantitative data are, in the main, drawn from sources through which routinely collected data are available. Qualitative data is drawn primarily from engagement with local Whānau Ora stakeholders including Māori whānau living in Taranaki, Māori health providers, Māori health professionals and iwi representatives. From these information sources, unmet Whānau Ora health and health care needs and determinant factors related to Whānau Ora have been identified. The six factors listed below guided the appraisal process used in this HNA to identify Whānau Ora priority areas for intervention.

1. Responsiveness to intervention by the Taranaki DHB
2. Burden on whānau
3. Consistency with local Māori aspirations for Whānau Ora
4. Whānau Ora efficacy
5. Extent of ethnic inequality
6. Data quality

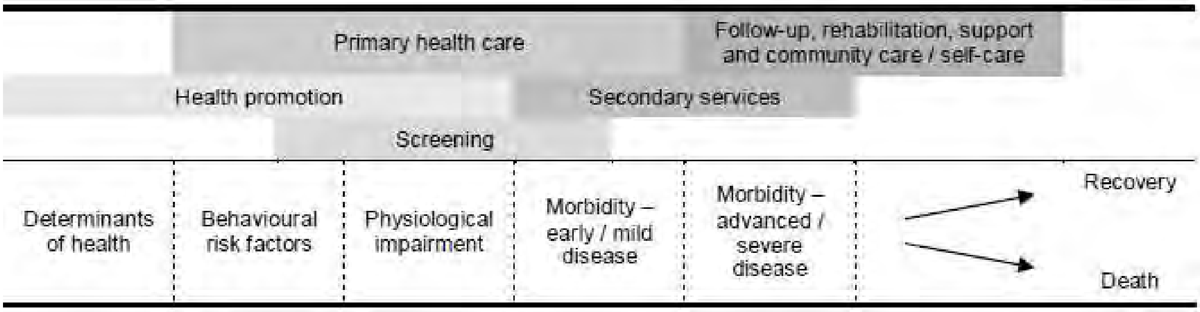
Each of these factors is briefly elaborated below. It should be noted, however, that any process of priority setting relies on both best available evidence and the exercise of good judgement. Within the constraints of the project this Whānau Ora HNA has sought to access the best available data and to draw on intersectoral and Māori stakeholder input throughout the Whānau Ora HNA in an effort to ensure that identified priorities are evidence-based and reflect community aspirations for Whānau Ora. Furthermore, the evidence appraisal process is made explicit in order to facilitate a transparent process for priority setting.

a) Responsiveness to Intervention by the DHB

Priorities should be identified in areas where issues are responsive to intervention by the DHB, that is, where there is evidence that local Health and Disability Sector provider activities are able to make a measurable difference to Whānau Ora for Māori. This will include intersectoral collaboration (e.g. with the Māori Sector, such as iwi) to address the determinants of health, which at times may involve Health and Disability Sector facilitation of action as health leadership in the role of champions or advocates. Health conditions or determinant factors that are not changeable through DHB and health provider intervention are not assessed further.

In considering the extent to which a priority area is responsive to intervention by the DHB, attention should be given to the level of opportunity for gains in health. That is, are there opportunities with regard to a particular potential priority area for major gains to be made? For example, it may be that a major shift in the way that primary care is delivered is identified as a potential priority area and this shift would provide a high level of opportunity for substantial health gain. This approach provides some balance to priority setting which is primarily focused on health need.

In assessing the feasibility and level of opportunity for intervention by DHBs, casual pathways may be examined for a given issue (e.g. a health condition) in order to identify the feasibility of potential interventions across the continuum of care and likely impact in terms of opportunity and therefore outcomes to be achieved (e.g. reductions in morbidity and mortality). There are a number of dimensions to feasibility including resource issues, acceptability of intervention, and the possible need for multiple interventions at various levels in order to achieve an impact. Another aspect of feasibility will be the capacity to affect change within reasonable timeframes, for example, to enable tracking of progress over a five year period. The simplified diagram below, adapted from the Waitemata DHB Cardiovascular Disease Framework, shows the relationship between causal pathways for illness and health services. The further to the left along the casual pathway that DHBs are able to intervene, the more likely that a larger health gain will be achieved.



