Te Kaitātaki Oranga
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Access to Mental Health and Addiction Services and Intersectoral Links, 2006/07

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Contents

1. Overview

The purpose of this report is to monitor progress towards the implementation of the Government's national mental health strategy.[1] This report presents information on access to secondary mental health and addiction services[2] and examines some of the connections between external organisations and these services. The report includes a discussion of inequalities between population groups in terms of access to services and differences in the way groups are referred to secondary mental health services. Specifically the report covers the following topics:

- access to secondary mental health services
- referrals to secondary mental health services
- Primary Health Organisation (PHO) enrolments for people accessing secondary mental health services
- inequalities between population groups.

Most of the information in this report is based on the six or twelve month period to 30 June 2007. Time-series information is also presented for the period 2001 to 2007. Data is sourced from two New Zealand Health Information Service data collections: the Mental Health Information National Collection (MHINC), and the Primary Health Organisation (PHO) Enrolment Collection.

Key points about data quality

1. Data is known to be systematically under-reported to the MHINC. Only a small proportion of non-government organisations that receive mental health and addiction funding currently report data to MHINC. Data for older people in the Central and Southern regions is not reported to MHINC and this means accurate access rates for people aged 65 years and over cannot be determined.

2. The volume of District Health Board (DHB) data reported to MHINC can be variable and when the data was extracted for this report, two DHBs had not reported data in the six months to June 2007. This means that the reported access rates for total New Zealand will be slightly lower than the actual access rates.

Summary of key findings

National access rates

The percentage of the population who accessed secondary mental health services over the twelve months ending June 2007 was 2.2 percent, the same rate as the previous twelve months. The six month access rate for the period ending June 2007 was 1.5 percent, slightly lower than the rate for the previous six months (1.6 percent). The lower rate is likely to be due to unreported data rather than representing an actual decline in the access rate.

[1] The National Mental Health Strategy is comprised of the following documents: *Looking Forward: Strategic Directions for Mental Health Services* (Ministry of Health 1994); *Moving Forward: The National Mental Health Plan for More and Better Services* (Ministry of Health 1997); *Te Tāhuhu – Improving Mental Heath 2005-2015* (Minister of Health 2005); *Te Kōkiri: The Mental Health and Addiction Action Plan 2006-2015* (Minister of Health 2006).

[2] In this report, the phrase 'mental health services' refers to mental health and addiction services.

Access rates by age
Adults aged 20 to 64 years had a higher rate of access over the six and twelve month period to June 2007 than children and youth (0 to 19 years) and older adults (65 years and over). However, under-reporting of data for older adults means the access rate for this age group will be significantly under-reported.

Access rates by ethnic group
Access rates for Māori, Pacific peoples and Other (non-Māori, non-Pacific) ethnic groups are presented in this report. Māori had the highest overall rate of access to secondary mental health services but there were variations by age group. In the age group 0 to 19 years, people from Other ethnic groups had the highest access rate. For adults aged 20 to 64 years, Māori had a much higher access rate than Pacific peoples and Other ethnic groups. For older adults, access rates were similar for Māori, Pacific peoples and Other ethnic groups.

While epidemiological data (Oakley Browne et al 2006) indicates that Pacific peoples have a higher twelve month prevalence of mental disorder than people from Other (non-Māori, non-Pacific) ethnic groups, the rate of access to secondary mental health services for Pacific peoples is much lower than the rate for Māori and Other ethnic groups.

Referrals to secondary mental health services
General Practitioners (GPs) were the most common source of referral to secondary mental health services. Adults aged 20 to 64 years were less likely than other age groups to be referred by a GP. Māori were much less likely than Pacific peoples and Other ethnic groups to be referred by a GP.

PHO enrolments
Linkages between PHOs and secondary mental health services are important to ensure continuity of care. The majority of people who accessed secondary mental health services were enrolled with a PHO (92.9 percent for the year ending June 2007), but enrolment rates were lower for service users aged 25 to 44 years, males and Pacific peoples.

2. Access to services

Level of need for services

It is important that mental health services are available to those in need, and that they are accessible to different groups in the population. The strategy documents *Te Tāhuhu: The Second New Zealand Mental Health and Addiction Plan* (Minister of Health 2005) and *Te Kōkiri: The Mental Health and Addiction Action Plan 2006-2015* (Minister of Health 2006) refer to gaps in access and the need for increased access to secondary mental health services for children, adults and older adults.

Access benchmarks provide a target level of access to secondary mental health services, based on estimates of the proportion of the population who have the highest need for mental health services. The Ministry of Health established an access benchmark that in any one month, public mental health services should see the three percent of the population with the most severe mental disorder or highest support needs (Ministry of Health 1994, 1997). This figure was estimated by adapting figures from international studies. In 1998, the Mental Health Commission adjusted the benchmark to three percent access over a six month period rather than a one month period (Mental Health Commission 1998). More recently, the Ministry of Health have moved to measuring access over a twelve month period. This report presents access rates for both six month and twelve month periods.

Epidemiological studies can provide information on the need for mental health services. According to *Te Rau Hinengaro: The New Zealand Mental Health Survey* (Oakley Browne et al 2006), an estimated 20.7 percent of people aged 16 years and over experienced mental disorder in the past twelve months, with 4.7 percent estimated to have serious disorder. Not everyone with mental disorder will have a need to access secondary mental health services, and access benchmarks target those with the highest need for services.

Access data in this report

This section presents data on access to secondary mental health services from June 2001 to June 2007. Information is not included on access to primary mental health services, on dimensions of access such as timeliness or quality of services provided, or on outcomes for people who accessed services.

Access data in this report is sourced from the Mental Health Information National Collection (MHINC), held by the New Zealand Health Information Service (NZHIS). The MHINC contains information on government-funded secondary mental health and addiction services. This includes secondary inpatient, outpatient and community services provided by hospitals and non-government organisations (NGOs).

Access refers to people who used mental health services in the reporting period. Most access figures in this report are based on a unique count of people using services in each period, rather than a count of services accessed over that period. People are only counted once in each six and twelve month period, regardless of the number of times they accessed services. For example, a service user who accessed services three times between August and November 2006 would be counted once in the six month period ending December 2006 and once in the twelve month period ending June 2007.

Access is calculated from data on the number of people who used mental health services. This is referred to in NZHIS publications as 'clients seen'. In this report, the term 'service users' refers to clients seen.

Most of the access data in this section is presented as an *access rate*, or the percentage of the population who used secondary mental health services. This is also referred to as the crude access rate per 100 people. Access rates are calculated by dividing the number of people who used secondary mental health services (as reported to MHINC) by the total number of people in the population.

2.1. Quality of access data

In order to understand the extent to which access data reported to the MHINC reflects the true picture of access to secondary mental health services in New Zealand, it is necessary to assess the data quality. Among other things, the quality of the access data is affected by systematic under-reporting to the MHINC, and data quality issues or under-reporting by individual District Health Boards (DHBs). There are also issues with ethnicity reporting for MHINC data. Each of these issues is discussed on the follow pages.

Systematic under-reporting

MHINC data is known to be under-reported in several areas, including data for NGOs and data for older people. Only a small proportion of NGOs that receive mental health funding currently report data to MHINC. The number of NGOs reporting to MHINC decreased slightly between January 2004 and June 2007. More complete reporting of NGO data is expected when the Project for the Integration of Mental Health Data (PRIMHD) is implemented.[3]

Data for psychogeriatric services provided in the Central and Southern regions is not reported to MHINC as these services are funded through the disability support funding stream rather than the mental health funding stream. This means that access rates for older people are under-reported and this will also be reflected in the total (all ages) access rates at a national level and for DHBs in the Central and Southern regions.[4]

The Ministry of Health have estimated that data for approximately 16,500 people is not captured in MHINC (based on data for the 12 months ending June 2004). This estimate includes unreported NGO data and data for older people in the Central and Southern regions. The estimated number of service users whose data is not reported to MHINC is equivalent to around 19 percent of the reported number of service users in MHINC.

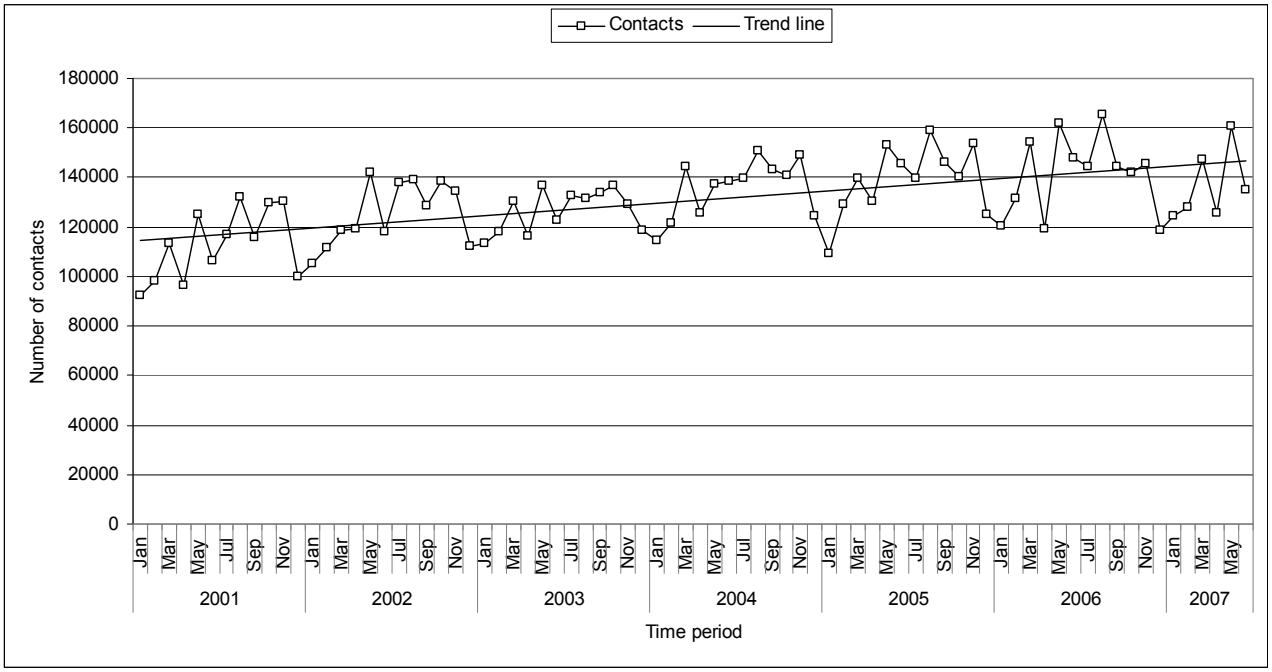
Data quality issues at a national or DHB level

Fluctuations in clients seen, contacts or bed nights at a national or DHB level may indicate data quality issues rather than actual changes in service use. Figure 1 shows the number of contacts per month while Figure 2 shows the number of clients seen and bed nights per month reported to MHINC from January 2001 to June 2007 for total New Zealand. While access rates in this report are calculated from the number of clients seen, contacts and bed nights can give an indication of possible data quality issues.

[3] PRIMHD will integrate MHINC data with the Mental Health Standard Measures of Assessment and Recovery (MH-SMART). DHBs are expected to report to PRIMHD from July 2008, while NGO implementation will be over three years from July 2008.

