

# **Suicide Facts**

2004–2005 data

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# Key Points

## Suicide deaths in 2004

- A total of 486 people died by suicide in 2004, compared with 517 in 2003.
- The average rate of suicide for 2002–2004 was 13.1 deaths per 100,000 population. This is a 3.0% decrease from the rate for 2001–2003 and a decrease of 19.6% from that in 1996–1998.
- Males continue to have a higher suicide rate than females. In 2002–2004 there were 3.1 male suicides to every female suicide, which was unchanged from 2001–2003.
- The average rate of suicide for Māori was 17.1 deaths per 100,000 population in 2002–2004. This is a 13.2% increase from 2001–2003 (15.1 per 100,000 population), but a 17.9% decrease from 1996–1998.
- In 2002–2004 the average suicide rates for Māori males and females were 26.9 and 7.9 deaths per 100,000 population respectively, and for non-Māori males and females, the rates were 18.4 and 5.9 deaths per 100,000 population respectively.
- The disparity between the average suicide rates of Māori and non-Māori males in 2002–2004 is the widest it has been in the previous eight years.
- Among females, those aged 15–19 years had the highest suicide rates.
- Among males, those aged over 85 years had the highest suicide rate.

## Hospitalisation for intentional self-harm in 2005

- There were 4,933 hospitalisations for intentional self-harm in 2005, amounting to a rate of 152.7 per 100,000 population. This was virtually identical to the rate in 2004 (152.5 per 100,000).
- Females continue to have a higher hospitalisation rate than males. The sex ratio was 2.0 female hospitalisations to every male hospitalisation.
- The Māori hospitalisation rate for intentional self-harm was nearly one and a half times the non-Māori rate.
- The hospitalisation rate for Māori males was over 1.75 times the rate for non-Māori males.
- Among females, those aged 15–19 years had the highest hospitalisation rate.
- Among males, those aged 20–24 years had the highest hospitalisation rate.



## Introduction

Suicide is a serious health issue that can be used as an indicator of mental health and wellbeing in the population. Each year approximately 500 New Zealanders die by suicide, more than the number dying from motor vehicle accidents. In 2003 suicide contributed 23.8% of all deaths in the 15–24-year-old age group and it was the second leading cause of death in this age group. It was also the ninth most common cause of death in the New Zealand population (Ministry of Health 2006b).

This publication provides the latest suicide and intentional self-harm data available, but does not provide an explanation of the causes of suicidal behaviour. International and New Zealand research has found that the overwhelming majority of those who die by suicide or make suicide attempts were experiencing mental health problems, which are often accompanied by other sources of life stress and difficulty. For further information on causal models of suicide in New Zealand, see *Suicide Prevention in New Zealand: A contemporary perspective* (Collings and Beautrais 2005).

In June 2006 the *New Zealand Suicide Prevention Strategy 2006–2016* (Associate Minister of Health 2006) was released. *Suicide Facts: 2004–2005 data* and subsequent annual updates will contribute to monitoring and evaluating the progress of the implementation of this strategy.

# Technical Notes

## Data

### Caution in interpretation

The methods used in this publication are different from those used in *Suicide Facts: Provisional 2003 All-Ages Statistics* (see Table 1). Please bear these changes in mind before making any comparisons.

**Table 1:** Differences in methods between the current publication and *Suicide Facts: Provisional 2003 All-Ages Statistics*

Method	<i>Suicide Facts: Provisional 2003 All-Ages Statistics</i>	Current publication	Reason for different method
Standard population	Segi's	World Health Organization	Public Health Intelligence best practice standard
Age-standardised rates for suicide	Annual	Three-year moving average	More robust for small numbers
Hospitalisation data	Unfiltered discharge data	Rate of first admission	Best practice for injury statistics
Those who die in hospital	Included in hospitalisations	Not included in hospitalisations	These are included in suicide deaths
Year of hospitalisation data presented	July 2002–June 2003	2005	To present calendar year of the latest hospitalisation data available

### Source

All data in this publication were sourced from the New Zealand Health Information Service (NZHIS), except for international comparisons, which were sourced from the World Health Organization.

### Suicide deaths

Classification of a death as suicide is subject to a coroner's inquiry, and only on completion of an inquest can a death be officially classified as suicide. In some cases the inquest will be heard several years after the death, particularly if there are a number of factors surrounding the death that need to be investigated first. Consequently, a provisional classification may be made for a suicide before a coroner's verdict. The suicide mortality data contained in this report are provisional 2004 data. There are a small number of deaths (14) still subject to coroners' findings, for which neither a final nor provisional cause of death has been assigned.

The number of provisional deaths presented for 2004 in this report may differ slightly in future reports, when final 2004 data are presented. The NZHIS will release the final data in the publication *Mortality and Demographic Data*.<sup>1</sup>

Caution should be exercised when comparing the age-standardised rates presented in this report with those released directly from the NZHIS because different standard populations are used for age-standardisation.

The suicide data in this report are based on the date the death is registered, which is usually soon after the death has taken place. However, it may mean that a small number of deaths that occur in December are counted in the following year's figures.