Source: Hosking 2009.

b) Burden on Whānau

The absolute size of the problem (i.e. numbers affected) and severity in terms of Māori morbidity and mortality should be considered for health conditions. A similar approach may be taken in determining the burden on whānau of the determinants of health, with an emphasis on the impact for health. It should be noted that ethnic inequality measures in isolation do not give a reliable indication of the extent of the problem. For example, there may be wide ethnic inequalities with regard to a given health issue but the crude numbers may be small and the severity low (e.g. in terms of health functioning, impact on other factors that affect health, implications for health across the life-course and fatality). Health conditions and determinant factors for which there is a lack of evidence of impact in terms of size and severity are not considered further.

c) Consistency with Local Māori Aspirations for Whānau Ora as it Relates to Health

Selected priorities should be consistent with local Māori aspirations for Whānau Ora as identified by stakeholder engagement, including the review of documents relating to recent consultation carried out by a range of organisations in Taranaki. Local Māori perceptions of Whānau Ora needs related to health should ideally drive priority setting and therefore are given some precedence in the identification of priorities for this HNA. It is also important to note there may be areas that are of high priority to communities, but where there is a lack of quantitative evidence to support this priority area due to poor data collection and reporting locally. Examples may include the areas of mental health, disability, and violence and abuse. Poor data quality is not a sufficient reason to dismiss a community identified priority area.

d) Whānau Ora Efficacy

The starting point for identification of Whānau Ora priorities is the Whānau Ora framework that underpins the HNA. In particular, the philosophy that gives Whānau Ora, as it relates to health, definition and distinctiveness. The outcomes that are being sought are primarily concerned with whānau ownership of their own health development, addressing determinants of health and reduced morbidity and mortality for whānau through support for whānau to achieve their maximum health and wellbeing (e.g. through integrated delivery that addresses whānau needs in a coherent manner). All identified priorities should contribute to the achievement of Whānau Ora for Māori living in Taranaki, as the overall vision for the HNA.

e) Extent of Ethnic Inequality

Rate ratios and other measures are used to provide evidence that an ethnic inequality exists and to gauge the extent of ethnic inequality between Māori and non-Māori. Analysis of ethnic inequalities in the leading causes of death[53] and hospitalisation[54] for Māori compared to non-Māori indicate the huge potential to reduce impaired health functioning and mortality if ethnic inequalities are addressed.

f) Data Quality

Quality data are suitable and sufficient for the purpose for which they are collected. While it is assumed that data collected by Taranaki DHB will be able to be disaggregated by ethnicity, high quality data also needs to possess a number of scientific, statistical and methodological attributes, as outlined in the 'SMART' criteria. The SMART acronym refers to the following mix of criteria:

Specific (measurement appropriately captures the level of detail required)
Measurable (measurement process is possible within available resources)
Accurate (indicator correctly measures the phenomenon it purports to measure)
Reliable (replicable measurements)
Timely (data are up-to-date)

Data quality is important to the extent that it will be necessary to set measurable targets in priority areas and assess progress over time. Therefore, while data quality should be considered (and the assessment used to drive improved data collection and reporting processes as required) it is not a key driver in the priority setting process.

9.2 PRIORITY AREAS

Te Ara Tuatahi Pathway One – 'Development of whānau, hapū, iwi and Māori communities'

Whānau, hapū, iwi and Māori community development as a basis for Whānau Ora was identified as a priority area through Māori engagement. However, progress in these areas will necessarily be characterised by Māori ownership and will be driven by Māori rather than by funders and providers. The challenge for funders and providers will be identifying ways in which they may take a facilitating role, without taking leadership and therefore risking engendering dependency.

