

Queensland Health

The health of Queensland's Māori population 2009



The health of Queensland's Māori population 2009

Published by the State of Queensland (Queensland Health), December, 2011

ISBN 978-1-921707-70-4

This document is licensed under a Creative Commons Attribution 3.0 Australia licence. To view a copy of this licence, visit creativecommons.org/licenses/by/3.0/au.



© State of Queensland (Queensland Health) 2011.

You are free to copy, communicate and adapt the work, as long as you attribute the State of Queensland (Queensland Health).

For copyright information contact:

The IP Officer
Purchasing and Logistics Unit
Queensland Health
GPO Box 48
Brisbane QLD 4001
ip_officer@health.qld.gov.au

For further information contact:

Queensland Health Multicultural Services
Division of the Chief Health Officer
Queensland Health
GPO Box 2368
Fortitude Valley BC QLD 4006

Suggested citation:

Queensland Health. *The health of Queensland's Māori population 2009*. Division of the Chief Health Officer, Queensland Health. Brisbane 2010.

Project team:

Project Sponsor: Ellen Hawes
Project Manager: Marina Chand
Project officer: Hanamenn Hunt
Māori Facilitators: Prof Gary Hook and Sari Williams
Research supervisor: Dr David Yeboah
Pacific Islander and Māori Needs Assessment Advisory Group

An electronic version of this document is available at www.health.qld.gov.au/multicultural

Table of Contents

Executive Summary	I
About the document	II
1 Data sources	1
1.1 Literature review	1
1.2 Quantitative data sources	1
1.2.1 Hospital separation data	1
1.2.2 Australian Bureau of Statistics	1
1.3 Focus groups with Māori community members and leaders	2
1.4 Health service provider survey	2
1.5 Data quality	2
2 A profile of Queensland's Māori population	3
2.1 Population size and growth	3
2.2 Languages spoken at home	3
2.3 Ancestry	4
2.4 Year of arrival	4
2.5 Participation in voluntary activities	5
2.6 Age and sex distribution	5
2.7 Geographic distribution	5
2.8 Summary of the Māori population profile	6
3 Māori health beliefs	7
3.1 Māori and the experience of indigeneity	7
3.2 Māori worldview and relationship to health	7
3.3 Māori models of health	8
3.4 Māori models of health care	8
3.5 Health beliefs and acculturative stress	9
4 Wellness and illness, the health status of Māori Queenslanders	10
4.1 Self-reported health and quality of life	10
4.2 Life expectancy	10
4.3 Infant mortality and health	10
4.4 Deaths – avoidable	10
4.5 Hospital separations –avoidable	10
5 Determinants of Māori health and wellbeing	11
5.1 About this chapter's data sources	11
5.2 Determinants of health	11
5.3 Broad features of society	12
5.4 Health behaviours	12
5.4.1 Tobacco use	12
5.4.2 Alcohol consumption	13
5.4.3 Dietary behaviour	13
5.4.4 Physical activity	14
5.4.5 Sexual behaviours	14
5.4.6 Vaccination status	15
5.5 Psychosocial factors	15
5.5.1 Psychological and mental health	15
5.5.2 Interpersonal violence	16
5.6 Socioeconomic characteristics	17
5.6.1 Access to health services	17
5.6.2 Income, employment and education	20
5.6.3 Family and neighbourhood	23
5.6.4 Housing	24
5.7 Knowledge, attitudes and beliefs	24
5.7.1 Health literacy	24
5.7.2 Help seeking behaviour	25
6 Health outcomes	27
6.1 Cancer	27
6.2 Cardiovascular disease	27
Coronary heart disease (heart attack and angina)	27

Stroke	28
6.3 Diabetes	28
6.4 Mental health	28
6.5 Respiratory disease	28
6.6 External causes	29
6.7 Musculoskeletal disease	29
6.8 Communicable disease	29
7 The way forward to improve Māori health	30
Attachment 1 - Data and methodology	31
Attachment 2 – Focus group prompting points (community members)	32
Attachment 3 – Focus group prompting points (community leaders)	34
Attachment 4 – Summary of focus group results	36
Attachment 5 – Survey of health service providers	37
Attachment 6 – Standards for Statistics on Cultural and Language Diversity	38
References	39

List of tables

Table 1 Profile of health service provider interview participants	2
Table 2 Queensland Māori population by three CALD indicators, 2006	3
Table 3 Queenslanders who spoke Māori at home by birthplace, 2006	3
Table 4 Queenslanders with Māori ancestry by birthplace, 2006	4
Table 5 Queenslanders who identified Māori ancestry by year of arrival, 2006	4
Table 6 Age and sex distribution by Māori ancestry and total Qld pop, 2006.....	5
Table 7 Queenslanders with Māori ancestry by top 10 LGAs, 2006	6
Table 8 Usual residents by relationship in household by Māori ancestry and total Queensland population, 2006.....	23
Table 9 Māori people’s rate ratios and mortality rates for cancers in New Zealand	27

List of figures

Figure 1 Te Whare Tapa Whā model of Māori health (Durie).....	8
Figure 2 Conceptual framework for the determinants of health	12
Figure 3 Level of education by Māori ancestry and Qld population, 2006.....	21
Figure 4 Occupation by Māori ancestry and Qld population, 2006.....	22
Figure 5 Weekly gross income by Māori ancestry and total Qld population, 2006	22

Executive Summary

This document profiles the health of Māori Queenslanders. Data from a literature review, Australian Bureau of Statistics and focus groups with Māori community members and leaders are presented.

Queensland Hospital Admitted Patient Data Collection data and other quantitative data, particularly on the determinants of health and health status indicators are not available. These data sources are based on country of birth and therefore do not identify Māori people who are included in the New Zealand category. Ethnicity or ancestry data are not routinely collected in Queensland Health data collections or in national surveys. Improved data collection and analysis is required to enable the development of a complete synopsis of the health of Māori Queenslanders.

The Māori population is the largest Pacific Islander population in Queensland, with 31,061 people identifying Māori ancestry. The Māori population (based on ancestry) grew by 43.6 per cent between the 2001 and 2006 Censuses, while the total Queensland population grew by 2.4 per cent. This indicates the Māori population is a rapidly growing population. The Māori population is relatively young, with a larger proportion under the age of 19 than the total Queensland population a significantly smaller proportion aged 65 years or older. The Māori community lives predominantly in south east Queensland.

The Māori community has distinct health beliefs and practices. Māori knowledge is embedded in *matauranga Māori* (Māori ways of knowing) and *Te Ao Marama* (a Māori worldview). A tradition of unity with the natural environment is reflected in customs, approaches to healing, birthing and death rituals. Māori models of health emphasise the equal importance of the physical, spiritual, family/social and mental dimensions of health. Traditional health beliefs, the process of colonisation as indigenous peoples and the process of acculturation all impact on the health of Māori Queenslanders.

Focus groups identified diabetes, kidney disease, coronary heart disease, mental health, suicide, obesity and hazardous alcohol consumption as the health priorities in the Māori community in Queensland. Māori people experience many barriers accessing the health system and there was high reliance on community people for support, including voluntary health support. The main issues raised in the focus groups were the lack of Māori health workers, the lack of Māori or Pacific Islander services, the use of different health models, the lack of cultural competency in health services and the lack of culturally tailored health promotion. There are also likely to be economic barriers as the Māori community in Queensland receives lower weekly income, is less educated and is overrepresented in lower paying occupations, compared to the total Queensland population.

To improve the health of Māori Queenslanders, all of the focus groups recommended dedicated Pacific Islander/Māori health workers and dedicated Pacific Islander/Māori health programs/services, implementation of strategies to increase cultural competency in health services and implementation of culturally tailored health promotion.

Taking these findings and overseas data together, the burden of chronic disease in the Māori community is likely to be high and the level of engagement with the health system, particularly preventive health, is likely low. Similar findings were made across other Pacific Islander communities in Queensland, highlighting what focus group participants themselves stated – Pacific Islander people have more similarities than differences regarding health and cultural belief systems. Therefore, the strategies to improve Pacific Islander and Māori health in Queensland have been compiled into a separate document, *Queensland Health response to the Pacific Islander and Māori needs assessment*.

About the document

Background

In 2008/09 the Queensland Government identified Pacific Islander¹ communities as a priority population. In response to this, Queensland Health undertook a health needs assessment with the largest communities – Papua New Guinean, Māori, Samoan and Fijian (indigenous Fijian and Fiji Indian).

Document structure

Section one, *Data sources*, describes the main data sources and data quality limitations of data used in this document.

Section two, *A profile of Queensland's Māori population* includes the population size and growth, languages spoken at home, ancestry, year of arrival, participation in voluntary activities, and age, sex and geographic distribution of the population.

Section three, *Māori health beliefs* outlines the key cultural issues and factors that relate to the Māori construction and experience of health and illness.

Section four, *Wellness and illness, the health status of Māori Queenslanders*, includes information on deaths (all causes and avoidable) and hospitalisations (all causes and avoidable).

Section five, *Determinants of Māori health and wellbeing*, includes health behaviours, psychosocial factors, socioeconomic characteristics and knowledge, attitudes and beliefs.

Section six, *Health outcomes for Māori Queenslanders*, principally documents data on the national health priority areas including: cancer, cardiovascular disease, diabetes, respiratory disease and musculoskeletal disease.

Section seven, *The way forward to improve Māori health* provides information on the approach taken to develop strategies and recommendations to improve Pacific Islander health in Queensland.

¹ Pacific Islander people come from three main regions in the Pacific – Melanesia (including Papua New Guinea, the Indonesian provinces of Papua and West Irian Jaya, New Caledonia, Vanuatu, Fiji, and the Solomon Islands); Micronesia (the Marianas, Guam, Wake Island, Palau, the Marshall Islands, Kiribati, Nauru, and the Federated States of Micronesia); and Polynesia (New Zealand, Niue, the Hawaiian Islands, Rotuma, the Midway Islands, Samoa, American Samoa, Tokelau, Tonga, Tuvalu, the Cook Islands, French Polynesia, and Easter Island). Polynesia is the largest of the three zones.

1 Data sources

This document draws on several quantitative and qualitative data sources. Data and methodology are further described in Attachment 1.

1.1 Literature review

A literature review was conducted for 1998 to 2010 using the following search terms:

- Health status Māori
- Health priorities Māori
- Morbidity Māori
- Risk factors Māori
- Māori health
- Māori epidemiology
- Māori chronic disease
- Māori mental health
- Social determinants of health
- Health inequity Māori
- Health disparity Māori
- Health inequality Māori
- Māori health models
- Māori health beliefs

Databases searched:

- Medline
- Meditext
- Austhealth

References in articles obtained were followed up. Internet searches were also conducted using these search terms.

Articles were prioritised to include studies on immigrant Māori populations in Australia. However, due to a lack of Australian published data, most articles were from New Zealand.

1.2 Quantitative data sources

1.2.1 Hospital separation data

A major gap in data in this document is the unavailability of data for the Māori population from the Queensland Hospital Admitted Patient Data Collection. As 'country of birth' data cannot be used for the Māori population, it was not possible to obtain data on this population from Queensland data sets.

For this reason, New Zealand data will be presented and should be interpreted with caution as the New Zealand based Māori population may have different socio-demographic features to the Māori population in Queensland. However, in the absence of any Australian health data, overseas data is preferable to no data.

1.2.2 Australian Bureau of Statistics

Several data were obtained from the Australian Bureau of Statistics - National Health Survey 2007-08¹, Health Literacy², Australian Social Trends³ and 2006 Census of Population and Housing.⁴ All sources are cited and information about specific surveys including sample size can be obtained from the appropriate data custodian.

1.3 Focus groups with Māori community members and leaders

Three focus groups involving 26 people were held in 2009– five Māori leaders participated in the leaders’ focus group in Brisbane, 13 community members attended a focus group at Loganlea and eight at Deception Bay. The first community focus group took place at the Loganlea community centre and involved eleven women and two men. The second focus group took place in Deception Bay at the premises of Pan Pacific Oceania and involved six women and two men.

The focus groups were co-facilitated by Māori facilitators and the Project Officer. Focus groups were predominantly in English. A standard list of prompting points was used (Attachment 2 for community and 3 for leaders’ focus groups) The focus group data was analysed by the Project Manager and Project Officer and then checked for cultural accuracy by the Māori co-facilitator. The major findings are presented in Chapter 5 and a summary of all focus group discussion points in Attachment 4.

1.4 Health service provider survey

A potential sample of health services was developed. Health services in locations where the Māori population reside, comprised the sample. Participants were randomly selected and contacted for a telephone interview. However, as most potential respondents were either not available or not able to participate due to time constraints, additional participants were selected from the sample or from referrals from the services contacted who could not participate. In total, 11 participants completed the questionnaire. (Attachment 5).

Table 1 Profile of health service provider interview participants

Type of health service provider	
Nurse	7
Social worker	2
GP	1
Dietician	1
Locations	
Logan	2
Northlakes / Redcliffe region	2
South Brisbane	2
Herston	1
Gold Coast	4

1.5 Data quality

Data are not available for several sections of this document. Health status data are not available because the data is based on country of birth and therefore does not identify Māori people who are included in the New Zealand category. Ethnicity or ancestry data is not collected in Queensland Health data collections.

Quantitative data on the determinants of health relies on overseas studies as once again; ethnicity or ancestry is not collected in national and other major surveys and data collections. There are currently no Australian data available on the health of Māori people living in Australia.

2 A profile of Queensland’s Māori population

Travel to Australia by Māori people started during the latter part of the 18th century and by 1840 up to one thousand Māori people had travelled to Sydney to trade and acquire new technology. Māori people were exempted from the legislative enforcement of the ‘White Australia Policy’ and small numbers remained through the 19th century and early 20th century.⁵ Significant migration started around the 1960s when more Māori people migrated to Australia looking for employment opportunities.

2.1 Population size and growth

The minimum data set indicators defining cultural and linguistic diversity (CALD) are country of birth, main language other than English spoken at home and proficiency in English. These indicators are problematic for the Māori population as country of birth is not a good indicator of population size since New Zealand immigrants comprise many ethnicities. The language indicator also does not provide a good estimate of population size since many Māori people speak and are proficient in English.

