Te Kaitātaki Oranga
MentalHealth
COMMISSION

August 2011

Child and youth mental health and addiction

Prepared for the Mental Health Commission

August 2011
Mental Health Commission
PO Box 12479, Wellington, New Zealand

ISBN 978-0-478-29231-2

This document is available on the Mental Health Commission's website
www.mhc.govt.nz

Contents

List of tables and figures

Executive summary

The purpose of this report is to examine the need for mental health and addiction services[1] among children and youth and to assess how well their needs are currently being met. The report includes quantitative information on the prevalence of mental disorder and addiction for children and youth, rates of suicide and intentional self-harm and patterns of mental health service use including service use over time. Qualitative information is included on common issues identified by children and youth with mental health and addiction problems and their families/whānau. The report concludes with a discussion of whether the mental health and addiction needs of children and youth are currently being met.

Key points

Mental disorder

- An estimated 29 percent of youth (16–24 years) have a mental disorder in a 12-month period. Youth have a higher prevalence of disorder and serious disorder than adults aged 25 years and over (Oakley Browne, Wells and Scott 2006). In particular, youth have a higher prevalence of mood disorder and substance use disorder.
- Māori have a higher 12-month prevalence of disorder and serious disorder than Pacific peoples and other ethnic groups (Oakley Browne, Wells and Scott 2006).
- More than half of people with mental disorder have an age of onset of 18 years or younger (Oakley Browne, Wells and Scott 2006).

Addiction

- Youth (18–24 years) have a much higher prevalence of substance use disorder than adults aged 25 years and over (Oakley Browne, Wells and Scott 2006; Ministry of Health 2008).
- A significantly higher proportion of youth engage in hazardous drinking than adults. More than half of male youths and nearly one-third of female youths engage in hazardous drinking (Ministry of Health, 2008).

Suicide and intentional self-harm

- Youth (16–24 years) have a higher prevalence of suicide ideation, making suicide plans and suicide attempts than adults aged 25 years and over (Oakley Browne, Wells and Scott 2006).
- In 2008, 56 children and youth aged 10–19 years died from suicide, and there were 458 hospitalisations for intentional self-harm (Ministry of Health 2010c).
- The youth suicide rate remained relatively unchanged between 1999 and 2008. Suicide is still a leading cause of death for young people (Ministry of Health 2010c).
- Māori youth had twice the suicide rate of non-Māori youth in 2008.
- Suicide is far more common among mental health service users than non-service users (Ministry of Health 2010c).

[1] In this report, the phrase ‘mental health services’ refers to mental health and addiction services.

Mental health service use

- 23,185 children and youth (0–19 years) used secondary mental health services in the year ending June 2008 (Ministry of Health 2010a).
- Youth aged 15–19 years had a higher rate of access (percentage of the population seen) to mental health services than other age groups.
- The rate of child and youth access to mental health services has gradually increased from 1.7 percent in 2005/06 to 1.9 percent in 2007/08, but remains well below the 3 percent target rate established by the Ministry of Health.
- Pacific children and youth had an access rate of 1.0 percent, much lower than the rate for Māori (1.9 percent) and non-Māori/non-Pacific (2.0 percent).

Specific issues identified

- The Mental Health Commission identified a number of issues for child and youth mental health service users through its district visits and qualitative research involving youth, which included difficulty in accessing services, lack of inpatient units for children and youth, the need for prevention services and early intervention and the need for collaboration between services and sectors.
- Positive developments included the establishment of services in schools (for example, health clinics) and youth one-stop shops (Communio, 2009).

Conclusions and recommendations

- Mental health and addiction problems are prevalent among youth, but there are ongoing issues around access to primary and secondary mental health and addiction services. In particular, access is low for Māori and Pacific children and youth.
- There is a need for prevention of mental health and addiction problems such as problem drinking and early intervention for emerging mental health and addiction problems.
- Collaboration and coordination between services and sectors is working well in some regions, but further work is required to ensure access and continuity of services.
- Challenges for the sector include ensuring there is an adequate workforce and capacity to provide services, further development of primary mental health services and ensuring children and youth are able to gain access to mental health services through a number of channels.
- Further work is required to assess the quality of services and outcomes for children and youth who have accessed secondary mental health and addiction services.

1 Introduction

1.1 Purpose of the report

The purpose of this report is to examine the need for mental health and addiction services among children and youth and to assess how well their needs are currently being met. Mental health problems, substance use and self-harm are common among young people. Many mental disorders begin in adolescence, and disorders are more prevalent in this age group than among adults. Many people with mental illness use mental health services for the first time during their youth and early adulthood. For some, it will be the start of ongoing contact with mental health services.

The report begins by identifying the prevalence of mental disorder and addiction for children and youth and rates of suicide and intentional self-harm. Current mental health service use by children and youth is described, and the service use of a group of service users is tracked over 6 years to identify patterns of use. Information on the use of services is supplemented by qualitative information on common issues identified by children and youth with mental health and addiction problems, their families/whānau and service providers. The report concludes with a discussion on whether the mental health and addiction needs of children and youth are currently being met.

1.2 Background

The need for improved child and youth mental health services has been identified as a priority for the child and youth mental health sector (Ministry of Health 2007). The *Blueprint for mental health services* (Mental Health Commission 1998) identified the particular needs of children and youth for mental health services that:

- focus on emerging psychiatric problems
- give particular attention to the risk of suicide
- recognise the physical, cultural and emotional needs of children and youth
- include family/whānau involvement
- are easily accessible
- coordinate with services in other sectors.

The mental health strategy *Te Tāhuhu – Improving mental health 2005–2015* (Minister of Health 2005) identified the Government's priorities for mental health and addiction between 2005 and 2015. Implementation of the strategy is guided by *Te Kōkiri – The mental health and addiction action plan 2006–2015* (Minister of Health 2006), which sets out a detailed plan of action for addressing the challenges identified in Te Tāhuhu. The mental health strategy identified gaps in access and the need to increase mental health services for children and youth. Secondary mental health services are to provide services to the 3 percent of children and youth with the highest level of need for services, but access rates remain well below that level.

The mental health strategy identified the need for increased collaboration between primary and secondary health services and across sectors to improve access to services, ensure continuity of care and support recovery.

The key issues and priorities for action for the child and youth mental health sector over the next 3–5 years identified by the Ministry of Health (2007) are:

- reducing inequalities
- access to child and youth specialist mental health services
- additional areas of focus:
  - parents with mental illness and their children and the needs of young carers
  - youth forensic services
  - services for children and youth with severe behaviour disorders
  - addiction services for children and youth
  - maternal and infant mental health services
  - provision of services for children and youth with low-prevalence disorders (e.g. eating disorders or autism spectrum disorders)
- implementation of best practice
- intersectoral collaboration
- child and youth mental health workforce
- primary mental health and early intervention.

The prevention of youth suicide and self-harm continue to be important issues. Suicide prevention is guided by the *New Zealand suicide prevention strategy 2006–2016* (Associate Minister of Health 2006). Goals of the strategy include prevention of mental health problems, improved care for people with mental disorders associated with suicidal behaviour and improved care for people who make non-fatal suicide attempts. Areas for action include improving access to primary and secondary mental health services and improving the quality of care for people with mental illness.

1.3 Information sources

This report includes information from a number of sources. Information on the prevalence of mental disorder and addiction is sourced from the New Zealand health survey, Te Rau Hinengaro: The New Zealand mental health survey, the Youth ’07 survey of secondary school students and administrative data on suicide and intentional self-harm.

Information on access to secondary mental health and addiction services is sourced from the Mental Health Information National Collection (MHINC) held by the Ministry of Health. The MHINC contains information on government-funded secondary mental health and addiction services, including secondary inpatient, outpatient and community services provided by hospitals and non-government organisations (NGOs). MHINC does not include information on access to primary mental health services, on quality of services or on outcomes for people who accessed services.

The most recent final published data from MHINC is for the year ending June 2008, and that is the data used in this report.

On July 1 2008, the Ministry of Health replaced MHINC with the Programme for the Integration of Mental Health Data (PRIMHD). PRIMHD integrates data from MHINC with the Mental Health Standard Measures of Assessment and Recovery Initiative (MH-SMART) and will provide information on both service activity and outcomes.

Data reported to MHINC does not represent the total number of people accessing secondary mental health services, and the data may be affected by systematic under-reporting and data quality issues or under-reporting at a district health board (DHB) level. MHINC contains incomplete data for non-government organisation (NGO) services, as only a small proportion of NGOs that receive secondary mental health funding reported data to MHINC. This means that people who accessed NGO services but did not also access DHB services may not be included in the data. More complete reporting of NGO data is expected over the next few years as more NGOs begin reporting to PRIMHD.

The main interest for this report is children and youth aged 0–19 years. However, many surveys don't include children and only include youth aged 15 years and over. Data is commonly aggregated for youth aged 15–24 years. Where an age breakdown of 15–19 years is not available, the wider age group (15–24 years) has been presented in this report. In some cases, information for adults aged 25 years and over is included for comparison purposes.

2 Prevalence of disorder

This section presents information on the prevalence of mental disorder, use of alcohol and drugs, suicide and intentional self-harm by children and youth. This provides an indication of the likely need for mental health and addiction services for children and youth.