Te Ara Tuarua Pathway Two – 'Māori participation in the Health and Disability Sector'

Building the capacity and capability of Māori providers and the Māori health workforce were identified through Māori engagement as priority areas. The need to strengthen the Māori health workforce was also supported through data review.

Te Ara Tuatoru Pathway Three – 'Effective health and disability services'

Community engagement identified increased access to health services at all levels, and particularly at the primary health care level as a priority. This is supported by the review of data relating to patterns of health service utilisation for preventative care/screening, primary care, DNA rates for outpatient care, and ambulatory sensitive hospitalisations. Improving geographically equitable access to quality health care across the Taranaki Region and the implementation of Whānau Ora oriented service provision were identified through community engagement as high priority areas.

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[53] Robson, B. and G. Purdie (2007). Mortality. Hauora: Māori standards of health IV. B. Robson & R. Harris. Wellington, Te Rōpū Rangahau Hauora a Eru Pōmare: 33-61.

[54] Robson, B., Robson, C., Harris, R., Purdie, G. (2007). Hospitalisations. Hauora: Māori standards of health IV. B. Robson & R. Harris. Wellington, Te Rōpū Rangahau Hauora a Eru Pōmare: 62-101.

The following have been identified as priorities in terms of protective and risk factors and preventative care; smoking, alcohol and drug issues, breastfeeding, immunisation, breast screening and cervical screening. The importance of health promotion for whānau to reinforce protective factors and mitigate risk factors was emphasised in community engagement. Priority health conditions identified in this Whānau Ora HNA were; diabetes, cardiovascular disease, lung cancer, breast cancer, respiratory disease (i.e. COPD and asthma), oral health, mental health and disability.

Te Ara Tuawhā Pathway Four – 'Working across sectors'
There is clear evidence that Māori living in Taranaki have poor access to socio-economic determinants of health, and this is reflected in high relative levels of deprivation, compared to non-Māori. It is also reflected in barriers to health care and related needs (e.g. ability to pay for service provision and access to transport) identified through community engagement. The importance of addressing determinants of health through intersectoral collaboration (e.g. to improve access to social services) was consistently highlighted as a priority area in community engagement. There is much potential for Taranaki DHB to actively participate in, and in some instances take a leadership role, as champions or advocates, in intersectoral activities that contribute to Whānau Ora.

9.3 RECOMMENDATIONS

It is recommended that the Whānau Ora HNA is utilised by the Taranaki DHB, health and disability providers and intersectoral partners to inform priority setting and action to support the achievement of Whānau Ora for Māori living in Taranaki.

APPENDICES

Appendix 1 LIST OF ABBREVIATIONS and GLOSSARY

ASR	Age Standardised Rates
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
DMFT/dmft	Decayed, missing and filled teeth
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
MaHGAC	Māori Health Gain Advisory Committee
MaPO	Māori Co-Purchasing Organisation
MSD	Ministry of Social Development
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
NZHST	New Zealand Health Strategy
NZHS	New Zealand Health Survey
PHO	Primary Health Organisation
PI	Pacific Islander
TDHB	Taranaki District Health Board
TLA	Territorial Local Authority
WINZ	Work and Income New Zealand

GLOSSARY

Hapū	Sub tribe
Hui	Meeting, gathering
Iwi	Tribe, people
Kaikaranga	Ceremonial caller
Kaikōrero	Formal orator
Kaumātua	Older people
Kaupapa Māori	Māori based methodology, themes or strategies
Kawa	Māori customary protocol (varies according to hapū and iwi)
Kōhanga Reo	Total immersion Māori language family programme for young children, 0-5 years
Kuia	Older woman or women
Kura Kaupapa Māori	Māori language immersion schools within which the philosophy and practice reflect Māori 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
Ora	Wellness
Ringawera	Host and caterer
Rohe	Region/district
Rongoa	Traditional Māori medicines and healing practices
Tamariki	Children
Tikanga	Māori custom and values
Whānau	Extended family