The size of the Queensland Māori population can better be estimated from Census ancestry data. Ancestry and religious affiliation are also included in the standard data set describing CALD. (Refer to Attachment 6 for the full list of indicators.) However, this may be an underestimation as one of the few studies conducted on Māori immigrants in Australia found that more than 14 per cent said they would not indicate they had Māori ancestry in the Australian Census.⁵ The true figure is therefore likely to be higher.

Table 2 Queensland Māori population by three CALD indicators, 2006

Queenslanders who speak Māori at home	1891 ²
Queenslanders with Māori ancestry	31,076
Queenslanders with Ratana (Māori) religious affiliation	977

Between 2001 and 2006, the Queensland Māori population (based on ancestry) grew by 43.6 per cent, while the Australia-born population grew by 27.4 per cent and the total Queensland population by 2.4 per cent. The Māori community is projected to continue growing rapidly as 15 per cent of migrants from New Zealand identify as Māori⁶ and New Zealand remains Queensland’s largest source of arrival settlers.⁷

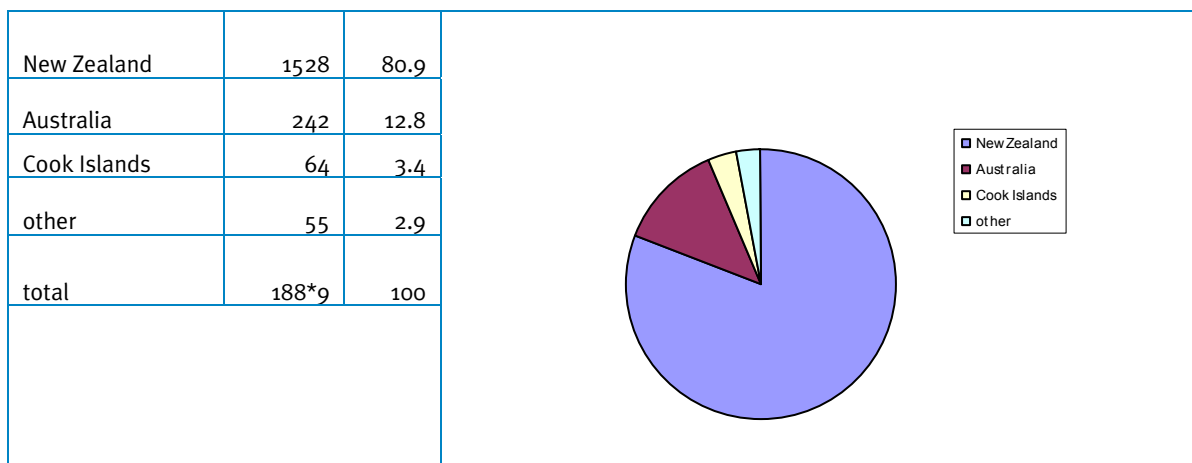
2.2 Languages spoken at home

At the 2006 Census, there were 1891 Queenslanders who spoke Māori at home. This was a 39.4 per cent increase from the 2001 Census. Māori was ranked 27th of all overseas languages spoken at home in Queensland.⁸

Among those Queenslanders who spoke Māori at home, 80.9 per cent were born in New Zealand, 12.8 per cent in Australia and 3.4 per cent in Cook Islands.

Table 3 Queenslanders who spoke Māori at home by birthplace, 2006

² For some demographic indicators the total population number may differ by a few, depending on which source was used. This is due to the application of randomisation formulas by ABS.



2.3 Ancestry

Of the 31,076* Queenslanders who identified their ancestry as Māori, the largest birthplace group was New Zealand, followed by Australia and Cook Islands.

Table 4 Queenslanders with Māori ancestry by birthplace, 2006

Birthplace country	Persons	% of ancestry
New Zealand	20,496	65.9
Australia	9724	31.3
Cook Islands	135	0.4
England	55	0.2
USA	21	0.1
Papua New Guinea	20	0.1
Singapore	14	0
Canada	9	0
Italy	8	0
Fiji	7	0
Other	605	1.9
Total	31,094*	100

2.4 Year of arrival

The majority of people who identified their ancestry as Māori arrived between 1991 and 2005 (Table 5).

Table 5 Queenslanders who identified Māori ancestry by year of arrival, 2006

Before 1971	1971-1980	1981-1990	1991-2000	2001-2005	2006	Not stated	Not applicable	Total
237	1119	2200	3454	3579	680	702	3113	15,084 ³

* For some demographic indicators the total population number may differ by a few, depending on which source was used. This is due to the application of randomisation formulas by ABS.

³ Only includes those who indicated Māori as first ancestry response

2.5 Participation in voluntary activities

At the time of the 2006 Census, 10 per cent of the Māori population in Queensland had participated in voluntary activities in the preceding 12 months. This was considerably lower than the proportion of Australia-born Queenslanders (20.3 per cent). Participation in voluntary activities is considered an important indication of social inclusion.^{9,10}

2.6 Age and sex distribution

The Māori Queensland population had a slightly younger age profile with 35 per cent of the population being 19 years or younger, whereas 28 per cent of the total Queensland population was 19 years or younger. Only one per cent of the Māori population was aged 65 years or older, whereas 12 per cent of total Queensland population was aged over 65 years.

Table 6 Age and sex distribution by Māori ancestry and total Qld pop, 2006

Age (5 Year Groups)	Māori				Total Qld population			
	Male	Female	Total Persons	% of Māori	Male	Female	total	% of total
0-4 years	608	580	1,188	8%	132,170	124,908	257,078	7%
5-9 years	761	656	1,417	9%	137,222	130,694	267,916	7%
10-14 years	765	676	1,441	10%	144,489	137,052	281,541	7%
15-19 years	644	623	1,267	8%	138,175	132,125	270,300	7%
20-24 years	671	623	1,294	9%	135,243	133,662	268,905	7%
25-29 years	712	683	1,395	9%	123,915	125,033	248,948	6%
30-34 years	758	736	1,494	10%	134,495	140,159	274,654	7%
35-39 years	636	640	1,276	8%	139,807	147,332	287,139	7%
40-44 years	634	590	1,224	8%	140,604	147,823	288,427	7%
45-49 years	538	489	1,027	7%	138,386	143,561	281,947	7%
50-54 years	433	371	804	5%	127,369	129,870	257,239	7%
55-59 years	317	296	613	4%	123,569	122,167	245,736	6%
60-64 years	167	139	306	2%	97,285	94,527	191,812	5%
65-69 years	107	86	193	1%	73,839	72,587	146,426	4%
70-74 years	32	41	73	0%	55,547	57,455	113,002	3%
75-79 years	15	26	41	0%	44,651	51,824	96,475	2%
80-84 years	8	6	14	0%	29,436	40,894	70,330	2%
85+ years	12	5	17	0%	19,176	37,480	56,656	1%

(Source: ABS, 2006 Census)

2.7 Geographic distribution

More than half of the Queensland Māori population (58.2 per cent) lived in South-East Queensland. Māori Queenslanders lived predominantly in Brisbane (7112), Gold Coast (6879) and Logan (4107).

Table 7 Queenslanders with Māori ancestry by top 10 LGAs, 2006

Local government area	Responses (2006)	Percentage
Brisbane	7,096	22.8
Gold Coast	6,891	22.2
Logan	4,105	13.2
Redland	1,256	4.0
Ipswich	1,204	3.9
Pine Rivers	1,026	3.3
Caboolture	953	3.1
Cairns	900	2.9
Maroochy	737	2.4
Redcliffe	534	1.7
Other	6,359	20.5
Total	31,061	100.0

2.8 Summary of the Māori population profile

The Māori population is the largest Pacific Islander population in Queensland, with 31,061 people identifying their ancestry as Māori. Of these people only a small number, 1891, speak Māori at home. In New Zealand, each Māori *iwi* (people, folk) has its own experience of loss of language and cultural institutions¹¹, indicating that speaking Māori at home is not a good indicator for identifying the Māori population.

Between 2001 and 2006, the Queensland Māori population (based on ancestry) grew by 43.6 per cent, while the Australia-born population grew by 27.4 per cent and the total Queensland population by 2.4 per cent.

The largest birthplace group for Māori Queenslanders was New Zealand, followed by Australia and Cook Islands. The majority of the Māori population arrived in Australia between 1991 and 2005.

The Māori population is relatively young, with a larger proportion under the age of 19 than the total Queensland population a much smaller proportion aged 65 years or older. The Māori community lives predominantly in the Brisbane, Gold Coast and Logan area and has half the rate in voluntary activities of the Australia-born Queensland population.

3 Māori health beliefs

Health and illness are constructs that differ across cultures. Culture significantly shapes perceptions of health and health-related behaviour. The failure to adequately take into account a population's cultural and social constructs can result in barriers to effective health care.¹² This section will briefly outline the fundamental concepts that are integral to the Māori construction of health and illness.

The concepts presented in this chapter are generalisations, and health beliefs and experiences will vary. Individuals may not fit in a predetermined cultural box. Furthermore, there are different practices and experiences of colonisation across Māori *Iwi* (social units/peoples), as well as commonalities.

The literature provides not only Māori models of health, but also Māori models of health care, health promotion, nursing practice, quality improvement and outcome measures.¹³⁻¹⁷

3.1 Māori and the experience of indigeneity

Māori are the indigenous people of New Zealand and comprise 14 per cent of the total population there. They share experiences with other indigenous people including a history of colonisation and the resulting loss of culture, land, political power, population and health and wellbeing.¹⁸ Like many other indigenous people, Māori people suffered big losses of population from infectious diseases, malnutrition and more recently, obesity, cancer, heart disease, diabetes, alcoholism, depression and suicide. On almost all indicators of social wellbeing, such as educational achievement, housing quality, income, employment or lifestyle risks, indigenous peoples fare worse than their non-indigenous neighbours.¹⁸

The *Treaty of Waitangi* was a Treaty between more than 500 *rangatira* (chiefs) representing Māori and the British Empire which was signed in 1840 and formed the foundation document of New Zealand. Reference to the Treaty was enshrined in the New Zealand Health and Disability Act 2000 which states¹⁹:

Part 1: Clause 4

In order to recognise and respect the principles of the Treaty of Waitangi, and with a view to improving health outcomes for Māori, Part 3 [on District Health Boards] provides for mechanisms to enable Māori to contribute to decision-making on, and to participate in the delivery of, health and disability services.

In the past twenty years there has been a significant revitalisation of Māori language and culture with a renewed sense of commitment to indigenous values and knowledge in New Zealand. Māori perspectives have also increasingly been expressed in health services, health research and models of health.¹⁸

3.2 Māori worldview and relationship to health

Māori knowledge is embedded in *matauranga Māori* (Māori ways of knowing) and *Te Ao Marama* (a Māori worldview)¹⁵. These are steeped in traditional conceptions of the world and communicated through intergenerational transmission. Māori worldviews are founded on holism; an *Iwi* based social system, and an oral tradition.

Pervading this is a tradition of unity with the environment which is reflected in song, customs, approaches to healing, birthing and the rituals associated with death.¹⁸ Human identity is regarded as an extension of the natural environment and there is an element of inseparability between people and the natural world. The material world proceeds from the spiritual and the spiritual (which is the higher order) interpenetrates the material physical world of *Te Ao Marama*¹⁵.

There are significant health implications of this worldview, since the colonial experience has alienated Māori people from their environment resulting in poor health and world views that have been fractured.¹⁸ However, the applicability of traditional views and knowledge should not be perceived as applicable only to the past, as the process to apply indigenous knowledge parallel with other knowledge systems is underway in New Zealand.¹⁸

3.3 Māori models of health

There are a number of Māori models of health that articulate the fundamental Māori dimensions of health and wellbeing.^{11,14,20} The most widely cited model was developed by Durie and more contemporary models refer to Durie's original *Te Whare Tapa Whā* model. This model expressed the equal importance of the physical, spiritual, family/social and mental dimensions of health.



Figure 1 Te Whare Tapa Whā model of Māori health (Durie)
(Source: ¹³)

Another model, the *Te Wheke* model was developed by Pere and in this model eight dimensions are expressed.²¹ Here the model encompasses family health and the eight tentacles of the octopus represent spirituality, the mind, physical wellbeing, extended family, the family, total wellbeing for the individual and family, life force in people and objects, unique identity of individual and family, breath of life from forbearers and the open and healthy expression of emotion.

The importance of *whanau* (family) and *taha wairua* (spirituality) is emphasised in these models of health and wellbeing.

3.4 Māori models of health care

Māori models of health care generally embrace the dimensions articulated by Durie – physical, spiritual, family/social and mental health.^{11,14,15} Some of the ways these dimensions manifest in a culturally competent health care setting are:

Whanau (family) involvement – no visiting restrictions, family actively encouraged to stay with sick relative, family involved with prayer.

Observation of spirituality – *Taha wairua* is observed openly; prayer is conducted openly, spiritual support is offered, family is encouraged to be present for prayer, death rituals observed.

Reducing service barriers – seamless service entry; home visits; home assessments; community nursing and community based health education.

Nurses/health staff become whanaunga (kin) – nurses who have cared for a person during a period of illness, by the association of that care, become kin.¹⁴

Traditional healing methods – *rongoa* (natural medicine) and *mirimiri* (therapeutic massage) are used to complement medical treatments.

Observance of *whakapapa* – establishment of genealogical links and the building of relationships are observed before commencement of treatment and education. Patient education sessions do not commence unless the first session is just dedicated to introduction (which is introducing oneself including one's whakapapa/genealogy), establishing a relationship and listening (*whakarongo ma*).

Māori workforce – active employment and development of Māori health professionals in Māori health services. Although non-Māori staff are employed, the emphasis is on Māori directorship, *tikanga* (customs, etiquette) in practice and whanau (family) centred care.

