

**MACRO-ANALYSIS OF THE
MĀORI MENTAL HEALTH WORKFORCE
TRM/04/08**

Ponga, L. N., Maxwell-Crawford, K.M., Ihimaera, L.V., & Emery, M.A.

**Published in June 2004 by
Te Rau Matatini**

**Te Pūtahi-ā-Toi, Massey University
Private Bag 11222, Palmerston North, New Zealand**

ISBN: 0-9582444-8-0

**This document is available on the website of Te Rau Matatini:
<http://www.matatini.co.nz>**



TE RAU MATATINI
AOTEAROA MĀORI MENTAL HEALTH WORKFORCE DEVELOPMENT

Acknowledgements

*E tika ana, kia mihi ki te kaha,
te wairua pakari, te pūkaha nui e mahia nei e ngā kaimahi Māori
kei roto i ngā kaupapa hauora hinengaro.
Ko tenei tuhunga hei whakapakari me te tautoko i nga wawata Māori ngā whaingā,
ngā huarahi kia tutaki pai.*

Te Rau Matatini would like to acknowledge the support and assistance of those who contributed to this document. The energy, input and guidance of the Māori mental health workforce shared generously at many hui and conferences has provided inspiration and shaped the development of this document. Special thanks also to Rahira Walsh, Kristen Maynard (Ministry for Social Development) and Kayrn Kee (Massey University) for your support and guidance throughout the development of this work.

Contents Page

1. Introduction.....	5
2. Background	9
2.1 Macro-analysis Chapters.....	9
2.2 Measures of Outcomes.....	10
3. Evidence-Based Directions.....	12
3.1 Māori Population	12
3.2 Māori Population by Age Group.....	14
3.3 Māori Men and Women.....	16
3.4 Māori Geographic Location.....	17
4. Transferable Skill Base.....	19
4.1 Māori in Compulsory Education.....	19
4.2 Māori in Tertiary Education.....	22
4.3 Māori Employment.....	30
4.4 Labour Force.....	31
4.5 Service Delivery Developments	34
5. Responding To Change.....	36
5.1 Technology	36
5.2 Industrial Change.....	37
5.3 Migration.....	37
6. Supportive Environments	41
6.1 Workplace Environments.....	42
6.2 Recruitment.....	42
7. Discussion.....	44
7.1 Existing Strategies	45
7.2 Workforce Planning Processes	46
7.3 Future Development.....	46
8. Conclusion	49
9. References.....	53

1. Introduction

Disparities between Māori and non-Māori standards of health are mirrored by disparities between Māori and non-Māori in the workforce (Durie, 1999). The impact of mental ill health on Māori has driven the need to develop more responsive mainstream mental health services and increase the capacity and capability of the Māori mental health workforce. Significant increases in Māori providers and dedicated Māori services since 1998 have highlighted the need to:

- better understand Māori mental health workforce development needs in mainstream and dedicated Māori mental health services, and
- better understand general health workforce issues and the impact this may have on Māori mental health workforce development.

On a national level, recent publications by the Health Workforce Advisory Committee (HWAC) and District Health Boards New Zealand (DHBNZ) have informed and provided a foundational information base capturing workforce development initiatives, priorities and progress (Health Workforce Advisory Committee, 2002a, 2002b, 2003; District Health Boards New Zealand, 2003). These provide contextual information relating to the general Māori health workforce, many of which are transferable to Māori mental health.

To understand the basis from which the Māori mental health workforce can be developed, an understanding of the general Māori health workforce is needed. This includes the identification of current patterns and future projected trends and considers the impact of these on Māori working in the health sector.

The Māori mental health workforce comprises of Māori staff with a variety of skills, knowledge and experience that contributes culturally, clinically and socially to improving the mental health of Māori individuals, whānau and communities (National Mental Health Workforce Development Co-ordinating Committee, 1999). The information contained in this macro-analysis has been used to look at a series of implications for Māori mental health workforce development. The macro-analysis

will be useful for the Māori mental health workforce and policy makers to inform service development.

It is complex to accurately plan for the right number and skill-mix of mental health practitioners to ensure quality mental health services. In light of historical and emerging issues affecting the overall New Zealand workforce, the Māori mental health workforce faces additional issues, linked to the specialisation, education, training and competencies required of the Māori mental health workforce at all levels (HWAC, 2002a).

The health sector have already acknowledged and facilitated a number of workforce development and planning strategies at a national level. A clear outline of the roles and responsibilities of key stakeholders is required to reflect sector accountability for planning, funding and implementing these strategies to advance the development of the Māori mental health workforce. Maintaining a sustainable future for the Māori mental health workforce will demand a combination of strengthening existing initiatives and the creation of innovative approaches that meet tangata whaiora¹ and whānau needs.

Table 1 provides an overview of areas for Māori health advancement, alongside some of the measures currently used to determine advancement. These areas and measures are important in strengthening wider Māori development and growth including the health sector, Māori mental health workforce and wider intersectoral collaboration. The relationship between the areas and measures in Table 1 highlight a number of intersecting considerations for Māori planning and future advancement.

¹ Tangata whai ora means "a person seeking health" and is also frequently written as tangata whaiora which refers to "a person who has wellbeing" (Ministry of Health, 2000). Given the workforce development focus of Te Rau Matatini, tangata whaiora is currently used to encompass both contexts and is seeking further guidance from the sector and consumers.

Table 1
Māori Health Advancement

Area for Advancement	Measure of Advancement
Participation in New Zealand society	Education Economic status Participation in decision-making
Access to te ao Māori	Land Language Whānau Marae
Quality health services	Access to primary and secondary care Health purchasing Māori health services Māori health workforce

Source: Durie, M. H. (1998). *Whaiora: Māori health development* (2nd ed.). Auckland, New Zealand: Oxford University Press.

This report draws on a number of information sources that include the New Zealand Census², Mental Health Information National Collection (MHINC), workforce profile surveys, research papers, journal articles and presentations. Limitations of the data include changes to data collection methods, quality problems with new data collections, inconsistency in the data definitions used, and a lack of specific ethnicity data. However, current available data allow an exploration of general trends and provide a guide to identifying the implications and probable future influences on Māori mental health workforce planning processes. This report also looks at areas where more information is needed and outlines how information can be used to assist further Māori mental health workforce planning processes.

Historically, specific information pertaining to the Māori mental health workforce has been scarce. While a number of government agencies (the Ministry of Health, Te Puni Kokiri and Statistics New Zealand), some professional bodies, and District Health Boards, collect data as part of their reporting requirements, reliable health workforce data is difficult to obtain (HWAC, 2002a; Te Puni Kokiri, 1996; MHC, 1998b).

The HWAC (2002a), Mental Health Commission (2003, 1998a), Takerei and Ehou (1997) state consistent workforce data and timely information are needed to inform

² All Statistics New Zealand data used in this report, including Census information, has been randomly rounded to base 3. This is the standard used in rounding procedures, which may result in a total disagreeing with the total of the individual items shown in the tables.

long-term workforce planning and to help monitor Māori health workforce trends such as recruitment and retention in both dedicated Māori and mainstream mental health service providers. Detailed information will:

- provide a means for measuring the uptake of workforce education and training initiatives through District Health Boards and Regional Mental Health Networks
- inform development processes for occupational training and education (including governance, senior management and advisory roles), and
- guide targeted future directions from a grass roots level and strategic planning processes.

2. Background

The Government's commitment to improving Māori health status and reducing inequalities in health status to ensure accessible and appropriate services for Māori is demonstrated in the New Zealand Health Strategy (Minister of Health, 2000), The New Zealand Disability Strategy (Minister for Disability Issues, 2001) and He Korowai Oranga: the Māori Health Strategy (Minister of Health and Associate Minister of Health, 2000). The key goals and direction for Māori mental health are set out in Te Puāwaitanga: The Māori Mental Health National Strategic Framework (Ministry of Health, 2002a). With the development of Te Puāwaitanga, the Government recognises that mental health is a major health concern for Māori, and that "...good health [in a Māori context], also requires access to the institutions of Māori society..." (Ministry of Health, 2002a, p.3). It also acknowledges the importance of working with and involving Māori in finding solutions.

2.1 Macro-analysis Chapters

For the first time in New Zealand, data pertaining to a range of professional and non-professional health workforce groups has been presented in a single document, the HWAC *New Zealand Health Workforce: Stocktake of Issues and Capacity* (Health Workforce Advisory Committee, 2002a). A number of trends and issues, which currently impact on health workforce development, have been identified in the macro-analysis, and will be discussed. Table 2 outlines some of the key issues identified in the HWAC report and the chapters in the macro-analysis where the implications of these issues for the Māori mental health workforce are discussed.

Table 2

Identified Health Workforce Issues and Chapters in the Macro-analysis

Chapter	Identified Health Workforce Issues
3. Evidence-based directions	Demographics Gender
4. Transferable skill bases	Education Labour market The economy Service delivery developments
5. Responding to change	Technology and its effects Globalisation
6. Supportive environments	Workplace environment Recruitment of health workers Retention of health workers

Source: Health Workforce Advisory Committee. (2002a). *The New Zealand health workforce: A stocktake of issues and capacity 2001*. Wellington, New Zealand: Health Workforce Advisory Committee.

2.2 Measures of Outcomes

Mortality (death) and morbidity (illness) rates have been used as indicators of Māori health in general; however, these alone do not recognise the socio-economic determinants of health, Māori values and holistic approaches to Māori health and wellbeing. “History [has shown] that conventional western medicine has not been able to close the disparities [between Māori and non-Māori] in mortality and health” (Turia, 2003, p.2).

Table 3
Diverse Māori Realities

Variable	Measures	Trend
Demographic	Population growth, age bands	Rapid growth, a youthful population that will increasingly age
Geographic location	Major urban, minor urban, rural, overseas	Major urban, international
Gender	Male-female disparities	Females disadvantaged
Standards of Living	Health status, educational achievement, incomes, employment	Disparities between Māori and non-Maori are growing
Lifestyles	Leisure time activities, alcohol and drug use, recreation	High achievement in sport, increased alcohol and drug use
Language usage	Competence in te reo Māori, domains of usage	Greater use but fewer native speakers, insufficient domains of usage
Affiliations	Tribal groups, community links, political level of involvement	Multiple affiliations
Whānau	Level and quality of commitment	Reduced links

Source: Durie, M. H. (2001). *Mauri Ora: The dynamics of Māori health*. Auckland, New Zealand: Oxford University Press.