APPENDIX 2 LIST OF FIGURES and TABLES

FIGURES

TABLES

APPENDIX 3 SUMMARY OF KEY DATA SOURCES

Data Type	Description and Source
Population Projections	**Statistics New Zealand** http://www.stats.govt.nz The updated 2006-base subnational population projections have as a base the estimated resident population of each area at 30 June 2006, and cover the period to 2031 at five-year intervals. These supersede the original 2006-base subnational population projections. Three alternative series (designated low, medium and high) have been produced for each area using different fertility, mortality and migration assumptions. At the time of release, the medium projection series is considered the most suitable for assessing future population change.
Census 2006	**Statistics New Zealand** http://www.stats.govt.nz/Census/2006CensusHomePage.aspx 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 Taranaki 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.
Births	**Statistics New Zealand** http://www.stats.govt.nz This includes all live and still birth 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. Ethnicity refers to the ethnic group or groups that a person identifies with. Prior to June 1998, up to three ethnic groups were captured; after that date all responses have been captured. Birth rates are based on the ethnicity of the mother.
Te Puni Kōkiri **The Health of the Māori Language in Te Taihauāuru**	http://www.tpk.govt.nz/en/in-print/our-publications/publications/ The Health of the Māori Language in Te Taihauauru 2006 Published in 2009. This report investigates the health of the Māori language in Te Taihauāuru in 2006. For the purposes of this report, Te Taihauāuru is defined as the Taranaki, Whanganui, and Manawatū regions. This is one of eight reports on the health of the Māori language at a regional level. This report is divided into five main sections: a brief history of the Māori language in Te Taihauāuru; Māori language knowledge and proficiency in the region; use of the Māori language within the whānau; the provision of Māori language services; and summary and conclusion. Te Puni Kōkiri advises that users exercise caution when interpreting results from the 2006 Health of the Māori Language survey. This is due to limitations in the 2006 survey design that in particular affect comparability with the 2001 Health of the Māori Language survey.
Te Puni Kōkiri Marae Development	TPK.Whanganui@tpk.govt.nz Te Puni Kōkiri's Marae Development Project has produced a Marae Development Questionnaire to collect critical information from participating marae. Marae