3.5 Health beliefs and acculturative stress

The preceding summary of health beliefs should be considered in the context of a population in the process of acculturation. As for any immigrant population, the Māori population is adjusting to a host culture and a range of experiences referred to as acculturative stressors. These include²² :

- Physical stressors – changes in weather, housing, new settings, safety
- Social stressors – loneliness, homesickness, missing family and friends, difficulty relating to others, making new friends
- Cultural stressors – differences in cultural values and attitudes, racial discrimination
- Functional stressors – change in mode of transportation, languages used daily, work and study conditions, financial situations
- Biological stressors – different foods, illnesses or disease.

In addition to this acculturative stress post migration, Māori people may also have experienced the effects of colonisation as the indigenous people of New Zealand. Traditional health beliefs, the process of colonisation and the process of acculturation play an integral role in the health and wellbeing of Māori people in Queensland.

4 Wellness and illness, the health status of Māori Queenslanders

From the current data sets of Queensland Health and the National Health Survey, it is not possible to document on the health status of Māori Queenslanders. The main reason being that 'country of birth', the main CALD indicator collected, does not identify the Māori population in the data.

This chapter will present a summary of Māori health status in New Zealand. However, it is emphasised that Māori health status in New Zealand cannot be taken to represent Māori health status in Queensland. In fact Māori health is more likely to be poorer in New Zealand as younger and healthier people tend to migrate. It does however provide an indication of some of the health issues that could be expected to be found in Queensland, if the data were available.

4.1 Self-reported health and quality of life

In the 2006/07 New Zealand Health Survey, Māori men (0.85) and women (0.82) were less likely to report excellent or very good self-rated health compared to the total New Zealand population (1.0).²³

4.2 Life expectancy

The life expectancy of the Queensland population 2004-06 (including Australian and overseas-born) was 78.5 years for males and 83.4 years for females³.

The life expectancy of the non-Māori New Zealand population is similar - 79 for males and 83 for females.

In New Zealand, the life expectancy for Māori males is 70.4 and for females 75.1. The difference for males is 8.6 years and for females is 7.9 years.²⁴

4.3 Infant mortality and health

In New Zealand the prevalence of low birth weight was similar for Māori and non-Māori. The Māori infant mortality rate was one-and-a-half times that of non-Māori.²⁵

4.4 Deaths – avoidable

In New Zealand, avoidable and amenable mortality rates were two-and-a-half times higher for Māori than for non-Māori.²⁶ (Amenable mortality is a subset of avoidable mortality and is restricted to deaths from conditions that are amenable to health care).

4.5 Hospital separations –avoidable

Hospital separation rates and ratios, adjusted for the age of the population, are often used to compare levels of illness in communities, though they need to be interpreted with caution. Hospital separations also reflect access to hospitals, need for repeated admission, and current medical practice of treating an illness or injury in hospital, all of which can vary over time and in some cases between geographic areas²⁷.

Hospital separations are a measure of hospital activity, representing episodes of hospital care from admission to discharge, transfer or death. In this document, hospital separations for the Māori population in Queensland are unavailable.

In New Zealand, Māori avoidable and ambulatory-sensitive hospitalisation rates were one-and-a-half times higher than those for non-Māori²⁶.

5 Determinants of Māori health and wellbeing

5.1 About this chapter's data sources

This chapter presents the key determinants of Māori population health. The chapter presents findings of a literature review, focus groups with the Māori community and a survey of health service providers.

Each section is documented in the following format:

1. Background information about the health factor summarised from *The Health of Queenslanders* report (where available)
2. Literature review findings about each health factor in relation to the Māori population
3. Focus group findings on each health factor
4. Health professional interview findings on each health factor

There are no national or Queensland data on the prevalence of particular determinants of health in the Māori population.

A summary of findings from focus groups with the Māori community is presented in Attachment 4. The major points of discussion will be documented in this chapter.

A summary of findings from the health service provider survey is presented in Attachment 5. Relevant findings will also be documented in this chapter.

5.2 Determinants of health

Determinants of health and wellbeing refers to the factors that influence the health status of populations and individuals²⁸. These factors act in various combinations; that is, health is multi-causal.²⁹ These determinants or factors include societal factors such as culture, resources and systems; socioeconomic factors such as education, employment and income; health behaviours such as tobacco use, physical activity and alcohol consumption; and biomedical factors such as blood pressure, blood cholesterol and body weight. These factors are often categorised as either risk factors or protective factors.

The determinants of health are particularly important for explaining and predicting trends in health, and can provide explanations as to why some populations have better or worse health than others. They are at the heart of disease prevention and health promotion.²⁹

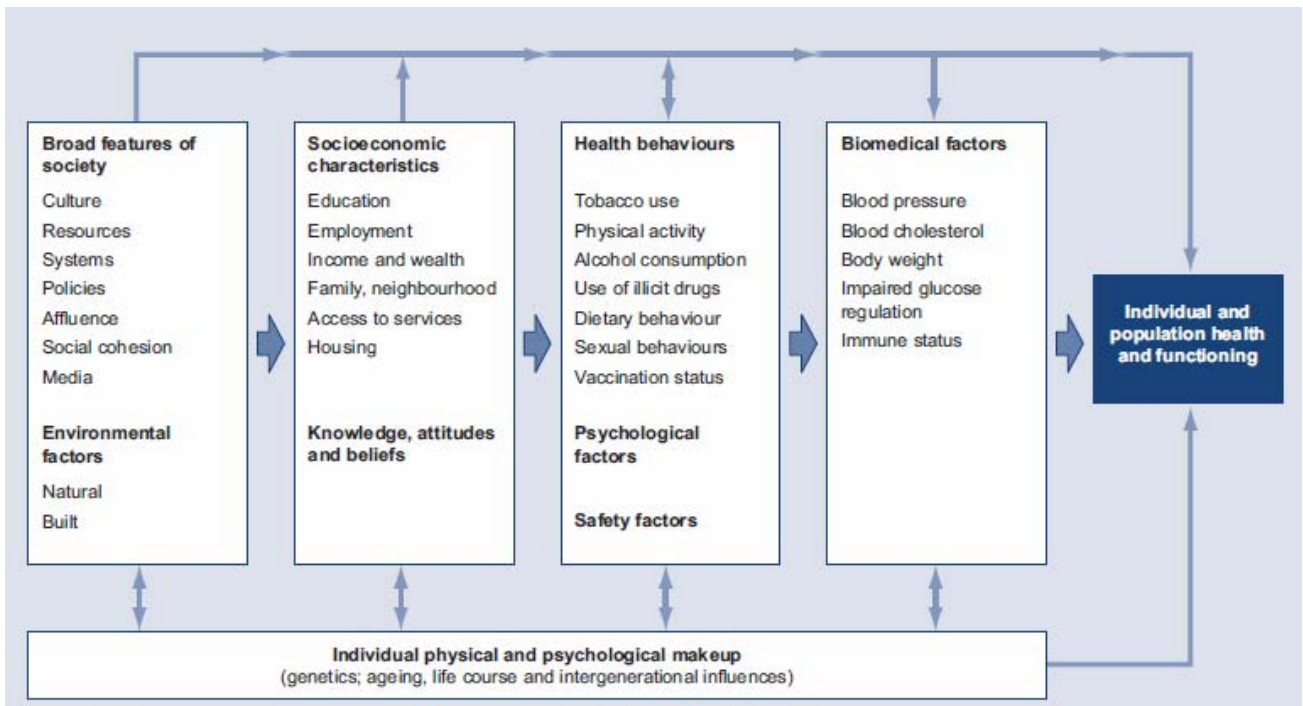


Figure 2 Conceptual framework for the determinants of health (Source: Australian Institute of Health and Welfare ²⁹)

This chapter documents the determinants of health and wellbeing.

5.3 Broad features of society

The Māori population in Queensland, like other Pacific Islander populations, is in cultural transition. Māori people are immigrants from a country where, as the indigenous peoples, they had cultural, social and spiritual ties to their land. Living in Australia, Māori people live in the “absence of this traditional, geographical and spiritual *Turangawaewae* (a place to stand – a place to belong)”.³⁰ Māori people do not identify themselves as ‘ethnic migrants’ and most keep strong links to New Zealand and intend to return to New Zealand.⁵

In Queensland there is evidence of social exclusion with two out of three focus groups and a Gold Coast Māori health needs assessment workshop identifying lack of belonging, isolation and lack of social support.³⁰ Low social cohesion within the Māori community was a major finding of a Gold Coast needs assessment workshop with racism and violence between *iwi* identified, as well as the experience of racism from wider society.

Māori people have migrated to Australia for many reason with economic ‘pull factors’ the major reason.⁵ However, in Australia the Māori population is not affluent, with lower weekly incomes and an over-representation in lower skilled occupations compared to the total population.

5.4 Health behaviours

5.4.1 Tobacco use

Tobacco smoking is a leading risk factor in Queensland. It is known to contribute strongly to lung and related cancers, cardiovascular disease and diabetes, regardless of country of birth.²⁷

International literature reports high prevalence of smoking among Māori women and men in New Zealand. The World Health Organisation reports high prevalence of smoking among Māori – 50 per cent are smokers compared to 23 per cent of the New Zealand European population.³¹

The 2006/07 New Zealand National Health Survey found Māori women were more than twice as likely to be a current smoker compared to women in the total population. Māori men were 1.5 times more likely to be a

current smoker.²³ In another national survey in New Zealand, Māori respondents were significantly more likely to perceive that ‘light’ cigarettes make it easier to quit; agree with the statement that ‘menthol cigarettes are less harmful than regular cigarettes’; underestimate the danger of second hand smoke; and agree that ‘tobacco companies have done everything they can to reduce the harm caused by smoking’.³² The need to increase the availability of and reduce barriers to smoking cessation programs to Māori people is a priority in New Zealand.³³

Smoking was not identified as a major concern in the Queensland focus groups nor in the health service provider survey.

5.4.2 Alcohol consumption

Alcohol is the most commonly used drug in Australian society. There is evidence that, from middle-age onwards, relatively low levels of alcohol have some health benefits.³⁴ However, drinking regularly and drinking at levels higher than the recommended National Health and Medical Research Council (NHMRC) guidelines increases the risk of acute and chronic health and social impacts, and premature death.

The 2006/07 New Zealand National Health Survey found that Māori women were nearly twice as likely, and Māori men 1.5 times as likely, to have potentially hazardous alcohol consumption compared to women and men in the total population.²³

Hazardous alcohol consumption was discussed in two of the three focus groups. The major theme was the widespread use of alcohol in the Māori community. One community focus group discussed the impact of the Australian drug and alcohol culture on Māori people, believing the impact to be negative:

“The drinking of alcohol - especially with Māoris because the government here wants people to be drunk. Look at the drug culture in Australia and then they say it’s bad for you”. – Māori female

Another person told of her experiences seeking help:

“With alcohol and drugs, when you go and seek help they are so rude to you. Even if you only have a little bit of alcohol in your system, they don’t treat you the same. They don’t want to help you they just want you to shut up.” – Māori young female

Six out of nine health service providers had observed drug and alcohol issues among Māori clients ‘sometimes’, while none had observed it ‘often’ and two did not observe it at all.

5.4.3 Dietary behaviour

Nutrition is an important determinant of health and wellbeing. Good nutrition is essential for the normal growth and the physical and cognitive development of infants and children, healthy weight, enhanced resilience and quality of life, good physical and mental health throughout life, resistance to infection, and protection against chronic disease and premature death.³⁵

The 2006/07 New Zealand National Health Survey found that Māori women (0.95) and men (0.98) were slightly less likely than all women and men to have adequate vegetable intake. Māori women were also slightly less likely to have adequate fruit intake compared to all women, but there were no significant differences between men.²³

All of the focus groups identified chronic disease, particularly diabetes, kidney disease, coronary heart disease and obesity as the most prevalent health problems in the Māori community. All of the focus groups discussed obesity as a major underlying risk factor to these health conditions and people’s powerlessness and lack of skills to reduce their obesity.

Various issues related to nutrition were discussed in the community focus groups. Most participants said Māori people generally lack education about nutrition. Some participants said there is a bigger focus in Māori families on filling up, rather than having a balanced meal:

“Obesity – I think it has to do with nutrition. Knowing what to eat. Māoris have a big feed and get full, but that’s it.” – Māori female

Other participants discussed the Māori community’s preference for foods similar to their cultural foods in New Zealand, which were centred on fried foods and dairy products, with high fat content. The following comments were typical of the discussions:

“‘Boil-ups and hangi’ we love our New Zealand food – butter, fried, cream. I can’t have my food without butter. Our diet has got to change. We eat all the fat that we used to have back home.” – Māori female

“Nutrition – what do we know? From birth, our parents, living off the land....that’s how we were brought up - shot pigeons and killed a pig. If you had fruit, you were pretty rich. When you ate bread, butter and jam that was nice. In this generation and in this time we are teaching our children, but we need education.” – Māori female

The focus groups also identified the lack of culturally tailored health promotion as contributing to this problem and the need for Māori health staff to provide health promotion services. The following comment was typical of the discussions:

“My parents today still need to be educated – eat the taro – I’m fat but it doesn’t matter. We need education. We are looking at a problem here– who can teach us? Where are the facilities? I want to tell that person where to go for help. I want to tell someone, ‘you know your little girl she is a little bit overweight which is not good for her heart when she’s 30’. Who will do that? At what place will they do that? Our community education has to be done by our own people...at a place where they regularly go to.” – Māori female

Dietary behaviour was not discussed in the health service provider survey.

Breastfeeding

Infants and children depend on good nutrition for normal growth and development. Breastfeeding is associated with a reduction in the incidence and impact of childhood infections, allergic disease, diabetes, obesity, some childhood cancers and Sudden Infant Death Syndrome.²⁷ Breastfeeding is also associated with reduced risk of cardiovascular disease in adulthood.³⁵

There is no Queensland Health data available on the breastfeeding patterns of Māori women. There were no significant ethnic differences reported in breastfeeding patterns in the 2006/07 New Zealand National Health Survey.