Table 3 provides an overview of some of the indicators discussed within this profile and indicates general trends that are discussed in relation to their impact on the development of Māori mental health workforce.

Future developments in Māori mental health services must continue to consider service delivery mechanisms based on the needs of tangata whaiora and whānau. Collaboration, communication and co-operation will be integral to aligning workforce development plans and targets on regional and national levels with local tangata whaiora and whānau needs. On a local level the priorities outlined by District Health Boards in their District Annual Plans and District Strategic Plans will be based on analyses of the needs of their population. This information will drive locally coordinated approaches for service and workforce development, which in turn will inform regional and national approaches.

3. Evidence-Based Directions

The use of demographic information is integral to ensuring workforce development and planning processes accurately reflect Māori realities and aspirations. To ensure evidence-based directions are taken into account in developing Māori mental health workforce, current information on the Māori population will be reviewed. Past trends and future projections provide a broad overview of considerations for future development.

The prominent health problems of the Māori population during the late 19th century were tuberculosis, pneumonia and malnutrition. In the 21st century, however, the greatest threats to good health for Māori are poor mental health, diabetes, cancer and cardiovascular disease (Durie, 1999; Minister of Health, 2000). Increasing rates of Māori hospital admissions and re-admissions since the 1960s, especially for Māori males, signal that significant improvements in Māori health status are yet to be sustained (ibid). The ability to account for unreported, undiagnosed and untreated mental illness will need to be further developed in line with existing measures to consolidate improvements in Māori mental health status.

3.1 Māori Population

The growth of the Māori population is important in health workforce development and planning. It provides an indication of probable future requirements, such as the demand for different service types, more responsive service delivery, and a more highly qualified, skilled and experienced workforce able to deliver effective, efficient and timely services.

What can we expect in the future?

The Māori population has been steadily increasing since the 1920s, and is projected to grow at a faster rate than the non-Māori population: Māori population is projected to rise from 15.1% of the New Zealand population in 2001 to almost 17% in 2021. The figures in Table 4 indicate Māori population will almost double in size between 1991 and 2021 (Statistics New Zealand, 2003; Durie, 2001).

Table 4

*Māori Population by Gender by Year*³

Gender	Year				
	1991	1996	2001	2014	2021
Male	214 428	258 000	257 484	341 200	371 700
Female	220 416	265 371	268 800	347 900	377 700
Total	434 847	523 374	526 281	689 100	749 400

Source: Statistics New Zealand. (2002a). *2001 Census: Māori (2001) – Reference reports*. Wellington, New Zealand: Statistics New Zealand.

The figures in Table 4 also show that Māori women outnumber Māori men, and this trend is expected to continue. Māori women have a higher life expectancy from birth than Māori men, and it has been steadily improving since the 1950s. These gender differences also occur in the non-Māori population (Te Puni Kokiri & Ministry of Women’s Affairs, 1999).

What does this mean for Māori mental health workforce development?

The impact of the projected Māori population increase will need to be explored further, given that Māori are expected to comprise almost 17% of the total population by 2021 (Statistics New Zealand, 2003). This population projection shows an increase of almost 42% from 2001 to 2021. The significance of this growth will need to be considered alongside current initiatives to reduce disparities and identified needs-based Blueprint targets that suggest access to mental health services for Māori should be double that of the general population, i.e., 6% rather than 3% (Mental Health Commission, 1998a). To build and develop a Māori mental health workforce capable of meeting tangata whaiora and whānau needs, it will be necessary to increase the effectiveness of current services and strengthen provisions for unreported, undiagnosed and untreated mental illness. Mental health services within primary health care settings also need to be included in future strategic targets.

The projected Māori population increase is expected to affect the demand for Māori mental health services. Although an increase in the size of the Māori population alone will not automatically constitute an increase in the incidence of mental illness,

³ Note: Projections for 2014 and 2021 are based on the estimated resident population of Māori ethnicity at 30 June 2001, of 586,000. These projections assume medium fertility, medium mortality, medium inter-ethnic mobility and a net migration loss of 2500 people a year.

Māori mental health workforce development initiatives will need to be developed to balance, enhance and reflect projected increases in demand. Within both mainstream and dedicated Māori service providers, development of the Māori mental health workforce will require training and education opportunities, career pathways (which reflect Māori mental health roles), and wider incentives and initiatives to attract and retain staff who are clinically and culturally competent.

3.2 Māori Population by Age Group

The age structure of the Māori population has important implications for Māori in working age groups, compulsory education, ageing and retiring. Discussions about New Zealand's future workforce have been dominated by considerations of an ageing population. Projections suggest that over the 25 years, from 2001 to 2026, across the Organisation for Economic Co-operation and Development (OECD)⁴ countries, 70 million people will retire, but only five million will enter the workforce. This change will not be so drastic in New Zealand as fertility levels have not fallen as sharply as in most other OECD countries (Department of Labour, 2003).

What can we expect in the future?

The projected Māori population will include not only a younger age structure but also a slowly ageing population. Therefore, existing and future mental health prevalence trends in Māori, will need to be reflected in the ability of the Māori mental health workforce to meet tangata whaiora and whānau needs, especially for the younger and older Māori populations.

The Māori population over 65 years old will increase almost three-fold, from nearly 20 000 in 2001 to 57 000 in 2021 (Statistics New Zealand, 2002a). While current figures on the prevalence of mental illness in Māori over 65 years old are not available, it is likely this age group will require increasing mental health care (Ministry of Social Development, 2002; Ministry of Health, 2001; 2002b), adding new dimensions for the capability of the Māori mental health workforce. Table 3 shows changes in Māori age groups over 1991 to 2001 and projections for 2021.

⁴ New Zealand is one of 30 member countries of the OECD, along with Australia, the United Kingdom and the United States of America. The OECD motto is 'Building Partnerships for Progress'.

Table 5
Age and Gender for the Māori Ethnic Group⁵ by Year

Age Group	Gender	1991	1996 ⁶	2001 ⁷	2021
0–14 yrs	Male	82 692	100 611	100 653	115 470
	Female	80 349	95 787	95 829	109 620
15–29 yrs	Male	64 569	68 979	63 342	95 130
	Female	67 758	73 227	68 445	90 150
30–44 yrs	Male	38 763	50 706	51 633	66 890
	Female	41 994	55 734	58 797	68 720
45–64 yrs	Male	23 445	30 645	33 855	68 710
	Female	24 315	31 842	36 087	77 970
65 and over	Male	4 965	7 056	7 989	25 500
	Female	5 997	8 778	9 642	31 180
Total	Male	214 428	258 000	257 484	371 700
	Female	220 416	265 371	268 800	377 640

Source: Statistics New Zealand. (2002a). *2001 Census: Māori (2001) – Reference reports*. Wellington, New Zealand: Statistics New Zealand.

From the projections outlined in Table 5, it is likely Māori in compulsory school-age groups will continue to be prominent in the future Māori population. This means the overall Māori population will continue to have a young structure that will provide opportunities for targeted workforce development initiatives.

What does this mean for Māori mental health workforce development?

The New Zealand working age is considered to be from 15 to 64 years (Department of Labour, 2003), and age is important, given the forecasted trends for working age Māori. Current figures (Hirini & Durie, 2003) show the majority of those working in the existing Māori mental health workforce are between 30 and 49 years old. Current and projected figures indicate this age group will be one of the larger age groups within the Māori population, which will be a consideration for recruitment and retention strategies. Given that the smallest age groups within the Māori mental health workforce are those under 20 to 29 and over 60 to 64 years old, innovative incentives and pathways for career development will be needed to attract younger and older workers.

⁵ Māori ethnic group rates for 1996-2001 have been revised using 2001-based estimated resident populations for the Māori ethnic group.

⁶ Between 1991 and 1996, the number of Māori in all age groups increased.

⁷ Between 1996 and 2001, those aged 0-9 and 15-29 decreased while the 10-14 age group experienced a small increase. Decreases were also evident in the 20-29 and 55-59 year age groups; however increases in 40-44 year age group offset the latter.

3.3 Māori Men and Women

Significant differences exist between Māori male and female participation in the workforce and between the levels and roles they undertake. Statistics New Zealand estimate that in 2001 Māori females comprised 51.1% (268 800), while Māori males made up 48.9% (257 484) of the total Māori population. Recent figures show almost half the total number of Māori employed in 2001 was female (46.9%) (Statistics New Zealand, 2002a).

In 1996, the main occupational roles of working Māori men and women were different from each other. Men predominantly worked as elementary service workers, fishery workers and stationary machine operators, while females worked as personal and protective service workers, office clerks, and elementary service workers⁸ (Statistics New Zealand, 1996). By 2001, the main occupations of Māori men and women had not changed significantly. The three dominant occupations for Māori males were: Plant and Machine Operators and Assemblers, Trades Workers, and Elementary Occupations (Statistics New Zealand, 2002a). Common elements within roles undertaken by Māori men include labour-intensive and practical skill-based work. The three main occupations for Māori females were: Service and Sales Workers, Clerks, and Professionals (Statistics New Zealand, 2002a). Common factors within roles undertaken by Māori women, include some flexibility in the hours worked, job share, and working from home opportunities.

What can we expect to see in the future?

As indicated in Table 4, the total Māori female population will continue to increase to 377 700 by 2021; however, the total percentage of Māori females within the Māori population will decrease slightly to 50.4%. The Māori male population is expected to increase to 371 700 (49.6%) by 2021.

⁸ Elementary Occupations include: Residuals, Labourers and Related Elementary Service Workers, Building Caretakers and Cleaners, Messengers and Doorkeepers, Refuse Collectors and Related Labourers, Packers and Freight Handlers, and Labourers.

What does this mean for Māori mental health workforce development?

The availability of Māori men and women is an important component of ensuring the Māori mental health workforce is balanced and able to meet effectively a wide range of tangata whaiora and whānau needs, including gender-related needs.