Project	representatives, with the assistance of Te Puni Kōkiri regional staff, have been invited to participate in the project by completing the questionnaire. The questionnaire looks into everything from governance to how marae store, record and maintain their mātauranga and taonga, as well as the physical condition of their marae and associated buildings. Participating marae receive a customised Marae Feedback Report that records essential information about the cultural and physical facilities of the marae. They will also receive other useful resources for the marae's benefit including the Te Puni Kōkiri Marae Governance and Management Toolkit. Information on the Taranaki region was sourced from the local office.
Ministry of Education	**http://www.minedu.govt.nz/** ECE and school listing in New Zealand early childhood education (ECE) services / childcare for your child.
BERL Economics	**http://www.taranaki.info/business/list.php/page/Māori-in-the-taranaki-economy-an-economic-profile** Māori in the Taranaki Region: An Economic Profile Venture Taranaki Trust / Tui Ora Limited Author(s): Jason Leung-Wai; Kel Sanderson This report provides a macro-economic picture of the Māori based economy and the role it does and could potentially play in the wider Taranaki economy. Firstly, as a resource, the report identifies and discusses the assets of Māori in the region. This can form the basis of a strategy for leveraging and enhancing Māori economic development in the region. Secondly, the report shows the importance of Māori to the Taranaki economy and the need to consider the Māori dimension when making business decisions and developing wider economic development strategy. The full report can be downloaded from the Venture Taranaki website here.
Hospital Episode Data	**Ministry of Health** 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. The data analysis was undertaken by Cranleigh an external provider, based on Ministry of Health expectations and peer reviewed by another DHB, and the TDHB Medical Officer of Health. 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	**Ministry of Health** 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 Taranaki population's use of Outpatient Clinics is drawn from this source. The data analysis was undertaken by Cranleigh, an external provider, based on Ministry of Health expectations and peer reviewed by another DHB, and the TDHB Medical Officer of Health.
Mortality Data	**Ministry of Health** The mortality statistics 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 information was provided by the Ministry of Health for three years 2006-2008. The data analysis was undertaken by Cranleigh an external provider, based on Ministry of Health expectations and peer reviewed by another DHB, and the TDHB Medical Officer of Health.
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 main data collection for Mental Health is now PRIMHD (Programme for the integration of Mental Health Data) http://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/collections/primhd
New Zealand Health Survey	**http://www.health.govt.nz/publication/portrait-health-key-results-2006-07-new-zealand-health-survey** **A Portrait of Health – Key Results of the New Zealand Health Survey 2006/07. Key results of the New Zealand Health Survey 2006/07.** Fourth national population based health survey carried out by the Ministry of Health. It collects information on New Zealanders health that is not available through health systems records and measures self reported physical and mental health status, modified risk and protective factors for health outcomes and the use of health care services. Taranaki data is clustered with other DHBs. The 2006/07 New Zealand Health Survey was carried out from October 2006 to November 2007, collecting information on over 17,000 New Zealanders (4921 children aged from birth to 14 years and 12,488 adults aged 15 years and over). The survey included 11,632 European/Other people, 5143 Māori, 1831 Pacific peoples and 2255 Asian people of all ages. A final response rate of 68% was achieved for the adult questionnaire and 71% for the child questionnaire, with good participation by Māori and Pacific peoples. There are 21 DHBs in New Zealand, responsible for providing, or funding the provision of, health and disability services in their district. Key data from the 2006/07 New Zealand Health Survey, have been presented in this report at the DHB level, where possible. Direct survey results from the 2006/07 New Zealand Health Survey were possible only for the larger DHBs (Waitemata, Auckland, Counties Manukau, Waikato and Canterbury). The remaining DHBs have been grouped according to population age and socio-demographic structure or shared service provision, to produce robust direct survey estimates with minimal sample error: Taranaki is grouped with Bay of Plenty/Taranaki/ MidCentral and in this region 597 were sampled in the 0-14 years age group and 1643 in the over 15 years age group. Where estimates are provided for Taranaki populations they are therefore synthetic estimates.
Youth 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.
Health of Children in Taranaki Region	The Health Status of Children and Young People in Taranaki. The first of three reports, in the second series on the health of children and young people in Taranaki is Health Outcomes The Health Status of Children and Young People in Taranaki. The third of three reports, on the health of children and young people in Taranaki and the first to utilise the New Zealand Child and Youth Epidemiology Service.
Sexually Transmitted Infections – Annual Surveillance Report 2007	Institute of Environmental Science and Research Limited (ESR). Available on: http://www.surv.esr.cri.nz/surveillance/annual_sti.php?we_objectID=1553
The Social Report 2008– Indicators of Social Wellbeing in New Zealand	Indicators of Social Wellbeing in New Zealand. The social report uses a set of statistical indicators to monitor trends across 10 'domains' or areas of peoples lives which provide a picture of wellbeing and quality of life in New Zealand. This data is available at the level of regional council and territorial local authority.
NZDep2006	Index of Social and Economic Deprivation, Atlas of Socio-Economic Deprivation in New Zealand NZDep2006.

APPENDIX 4 FRAMEWORK AND PROPOSED INDICATORS FOR MONITORING POPULATION AND PERFORMANCE ACCOUNTABILITY

INDICATOR FRAMEWORK

He Korowai Oranga provides key elements of the overarching Whānau Ora HNA Framework. The monitoring framework adopted for the HNA is comprised of five domains, four of which are based on the pathways identified in He Korowai Oranga. The monitoring framework is populated with indicators classified under each of the five domains. This monitoring framework used in the Whānau Ora HNA report may be readily adaptable for use within a variety of accountability frameworks. One such framework is Results Based Accountability (RBA). RBA is increasingly being adopted in the Health and Disability Sector and this section makes explicit the way in which the Whānau Ora HNA Framework can be applied in a RBA model as an example.

