7 MENTAL HEALTH: PSYCHIATRIC DISORDER AND SUICIDE

Joanne Baxter

Key points

- In 2003/04, Te Rau Hinengaro, the New Zealand Mental Health Survey showed that just over half of Māori had experienced a mental disorder during their lifetime, and just under a third within the past 12 months.
- The most common lifetime disorders for Māori were anxiety (31.3%), substance (26.5%) and mood (24.3%) disorders.
- Mental disorders for Māori were more common in those aged 16 to 24 and 25 to 44 years, those living in low income households and those living in areas of higher deprivation. There were no differences in rates by region or rurality.
- Māori had higher overall rates of disorder and higher rates of serious disorders than Pacific people and non-Māori non-Pacific people.
- Contact with health services for mental health needs was low for Māori relative to need. Only half of those with a serious disorder in the previous 12 months had any contact with mental health services (compared with two-thirds of non-Māori). General practice was the leading source of service contact.
- In 2003–2005 the leading causes of hospitalisation for mental disorder among Māori were schizophrenia followed by bipolar disorder (more than half).
- Māori age-sex-standardised rates of hospitalisation for mental disorder were 80% higher than those of non-Māori.
- Māori were less likely than non-Māori to be hospitalised for depressive, personality and eating disorders, but over 3.5 times more likely for schizophrenia and 2.4 times more likely to be hospitalised for bipolar disorder.
- In 2000–2004 suicide mortality was highest among Māori aged 15–24 and 25–44 years.
- Māori aged 15–24 years were two times more likely to die by suicide than non-Māori, and 1.5 times more likely than non-Māori at ages 25–44 years.
- Suicide rates among Māori in older age groups were lower than rates for non-Māori.

Introduction

Over the 1990s a growing awareness of mental health as an important health issue for Māori was evident (Pōmare et al 1995; Dyall 1997; Durie 1999). Concerns regarding mental health were reflected in commentary from the Māori Health Commission: “There is a crisis in Māori Mental Health of unprecedented proportions” (Māori Health

Commission 1998, p. 14), and the Mental Health Commission who stated "mental illness is now the number one health concern for Māori" (Mental Health Commission 1998, p. vii). Alongside these concerns there was a call for more information on Māori mental health (Dyall 1997; Baxter 1998). *Hauora: Māori Standards of Health III* stated that "a comprehensive review of Māori mental health is necessary" (Pōmare et al 1995, p. 161).

Recognition of Māori mental health need occurred alongside a raised awareness of the need to address mental health as a health issue. Inquiries into forensic psychiatric services and the growth of community based mental health care have led to changes in both where and how mental health services are delivered. Within New Zealand health policy stated priorities include the reduction of suicide and the reduction of alcohol- and drug-related harm (Minister of Health 2000).

In response to mental health need, the Mental Health Commission described a need for more and better mental health services including services for young people, early intervention services, and mental health workforce development (Mental Health Commission 1998). Alongside these policies the development of Māori mental health services and Māori mental health workforce initiatives occurred. Thus the 1990s could be seen as a time of mental health development, including development of Māori mental health initiatives and services in response to identified need.

Within this chapter we review literature on Māori mental health and update current knowledge about Māori hospitalisation for mental disorders, with analysis of hospitalisation data and suicide mortality data. The aim is to provide a picture of the status of Māori mental health based on recent data.

This chapter is divided into four sections. Firstly, there is a review of the evidence for mental health in Māori and disparities in mental health outcomes from an epidemiology perspective based on published reports and research. Secondly, there is an analysis of hospitalisation patterns and rates for mental disorders, firstly within Māori (e.g., by age and gender) followed by comparisons with non-Māori for data from 2003 to 2005. Thirdly, analysis of suicide mortality is presented for the years 2000 to 2004. Finally, a discussion covering key issues concludes the chapter.

A limitation of this chapter is a lack of commentary on Māori mental wellbeing. Although it is beyond the chapter's scope to fully address mental wellbeing this does not reduce the importance of broader concepts. Using broader definitions Māori over-representation in terms of socioeconomic disadvantage, and experience of high imprisonment rates, may be considered as indicators of mental health needs. Factors including the impact of colonisation and its consequences on Māori mental health, and access to tikanga and te reo have been considered by Māori health commentators as influencing mental health (Dyall 1997). The impact of racism or discrimination, access to and effectiveness of services are also described as having an impact on Māori health outcomes.

Māori mental health – a review of the evidence

Until recently, much of the information available about Māori mental health has been based on analyses of routinely collected health sector data. Community-based research or research investigating mental wellbeing has been less available. However, recently the release of Te Rau Hinengaro, the New Zealand Mental Health Survey, has provided information on mental health at a population level (Oakley Browne et al 2006a). The following is a summary of some key findings from a range of sources.

Health sector data

Analyses of hospitalisation data for psychiatric disorder

In the 1990s there were several reports describing Māori mental health based on hospital data. *Hauora: Māori Standards of Health III* (Pōmare et al 1995) found Māori rates of admission for psychiatric disorder increased markedly from 1970 to 1991. Alcohol disorders were the leading reason for mental health admission for Māori and non-Māori men and the second leading cause for Māori women. Authors noted Māori were likely to access mental health services at a later stage and were more seriously ill when help was obtained than non-Māori.

Two reports released by Te Puni Kōkiri (1993, 1996), the most recent spanning 1984 to 1993, described patterns of mental disorder hospitalisation by ethnicity and trends across time. An increase in the rate of Māori hospitalisation (both first admission and readmission) was also found while rates of hospitalisations for non-Māori fell (Te Puni Kōkiri 1996). Rates of hospitalisation were greater for both Māori men and women when compared with Pākehā men and women and for both first and subsequent re-admissions. This picture was more marked for psychotic illness. Māori were more likely to enter hospital via court and justice means and also to be hospitalised within forensic or secure units than Pākehā.