Māori males in the 20–29 year age group have the highest hospital first admission rate and readmission rate relative to Māori women and non-Māori populations (Te Puni Kokiri, 1996; New Zealand Health Information Service, 2002). Factors associated with the risk of mental illness for Māori men include high unemployment, low educational success, cultural alienation, and a perceived lack of a positive future (Te Puni Kokiri, 2002). The ongoing impact of these factors and the prevalence of mental health needs among Māori men must be considered in workforce planning. In addition, current information highlights that Māori males are under-represented within the Māori mental health workforce (29.3%) (Hirini & Durie, 2003) and will need to be incorporated into workforce planning processes.

Comparatively, current figures indicate Māori women comprise 69.2% of the Māori mental health workforce (Hirini & Durie, 2003). Initiatives to increase the size and capability of the Māori mental health workforce will need to include support for Māori women on a number of levels to ensure they are retained within a wide range of roles to enhance their existing contributions to mental health services.

3.4 Māori Geographic Location

Rural and urban Māori communities have different levels of access to general health services, and while this has implications and challenges for health service delivery needs and the development of the health workforce, it does present collaborative opportunities for education and training in the delivery of specialist services.

Nearly 90% of Māori live in the North Island, with over half residing in Northland, Auckland, Waikato and the Bay of Plenty. Forecasts predict Māori population growth to continue across all areas over the next 20 years (Statistics New Zealand, 2003).

Table 6 outlines Māori population statistics of regions, with 1996 figures as a base year for projecting regional populations in 2021.

Table 6
Projected Māori Population of Regions

Region	Projected Māori Population (000)	
	1996 (Base)	2021
Auckland	133.4	194.6
Waikato	74.8	105.3
Bay of Plenty	65.4	95.9
Wellington	52.1	67.1
Northland	43.1	63.9

Source: Statistics New Zealand. (2003). *Household labour force survey*. Wellington, New Zealand: Statistics New Zealand.

Population increases are projected across all regions; however, the biggest population increases, outlined in Table 7, will be in Auckland, Waikato, Bay of Plenty and Northland. In the South Island, the biggest Māori population increases will be in Canterbury, Otago and Southland. Despite expected increases, the entire Māori population in the South Island will be slightly less than in the Waikato region, which will have the second largest Māori population in 2021.

Table 7
Projected Regional Māori Growth by 2021

Region	Projected Growth %
Auckland	61.2
Waikato	30.5
Bay of Plenty	30.5
Northland	20.8

Source: Statistics New Zealand. (2001). *Population monitor: Future Māori population – Summary of latest trends*. Wellington, New Zealand: Statistics New Zealand.

What does this mean for Māori mental health workforce development?

Given the projection of continuing growth of Māori populations within the Auckland, Waikato, Bay of Plenty and Wellington regions (Statistics New Zealand, 2001) the development of Māori mental health providers and services should be well located to provide services to these regions (Hirini & Durie, 2003). The level of need within Māori mental health services is not yet identified through geographic location, but it is likely access issues relating to rural health services will be exacerbated for areas with small Māori populations requiring specialist mental health services. This may also affect training opportunities for Māori mental health staff. More information is needed to identify by location the prevalence of mental illness and the relationship between areas where Māori live and patterns of access to mental health services.

4. Transferable Skill Base

As part of a growing trend, people move through a number of jobs or occupational roles during their career, and the accumulation of transferable skills is an important influence on these moves (Department of Labour, 2002). Underlying the development of a transferable skill base is participation in compulsory education, tertiary education and employment opportunities. Increasing the participation of Māori in each of these sectors will contribute to the development of a wide range of transferable skills and better equip Māori of all age groups to work in Māori mental health.

4.1 Māori in Compulsory Education

Trends in the level of compulsory education achieved by Māori will provide a basis for identifying the number of Māori expected to be eligible in the short-term for post-school and tertiary educations. These trends will also contribute to recognising the level of education attained by Māori, which will allow the targeting of training programmes to attract Māori to work in Māori mental health. While it is recognised that Māori may be eligible to enter training and tertiary education programmes at a later stage without school qualifications, opportunities exist to target specific levels of school leavers as well as post-school qualified Māori.

Participation of 16- and 17-year-old Māori in secondary school education between 1987 and 1991 increased relative to the non-Māori rate, but there was a relative reduction post-1994. By 1997 the gap between Māori and non-Māori had widened to pre-1991 levels (Durie, 2001). Disparities between Māori and non-Māori remain.

Despite disparities, Māori are more qualified than in the past. In 1996, half of all Māori had a formal qualification and one in five Māori had a post-school qualification. Table 8 provides a snapshot of school leavers in 2001 and highlights that, despite the average stay at secondary school being similar to non-Māori, both Māori males and females were at least two times more likely to leave school with no formal qualifications.

Table 8
Proportion of School Leavers by Highest Qualification, Gender and Ethnicity 2001

	Māori		Non – Māori	
	Male	Female	Male	Female
University Bursary	2.8	5.2	18.6	24.8
Entrance Qualification	3.3	3.6	7.6	9.6
Higher School Certificate	7.3	9.6	10.8	12.2
6 th Form Certificate	23.7	25.9	27.2	26.9
School Certificate	26.0	25.9	20.4	15.5
No Formal Qualifications	37.0	29.9	15.5	11.0
Number of School Leavers	4868	4820	22 732	21 097
Average Stay at Secondary School (Yrs)	4.1	4.2	4.4	4.6

Source: Statistics New Zealand. (2002a). *2001 Census: Māori (2001) – Reference reports*. Wellington, New Zealand: Statistics New Zealand.

What can we expect in the future?

Table 9 outlines by region the proportion of Māori students in 2002, and highlights Gisborne, Northland and the Bay of Plenty as having the highest proportions of Māori students. Given the size of the overall population in Auckland, the proportion of Māori students may seem comparatively low; however, it is important to note that raw figures indicate 25% of the Māori population reside in Auckland (Statistics New Zealand, 2001). In line with this statistic, Auckland has the largest number of Māori students. Future Māori population projections by age group indicate the expected number of Māori within school age groups will decrease to 4.6% of the total Māori population in 2021, compared with 6% in 2001.

While significant Māori populations exist in the Gisborne, Northland and Bay of Plenty regions, from these statistics the distribution of school leavers for each region is not clear. Information identifying the regions with the highest number of Māori who left school with no qualifications will be useful to further understanding of subsequent training or work options undertaken and trends that exist within highly populated Māori regions. Regional trends could also be identified for Māori who

leave school with university bursary qualifications, which would provide an opportunity to encourage careers in Māori mental health.

In line with regional statistics, monitoring and evaluating employment outcomes for Māori in relation to educational opportunities, career information, guidance and planning will provide an indication of effective Māori recruitment processes, which could be used to encourage Māori to work in the mental health sector.

Table 9
Regional Statistics 2001, Proportion of Māori Students by Region

Region	Proportion of NZ Students Māori 2002 %
Northland	46.1
Auckland	14.5
Waikato	29.4
Bay of Plenty	39.8
Gisborne	59.5
Hawke's Bay	34.2
Taranaki	21.9
Manawatu – Wanganui	26.7
Wellington	17.6
Nelson / Marlborough / Tasman	11.7
West Coast	14.6
Canterbury	9.0
Otago	8.7
Southland	16.0

Source: Ministry of Education. (2002). *Nga Haeata Matauranga: Annual report on Māori education 2001/2002 and direction for 2003*. Wellington, New Zealand: Ministry of Education.

The level of Māori attainment in school by region would enable general trends to be identified, which could provide an opportunity for strengthening areas of Māori participation in school education leading to Māori mental health careers. The need for strengthening training institutions and opportunities to work in Māori mental health could also be identified through this information.

What does this mean for Māori mental health workforce development?

Many of the fastest growing job opportunities in the future will require post-school education or training. Driven by changes in technology and demand for sophisticated services, jobs have, on average, required greater qualifications (Department of Labour, 2003). Compulsory school education links to further education, training and

study will continue to be important if Māori are to improve the number of health professionals working in Māori mental health, particularly in specialised areas.

Health careers will need to compete with a range of other options that will open up for Māori school leavers. In this respect a proactive approach to developing the Māori mental health workforce will be required, given the amount of time necessary to complete and continue ongoing education and training requirements. The most common mental health workforce roles identified in the Māori mental health workforce profile in November 2002 (Hirini & Durie, 2003) include Māori Health Workers, Community Support Workers, Registered Nurses and Counsellors, while the least common mental health workforce roles were Psychiatrists, Occupational Therapists, Traditional Māori Healer/Tohunga, and Registered Psychologists (ibid).

The focus, role and skills required for each role vary significantly. Equally variable, the educational requirements, amount of time, cost and commitment needed for completion are considerations that will influence Māori mental health recruitment and retention strategies.

4.2 Māori in Tertiary Education

Education and training beyond compulsory schooling have been identified as significant contributors to Māori roles, occupations and employment, and are likely to be the most significant determinants of socio-economic advancement (Durie, 2001). Māori levels of enrolment in tertiary education, the duration of their courses, and the levels of completion are important in analysing the correlation between employment occupations and roles undertaken by Māori.

Historically, the performance of Māori in the labour market has been constrained by a lack of those with tertiary qualifications. However, labour market outcomes for Māori who have tertiary qualifications have been showing signs of improvement, which is evident in the increasing participation of Māori graduates in employment (Department of Labour, 2003).

Increased participation in tertiary education has been a feature of Māori progress for more than a decade; however, Māori tend to be enrolled in shorter courses and are less

likely to graduate with a degree, as opposed to a certificate or introductory certificate (Durie, 2001). Growth in the number, type and location of tertiary training providers has had a significant impact on Māori participation rates.

While Māori participation varies across different types of tertiary providers, an increase in the choice of providers has created more tertiary learning opportunities for Māori. Te Wānanga O Aotearoa has experienced significant growth and is the fastest growing national tertiary provider (Ministry of Education, 2002). In 2001, Wānanga throughout the country experienced 57% growth, and along with other private tertiary organisations had the highest proportion of first-year students of all tertiary institutions. The continuation of past trends may see increasing numbers of Māori men and women undertaking short courses, which may lead to long-term engagement in degree qualifications and further tertiary study.