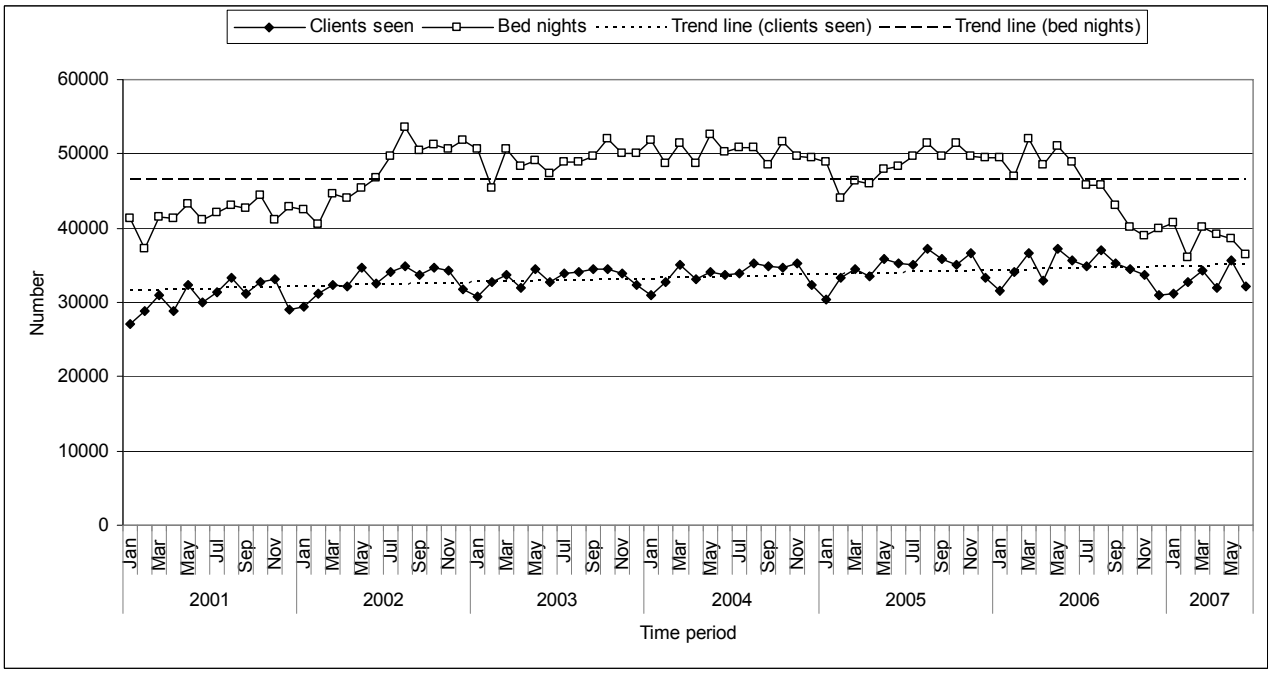
[4] DHBs in the Central and Southern regions include Hawke's Bay, MidCentral, Whanganui, Capital & Coast, Hutt Valley, Wairarapa, Nelson-Marlborough, West Coast, Canterbury, South Canterbury, Otago and Southland.

Figure 1: Number of contacts per month reported to MHINC, January 2001 to June 2007



The reported number of contacts per month has been variable over time but followed a similar monthly pattern. The annual number of contacts increased between 2001 and 2006, but the reported number of contacts for the six months ending June 2007 (approximately 821,100) was 1.6 percent lower than the reported number for the six months ending June 2006 (approximately 834,300).

Figure 2: Number of clients seen and bed nights by month reported to MHINC, January 2001 to June 2007



There was a large decrease (22.1 percent) in the number of bed nights reported in the six month period ending June 2007, compared with the same period in 2006. The number of bed nights reported in February 2007 (approximately 36,100) was the lowest reported since the MHINC collection started. The reported number of clients seen in 2007 followed a similar monthly pattern to previous years, but decreased from approximately 207,900 in

the six months ending June 2006 to approximately 198,000 in the six months ending June 2007 (4.8 percent decrease).

There was some variability at an individual DHB level in the number of clients seen, contacts and bed nights reported per month. Some of the variability is likely to be due to data quality issues. In most cases the monthly variability for individual DHBs has not had a noticeable impact on the access rates in this report, as access data is mostly presented at a national level based on six month or twelve month periods rather than single months. However, unreported data for Whanganui and Capital & Coast DHBs in the six months to June 2007 has resulted in a decrease in the reported number of clients seen in 2007. As access rates are based on the reported number of clients seen, incomplete data for these DHBs has resulted in a slight decrease in the six month and twelve month national access rates for the period ending June 2007.

In conclusion, data reported to MHINC does not represent the total number of people accessing secondary mental health services. In particular the data for older people and those who accessed NGO services but did not also access DHB services is under-reported. Additionally the data for some DHBs was incomplete for the six months ending June 2007, and this will lower the reported national rate of access (see Appendix A). In particular the reported data for Capital & Coast and Whanganui DHBs is much lower in 2006/07 than in previous years. If people in these two DHBs accessed secondary mental health services at the same rate for the period ending June 2007 as the period ending June 2006, this would increase the national access rates slightly. It is estimated that the national six month access rate would increase from 1.5 percent to 1.6 percent, while the twelve month rate would increase from 2.2 percent to 2.3 percent.

Most of the data used in this report was extracted in January 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.

Quality of ethnicity data

In the past there have been known issues with the quality of ethnicity data reported to MHINC. One aspect of data quality is the proportion of service users with an unspecified ethnicity. For the purposes of MHINC, this has been defined as people with ethnicity not stated (ethnicity code '99') or 'other' (ethnicity code '54').[5] In the six months ending June 2001, 12.4 percent of service users had an unspecified ethnicity in MHINC. This dropped to 6.6 percent in the six months ending June 2007.

There is an ongoing need to collect good quality ethnicity data in order to measure inequalities between ethnic groups. The decrease in the proportion of people with unspecified ethnicities is positive. However, this is likely to result in a greater number of people being classified to Mäori and Pacific ethnic groups and this should be taken into account when analysing MHINC data over time. In MHINC, the proportion of people with a

[5] The ethnicity code '54' includes ethnic groups such as Central, North and South American Indian, Inuit/Eskimo, Mauritian and Seychelles Islander, as well as unspecified ethnicities of *Other, not elsewhere classified* (nec) and *Other, not further defined* (nfd). As the actual number of people in New Zealand belonging to these ethnic groups is very small, most of the cases reported in the MHINC are likely to represent unspecified ethnicity (Other, nec or nfd). For the purposes of this report, clients coded to the ethnicity code *54* are assumed to have unspecified ethnicity.

Note that the current Statistics NZ code for this group is *61* and this includes New Zealander responses. Excluding New Zealander responses, less than 1500 people in the 2006 Census reported belonging to these ethnic groups (Statistics NZ 2008). This represents less than 1 percent of the population.

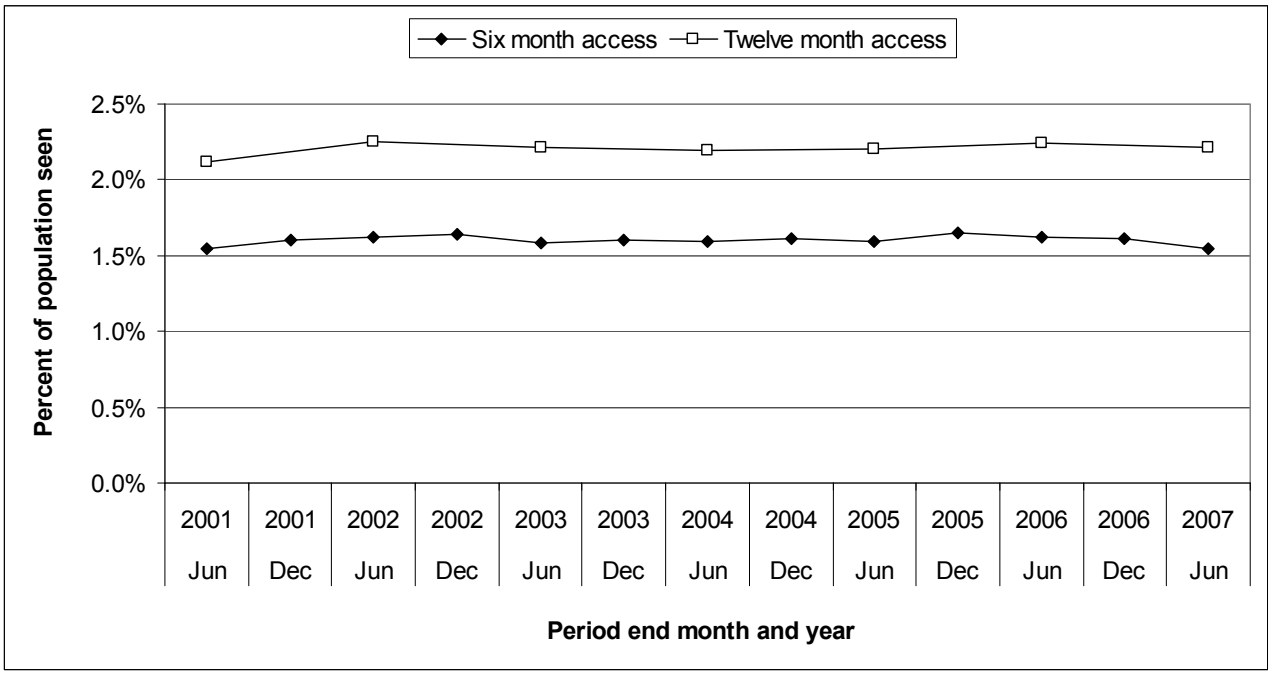
prioritised ethnicity of Māori or Pacific increased from 17.9 percent in the six months ending June 2001, to 23.5 percent in the six months ending June 2007. In addition to a decrease in the proportion of people with unspecified ethnicity, there has been an increase in the proportion with two or more ethnicities reported in MHINC. This is also likely to impact on the proportion of people being allocated to the Mäori and Pacific ethnic groups.

In addition to the issues outlined above, access figures for Māori may be understated as many kaupapa Māori services are provided by NGOs that currently do not report to the MHINC.

2.2. National access rates

Figure 3 shows rates of access to secondary mental health services for the periods ending June 2001 to June 2007. The twelve month access rate for the year ending June 2007 was 2.2 percent, the same rate as the previous twelve months. The six month access rate for the period ending June 2007 was 1.5 percent, compared with 1.6 percent for the previous six months ending December 2006. While the access rates appear stable, this may partly reflect data quality issues with MHINC data as discussed in the previous section.