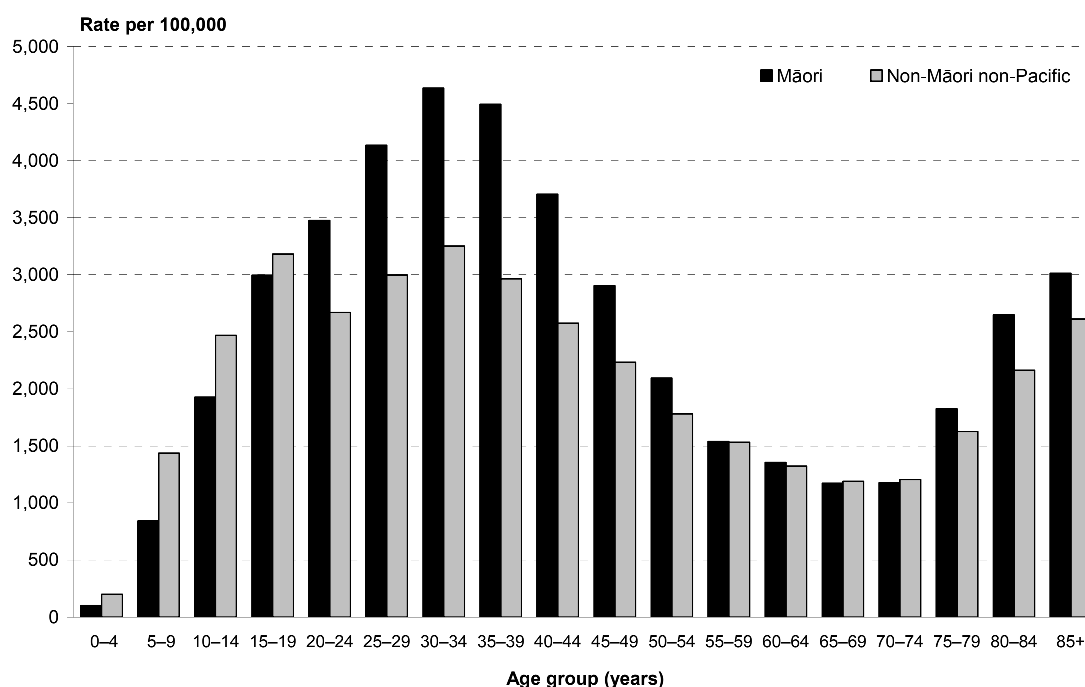
In summary, analyses of mental disorder hospitalisations over the 1980s and early 1990s show an increasing rate of hospitalisation in Māori, particularly for psychotic illness. Findings indicate growing disparities between Māori and non-Māori.

Other secondary care data – the Mental Health Information National Collection

More recently (since 2001), the Mental Health Information National Collection (MHINC) has reported on data collected from District Health Board (DHB) Mental Health Services. MHINC includes not only hospitalisation data but also data from outpatient settings, alcohol and drug services, early intervention services, child and youth specialty services, and kaupapa Māori services. MHINC does not include primary care or non-governmental organisations.

In the publication of MHINC data for 2003 there were a total of 14,909 Māori individuals seen within DHB mental health services, comprising 17.2% of the clients (New Zealand Health Information Service 2006).

Figure 7.1: Māori/non-Māori age-specific rates of clients seen within DHB secondary care mental health services, 2003



Source: MHINC data from New Zealand Health Information Service 2006

Figure 7.1 shows the age-specific rates of service contact among Māori and non-Māori individuals across DHB services. Māori rates of service contact are higher among adults aged 20 to 54 years and 75 years and older. However, Māori rates of service contact are lower in those aged under 20 years and in other adult ages (New Zealand Health Information Service 2006). In the ages between 25 and 39 years age-specific rates for Māori were greater than 4,000 per 100,000, i.e., over 1 in every 25 Māori people in these ages had contact with DHB mental health services.

Mental health in primary care settings

The Mental Health and General Practice Investigation study (MaGPIe) measured mental disorders in people attending primary health care. Researchers found Māori, and particularly Māori women general practice attendees, had higher rates of mental disorder than non-Māori. Māori had higher rates of anxiety, depression, and substance abuse. Symptoms among Māori were also considered more severe. Findings were not explained by Māori/non-Māori differences in age and socioeconomic status (MaGPIe Research Group 2001, 2003, 2005).

Mental health from a community setting

Hospitalisation data is not an accurate measure of mental disorders within a population, and levels of hospitalisation are impacted upon not just by the prevalence of mental disorders but also by access to health services including primary care services and early detection services, and by the effectiveness of those services. There

are a number of surveys and research projects that provide some indication of Māori mental health from a population perspective.

Te Rau Hinengaro, the New Zealand Mental Health Survey

Te Rau Hinengaro, the New Zealand Mental Health Survey, was undertaken in 2003/2004 by a team of researchers, including Māori researchers. The survey studied over 12,000 New Zealanders including 2,595 Māori and had a number of objectives, including to describe the prevalence of mental disorders and patterns of health service use for adults (16 years and over) among the total New Zealand population, among Māori, and among Pacific people (Baxter et al 2006a, 2006b; Beautrais et al 2006; Oakley Browne et al 2006a, 2006b; Wells et al 2006). The survey report includes a chapter on Māori (Baxter et al 2006c) and published papers also present findings related to Māori (Baxter et al 2006a, 2006b). A selection of findings is described here and the survey report contains fuller findings (Oakley Browne et al 2006a).

The survey found that mental disorders were common among Māori and had been experienced by just over half of Māori (50.7%) in their lives until the time of interview, and by just under one in three Māori (29.5%) in the past 12 months. The most common mental disorders experienced by Māori over their lifetime were anxiety disorders, experienced by in one in three (31.3%). Substance disorders (alcohol or drug disorders) and mood disorders had been experienced by one in four Māori (26.5% and 24.3% respectively).

Co-morbidity (having two or more disorders) was common and among Māori with any disorder in the past 12 months just under half (44.5%) had two or more disorders. In addition, many Māori with disorders in the past 12 months were considered to have serious disorders (29.6%) or disorders of moderate severity (42.6%).

The prevalence of mental disorders differed by gender and by age. One in four Māori males (24.8%) and one in three Māori females (33.6%) experienced at least one disorder in the previous 12 months. With regards to age, disorders were most common in those aged 16 to 24 years (33.2%) and 25 to 44 years (32.9%). Older Māori were less likely to experience disorders, with 23.7% of those aged 45 to 64 years and 7.9% of Māori aged 65 years and older with a 12-month disorder. Rates differed also by socioeconomic status, with higher rates of disorder among those living in low income households and those living in areas of higher deprivation. Rates did not differ by geography, with no significant differences between Māori based on whether they lived in rural and urban areas, or between geographical region of home.