Table 10 shows increases in both Māori male and female enrolments in Tertiary Education Institutions⁹ (TEI) between 1996 and 2001. As a percentage of all tertiary students, Māori enrolments increased from 11.6% to 16.6% in 2001. A feature of Māori tertiary enrolment growth has been the growth of mature students and increased participation of Māori women aged 25 and over, which is twice that for Māori men.

Table 10
Māori Enrolled in Tertiary Education Institutions

	1996	2001
Male	9737	12 851
Female	13 713	23 301
Total	23 450	36 152

Source: Ministry of Education. (2002). *Nga Haeata Matauranga: Annual report on Māori education 2001/2002 and direction for 2003*. Wellington, New Zealand: Ministry of Education.

Māori enrolments in tertiary education providers as at July 2001 (Ministry of Education, 2002) indicate the majority of Māori females and males chose to study society and culture and mixed-field programmes. Health was the fourth and fifth most popular enrolment subject for Māori females and males respectively. Trends indicate increasing numbers of Māori males enrol in engineering and related technologies, while more Māori females are enrolling in management and commerce.

⁹ Tertiary Education Institutions refer to Universities, Wānanga, Polytechnics and Colleges of Education.

4.2.1 Māori Graduates

The relationship between the increasing number of Māori graduates and resulting employment occupations and roles are significant in further identifying patterns and trends likely to influence the future Māori workforce. Highly skilled Māori are sought after in a range of occupations within the health sector, including Māori mental health.

In 2001, Māori comprised almost 15% of all students completing tertiary programmes, of which, 6% were post-graduate qualifications. Table 11 outlines a steady trend between 1997 and 2001 that highlights lower completion percentages (despite increases each year) compared with non-Māori. Trends indicate that while Māori graduate numbers are increasing, it is more likely, in the short term that the size of the general tertiary qualified health workforce will be increased by the larger proportion of non-Māori graduates.

Table 11

*Māori and non-Māori Tertiary Programme Completions by Total Awards Completed, 1996–2001*¹⁰

Ethnic Group	1996	1997	1998	1999	2000	2001
Māori	13%	13%	14%	14%	14%	15%
Non-Māori	87%	87%	86%	86%	86%	85%

Source: Ministry of Education. (2002). *Nga Haeata Matauranga: Annual report on Māori education 2001/2002 and direction for 2003*. Wellington, New Zealand: Ministry of Education.

4.2.2 Māori Graduate Employment

A survey undertaken by the New Zealand Vice-Chancellors' Committee reported in 2000 that the majority of Māori female graduates were employed in primary and secondary education (20%), followed by government administration and defence (17%). The majority of Māori male graduates were employed in government administration and defence (22%), followed by health and community services (14%). The total number of Māori female university graduates (64% of Māori graduates) was significantly greater than Māori male graduates. This pattern is also apparent in the

¹⁰ Figures in Table 11 have been rounded to nearest whole percentage.

non-Māori population, where 57% of all graduates were female (New Zealand Vice-Chancellor's Committee, 2001).

The percentage of Māori male graduates employed in health and community services is positive. However, further information is needed on the occupations and roles undertaken to link the tertiary qualifications used in these roles and to understand better the factors underlying graduate employment choices. Such factors will provide an outcomes-focused opportunity to identify areas for targeting employment in the Māori mental health sector.

4.2.3 Completion Levels

As shown in Table 12, differences in completion levels exist for Māori and non-Māori in tertiary programmes between 1996 and 2001. The total number of tertiary awards completed by Māori increased by 32.5% during this time, compared with an increase of 22.2% for non-Māori

Table 12
Māori and non-Māori Tertiary Programme Completions by Level of Study 1996 and 2001

Completion Levels	1996	2001
Māori		
Doctorates	10	21
Masters / Honours	154	280
Post-grad Diplomas / Certificates	209	258
Degrees	1391	2152
Diplomas	983	1637
Certificates	3431	4804
Total Awards Completed	6178	9152
Non-Māori		
Doctorates	268	420
Masters / Honours	3170	3904
Post-grad Diplomas / Certificates	2735	3278
Degrees	15 270	21 786
Diplomas	5692	5838
Certificates	13 929	17 547
Total Awards Completed	41 064	52773

Source: Ministry of Education. (2002). *Nga Haeata Matauranga: Annual report on Māori education 2001/2002 and direction for 2003*. Wellington, New Zealand: Ministry of Education.

Despite an increase in numbers, for example just over double the number of doctorates have been completed by Māori in 2001 compared with 1996, Māori still complete less post-graduate qualifications¹¹ overall. However, this preference for completing undergraduate programmes¹² also occurs in the non-Māori population, where degrees are the most completed tertiary qualification, as are certificates in the Māori population.

What can we expect in the future?

According to the Ministry of Education there are “more Māori participating in tertiary education than at any other time, with Māori participating in post-school education and training at a higher rate than non-Māori” (Ministry of Education, 2002, p.80). Māori population projections indicate that, of those likely to complete tertiary qualifications, around 17.5% of Māori men and women will be between 20 and 30 years old, which is a sizeable proportion.

What does this mean for Māori mental health workforce development?

The expansion of opportunities for younger Māori with post-school qualifications will become increasingly important in developing a clinically and culturally competent workforce. Similarly, the growth of mature Māori students participating in tertiary programmes will provide opportunities to target the same age groups, such as those aged 40 to 49 years old, within the Māori mental health workforce. It will be important to ensure both new and experienced Māori mental health workers receive appropriate training, education, support and experience when moving into Māori mental health.

In the Māori mental health workforce, Māori are significantly under-represented in specialist occupations that require tertiary qualifications. Specialist shortages in the Māori mental health workforce exist in a number of roles including psychiatrists, clinical psychologists, and occupational therapists (Mental Health Commission, 1998a). As previously identified in this section, general trends show Māori uptake and completion of tertiary qualifications tend to be at sub-degree level and are shorter

¹¹ Postgraduate qualifications refer to Doctorates, Masters/Honours and Post-Graduate Diplomas/Certificates as indicated in Table 12.

¹² Undergraduate programmes refer to Degrees, Diplomas and Certificates as indicated in Table 12.

in duration. Part of the challenge of increasing the number of Māori working in tertiary qualified mental health roles will be to provide both support throughout the duration of the qualification and incentives to attain higher levels of qualifications.

Ministry of Education statistics show that while health is not one of the top three subjects studied by Māori female and male graduates, there were sizeable enrolments in 2001 of 1723 and 358, respectively (Ministry of Education, 1998). Given that the size of the Māori mental health workforce is estimated to be around 1500 Māori (National Mental Health Workforce Development Co-ordinating Committee, 1999), an injection of a quarter of those enrolled in 2001 would increase the Māori mental health workforce by a third.

For the Māori mental health workforce, opportunities exist for tertiary institutions to target and encourage Māori towards careers in Māori mental health. The development of promotion information, career pathways, education and training packages that inspire and support Māori to work in mental health will need to take into account many factors, including the fact that Māori females significantly outnumber Māori males in tertiary training.

4.2.4 Inter-sectoral Collaboration

The role of tertiary providers has become increasingly important in delivering training and education to the Māori mental health workforce. Ring and Brown (2003), outlined the need for tertiary institutions and colleges to acknowledge provider responsibility to produce competent and responsive clinicians. Through the development of guidelines, a consistent and co-ordinated national approach is likely to bring together cultural and clinical elements integral to all those pursuing education and training to work in the Māori mental health sector.

Within the health sector, workforce development priorities are not dissimilar to experiences in the education sector, which also identify the need for Māori participation at all levels of planning, development, delivery, and evaluation of services. An important example of this is the strategic direction for the tertiary education sector that acknowledges the need for the sector to contribute to the achievement of Māori development aspirations.

Higher education has been identified as an important pre-requisite for advancement in to senior management, advisory and governance roles. The challenge for the Māori mental health sector will be to increase opportunities for the existing workforce, as well as to attract new staff into these positions.

4.2.5 Importance of Location

Formal tertiary education is study undertaken at a public or private tertiary education provider that leads to a recognised New Zealand qualification. Public tertiary education institutions include universities, polytechnics, colleges of education, and wānanga (Ministry of Education, 2002). With eight universities in New Zealand, three in the South Island and five in the North Island, regional differences in the uptake of tertiary study by Māori are evident. A number of tertiary institutions operate campuses, in both islands throughout the country, such as the University of Otago and Te Wānanga O Aotearoa, which will be important in extending tertiary opportunities in the future. Massey University has the greatest number of Māori enrolments (4,000) many of whom are part-time and extramural. In the year 2000, the University of Waikato had the largest number of Māori graduates (475) followed by Victoria University of Wellington (176) and the University of Otago (165). In all universities, excluding Lincoln University, there were more Māori female than Māori male graduates (ibid).

The availability of courses specifically relating to Māori mental health workers and potential workers must be considered in the light of the location of tertiary institutions. For example, the majority of universities, along with the majority of the Māori population, are located in the North Island. However, for the increasing Māori populations in the South Island the availability of courses in regions such as Otago will need to continue to ensure opportunities for education and Māori mental health provision do not disadvantage regions with small but growing Māori populations. The provision of extramural study options, such as those currently in place at Massey University, which are location flexible, will be important in increasing the number of tertiary-qualified Māori.

4.2.6 Impact of Student Loan debt

Student loans have been linked to difficulties in attracting and retaining staff in the New Zealand health workforce, particularly within specialised areas. Statistics show Māori student loan borrowers between 1997 and 2000 had a mean loan balance of \$12,330, the lowest of the ethnic groups recorded¹³ (Statistics New Zealand, 2002b). Māori comprised 6% of all student loan borrowers over the 4-year period; twice as high as the Asian ethnic group, but more than three times lower than the European ethnic group.

The loan balance of New Zealand residents and overseas student loan holders in 2000 identifies the latter as less than 6% of all borrowers, owing on average \$6,900 more than those who remained in New Zealand (Statistics New Zealand, 2002b). Of overseas student loan borrowers, those who studied in the health field had the highest outstanding average balance of \$28,370, which was consistent with the general trend of those overseas having higher average loan balances. Comparatively, between 1997 and 2000, an extra 2220 students borrowed money to study in the health field.