2.1 Prevalence of mental disorder

Depressive symptoms are relatively common among secondary school students. According to the Youth ’07 survey of secondary school students, 11 percent of students had significant depressive symptoms, and 27 percent were depressed for 2 weeks in a row in the past 12 months (Adolescent Health Research Group 2008). Female students were more than twice as likely as males to have significant depressive symptoms (Table 1). The proportion of students reporting significant depressive symptoms decreased slightly between 2001 (12 percent) and 2007 (11 percent).

Table 1: Depression in secondary school students, 2007

		Significant depressive symptoms		Depressed for 2 weeks in a row in past 12 months	
		%	(95% CI)	%	(95% CI)
Total		10.6	(9.7–11.4)	27.0	(25.3–28.6)
By gender	Male	6.9	(6.3–7.6)	20.0	(18.5–21.4)
	Female	14.7	(13.7–15.8)	35.1	(33.6–36.6)
By age (years)	13 or less	8.8	(7.5–10.1)	22.0	(19.8–24.1)
	14	11.9	(10.1–13.6)	26.5	(23.8–29.2)
	15	12.0	(10.6–13.4)	30.2	(27.8–32.6)
	16	10.2	(8.7–11.6)	28.8	(25.8–31.8)
	17+	9.3	(7.5–11.1)	27.3	(24.4–30.2)

Source: Adolescent Health Research Group, 2008

According to the New Zealand health survey, 0.2 percent of children younger than 15 years had a diagnosed mood disorder such as depression, and 0.3 percent had a diagnosed anxiety disorder (Ministry of Health 2008). The prevalence of mood disorders for youth (15–24 years) was 7.0 percent, with depression being the predominant disorder. The prevalence of anxiety disorders in this age group was 2.6 percent. Female youth had a higher prevalence of mood disorders than males (8.7 percent for females, 5.3 percent for males), while the prevalence of anxiety disorders was similar (3.0 percent for females, 2.3 percent for males).

Diagnosed disorders are more prevalent among youth (16–24 years) than adults aged 25 years and over. According to Te Rau Hinengaro: The New Zealand mental health survey, more than a quarter (29 percent) of youth had a mental disorder in a 12-month

period (Oakley Browne, Wells and Scott 2006).[2] This was higher than the 12-month prevalence for adults aged 25 years and over (Table 2). Youth also had a higher prevalence of serious disorder than adults.

Table 2: 12-month prevalence of mental disorder and serious disorder, by age group

		Age group (years)			
		16–24	25–44	45–64	65+
Any disorder	% (95% CI)	28.6 (25.1–32.3)	25.1 (23.2–27.1)	17.4 (15.7–19.2)	7.1 (5.7–8.8)
Serious disorder		7.2 (5.7–9.0)	5.8 (5.0–6.6)	3.8 (3.1–4.5)	1.1 (0.5–2.0)

Source: Oakley Browne, Wells and Scott, 2006

Māori had a higher 12-month prevalence of disorder and serious disorder than Pacific peoples and other ethnic groups (Table 3).

Table 3: 12-month prevalence of mental disorder and serious disorder, by ethnicity (adjusted for age and sex)

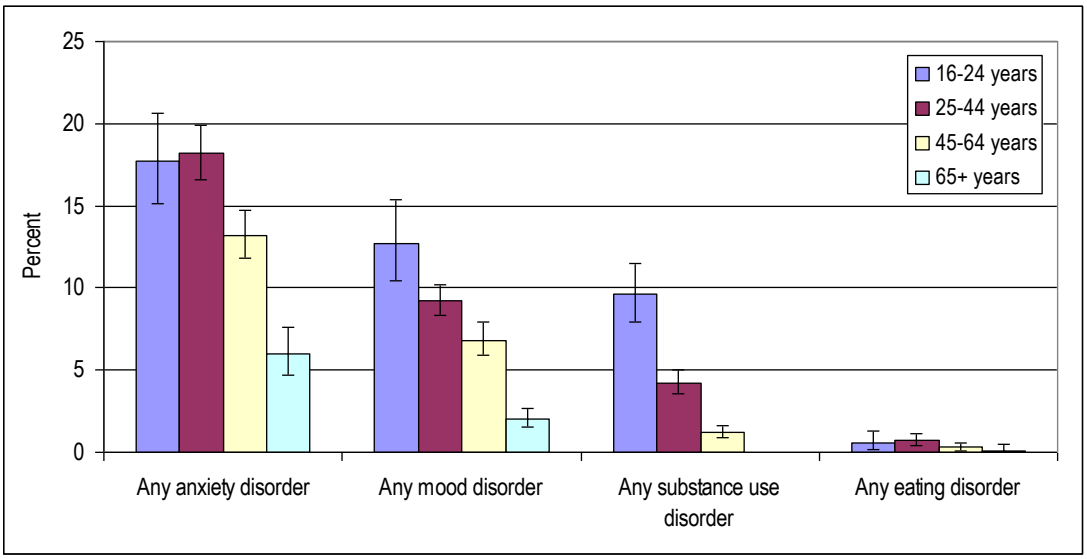
	Ethnic group					
	Māori		Pacific		Other	
	% (95% CI)					
Any disorder	26.4	(23.7–29.0)	21.8	(18.8–24.7)	19.8	(18.4–21.1)
Serious disorder	7.6	(6.4–8.8)	5.3	(4.1–6.5)	4.2	(3.7–4.7)

Source: Oakley Browne, Wells and Scott, 2006

Figure 1 shows the 12-month prevalence of mental disorder by disorder group and age group. Youth had a higher 12-month prevalence of mood disorder (including major depressive disorder and bipolar disorder) and substance use disorder (including alcohol abuse and dependence and drug use and dependence) than adults. They had the second highest prevalence of anxiety disorder, slightly lower than the prevalence for adults aged 25–44 years.

[2] This figure excludes specific psychotic disorders such as schizophrenia or schizoaffective disorder and excludes people living in institutions.

Figure 1: 12-month prevalence of mental disorder, by age group and disorder group



Source: Oakley Browne, Wells and Scott, 2006

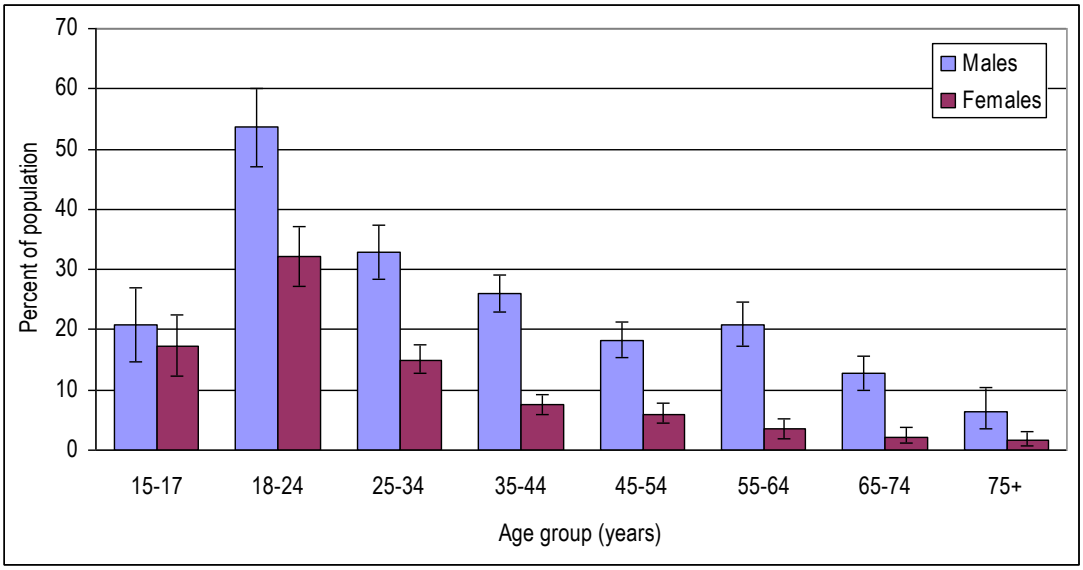
Many disorders had an early age of onset, and half of all people with a disorder had an age of onset of 18 years or younger (Oakley Browne, Wells and Scott 2006). Disorders with early ages of onset included substance use disorders, eating disorders and bipolar disorder. The median age for the development of substance use disorders was 18 years, while the median age for eating disorders was 17 years. Half of people who developed bipolar disorder had an age of onset of 23 years or younger.

2.2 Substance use and addiction

Alcohol use is common among youth and can result in a range of negative consequences including health problems, injuries and risky behaviours such as unsafe sex (Ministry of Health 2009b). In 2007, an estimated 61 percent of secondary school students were current drinkers, and one-third (34 percent) had engaged in binge drinking (five or more drinks within 4 hours) in the previous 4 weeks (Adolescent Health Research Group 2008). This is a slight decrease from 2001 when 40 percent of students reported an episode of binge drinking in the past 4 weeks. Many current drinkers reported negative consequences of alcohol use such as injuries and unsafe sex. Drug use was less common, with an estimated 16 percent of students currently using marijuana and a small proportion using other drugs such as glue, ‘P’, ecstasy or speed.

Youth have a much higher prevalence of substance use disorder than adults (Figure 1) (Oakley Browne, Wells and Scott 2006; Ministry of Health 2008). Young males in particular display hazardous drinking patterns. The New Zealand health survey showed that more than half of males (54 percent) and nearly one-third (32 percent) of females aged 18–24 years engaged in hazardous drinking (Ministry of Health 2008). This is significantly higher than the percentage of males and females in other age groups that engaged in hazardous drinking (Figure 2).