Figure 3: Six and twelve month access rates (percent of population seen) for all ages, June 2001 – June 2007, total New Zealand



Access rates by age

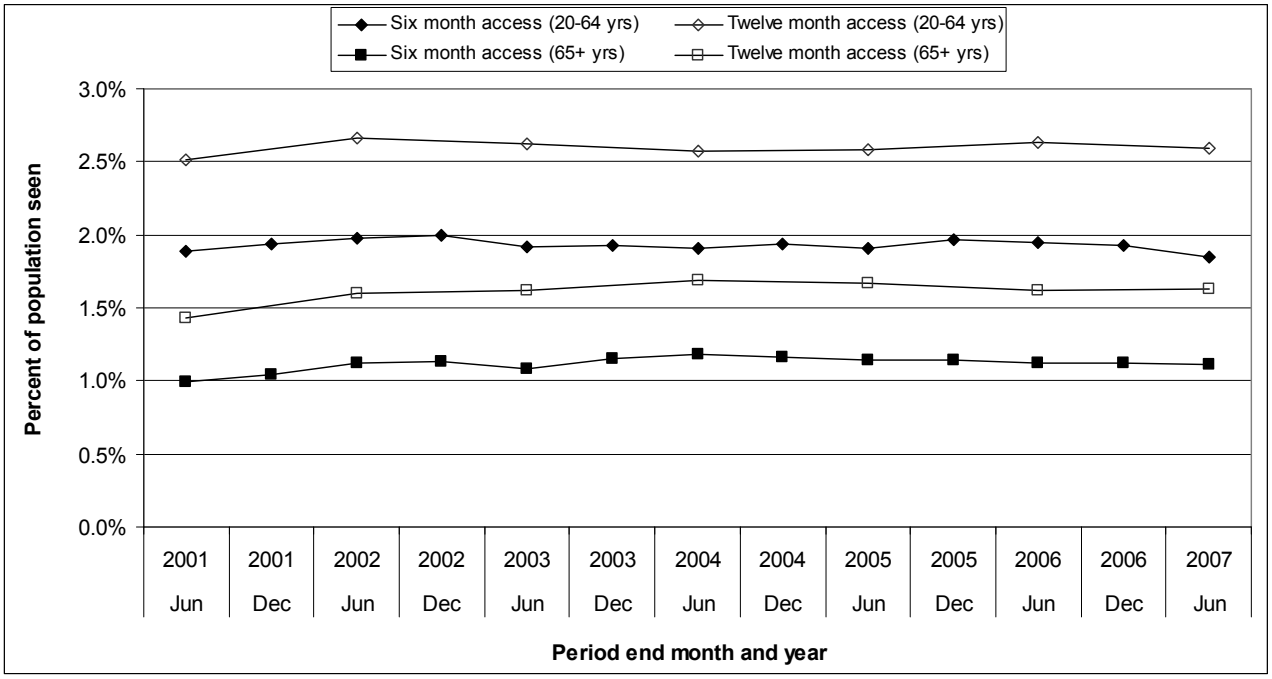
Table 1 shows access rates by age group for the period ending June 2007, while Figure 4 shows access rates by age group for adults from June 2001 to June 2007. Adults aged 20 to 64 years had a higher rate of access over the six and twelve month period to June 2007 than children and youth (0 to 19 years) and older adults (65 years and over). The rates for older adults will be understated due to unreported data for psychogeriatric services in the Central and Southern regions (see Section 2.1). This restricts the Commission's ability to assess and comment on access rates for older adults at a national level.

Table 1: Access numbers and rates (percent of population seen) for the six and twelve month periods ending 30 June 2007, by age group, total New Zealand

		Age group			
		0-19 years	20-64 years	65 years and over	Total, all ages
6 month period	Clients seen	13,497	45,761	5781	65,039
	Access rate	1.1%	1.8%	1.1%	1.5%
12 month period	Clients seen	20,245	64,475	8434	93,154
	Access rate	1.7%	2.6%	1.6%	2.2%

Note: Clients are grouped by their age as at the end of the period.

Figure 4: Six and twelve month access rates (percent of population seen) by age group for adults aged 20 years and over, June 2001 – June 2007, total New Zealand



Access rates for children and youth are further broken down by age in Table 2. The access rate for children and youth in the six month period ending June 2007 was 1.1 percent, compared with 1.2 percent for the previous six month period. The access rate for the twelve months ending June 2007 was 1.7 percent, the same as the access rate for the previous year.

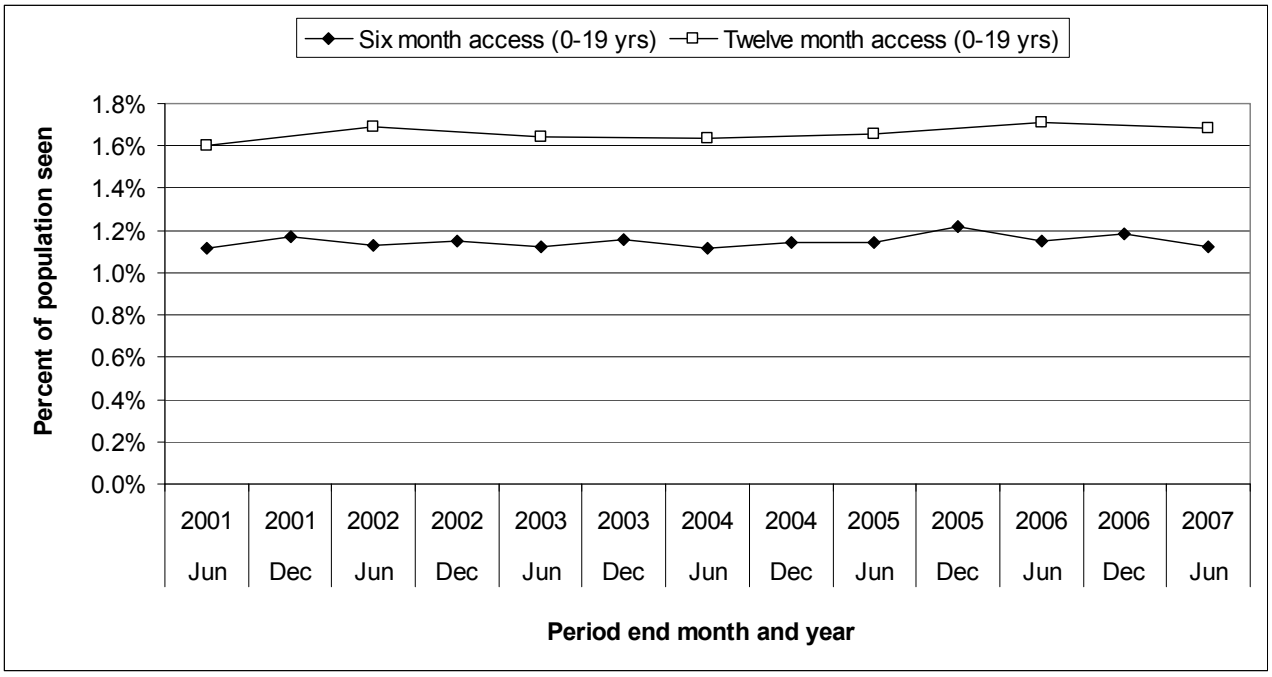
Figure 5 shows six and twelve month access rates for children and youth from June 2001 to June 2006. The relatively flat trend shows that improvements have not been made towards the access rate benchmarks over this time. Broken down further by age group, access rates for youth aged 15 to 19 years have increased slightly over this time, while rates for children in the age groups 0 to 9 years and 10 to 14 years remained at approximately the same level.

Table 2: Access numbers and rates (percent of population seen) for the six and twelve month periods ending 30 June 2007, children and youth aged 0 to 19 years, total New Zealand

		Age group			
		0-9 years	10-14 years	15-19 years	Total, 0-19 years
6 month period	Clients seen	2270	4190	7037	13,497
	Access rate	0.4%	1.4%	2.2%	1.1%
12 month period	Clients seen	3135	6029	11,081	20,245
	Access rate	0.5%	2.0%	3.5%	1.7%
Access rate benchmark (six month)		1.0%	3.9%	5.5%	3.0%

Note: Clients are grouped by their age as at the end of the period.
Access rate benchmarks are sourced from the *Blueprint for Mental Health Services in New Zealand* (Mental Health Commission 1998).

Figure 5: Six and twelve month access rates (percent of population seen) for children and youth aged 0 to 19 years, June 2001 – June 2007, total New Zealand



2.3. Access rates by ethnic group

This section presents rates of access to secondary mental health services by ethnic group. The ethnicity data in this section is based on prioritised ethnicity at the end of the period. Prioritisation is a method of categorising the ethnicity of a person who belongs to more than one ethnic group, to a single ethnic group based on a priority schedule. This method of outputting ethnicity data is commonly used in the health sector.

In this report, people have been assigned to one of three ethnic group categories according to the following prioritisation schedule:

- If Mäori is one of the ethnic groups reported, the person is assigned to the 'Mäori' ethnic group.
- If any Pacific group is reported, the person is assigned to 'Pacific peoples'.
- If neither of the above are reported, the person is assigned to 'Other' ethnic groups (this includes unspecified ethnicity).

Prioritisation may result in data for certain ethnic groups such as Pacific peoples being under-reported. The majority of mental heath service users only have one ethnic group reported (92.5 percent in the six month period ending June 2007) and so prioritisation will have no effect on their reported ethnicity. However, an increasing proportion of service users have two or three ethnic groups reported in MHINC.

Types of rates

Three types of rates are shown in this report: crude access rates, age-specific access rates and age-standardised access rates. All rates are calculated using Census projected populations from Statistics NZ.

Crude access rates represent the percentage of people who have accessed secondary mental health services. These rates are not adjusted for age.

When comparing different ethnic groups (eg, Māori and Other ethnic groups), it is necessary to adjust for differences in the size and age-structure of the groups being compared. Comparison between groups is possible through use of age-specific or age-standardised rates.

Age-specific access rates represent the percentage of an age group (0-19, 20-64 and 65 years and over) who have accessed mental health services.

Age-standardised access rates adjust for differences in the size and population structure of the groups being compared to give a single rate for each group. They are calculated by weighting the age-specific access rates by a standard population.[6] Age-standardised rates have no meaning by themselves and are only meaningful when compared with other age-standardised rates.

Table 3 shows the six month and twelve month access rates for Mäori, Pacific peoples and Other ethnic groups. Service users with an unspecified ethnic group are included in the category 'Other'. Some of these people may belong to the Mäori and Pacific ethnic groups and so the rates for these groups may be underestimated.

Table 3: Access numbers and rates (crude and age-standardised) for the six and twelve month periods ending 30 June 2007, by ethnic group, total New Zealand

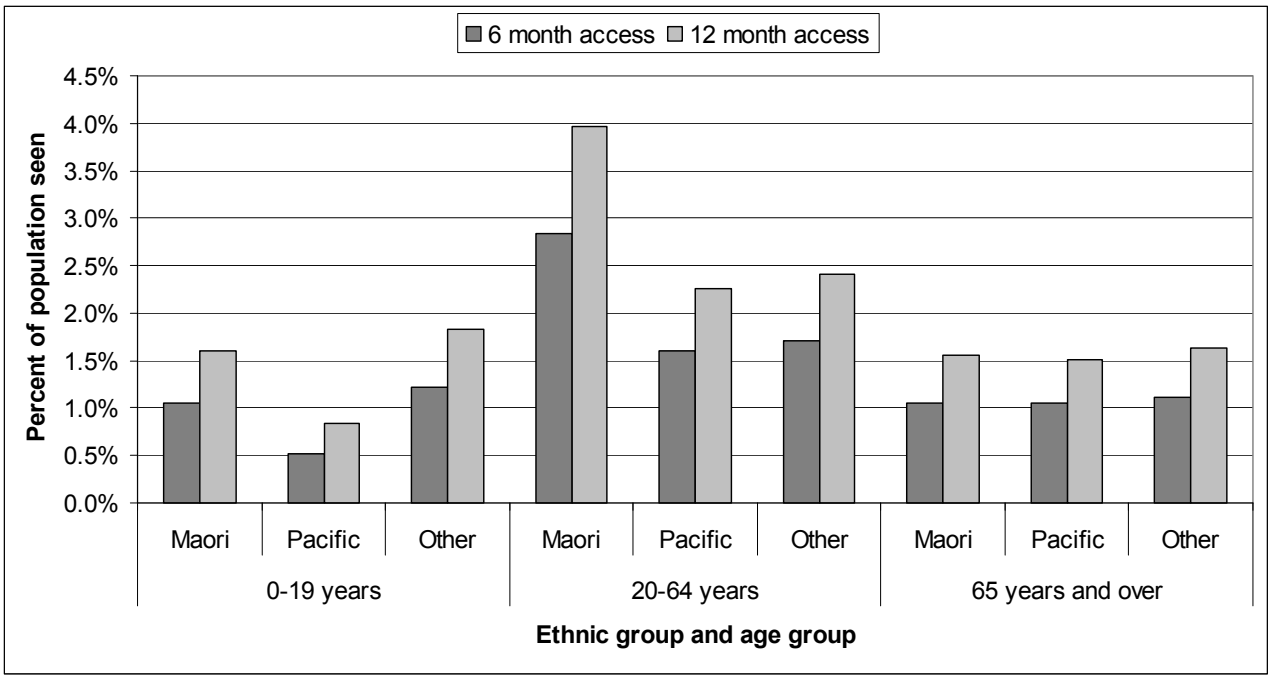
		Ethnic group		
		Mäori	**Pacific peoples**	**Other**
6 month period	Clients seen	12,350	2917	49,772
	Access rate (%)	2.0%	1.1%	1.5%
	Age-standardised rate (per 100,000)	1923	1099	1427
12 month period	Clients seen	17,612	4219	71,323
	Access rate (%)	2.8%	1.6%	2.2%
	Age-standardised rate (per 100,000)	2738	1586	2061

Note: Clients are grouped by their ethnicity as at the end of the period. Other includes unspecified ethnicity.