Despite high prevalence found, contact with services for mental health needs was low. Of those Māori with a mental disorder in the previous 12 months, fewer than one in three had any contact with services to meet mental health needs. Of those Māori who had a serious disorder (12 months), only half had any contact with services to meet mental health needs. General practice was the service seen most by Māori with mental disorders.

Ethnic disparities were evident and Māori had higher rates of disorder overall, higher rates of specific disorders and of serious disorders when compared with Pacific people and when compared with non-Māori non-Pacific people.

The New Zealand Health Survey

The New Zealand Health Survey 2002/03 (Ministry of Health 2004) interviewed 12,929 New Zealanders aged 15 years and over. It included 4,369 Māori. The study found 2.2% of Māori males had a known mental disorder and this was very similar to the total male rate in the survey (2.1%). Among Māori females, rates of known mental disorder (1.8%) were lower than for females overall (3.2%). Within the same survey Māori females scored lower than non-Māori females on many measures of self-reported health using the SF-36, including dimensions of emotional and mental health. These findings indicate that Māori women self-reported poorer mental health. However, this was not reflected in the likelihood of their having had a mental health problem recognised within a health care setting.

Other research

The Christchurch Health and Development Study (CHDS), a Christchurch based birth cohort study, found 55% of Māori at age 18 years experienced at least one mental disorder within the previous three years, compared with 41% of non-Māori (Horwood and Fergusson 1998).

The New Zealand National Prison Study 1997/98 measured mental disorders among over 12,000 inmates, almost half of whom (48.4%) were Māori. The study found high levels of mental disorders among all inmates, Māori and non-Māori (Brinded et al 2001; Simpson et al 2003). Most inmates had a mental disorder diagnosis and 6–8% had a schizophrenic disorder in their lifetime. When Māori were compared with Pacific and European/Other ethnicities no differences in the prevalences of individual mental disorders was found (Simpson et al 2003). Researchers did find that Māori and Pacific inmates with mental disorders were less likely to have received treatment (past or current) than European/Other inmates.

Suicide

Considerable concern was raised in the 1980s and 1990s about increasing rates of suicide among the young and Māori. Before the 1980s Māori suicide rates were lower than those for non-Māori. However, Māori rates increased markedly over the 1980s and 1990s, and disparities between Māori and non-Māori have emerged, particularly among the young. Analysis of the 2002/03 New Zealand Child and Youth Mortality Database showed Māori mortality for suicide in those aged 15–24 years as twice the rate for non-Māori in this age group (31.8 per 100,000 population compared with 14.4 per 100,000) (Sargent and Baxter 2005).

Summary

Analyses of hospitalisation data over recent decades indicate an increase in hospitalisation for mental disorder among Māori, and analyses of mortality data shows increased rates of Māori suicide, particularly among young adults, over the past decades. Disparities between Māori and non-Māori in both hospitalisation for mental disorders and death due to suicide have become apparent.

Recent population-based research indicates that the more common mental health problems such as anxiety, mood and substance disorders are also common among Māori, with disparities evident when compared with non-Māori, including for levels of co-morbidity and serious disorder. Despite this, evidence suggests that there is low Māori service contact for mental health need at a community level.

In putting the two together, it appears Māori have high levels of hospitalisation but relatively low contact with community and primary care services for mental health needs.

Mental disorder hospitalisations

What this analysis shows

Data sources and methods for overall data analysis are reported in Appendix 1. The section below briefly describes issues particular to this chapter on mental health.

Analysis of hospitalisation data for diagnoses of mental disorders is one indicator of mental health need. This analysis describes rates and patterns of hospitalisation for mental disorders based on ICD-10 coded diagnoses on discharge from hospital. The findings are presented for the years 2003 to 2005. The following analyses have been undertaken:

a) Within Māori analysis: Rates of hospitalisation for mental disorder overall, trends over time, rates by gender and age-group, and rates by cause by gender.

b) Māori and non-Māori comparisons describing disparities.

Hospitalisation for mental disorders – 'within Māori' analysis

Mental disorders constitute an important reason for hospitalisation for Māori. Over the period of analysis (2003–2005), there were 12,376 hospitalisations among Māori for diagnoses of mental disorders.

The following tables show findings for analysis of data for mental disorder hospitalisations for the time period from 2003–2005, firstly for total diagnosis (age-sex-standardised), and then by gender (age-standardised) for diagnoses. Age-specific rates for combined diagnoses are also provided.

Table 7.1: Māori hospitalisations for mental disorders by sex and by age group, 2003–2005

		Total number of hospitalisations	Rate (95% CI)
Total		12,376	658.1 (645.9–670.5)
Age group	5–14 years	274	62.7 (55.4–70.9)
	15–24 years	3,053	913.1 (878.4–949.2)
	25–44 years	6,542	1,241.0 (1208.8–1274.1)
	45–64 years	2,019	751.1 (717.5–786.3)
	65 years and over	457	642.9 (582.9–709.1)

Notes: Rates are calculated per 100,000; rates for total and 65 years and over were age-sex-standardised to the 2001 Māori population.

Table 7.2: Māori mental disorder hospitalisations by sex and by age group, 2003–2005

Age group	Māori females		Māori males	
	Total number of hospitalisations	Rate (95% CI)	Total number of hospitalisations	Rate (95% CI)
All ages	5,630	570.8 (555.3–586.7)	6,746	745.4 (726.8–764.5)
5–14 years	131	61.8 (51.8–73.8)	143	63.5 (53.6–75.3)
15–24 years	1,080	644.4 (605.3–686.1)	1,973	1,182.9 (1,128.4–1,240.2)
25–44 years	2,985	1,080.7 (1,040.7–1,122.3)	3,557	1,417.4 (1,368.9–1,467.6)
45–64 years	1,141	820.9 (772.8–871.9)	877	675.5 (630.7–723.5)
65 years and over	283	726.1 (641.5–821.8)	173	559.7 (478.1–655.3)

Notes: Rates are calculated per 100,000; rates for 'all ages' and ages 65 years and over were age-standardised to the 2001 Māori population.

Among age groups the highest rate of hospitalisation among Māori was in those aged 25–44 years, where findings show an average hospitalisation rate equivalent to 1.2 in every 100 Māori (1,241/100,000). This is followed by Māori aged 15–24 years, with an average hospitalisation rate for mental disorder of just under 1 in every 100 (Table 7.1).