Figure 2: Hazardous drinking* among the total population, by gender and age group



*Hazardous drinking in the previous 12 months as indicated by a score of 8 or more on the AUDIT questionnaire.
Source: Ministry of Health, 2008

3 Suicide and intentional self-harm

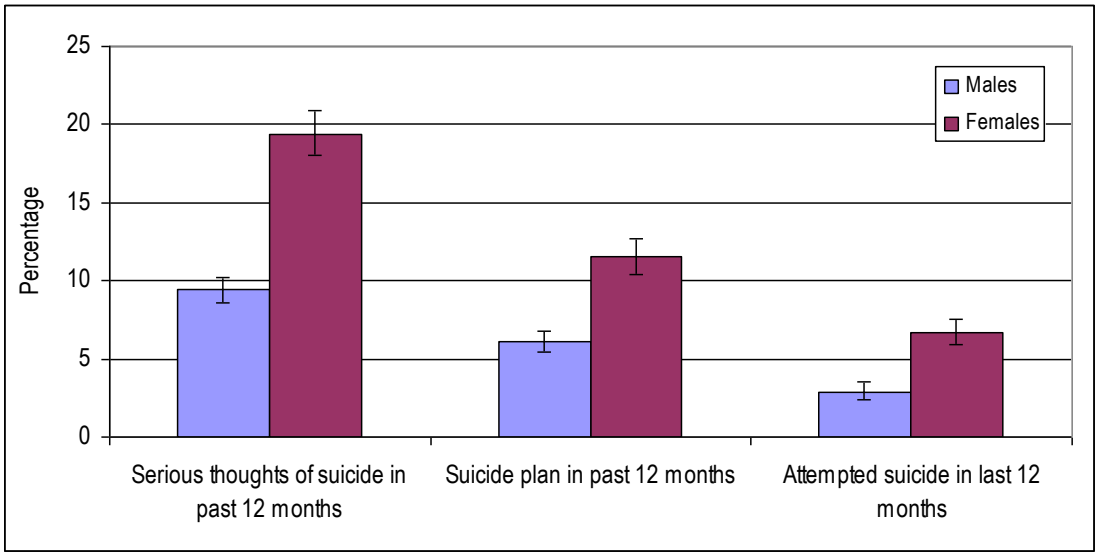
Suicide is a leading cause of death for youth, accounting for almost a third of deaths for females aged 15–19 in 2008 and almost a quarter of deaths for males aged 15–19 in 2008 (Ministry of Health 2010a). New Zealand has the highest rate of youth suicide for females and the third highest rate for males among selected OECD countries[3] (Ministry of Health 2010a). People who had a mental disorder in the past 12 months have a higher rate of suicide behaviour (suicide ideation, suicide plan and suicide attempt) than people with no disorder (Oakley Browne, Wells and Scott 2006).

3.1 Intentional self-harm and suicide behaviours

Intentional self-harm appears to be common among youth, especially among females. One in five (20 percent) of secondary school students reported intentional self-harm in the past 12 months (Adolescent Health Research Group 2008). Intentional self-harm was more common among females (26 percent) than males (16 percent) and was most commonly reported by students aged 14–16 years. For 2.9 percent of students, the self-harm required treatment by a doctor or nurse.

Around 4.7 percent of students reported attempting suicide in the past 12 months, a decrease from 2001 when 7.8 percent of students reported suicide attempts. Females were more likely than males to report suicide attempts in 2007 (Figure 3). This contrasts with suicide deaths, where males far outnumber females (see section 3.3).

Figure 3: Suicidal thoughts and behaviours among secondary school students in the past 12 months, by gender



Source: Adolescent Health Research Group, 2008

Table 4 shows the prevalence of suicide ideation, suicide plans and suicide attempts by youth and adults by age-group. Youth aged 16–24 years have a higher prevalence of suicide ideation (thinking seriously about committing suicide), making suicide plans and

[3] The countries included Australia, Canada, Finland, France, Germany, Ireland, Japan, The Netherlands, Norway, Sweden, United Kingdom and USA.

suicide attempts than adults aged 25 years and over. Nearly 7 percent of youth reported suicide ideation in the past 12 months, 2 percent had made a suicide plan and 1 percent had made a suicide attempt.

Table 4: Prevalence of suicide ideation, suicide plan and suicide attempt in the past 12 months, by age group

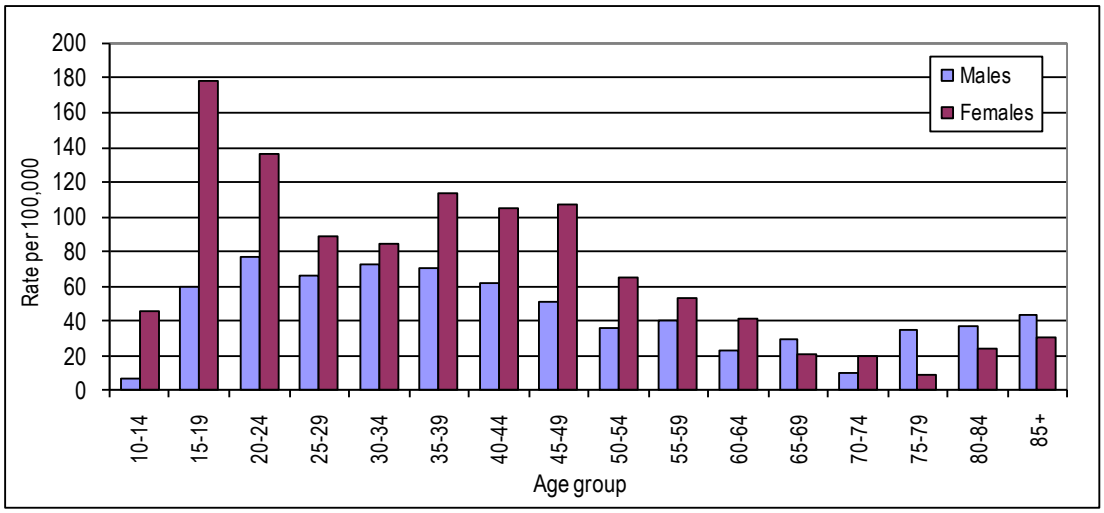
Age group (years)	Suicide ideation		Suicide plan		Suicide attempt	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
16–24	6.6	(5.3–8.3)	2.0	(1.2–3.2)	1.3	(0.6–2.3)
25–44	3.6	(3.0–4.3)	1.2	(0.9–1.6)	0.4	(0.2–0.6)
45–64	2.1	(1.5–2.7)	0.5	(0.3–0.7)	0.1	(0.0–0.3)
65+	0.8	(0.4–1.4)	0.3	(0.1–0.8)	0.1	(0–0.7)

Source: Oakley Browne, Wells and Scott, 2006

3.2 Hospitalisations for intentional self-harm

In 2008 there were 458 hospitalisations for intentional self-harm of children and youth aged 10–19 years, and more than three-quarters (76 percent) were females (Ministry of Health 2010c). As shown in Figure 4, intentional self-harm hospitalisation rates were highest for females aged 15–19 years (179 hospitalisations per 100,000 population).

Figure 4: Hospitalisation rates for intentional self-harm, by gender and age group, 2008 (rates per 100,000 population)

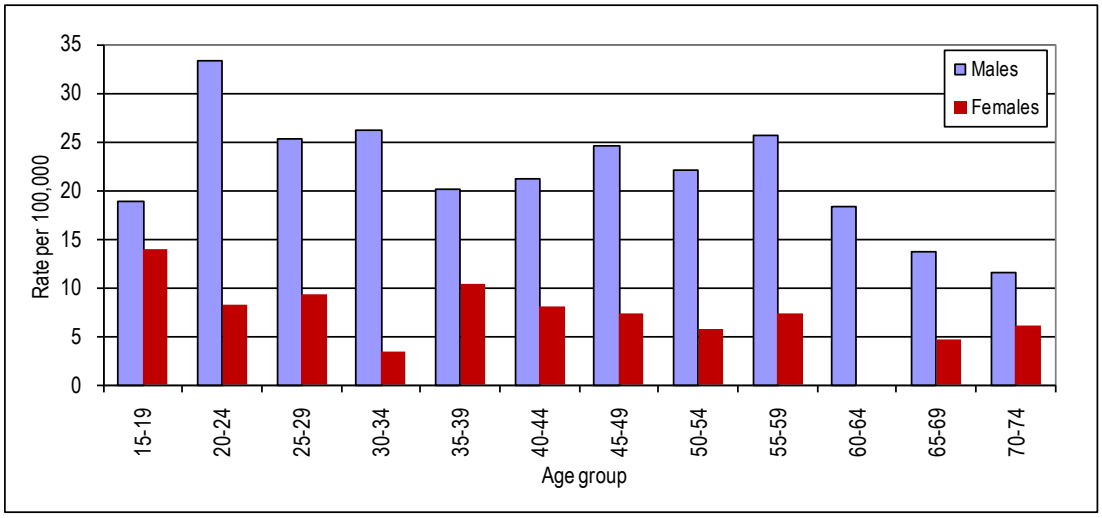


Source: Ministry of Health, 2010c

3.3 Suicide deaths

In 2008, 56 children and youth aged 10–19 years died from suicide. More than half (57 percent) of those who died were males. The highest rate of suicide for males was in the age group 20–24 years, while the female rate peaked in the age group 15–19 years (Figure 5).