Incentives to attract Māori into undertaking and completing tertiary qualifications to work in the mental health sector will need to consider the impact of higher borrowing, numbers of men, students in their 20s, students who undertake post-graduate study, and students who study at university (Statistics New Zealand, 2002b). While the extent to which these general trends impact on Māori is not clear, recruiting young Māori men into tertiary-qualified occupations in the mental health sector will be a priority that will require support to ensure the burden of a student loan is not an additional barrier to entry and qualification completion.

For Māori women, the challenge will be to develop incentives that recognise both the possibility they may earn lower salaries and wages than Māori males in the general workforce and the flow-on effect therefore of greater difficulty repaying student loans. Both recruitment and retention initiatives will need to target and offer

¹³ Other ethnic groups listed by Statistics New Zealand were: European, Pacific peoples, Asian, Other, Not included elsewhere.

competitive advantages and incentives for Māori in the light of past trends in tertiary education participation and continuing student loan indicators.

4.3 Māori Employment

Identifying the number of Māori expected to participate in the future general workforce will enable workforce planning processes to consider the age and gender structure of the working Māori population. This is important in determining targets and indicators for specific development. Issues underlying Māori participation rates in the general workforce must be considered to enhance balanced, informed and targeted approaches to recruitment and retention. The implications and challenges these issues present are likely to shape positively those targeted approaches undertaken by training institutions in delivering training programmes and opportunities and developing career pathways for Māori in all areas.

Research identifying the issues underlying trends in Māori employment and unemployment provides a basis for workforce planning processes. The number of Māori working in full-time and part-time equivalent positions indicates the number of hours being worked and provides a basis for further understanding those influences and factors that impact on decisions to work these hours. Such influences and factors may further shape the composition of Māori in the workforce and the types of roles undertaken within mainstream mental health and dedicated Māori services in both DHB and NGO environments.

As a group, Māori have experienced strong employment growth since the early 1990s, despite being hard hit by restructuring within the manufacturing sector in the late 1980s and early 1990s. The low concentration of Māori in growth industries (such as business and financial services) and occupations (such as legislators, administrators and managers) means Māori will not benefit to the same degree by future expansion and employment growth areas. Conversely, Māori will be particularly vulnerable to any future declines in manufacturing, building and transport industries, and in low-skilled occupations (Te Puni Kokiri, 1998).

Māori populations have on average lower incomes than non-Māori and they are less likely to be self-employed. Comparing Māori with non-Māori, on average weekly earnings, non-Māori earned more across all industries (Statistics New Zealand, 2003). As the population gets older and the workforce as a whole gets older, there will be increasing opportunities and incentives to stay in paid employment longer. With a young age structure, opportunities for improving future prosperity will continue to be based on educational and employment achievements (Department of Labour, 2003).

For Māori men and women working in health and community services there were no sizeable differences in average hourly and weekly earnings compared with other industries. In addition, occupation statistics do not indicate any significant shifts towards occupations in the health sector or the Māori mental health workforce.

While average earnings between Māori men and women are different, pay scales alone do not underpin effective recruitment and retention strategies. Opportunities for career development, ongoing training and development, recognition and reflective pay scales and the long-term effectiveness of these in industry recruitment and retention, need to be considered in line with the impact of competition between service industries, including mental health.

4.4 Labour Force

Due to the younger age structure of the Māori population, statistics indicate the Māori labour force¹⁴ is less skilled, has less work experience, and is less adaptable to changing labour market needs (Department of Labour, 2003). In times of economic growth, the educational status of the Māori labour force has meant Māori are ill equipped to compete for limited job opportunities in the marketplace. For example, a person with no qualifications is, on average, about two and a half times more likely to be unemployed than someone with both school and post-school qualifications (ibid).

According to the 1991 Census, 24% of Māori in the labour force were unemployed. In comparison, in 1996, 17% of Māori in the labour force were unemployed and looking for work, while 83% worked in paid employment.

¹⁴ Labour Force: The sum of the employed and unemployed; the number of people either in work or available and actively seeking work.

Table 13

Workforce Status and Gender for the working age¹⁵ Māori Ethnic Group in 2001

Labour Force¹⁶	2001	%
Male	114 714	52
Female	105 876	48
Total	220 590	100
Unemployed		
Male	17 664	47
Female	19 713	53
Total	37 377	100
Employed¹⁷		
Male	97 047	53
Female	86 163	47
Total	183 210	100
Not in the Labour Force		
Male	34 128	37
Female	57 444	63
Total	91 572	100

Source: Statistics New Zealand. (2002a). *2001 Census: Māori (2001) – Reference reports*. Wellington, New Zealand: Statistics New Zealand.

As outlined in Table 13, similar numbers of Māori men and women aged 15 to 64 years were in the labour force in 2001. In the same year, a higher percentage of those not in the labour force were Māori women. Targeted initiatives that recognise Māori with the appropriate skills, qualifications, training and experience will need to consider labour force trends when formulating recruitment and retention strategies. This will become especially important in developing specific initiatives for recruiting tertiary-qualified specialists and those with age and gender characteristics that meet tangata whaiora and whānau needs.

Table 14 highlights the comparative full and part-time age groups in which Māori males and females were employed in 2001. In 2001, the statistics indicate Māori males aged 35–39 years were more likely to be employed full-time, while Māori females the same age were more likely to be employed part-time. Overall, the highest

¹⁵ Working age identifies those from 15-64 years.

¹⁶ Labour Force: The sum of the employed and unemployed; the number of people either in work or available and actively seeking work.

¹⁷ Identified as paid employee, employer, self-employed and without employees, unpaid family worker. Total number of Māori between 15 and 64 years who did not give their employment status was 7503.

numbers of Māori working in full-time employment fell between the ages of 25 and 29. Employment figures show Māori males were most likely to work part-time at a younger age (15-19 years) than in any other age group. Māori females working part-time were most likely to be within the 15-19 and 35-39 year age groups.

Table 14

Dominant Full-time and Part-time Workforce Age Groups by Sex for Māori Ethnic Group in 2001

	15–19 yrs	20–24 yrs	25–29 yrs	30–34 yrs	35–39 yrs
Employed Full-time					
Male	5 928	11 139	11 850	11 892	12 000
Female	3 438	7 128	7905	7626	8079
Employed Part-time					
Male	3900	1848	1302	1 206	1 206
Female	5280	3 258	3 330	3789	4032

Source: Statistics New Zealand. (2002a). *2001 Census: Māori (2001) – Reference reports*. Wellington, New Zealand: Statistics New Zealand.

Of employed Māori in 1996 and 2001, 76% had full-time jobs and 24% worked part-time (Statistics New Zealand, 1996, 2002b). The highest number of employed Māori men and women are within the 35–39 years age group, while young Māori feature prominently in part-time employment between 15 and 19 years old.

Table 15

Work Force Status and Sex for Māori Ethnic Group

	2001	Percentage
Employed Full-time	141 597	
Male	84 630	59.7%
Female	56 967	40.2%
Employed Part-time	44 220	
Male	13 953	31.5%
Female	30 267	68.4%
Total Employed	185 817	
Male	98 586	53.1%
Female	87 237	46.9%

Source: Statistics New Zealand. (2002a). *2001 Census: Māori (2001) – Reference reports*. Wellington, New Zealand: Statistics New Zealand.

The figures outlined in Table 15 confirm past overall trends of more Māori men working in full-time employment, while more Māori women worked in part-time employment.

4.5 Service Delivery Developments

Industry group statistics do not relate specifically to the number of Māori men and women working in the Māori mental health workforce; however, the general trend highlighted between the 1996 and 2001 data shows a significant increase in Māori women working in health and community services (Statistics New Zealand, 2002a). During this time, the number of Māori NGO and community providers also increased.

Table 16

Industry (Division) and Sex by Status in Employment for the Employed Māori Ethnic Group in 2001

Health and Community Services					
	Total	Paid Employee	Employer	Self-employed Without Employees	Unpaid Family Worker
Male	2250	1998	69	114	27
Female	11 316	10 698	108	285	60
Total	13 566	12 696	177	399	87

Source: Statistics New Zealand. (2002a). *2001 Census: Māori (2001) – Reference reports*. Wellington, New Zealand: Statistics New Zealand.

Census statistics indicate the majority of employed Māori females worked in health and community services (as detailed in Table 16), education and retail, and these three industries also had the highest number of Māori females in total and paid employees. Māori males were predominantly employed in manufacturing, construction and agriculture, forestry and fishing; and included the highest number of Māori paid employees.

What can we expect in the future?

The potential workforce is identified as people aged 15 to 64 years, and the number of Māori in the potential workforce is projected to rise by 85% over the next 50 years. Within the total Māori population, the potential workforce is likely to remain around 60%, but it is expected that those aged between 40 and 64 years will constitute a larger proportion of the total number in the 15 to 64 year old group by 2051 (Statistics New Zealand, 2002b).

According to the New Zealand Institute of Economic Research (2003) the labour market has been offering relatively high rewards for Māori to acquire tertiary qualifications, particularly degrees. While these rewards are not considered to be long-term incentives, it is likely this will increase opportunities for Māori to take up wider and more specialised roles, positively influencing pay opportunities within numerous industries, including Māori mental health.

What does this mean for Māori mental health workforce development?

Demographic and socio-economic characteristics of the Māori labour force have been significantly impacted on by:

- A youthful age structure
- Low levels of educational attainment
- Under representation in formal systematic training
- Over representation in low-skilled occupations
- Under representation in high-growth industries, and
- The presence of a comparatively high proportion of long-term unemployed (Te Puni Kokiri, 1998).

Future projections in relation to employment of Māori in the mental health workforce will continue to be affected by these characteristics; however, with improving levels of educational attainment, employment prospects are likely to gradually improve. In line with improving future employment projections for Māori, wider employment prospects will provide opportunities beyond traditional industries for Māori to work in a wider range of occupational roles, specialist areas and workplace settings. Recruiting Māori to work in mental health will require not only the development of professional clinical expertise to advance specialist occupation roles but also cultural and competency-based education to enhance indigenous health perspectives and effectiveness in working with tangata whaiora and whānau (Lawson-Te Aho, 1997).