5.4.4 Physical activity

Physical activity is essential for maintaining good physical and mental health and general wellbeing of adults and children. Regular physical activity reduces the risks of many chronic diseases, particularly cardiovascular disease and Type 2 diabetes. Half the adult population in Queensland is not sufficiently active and there is great potential to improve physical activity.³⁵

There is no Queensland or Australian data on physical activity among Māori people. In the New Zealand National Health Survey Māori men (1.05) and women (1.03) were more likely to meet the recommended 30 minutes of physical activity on five or more days of the week compared to men and women in the total population (1.0).

None of the community focus groups raised physical activity as a health concern in the Māori community, nor did the health service provider survey respondents.

5.4.5 Sexual behaviours

Safe sexual behaviour is another factor affecting health and wellbeing³⁶. Unsafe sex, unplanned pregnancies, sexually transmitted infections, HIV infection and unwanted sex are some of the issues related to sexual behaviour.

There is no Queensland data on the prevalence of these sexual health behaviours and health outcomes among the Māori community.

New Zealand reports national data on sexual health.³⁷ Chlamydia trachomatis is the most common sexually transmitted infection in New Zealand and the rate of Chlamydia detection among Māori clients at New Zealand sexual health clinics was double that of Europeans in 2007. Although not as common as Chlamydia, the diagnosis of Neisseria gonorrhoea was increasing in 2007 and Māori people accounted for more cases of gonorrhoea than any other ethnic group.

An analysis of hospitalisations for pelvic inflammatory disease by Counties Manukau District Health Board in New Zealand found that Māori women had double the hospitalisation rate of European women. As pelvic inflammatory disease is a consequence of genitourinary infection, predominantly sexually transmitted infections such as Chlamydia and gonorrhoea, it is an indicator of sexual health status.³⁸

In New Zealand, Māori teenagers have the highest fertility rate (70 per 1,000 in 2000–2002), compared to Pacific Islander New Zealanders (48) and European New Zealanders (22). The Māori abortion rate was 30 per 1,000, compared to Pacific Islander (26) and European (21).³⁹

In the focus groups, sexual health issues did not feature. Participants discussed sexual health as being important and that health promotion was required around sexually transmitted infections, particularly by Māori health workers who could promote services as trustworthy. However, it was not identified as a priority issue.

5.4.6 Vaccination status

Data are not available to provide vaccination rates for the Māori population in Queensland. A Logan study⁴⁰ on immunisation for children from Samoan, Tongan, Cook Islands and Māori backgrounds reported lower immunisation coverage (77 per cent) in four Logan suburbs and an overrepresentation of children from these backgrounds among those in prep/year one who were overdue for immunisation. Barriers to immunisation were identified as previous immunisation experiences, cultural norms, family structure, language barriers and low health literacy. Enablers were identified as having knowledge of immunisation and the health system, the ability to read and speak English, an understanding of incentive programs, having support family networks, and maintaining a record of past immunisations.

5.5 Psychosocial factors

5.5.1 Psychological and mental health

There are no data available on the prevalence of mental illness in the Māori population in Queensland.

In New Zealand, Māori people have the highest prevalence of any mental disorder, and relative to need, are less likely than non-Māori (excluding Pacific Islander) to have contact with services, regardless of socio-demographic circumstances.⁴¹

Māori people in New Zealand have a significantly higher rate of suicide and attempted suicide. The patterns of Māori suicide in New Zealand are⁴²:

- Suicide rates increased more notably among Māori than non-Māori throughout the 1980s and 1990s
- Māori suicide rates are significantly higher than other ethnic groups
- A significant pattern of suicide occurs in the under-35 year age group, with significantly lower prevalence in those aged over 45 years
- Māori males have a higher rate of suicide and hospitalisation for suicide attempts compared with non-Māori males. In contrast, there is little difference between the Māori female and non-Māori female suicide rate
- However, Māori females have a significantly higher rate of hospitalisation for suicide attempts than non-Māori females.

A Gold Coast needs assessment workshop with the Māori community identified the breakdown of social and family support networks and social isolation as major issues for the Māori community at the Gold Coast.³⁰

All of the focus groups identified mental health issues and two identified social and personal wellbeing as significant problems in the Māori community. The focus groups discussed social isolation and lack of support as an underlying issue to the social and personal wellbeing problems in the community. The Māori reliance on *whanau* (extended family) support is undermined post-migration when the family may not be available, or lives a long distance away:

“A typical example was we got called to a tangihanga (funeral). It was a ...woman who had been for ...[time] in Australia. She was so homesick. She had nobody to talk to and to link to. She hung herself because she had nobody. She didn't have anybody for support; she didn't know where to go. People need somewhere to go – some focus point. There was nobody. It broke my heart to know this. She had children.” Māori female

Suicide and depression were discussed as the major mental health issues in the community. Both community focus groups mentioned that a significant number of funerals had occurred in the Māori community in the preceding 18 months due to suicide. A comment that other participants agreed with was:

“Suicide – it is young and old, not just young people. There was a time 18 months ago; there was just one after the other. It seems to have slowed down a bit now. It was very bad.” Māori female

This comment indicates an experience different to that of Māori people in New Zealand, where people over the age of 45 are less likely to suicide.

Among the health service providers interviewed, four had observed mental illness among their Māori clients ‘sometimes’ and four ‘never’ while one health service provider could not comment.

5.5.2 Interpersonal violence

Abuse and steep power hierarchy within a community are recognised as risk factors to health and wellbeing.^{29,36} Queensland and Australian data on the prevalence of interpersonal and domestic violence in the Māori population are not available. National surveys such as the Personal Safety Survey (2005) are not reported by ancestry or ethnicity.

As many people in the Māori population are reluctant to use services or report incidents of violence to the police, service data is also not an accurate reflection of the extent of the problem.

In New Zealand the complex interplay of family, tribe, identity and violence is acknowledged⁴³:

The significance of whānau, hapu and iwi for Māori victims of family violence is complex and wide-ranging. On the one hand, whānau can be a site of intergenerational abuse of children and adults, and abuse in turn can result in alienation from whānau and poverty and transience for women and children who are victimised. On the other hand, whānau, hapu and iwi can represent a source of identity, belonging and values. Whānau can also be a primary source of support, intervention and protection for victims, even if responses are not always appropriate (Hand et al 2002).

In New Zealand Māori people are substantially over-represented as both victims and perpetrators of violence in families. In the National Survey of Crime Victims (2001) the lifetime prevalence of interpersonal violence was much higher for Māori women (49 per cent) than New Zealand European women (24 per cent). In the Women's Safety Survey 52 per cent of Māori women reported experiencing at least one form of interpersonal violence during their current relationship – nearly double the rate among non-Māori. This was not solely violence by Māori men, as many of the women had non-Māori partners. The highest risks were among Māori women with recent partners rather than current ones.⁴³

The focus groups mentioned violence as an issue within the Māori community, but it did not attract further discussion. This could reflect cultural and gender issues within the focus group. The health service providers did not discuss interpersonal violence.

5.6 Socioeconomic characteristics

5.6.1 Access to health services

The health system itself is a fundamental determinant of health.⁴⁴ The World Health Organisation has identified that in most countries the health care system is inequitably distributed. This is pronounced in low- and middle-income countries, but inequity is prevalent in high income countries such as Australia too. There is evidence that people from ethnic minorities and indigenous peoples are less likely to receive recommended health services and treatments, that the wider population can expect to receive⁴⁴). Access to culturally appropriate health services is an important protective factor.³⁶

Lack of dedicated Māori programs, services and staff

The unavailability of dedicated Māori or Pacific Islander services and programs featured in all the community focus groups. All of the focusgroup participants particularly discussed the challenges of not having Pacific/Māori health workers. As the indigenous health services and workforce in New Zealand are well developed, their lack of availability is an obvious challenge for Māori people in Australia. The leaders believed the main problem was a lack of Māori or Pacific Islander liaison officers in the health system that could help to access and negotiate this complex system. They also identified the cultural link these officers could play:

“We need our own people on staff. People get ‘shy’ and don’t tell what is really going on.” – Māori male leader

The community focus groups discussed the lack of dedicated Pacific Islander health programs and services. They discussed the impact of the unavailability of Māori services, particularly on elderly and convalescing people. One participant who works in a major hospital in Brisbane said:

“When we plan for discharge for patients, service providers from ethnic communities like OzPole or Coasit – they are good at looking after their own. We don’t have that for Pacific people. We only have mainstream to offer our people. However, they’ll say ‘no I’m fine’ because they don’t want that mainstream service – they can’t shower or whatever, but they still don’t accept the service.” – Māori female

One community focus group discussed at length the important role of a Pacific Islander community health centre – both to provide a linking and referral point and to provide health services. The following comment from one community participant was typical:

“[We] need services to be provided by our own people – not just Māori but Pacific people. We need our own people to provide services for us. Need cultural community centres for our young people – rather than hanging out in the mall, in the street or the alley ways.” – Māori male

Two focus groups also discussed various programs or schemes that would provide training and pathways into health careers for Māori people to take up health jobs. This may reflect the New Zealand system which has many such programs and a culturally diverse workforce. One focus group also mentioned that Māori people need encouragement to undertake further studies as many people have the mindset that if high school is completed, that is an achievement. People may not consider they can study beyond high school.

“To help people manage their health problems better, our own health workers are needed. Training should be available to our people to be health workers. Free courses...funding for Uni or TAFE courses for health workers.” – Māori leader

Different health models

A Gold Coast project to identify Māori health priorities found poor access to health services due to low health literacy and culturally unsafe services³⁰:

“Māori are struggling to come to terms with their health problems. People are not turning up to scheduled appointments and programs because they do not feel culturally safe, the medical model is not encompassing of family and spiritual wellbeing.”(p.12)

Similarly, all of the focus groups discussed a range of issues with the Queensland health system that reflects Māori people's different model of health. Both community focus groups mentioned the importance of traditional medicine and the importance of providing a more holistic health service that incorporates dimensions such as housing and employment. The leaders and one community focus group explicitly stated that Māori people have a different concept of health to the mainstream Queensland Health concept and that spirituality in particular, was the major missing dimension. This different health concept is particularly relevant for older people.

Throughout the discussions the role of extended family and community was also evident as being integral to the Māori community's concept of health. Two focus groups also mentioned that Māori people have a different concept of mental health. The following comments are representative of the discussions on Māori health concepts:

"Spiritual health- when dealing with the health system here there's no understanding of our spiritual health... Karakia and Whakapapa** " - Māori male leader*

"It is part of our culture – if we had cultural medicines incorporated within the Queensland Health structure – huge benefit. We need traditional medicine available through Queensland Health. We have people come over from home to teach all this. We want to do it and we want it to be accessible. It needs to be accessible to people within a structured organisation". – Māori female

(*prayers or incantations ** genealogy, knowing where you are from and who your people are, knowing who your tribe is)

Lack of cultural competency in health services

Various anecdotes during all of the focus groups reflected a lack of cultural competency in health and aged care services. Māori people expressed mixed experiences with the health system – there were debates in both the community focus groups about the quality of health care in Queensland. Some consumers of cancer and cardiac treatment services expressed satisfaction with health services and felt that the quality and understanding of health workers was very good while other had experienced negative attitudes and problems with the system.

The issue of visiting arose in all of the focus groups. Some people had found Queensland Health staff to be supportive and understanding of the need to have a large number of visitors. Other people had experienced difficulties. However, all participants agreed that in New Zealand the provisions for *whanau* (family) were better in hospitals where a separate room with facilities is provided for the family of the sick patient. Such facilities are not available in Queensland. One participant explained:

"I strongly support hospital stays for family...this happened to my mum and dad – my dad moved in to the hospital and stayed there to be with my mother in New Zealand. He was a minister and because he stayed in the hospital, people went into the hospital for their services".- Māori male

One participant described the difficulties experienced from the unavailability of family rooms in hospitals:

*"...even if you have a baby here – someone's baby died at ** [hospital] – we had to leave at midnight and come back at 6am. We took food – the food is so expensive there at the hospital – only the baby got fed. This baby was going to die but they still won't let you stay there. We brought in food to feed the young family and the staff asked 'what are you doing - this is a hospital?' So we said we are here to help and support the family." – Māori female*

There was also debate about the handling of deceased bodies according to Māori cultural needs. The leaders identified this as a problem in Queensland hospitals, but the community participants at one focus group described positive experiences where hospital staff had allowed the family to mourn and observe the cultural and spiritual requirements for the deceased. Participants said that some people and leaders are from certain regions and tribes that have stricter cultural protocols for deceased persons, and for these Māori people, the issue of protocols for handling bodies is a major concern.

"There are certain protocols for the elders. It came up in the leaders' workshop ...certain tribes have certain protocols...I found them to be quite good... I went straight into the hospital ... she had died.

They came in and said 'take your time'. I thought 'there's going to be a problem' – I thought 'she's mine, she's mine, I have to do what I have to do for my people back home'. They were really good. They allowed me to do what I had to do. They were pretty good like that." – Māori female

Participants compared the health system in New Zealand to the system in Australia and it was perceived that the New Zealand system better caters for the cultural needs of Māori people.

One participant described a negative experience at a mental health unit in a Queensland health facility. There was agreement from the other participants that such experiences are not uncommon and shared other anecdotes:

"There was a girl with a mental issue. Three of us from the church went down. We were told 'you have 20 minutes' and lots of no no's were put on us. 'Don't do this don't do that.' The staff were sitting at the back looking. As soon as this girl got up and hugged us, the girl was with us. As soon as we started praying they got up and said 'get out'. They kicked us out. 'We told you, you weren't supposed to do that.' I said 'it wasn't worth it then to come.' The outcome was the girl got out of her mental state about a month later. We prayed to the Lord for that. That incident showed me some individual people use their authority – I don't think it's hospital policy." – Māori male

Four health service providers made suggestions on how their service could be more culturally competent including the need for more information about the Māori community lifestyle factors, more cultural awareness training, accessing support from the Queensland Transcultural Mental Health Centre and more community based health programs.

All of the focus groups recommended that strategies to increase the cultural competency of health services be implemented.