[6] The standard population used to calculate age-standardised rates in this report is Segi's world population (Waterhouse et al 1982). Segi's world population is also used in *Mental Health: Service Use in New Zealand 2004* (NZHIS 2007).

Unadjusted for age, Māori had a higher crude access rate than Pacific peoples and Other ethnic groups in the six month and twelve month periods ending June 2007. When adjusted for age, Māori had a higher age-standardised access rate than Pacific peoples and Other ethnic groups. However, the age-specific access rates showed a slightly different pattern (Figure 6).

Figure 6: Six and twelve month access rates (percent of the population seen) for the period ending 30 June 2007, by ethnic group and age group, total New Zealand



In the age group 0 to 19 years, Other ethnic groups had the highest six month and twelve month age-specific access rates, closely followed by Māori. The six month and twelve month access rate for Pacific children and youth was approximately half that of the Māori rate and less than half the rate for Other ethnic groups.

Māori had a much higher access rate than Pacific peoples and Other ethnic groups in the age group 20 to 64 years. For older adults (65 years and over), rates of access were similar across the three groups. Some of these patterns may reflect data quality of the ethnicity data or the effects of prioritisation. In particular, the data for Pacific peoples may be affected by the use of prioritised ethnicity and the number of people with unspecified ethnicity. For these reasons the access rates for Pacific peoples could be understated.

In the *Blueprint for Mental Health Services* (*Blueprint*), Māori access rate benchmarks were set at six percent over a six month period (ie, double the rate for the general population). At the time it was noted that epidemiological data was lacking and benchmarks could be revised when further information became available (Mental Health Commission 1998). Later epidemiological data in *Te Rau Hinengaro* indicated that the twelve month prevalence of mental disorders (unadjusted for age and sex) is around 50 percent higher for Māori compared with Other (non-Māori, non-Pacific) ethnic groups.[7] This suggests that while future revisions of access rate benchmarks for Māori may not need to be as high as double the benchmark for the general population, Māori still have a

[7] Adjusted for age and sex, the rate for Māori is around one-third higher than the rate for Other (non-Māori, non-Pacific) ethnic groups.

greater need for mental health services than the general population.[8] As the previous figure and table have shown, Māori have a higher overall rate of access to secondary mental health services, but the higher access rate mainly occurs in the age groups 20 to 64 years.

Epidemiological data presented in *Te Rau Hinengaro* also indicates that the twelve month prevalence of mental disorder for Pacific peoples is slightly higher than the rate for people from Other (non-Māori, non-Pacific) ethnic groups (see Section 5 for further information). However, the rate of access to secondary mental health services for Pacific peoples is lower than the rate for Māori and Other ethnic groups, especially for children and youth (0 to 19 years) and adults aged less than 65 years. In addition to actual differences in access, this could reflect data quality issues and the effect of prioritisation of data.

2.4. Access rates by DHB of domicile

The DHB data in this report is based on the place where the person accessing the mental health service lived (DHB of domicile) rather than the place where the service was received (DHB of service). As Section 2.1 outlined, Whanganui and Capital & Coast DHBs had not reported complete data for 2006/07 at the time of this report. Most people accessing secondary mental health services will be seen in their DHB of domicile, and so incomplete reporting or other data quality issues at an individual DHB level may be reflected in this data. Note that NGO data is included, where this has been reported to the MHINC.

Six and twelve month access rates for people aged 0 to 64 years by DHB are shown in Figure 7. Data for older adults has been excluded as the Central and Southern regions do not report psychogeriatric data to MHINC. This means the total access rates (all ages) and the access rates for older adults in DHBs in the Central and Southern regions are incomparable with access rates for DHBs in the Northern and Midland regions.

As Figure 7 shows, there is variation across DHBs in terms of the rate of access to mental health services. This variation may reflect actual differences in access to services or it may be due to issues with data quality and completeness. There will also be differences in access to services due to regional variations in the population structure (eg, age and ethnic structure).

Service users aged 0 to 64 years from West Coast DHB consistently had the highest six month and twelve month access rates of all DHBs in the period June 2001 to June 2007. The actual number of people accessing services was relatively small though. Prior to December 2006, people from Whanganui DHB had one of the highest six and twelve month access rates across the DHBs. The access rate for Whanganui DHB dropped dramatically between July 2006 and June 2007, due to data not being reported to MHINC. The access rate for Capital & Coast DHB was also affected by unreported data over this period.

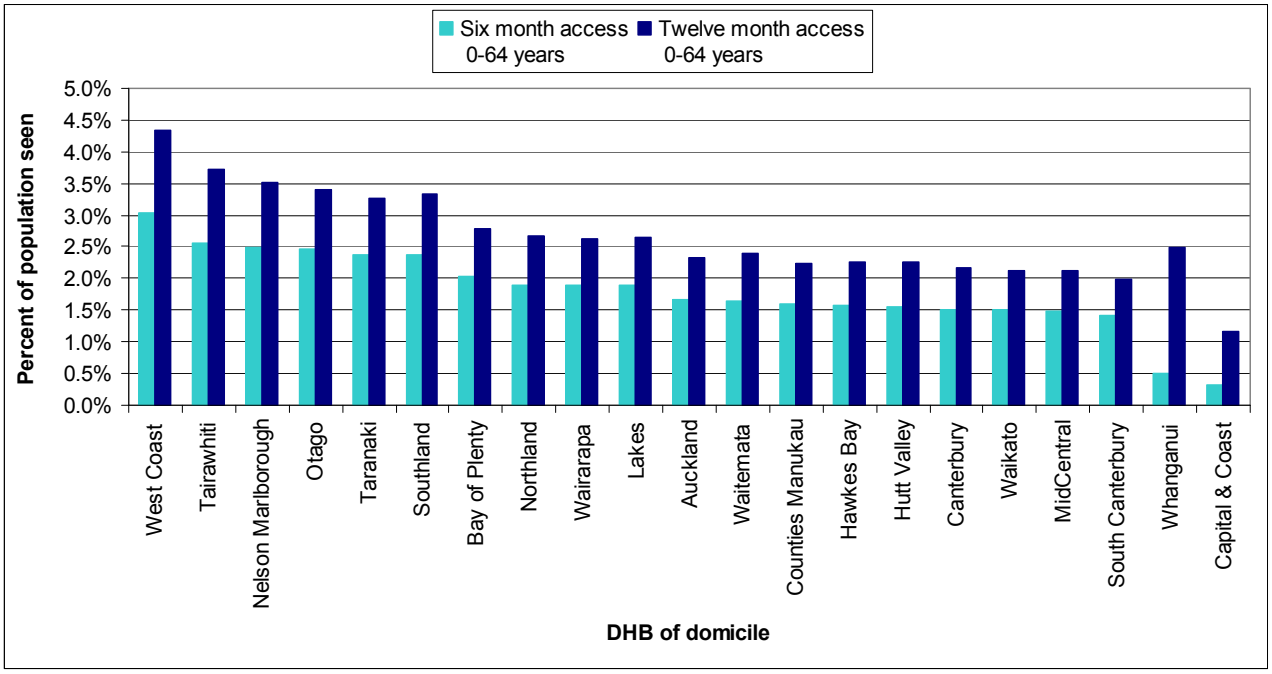
For people aged 0 to 64 years, the biggest increases in six month access rates from June 2001 to June 2007 were recorded for people in Tairawhiti and Counties Manukau DHBs.

[8] Note that *Te Rau Hinengaro* did not examine all types of mental disorder – limitations of the study are that it did not cover specific psychotic disorders and people with severe but uncommon conditions are likely to be under-represented. In addition, people aged 0-15 years were not part of the survey.

South Canterbury DHB had the biggest decrease in access rates (excluding DHBs with unreported data), although most of the decrease occurred prior to June 2003.

More detailed information about access rates by DHB of domicile are given in Appendix A.

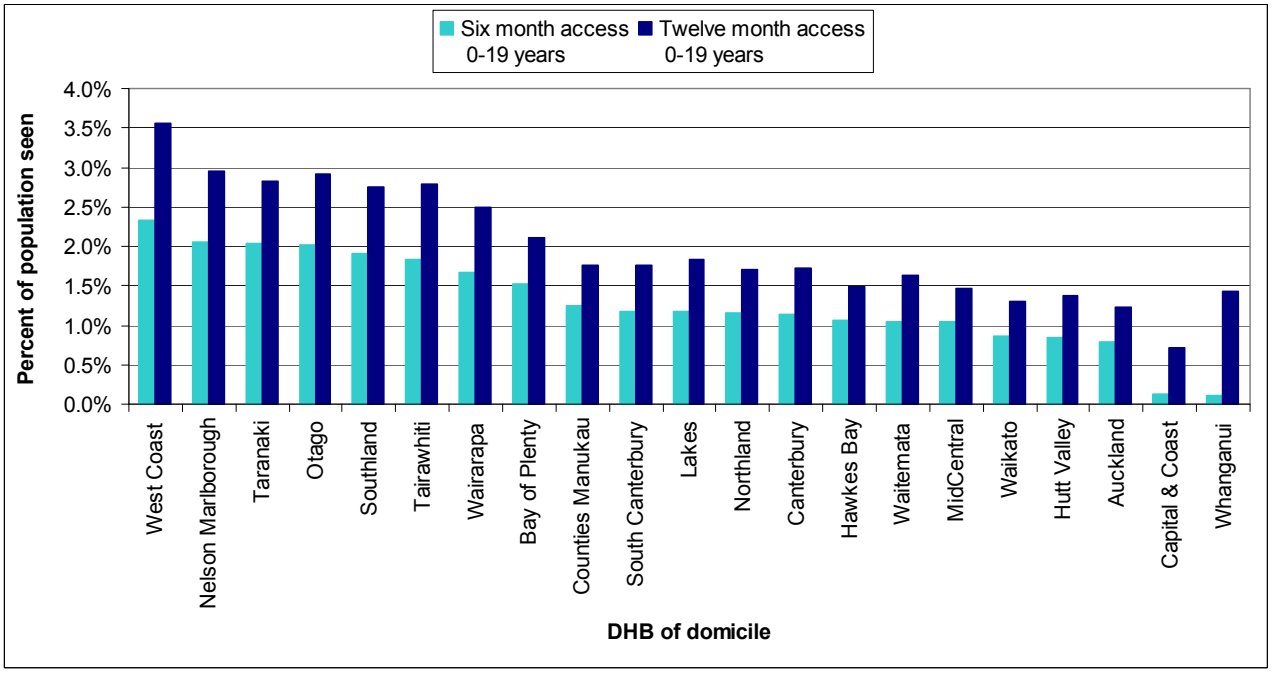
Figure 7: Six and twelve month access rates (percent of population seen) for the period ending 30 June 2007, for people aged 0 to 64 years, by DHB of domicile



Note: Data is incomplete for Whanganui and Capital & Coast DHBs.
DHBs are sorted based on their six month access rate.