5. Responding To Change

Changes to the way mental health services are provided, from institutional to community-based support, and the associated changes to occupational roles within the mental health sector have, over the last 15 years, been significant in the development of the mental health workforce and particularly Māori participation in mental health services. The Māori mental health workforce has evolved and is continuing to develop in response to changing mental health service delivery demands and increasing tangata whaiora expectations for a culturally and clinically competent workforce. Technology, industrial change and migration are some key elements impacting on the current Māori mental health workforce and are likely to impact on the future workforce.

5.1 Technology

Within New Zealand, the WAVE project has been identified as an important project in ‘improving health outcomes, through effective use of information’ (The WAVE Advisory Board, 2001). The project aims to produce an information and technology plan for the health sector. Issues raised in relation to the WAVE project include the potential for heavy demands placed on providers to up-skill their workforce to use and support technology. Improved integration and co-ordination in the light of the information identified by this project is likely to require a collaborative approach among providers and training institutions, as well as DHBs and Regional Mental Health Networks to support any subsequent training requirements.

Similarly, The Australian Early Intervention Network for Mental Health in Young People (Auseinet) was established in 1997 to co-ordinate a national approach to early intervention for mental health in young people in Australia. The website was developed as a resource to provide electronic access to current and new material and provides a range of mental health promotion information, advice and resource tools. Website statistics indicate visits to the website have remained steady throughout the year to April 2004, with an average of 16 845 visits per month (Auseinet, 2004).

Advances in technology now provide opportunities for global communication, information sharing, education and training possibilities on a scale wider than ever

before. This is an important advancement because it widens the ability of health practitioners to expand their skills and abilities, both within and beyond their specialist area, to consider and, where appropriate, to incorporate international experiences and teachings in their own professions.

5.2 Industrial Change

Over the past two decades mental health has moved from an institution-based service setting to a community-based one. The focus has shifted from containment to recovery, which supports full participation of tangata whaiora in society, protecting rights and helping to create supportive environments as well as community-based interventions and treatment.

Improving access to mental health services has been a major driver behind changes within the mental health sector. Access difficulties to health services, for example, in rural areas are well documented in primary health care services and are also significant in the provision of Māori mental health services (HWAC, 2001; Litchfield, 2002; Ministry of Health, 2002d; Bidwell, 2001; Grimwood & London, 2003). Developing a workforce capable of providing accessible and appropriate primary health care and mental health services will require innovative solutions, including the strengthening of regional networks, to support health workers' clinical and cultural training and development.

5.3 Migration

Migration statistics indicate a consistent pattern of New Zealanders leaving to live overseas, especially in Australia. Around 6% of the New Zealand Māori descent population were living in Australia in the mid-1980s; however, by 1996 over half the number of Māori born overseas were born in Australia.¹⁸ Furthermore, New Zealanders were among the largest group of permanent arrivals in Australia in the mid-1990s, with one in five of those people who had immigrated to Australia being born in New Zealand.¹⁹

¹⁸ Māori in Australia, *Māori* (1996), Retrieved 5 November 2003 from Statistics New Zealand Web Site: <http://www.statistics.govt.nz/domino/external/web/nzstories.nsf>

¹⁹ *Migration levels fall, but New Zealanders defy trend* (1997), 3401.0. Retrieved 5 November, 2003, from Australian Bureau of Statistics Web Site: <http://www.abs.gov.au/Ausstats/abs@.nsf>

Conversely, New Zealand gains people from all over the world. Looking at the skills of those who come and go, the largest gains and losses have been among migrants within professional occupations. In 2001, health “professionals”²⁰ made up almost 35% of both arrivals and departures but only 14% of the resident workforce (Department of Labour, 2003). This reflects the increasing mobility of highly skilled workers, especially professionals, in the global labour market.

International arrivals and departures are a major feature of the New Zealand workforce. With projections of significant falls in the European labour force in coming years, opportunities for New Zealanders to work overseas are likely to expand, and to spread to a wider range of occupations (Salmond, 2003). The increased mobility of many health practitioners as a result of increased funding in some jurisdictions (e.g., in the United Kingdom) together with an international trend towards reduced hours of work (HWAC, 2002b) will need to be considered when developing competitive promotion and retention strategies to develop the Māori mental health workforce further, and in doing so also ensure the mental health sector is in a position to retain qualified, skilled and experienced Māori staff.

Since 1980, the inflow of foreign doctors into New Zealand has been reduced by immigration restrictions. However, it is often perceived to be easier, quicker, less expensive and safer to recruit from overseas to fill large New Zealand health occupational deficits. The associated impact of this on the New Zealand healthcare system is likely to be profound (Salmond, 2003).

What can we expect in the future?

New Zealand’s workforce will become more culturally diverse. In 2001, the composition of New Zealand’s potential workforce (people over 15) was 11.7% Māori, 5.1% Pacific people, 6.7% Asian, and 76.5% European/Pākehā (Department of Labour, 2003). Projections suggest that in 2024 European/Pākehā will make up 67% of the possible workforce, and that the number and proportion of Māori, Pacific and Asian people in the workforce will have increased (ibid).

²⁰ Professionals refers to formally qualified health workers.

Industrial change will have future implications for community-based service provision. Over the last decade, the growth of dedicated Māori service providers has been in line with increases in community-based services and it is likely a sustainable future will require long-term evidence-based strategies to strengthen these initiatives.

What does this mean for the Māori mental health workforce?

The HWAC have documented some of the key impacts of technology, migration and globalisation on the health workforce, which include the following issues:

- cultural appropriateness of service delivery if importing workforce
- labour mobility
- education and training
- electronic-based services
- lack of knowledge about the impact of technology developments will have on the health workforce, and
- lack of infrastructure to up-skill the workforce quickly to harness the opportunities provided by new technology in service delivery, continuing professional education and patient self-management (HWAC, 2002a).

More information and a better understanding of these issues and factors underlying Māori workforce shortages, particularly within specialist roles, will require innovative approaches that capitalise on opportunities presented through changes in these factors.

Projections indicate there will be more Māori, Pacific and Asian people in the economy, both as employees and employers (Department of Labour, 2003). This may mean more non-Māori will be working with tangata whaiora and whānau. There may also be an increase in demand for multicultural mental health services. At present the ability of current mental health services to meet multicultural needs is not clear and will need to be assessed in line with significant ethnic population changes. Such changes are likely to increase the competition for qualified, skilled and experienced mental health staff. More information and planning will be required to minimise the impact of ethnic population changes on the ability of the Māori mental health workforce to improve Māori mental health outcomes.

Projections also indicate that as the Māori population ages, there will be significant numbers of Māori working in mental health services within the 30–49 year age group. Given competition from other industries, the challenge will be to balance the sector to cover the full age range. This will reduce the potential impact of a large retiring group of Māori mental health workers on a young and inexperienced work group.

6. Supportive Environments

Supportive environments encompass the creation and maintenance of health workplace environments outlined by the HWAC, who have prioritised the development of guidelines to encourage healthy workplace environments through:

- organisational performance and sustainability
- workforce diversity to more accurately reflect the demographic makeup of New Zealand, and
- the quality of work life of health practitioners in all settings (HWAC, 2003).

In addition to improvements in these areas, better understanding the factors underlying workplaces where Māori prefer to work is also important. The ongoing development of supportive environments are therefore pivotal in ensuring recruitment and retention strategies are effective and able to contribute to long-term development and growth of the Māori mental health workforce.

Attracting and retaining clinically and culturally competent staff is a priority in delivering quality mental health services to Māori. With sizeable numbers of Māori residing in rural regions, it is important for inclusive local and regional mental health training and development opportunities to enhance learning and the range of services offered in both rural and urban areas.

International retention strategies have incorporated numerous models, including the Magnet Hospital model, which highlights characteristics to recruit and retain nursing staff through the provision of work environments that have: a reputation for quality nursing care and being a good place to work, proactive monitoring of retention and turnover rates, the proportion of Registered Nurses on staff and nurse-to-patient ratios. The principles of the Magnet Hospital model will provide useful information for recruitment and retention strategies within mainstream and dedicated Māori DHB and NGO workplace environments (Carrier, 2001).

6.1 Workplace Environments

Within health services, factors underlying job satisfaction (within clinical working environments) include: work loads, stability, morale, staff numbers in relation to work requirements, work hours, clinical and administrative responsibilities (Mental Health Commission, 1998b). In addition, remuneration, recognition and value of workers will continue to be important points to address in workforce planning. Māori mental health providers must also address these factors if they are to compete for suitably qualified and experienced Māori mental health workers in an already stretched workforce.

Workplace settings and trends indicate choices of work environment and the roles undertaken by Māori within these settings. They also provide some information on factors contributing to the levels in which Māori work in specific roles (for example, senior management, supervisory, social work, nursing and community support work).

As identified earlier in the Māori Employment section on page 30, by reviewing past trends, the support and development mechanisms underlying popular workplace settings can be better understood. These trends provide an opportunity to strengthen workforce recruitment and retention initiatives. Identified trends within workplace settings, occupations and roles are also likely to give indications of education and training uptake linked to personal development opportunities, career planning, remuneration and duration in these roles.

6.2 Recruitment

In general, health workforce recruitment is affected by a number of factors that include: interest by school leavers in health sector careers, recruitment of graduates into the health workforce, and recruitment and re-entry of experienced staff. Difficulties in encouraging practitioners to re-enter the workforce after some time away has been identified as particularly prevalent among nurses (Nursing Council of New Zealand, 2002). Based on the Annual Workforce Survey carried out by the Nurses Council of New Zealand (2000), factors that contribute to nurses and midwives returning to clinical practice were:

- availability of 'return to work' programmes

- provision of child care facilities
- salary increases, and
- more flexible hours of work.