"Queensland Health should themselves be better educated – be aware of our culture. Australia is a multicultural society. Who is making them aware...? Is it another Australian? Is it an Indian guy? We need a forum involving Pacific Islanders who can educate the Queensland Health staff. They should listen first hand. I don't know if you can educate them but you can certainly make them aware. These are needs, these are issues, this is going on..." – Māori female

The Māori leaders advocated eleven recommendations to Queensland Health – six related to increasing the cultural competency of health services. These six were:

1. Māori people need own Māori health workers
2. Develop database with Māori health statistics (Māori in Queensland)
3. Community education that is culturally appropriate
4. Cultural awareness in health services
5. Protocols surrounding death
6. Development of Māori health programs

Lack of culturally tailored health promotion

A strong theme throughout all of the focus groups was the lack of culturally tailored health promotion targeting the Māori community. All of the focus groups emphasised the importance of targeting Māori people in promotion campaigns and the needs for specific tailoring to the Māori community. Some community participant felt strongly that most of the health issues facing Māori people could be reduced through adequate community health education/ health promotion.

The community focus groups noted that information is generally not available where most of the people access services and information when they first arrive, for example at Centrelink or community places. The community leaders emphasised the importance of culturally tailored marketing campaigns. Across all of the focus groups, several examples were provided of areas that require priority education or promotion:

- nutrition
- cancer screening
- mental health
- obesity
- diabetes
- sexually transmitted infections.

This is congruent with the National Health and Medical Research Council's recommendations for more culturally competent health promotion.⁴⁵

Related to this was Māori people's low health literacy. Both community focus groups discussed this situation and linked this problem largely with the lack of culturally tailored health promotion. All of the focusgroups recommended that culturally tailored health promotion be implemented. Participants commented that most campaigns do not have the images or content that relates to them as Māori people. For example:

"Last year Queensland Health ran TV ads encouraging women to come and do a pap test. Where were the Pacific people? They had a white person, an Indian and German. We are missed out every time. Our women don't even listen, 'this is not for me'." - Māori female

Lack of communication and engagement

The leaders' focus group and one community focus group discussed the communication barriers Māori people can experience. These barriers are generally related to a cultural reservedness to communicate openly and people's shyness, embarrassment and fear to speak openly to health providers. One community participant said that people generally feel uncomfortable when they deal with health workers:

"The younger generation, they hear examples and stories then they feel 'I can talk too and share and speak'. Most of us are nervous. You need a setting to feel comfortable and speak out." - Māori female

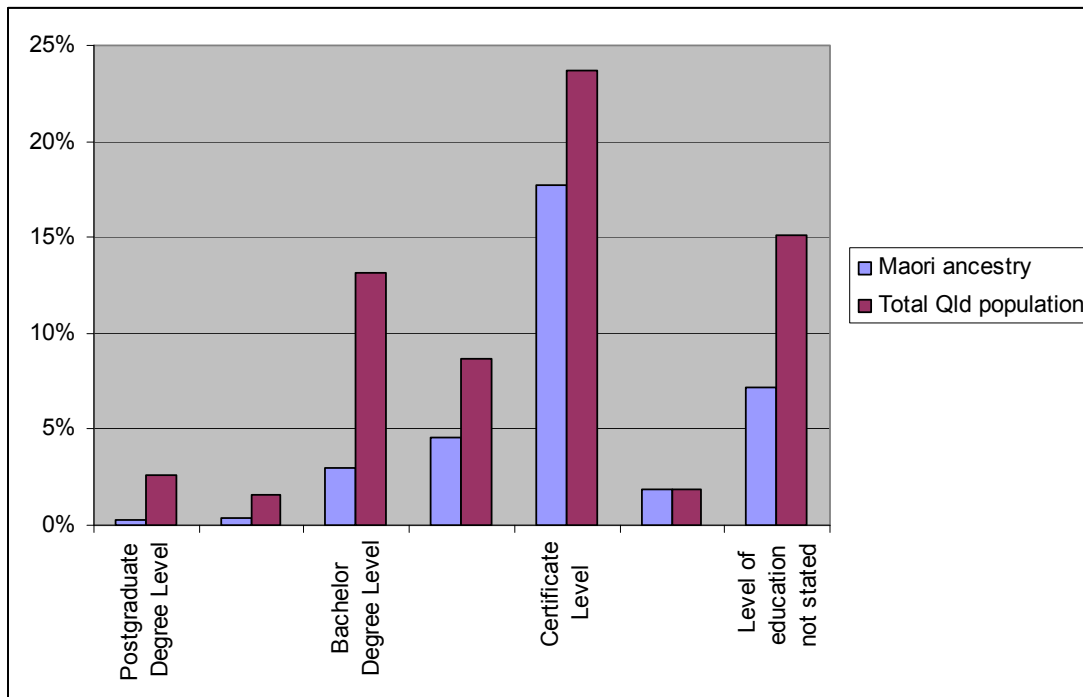
The other issue identified was lack of community engagement and the difficulty to engage Māori people on health issues. Two focus groups also recommended that Queensland Health should actively engage the Māori community. It was felt that Queensland Health should listen to community issues and concerns on a regular basis and should recognise and respond to Māori community needs. Related to this was the need community capacity building to promote Māori people to take action in their own community and work alongside Queensland Health.

Three health service providers had experienced communication barriers with Māori clients, while six said they had not experienced communication barriers.

5.6.2 Income, employment and education

Poverty and low social status are risk factors to health and wellbeing while supportive economic and social conditions, income, wealth, employment and education are protective factors.^{29,36}

The Queensland Māori population had a different educational profile to that of the total Queensland population in the 2006 Census. While 18 per cent of the total Queensland population had a bachelor or post-graduate level of education, only 3 per cent of the Māori population had the same level of education.



Level of Education	Māori ancestry	Total Qld population
Postgraduate Degree Level	0%	3%
Graduate Diploma and Graduate Certificate Level	0%	2%
Bachelor Degree Level	3%	13%
Advanced Diploma and Diploma Level	5%	9%
Certificate Level	18%	24%
Level of education inadequately described	2%	2%
Level of education not stated	7%	15%

Figure 3 Level of education by Māori ancestry and Qld population, 2006

In a study on Māori living in Australia, the majority of respondent indicated they moved to Australia seeking better employment and income. Of those who answered the question, 74 per cent had ‘much better’ employment since migrating, 12.9 per cent ‘a bit better’, 7 per cent ‘remained the same’ 2.2 per cent ‘a bit worse’ and 1.1 per cent ‘much worse’.⁵

The Queensland Māori population also had a different occupational profile to that of the total Queensland population in the 2006 Census, with a higher proportion represented in the labouring and production workers occupational groups, and fewer represented in the managers and professional groups.

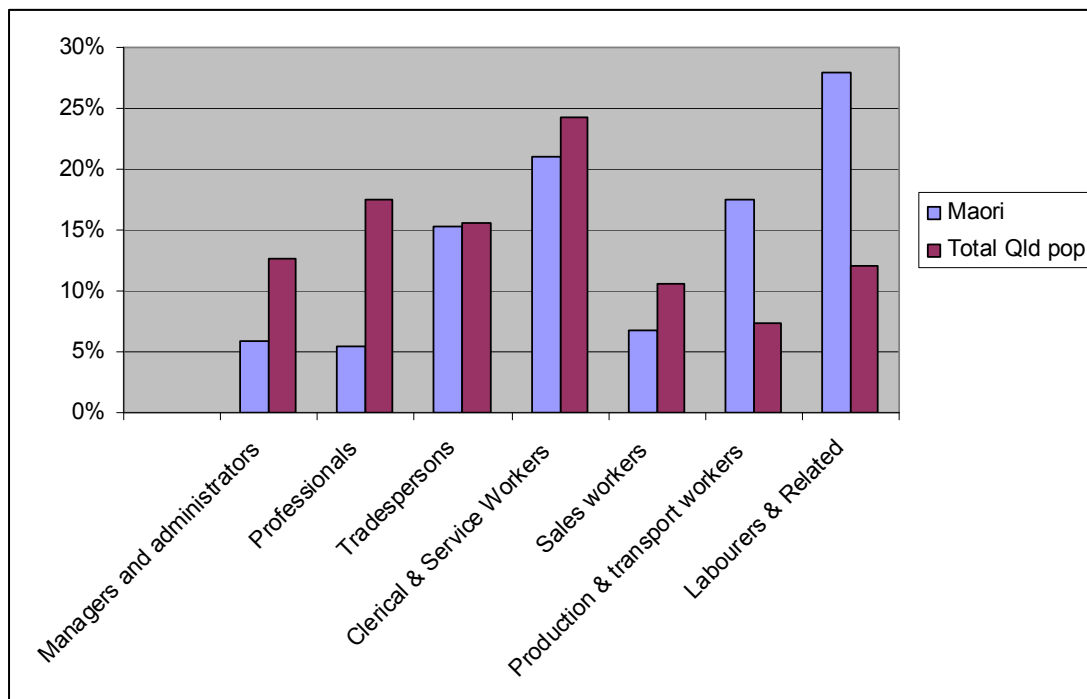


Figure 4 Occupation by Māori ancestry and Qld population, 2006

Note: 'inadequately described, not stated and not applicable' categories excluded

At the 2006 Census, the Māori population had higher representation in the lower weekly income groups and lower representation in the higher income groups compared to the total population.

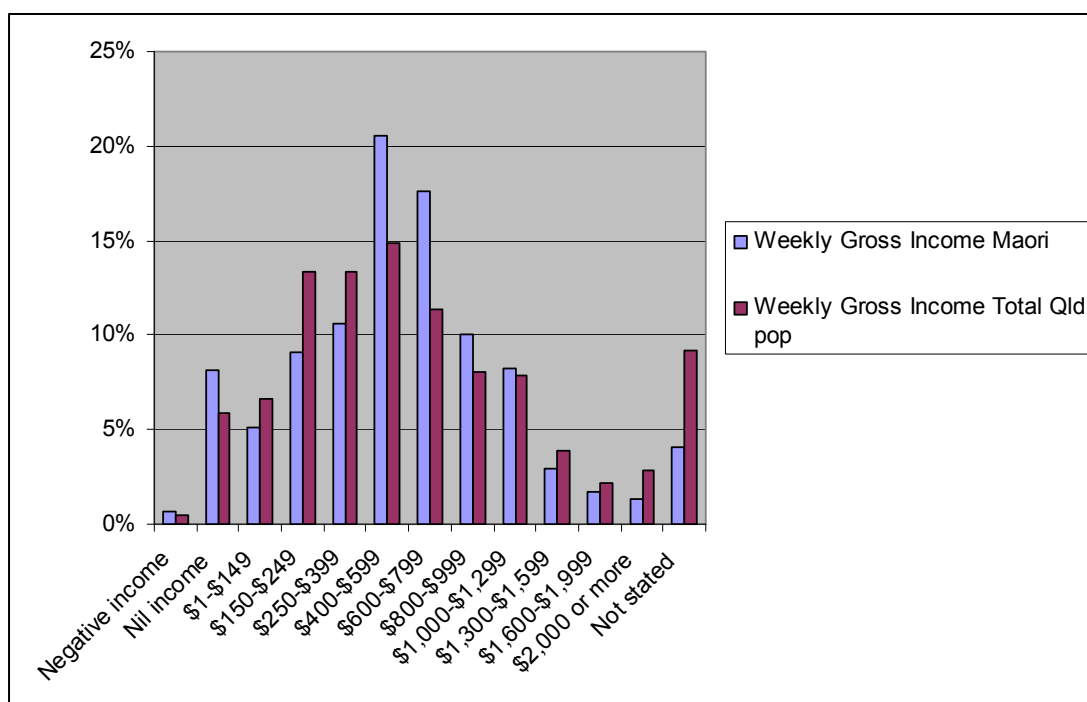


Figure 5 Weekly gross income by Māori ancestry and total Qld population, 2006

The community focus groups did not feature economic barriers to health care, nor did people discuss issues related to poverty and financial stress. The Census data however, does indicate a population that has lower educational qualifications, an over-representation in labouring and production occupations and over-representation in the low income groups. This indicates a community with relatively less access to financial resources than the total Queensland population.

5.6.3 Family and neighbourhood

Family, and in particular, marital status is an important protective factor. Married people tend to be healthier and live longer than those who are unmarried. Research also shows that children and young people in lone-parent households have poor health status than those in two-parent households. This appears to be due to material disadvantage, rather than the family structure itself.²⁹

Māori households in Queensland had a slightly different profile to that of the total Queensland population in the 2006 Census. There were fewer people living in a registered marriage spousal relationship; more living in a partner de facto relationship; more living with children; slightly more lone parents; and fewer lone persons.

Table 8 Usual residents by relationship in household by Māori ancestry and total Queensland population, 2006

Usual Residents by Relationship in Household	Māori ancestry	Total Queensland Residents
Husband, Wife in a registered marriage	24%	35%
Partner in de facto marriage, opposite-sex couple	16%	7%
Lone parent	6%	4%
Natural, or adopted child under 15	23%	18%
Step child under 15	2%	1%
Otherwise related child under 15	1%	0%
Natural or adopted dependent student	3%	4%
Student step child	1%	0%
Non-dependent natural, or adopted child	4%	5%
Non-dependent step child	1%	0%
Brother/sister	2%	1%
Father/mother	1%	0%
Nephew/niece	1%	0%
Unrelated individual living in family household	2%	1%
Group household member	4%	3%
Lone person	5%	8%
Visitor (from within Australia)	3%	3%
Not applicable	2%	7%

Māori culture and health models have a strong emphasis on *whanau*, or family. A Gold Coast project to identify Māori health issues found a loss of family support networks, loss of access to elder support, knowledge and language and parenting issues.³⁰

The importance of family was emphasised in the community focus groups, with the need for family support and family involvement in health care highlighted. For example:

"In one family the mother had a stroke and they had no break at all. If we were at home, the whole family would help to look after the old lady. We told them to go away [and have a break]. As a Māori I know how to look after her. Forget about respite – you can't get what you need". - Māori female

There is increasing evidence that neighbourhoods affect health, particularly children's health.^{28,46} As a result of lower socioeconomic resources children from ethnic minority populations in particular have limited access to neighbourhoods with opportunities such as good schools and after-school programs, safe streets and playgrounds and positive role models. After taking into account individual-level factors, disadvantaged neighbourhoods are associated with detrimental health outcomes, negative health behaviour, developmental delays, low birth weight, teen parenthood and academic failure for young people and higher rates of mortality, depression, cancer and cardiovascular disease for whole populations.^{46,47}

In the community and leader focus groups, the neighbourhood environment was not specifically discussed.