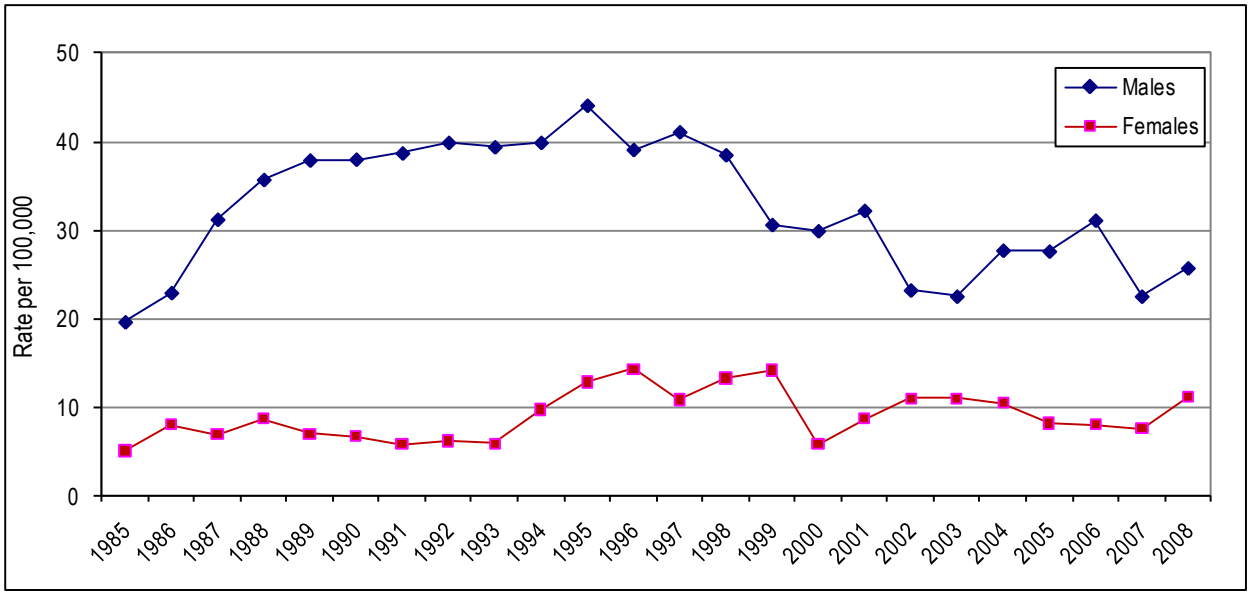
Figure 5: Suicide rates, by age group and sex, 2008 (rates per 100,000 population)



Source: Ministry of Health, 2010c
Note: The graph only shows rates for people aged 15–74 years as numbers were small in other age groups.

The suicide rate for youth reached a peak of 156 deaths in 1995 and had decreased by more than 25 percent by 1999, but the rate remained relatively unchanged between 1999 and 2008. The main driver of these changes in the suicide rate for youth has been males, while the rate for female youth has remained relatively unchanged between 1985 and 2008.

Figure 6: Suicide rates for youth aged 15-24 years, by sex, 1985-2008 (rates per 100,000 population)



Māori were over-represented among children and youth who died from suicide – 32 percent of those who died were Māori and Māori had twice the suicide rate of non-Māori in this age group.

The suicide rate was higher in areas with high levels of deprivation. In 2008, the rate of suicide was 1.6 times higher in the most deprived areas than in areas with the least deprivation, according to NZDep quintiles (Ministry of Health 2010c).

Recent analysis by the Ministry of Health showed that suicide is far more common among mental health service users than non-service users (Ministry of Health 2010b).[4] In 2007, mental health service users had a suicide rate that was approximately 25 times the rate of non-service users. Suicide deaths of inpatient mental health service users often occurred soon after use of mental health services.

[4] Mental health service use was defined as use of community or inpatient services in specialist mental health (including addiction) services in the year prior to their death. Only people younger than 65 years were included in the analysis. Data on access to mental health services for older people is not available for the Central and Southern regions.

4 Access to primary health care

Primary health services such as GPs are a key point of contact for accessing secondary mental health services (Mental Health Commission 2008; Dowell et al 2007). However, young people, in particular young males, are less likely to access primary health services than adults.

The New Zealand health survey showed that an estimated 87 percent of 15–24 year old males and 84 percent of 25–34 year old males had a primary health care provider that they usually go to when they are feeling unwell or have an injury (Ministry of Health 2008). In comparison, 91 percent of females aged 15–24 years and 92 percent of females aged 25–34 years. The total percentage for all adults aged 15 years and over who had a primary health care provider was 92 percent for males and 95 percent for females. GP clinics were the most common type of primary health care provider that people would access when they were sick or injured.

Three-quarters (75 percent) of youth aged 15–24 years reported seeing a GP in the previous 12 months (Ministry of Health 2008). This was lower than the proportion of adults aged 25 years and over who saw a GP in the previous 12 months. Male youth (71 percent) were less likely than females (78 percent) to have seen a GP in the past year. Females who had seen a GP in the previous year had a median of 3 visits, while males had a median of 2 visits.

Previous analysis by the Mental Health Commission is consistent with the findings of the New Zealand health survey. Mental Health Commission analysis showed that male mental health service users were less likely than females to be enrolled with a primary health organisation (PHO), particularly between the ages of 20–44 years (Mental Health Commission 2008). While enrolment with a PHO is not essential to accessing primary services, it may provide some indication about use of primary services.

5 Access to mental health services

This section presents data on access to primary and secondary mental health services. In some cases, this is presented as the access rate or the percentage of the population who used mental health services over the period.

5.1 Mental health visits to health professionals

This section presents information on the use of health services for mental health reasons. It includes information on primary and secondary services.

The need to build primary mental health services and collaboration across primary and secondary care has been identified previously (Minister of Health 2006; Ministry of Health 2007). While youth have a higher prevalence of serious disorder than adults, data from Te Rau Hinengaro indicates they are less likely than adults to make a mental health visit to a health care professional[5] (Oakley Browne, Wells and Scott 2006). An estimated 10 percent of youth (16–24 years) made a mental health visit to the health care sector, compared with 12 percent of 25–44 year olds and 14 percent of 45–64 year olds.

Pacific peoples (7.9 percent) and Māori (9.3 percent) are less likely to make a mental health visit to the health care sector than people from other ethnic groups (13 percent), adjusted for age, sex and severity of disorder (Oakley Browne, Wells and Scott 2006).

According to the New Zealand health survey, females were more likely than males to see a health professional for mental health reasons – 5.1 percent of female youth (15–24 years) reported seeing a psychologist, counsellor or social worker, compared with 3.6 percent of male youth (Ministry of Health 2008).

Female secondary school students (22 percent) were twice as likely as males (12 percent) to report seeing a health professional for emotional worries in the past 12 months (Adolescent Health Research Group 2008). Female students were more than twice as likely to report difficulty getting help for an emotional worry in the past 12 months (13 percent for females and 5.4 percent for males).

5.2 Secondary mental health service use by children and youth in 2005

The Ministry of Health established an access benchmark that public mental health services should see the 3 percent of the population with the most severe mental disorder or highest support needs (Ministry of Health 1994, 1997). Initially, a target of 5 percent was established for children and youth, but this target included access to addiction services (Ministry of Health 1997). A revised target of 3 percent excluded addiction services. The targets differed by age group – 1.0 percent for 0–9 year olds,

[5] A mental health visit is a visit to a professional for help with problems with emotions, nerves, mental health or substance use (Oakley Browne, Wells and Scott, 2006). The figures given here include visits to mental health professionals (such as psychiatrists, counsellors and other mental health workers) and general medical professionals (such as doctors). Figures are adjusted for severity.

3.9 percent for 10–14 year olds and 5.5 percent for 15–19 year olds (Mental Health Commission 1998).

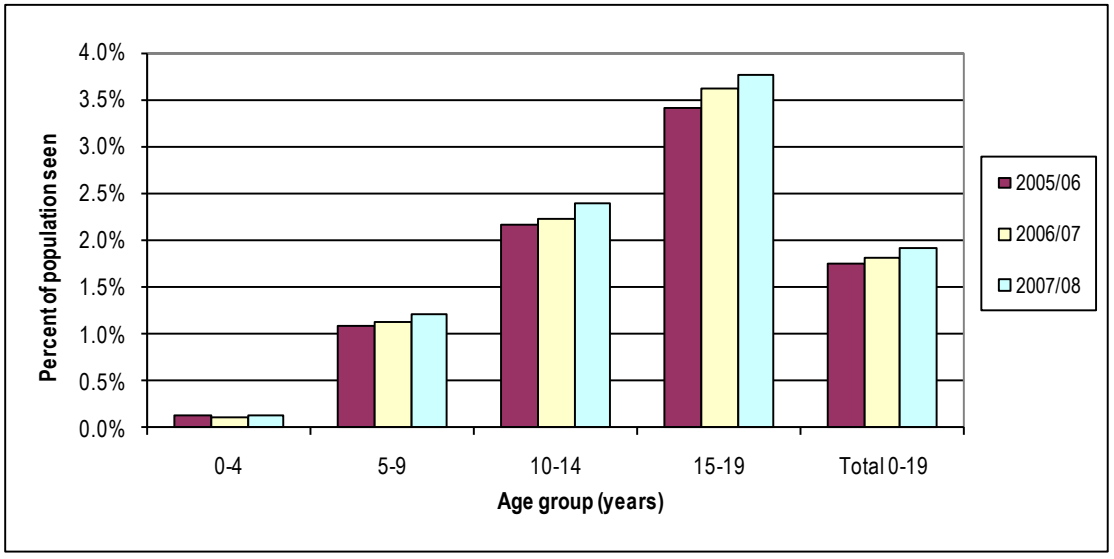
In the year ending June 2008, 23,185 children and youth (0–19 years) used secondary mental health services in New Zealand, and they accounted for nearly one-quarter (23 percent) of mental health service users (Ministry of Health 2010a). More youth aged 15–19 years were seen than service users in any other 5-year age group (Figure 7). This age group also had the highest rate of access (percentage of the population seen).