RESULTS BASED ACCOUNTABILITY[56] (RBA)

RBA is defined as a disciplined way of thinking and taking action that can be used to improve the quality of life in communities, cities, states and nations. Results Based accountability can also be used to improve the performance of programmes, agencies and services and systems. Two levels of accountability measures are considered.

POPULATION Accountability	The Taranaki DHB is one of a group of partners collectively responsible for supporting whānau living in Taranaki to achieve Whānau Ora. The framework contains POPULATION accountability indicators for monitoring Whānau Ora for Māori living in Taranaki. These are not service-based indicators.
PERFORMANCE Accountability	Service providers are responsible for the performance of services delivered. PERFORMANCE accountability is measured using service-based indicators

DATA DEVELOPMENT ISSUES

There is currently no robust set of comprehensive indicators that are able to capture Whānau Ora. Indicators have not yet been developed to measure many of the concepts that underpin Whānau Ora. In some areas there is a lack of regularly collected regional data, and there are problems with ethnicity data collection and reporting to enable disaggregation by ethnicity. In the monitoring framework below, potential indicators for which data are not yet available are included in *italics* to provide an indication of areas where data development work is required. For example, the indicator set 'Te Ara Tuatahi Pathway One – Development of whānau, hapū, iwi and Māori communities' includes examples of the types of measures that may gauge the wellbeing of the whānau collective at the whānau level. There are no regional data sources currently available that enable use of these indicators for the purpose of this Whānau Ora HNA. Further detail regarding data issues is provided in the introductory section of this report.

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[56] Trying Hard is not Good Enough. Mark Friedman (2005)

DOMAIN 1: DEMOGRAPHY

Category	Framework Heading	Population Accountability Description	Performance Accountability
Sound Understanding of Māori Population Characteristics	Population Size	Number of Māori Projected population to 2026 Birth rate	
	Population Composition	Age structure Family composition of households Geographic distribution (e.g. Māori density) Iwi region/rohe affiliations, tribal affiliations Māori living with a disability	

DOMAIN 2: TE ARA TUATAHI PATHWAY ONE: Development of whānau, hapū, iwi and Māori communities

Category	Framework Heading	Population Accountability Description	Performance Accountability
Thriving whānau, hapū, iwi and Māori communities	*Marae Development*	*Access to Marae*	
	Knowledge of Iwi Affiliations	Ability to name iwi affiliations	
	Te Reo Māori	Numbers of Māori enrolled in kōhanga reo by TLA Self assessed proficiency in te reo Māori by iwi Percentage of Māori who can hold a conversation about a lot of everyday things in Māori	
	Participation in Māori Medium Educations	Number of Māori enrolled in Kohanga reo Number of Māori enrolled in kura kaupapa Enrolments in Māori Medium Education by percentage of instruction in te reo	
	Iwi Activities/Responsiveness	*Service provision to whānau by iwi* *Iwi events* *Representative iwi structures/decision making bodies* *Māori owned businesses (Māori employer or self-employed)* *Measure in place to grow iwi leadership* *Iwi have proactive role in environment reporting* *Strategic planning by iwi*	
	Size of Māori Asset Base	Proceeds from Treaty of Waitangi settlements Māori owned businesses (Māori employer of self	

		employed) Māori contribution to Taranaki GDP *Land in Māori ownership* *Assets held by iwi on behalf of membership*	
	Whakawhanaungatanga – whānau cohesion	*Degree and quality of whānau contact* *Assistance in times of need* *Allocation of whānau resources* *Mechanism for accountability to whānau* *Reo Māori and cultural practices to transmit values and knowledge whānau marae, whānau trust* *Kaumatua housing* *Healthy whānau policies e.g. Smokefree homes* *Tangihanga* *Membership of marae committees* *Educated achievements* *Planning hui, whānau reunions* *Positive role in marae activities*	