Two focus groups discussed the need to reduce the physical barriers to access by providing community transport services to enable people to access hospitals and other services. Australian literature linking social exclusion and transport disadvantage is growing and focussed on social excluded communities living in the

outer urban fringes of cities and in regional and rural areas.⁴⁸⁻⁵¹ This is therefore a pertinent issue for the Māori population, which is concentrated in the outer urban fringes.

A recent Melbourne study found that socially excluded populations living in the outer fringes of Melbourne were more likely to be 'forced car ownership' users rather than 'zero car ownership'. There was evidence of financial stress associated with owning and running cars in 'forced car ownership' households. These households also operated smaller and older cars than other households. There is no Australian data on transport disadvantage in the Māori population.

5.6.4 Housing

Housing conditions are recognised as a factor affecting health and wellbeing.²⁹ Poor housing and ill health are linked.⁵² In particular, there is an increasing body of evidence associating housing quality with infectious diseases, chronic illnesses, injuries, poor nutrition and mental disorders.⁵³ There is also a relationship between health and whether a family lives in owner-occupied housing, privately rented housing or public housing.⁵⁴

Data on housing type of the Māori population in Queensland are not available.

In New Zealand, some of the features of Māori housing issues include⁵⁵:

- In 2006, about 12 per cent of the Māori population resided in Housing New Zealand Corporation (Corporation) housing. This compared to 2 per cent of the European population, and 26 per cent of the Pacific Islander population
- 13 per cent of all Māori households were overcrowded
- In 2007 29 per cent of Māori households spent more than 30 per cent of their income on housing
- In 2009, Māori accounted for 27 per cent of all Accommodation Supplement (AS) recipients. When compared with European, and Pacific Islander AS recipients, the proportion of Māori AS recipients who owned their home was smallest, and the proportion of single parents was highest. The number of people receiving the AS significantly increased between 2008 and 2009, increasing the most for Māori (by 15 per cent) when compared with European (by 12 per cent), or Pacific Islander people (by 11 per cent).
- The 2009 economic recession in New Zealand saw a higher proportion of Māori (and Pacific Islander people) become unemployed than Europeans. The Māori unemployment rate rose by 2.3 per cent to 11.2 per cent between the March 2008 and 2009 quarter, which was more than twice the rise in the European rate, but less than the rise in the Pacific Islander rate.

Housing issues did not arise in the community focus groups.

5.7 Knowledge, attitudes and beliefs

5.7.1 Health literacy

The National Preventative Health Taskforce recognises that knowledge, attitudes and beliefs are important factors in the health of individuals and populations.²⁸ Health literacy refers to the knowledge and skills required to understand and use information relating to health issues such as drugs and alcohol, disease prevention and treatment, safety and accident prevention, first aid, emergencies, and staying healthy². Health literacy is particularly important to understanding the health of immigrant populations, as education and health literacy have an integral relationship with the overall health of a society's population, as well as inequalities within the population.²

The 2006 Adult Literacy and Life Skills Survey (ALLS) contained 191 health-related items across four domains (health promotion, health protection, disease prevention and systems navigation). For each of these domains, proficiency was measured on a scale. Scores were grouped into five skill levels with level one the lowest and level five the highest.

The ALLS found particular factors influenced people's health literacy. These included education, occupation, parental characteristics, and English as a second language. Only 26 per cent of those born in a mainly non-English speaking country achieved Level three or above.

Focus groups with Māori community members and leaders found poor health literacy among the Māori community in Queensland. Both community focus groups discussed people's low knowledge of health services and health issues and linked this problem largely with the lack of culturally tailored health promotion in Queensland.

"There used to be a directory with all the cultural groups. I don't know if our people would look in something like that. These things need to be easily available." – Māori female

"Everything that's up there relates to lack of communication, lack of knowledge. For every topic that is the main problem: lack of education and knowledge." – Māori male

The findings of the focus groups are consistent with the findings of 2006 ALLS.

5.7.2 Help seeking behaviour

Attitudes and belief systems affect health and health choices. Cultural values and world views also influence health and health choices.^{56,57}

Internationally it is observed that collectivist cultures such as Māori and Pacific Islander cultures have a high reliance on their own social group for care and support, and may delay their use of Western medicine, especially preventive health services.⁵⁷ Minor health issues are often expected to be cared for within the family or social unit and Western medicine only if emergency care is required.

There were some participants in all of the focus groups who were evidently very active within the Māori community providing unpaid work, support and assistance in a voluntary capacity by doing hospital visits, prison visits, providing food at hospitals, taking people to appointments and caring for sick and convalescing people. These participants described the importance of this support within the community and also the consequences when such support is not available, including suicide.

The informal community helpers also described the personal burden and financial costs of being constantly called upon to provide support:

"I always get rung, 'so and so is in hospital'. Twice we've been to Nambour – that's a three hour drive. We get there and he's sitting in his bed like a lost child. His family are all working. We can't go to everybody. We get home, there's somebody in the PA or somebody in RBWH. You get burnt out." - Māori female

A high level of reliance on people within the Māori community for support, including health support, is evident from the focus groups.

There is no data on Māori access to health services in Australia. In New Zealand there is growing evidence that there is inequity of access to both primary and secondary health services between Māori and non-Māori populations.⁵⁸

The leader and community focus groups also discussed the community's apparent cultural reluctance to seek help and people's low comfort levels in dealing with health professionals:

"The most prevalent disease that is suffered by people of the Pacific, including Māori is obesity. In this room are two registered nurses and at Gold Coast is a Māori doctor. Why can't Queensland Health get together those people who are skilled to run workshops or community education. ..You know we are basically shy...we go to our doctors and they say 'you put on weight' we say 'can you help me?' They say 'you know what to do'...we want people we can relate to." Māori female

People discussed their cultural reservedness to communicate openly and people's shyness, embarrassment and fear to speak openly to health providers.

This finding is consistent with overseas experiences indicating that minority ethnic communities have poor access to the health system for a range of complex reasons including cultural and language barriers^{57,59,60}.

This is also consistent with a pilot project in 2009-10 in Logan involving the Māori population. The *Logan Health and Wellbeing Natural Helper Project* was developed in response to the significant barriers for CALD communities in accessing health services. The 'navigator' role specifically aimed to reduce barriers to access by assisting individuals and groups to navigate the health system. Process evaluation confirmed the key strength of the role as the ability to facilitate health service access for Pacific Islander and other ethnic communities.⁶¹ An impact evaluation will be conducted in 2010-11.

The health service providers interviewed had not observed any issues of significance with Māori people's help seeking behaviour.

6 Health outcomes

This chapter presents a summary of overseas data on Māori health outcomes. There are no Queensland or Australian data available on the health outcomes of the Māori population living in Australia.

6.1 Cancer

Cancer is not just one disease, but a diverse group of diseases. Although there are many types of cancer, they all start because abnormal cells grow out of control. Cancers were the leading cause of the burden of disease and injury in Queensland in 2006, causing 18.9 per cent of the total burden of premature death and disability. Lung, colorectal, breast and prostate cancers caused half the cancer burden (49.2 per cent)³⁵.

In 2002/03 in New Zealand, Māori adults had slightly higher registration rates than non-Māori for all cancers and there was no significant difference between the self-reported prevalence of cancer between Māori and non-Māori. However, Māori people's all-cancer mortality rates were twice those of non-Māori people. The leading causes of cancer death were lung, breast, colorectal, stomach and cervical.⁶²

Table 9 Māori people's rate ratios and mortality rates for cancers in New Zealand

Cancer	Sex	Māori rate ratio	Māori mortality
Breast	Female	1.3 (CI 1.2-1.4)	2.0 (CI 1.8-2.4)
Cervical	Female	1.9 (CI 1.6-2.4)	4.1 (CI 2.9-5.8)
Lung	Female	4.6 (CI 4.1-5.2)	5.0 (CI 4.5-5.7)
	Male	3.2 (CI 2.8-3.6)	2.9 (CI 2.6-3.3)
Colo-rectal	Female	0.6 (CI 0.5-0.7)	0.9 (CI 0.7-1.2)
	Male	0.7 (CI 0.6-0.9)	1.1 (CI 0.9-1.4)
Liver	Male	5.5 (CI 4.3-7.2)	6.3 (CI 4.8-8.2)
Prostate	Male	0.8 (CI 0.7-0.9)	1.9 (CI 1.6-2.3)
Stomach	Male	2.7 (CI 2.1-3.4)	2.8 (CI 2.2-3.6)

For many cancers the rate ratio for Māori people compared with non-Māori people is higher for mortality rates than for registration rates. This suggests that Māori people with cancer may be more likely to die from their cancer than non-Māori people in New Zealand.⁶²

A number of risk factors have been identified for these patterns in cancer rate and mortality in New Zealand⁶³:

- Māori people are more than twice as likely to be smokers than European New Zealanders
- Māori people are 50 per cent more likely to be obese and almost three times as likely to be obese smokers
- More Māori are positive for the Hepatitis B antigen than non-Māori. Six per cent of European New Zealanders with hepatocellular carcinoma were Hepatitis B antigen positive, compared with 76.7 per cent of Māori patients. Hepatitis infection accounts for most of the increased incidence of hepatocellular carcinoma in ethnic communities.

6.2 Cardiovascular disease

Cardiovascular health refers to any disease of the heart and blood vessels and is the leading cause of death in Australia. Cardiovascular disease (CVD) is also a major source of burden of disease in Queensland, where, in 2006, it accounted for 16.3 per cent of the total burden of disease. It is important to note that coronary heart disease accounts for a substantial proportion of morbidity and mortality associated with CVD. CVD, diabetes and chronic kidney disease account for about a quarter of the burden of disease in Australia.

Coronary heart disease (heart attack and angina)

In New Zealand, Māori men (1.22) and women (2.13) had a higher rate ratio for diagnosed heart attack and angina than the total population.²³

Stroke

In New Zealand there were no significant differences in the diagnosis rate of stroke between Māori people and total population.²³

6.3 Diabetes

Diabetes mellitus (diabetes) is a chronic metabolic condition in which the body produces inadequate insulin or is unable to properly use the insulin it produces, resulting in improper control of blood glucose.

Diabetes was the sixth leading broad cause of premature death and disability in Queensland in 2006, and was responsible for 5.7 per cent of the total burden of disease and injury. Type 2 diabetes caused 92 per cent of the total diabetes burden. Type 2 diabetes was the third largest specific cause of burden of disease (5.2 per cent), after coronary heart disease, and anxiety and depression. Diabetes is one of the few conditions for which death rates and prevalence are increasing.

In New Zealand, Māori men (1.74) and women (1.61) had a higher rate ratio for diagnosed diabetes than the whole population.²³

6.4 Mental health

Mental health is the ability for people to interact with one another and the environment, in ways that promote subjective wellbeing, optimal development and the use of cognitive, affective and relational abilities. An individual's mental health is derived from their genetic makeup and general life circumstances, including their social, economic and environmental situation. Mental health problems and mental disorders refer to the spectrum of cognitive, emotional and behavioural disorders that interfere with the lives and productivity of people.⁶⁴

Queensland data relating to mental health and suicide by ancestry or ethnicity are not available.

The New Zealand Mental Health Survey reports ethnic groups classified as Māori, Pacific Islander and other. The prevalence of disorder in any period was found to be higher for Māori and Pacific Islander people than for the 'other' composite ethnic group. For disorder in the past 12 months, prevalence was 29.5 per cent for Māori, 24.4 per cent for Pacific Islander people and 19.3 per cent for others, which indicates that Māori and Pacific Islander people have a greater burden due to mental health problems. It was concluded that much of this burden appears to be due to the youthfulness of the Māori and Pacific Islander populations, and their relative socioeconomic disadvantage.⁶⁵

Māori people in New Zealand have a significantly higher rate of suicide and attempted suicide.⁴² Māori suicide rates (16.1 per 100,000 Māori population) in 2007 were significantly higher than non-Māori suicide rates (9.9 per 100,000 population).⁶⁶

6.5 Respiratory disease

Asthma is a chronic disease characterised by recurrent attacks of breathlessness and wheezing, which vary in severity and frequency from person to person. While the cause of asthma is unknown, there are factors that may increase the risk of developing the condition, including environmental exposures such as tobacco smoke, specific allergens, lack of physical activity and stressful life events.²⁷

In New Zealand, adjusted for age, Māori boys (1.3) and girls (1.46) had a significantly higher rate of taking medication for asthma than boys and girls in the total population.²³ Similarly, after adjusting for age, Māori women were 40 per cent more likely to be taking medication for asthma than women in the total population.

Chronic obstructive pulmonary disease

Chronic obstructive pulmonary disease (COPD) is a specific health condition which affects the lung. It is characterised by a persistent blockage of airflow from the lungs and can be life threatening. The condition cannot be reversed. The main form of COPD is emphysema. The main cause of COPD is tobacco smoking.

In New Zealand, after adjusting for age, Māori men aged 45 years or over had twice (2.28) the prevalence of COPD than all men aged 45 years and over. Māori women aged 45 years and over also had an increased prevalence (1.74) of COPD.

6.6 External causes

Injury resulting from an external cause

In 2003, in Queensland, intentional and unintentional injury was the cause of 7.9 per cent of the total burden of disease; 10.6 per cent for males and 4.7 per cent for females. One third of the burden due to injury is due to seven risk factors. Alcohol is by far the biggest contributor. Injury prevention was designated a national priority in 1986 in recognition of the national burden of injury, its high importance to the community, the potential for gain through preventing or lessening the impact and because the extent of injury can be measured through a number of relevant indicators.

While deaths from injury have declined, rates of hospitalisation for many injuries have increased over the past decade, in particular, fire, burns and scald injury in young children, and fall related injuries in older people.

There is no data on external cause injuries for the Māori population in Queensland.