Recruitment issues and initiatives identified in the general health workforce also impact upon retention rates of the Māori mental health workforce. To address key recruitment issues in Māori mental health, initiatives will need to:

- target Māori in secondary and tertiary institutions and provide students and teachers with information on the career options available in mental health
- encourage people working on a voluntary basis in mental health to pursue tertiary qualifications in health
- ensure mainstream health training agencies retain Māori students
- actively encourage young people to train in traditional Māori healing methods
- develop specific workforce plans for Māori, to identify and encourage the recruitment of more professionally qualified Māori staff, and
- develop and implement a recruitment and selection process that actively promotes Māori, with appropriate skills into all levels of mainstream management and decision-making positions.

7. Discussion

Over the last few decades the formation and development of the Māori mental health workforce and mental health policies have evolved amid discussion and debate on the most effective and efficient ways to improve Māori mental health outcomes. This chapter looks at issues related to Māori mental health workforce development, existing strategies, and workforce planning processes aimed at enhancing and sustaining an appropriately skilled Māori mental health workforce.

A number of considerations underlie key issues relating to Māori mental health workforce development and provide a basis for better understanding the issues and the context within which they may be able to be addressed. The questions and issues are complex, and while this report has sought to identify some of the key issues and suggests ways in which they may be addressed, it is clear a collective and timely approach will be required to foster comprehensive long-term solutions. A strategic plan will be needed to build and shape sustainable and innovative future pathways on a national level.

Bringing together and addressing issues that relate to Māori mental health workforce development is a critical part of strengthening current workforce systems and improving the ability of the workforce, now and in the future, to develop and maintain positive mental health outcomes.

Key issues previously identified (HWAC, 2002; Mental Health Commission, 1998; National Mental Health Workforce Development Co-ordinating Committee, 1999) in the development of the Maori mental health workforce include:

- improvement of the mental health status of Māori through:
 - facilitating effective communication and intervention
 - developing appropriate mental health information for Māori communities
 - supporting culturally effective service delivery that lowers barriers to access and encourages the early uptake of service
 - developing health worker leadership roles to provide role models and to aid the community in the destigmatisation of mental illness.

- shortages of Māori mental health workers across a range of occupational roles
- under-representation of Maori in the clinically trained workforce
- lack of dual competency-based training opportunities and support
- distribution of the mental health workforce in relation to tangata whaiora (for example, a lack of specialists working with tamariki and rangatahi)
- need for recruitment and retention of staff
- funding and contract constraints
- inappropriate performance measures
- lack of research and collection of information, and
- confusion over the number of national agencies with a role in mental health workforce development.

7.1 Existing Strategies

Many of the identified issues have been recognised to some extent within new and existing initiatives. The Puahou Plan recommends five interrelated strategies for improving Māori mental health and future development (Durie, 1999). These strategies highlight the importance of: a secure cultural identity through improved access to Māori resources such as land, language and family networks; active Māori participation in society and the economy; alignment of mental health services with primary health care, Māori health services, services for youth; accelerated workforce development; increased autonomy and control (ibid).

Current health policies have started to look at ways to strengthen aspects of these strategies, for example, accelerated workforce development and active Māori participation in society and the economy has been encouraged through He Korowai Oranga, the Māori Health Strategy and education and training initiatives. Te Puāwaitanga, the Māori Mental Health National Strategic Framework, the Blueprint for Mental Health Services in New Zealand and the Alcohol and Other Drug Mental Health Framework (Ministry of Health, 2002a, 2002e; Mental Health Commission, 1998a) have been developed within recent years to progress development within the mental health sector. Monitoring and evaluation processes continue towards identifying the achievement of Blueprint targets. Dedicated resources will be integral to sustainable development, and central to building on past gains and current progress. Future challenges lie in funding and facilitation from a national level, with

collaboration at regional and local levels to ensure effective outcomes can be managed and achieved in a way measurable and meaningful to Māori. Dual competency-based training and education will be needed to support this direction.

7.2 Workforce Planning Processes

Health workforce planning methods either in use internationally or that have been used in the past include:

- workforce to population ratios
- student admissions
- needs-based planning
- demand-based planning
- benchmarking, and
- models of care approach (HWAC, 2002a).

As discussed, forecasting the demand for general health and Māori mental health workforce planning processes is complex. Further information is required to determine the likely size of an increase in demand for the Māori mental health workforce in the future. Demand estimates could be derived by comparing the current prevalence of mental illness in Māori and the outcomes achieved by the current Māori and non-Māori mental health workforce with the projected prevalence and requirements (including shortages and surpluses) of the current Māori mental health workforce to improve or at least equal these outcomes. While this information is currently not available, the Ministry of Health supports the Health Research Council in the development of the Mental Health Research and Development Strategy. A priority area within the strategy is measuring the incidence and prevalence of different mental health problems, which is being conducted through an epidemiological study of the New Zealand population by age group and ethnicity.

7.3 Future Development

The future Māori mental health workforce will encounter many challenges and opportunities that will affect both the wider health workforce and working relationships with other sectors, such as education, housing and employment. A collective approach will be required to meet challenges and maximise future opportunities.

Table 17

Future challenges and opportunities for the Māori mental health workforce

Challenges	Opportunities
Funding and provision of services for Māori	The structure of the Māori population, which will provide opportunities for younger and older Māori to work in Māori mental health
Measurable outcomes	Building on positive Māori participation in the workforce
Relevant data collection and availability of information	Strengthening the capability of mental health providers by increasing the skill-base of Māori working in both mainstream and dedicated Māori mental health services
Incentives to attract and retain the Māori mental health workforce	Using opportunities in primary health care services (including Primary Healthcare Organisation infrastructure and funding) to strengthen the interface with mental health
Sustainable Māori provider development	Expanding the multi-disciplinary team approach, primarily in Māori mental health providers

Inter-sectoral collaboration will continue to be a priority to achieve sustainable gains in Māori health outcomes. On a strategic level, the vision for Māori mental health services will be guided by a number of considerations, which include: reviewing the strategic direction of services, developing scenarios for the future workforce and the consideration of innovative approaches to the future workforce (DHBNZ, 2003). Further considerations include: population-needs analysis, accurate current status information, education and training to ensure quality, and managing the performance and retention of an appropriately trained workforce (HWAC, 2002a). On a wider level, workforce development initiatives undertaken in Māori mental health will need to be connected to Māori health workforce development on a national level, given the

shortage of Māori to fulfil current occupation demands in the general health workforce.

8. Conclusion

This macro-analysis has outlined a number of past trends and future projections for the Māori population, and the implications, challenges and opportunities of these for Māori mental health workforce development. Health workforce issues have been discussed under the key themes of: Evidence-Based Directions, Transferable Skill Base, Responding to Change, and Supportive Environments. These themes are essentially principles that create a foundation for planning future directions, priorities and pathways to strengthen and develop the Māori mental health workforce.

The Discussion chapter outlined some of the questions and issues that will influence Māori mental health workforce development, and highlighted the importance of building on past gains and using future opportunities to strengthen workforce development and planning processes. Key components within the chapter include national consistency in the development, implementation and use of dual competencies, and the commitment of dedicated resources to support Māori mental health workforce development and sustainable Māori provider development. Table 16 outlines a summary by chapter of health workforce issues and likely implications for Māori mental health workforce development.

Future priorities for Māori mental health workforce development will include:

- active recruitment based on improving the skill mix and experience of the workforce while fostering Māori values and enhancing cultural identity
- effective and innovative recruitment strategies to attract Māori students
- positive retention initiatives that support wider work influences
- sustainable development of dedicated Māori DHB and NGO service providers
- increasing training and development opportunities in both clinical and cultural aspects of Māori mental health service delivery
- improving information systems to better facilitate co-ordinated approaches at national, regional and local levels, and
- inter-sectoral collaboration, particularly with the Education, Social Service and Justice sectors.

Māori mental health best practice must be based on the highest international clinical standards, be underpinned by indigenous values and concepts of healing, and be prioritised through dedicated resources for Māori mental health workforce development. The dual benchmarks of clinical and cultural competence recognise the reality within which Māori live in contemporary times and are integral to effectively developing a workforce capable of meeting tangata whaiora and whānau needs. It is therefore essential, particularly within recruitment and retention initiatives that clinical and cultural excellence and a commitment to quality service provision underpin future Māori mental health workforce development.

Table 16

A summary of the Likely Impact of Health Workforce Issues²¹ on the Māori Mental Health Workforce

Chapter	Health workforce issue	Likely impact on Māori mental health workforce
Evidence-Based Directions	Gender	<ul style="list-style-type: none"> - Enhancement of cultural responsiveness and service effectiveness - Recruitment initiatives that reflect the composition of the Māori population
Responding to Change	Globalisation	<ul style="list-style-type: none"> - Competition for specialised Māori mental health workers - Use of non-Māori and overseas specialists working with tangata whaiora and whānau - Competition between service industries
	Technology and its effects	<ul style="list-style-type: none"> - Increased options for training and education - Increased expectation of workers to up-skill
Transferable skill bases	Education	<ul style="list-style-type: none"> - Extended education opportunities - Recruitment opportunities to fill under-represented occupations - Retention and development of existing workers - Further employment opportunities for Māori in the mental health sector - Education opportunities for the wider inter-sectoral workforce - Recruitment difficulties for workers without relevant transferable skills

²¹ As outlined in table 2, these issues were highlighted in the New Zealand Health Workforce: A Stocktake of capacity and issues 2001 (HWAC, 2002a).