Access rates by DHB of domicile for children and youth are shown in Figure 8.

Figure 8: Six and twelve month access rates (percent of population seen) for the period ending 30 June 2007, children and youth aged 0 to 19 years, by DHB of domicile



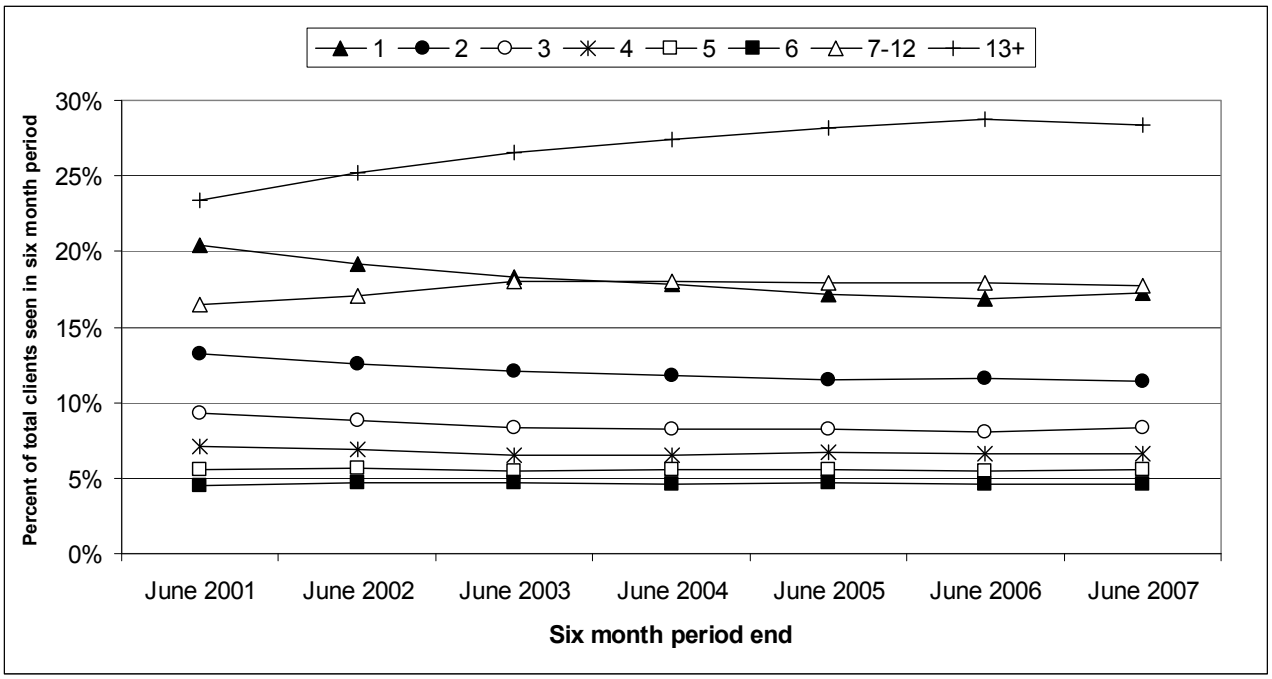
Note: Data quality issues affect data from late 2006 for Whanganui and Capital & Coast DHBs (no / low data reported).
DHBs are sorted based on their six month access rate.

2.5. Access and intensity of service provision

Despite increases in funding, the percentage of the New Zealand population accessing mental health services has remained relatively constant since 2001 (as previously shown in Figure 3). The increased funding may have been used in ways that are not reflected in the access rates such as quality improvements, staff development or changes in service provision to provide more intensive services. One possible measure of service intensity is the number of contacts a service user has over a certain time period. Figure 9 shows the percentage of service users seen by the number of contacts they had during the period. This differs from other data in this report in which service users have only been counted once regardless of the number of contacts they had.

Half of all service users (50.7 percent) were seen six or more times in the six month period ending June 2007. The percentage of service users seen 13 or more times over six months increased by 5.0 percentage points between June 2001 and June 2007, while the percentage seen only once decreased by 3.1 percentage points. An increasing number of contacts per person may indicate that the intensity of services has increased over time and may partially explain the lack of observed increase in access rates.

Figure 9: Percentage of clients by number of contacts during the period, total New Zealand



3. Referrals

This section contains information on the main sources of referral to secondary mental health services. Only referral sources external to the mental health services of the DHB are shown. This provides information about the links between secondary mental health services, the health and disability sector and the wider social sector.

According to *Te Tāhuhu*, one of the leading challenges for the mental health sector is to work together and build effective partnerships with the wider health and social sector (Minister of Health 2005). Collaboration both within and beyond the mental health and

addiction sector is necessary in order to achieve shared goals (Mental Health Commission 2007).

3.1. Quality of referral data

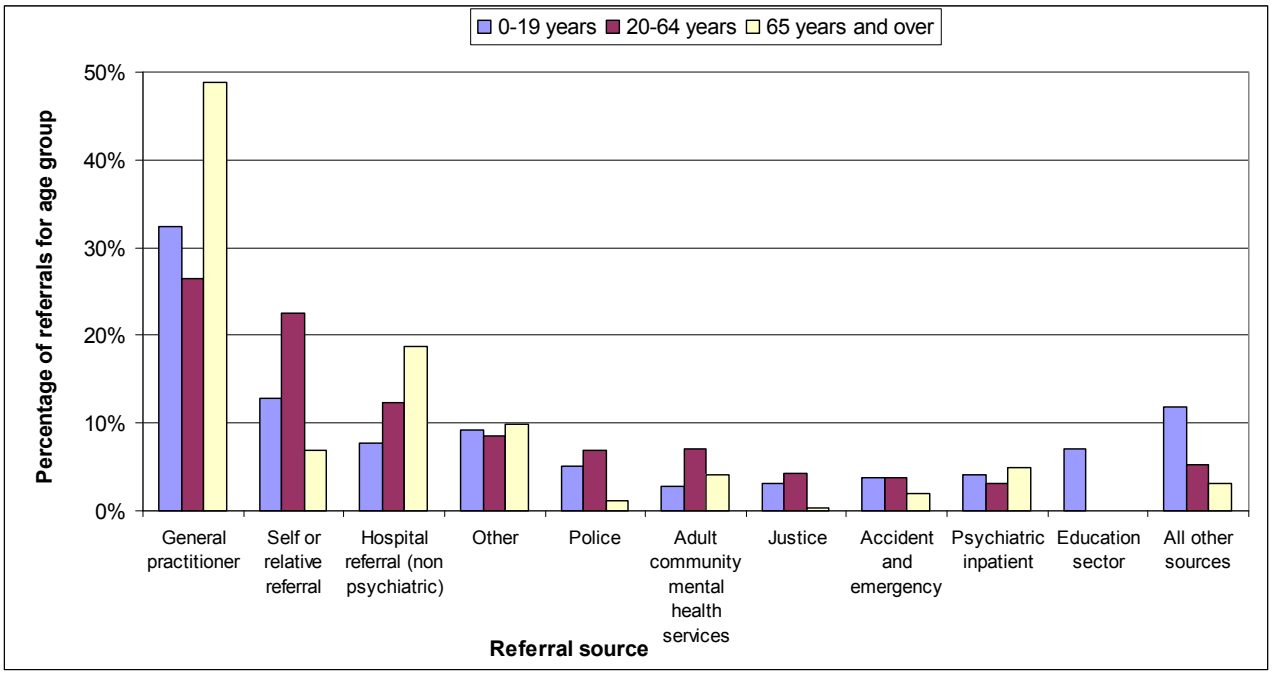
This section only contains information on external referrals to secondary mental health services. Referrals made between the mental health teams of one agency (eg, within one DHB's mental health services) are not included. The data quality of outgoing referrals from mental health services was not considered to be robust enough for analysis due to under-reporting. While data on referrals to mental health services is incomplete for a small number of DHBs, it generally appears to be robust.

3.2. Referral sources by service user age group

Figure 10 shows the ten most common sources of referral to mental health services by age group, for the year ending June 2007. The most common source of referral to mental health services for the three age groups shown was general practitioners (GPs). This includes referrals by GPs in Primary Health Organisations (PHOs) and medical centres. Nearly half (48.8 percent) of the referrals for older adults (65 years and over) were from GPs, and this was a much higher proportion than for children and youth aged less than 20 years (32.4 percent) and for adults aged 20 to 64 years (26.4 percent).

Older adults were also more likely than other age groups to be referred by hospital (non-psychiatric) services. This category includes referrals by hospital facilities which are not psychiatric inpatient units, such as medical wards or emergency services. Adults aged 20 to 64 years were the most likely of the three age groups to make self-referrals or be referred by relatives (22.5 percent, compared with 12.8 percent of referrals for children and youth and 6.9 percent for older adults).

Figure 10: Referrals by source as a percentage of total referrals for the age group, for the year ending 30 June 2007



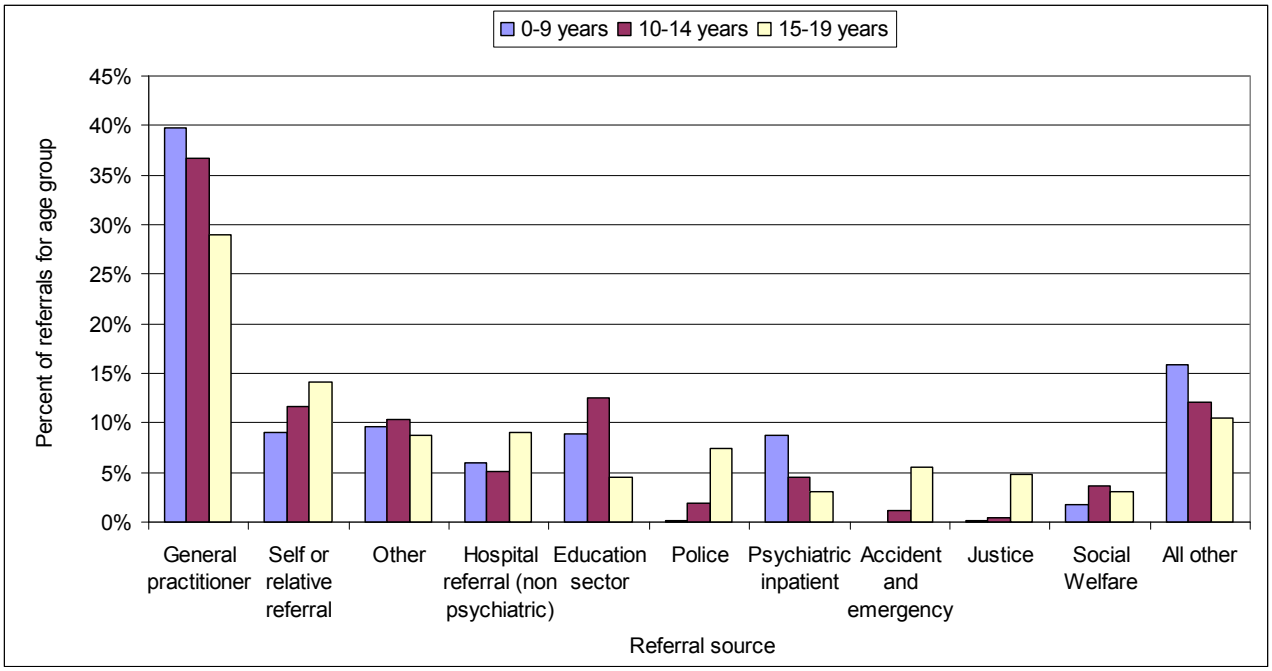
Note: This figure shows the top ten most common sources, sorted by total number of referrals.
'Adult community mental health services' includes mobile community teams outside of the agency.
The category 'other' refers to referrals from other services or agencies not specified elsewhere. 'All other sources' summarises all other referrals beyond those shown.[9]

Referrals for children and youth (0 to 19 years) were made by a range of sources and varied by age, as Figure 11 shows. GPs were the most common source of referral, and children aged less than 10 years had proportionally more referrals from this source than older children or youth.