Table 7.2 shows that rates of hospitalisation for Māori men were 30% higher than for Māori women. When comparing Māori males with Māori females, Māori males had higher rates in each age-group up until 44 years. However, Māori female rates were higher than Māori males among those aged 45 onwards. For both Māori males and females, rates were highest among the 25–44 year age group, with just over 1 hospitalisation for every 100 Māori females and just under 1.5 hospitalisations for every 100 Māori males in this age-group.

Table 7.3: Leading causes of Māori hospitalisations for mental disorders, 2003–2005

Disorder	Number of hospitalisations	Rate (95% CI)
Schizophrenia, schizotypal and delusional disorders	5,924	319.6 (311.1–328.2)
Manic episode and bipolar affective disorder	1,996	103.5 (98.9–108.3)
Substance use disorders	1,309	70.2 (66.3–74.2)
Anxiety and stress-related disorders	1,126	59.3 (55.8 – 63.0)
Depressive episode, persistent mood disorders	933	48.9 (45.7–52.2)
Organic disorders	532	26.9 (24.6–29.4)
Personality and behavioural disorders	262	13.9 (12.2–15.7)

Note: Rates are calculated per 100,000 and were age-sex-standardised to the 2001 Māori population.

Table 7.4: Māori hospitalisations for mental disorders by sex and cause of hospitalisation, 2003–2005

Disorder	Female Rate (95% CI)	Male Rate (95% CI)
Schizophrenia, schizotypal and delusional disorders	222.4 (212.9–232.3)	416.7 (402.9–430.9)
Manic episode and bipolar affective disorder	121.3 (114.4–128.5)	85.7 (79.8–92.2)
Substance use disorders	58.7 (53.9–63.9)	81.7 (75.8–88.0)
Anxiety and stress-related disorders	62.5 (57.6–67.8)	56.1 (51.3–61.3)
Depressive episode, persistent mood disorders	56.8 (52.1–61.8)	41.0 (36.9–45.5)
Organic disorders	21.3 (18.6–24.4)	32.6 (29.0–36.7)
Personality and behavioural disorders	17.0 (14.5–19.9)	10.7 (8.7–13.1)

Note: Rates are calculated per 100,000 and were age-standardised to the 2001 Māori population.

Table 7.3 shows the seven leading causes of hospitalisation in Māori. Other causes not shown on this table include eating disorders and intellectual disability, where numbers and rates were lower. These are presented in the Māori/non-Māori tables below.

The leading causes of mental disorder hospitalisations were for schizophrenia followed by bipolar disorder. Hospitalisations for these causes comprised well over half of all mental disorder hospitalisations among Māori.

Table 7.4 shows causes of hospitalisation in Māori males and Māori females. For both males and females the leading causes of hospitalisation are schizophrenia followed by bipolar disorders. The pattern of disorders differs between Māori males and Māori females. Māori female rates are higher than Māori male for bipolar disorders, mood disorders, anxiety and stress related disorders, and for personality disorders. Māori male hospitalisation rates are higher for schizophrenia, substance use disorders, and organic disorders.

Hospitalisations for mental disorder – Māori and non-Māori

Figure 7.2: Māori and non-Māori hospitalisations for mental disorders (age-sex-standardised rates), 2000–2005

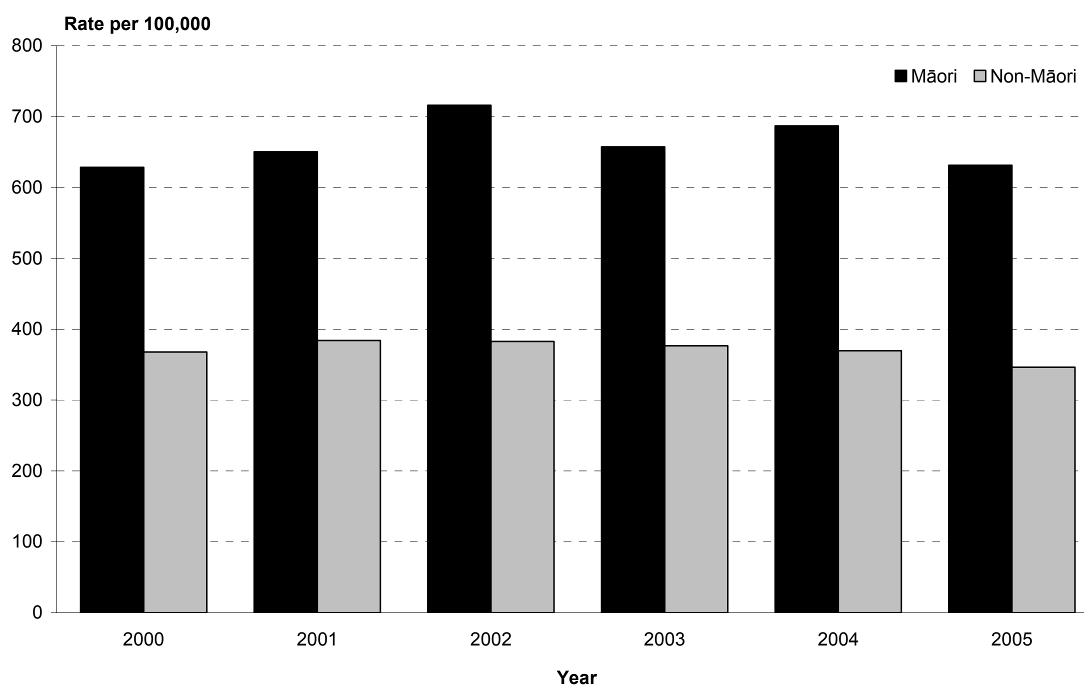


Figure 7.2 shows that for Māori and non-Māori there was very little change in overall hospitalisation rates for mental disorders between 2000 and 2005, with persistent disparity between rates of hospitalisation for Māori when compared with non-Māori.