Figure 7: Clients seen by secondary mental health services, by age group, 2007/08

Source: Ministry of Health, 2010a

The rate of access to mental health services for children and youth has gradually increased from 1.7 percent in 2005/06 to 1.9 percent in 2007/08, but remains well below the 3 percent target rate. The access rate for youth aged 15–19 years has increased the most over this time (Figure 8).

Figure 8: Twelve month access rate (percent of population seen), 0–19 years, 2005/06–2007/08



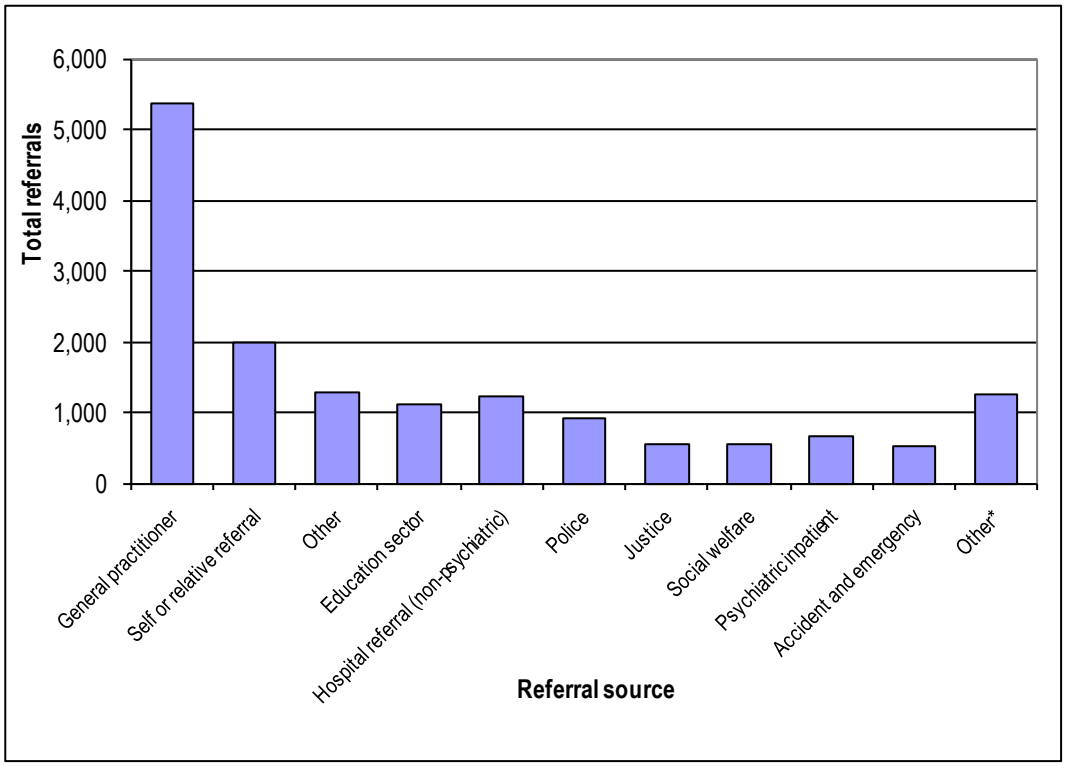
Source: Ministry of Health, 2009a, 2010a

Twenty-four percent of children and youth seen in 2007/08 were Māori, 5 percent were Pacific and the remaining 71 percent were non-Māori/non-Pacific. Pacific children and youth had an access rate of 1.0 percent, much lower than the rate for Māori (1.9 percent) and non-Māori/non-Pacific (2.0 percent).

In 2007/08, two-thirds (67 percent) of children and youth who used secondary mental health services were seen by child, adolescent and family teams (Ministry of Health 2010a). This was the most common team type for children and youth, followed by community teams (20 percent) and youth specialty teams (12 percent). While some teams saw children and youth across the age groups, alcohol and drug teams and forensic teams predominantly saw young males aged 15–19 years.

The most common sources of referral to child and youth mental health services were GPs, self- or relative-referrals, hospitals and the education sector (Figure 9). Referrals from GPs made up 35 percent of all referrals to child and youth teams.

Figure 9: Referrals of children and youth (0–19 years), by referral source, 2007/08



Note: Referral source is the external service or people who referred the client to the district health board mental health service.
*See footnote[6]
Source: Ministry of Health, 2010a

[6] Other referral sources include paediatrics; adult community mental health services; child, adolescent and family mental health services; private practitioners; public health; psychiatric outpatient services; Māori providers or facilities; alcohol and drug needs assessment and co-ordination services; mental health residential services; day hospitals and unknown sources.

5.3 Secondary mental health service use over time

The previous section provided a snapshot of secondary mental health service use over a 1-year period. This section will examine service use in more detail. The service use of a group of children and youth who used mental health services in 2002 was examined over the following 5 years (2003–2007). Analysis is divided into 4 sections:

- Section 5.3.1 describes the characteristics of the cohort that used secondary mental health services in 2002, including their age, ethnic group and level of deprivation.
- Section 5.3.2 examines mental health service use of the 2002 cohort over the following 5 years, to highlight patterns of service use.
- Section 5.3.3 presents information on intentional self-harm hospitalisations for the 2002 cohort from 2002–2007.
- Section 5.3.4 presents information on deaths among the 2002 cohort from 2002–2007.

This analysis has some limitations. While information is presented from 2002 onwards, this is not necessarily the first year of secondary mental health service use for the cohort. Access in subsequent years is only presented for people who accessed secondary services that reported data to MHINC, and this does not include people who only accessed primary services. Analysis has been limited to whether children and youth accessed services during the year, and information is not presented on how many times they accessed services each year. For children and youth who were hospitalised for intentional self-harm, the report does not identify whether the self-harm occurred before, during or after mental health services were accessed or look at the length of time between mental health service use and suicide or self-harm events. Information is not presented on outcomes of the service and whether it met the needs of the individual.

The time-series data used in this section was extracted from MHINC in December 2008. MHINC data may be subject to change over time as more information is reported. As a result, data in this report may differ slightly from data extracted at an earlier or later date and from data published by the Ministry of Health.

5.3.1 Secondary mental health service use by children and youth in 2002

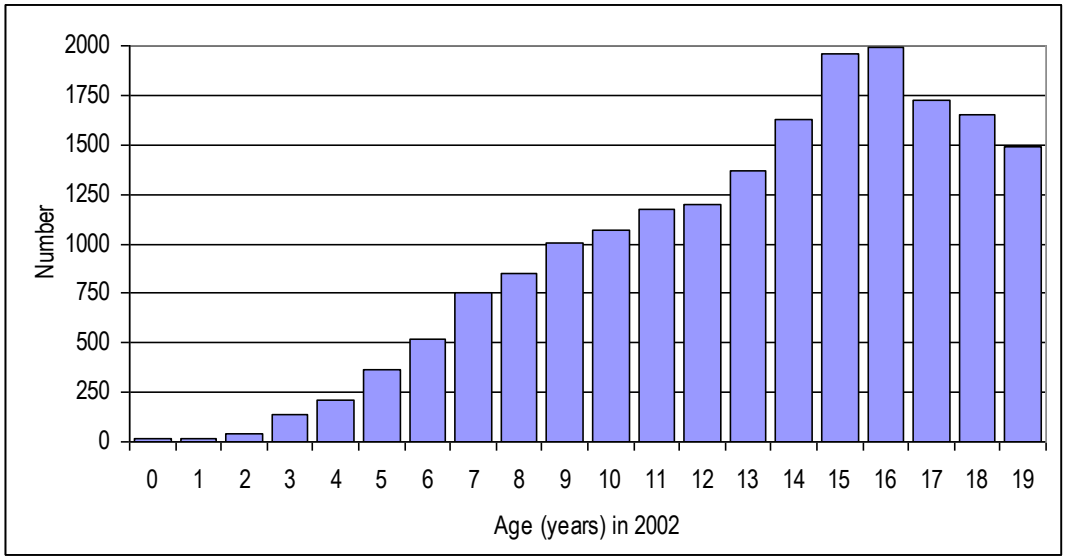
Approximately 19,700 children and youth used secondary mental health services in 2002 (Ministry of Health 2005). This is slightly lower than the number of those who accessed services in 2005 (approximately 20,500), but the access rate (1.7 percent) was the same for both years.

The analysis in section 5.3 of this report is based on approximately 19,200 children and youth who used secondary mental health services in 2002. For the purposes of this analysis, age has been calculated at the year end rather than the age at the time of service use.