6.7 Musculoskeletal disease

Musculoskeletal conditions include arthritis and other joint problems and disorders of the bones, muscles and their attachments to each other. Arthritis and musculoskeletal conditions are the world's most common cause of severe long term pain and physical disability.

In New Zealand, after adjusting for age, Māori men had an increased prevalence of arthritis (1.27) compared to men in the total population and there was no significant difference among Māori women and the total population²³. There were no significant differences by ethnic groups for osteoporosis prevalence.

6.8 Communicable disease

In Queensland, infectious and parasitic diseases account for a low level of the burden of disease. This is due to current levels of investment in communicable disease surveillance and control.

Prevention (including vaccination), screening, treatment, control and monitoring of a range of communicable diseases are undertaken in Queensland. Communicable diseases include: mumps; measles; rubella; hepatitis; pertussis; tetanus; influenza; sexually transmissible diseases; food borne illnesses; vector (such as mosquito) borne diseases; tuberculosis; and diseases transmitted by animals (zoonotic diseases).

Due to data collection methodology and the small numbers involved, it is not possible to report communicable diseases by country of birth or ethnicity.

7 The way forward to improve Māori health

The health experiences and needs of people in the Māori community in Queensland overlap other Pacific Islander communities and some are also unique to the Māori community.

A major limitation of this document is the unavailability of Australian or Queensland quantitative data on Māori health. The reliance on New Zealand data is not ideal as migrants tend to be younger and healthier and therefore New Zealand data may not be representative of Māori health in Australia.

Improved cultural competency in research, data collection and analysis is required to enable a robust and complete analysis of the health of Queenslanders from a Māori background, which is a large and growing community.

Data in New Zealand indicate a higher mortality rate for cancer, and higher hospitalisation rates for cardiovascular disease, diabetes, mental illness, and COPD. Supporting this for the Māori population in Queensland, focus groups identified diabetes, kidney disease, coronary heart disease, mental health, suicide, obesity and hazardous alcohol consumption as the health priorities in the Māori community in Queensland. Māori people experience many barriers accessing the health system and there was high reliance on community people for support, including health support. The main issues raised in the focus groups were lack of Māori health workers, Māori or Pacific Islander services, the use of different health models, the lack of cultural competency in health services and the lack of culturally tailored health promotion were the main issues discussed. There were also indications of social exclusion and social isolation and there are also likely to be economic barriers as the Māori community in Queensland receives lower weekly income, is less educated and is overrepresented in lower paying occupations, compared to the whole Queensland population.

Similar findings were made across other Pacific Islander communities in Queensland, highlighting what focus group participants themselves stated – Pacific Islander people have more similarities than differences regarding health status and belief systems. Therefore, the strategies to improve Pacific Islander and Māori health in Queensland have been compiled into a separate document, *Queensland Health response to the Pacific Islander and Māori health needs assessment*. Separate documents have been prepared for other Pacific Islander communities in Queensland.

Attachment 1 - Data and methodology

All data sources are cited. For further information contact the program manager, Queensland Health Multicultural Services.

Unless otherwise indicated all data refer to the total population (0-85+ years).

Australian Bureau of Statistics (ABS) data are used with permission from the ABS. Copyright in ABS data vests with the Commonwealth of Australia.

Hospital separation data were derived from the Queensland Hospital Admitted Patient Data Collection, including private and public hospitals. All disease specific hospital separations were derived using the principal diagnosis of inpatient episodes of care. All separations were coded using the International Classification of Diseases version 10 Clinical Modification (ICD-10-CM) using standard code sets.⁶⁷

Death, cancer incidence and hospitalisation rates for all diseases and conditions are reported as age standardised rates. Standardisation minimises the differences in age composition among populations and facilitates comparisons among populations. Queensland total population (person) data is directly standardised to the 2001 Queensland Census data. Country of birth population data is indirectly standardised to the 2006 Queensland Census data.

With the method of direct standardisation, the proportional age distribution of the standard population is applied to the rates to obtain age standardised rates, which minimise or remove the distorting effects of age. Indirect standardisation uses the age distribution of the standard population to obtain expected counts, total number of expected counts and subsequently standardised ratios (standardised mortality ratio or standardised separation ratio etc). The end product of direct standardisation is age-adjusted rates, while the end products of indirect standardisation are expected counts and standardised ratios.

Survey data are reported as percentage and 95 per cent confidence intervals. Unless otherwise noted, all survey data refer to self report and are not standardised. All sources are cited and information about specific surveys including sample size can be obtained from the custodian.

Attachment 2 – Focus group prompting points (community members)

1. Arrival and refreshments (30 mins)

2. Facilitators introduce themselves and explain the process (10 mins)

Traditional welcome and Aboriginal and Torres Strait Islander acknowledgement

Today we are going to talk about the health needs of our community. Queensland Health, who we both work for, is interested in finding out about the health needs of our community and most importantly, what you think are the best ways to address them. Firstly, I want to check whether you prefer to speak in [**] or in English, or both.

We want this to be like an informal chat, so there are no right or wrong answers. All details you provide will be completely confidential; we do not use names or any other personal details.

Does anyone have any questions before we start?

3. Introductions (15 mins)

Let's all introduce ourselves. Could you please introduce yourself and tell us what you think the number one health problem in our community is. Just be brief – no more than one minute per person.

4. Health priorities from community perspective (20 mins)

What are the health conditions common in our community?

- what about younger people?
- what about older people?
- what about mental or emotional health? (if only physical health is mentioned)

What are the issues with the health system common in our community?

- what about health promotion campaigns?
- what about community health services?
- what about hospital services?

5. Present literature review (15 mins)

Distribute the hand-out on the literature review findings and go through it

What do you think about these research findings? Does it apply to the community here?

6. Present leaders' responses (15 mins)

Distribute the hand-out on the health priorities identified by the community leaders

What do you think about what your leaders said? Do you agree?

7. Strategies to address health needs (30 mins)

Let's now talk about what needs to be done about these health needs in the community.

In your opinion/view, what do you think Queensland Health should do to address the health conditions common in our community?

- what could be done to prevent some of these health problems in the community?

- what could be done to help people manage their health problems better?

In your opinion/view, what do you think Queensland Health should do to address the common problems people have with the health system?

- what could be done to improve access to services by people from our community?
- what should Queensland Health do to improve the experiences people have when they go to a community health centre or a hospital?

What should Queensland Health do to ensure that health information reaches our community members? How do people receive information? What is the best way to reach them?

8. Summing up (15 mins)

We have discussed a lot of health needs today. To finish up, can we make a summary that we can all agree on?

If you had an opportunity to present a list of the most important health priorities that Queensland Health should work on with our community, what would be on the list? Please put the list in order of importance.

- have we missed anything?
- is there anything you want to add to the list?

9. Finish

Thank for your time today. If you are interested in knowing about the outcome of our project, please leave us your contact details. We plan to hold a forum in November to share our findings with the communities involved. If you leave your contact details, you will receive an invitation.

Attachment 3 – Focus group prompting points (community leaders)

1. Arrival and refreshments (30 mins)

2. Facilitators introduce themselves and explain the project and workshop process (15 mins)

Traditional opening and Aboriginal and Torres Strait Islander acknowledgement

Introductions (name and community)

Cover following topics:

- Purpose and scope of health needs assessment project
- Which communities involved and why
- Methodology
- Forum

Workshop process:

- Going to do small group work in our community groups
- Going to have big group discussions

Does anyone have any questions before we start?

3. Small group work: health priorities identification (15 mins)

Could you please move into small groups so that you are with people who are also from your community?
Please answer the following question:

Q: What are the health conditions common in your community?

- what about younger people?
- what about older people?
- what about mental or emotional health? (if only physical health is mentioned)

Please choose one person to present back to the big group.

Q: What are the issues with the health system common in your community?

- what about access to services?
- what about experiences people have at health services?
- what about health promotion campaigns?
- what about community health services?
- what about hospital services?

4. Big group: presentation of health needs (25 mins)(5 mins per presentation)

5. Small group work: compare with research findings and develop summary list (15 mins)

Could you please move back into your small community groups? We will now present you with a list of health priorities for your community that has come from research. Please note, that some of this research has come from overseas and some from Australia. For some communities more information has come from overseas than for other communities.

Please answer the following questions:

What do you think about this research? Does it apply to your community here?

Please make a list of the most important health needs and priorities in your community in Queensland that you think Queensland Health should be working on. It should be a list that you can all agree on. Please put the list in order of importance.

6. Small group work: Strategies to address health needs (15 mins)

Stay in your small groups. Please now answer the following questions:

Please advise us what Queensland Health could do to:

- **Prevent** some of these health problems in your community.
- Ensure that **health information reaches** your community members? How do people receive information? **What is the best way to reach them?**
- **Improve access** to services by people from your community.
- Help people **manage** their health problems better.
- Improve the **experiences** people have when they use a health service.

7. Presentation (40 mins)(8 mins per presentation)

Please present your small group work. Please tell us:

- whether your list was different from the research findings and why you think this is the case
- what your agreed list of priorities is
- what the major strategies are to address these health needs

8. Finish

We have discussed a lot of health needs today. Please be assured that your contribution will be used in our work. Thank for your time today. If you are interested in knowing about the outcome of our project, please leave us your contact details. We plan to hold a forum in November this year to share our findings with the communities involved. If you leave your contact details, you will receive an invitation.

Traditional close

Attachment 4 – Summary of focus group results

Three focus groups involving 26 people were held in 2009– five Māori leaders participated in the leaders' focus group in Brisbane, 13 community members attended a focus group at Loganlea and eight at Deception Bay.

Across all of the focus groups, the following health conditions were identified as being prevalent in the Māori community in Queensland:

Identified by all three focus groups	Identified by two focus groups	Identified by one focus group
Diabetes (type 2) Kidney disease Mental illness and suicide Obesity Cardiovascular disease Cancer Alcohol and drug abuse	Poor nutrition Social and personal wellbeing (lack of belonging, lack of support, isolation) Eczema Gout Arthritis	Asthma Domestic violence Head and spinal injuries from accidents Sleep apnoea Disability Sexual health

The focus groups were also asked to comment on the Queensland health system and the interaction between Māori people and the health system. Many barriers and problems were identified:

Identified by all three focus groups	Identified by two focus groups	Identified by one focus group
Lack of Māori health workers Different health models Lack of cultural competency in services Lack of culturally tailored health promotion	Lack of dedicated programs and services Satisfaction with health services Low knowledge of health issues and services Communication barriers	Lack of community engagement Reliance on unpaid work in the community for support Cultural reluctance to seek help

Finally, focus group participants were asked to make recommendations or suggest strategies for remedying the problems identified:

Identified by all three focus groups	Identified by two focus groups	Identified by one focus group
Dedicated Māori or Pacific health workers Dedicated Māori or Pacific programs and services Increase cultural competency in health services Culturally tailored health promotion	Reduce physical barriers to access (transportation) Upskilling, training and scholarships Community engagement	Increase knowledge of health services and system Community capacity building Māori health research and data Dedicated Māori and Pacific Islander health centre

Attachment 5 – Survey of health service providers

A potential sample of health services was developed. Health services in locations where the Māori population reside comprised the sample. Participants were randomly selected and contacted for a telephone interview. However, as most potential respondents were either not available or not able to participate due to time constraints, additional participants had to be selected from the sample or from referrals from the services contacted who could not participate. In total, 11 participants completed the questionnaire.

Health service providers were asked to comment on whether barriers are experienced by Māori clients in their service; whether they had experienced any difficulties or challenges working with Māori clients; to rate the frequency they had observed particular health conditions among their Māori clients (health conditions identified from the literature review); and to suggest the most important health priorities and strategies to improve Māori health.

The following summary table presents the results of the questionnaire:

Question	response	
	Yes	No
Do you see Māori patients in your service?	8	3
In your observation, do Māori patients experience:	0	9
- language barriers?		
-problems of literacy	2	7
-non-attendance or drop out of using service?	5	4
Do you experience any difficulties or challenges in:	3	6
-communication?		
-cultural understanding?	5	4
-developing rapport or engagement?	5	4

Please rate the frequency you have observed the following issues:	often	some-times	never
Diabetes	4	2	2
Renal disease	8	2	2
Cardio vascular disease	10	1	1
Cancer	0	6	6
Asthma	3	6	3
Mental illness	1	2	9
Drug and alcohol abuse	2	9	1

Major health priorities and problems identified	Frequency
Diabetes	1
Transport barriers	1
Non eligibility health care card	1
No support systems	1
Psychosis and depression	1
Trauma	1
Lack of knowledge of Māori communities in health services	1
Need for training in health services	1

Strategies identified by health service providers to address health priorities	Frequency
Pacific Islander workers	1
Diabetes health promotion	1
Working slowly and build trust	1
Access Qld Transcultural Mental Health Centre for support	1
Community based programs and advocacy	1

Attachment 6 – Standards for Statistics on Cultural and Language Diversity

The Australian Bureau of Statistics Statistical Concepts Library provides authoritative information about the concepts, sources, methods and classifications underlying Australian official statistics. The *Standards for Statistics on Cultural and Language Diversity*⁶⁸ identifies three ‘minimum core set’ items that measure cultural and linguistic diversity (CALD) and an additional eight standard indicators.