Table 7.5: Māori and non-Māori hospitalisations for mental disorders by sex and by age-group, 2003–2005

	Māori		Non-Māori		Rate ratio (95% CI)
	Total number of hospital admissions	Rate (95% CI)	Total number of hospital admissions	Rate (95% CI)	
Total	12,376	658.1 (645.9–670.5)	49,373	364.0 (359.1–368.9)	1.81 (1.77–1.85)
Sex					
Female	5,630	570.8 (555.3–586.7)	27,062	379.2 (372.5–386.0)	1.51 (1.46–1.56)
Male	6,746	745.4 (726.8–764.5)	22,311	348.7 (341.7–356.0)	2.14 (2.07–2.21)
Age group					
5–14 years	274	62.7 (55.4–70.9)	1,049	76.6 (71.1–82.6)	0.82 (0.71–0.95)
15–24 years	3,053	913.1 (878.4–949.2)	6,881	483.8 (468.0–500.2)	1.89 (1.79–1.99)
25–44 years	6,542	1241.0 (1208.8–1274.1)	17,955	605.5 (593.8–617.5)	2.05 (1.98–2.12)
45–64 years	2,019	751.1 (717.5–786.3)	12,014	472.9 (463.2–482.8)	1.59 (1.51–1.67)
65 years and over	457	642.9 (582.9–709.1)	11,349	625.2 (611.1–639.8)	1.03 (0.93–1.14)

Notes: Rates are calculated per 100,000; rates for 'all-ages' and ages 65 years and over were age-sex-standardised to the 2001 Māori population.

This table shows that overall Māori rates of hospitalisation for mental disorder between 2003 and 2005 were 1.8 times higher than for non-Māori. Other findings include:

- for gender:
  - overall, Māori males had the highest rates of hospitalisations
  - Māori male rates were 2.2 times non-Māori male rates and Māori female rates were 1.5 times higher than non-Māori females
  - patterns differed between Māori and non-Māori – whereas Māori males had higher rates than Māori females, non-Māori females had rates that were slightly higher than non-Māori males
- for age group:
  - Māori rates were higher than non-Māori rates, apart from those aged 5 to 14 years, where Māori rates were lower, and 65 years and over, where Māori rates were similar
  - the age group of greatest disparity was 25–44 years, with Māori rates double those of non-Māori
  - rates for Māori aged 15–24 years were 90% higher than for non-Māori in this age group and rates for Māori aged 45–64 years were 60% higher

Table 7.6: Māori and non-Māori hospitalisations for mental disorder diagnostic groups, 2003–2005

Disorder	Māori rate (95% CI)	Non-Māori rate (95% CI)	Rate ratio (95% CI)
Schizophrenia, schizotypal and delusional disorder	319.6 (311.1–328.2)	91.0 (88.2–94.0)	3.51 (3.37–3.66)
Manic episode and bipolar affective disorder	103.5 (98.9–108.3)	42.9 (41.3–44.6)	2.41 (2.27–2.56)
Substance use disorders	70.2 (66.3–74.2)	55.0 (53.2–56.9)	1.28 (1.20–1.36)
Anxiety and stress related disorders	59.3 (55.8–63.0)	50.1 (48.4–51.8)	1.18 (1.11–1.27)
Depressive episode, persistent mood disorders	48.9 (45.7–52.2)	61.9 (60.2–63.6)	0.79 (0.73–0.85)
Organic disorders	26.9 (24.6–29.4)	19.2 (18.4–20.1)	1.40 (1.27–1.55)
Personality disorders	13.9 (12.2–15.7)	21.8 (20.8–22.9)	0.64 (0.56–0.73)
Other mental and behavioural disorders	9.4 (8.1–11.0)	9.8 (8.9–10.8)	0.96 (0.80–1.15)
Intellectual disability	3.3 (2.5–4.2)	2.5 (2.1–2.9)	1.32 (0.97–1.78)
Other mood (affective) disorders	2.0 (1.4–2.8)	1.4 (1.1–1.7)	1.44 (0.97–2.13)
Eating disorders	1.2 (0.8–1.9)	8.3 (7.6–9.1)	0.15 (0.10–0.23)

Note: Rates are calculated per 100,000 and were age-sex-standardised to the 2001 Māori population.

Table 7.6 shows that:

- Māori rates of hospitalisation were higher than non-Māori for all causes apart from depressive disorders, personality disorders and eating disorders, where Māori rates were lower, and for 'Other' disorders, where rates were similar
- disparities were greatest for schizophrenia and bipolar disorder. Māori were over 3.5 times more likely to be hospitalised for schizophrenia and related illness, and

2.4 times more likely to be hospitalised for bipolar disorder when compared with non-Māori.

Table 7.7: Māori and non-Māori hospitalisations for mental disorder diagnostic groups, 2003–2005, females

Disorder	Māori rate (95% CI)	Non-Māori rate (95% CI)	Rate ratio (95% CI)
Schizophrenia, schizotypal and delusional disorder	222.4 (212.9–232.3)	62.3 (59.1–65.7)	3.57 (3.33–3.82)
Manic episode and bipolar affective disorder	121.3 (114.4–128.5)	48.7 (46.3–51.1)	2.49 (2.31–2.69)
Anxiety and stress related disorders	62.5 (57.6–67.8)	62.8 (60.2–65.5)	1.00 (0.91–1.09)
Substance use disorders	58.7 (53.9–63.9)	45.8 (43.4–48.3)	1.28 (1.16–1.42)
Depressive episode, persistent mood disorders	56.8 (52.1–61.8)	81.3 (78.6–84.1)	0.70 (0.64–0.77)
Organic disorders	21.3 (18.6–24.4)	16.8 (15.7–18.0)	1.27 (1.09–1.47)
Personality disorders	17.0 (14.5–19.9)	36.7 (34.9–38.6)	0.46 (0.39–0.55)
Other mental and behavioural disorders	5.0 (3.7–6.8)	5.5 (4.6–6.6)	0.91 (0.65–1.30)
Intellectual disability	1.2 (0.7–2.2)	1.8 (1.4–2.3)	0.68 (0.36–1.29)
Other mood (affective) disorders	2.3 (1.5–3.5)	1.6 (1.2–2.1)	1.40 (0.84–2.34)
Eating disorders	2.4 (1.5–3.7)	15.9 (14.6–17.4)	0.15 (0.09–0.23)

Note: Rates are calculated per 100,000 and were age-standardised to the 2001 Māori population.