Chapter	Health workforce issue	Likely impact on Māori mental health workforce
Supportive Environments	Labour market and the Economy	<ul style="list-style-type: none"> - Mobility within the labour market - The development and use of career pathways - Reflective pay scales - Difficulties retaining Māori mental health workers
	Service delivery developments	<ul style="list-style-type: none"> - Accessible service delivery - Dual clinical and cultural competence and training
	Recruitment and retention of health workers	<ul style="list-style-type: none"> - Promotion of the unique Māori mental health work environment - Incentives and support for all Māori, including tangata whaiora and whānau working in mental health services
	Workplace environment	<ul style="list-style-type: none"> - Workplaces that support workforce training and development needs - Development of sustainable management structures - Development of multi-disciplinary teams in Māori providers

9. References

- Auseinet. (2004). *Usage Statistics for auseinet*. Retrieved 31 May 2004 from Auseinet Web Site: <http://auseinet.flinders.edu.au/website/stats>
- Australian Bureau of Statistics. (1997). *Migration levels fall, but New Zealanders defy trend*, 3401.0. Retrieved 5 November 2003 from Australian Bureau of Statistics Web Site: <http://www.abs.gov.au/Ausstats/abs@.nsf>
- Barnett, J. (1991). Where have all the doctors gone? Changes in the geographic distribution of general practitioners in New Zealand since 1975(3): New Zealand and foreign medical graduates compared, *New Zealand Medical Journal*, 104 (918), 358–360.
- Bidwell, S. (2001). *Successful models of rural health service delivery and community involvement in rural health: International literature review*. Christchurch, New Zealand: Centre for Rural Health.
- Carrier, J. (2001). *The identification of magnet hospitals in the USA – a brief summary*. Retrieved 5 November 2003 from the College of Nurses Aotearoa (NZ) Inc. Web Site: <http://www.nurse.org.nz/Articles/Magnet.html>
- Department of Labour. (2002). WorkINSIGHT, First Edition, November 2002. *The big picture*. Retrieved 15 March 2004 from the Department of Labour website: <http://www.dol.govt.nz/workinsight-01.asp>
- Department of Labour. (2003). *Work trends – how work is changing in New Zealand*. Wellington, New Zealand: Department of Labour.
- de Raad, J. P. (1998). Shaping the health workforce: Why employers need to lead the thinking and decisions in the health labour market. *An Occasional paper, 1, prepared for the Ministry of Health*. Wellington: Ministry of Health.
- District Health Boards New Zealand. (2003). *DHB / DHBNZ Workforce Action Plan*. Wellington, New Zealand: District Health Boards New Zealand.
- Durie, M. H., & Kani, Te K. R. (1997). A framework for measuring Māori mental health outcomes. *A report prepared for the Ministry of Health, Department of Māori Studies*, Palmerston North: Massey University.
- Durie, M. H. (1998). *Whaiora: Māori health development* (2nd ed.). Auckland, New Zealand: Oxford University Press.
- Durie, M. H. (1999). Transcultural psychiatry mental health and Māori development. *Australian and New Zealand Journal of Psychiatry*, 33 (11), 5–13.
- Durie, M. H. (2001). *Mauri Ora: The dynamics of Māori health*. Auckland, New Zealand: Oxford University Press.

- Durie, M. H. (2003). Providing health to indigenous peoples. *British Medical Journal*, 327 (7412), 408–409.
- Dyall, L. (1997). *Key issues for consideration in developing Māori health*. Retrieved 3 December 2003 from the Health Care & Informatics Review website: www.enigma.co.nz/hcro.website.index.cfm.
- Dyall, L. *Rangahau Hauora Hinengaro – Oranga Hinengaro Māori*. Presentation at the Māori mental health summit, Wellington. (28 August 1997).
- Grimwood, S., & London, M. (2003). *The successful design and delivery of rural health services: Facilitating community participation, testing the tool*. Christchurch, New Zealand: Centre for Rural Health.
- Hansen, C. (2003). Strengthening our foundations: The role and workforce development requirements of service-users in the mental health workforce. *Incite*, 2 (1), 33–40.
- Health Workforce Advisory Committee. (2002a). *The New Zealand health workforce: A stocktake of issues and capacity 2001*. Wellington, New Zealand: Health Workforce Advisory Committee.
- Health Workforce Advisory Committee. (2002b). *The New Zealand health workforce: Framing future directions discussion document*. Wellington, New Zealand: Health Workforce Advisory Committee.
- Health Workforce Advisory Committee. (2003). *The New Zealand Health workforce: Future Directions – Recommendations to the Minister of Health 2003*. Wellington, New Zealand: Health Workforce Advisory Committee.
- Hirini, P. R., & Durie, M. H. (2003). *Te Rau Matatini workforce profile*. Palmerston North: Te Rau Matatini.
- Lawson-Te Aho, K. (1997). *A strategic plan for post entry clinical training for Māori, prepared for the Clinical Training Agency*. Wellington: Te Aho Associates.
- Litchfield, M. (2002). *The successful design and delivery of rural health services: The meaning of success*. Christchurch, New Zealand: Centre for Rural Health.
- Maxwell-Crawford, K. M., & Gibbs, R. (2003b). *Te Rau Matatini orientation and preceptoring in Māori mental health*. Palmerston North: Te Rau Matatini.
- Mental Health Commission. (1998a). *Blueprint for mental health services in New Zealand: How things need to be*. Wellington, New Zealand: Author.
- Mental Health Commission. (1998b). *Report of key messages to the Mental Health Commission from hui held February–April 1998*. Wellington, New Zealand: Author.

- Mental Health Commission. (1999). *New Zealand's national mental health strategy: Review of progress 1994–1995*. Wellington, New Zealand: Author.
- Mental Health Commission. (2003). *Report on progress 2001–2002 towards implementing the blueprint for mental health services in New Zealand*. Wellington, New Zealand: Author.
- Ministry of Education. (1998). *Ngā Haeata Mātauranga: Annual report on Māori education 1997/1998 & direction for 1998*. Wellington, New Zealand: Author.
- Ministry of Education. (2002). *Ngā Haeata Mātauranga: Annual report on Māori education 2001/2002 and direction for 2003*. Wellington, New Zealand: Author.
- Ministry of Education. (2003). *Graduates and qualification completions 2001*. Retrieved 18 December 2003 from the Ministry of Education website: <http://www.minedu.govt.nz/printdoc.cfm>
- Minister for Disability Issues. (2001). *The New Zealand disability strategy: Making a world of difference, Whakanui Oranga*. Wellington, New Zealand: Ministry of Health.
- Minister of Health. (2000). *The New Zealand health strategy*. Wellington, New Zealand: Author.
- Minister of Health and Associate Minister of Health. (2002). *He Korowai Oranga, Māori health strategy*. Wellington, New Zealand: Authors.
- Ministry of Health (1999). *Our health, our future – Hauora Pakari, Koiora Roa*. Wellington, New Zealand: Author.
- Ministry of Health. (2001). *New Zealand health strategy, DHB toolkit, mental health: To improve the mental health status of people with severe mental illness*. Wellington, New Zealand: Author.
- Ministry of Health. (2002a). *Te Puāwaitanga Māori mental health national strategic framework*. Wellington, New Zealand: Author.
- Ministry of Health. (2002b). *Health of older people strategy*. Wellington, New Zealand: Author.
- Ministry of Health. (2002d). *Implementing the primary health care strategy in rural New Zealand: A report from the Rural Expert Advisory Group to the Ministry of Health*. Wellington, New Zealand: Author.
- Ministry of Health. (2002e). *Mental health (alcohol and other drugs) Workforce development framework*. Wellington, New Zealand: Author.

- Ministry of Health. (2004). *Clinical training agency strategic intentions 2004–2013*. Wellington, New Zealand: Author.
- Ministry of Social Development. (2002). *Ngā Āhuatanga Noho o te Hunga Pakeke Māori: Living standards of older Māori, A report prepared for the Ministry of Social Development*. Wellington, New Zealand: Author.
- Ministry of Women's Affairs. (2001). *Māori women: Mapping inequalities and pointing the way forward*. Wellington, New Zealand: Author.
- National Mental Health Workforce Development Co-ordinating Committee. (1999). *Developing the mental health workforce: A report of the National Mental Health Workforce Development Co-ordinating Committee*. Wellington, New Zealand: Author.
- New Zealand Institute of Economic Research. (2003). *Māori Economic Development, Te Ōhanga Whanaketanga Māori*. Wellington, New Zealand: Author.
- New Zealand Vice-Chancellor's Committee. (2001). *University graduate destinations*. Wellington, New Zealand: Author.
- Nursing Council of New Zealand. (2002). *Annual workforce survey*. Wellington, New Zealand: Author.
- Peet, K. (2001). *Leadership and the big picture – Inspiring involvement*, Presentation at the National Conference for 2001 International Year of Volunteers.
- Ring, I., & Brown, N. (2003). The health status of indigenous peoples and others. *British Medical Journal*, 323 (7412), 404–405.
- Salmond, G. *Can we plan the health workforce?* Presentation at the Health Services Research Centre, Wellington. (16 October 2003).
- Statistics New Zealand. (1996). *Reference reports Māori (Census 96) 1996 Highlights*. Wellington, New Zealand: Author.
- Statistics New Zealand. (1996). Māori in Australia, *Māori*. Retrieved 5 November 2003 from Statistics New Zealand Web Site:
<http://www.statistics.govt.nz/domino/external/web/nzstories.nsf>
- Statistics New Zealand. (2001). *Population monitor: Future Māori population – Summary of latest trends*. Wellington, New Zealand: Author.
- Statistics New Zealand. (2002a). *2001 census: Māori (2001) – Reference reports*. Wellington, New Zealand: Author.
- Statistics New Zealand (2002b). *Integrated data on student loan borrowers (1997 – 2000)*. Wellington, New Zealand: Author.

- Statistics New Zealand. (2003). *Household labour force survey*. Wellington, New Zealand: Author.
- Takerei, B., & Ehau, N. (1997). The place of research from the point of view of a Māori mental health provider, *Hauora O Te Hinengaro*. Auckland, New Zealand: Health Research Council of New Zealand.
- The WAVE Advisory Board. (2001). *From strategy to reality: The WAVE Project*. Wellington, New Zealand: Author.
- Te Puni Kokiri. (1996). *Ngā Ia O Te Oranga Hinengaro Māori, trends in Māori mental health 1984–1993*. Wellington, New Zealand: Author.
- Te Puni Kokiri. (1998). *Trends in Māori employment, income and expenditure*. Wellington, New Zealand: Author.
- Te Puni Kokiri & Ministry of Women's Affairs. (1999). *Māori women in focus: Titiro hāngai, ka mārama*, Wellington: Te Puni Kokiri.
- Te Puni Kokiri. (2000). *Tikanga Oranga Hauora*. Wellington, New Zealand: Author.
- Te Puni Kokiri. (2002). *Ngā Tāne Māori – Māori men*. Wellington, New Zealand: Author.
- Turia, T. *Māori community health and whānau ora*, Presentation at the Karangaora Graduation Ceremony, Parihaka. (1 August 2003).