Youth aged 15 to 19 years had proportionately fewer referrals from GPs and more referrals from police, the justice sector and from accident and emergency services than children and youth in younger age groups. It is important that youth mental health issues are addressed at an early stage and referrals are made from a source such as a PHO.

[9] 'All other sources' shown in this graph includes referrals from following services: Government social welfare (eg, Children, Youth & Family, Work and Income), alcohol and drug provider or facility, private practitioner (eg, psychologist, psychiatrist, medical secondary in private practice), psychiatric outpatient service, child, adolescent and family service, paediatric setting or a paediatrician, needs assessment and co-ordination service, child or adolescent referred from or to a non mental health community provider (eg, public health nurse, plunket), Māori provider or facility, mental health residential service, day hospital, mental health community skills enhancement programme, Pacific provider or facility, and referral source not known.

Figure 11: Referrals by source as a percentage of total referrals for the age group, for the year ending 30 June 2007, children and youth aged 0 to 19 years



Note: This figure shows the top ten most common sources, sorted by total number of referrals.
The category 'other' refers to referrals from other services or agencies not specified elsewhere. 'All other sources' summarises all other referrals beyond those shown.[10]

3.3. Referral sources by service user ethnic group

Table 4 and Figure 12 show the ten most common sources of referral to mental health services by ethnic group.

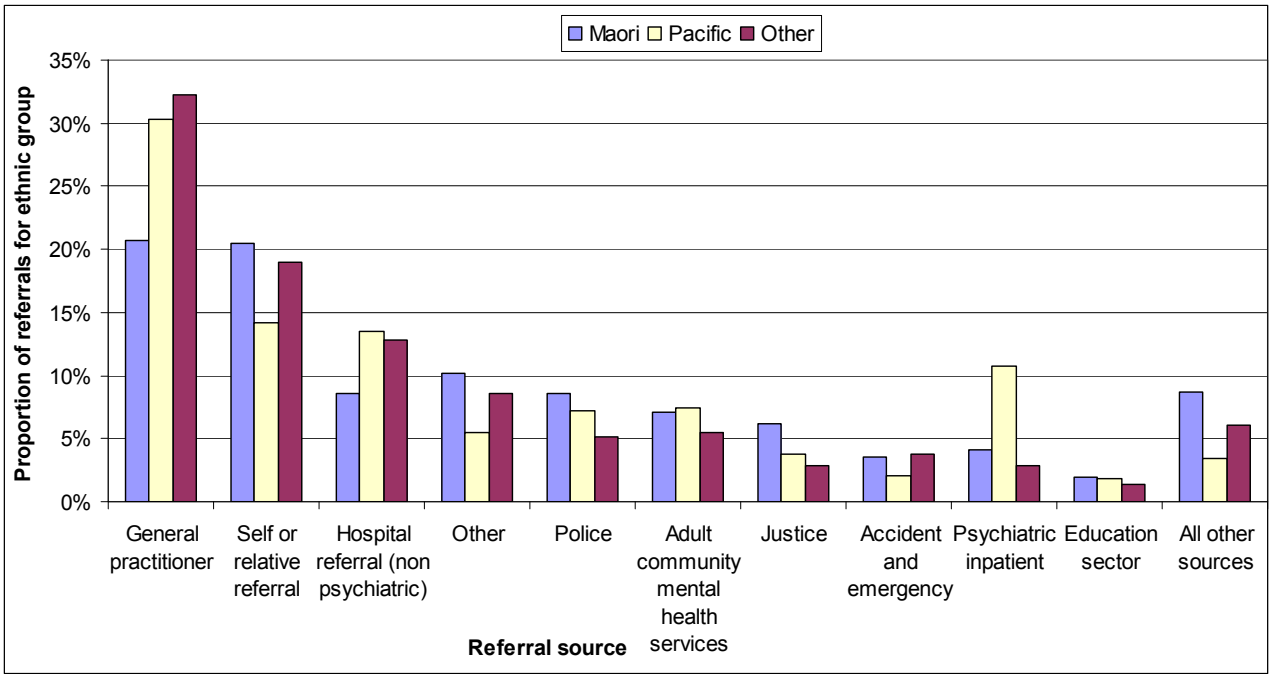
[10] 'All other sources' shown in this graph includes referrals from following services: adult community service, paediatrician, child, adolescent and family service, child or adolescent referred from or to a non mental health community provider (eg, public health nurse, plunket), private practitioner (eg, psychologist, psychiatrist, medical secondary in private practice), Māori provider or facility, psychiatric outpatient service, alcohol and drug provider or facility, needs assessment and co-ordination service, mental health residential service, day hospital, mental health community skills enhancement programme, Pacific provider or facility, and referral source not known.

Table 4: Number and percent of referrals by ethnic group and referral source, for the year ending 30 June 2007

	Māori		Pacific peoples		Other		Total, all ethnic groups	
Referral source	Number	Percent	Number	Percent	Number	Percent	Number	Percent
General practitioner	3058	20.7%	795	30.4%	15,761	32.2%	19,614	29.6%
Self or relative referral	3028	20.5%	372	14.2%	9268	19.0%	12,668	19.1%
Hospital referral (non psychiatric)	1259	8.5%	353	13.5%	6268	12.8%	7880	11.9%
Other	1500	10.2%	144	5.5%	4171	8.5%	5815	8.8%
Police	1269	8.6%	189	7.2%	2514	5.1%	3972	6.0%
Adult community mental health services	1046	7.1%	195	7.4%	2659	5.4%	3900	5.9%
Justice	906	6.1%	99	3.8%	1415	2.9%	2420	3.7%
Accident and emergency	518	3.5%	53	2.0%	1819	3.7%	2390	3.6%
Psychiatric inpatient	604	4.1%	282	10.8%	1398	2.9%	2284	3.4%
Education sector	288	2.0%	47	1.8%	680	1.4%	1015	1.5%
All other sources	1288	8.7%	89	3.4%	2945	6.0%	4322	6.5%

Note: This table shows the top ten most common sources for all ethnic groups.
'Adult community mental health services' includes mobile community teams outside of the agency.
The category 'other' refers to referrals from other services or agencies not specified elsewhere. 'All other sources' summarises all other referrals beyond those shown (see Footnote 9).

Figure 12: Referrals by source as a percentage of total referrals for the ethnic group, for the year ending 30 June 2007



Note: This figure shows the top ten most common sources for all ethnic groups.
'Adult community mental health services' includes mobile community teams outside of the agency.
The category 'other' refers to referrals from other services or agencies not specified elsewhere. 'All other sources' summarises all other referrals beyond those shown (see Footnote 9).

For Pacific peoples and Other ethnic groups, GPs were the most common source of referral to secondary mental health services. For Māori, a similar proportion of referrals came from GPs (20.7 percent) and self or relative referrals (20.5 percent). Māori had proportionately fewer referrals from GPs than Pacific peoples and Other ethnic groups. This information should be considered in relation to PHO enrolment information (see Section 4).

Pacific peoples had proportionally more referrals from psychiatric inpatient services (these are services external to the agency to which the consumer has been referred) and fewer referrals by self or relatives compared with Māori and Other ethnic groups.

Differences in referral patterns across ethnic groups may partly reflect the different age structures of the groups, although most of the differences described above occurred across the three age groups shown. There were some age differences in sources of referral for Māori though, and the most common source of referral for Māori aged 20 to 64 years was self or relative referral (23.5 percent).

4. PHO enrolments

Primary Health Organisations are responsible for the co-ordination and delivery of primary health care services to their enrolled populations. In the past, most primary health care was provided by general practitioners (GPs) and practice nurses. The Primary Health Care Strategy (Ministry of Health 2001) recognised the importance of co-ordination across a wider team of health professionals. In addition to GPs and nurses, PHOs include health professionals such as psychologists, pharmacists and Māori health workers. PHOs are also expected to co-ordinate with secondary services.

As shown in the previous section, GPs are a key source of referral to secondary mental health services. An evaluation of primary mental health initiatives also highlighted the importance of GPs as a key point of contact for accessing further mental health services (Dowell et al 2007).

It is important that there are linkages between PHOs and other mental health service providers in order to meet the needs of service users and ensure continuity of care (Minister of Health 2005, 2006; Counties Manukau District Health Board 2007). Primary health care services are recognised as a key point of entry to secondary mental health services (Mental Health Commission 2007).

This section investigates the connection between primary health and secondary mental health services. More specifically, it looks at how many people using secondary mental health services were enrolled with a PHO prior to, or at the time of accessing secondary mental health services. Data in this section is sourced from the Mental Health Information National Collection (MHINC) and the Primary Health Organisation (PHO) Enrolment Collection.

4.1. PHO enrolments by age group

Table 5 shows the number and percentage of secondary mental health service users (people who accessed services between 1 June 2004 and 30 June 2007) who had a PHO enrolment. The information presented shows the number of PHO enrolments by the period during which the person accessed mental health services, where the PHO enrolment occurred on or before the last reporting end date[11] for the period of access.

[11] Reporting end date is the date of the last contact or bed night in a calendar month for a service user.

Table 5: Number and percent of mental health service users with a PHO enrolment, by age group and twelve month period of mental health service access

	0-19 years		20-64 years		65 years and over		Total, all ages	
Time period of access	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1 Jul 2004 - 30 Jun 2005	16,136	81.9%	48,041	77.3%	6891	83.9%	71,068	78.9%
1 Jul 2005 - 30 Jun 2006	18,356	90.2%	55,000	85.8%	7565	92.3%	80,921	87.4%
1 Jul 2006 - 30 Jun 2007	19,169	95.2%	59,050	91.7%	8072	96.5%	86,291	92.9%

Note: Total mental health service users seen for each period and age group (the denominator in the percentage calculation) is not shown in the table above.

In the twelve months ending June 2007, 92.9 percent of people who used secondary mental health service in the period were enrolled with a PHO at the time of, or prior to accessing mental health services. This is similar to the proportion of all New Zealanders enrolled with a PHO (approximately 94 percent at July 2007).

For the year ending June 2007, there were similar proportions of service users in the age groups 0 to 19 years and 65 years and over who were enrolled with a PHO, but the proportion of service users aged 20 to 64 years enrolled with a PHO was slightly lower. It is positive that most mental health service users are enrolled with a PHO, but there are differences between age groups and ethnic groups in the proportion of service users enrolled. In the twelve months ending June 2007, the lowest rates of PHO enrolment were for service users aged 25 to 44 years (91.0 percent).

Table 6: Number and percent of child and youth mental health service users with a PHO enrolment, by age group and twelve month period of mental health service access

	0-9 years		10-14 years		15-19 years	
Time period of access	Number	Percent	Number	Percent	Number	Percent
1 Jul 2004 - 30 Jun 2005	3024	88.3%	5263	83.6%	7849	78.6%
1 Jul 2005 - 30 Jun 2006	3034	94.1%	5707	91.2%	9615	88.5%
1 Jul 2006 - 30 Jun 2007	3025	97.3%	5762	96.1%	10382	94.0%

Note: Total mental health service users seen for each period and child and youth age group (the denominator in the percentage calculation) is not shown in the table above.