Table 7.7 shows:

- for Māori women the three most common reasons for hospitalisation were schizophrenia, bipolar disorder, and anxiety and stress related disorders. For non-Māori women the pattern is different, with depressive episodes being the most common diagnosis.
- Māori women were significantly more likely to be hospitalised for many diagnoses, however rates of hospitalisation among Māori women were lower for depressive disorders, personality disorders, and eating disorders. Rates were similar for substance use disorders.
- Māori women were almost 3.6 times more likely to be hospitalised for schizophrenia and related illness, and 2.5 times more likely to be hospitalised for bipolar disorder than non-Māori women.

Table 7.8: Māori and non-Māori hospitalisations for mental disorder diagnostic groups, 2003–2005, males

Disorder	Māori rate (95% CI)	Non-Māori rate (95% CI)	Rate ratio (95% CI)
Schizophrenia, schizotypal and delusional disorder	416.7 (402.9–430.9)	119.7 (115.0–124.6)	3.48 (3.30–3.67)
Manic episode and bipolar affective disorder	85.7 (79.8–92.2)	37.2 (35.1–39.5)	2.30 (2.10–2.53)
Substance use disorders	81.7 (75.8–88.0)	64.2 (61.4–67.0)	1.27 (1.17–1.39)
Anxiety and stress related disorders	56.1 (51.3–61.3)	37.4 (35.2–39.6)	1.50 (1.35–1.67)
Depressive episode, persistent mood disorders	41.0 (36.9–45.5)	42.5 (40.5–44.6)	0.96 (0.86–1.08)
Organic disorders	32.6 (29.0–36.7)	21.6 (20.3–23.0)	1.51 (1.32–1.72)
Personality disorders	10.7 (8.7–13.1)	6.9 (6.1–8.0)	1.54 (1.21–1.97)
Other mental and behavioural disorders	13.8 (11.6–16.5)	14.1 (12.6–15.8)	0.98 (0.79–1.21)
Intellectual disability	5.3 (4.0–7.1)	3.2 (2.6–3.9)	1.68 (1.18–2.39)
Other mood (affective) disorders	1.7 (1.0–2.9)	1.2 (0.8–1.6)	1.50 (0.82–2.72)
Eating disorders	0.1 (0.0–0.8)	0.7 (0.5–1.1)	0.16 (0.02–1.22)

Note: Rates are calculated per 100,000 and were age-standardised to the 2001 Māori population.

This table shows:

- for Māori men, the two most common reasons for hospitalisation were schizophrenia, and bipolar disorders. For non-Māori men they were schizophrenia and substance use disorders. Substance use disorders was the third most common reason for hospitalisation for Māori men, compared with depressive disorders for non-Māori men
- Māori men were significantly more likely to be diagnosed for most diagnoses. In particular, Māori men were 3.5 times more likely to be hospitalised for schizophrenia and related illness, and 2.3 times more likely to be hospitalised for bipolar disorder than non-Māori men. Māori men were around 1.5 times more likely to be hospitalised for personality disorders, stress related disorders, intellectual disability, and other mood disorders.

Suicide mortality in Māori and non-Māori

The following table (Table 7.9) shows findings for suicides from 2000–2004 in Māori and non-Māori and presented by gender and by age group. The table shows that overall Māori suicide rates were 1.5 times higher than non-Māori.

With regards to gender:

- Māori males had the highest suicide rates followed by non-Māori males, Māori females, and non-Māori females
- Māori males and Māori females were around 1.5 times more likely to die by suicide than their non-Māori counterparts.

With regards to age group:

- for both Māori and non-Māori, rates of suicide are highest amongst those aged 15–24 and 25–44 years

- although numbers are small among those aged 5–14 years, this is the age of greatest disparity between Māori and non-Māori with Māori children being four times more likely to die due to suicide than non-Māori children
- Māori aged 15–24 years are two times more likely to die by suicide and Māori aged 25–44 years are 1.5 times more likely to die by suicide than non-Māori in corresponding age groups
- suicide rates among Māori in older age groups are lower than rates for non-Māori in corresponding age groups
- there are variations in the relative differences in suicide mortality by age-group when Māori and non-Māori are compared. Whereas young Māori (15 to 24 years) are 5.6 times more likely to die due to suicide than Māori aged over 65 years this contrasts with non-Māori, where those aged 15–24 years are 1.3 times more likely to die by suicide compared with non-Māori older adults (65 years +).

Table 7.9: Māori and non-Māori deaths from suicide by sex and by age-group, 2000–2004

	Māori		Non-Māori		Rate ratio (95% CI)
	Number	Rate (95% CI)	Number	Rate (95% CI)	
Both sexes					
Total	**437**	**14.8 (13.5–16.2)**	**2,004**	**10.0 (9.5–10.4)**	**1.49 (1.34–1.65)**
5–14 years	10	1.4 (0.8–2.6)	8	0.4 (0.2–0.7)	4.00 (1.58–10.13)
15–24 years	162	30.5 (26.2–35.6)	348	15.5 (14.0–17.2)	1.97 (1.63–2.37)
25–44 years	223	26.1 (22.9–29.7)	849	17.2 (16.1–18.4)	1.52 (1.31–1.76)
45–64 years	37	9.0 (6.6–12.5)	525	13.1 (12.0–14.3)	0.69 (0.50–0.96)
65 years and over	5	5.3 (2.2–12.7)	274	12.3 (10.8–14.0)	0.44 (0.18–1.04)
Female					
Total	**101**	**6.5 (5.4–7.9)**	**467**	**4.5 (4.1–5.0)**	**1.44 (1.16–1.79)**
5–14 years	3	0.9 (0.3–2.7)	3	0.3 (0.1–0.8)	3.19 (0.64–15.79)
15–24 years	47	17.6 (13.2–23.4)	82	7.5 (6.0–9.3)	2.36 (1.65–3.37)
25–44 years	45	10.0 (7.5–13.4)	184	7.2 (6.3–8.4)	1.39 (1.00–1.92)
45–64 years	6	2.8 (1.3–6.3)	135	6.7 (5.6–7.9)	0.43 (0.19–0.97)
65 years and over	0	–	63	4.8 (3.7-6.5)	–
Male					
Total	**336**	**23.0 (20.7–25.6)**	**1,537**	**15.4 (14.6–16.2)**	**1.50 (1.33–1.69)**
5–14 years	7	1.9 (0.9–4.0)	5	0.4 (0.2–1.0)	4.49 (1.43–14.15)
15–24 years	115	43.6 (36.3–52.3)	266	23.2 (20.6–26.2)	1.88 (1.51–2.33)
25–44 years	178	43.8 (37.8–50.7)	665	27.7 (25.7–29.9)	1.58 (1.34–1.87)
45–64 years	31	15.6 (11.0–22.2)	390	19.6 (17.7–21.6)	0.80 (0.55–1.15)
65 years and over	5	10.6 (4.4–25.5)	211	19.8 (17.1–22.9)	0.54 (0.22–1.30)

Notes: Rates are calculated per 100,000; rates for 'all ages' and for 65 years and over were age-sex-standardised to the 2001 Maori population.