Youth aged between 15–19 years accounted for nearly half (46 percent) of children and youth younger than 20 years who accessed mental health services. Just over one-third (34 percent) were aged 10–14 years, 18 percent were aged 5–9 years and 2 percent

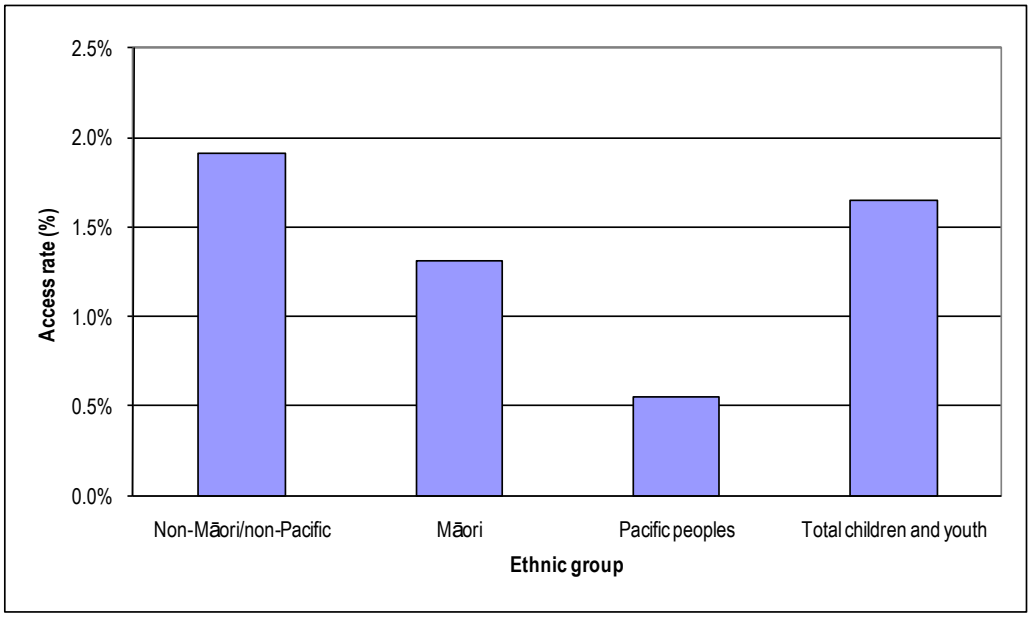
were younger than 5 years. Broken down by single year of age, mental health service use was highest among 15 and 16 year olds (Figure 10).

Figure 10: Age of children and youth who accessed mental health services in 2002



Males accounted for 59 percent of children and youth who accessed secondary mental health services in 2002. More than three-quarters (78 percent) of children and youth who accessed mental health services in 2002 were non-Māori/non-Pacific, 19 percent were Māori and the remaining 3 percent were Pacific. The 12-month access rate for non-Māori/non-Pacific children and youth (1.9 percent) was higher than the rate for Māori (1.3 percent) and Pacific children and youth (0.6 percent) in 2002 (Figure 11).

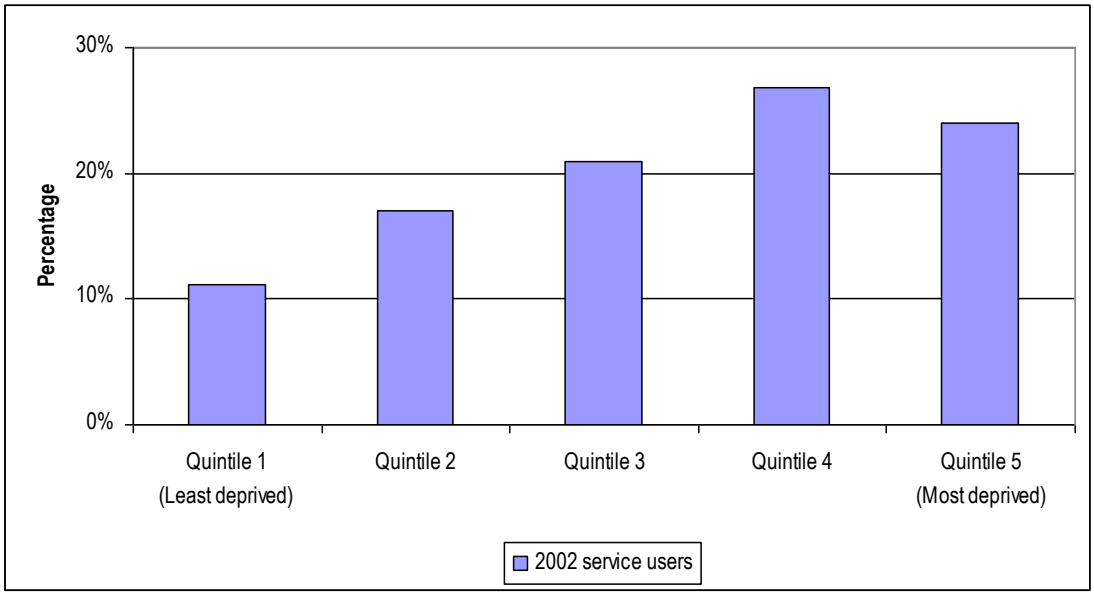
Figure 11: Access rates for children and youth by ethnic group, 2002



An association has been shown between the prevalence of disorder and deprivation, and between the prevalence of serious disorder and deprivation (Oakley Browne, Wells and Scott 2006). The association between asset wealth and mental health has also

been demonstrated (Carter et al 2009). There appears to be an association between mental health service use and deprivation for the 2002 cohort of mental health service users (Figure 12). More than half (51 percent) of children and youth who accessed mental health services in 2002 lived in areas with the highest levels of deprivation (quintiles 4 and 5).

Figure 12: NZDep quintiles of child and youth service users, 2002



Note: This graph only includes children and youth with a specified meshblock code.

5.3.2 Ongoing service use by 2002 cohort of mental health service users

Ongoing secondary mental health service use was common for the cohort of children and youth who used mental health services in 2002, with nearly half (46 percent) still accessing services the following year (Table 5). The proportion accessing services decreased gradually over the next 5 years, and in 2007, approximately one in five (21 percent) used secondary mental health services. Male service users were slightly more likely than females to access services over the 5-year period.

Table 5: Secondary mental health service use from 2003–2007, for children and youth who accessed mental health services in 2002

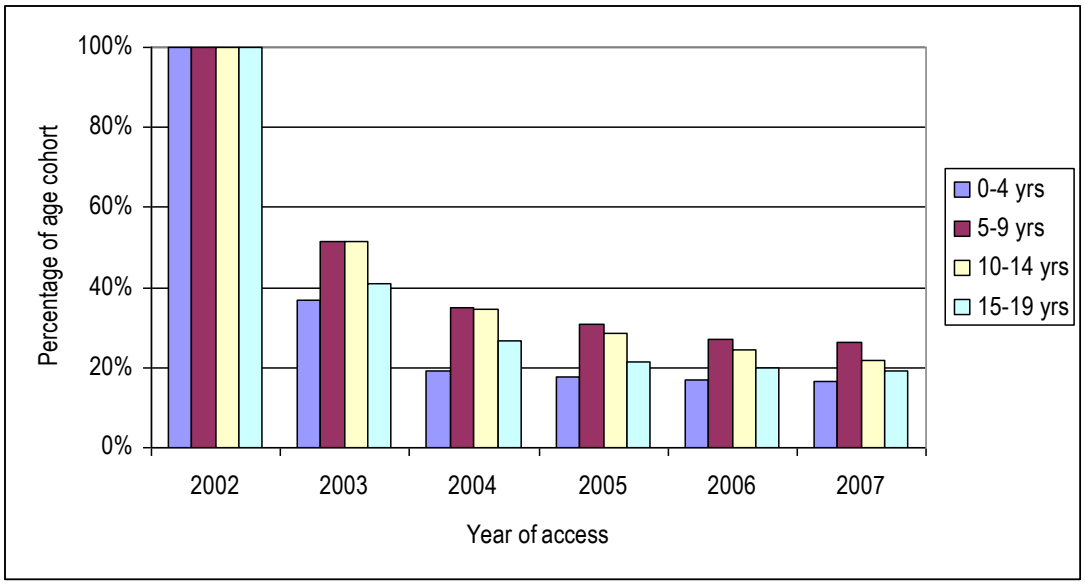
Year of access	Percentage accessing secondary mental health services		
	Total	Gender	
		Female	Male
2002	100%	100%	100%
2003	46%	44%	48%
2004	31%	27%	33%
2005	25%	22%	28%
2006	23%	19%	25%
2007	21%	19%	23%

Figure 12 shows the same information broken down by age group. The majority (63 percent) of children aged 0–4 years who accessed mental health services in 2002 did

not access services the following year, and in 2007, only 17 percent accessed mental health services.

Children aged 5–9 years and 10–14 years were the most likely of the four age groups to access mental health services over the next 5 years. For youth aged 15–19 years, less than half (41 percent) accessed services in 2003, and this dropped to 19 percent in 2007.

Figure 13: 2003–2007 secondary mental health service use for children and youth who accessed mental health services in 2002, by age in 2002



Pacific children and youth were the least likely of the three groups to access services in 2003 (39 percent, compared with 42 percent of Māori and 47 percent of non-Māori/non-Pacific) (Table 6). However, the differences in access between the ethnic groups decreased over time, and in 2007 a similar proportion of children and youth from the three groups accessed services.