The rate of PHO enrolment for mental health service users aged 15 to 19 years was lower than the enrolment rate for children and younger youth. As the previous section showed, youth aged 15 to 19 year olds were less likely than children and youth aged less than 15 years to be referred to secondary mental health services by GPs (see Section 3). As Table 6 shows, the proportion of child and youth mental health service users enrolled with a PHO decreased by age group.

4.2. PHO enrolments by ethnic group

Table 7 shows the number of PHO enrolments for mental health services users by ethnic group.

Table 7: Number and percent of mental health service users with a PHO enrolment, by ethnic group and twelve month period of mental health service access

	Māori		Pacific peoples		Other		Total, all ethnic groups	
Time period of access	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1 Jul 2004 - 30 Jun 2005	12,197	78.7%	2488	76.4%	56,383	79.1%	71,068	78.9%
1 Jul 2005 - 30 Jun 2006	14,489	86.7%	3127	83.4%	63,305	87.7%	80,921	87.4%
1 Jul 2006 - 30 Jun 2007	16,106	91.7%	3721	88.1%	66,464	93.5%	86,291	92.9%

Note: Total mental health service users seen for each period and ethnic group (the denominator in the percentage calculation) is not shown in the table above.

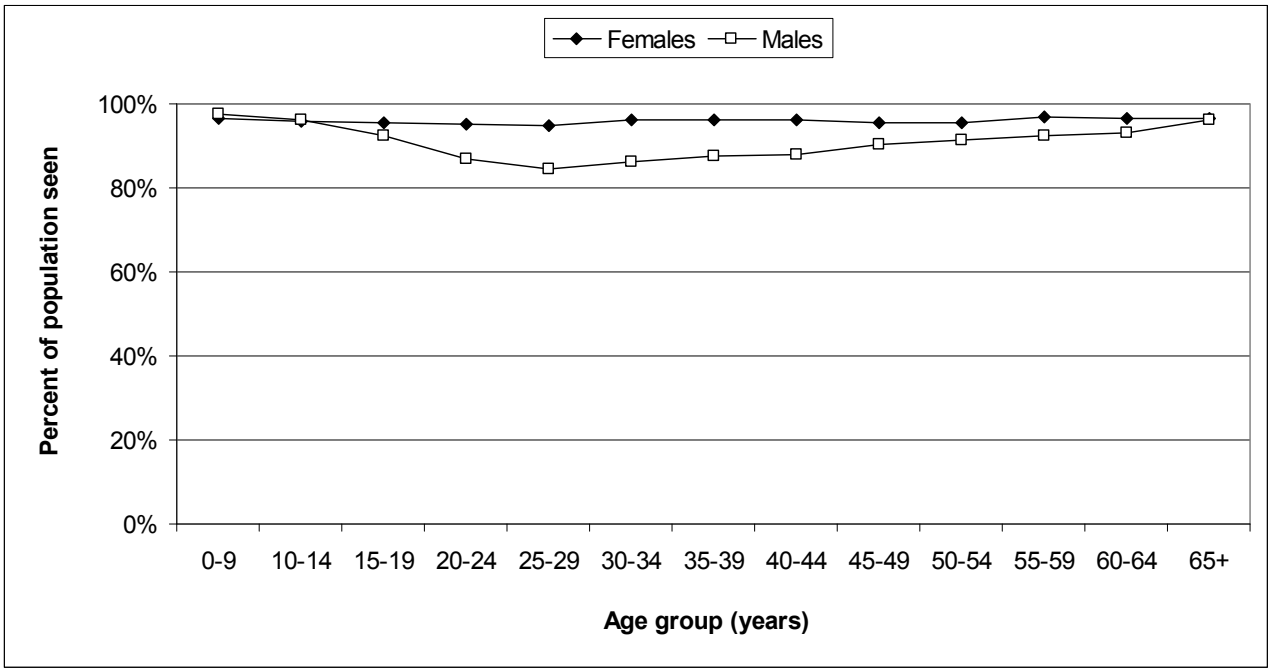
For the year ending June 2007, the proportion of Pacific mental health service users enrolled with a PHO (88.1 percent) was lower than the proportion of Māori (91.7 percent) and Other service users (93.5 percent) enrolled. In Table 7, Asian people are grouped in the Other ethnic group category. When analysed separately, the proportion of Asian mental health services users enrolled with a PHO (85.6 percent for the year ending June 2007) is lower than the rate for Māori, Pacific peoples and Other ethnic groups. When Asian people are not grouped in the Other ethnic group category, the proportion of Other ethnic group service users enrolled with a PHO is 93.8 percent for the year ending June 2007.

Māori and Pacific peoples have been identified as being more likely to access mental health services at an acute level, and primary health care organisations are encouraged to promote early access to mental health services (Ministry of Health 2004). However, Māori and Pacific service users have lower PHO enrolment rates than service users from Other ethnic groups. For Pacific peoples, stigma appears to be a barrier to addressing mental health needs (Dowell et al 2007).

4.3. PHO enrolments by sex

There were large differences in the proportion of male and female mental health service users who were enrolled with a PHO. In the twelve months ending June 2007, 95.9 percent of female service users were enrolled with a PHO, compared with 90.2 percent of male service users. The biggest difference was between the ages of 25 to 34 years, where there was a difference of around ten percentage points between the proportion of male and female service users enrolled with a PHO (Figure 13).

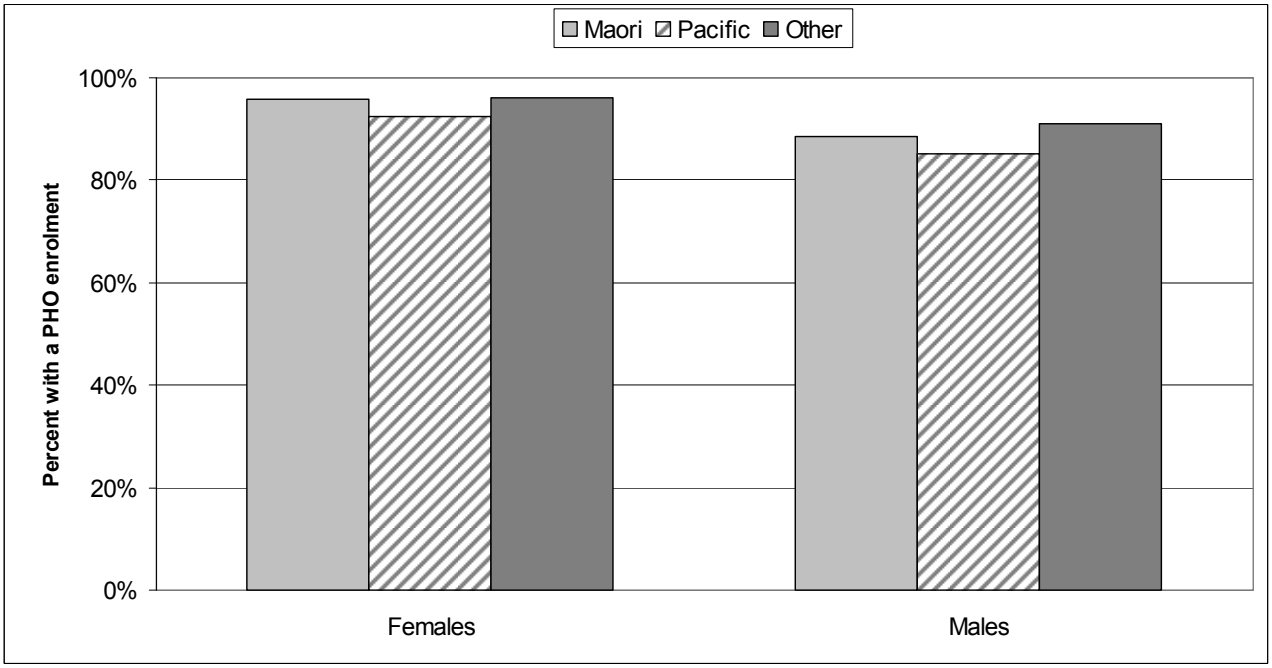
Figure 13: Percent of mental health service users with a PHO enrolment, by sex and age group, for the twelve month period ending 30 June 2007



Note: This graph shows PHO enrolments for people who accessed secondary mental health services in the twelve months ending 30 June 2007.

Figure 14 shows the percentage of services users with a PHO enrolment, by sex and ethnic group. The total (all ages) rate of PHO enrolment for female service users exceeded the male rate for all ethnic groups. Pacific service users were the least likely to be enrolled with a PHO, particularly Pacific males aged 20 to 64 years who had the lowest rate of PHO enrolment (83.0 percent). However, in the age groups 0 to 19 years and 65 years and over, Pacific females had a lower rate of PHO enrolment than Pacific males.

Figure 14: Percent of mental health service users with a PHO enrolment, by sex and ethnic group, for the 12 month period ending 30 June 2007



Note: This graph shows PHO enrolments for people who accessed secondary mental health services in the 12 months ending 30 June 2007.

Information about PHO enrolments and referrals to mental health services provide us with some information about pathways into, and linkages between services. As primary health care is often the first point of contact, barriers to access can subsequently reduce access to other services. Enrolment with a PHO is one step towards receiving primary health care services, but further questions remain about why some groups are not being referred by GPs at the same rate as other groups. For example, while the PHO enrolment figures indicate that most Māori mental health service users are enrolled with a PHO, proportionately fewer Māori referrals (compared with other ethnic groups) to secondary mental health services are made by GPs. Further analysis would be required to determine why links between primary and secondary services are stronger for some groups than others. Information on utilisation of primary health care services (both those relating to mental and physical health) would provide further information about the links between PHOs and secondary mental health services.

5. Inequalities

As this report has shown, there are differences in the patterns of access, referral to secondary mental health services and PHO enrolment of service users across different age and ethnic groups, and between males and females. There is a need to reduce mental health inequalities and to meet the needs of different population groups, in particular for Mäori and Pacific peoples (Minister of Health 2005, 2007; Mental Health Commission 2007). According to *He Korowai Oranga: the Mäori Health Strategy* (Ministry of Health 2002), primary health plays a crucial role in reducing inequalities for Mäori.

Access to health services should be equitable across groups (Minister of Health 2000) and reflect the differing needs of population groups for access to mental health services. As discussed in Section 2, benchmarks for accessing mental health services were established for children, youth and adults, and for Mäori based on the estimated proportion of people who required mental health services. These benchmarks were set with the view that they would be reviewed as more information became available (Minister of Health 1994, 1997).

Data on the prevalence of mental disorder was collected in *Te Rau Hinengaro*. Table 8 shows the twelve month prevalence rate of disorder and the prevalence rate of severe disorder. According to this survey, Mäori were the most likely to experience any mental disorder over the previous twelve months (Oakley Browne et al 2006). Mäori were also more likely to have a serious disorder[12] but less likely than Other ethnic groups to have a mental health visit to the health care sector (adjusted for severity).

Pacific peoples had a twelve month prevalence rate of any disorder that was slightly higher than the rate for Other ethnic groups, but Pacific peoples were less likely than Mäori and Other ethnic groups to have a mental health visit to the health care sector. As Section 2 of this report showed, Pacific peoples had a lower rate of access to secondary mental health services than Mäori and Other ethnic groups.

[12] Note the term ‘serious disorder’ used here is not equivalent to the term ‘major mental health disorders’ used in the National Mental Health Plan and does not relate to the three percent benchmark for access to services (Minister of Health 1997).