Summary

This updated analysis of recent rates of hospitalisation (from 2003 to 2005) and mortality due to suicide (from 2000 to 2004) reinforces concerns raised in previous analyses. Hospitalisation analysis continues to show high rates of hospitalisation for

schizophrenia and bipolar disorder, in particular among both Māori men and women. There is considerable disparity evident in males and females and across most age-groups but particularly among those aged 25–44 years and those aged 15–24 years. Analysis of suicide data is consistent with these patterns, with high relative rates in those aged under 45 years andparticularly in children and Māori aged 15 to 24 years.

Discussion

Commentary, data analyses, and research describing mental health, mental disorders, and suicide among Māori highlight the increasing level of concern about Māori mental health over recent decades. The need to remain concerned is reinforced by recent research and data analyses. Findings from Te Rau Hinengaro, the first survey to measure the prevalence of mental disorders within the Māori adult population, are consistent with concerns raised about mental health in other sources. Mental disorders were found to be common, particularly among rangatahi (15 to 24 years) and in young adults (25–44 years), and in both Māori men and women. Findings highlight the importance of considering mental health from public health and primary care perspectives alongside those services focussed on meeting the needs of Māori with long term and serious mental illness. General practice was the leading source of service contact for mental health needs among Māori and the findings reinforce the importance of ensuring primary care services are well equipped to meet Māori mental health need.

The analyses within *Hauora IV* contribute an updated picture of hospitalisation trends for Māori for mental disorder. The previous *Hauora* publication (*Hauora III)* very clearly identifies, however, that “psychiatric hospital admissions alone do not give a true indication of the degree of mental illness and mental distress within a population.” (Pōmare et al 1995, p. 121). As such, findings in the analysis of hospitalisation data provide only part of the picture. However, the picture that they provide is also one of considerable concern.

Rates of hospitalisation are high among Māori aged 15–24 years and 25–44 years for both males and females. Schizophrenia and bipolar disorder in particular are leading reasons for hospitalisation among Māori men and women. There are significant disparities evident between Māori and non-Māori across all years of the data analysis and no improvement across years. Overall, Māori are 1.8 times more likely to be hospitalised for a mental disorder than non-Māori. In particular, the rate of hospitalisation for diagnoses of schizophrenia is over three times higher in Māori.

Despite these differences and their persistence across years, there remains little published research or analysis to better inform on why these disparities are evident or how best to address them. Speculation has included increased risk of psychotic episodes due to poorer outcomes from and management within mental health services among Māori with psychoses, increased acuity and severity of disorder among Māori, poorer access to early intervention, preventive or primary care services leading to late presentation, and increased levels of co-morbidity. There is an urgent need for more information to eliminate these significant disparities in outcomes with psychosis and with bipolar disorder.

In addition, there is a persistent finding of Māori over-representation in forensic psychiatric services with justice entry points to mental health service being more likely for Māori than via primary care. This is a further issue, where significant inequities in service provision are occurring with little research available with which to understand inequities and to address them.

It is interesting to view hospitalisation rates alongside those from other research and from Te Rau Hinengaro, the New Zealand Mental Health Survey. The MaGPIe study found increased risk of depression, anxiety, and substance disorders among Māori (MaGPIe Research Group 2001, 2003, 2005). Te Rau Hinengaro found rates of depression were slightly higher among Māori following age-sex adjustment. However this is not reflected in hospitalisation rates for depression, where rates are lower in Māori. Hospitalisation rates for substance disorders also do not reflect disparities found within Te Rau Hinengaro where Māori men and Māori women had significantly higher rates of substance disorders than Others within the study. Analysis of hospitalisation data, however, found Māori men and Māori women have hospitalisation rates for substance disorders that are only 30% higher than their non-Māori counterparts. A further area where there is mismatch between community prevalence and relative levels of hospitalisation is in eating disorders. Within Te Rau Hinengaro, Māori women had the highest prevalence of eating disorders. However, this is not reflected in hospitalisations, where rates are much lower for Māori women. Again this is an area where there is very little information to aid in understanding how best to understand and meet the needs of Māori.

With a lack of research to explain these differences, causes can only be speculated on. Whereas high hospitalisation rates for psychosis may reflect a lack of effectiveness in meeting the needs of Māori with psychosis, particularly within a community setting, the reduced rate of hospitalisation for Māori for depression for example, may also reflect service failures to identify Māori with serious depressive illness.

Analyses of suicide rates within *Hauora IV* are consistent with concerns described elsewhere regarding suicide in Māori. Overall rates of suicide among Māori are 1.5 times higher than non-Māori. The presence of suicide among the very young (those aged under 15), and the high proportion of these that are Māori, is of particular concern and has been noted in other research (Beautrais 2001; Sargent and Baxter 2005). Moves towards an 'all age' suicide strategy need to take cognisance of the patterns in Māori. Although rates have begun to reduce overall, there remains high rates of suicide among young Māori and this, in combination with the presence of suicide among Māori children, leads to a conclusion that there needs to be an ongoing focus on suicide among young Māori, alongside ensuring all ages' needs are met.

Conclusions

Analysis of *Hauora IV* data outlines persistent and concerning rates and patterns of hospitalisation for mental disorders among Māori, with no evidence of reduced hospitalisation over time where there have been increased services such as early intervention services. There remains a question as to whether high Māori

hospitalisation rates reflect difference in prevalence of disorder, access to preventive early measures, or poorer outcomes leading to increased hospitalisation among Māori with mental disorders. It must be noted that most mental disorders do not reach psychiatric hospitals or hospitalisation points. Thus, analysis of other information sources such as the MHINC database, the National Mental Health Survey, and projects such as the MaGPIe project will all add information to this area.