Table 6: 2003–2007 secondary mental health service use for children and youth who accessed mental health services in 2002, by ethnic group

	Māori	Pacific peoples	Non-Māori/non-Pacific
2002 access	100%	100%	100%
2003 access	42%	39%	47%
2004 access	27%	27%	32%
2005 access	23%	23%	26%
2006 access	22%	22%	23%
2007 access	22%	21%	21%

5.3.3. Intentional self-harm hospitalisations of 2002 cohort of mental health service users

Approximately 8 percent of the 2002 cohort of child and youth mental health services users had a hospitalisation for intentional self-harm between 2002 and 2007. More than 3 percent had a hospitalisation in 2002, and this may have preceded the mental health service use. In the following 5 years, 1–2 percent per year had a hospitalisation for intentional self-harm. In some cases, the children or youth had multiple hospitalisations over this time. More than two-thirds (71 percent) of those hospitalised over this time were females. This is similar to figures for total New Zealand, where females account for around three-quarters of self-harm hospitalisations in this age group (Ministry of Health 2010c).[7]

Pacific children and youth (8 percent) were slightly more likely to have a hospitalisation for intentional self-harm than Māori or other ethnic groups (6 percent).

5.3.4 Suicide and other causes of death

In the 6 years from 2002–2007, more than 140 children and youth who had used mental health services in 2002 died. This represents approximately 1 percent of the cohort. The cause of death was specified in more than 60 percent of the cases (the remaining deaths had an unspecified cause as they were subject to coroners' findings). Suicide was the most common cause of death (38 percent of deaths with a specified cause), followed by unintentional injury (28 percent).

5.4 Specific issues for children and youth with mental health and addiction problems

Previous sections of this report have shown the number of children and youth with mental health and addiction problems and the number accessing services. This does not show if the children and youth who need services are able to access them or how well the services are meeting the needs of those who access them.

The Mental Health Commission has identified a number of issues faced by child and youth mental health service users through its district visits and through qualitative research involving youth.

The following are some of the issues identified in district visits:

- **Difficulty in accessing services** – In particular, there were difficulties if the child or youth didn't meet the criteria for access as they weren't considered to have serious issues or they had multiple moderate issues (such as mental illness and intellectual disability). There appears to be a gap in services for people with mild to moderate mental disorder and people with multiple problems who may be passed between sectors. In some cases, youth who were turned away from mental health services were later being picked up by the justice sector.

[7] Note the data for total New Zealand has been filtered to exclude people admitted via emergency departments with a length of stay less than 48 hours and readmissions within 2 days. The figures represent events, not people.

- **Lack of inpatient units for children and youth** – Children and youth often had to travel to other DHBs or stay in adult inpatient units, which was not seen as appropriate. There were also difficulties around transition points such as youth moving from child to adult inpatient services or youth moving out of Child, Youth and Family care.
- **Need for prevention services and early intervention** – Many people mentioned the need for prevention and early intervention for children, youth and their families/whānau, particularly when there were intergenerational issues such as addiction or family violence. In addition, some people believed more support was required to meet the needs of children whose parents had mental disorder.
- **Need for collaboration** – While some DHBs had good links with other organisations, there was a general need for collaboration between services (such as between primary and secondary mental health services and between sectors such as health, education and justice). Continuity of care and follow-up services are required, for example when people are discharged from hospital following a self-harm event.
- **Importance of schools** – Schools were seen as playing an important role as they were often the first point of contact for children with mental illness. Children and youth do not necessarily visit their GP and may not present with mental health problems.
- **Need for addiction services** – Some people believed the demand for addiction services was growing and problems were occurring at an earlier age.
- **Recruitment of staff** – Difficulty around recruitment and retention of mental health staff was a common theme.
- **Positive developments** – Positive developments included the establishment of services in schools (such as health clinics, GPs in schools and addiction services) and youth one-stop shops where youth can access health and mental health services without the stigma of others knowing their reason for attending (such as Rotovegas Youth Health (Da Bomb Shelter) in Rotorua and YOSS in Palmerston North).

Qualitative research carried out by the Mental Health Commission highlighted a number of issues for youth with mental health and addiction problems (Mental Health Commission 2006a). Many of the issues raised were the same as those mentioned above, including difficulty accessing services, lack of early intervention and the importance of collaboration.

- Many of the young people, especially those without psychosis, had difficulty accessing secondary mental health services. The young people often had a period of decline when they sought help from people such as doctors and school guidance counsellors. Most were unable to access secondary services until a crisis occurred. Suicide attempts and serious self-harm were common at this point.
- Young people who received treatment through A&E didn't always receive follow-up care or a referral to secondary services.
- Young people who used adult inpatient psychiatric units generally found them traumatic, especially if they were subject to compulsion and seclusion. Females reported feeling unsafe in the inpatient units.

6 Discussion

This report has examined the need for mental health and addiction services and access to services for children and youth. The introduction of this report (section 1.2) highlighted the priorities for the child and youth mental health sector as:

- the need for better access to services and more specialist services
- the importance of collaboration and co-ordination between primary and secondary health services and across sectors
- prevention and early intervention, including suicide prevention.

Access to services, primary mental health services, collaboration and prevention/early intervention will be discussed below and an assessment made of how well the needs of children and youth are being met in these areas.

6.1 Access

Information on the prevalence of mental disorder and addiction gives an indication of the likely need for services. Mental health and addiction problems are prevalent among youth. More than one in four youth (29 percent) are estimated to have a mental disorder over a 1-year period, and 7.2 percent are estimated to have a serious disorder (Oakley Browne, Wells and Scott 2006). For many people, the age of onset for mental disorders occurs during their youth.

Mood disorders, substance use and intentional self-harm are the most common mental health issues for youth. Many teenagers report feeling depressed and significant depressive symptoms are common, particularly among females. Youth are much more likely than adults to display hazardous drinking patterns (Ministry of Health 2008) and to have a substance use disorder (Oakley Browne, Wells and Scott 2006). Suicide continues to be a leading cause of death for youth, despite a decrease of more than 25 percent in the youth (15–24 years) suicide rate between 1997 and 2008. Hospitalisations following intentional self-harm are more common among female youth, while male youth are more likely to die as a result of suicide. Intentional self-harm and suicide attempts often precede mental health service use (Mental Health Commission 2006a).

Secondary mental health services should be available for the 3 percent of people with the highest need for services. Access to mental health services is an ongoing issue, and the current rate of access to secondary mental health services for children and youth (1.9 percent in 2007/08) is well below the 3 percent target set by the Ministry of Health. Based on the target, around 1.1 percent of children and youth (over 13,400 children and youth) are not accessing secondary mental health services. The rate of child and youth access to mental health services has gradually increased from 1.7 percent in 2005/06 to 1.9 percent in 2007/08. The access rate for youth aged 15–19 years has increased the greatest over this time.

There are likely to be gaps in access for Māori and Pacific youth. According to Te Rau Hinengaro: The New Zealand mental health survey, Māori and Pacific peoples have a higher prevalence of mental disorder than people from other ethnic groups (Oakley Browne, Wells and Scott 2006). However, they were less likely to make a mental health

visit to the health care sector (Oakley Browne, Wells and Scott 2006). The Māori and Pacific populations are very youthful, with a high proportion aged less than 20 years.[8] Māori and Pacific account for one-third (33 percent) of children and youth younger than 20 (Ministry of Health 2010a). In comparison, 29 percent of children and youth accessing secondary mental health services in 2007/08 were Māori or Pacific. The access rate for Māori and Pacific peoples in 2007/08 was lower than the rate for non-Māori/non-Pacific children and youth, and this may indicate an unmet need for services.

Information on access rates does not provide information on how many people need services but are unable to access them or on the barriers to access. According to Te Rau Hinengaro, there is a significant unmet need for services for people with mental disorder (Oakley Browne, Wells and Scott 2006). Possible reasons for the low access rates for children and youth include the threshold for access to secondary mental health services being set too high, lack of services, workforce shortages and children and youth not attempting to access services.

Difficulties around access to mental health services is repeatedly raised as an issue in the Mental Health Commission district visits, and it was also mentioned by many youth services users in the research for *Journeys of despair, journeys of hope* (Mental Health Commission 2006a). Many children and youth with mental disorder are being assessed as not meeting the threshold for accessing secondary mental health services, and primary mental health services are not always available. This can result in children and youth being unable to access any mental health services until they are seriously distressed, often following serious self-harm.

Staffing issues such as difficulties with recruiting and retaining staff are commonly mentioned in the Commission's district visits and may affect access to services. This is particularly the case in rural areas where access to specialist child and youth mental health services is limited.

Not all children and youth with mental health and addiction problems will attempt to access services. Many people do not make treatment contact at the onset of their disorder and either delay treatment or do not seek help at all. Common reasons for delaying treatment include people wanting to handle the problem themselves, thinking the problem will go away and not being bothered by the problem (Oakley Browne, Wells and Scott 2006). Stigma may also prevent youth from accessing mental health services. Some regions have youth services such as one-stop shops and services such as GPs in schools, and these appear to be very successful in providing health services to youth.

While access to services is very important, it is also important that services are appropriate for children and youth and meet the needs of the people using them. Access to inpatient services has been identified as an issue in this report. Ideally, acute services such as inpatient units are located in the local community (Mental Health Commission 2006b). Child and youth inpatient units are often not available in smaller regions, and youth may be sent to local adult units, which can be traumatic. However, this option needs to be weighed up against sending them to child and youth inpatient units in other regions where they are geographically separated from family, friends and

[8] At June 2008, 45 percent of Māori, 43 percent of Pacific peoples and 24 percent of non-Māori/non-Pacific were younger than 20 (Statistics NZ population projections, sourced from Ministry of Health 2010).

other supports. Further work is needed to identify alternative options to acute inpatient services, particularly for children and youth.

This report does not contain information on the quality of services delivered. It also contains little information on immediate and longer-term outcomes for children and youth who have used services (such as educational and employment outcomes). Some information on outcomes will be provided by PRIMHD.