DOMAIN 3: TE ARA TUARUA PATHWAY TWO: Māori participation in the health and disability sector

Category	Framework Heading	Population Accountability Description	Performance Accountability
Active Māori Participation	Increasing Māori Participation in Decision Making		Māori on DHB Board, number and percent Māori on DHB Boards/committees, e.g. Clinical Board, number and % Māori involvement in PHO governance
	Māori Provider Capacity and Capability		*DHB expenditure on Māori providers* *Māori recruited to workforce development programmes* Number and type of Māori providers
	Māori Health Workforce Development		Māori specific positions, number and role Staff in each service who are Māori, percent *Māori recruited to workforce development programmes* *Māori recruited to the incubator programme*

DOMAIN 4: TE ARA TUATORU PATHWAY THREE: Effective health and disability services			
Category	**Framework Heading**	**Population Accountability Description**	**Performance Accountability**
	Healthier Lifestyles Adopted	Infants exclusively breastfeed at three weeks, three months and six months Percentage of adults over 15 years classified as overweight or obese Percentage of adults over 15 years consuming 2+ fruit per day Percentage of adults over 15 years consuming 3+ vegetables per day Percentage of adults over 15 years doing regular physical activity Percentage of adults over 15 years reporting hazardous alcohol drinking Percentage of adults who are current smokers or non-smokers but exposed to smoking in the home Prevalence of youth smokers 14-15 years age specific rate per 100 Prevalence of current smokers (adults) Teenage pregnancy, rate per 1000	Identified current smokers enrolled in a PHO and provided with advice and help to quit, percent Percentage of adults 15+ admitted to hospital who are provided with advice and help to quit
	Long and Equitable Life Expectancy	Infant mortality Life expectancy at birth Leading causes of avoidable mortality by age group Leading causes of avoidable hospitalisation by age group Low birth weight rate per 1000 live births Prevalence of people reporting health status as good or very good	Percentage of children fully immunised at age two years Ambulatory Sensitive Admission (ASH) rates
	Chronic Conditions Prevented and Managed	CVD hospitalisation CVD mortality	Adults 15 years and over taking medication for high blood pressure Adults 15 years and over taking medication for high cholesterol (statins) Blood pressure checks in the last 12 months Cholesterol checks in the last 12 months Percentage of Māori population who have had their CVD risk assessed within the past five years

			Māori and non- Māori age standardised rate of selected CVD procedures relative to need.
		Asthma hospitalisation, 0-14 years ASR per 100,000 COPD hospitalisation, 45+ years COPD mortality, by gender COPD prevalence	Asthma re-admission, 0-4 years
		Diabetes self reported prevalence Diabetes hospitalisation for complications (renal failure and amputations) Diabetes hospitalisation, adults over 15 years	Percentage of diabetics who have completed Diabetes Annual Review and are HbA1c<8% Percentage of diabetics who have attended a Diabetes Annual Review (DAR)
		All cancer mortality Breast cancer registrations, hospitalisations and deaths Colorectal cancer registrations, hospitalisations and deaths Lung cancer registrations, hospitalisations and deaths	Breast screening coverage Cervical screening coverage
		Lifetime, 12-month and 1-month prevalence of mental disorders Percentage of adults with high or very high probability of having an anxiety or depressive disorder Prevalence of any self-reported chronic mental health condition, adults 15+ years Prevalence of depression and anxiety disorder, percent Self harm hospitalisations, 5+ years, per 100,000 Suicide, 5+ years per 1000,000	Access to secondary mental health and additions services
		Percentage of 5 year-olds in Taranaki caries free DMFT scores at Year 8 in Taranaki	Percentage of adults with unmet dental needs in the last 12 months
	Equitable Access to Quality Care		DNA rate for all follow-up appointments, by service DNA rate for all FSA, by service DNA rate for colposcopy DNA rate for gynaecology outpatients