Table 8: Twelve month prevalence of any disorder and severe disorder

Characteristic	Twelve month prevalence of any disorder (%) (95% CI)	Prevalence of serious disorder (%) (95% CI)
Age group (years)		
16–24	28.6	7.2
	(25.1–32.3)	(5.7–9.0)
25–44	25.1	5.8
	(23.2–27.1)	(5.0–6.6)
45–64	17.4	3.8
	(15.7–19.2)	(3.1–4.5)
65 and over	7.1	1.1
	(5.7–8.8)	(0.5–2.0)
Ethnicity (adjusted for age and sex)		
Māori	26.4	7.6
	(23.7–29.0)	(6.4–8.8)
Pacific peoples	21.8	5.3
	(18.8–24.7)	(4.1–6.5)
Other	19.8	4.2
	(18.4–21.1)	(3.7–4.7)

Source: *Te Rau Hinengaro*. Oakley Browne et al 2006

Section 2 of this report showed that adults aged 20 to 64 years had the highest rate of access of secondary mental health services. However, service users in this age group had a lower PHO enrolment rate than other age groups and were less likely to be referred to secondary mental health services by GPs.

Mäori had a higher rate of access to secondary mental health services, especially in the age group 20 to 64 years. While Mäori service users were enrolled with PHOs at a higher rate than Pacific peoples and a similar rate to people from Other ethnic groups, Mäori were much less likely to be referred to secondary mental health services by a GP.

Pacific peoples accessed secondary mental health services at a lower rate than Mäori or Other ethnic groups, despite *Te Rau Hinengaro* indicating that Pacific peoples had a higher prevalence of disorder than Other ethnic groups. Pacific children and youth had a much lower six month access rate than Mäori or people from Other ethnic groups. Pacific adults aged 20 to 64 years had a slightly lower access rate than people from Other ethnic groups. Older Pacific adults had a similar six month access rate to people from Other ethnic groups.

GPs were the most common source of referral for Pacific peoples, despite Pacific service users having a low PHO enrolment rate. Further investigation would be required to fully understand the reasons for different patterns of access, referral and PHO enrolment for different age groups and ethnic groups.

6. Conclusions

This report has shown that the national rate of access to secondary mental health services has remained at approximately the same level over the past six years. Given the increases in mental health funding over this time, an increase in access rates might be expected to result. This is not evident in the data reported, but the increase in the number of contacts per person over time may indicate that the intensity of services has increased. Further investigation would be required to determine other reasons for the flat access rate trend. Possible reasons include the provision of better quality services and investment in the mental health workforce.

Incomplete reporting continues to restrict the Commission's ability to assess progress towards implementation of the national mental health strategy. While reporting of NGO data is likely to increase when PRIMHD is implemented, data for older people continues to be under-reported. In addition, unreported data for some DHBs means the reported access rates will not represent the true proportion of people accessing secondary mental health services.

This report has highlighted differences in secondary mental health service access rates by age group, sex and ethnic group. Some differences in access will reflect differences in the need for services, but others may indicate that groups are not accessing services according to their level of need. For example *Te Rau Hinengaro* indicated that Pacific peoples had a higher prevalence of disorder than Other ethnic groups, but the Pacific rate of access to secondary mental health services was lower than the rate for Other ethnic groups. Children and youth had a low rate of access to secondary mental health services (1.1 percent over six months and 1.7 percent over the twelve months ending June 2007). This is well below the three percent benchmark set out in the *Blueprint*.

Collaboration between health and social services is important to meet the mental health needs of communities. Information on sources of referral to secondary mental health services provides some indication of the links between primary health and social services, and secondary mental health services. GPs should be the main source of referral to secondary mental health services, but youth and adults aged 15 to 64 years are less likely than people in other age groups to be referred by GPs. Youth and adults are proportionately more likely to have self or relative referrals than people in other age groups.

Māori also have low rates of referral from GPs and high rates of self or relative referral compared with Pacific peoples and Other ethnic groups.

PHOs can provide a link between primary and secondary health services, but it appears that some groups are enrolled with PHOs at a lower rate than others. In particular, male services users were less likely to be enrolled with a PHO than females, and Pacific service users were less likely to be enrolled than Māori and Other ethnic groups. Enrolment with a PHO does not provide information on whether people have accessed services. Further investigation would be required to determine whether people who are enrolled and those not enrolled are accessing primary health services.

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Appendix A: Access rates by DHB of domicile

Six and twelve month access rates by DHB of domicile, for clients aged 0 to 64 years

DHB	Period	Period end												
		2001		2002		2003		2004		2005		2006		2007
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Northland	6 month	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.7%	1.7%	1.9%	1.9%	1.9%	1.9%
	12 month	2.4%	-	2.5%	-	2.5%	-	2.4%	-	2.3%	-	2.6%	-	2.7%
Waitemata	6 month	1.3%	1.4%	1.5%	1.5%	1.5%	1.4%	1.4%	1.5%	1.5%	1.7%	1.6%	1.7%	1.6%
	12 month	1.8%	-	2.1%	-	2.1%	-	2.0%	-	2.1%	-	2.4%	-	2.4%
Auckland	6 month	1.6%	1.6%	1.6%	1.5%	1.5%	1.4%	1.4%	1.5%	1.5%	1.6%	1.5%	1.6%	1.7%
	12 month	1.9%	-	2.1%	-	2.0%	-	2.0%	-	2.0%	-	2.2%	-	2.3%
Counties Manukau	6 month	0.8%	0.8%	1.0%	1.0%	1.0%	1.0%	1.1%	1.2%	1.3%	1.4%	1.4%	1.5%	1.6%
	12 month	1.1%	-	1.3%	-	1.4%	-	1.5%	-	1.8%	-	2.0%	-	2.2%
Waikato	6 month	1.5%	1.6%	1.5%	1.6%	1.6%	1.7%	1.7%	1.7%	1.6%	1.7%	1.6%	1.6%	1.5%
	12 month	2.2%	-	2.2%	-	2.3%	-	2.4%	-	2.3%	-	2.3%	-	2.1%
Lakes	6 month	1.6%	1.7%	1.8%	1.9%	1.8%	1.9%	1.8%	1.8%	1.7%	1.9%	1.8%	1.9%	1.9%
	12 month	2.1%	-	2.4%	-	2.6%	-	2.5%	-	2.5%	-	2.6%	-	2.6%
Bay of Plenty	6 month	2.1%	2.2%	2.1%	2.1%	1.9%	1.9%	1.8%	1.7%	1.7%	1.9%	1.7%	1.9%	2.0%
	12 month	2.8%	-	3.1%	-	2.8%	-	2.6%	-	2.5%	-	2.5%	-	2.8%
Tairawhiti	6 month	1.5%	1.6%	1.8%	1.8%	2.0%	2.1%	2.3%	2.3%	2.2%	2.4%	2.3%	2.4%	2.6%
	12 month	2.1%	-	2.5%	-	2.8%	-	3.2%	-	3.4%	-	3.6%	-	3.7%
Hawke's Bay	6 month	1.6%	1.9%	1.8%	1.7%	1.4%	1.6%	1.6%	1.6%	1.4%	1.5%	1.5%	1.5%	1.6%
	12 month	2.3%	-	2.8%	-	2.2%	-	2.3%	-	2.1%	-	2.1%	-	2.3%

DHB	Period	Period end												
		2001		2002		2003		2004		2005		2006		2007
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Taranaki	6 month	2.2%	2.4%	2.3%	2.5%	2.4%	2.5%	2.5%	2.5%	2.6%	2.7%	2.4%	2.4%	2.4%
	12 month	3.0%	-	3.3%	-	3.3%	-	3.5%	-	3.5%	-	3.5%	-	3.3%
MidCentral	6 month	1.7%	1.8%	1.7%	1.9%	1.7%	1.7%	1.7%	1.8%	1.6%	1.6%	1.6%	1.5%	1.5%
	12 month	2.4%	-	2.4%	-	2.5%	-	2.4%	-	2.4%	-	2.3%	-	2.1%
Whanganui	6 month	2.5%	2.5%	2.8%	3.0%	2.8%	3.0%	2.8%	3.0%	2.8%	2.8%	2.8%	2.3%	0.5%
	12 month	3.4%	-	3.7%	-	4.0%	-	4.0%	-	4.0%	-	3.9%	-	2.5%
Capital & Coast	6 month	1.7%	1.8%	1.8%	1.7%	1.7%	1.6%	1.5%	1.6%	1.5%	1.5%	1.4%	1.0%	0.3%
	12 month	2.2%	-	2.5%	-	2.2%	-	2.1%	-	2.1%	-	1.9%	-	1.2%
Hutt Valley	6 month	1.8%	1.9%	1.9%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%	1.8%	1.8%	1.7%	1.5%
	12 month	2.4%	-	2.6%	-	2.6%	-	2.6%	-	2.5%	-	2.4%	-	2.3%
Wairarapa	6 month	1.7%	1.7%	1.6%	1.8%	1.8%	1.8%	1.4%	1.4%	1.6%	1.7%	1.8%	1.9%	1.9%
	12 month	2.5%	-	2.3%	-	2.5%	-	2.2%	-	2.0%	-	2.4%	-	2.6%
Nelson Marlborough	6 month	2.6%	2.6%	2.6%	2.6%	2.4%	2.4%	2.3%	2.3%	2.3%	2.4%	2.3%	2.4%	2.5%
	12 month	3.8%	-	3.7%	-	3.6%	-	3.4%	-	3.2%	-	3.3%	-	3.5%
West Coast	6 month	3.5%	3.7%	3.6%	3.7%	3.6%	3.8%	3.8%	3.5%	3.4%	3.3%	3.6%	3.3%	3.0%
	12 month	4.8%	-	5.2%	-	5.1%	-	5.2%	-	4.8%	-	4.8%	-	4.3%
Canterbury	6 month	1.7%	1.6%	1.7%	1.7%	1.7%	1.7%	1.6%	1.6%	1.6%	1.7%	1.6%	1.6%	1.5%
	12 month	2.4%	-	2.4%	-	2.4%	-	2.3%	-	2.3%	-	2.3%	-	2.2%
South Canterbury	6 month	2.1%	2.0%	1.8%	1.6%	1.4%	1.4%	1.2%	1.4%	1.3%	1.4%	1.5%	1.4%	1.4%
	12 month	2.9%	-	2.7%	-	2.1%	-	1.8%	-	1.8%	-	1.9%	-	2.0%

DHB	Period	Period end												
		2001		2002		2003		2004		2005		2006		2007
		Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun	Dec	Jun
Otago	6 month	2.6%	2.8%	2.7%	2.8%	2.7%	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.5%
	12 month	3.4%	-	3.7%	-	3.7%	-	3.6%	-	3.6%	-	3.5%	-	3.4%
Southland	6 month	2.2%	2.2%	2.0%	2.0%	2.1%	2.1%	2.1%	2.0%	2.0%	2.1%	2.1%	2.4%	2.4%
	12 month	2.9%	-	2.9%	-	2.8%	-	2.9%	-	2.9%	-	2.9%	-	3.3%
Total New Zealand	6 month	1.6%	1.7%	1.7%	1.7%	1.7%	1.7%	1.6%	1.7%	1.7%	1.7%	1.7%	1.7%	1.6%
	12 month	2.2%	-	2.3%	-	2.3%	-	2.3%	-	2.3%	-	2.3%	-	2.3%

Note: these access rates reflect data extracted at January 2008. MHINC data may be subject to change over time as more information is reported. As a result, data presented above may differ slightly from data extracted at an earlier or later date.