Based on the information in this report, it appears that there is a continuing issue around unmet need for access to primary and secondary mental health services.

6.2 Primary mental health services

As mentioned previously, the level of access to secondary mental health services (1.9 percent in 2007/08) remains below the 3 percent target and indicates an unmet need for secondary services. Qualitative information suggests that there is also an unmet need for primary mental health services for people with mild or moderate mental health and addiction problems. The sections on the prevalence of mental disorder (section 2) and suicide and intentional self-harm (section 3) of this report showed that depression, intentional self-harm and substance use are common among youth, but youth (15–24 years) are less likely than adults aged 25–64 years to make a mental health visit to a health care professional (Oakley Browne, Wells and Scott, 2006). Youth may not access services through GPs but may access youth one-stop shops or school services such as guidance counsellors.

PHOs play an important role for people with mental illness. They are expected to assist with the recovery of people in their enrolled populations who have mental illness and addiction problems and to co-ordinate with secondary mental health services (Ministry of Health 2001). The Ministry of Health has funded 41 PHOs to implement primary mental health initiatives, and an evaluation of these initiatives has been positive.[9] However, continued development of primary mental health services is required in order to meet the needs of children and youth with mild to moderate mental health and addiction problems.

6.3 Collaboration and coordination

The mental health strategy identified the importance of collaboration between primary and secondary health services and other sectors. Collaboration between services is essential to ensure that children and youth with mental health and addiction problems are able to access services and to ensure continuity of services. Children and youth are referred to secondary mental health services from a variety of sources including GPs, the education sector, justice, police and A&E services (Figure 8).[10] Collaboration between sectors is essential to ensure that children and youth are able to access mental health services, although this does not always occur.

---

[9] Reports on the primary mental health evaluation are available at http://www.wnmeds.ac.nz/academic/gp/mentalhealth/index.html.

[10] See Mental Health Commission (2008) for more information about sources of referral for children and youth.

Given the high prevalence of mental health and addiction problems among teenagers, it is important that youth are able to access mental health services at transition points such as when they leave school or when moving between youth and adult services. As the section on secondary mental health use over time (section 5.3) of this report showed, the level of access to services appears to drop at around 17 years of age. Difficulties with transitions between services (such as child and youth, adult and alcohol and drug services) may affect access (Ministry of Health 2007). Lack of follow-up after intentional self-harm events may also prevent youth from accessing mental health services. PHOs play an important role in providing access to services and ensuring continuity of services.

Mental Health Commission analysis indicates that collaboration is working well in some areas, but that there are regional variations. Schools play an important role, as school guidance counsellors may be the first to see children and youth with mental health and addiction problems. In addition, there are a number of services in schools (such as GPs in schools) that appear to be working well. Further work is required to identify services that are working well and to ensure collaboration is occurring in all regions.

6.4 Prevention and early intervention

The *Blueprint for mental health services* (Mental Health Commission 1998) highlighted the need to focus on emerging mental health problems among children and youth, while the *New Zealand suicide prevention strategy 2006–2016* (Associate Minister of Health 2006) outlined the need to prevent mental health problems and suicide. Rates of suicide and intentional self-harm are highest among youth and young adults. It is positive to note that youth suicide and intentional self-harm appear to be decreasing. There was a 25 percent decrease in the youth (15–24 years) suicide rate between 1997 and 2008 (Ministry of Health 2010c). According to the Youth ’07 survey, rates of suicide attempts among secondary school students decreased between 2001 and 2007 (Adolescent Health Research Group 2008).

Mental Health Commission research and district visits indicate that children and youth are sometimes unable to get early access to mental health services. For example, youth who self-harmed were sometimes turned away from secondary services as their problems were not considered serious enough, but they were unable to access primary mental health services. Youth and their families reported being unable to access mental health services until the youth had a crisis such as a suicide attempt. In other cases, youth who received hospital treatment following self-harm did not receive referrals or follow-up mental health services.

There appears to be a need for prevention and early intervention services for addiction problems, particularly youth drinking. More than half (53.6 percent) of males and nearly one-third (32.1 percent) of females aged 18–24 years engage in hazardous drinking (Ministry of Health 2008), and these rates are significantly higher than those of other age groups. Youth aged 16–24 years have a significantly higher rate of substance use disorder than adults aged 25 years and over (Oakley Browne, Wells and Scott 2006).

There is a clear need for prevention of mental health and addiction problems and for mental health services for people with emerging problems. There is also a need to prevent intergenerational problems such as addiction. Schools and youth one-stop

shops may identify emerging mental health and addiction problems among children and youth. However, it is important that schools and youth services are able to refer children and youth on to specialist mental health and addiction services if required.

6.5 Conclusion

Many of the issues identified in the background section (section 1.2) of this report continue to be issues for children and youth with mental health and addiction problems. It appears that the mental health needs of children and youth are not being met in some areas.

Access to primary and secondary mental health and addiction services continues to be an issue for children and youth. Mental health and addiction problems are prevalent among youth, and it is essential that there are appropriate services available. This report has highlighted the difficulties faced by children, youth and their families/whānau in accessing services. It has also highlighted gaps in access to services, particularly for Māori and Pacific children and youth.

Some children and youth do not access mental health and addiction services due to stigma or other reasons, such as not acknowledging that they have a problem. Youth one-stop shops and services in schools have been identified as a positive development in allowing children and youth to access health services. However, it is important that these services are able to refer children and youth on to specialist mental health and addiction services if necessary.

This report has shown that substance use disorders are common among youth. There is a need for prevention of problem drinking among this group. Early intervention for mental health and addiction problems is important, but this report has highlighted that children, youth and their families/whānau are not always able to gain early access to services.

The importance of collaboration and coordination within the health sector and with other sectors has been identified in this report. While collaboration is working well in some regions, there are some issues around continuity of services (especially at transition points) and coordination between sectors. Further work is needed to ensure that collaboration is working well in all regions.

Challenges for the sector include ensuring there is an adequate workforce and capacity to provide services, further development of primary mental health services and ensuring that children and youth are able to gain to access mental health services through a number of channels. Further work is required to assess the quality of services and outcomes for children and youth who have accessed secondary mental health and addiction services.

References

Adolescent Health Research Group. 2008. *Youth '07: The health and wellbeing of secondary school students in New Zealand. Technical Report.* Auckland: The University of Auckland.

Associate Minister of Health. 2006. *New Zealand suicide prevention strategy 2006–2016.* Wellington: Ministry of Health.

Carter KN, Blakely T, Collings S, et al. 2009. What is the association between wealth and mental health? *Journal of Epidemiology and Community Health, 63*: 221–226.

Communio. 2009. *Evaluation of Youth Ones Stop Shops*. Retrieved from http://www.moh.govt.nz/moh.nsf/indexmh/evaluation-of-youth-one-stop-shops

Dowell T, Garrett S, Collings S, et al. 2007. *Primary mental health initiatives: Interim report.* Wellington: School Of Medicine and Health Sciences, University of Otago.

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

Mental Health Commission. 2006a. *Journeys of despair, journeys of hope*. Wellington: Mental Health Commission.

Mental Health Commission. 2006b. *The acute crisis – towards a recovery plan for acute mental health services in New Zealand.* Wellington: Mental Health Commission.

Mental Health Commission. 2008. *Access to mental health and addiction services and intersectoral links, 2006/07.* Retrieved from *http://www.mhc.govt.nz/media_releases/topics/show/136-18-december-2008-access-to-mental-health-and-addiction-services-and-intersectoral-links-200607*

Minister of Health. 2005. *Te Tāhuhu – Improving mental health 2005–2015: The second New Zealand mental health and addiction plan*. Wellington: Ministry of Health.

Minister of Health. 2006. *Te Kōkiri: The mental health and addiction action plan 2006–2015*. Wellington: Ministry of Health.

Ministry of Health. 1994. *Looking forward: Strategic directions for mental health services*. Wellington: Ministry of Health.

Ministry of Health. 1997. *Moving forward: The national mental health plan for more and better services.* Wellington: Ministry of Health.

Ministry of Health. 2001. *The primary health care strategy.* Wellington: Ministry of Health.

Ministry of Health. 2005. *Mental health: Service use in New Zealand 2002.* Wellington: Ministry of Health.

Ministry of Health. 2007. *Te Raukura. Mental health and alcohol and other drugs: Improving outcomes for children and youth*. Wellington: Ministry of Health.

Ministry of Health. 2008. *A portrait of health: Key results of the 2006/07 New Zealand health survey.* Wellington: Ministry of Health.

Ministry of Health. 2009a. *Mental health: Service use in New Zealand 2005/06 and 2006/07.* Wellington: Ministry of Health.

Ministry of Health. 2009b. *Alcohol use in New Zealand: Key results of the 2007/08 New Zealand alcohol and drug use survey.* Wellington: Ministry of Health.

Ministry of Health. 2010a. *Mental health: Service use in New Zealand 2007/08.* Wellington: Ministry of Health.

Ministry of Health. 2010b. *Office of the Director of Mental Health: Annual report 2009.* Wellington: Ministry of Health.

Ministry of Health. 2010c. *Suicide facts: Deaths and intentional self-harm hospitalisations 2008.* Wellington: Ministry of Health.

Oakley Browne MA, Wells JE, Scott KM (eds). 2006. *Te Rau Hinengaro: The New Zealand mental health survey*. Wellington: Ministry of Health.