The findings from this chapter align with those from the previous edition of *Hauora*, showing an ongoing and urgent need to review the issues identified from analysis of hospitalisation and suicide data. Implications for mental health promotion and for the primary and secondary care sectors include a need for better training and understanding of Māori mental health, better service delivery and effectiveness of services (preventive, primary, and secondary care) for Māori, more support for Māori specific services to contribute to Māori mental health outcomes, and a commitment to elimination of the significant disparities that exist.

References

Baxter J. 1998. Culture and women's mental health: international perspectives and issues for Aotearoa / New Zealand. In: Romans S (ed). *Folding back the shadows: A perspective on women's mental health* (pp. 63-86). Dunedin: University of Otago Press.

Baxter J, Kokaua J, Wells JE, McGee MA, Oakley Browne MA. 2006a. Ethnic comparisons of the 12 month prevalence of mental disorders and treatment contact in Te Rau Hinengaro: the New Zealand Mental Health Survey. *Australian and New Zealand Journal of Psychiatry* 40(10): 905–913.

Baxter J, Kingi TK, Tapsell R, Durie M, McGee MA. 2006b. Prevalence of mental disorders among Māori in Te Rau Hinengaro: the New Zealand Mental Health Survey. *Australian and New Zealand Journal of Psychiatry* 40(10): 914–923.

Baxter J, Kingi TK, Tapsell R, Durie M. 2006c. Chapter 9: Māori. In Oakley Browne MA, Wells JE, Scott KM (eds). *Te Rau Hinengaro: The New Zealand Mental Health Survey* (pp. 139–178). Wellington: Ministry of Health.

Beautrais AL. 2001. Child and young adolescent suicide in New Zealand. *Australian and New Zealand Journal of Psychiatry* 35: 647–653.

Beautrais AL, Wells JE, McGee MA, Oakley Browne MA. 2006. Suicidal behaviour in Te Rau Hinengaro: the New Zealand Mental Health Survey. *Australian and New Zealand Journal of Psychiatry* 40(10): 896–904.

Brinded PM, Simpson AI, Laidlaw TM, Fairley N, Malcolm F. 2001. Prevalence of psychiatric disorders in New Zealand prisons: a national study. *Australian and New Zealand Journal of Psychiatry* 35: 166–173.

Durie M. 1999. Mental health and Māori development. *Australian and New Zealand Journal of Psychiatry* 33: 5–12.

Dyall L. 1997. Chapter 3: Māori. In: Ellis P, Collings S (eds). *Mental health in New Zealand from a public health perspective*. Wellington: Ministry of Health.

Horwood J, Fergusson D. 1998. *Psychiatric disorder and treatment seeking in a birth cohort of young adults: A report to the Ministry of Health*. Christchurch: The Christchurch Health and Development Study and the Ministry of Health.

MaGPIe Research Group. 2001. Psychological problems in New Zealand primary health care: a report on the pilot phase of the Mental Health and General Practice Investigation (MaGPIe). *New Zealand Medical Journal* 114: 13–16.

MaGPIe Research Group. 2003. The nature and prevalence of psychological problems in New Zealand primary healthcare: a report on Mental Health and General Practice Investigation (MaGPIe). *New Zealand Medical Journal* 116: U379.

MaGPIe Research Group. 2005. Mental disorders among Māori attending their general practitioner. *Australia and New Zealand Journal of Psychiatry* 39: 401–406.

Māori Health Commission. 1998. *Tihei Mauri Ora. Report of the Māori Health Commission June 1998.* Wellington: The Māori Health Commission.

Mental Health Commission. 1998. *Blueprint for Mental Health Services in New Zealand: How things need to be.* Wellington: Mental Health Commission.

Mental Health Commission. 2007. *Te Hononga 2015: Connecting for greater wellbeing*. Wellington: Mental Health Commission.

Minister of Health. 2000. *The New Zealand Health Strategy*. Wellington: Ministry of Health.

Ministry of Health. 2004. *A Portrait of Health: key results of the 2002/03 New Zealand Health Survey.* Public Health Intelligence Occasional Bulletin No. 21. Wellington: Ministry of Health.

Ministry of Health. 2005. *Suicide Facts: Provisional 2002 all ages statistics*. Wellington: Ministry of Health.

New Zealand Health Information Service. 2006. *Mental health service use in New Zealand 2003*. Wellington: Ministry of Health.

Oakley Browne MA, Wells JE, Scott KM (eds). 2006a. *Te Rau Hinengaro: the New Zealand Mental Health Survey*. Wellington: Ministry of Health.

Oakley Browne MA, Wells JE, Scott KM, McGee MA. 2006b. Lifetime prevalence and projected lifetime risk of DSM-IV disorders in Te Rau Hinengaro: the New Zealand Mental Health Survey. *Australia and New Zealand Journal of Psychiatry* 40(10): 865–874.

Pōmare E, Keefe-Ormsby V, Ormsby C, Pearce N, Reid P, Robson B, Watene-Haydon N. 1995. *Hauora. Māori standards of health III: a study of the years 1970-1991*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare.

Sargent M, Baxter J. 2005. *Māori child and youth mortality 2002/2003*: A report prepared for the New Zealand Child and Youth Mortality Review Committee. Dunedin: Ngāi Tahu Māori Health Research Unit, University of Otago.

Simpson AIF, Brinded PM, Fairley N, Laidlaw TM, Malcolm F. 2003. Does ethnicity affect need for mental health service among New Zealand prisoners? *Australian and New Zealand Journal of Psychiatry* 37: 728–734.

Te Puni Kōkiri. 1993. *Ngā ia o te oranga hinengaro Māori. Trends in Māori mental mealth: A discussion document.* Wellington: Te Puni Kōkiri.

Te Puni Kōkiri. 1996. *Ngā ia o te oranga hinengaro Māori. Trends in Māori mental health 1984–1993*. Wellington: Te Puni Kōkiri.

Wells JE, Oakley Browne MA, Scott KM, McGee MA, Baxter J, Kokaua J. 2006. Te Rau Hinengaro: the New Zealand Mental Health Survey: overview of methods and findings. *Australia and New Zealand Journal of Psychiatry* 40(10): 835–844.

Hēniratapu Rangi and Pene Bush at Te Matatini 2007 *Photo by Sharon Hawke*