The **Minimum** Core Set of Cultural and Language Indicators consists of the following four indicators:

- Country of Birth of Person
- Main Language Other Than English Spoken at Home
- Proficiency in Spoken English
- Indigenous Status

The **Standard** Set of Cultural and Language Indicators is as follows:

- Country of Birth of Person
- Main Language Other Than English Spoken at Home
- Proficiency in Spoken English
- Indigenous Status
- Ancestry
- Country of Birth of Father
- Country of Birth of Mother
- First Language Spoken
- Languages Spoken at Home
- Main Language Spoken at Home
- Religious Affiliation
- Year of Arrival in Australia

References

1. Australian Bureau of Statistics. *National Health Survey 2007-08: summary of results*. Australian Bureau of Statistics,; Canberra; 2009. [http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/9FD6625F3294CA36CA25761C0019DDC5/\\$File/43640_2007-2008%20\(reissue\).pdf](http://www.ausstats.abs.gov.au/ausstats/subscriber.nsf/o/9FD6625F3294CA36CA25761C0019DDC5/$File/43640_2007-2008%20(reissue).pdf).
2. Australian Bureau of Statistics. *Health literacy, Australia*. Australian Bureau of Statistics: Canberra; 2008. [http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/o/73ED158C6B14BB5ECA2574720011AB83/\\$File/42330_2006.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/o/73ED158C6B14BB5ECA2574720011AB83/$File/42330_2006.pdf).
3. Australian Bureau of Statistics. *Australian Social Trends-Data cube*. Australian Bureau of Statistics: Canberra; 2007.
4. Australian Bureau of Statistics. *Census of Population and Housing 2006*. Australian Bureau of Statistics: Canberra; 2008.
5. Hamer P. *Maori in Australia Nga Maori Te Ao Moemoea*. Te Puni Kokiri and Griffith University: Brisbane; 2007. <http://www.tpk.govt.nz/en/in-print/our-publications/publications/maori-in-australia/download/tpk-maorinaustralia2007-en.pdf>.
6. Australian Bureau of Statistics. *New Zealanders in Australia*. Australian Bureau of Statistics: Canberra; 2010. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/4102.oMain+Features5oSep+2010>.
7. Office of Economic and Statistical Research. Queensland population update number 15. *Recent population change and trends in Queensland*; 2010:1-11.
8. Department of Immigration and Citizenship. *The people of Queensland - statistics from the 2006 Census*. Department of Immigration and Citizenship,; 2008. <http://www.multicultural.qld.gov.au/services-resources/documents/People-of-QLD-Publication-Vol-1.pdf>.
9. Department of the Prime Minister and Cabinet. *A Stronger, Fairer Australia - National Statement on Social Inclusion*. Department of the Prime Minister and Cabinet: Canberra; 2009. <http://www.socialinclusion.gov.au/Resources/Documents/ReportAStrongerFairerAustralia.pdf>.
10. Haski-Leventhal DD. *Addressing social disadvantage through volunteering*. Centre for Social Impact, University of New South Wales: Sydney; 2009. <http://www.socialinclusion.gov.au/Documents/AddressingSocialDisadvantagethroughVolunteering.pdf>.
11. Rochford T. Whare Tapa Wha: A Maori model of a unified theory of health. *The Journal of Primary Prevention* 2004;25:41-57.
12. Capstick S, Norris P, Sopoaga F, Tobata W. Relationships between health and culture in Polynesia - a review. *Social science and medicine* 2009;68:1341-1348.
13. Ministry of Health. Maori Health Models. <http://www.maorihealth.govt.nz/moh.nsf/o/1C22C439DDC5F5CACC2571BD00682750>. Accessed 22 February 2010, 2010.
14. Lyford S, Cook P. The Whanaungatanga model of care. *Nursing Praxis in New Zealand* 2005;21:26-36.
15. Barton P, Wilson D. Te Kapunga Putohe (the restless hands): a Maori centred nursing practice model. *Nursing Praxis in New Zealand* 2008;24:6-15.
16. Buetow S. New Zealand Maori quality improvement in health care: lessons from an ideal type. *International Journal for Quality in Health Care* 2004;16:417-422.
17. Durie M. *Measuring Maori Wellbeing*. Massey University: Wellington; 2006.
18. Durie M. Understanding health and illness: research at the interface between science and indigenous knowledge. *International Journal of Epidemiology* 2004;33:1138-1143.
19. Earp R. The Treaty of Waitangi & Māori Health. *National Forum on Indigenous Health and the Treaty Debate*. University of New South Wales, Sydney 2004.
20. Durie M. *Whaiaora - Maori health development*. Auckland: Oxford University Press; 1994.
21. Pere RTR. Nga Kawai Rangatira O Te Wheke Kamaatu (The eight noble tentacles of the great octopus of wisdom). *10th Australasian Conference on Child Abuse and Neglect* Wellington, New Zealand: New Zealand Family Violence Clearinghouse; 2006.
22. Berry JW. Immigration, Acculturation, and Adaptation. *Applied Psychology: an international review* 1997;46:5-68.
23. Ministry of Health. *A Portrait of Health - Key results of the 2006/07 New Zealand Health Survey*. Ministry of Health: Wellington; 2008. <http://www.moh.govt.nz/moh.nsf/indexmh/portrait-of-health>.

24. Ministry of Social Development. *2009 The Social Report* Ministry of Social Development: Wellington; 2009. <http://www.socialreport.msd.govt.nz/health/life-expectancy.html>.
25. Ministry of Health. Maori health - health status indicators - infant health <http://www.maorihealth.govt.nz/moh.nsf/indexma/infant-health>. Accessed 4 May 2010, 2010.
26. Ministry of Health. Maori health - health system indicators - avoidable mortality and hospitalisation <http://www.maorihealth.govt.nz/moh.nsf/indexma/avoidable-mortality-and-hospitalisation>. Accessed 5 May 2010, 2010.
27. Queensland Health. *The Health of Queenslanders 2006. Report of the Chief Health Officer*, Queensland Health: Brisbane; 2006. http://www.health.qld.gov.au/cho_report_2006/documents/32048.pdf.
28. National Preventative Health Taskforce. *Australia: the healthiest country by 2020 A discussion paper*. Australian Government National Preventative Health Taskforce: Canberra; 2008. [http://www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/Ao6C2FCF439ECDA1CA2574DD0081E40C/\\$File/discussion-28oct.pdf](http://www.health.gov.au/internet/preventativehealth/publishing.nsf/Content/Ao6C2FCF439ECDA1CA2574DD0081E40C/$File/discussion-28oct.pdf).
29. Australian Institute of Health and Welfare. *Australia's health 2008*. Australian Institute of Health and Welfare: Canberra; 2008. <http://www.aihw.gov.au/publications/aus/aho8/aho8.pdf>.
30. Konise M, Va'a V, Duthie R, Beattie P. *Hui for Hauora 'gathering for health'*. Pacific Indigenous Nations Network and Queensland Health: Gold Coast; 2010.
31. World Health Organization. New Zealand country health information profiles; 2008.
32. Wilson N, Thomson G, Weerasekera D, Blakely T, Edwards R, Peace J, et al. Smoker misperceptions around tobacco: national survey data of particular relevance to protecting Maori health. *The New Zealand Medical Journal* 2009;122:123-127.
33. Glover M, Cowie N. Increasing delivery of smoking cessation treatments to Maori and Pacific smokers. *The New Zealand Medical Journal* 2010;123:6-9.
34. National Health and Medical Research Council. *Australian alcohol guidelines: health risks and benefits*. National Health and Medical Research Council: Canberra; 2001.
35. Queensland Health. *The Health of Queenslanders 2008: Prevention of Chronic Disease. Second Report of the Chief Health Officer Queensland*, Queensland Health: Brisbane; 2008.
36. Victorian Government Department of Health. The factors affecting health and wellbeing; 2009.
37. Ministry of Health. Sexually transmitted infections in New Zealand: key findings from the 2007 New Zealand annual STI surveillance report. http://www.bpac.org.nz/magazine/2009/february/docs/bpj19_sti_pages_44-47.pdf. Accessed 10 May 2010, 2010.
38. Winnard D. *Maa Taatou, Moo Taatou Information to support Maori Health Planning in Counties Manukau*. Counties Manukau District Health Board: Manukau; 2007. http://www.cmdhb.org.nz/about_cmdhb/planning/health-status/Maori-Health/Maori-healthplanning.pdf.
39. Boddington B, Khawaja M, Didham R. *Teenage fertility in New Zealand*. Statistics New Zealand: Wellington; 2003. <http://www.stats.govt.nz/reports/articles/teenage-fertility-in-nz.aspx>.
40. Schmidt L. *Barriers and enablers for parents/carers accessing age appropriate funded immunisation for their children from Samoan, Tongan and Cook Islands and Maori backgrounds*. Griffith University and Queensland Health: Logan; 2010.
41. Baxter J, Kokaua J, Wells E, McGee M, Oakley Browne M. Ethnic comparisons for the 12 month prevalence of mental disorders and treatment contact in te Rau Hinengaro: the New Zealand Mental Health Survey. *Australian and New Zealand Journal of Psychiatry* 2006;40:905-913.
42. Associate Minister of Health. *The New Zealand Suicide Prevention Strategy 2006-2016*. Ministry of Health: Wellington; 2006. [http://www.moh.govt.nz/moh.nsf/pagesmh/4904/\\$File/suicide-prevention-strategy-2006-2016.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/4904/$File/suicide-prevention-strategy-2006-2016.pdf).
43. Lievore D, Mayhew P. *The scale and nature of family violence in New Zealand: A review and evaluation of knowledge*. Ministry of Social Development: Wellington; 2007. http://www.msd.govt.nz/documents/about-msd-and-our-work/publications-resources/research/scale-nature/scale-and-nature.doc#_Toc162058932.
44. Commission on Social Determinants of Health. *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health*. World Health Organisation: Geneva; 2008. http://whqlibdoc.who.int/publications/2008/9789241563703_eng.pdf.
45. National Health and Medical Research Council. *Cultural competency in health: a guide for policy, partnerships and participation*. National Health and Medical Research Council; 2006.
46. Acevedo-Garcia D, Osypuk T, McArdle N, Williams D. Towards a policy-relevant analysis of geographic and racial/ethnic disparities in child health. *Health Affairs* 2008;27:321-333.

47. Gehlert S, Sohmer D, Sacks T, Mininger C, McClintock M, Olopade O. Targeting Health Disparities: A Model Linking Upstream Determinants To Downstream Interventions. *Health Aff* 2008;27:339-349.
48. Currie G. Australian Urban Transport and Social Disadvantage. *Australian Economic Review* 2009;42:201-208.
49. Rashid K, Yigitcanlar T, Bunker J. Transportation disadvantage determination framework: space-time organisation measure in determining transportation disadvantage. *The Second Infrastructure Theme Postgraduate Conference: Conference Proceedings*. Brisbane: Queensland University of Technology; 2009.
50. Dodson J, Buchanan N, Gleeson B, Sipe N. Investigating the social dimensions of transport disadvantage - I. Towards new concepts and methods. *Urban Policy and Research* 2006;24:433-453.
51. Graham C. Australian urban transport and social disadvantage. *The Australian Economic Review* 2009;42:201-208.
52. Schluter P, Carter S, Kokaua J. Indices and perception of crowding in Pacific households domicile within Auckland, New Zealand: findings from the Pacific Islands Families Study. *New Zealand Medical Journal* 2007;120.
53. Kriger J, Higgins D. Housing and health: time again for public health action. *American Journal of Public Health* 2002;92:758-768.
54. Bashir S. Home is where the harm is: inadequate housing as a public health crisis. *American Journal of Public Health* 2002;92:733-738.
55. Pfitzner F, Flynn M, Carne S. *Māori Housing Trends 2009*. Housing New Zealand: Wellington; 2009. <http://www.hnzc.co.nz/hnzc/dms/A2199AoFo78A532ABoD7D41oB8B42B27.pdf>.
56. McLaughlin L, Braun KL. Asian and Pacific Islander Cultural Values: Considerations for Health Care Decision Making. *Health & Social Work* 1998;23:116-126.
57. Nguyen T-UN, Kagawa-Singer M. Overcoming Barriers to Cancer Care Through Health Navigation Programs. *Seminars in Oncology Nursing* 2008;24:270-278.
58. Ellison-Loschmann L, Pearce N. Improving Access to Health Care Among New Zealand's Maori Population. *American Journal of Public Health* 2006;96:612-617.
59. Jones RG, Trivedi AN, Ayanian JZ. Factors influencing the effectiveness of interventions to reduce racial and ethnic disparities in health care. *Social Science & Medicine* 2010;70:337-341.
60. Gibbons C, Tyrus N. Systematic review of US based randomised controlled trials using community health workers. *Progress in Community Health Partnerships* 2007;1:371-381.
61. Kelly L, Kendall E, Henderson S. *Logan Health and Wellbeing Natural Helper Project*. Griffith Institute for Health and Medical Research: Logan; 2010.
62. Ministry of Health. Maori health - health status indicators - cancer. <http://www.maorihealth.govt.nz/moh.nsf/indexma/cancer>. Accessed 11 May 2010, 2010.
63. Dachs G, currie M, McKenzie F, Jeffreys M, Cox B, Foliaki S, et al. Cancer disparities in indigenous Polynesian populations: Maori, Native Hawaiians and Pacific people. *Oncology Lancet* 2008;9:473-484.
64. Commonwealth Department of Health and Aged Care. *Promotion, prevention and early intervention for mental health-a monograph*. Mental Health Special Programs Branch, Commonwealth Department of Health and aged Care: Canberra; 2000.
65. MA Oakley Browne JW, KM Scott (eds),. *Te Rau Hinengaro: The New Zealand Mental Health Survey*. Ministry of Health; 2006. [http://www.moh.govt.nz/moh.nsf/pagesmh/5223/\\$File/mental-health-survey.pdf](http://www.moh.govt.nz/moh.nsf/pagesmh/5223/$File/mental-health-survey.pdf).
66. Ministry of Health. *Suicide Facts: Deaths and intentional self-harm hospitalisations 2007*. Ministry of Health: Wellington; 2009. [http://www.moh.govt.nz/moh.nsf/Files/suicide/\\$file/suicidefacts2007-16dec.pdf](http://www.moh.govt.nz/moh.nsf/Files/suicide/$file/suicidefacts2007-16dec.pdf).
67. National Centre for Classification in Health. *The International statistical Classification of Diseases and related health problems, Tenth revision, Australian modification (ICD-10-AM) - 7th edition*. NCCH: Sydney; 2010.
68. Australian Bureau of Statistics. *Standards for Statistics on cultural and Language Diversity*. Australian Bureau of Statistics; 1999. <http://www.abs.gov.au/AUSSTATS/abs@.nsf/productsbyCatalogue/79FABo4272992D54CA25697Eo018FEBD?OpenDocument>.