### **Hospitalisation for intentional self-harm**

In New Zealand, hospitalisation for intentional self-harm is a recognised proxy measure for attempted suicide, which measures the number of people who intentionally harmed themselves and were admitted to hospital. The motivation for intentional self-harm varies, but for a large proportion of people who present in this way the desire to end their lives is a major factor. In this report, the hospitalisation rate for intentional self-harm is defined as the rate of first admission (inpatient or day patient) for an intentional self-harm event, using the International Statistical Classification of Diseases 10th Revision, Australian Modification system (National Centre for Classification in Health 1998).

People who intentionally harm themselves but are not admitted to hospital are not included; for example, those people treated by a general practitioner (GP) or an emergency department but are not admitted to hospital. People who are hospitalised several times for the same intentional self-harm injury event are only counted once. People who are hospitalised for further separate intentional self-harm events are counted once for each event. Suicide deaths are *not* included in the hospitalisation data. Hospitalisation data in this report are for 2005. For more information on 2004 hospitalisation data please see *New Zealand Suicide Trends: Mortality 1921–2003, hospitalisations for intentional self-harm 1978–2004* (Ministry of Health 2006b).

The numbers and rates reported in the current document are based on current best practice methods for injury statistics and are consistent with the method used in the New Zealand Injury Prevention Strategy Outcomes Indicators Project, which includes suicide measures for death and hospitalisation. This is the same method as used in *New Zealand Suicide Trends: Mortality 1921–2003, hospitalisations for intentional self-harm 1978–2004* (Ministry of Health 2006b). These rates are not compared to rates reported in previous *Suicide Facts* publications because 'unfiltered' discharge data were previously presented. Using the unfiltered discharge method can result in an over-count of intentional self-harm events, because any single intentional self-harm event may result in multiple admissions to a hospital (or a transfer between hospitals). These re-admissions and transfers were previously counted as separate intentional self-harm events. This method is not consistent with best practice for calculating injury statistics in New Zealand and internationally.

<sup>1</sup> <http://www.nzhis.govt.nz/publications/mortality.html>

Caution should be exercised when comparing the data presented in this report with those released directly from the NZHIS because those data are not filtered and different standard populations are used for age-standardisation.

### **International Classification of Diseases (ICD) codes**

The ICD-10 codes used for both mortality and hospitalisations were X60–X84. The ICD-9 codes used were E950–E959 (National Centre for Classification in Health 1998).

## **Definitions**

### **Numbers, rates and ratios**

The *number* of suicide deaths refers to the actual number of people who have died by suicide.

The *rate* of suicide or hospitalisation refers to the frequency with which these events occur relative to the number of people in a defined population and a defined time period.

*Rate ratios* indicate how many times suicide or hospitalisation for intentional self-harm are reported in one population group compared to another.

The suicide rates presented here may differ very slightly with those presented in *New Zealand Suicide Trends: Mortality 1921–2003, hospitalisations for intentional self-harm 1978–2004* (Ministry of Health 2006b), because the methods used to estimate the New Zealand populations were slightly different.

### **Age-standardised rates or rate ratios**

*Age-standardised rates* are rates that have been adjusted to take account of differences in the age distribution of the population over time or between different groups (eg, different ethnic groups).

*Age-standardised rate ratios* are the ratio of the two rates, taking into account differences in the group size and age structure.

Previous *Suicide Facts* publications have used Segi's world population as the standard population. This publication has used the World Health Organization (WHO) standard population, because this is the Public Health Intelligence standard. The WHO standard population has an older age structure than Segi's population and resembles more closely the current and likely future New Zealand populations (Ministry of Health 2006a).

### **Three-year moving average**

*Three-year moving average* age-standardised rates are the average age-standardised rates for rolling three-year periods; that is, 1983–1985, 1984–1986, 1985–1987, etc. The three-year moving averages are plotted on the mid-point year. For example, the 2002–2004 three-year moving average is plotted on the year 2003.

Rates based on individual years tend to exhibit pronounced variation. By using the three-year moving average this variation is ‘smoothed’ so that the underlying trends over time can be more clearly illustrated. These have been used in this publication to present suicide data because the numbers are relatively small. Because the hospitalisation data are more substantial, annual rates have been used.

### **Age-specific rates**

An *age-specific rate* refers to the frequency with which suicide occurs relative to the number of people in a defined age group. Age-specific rates are presented for five-year age groups and youth (15–24 years) data.

### **District Health Board rates**

Age-standardised rates were calculated for each *District Health Board (DHB)*. Deaths from the years 2002 to 2004 were summed to provide sufficient numbers to calculate robust rates and protect confidentiality. For hospitalisations for intentional self-harm, sufficient numbers allowed rates for a single year (2005) to be calculated.

Note that some of the regional differences in hospitalisation for intentional self-harm rates between DHBs are due to different practices in reporting and patient management.

### **Comparison with international data**

Caution should be exercised when comparing the data presented in this report with that of other countries. Many factors affect the recording and classification of suicide in different countries. These factors include the level of proof required for a verdict, stigma, religion, social class, occupation and confidentiality (Andriessen 2006).

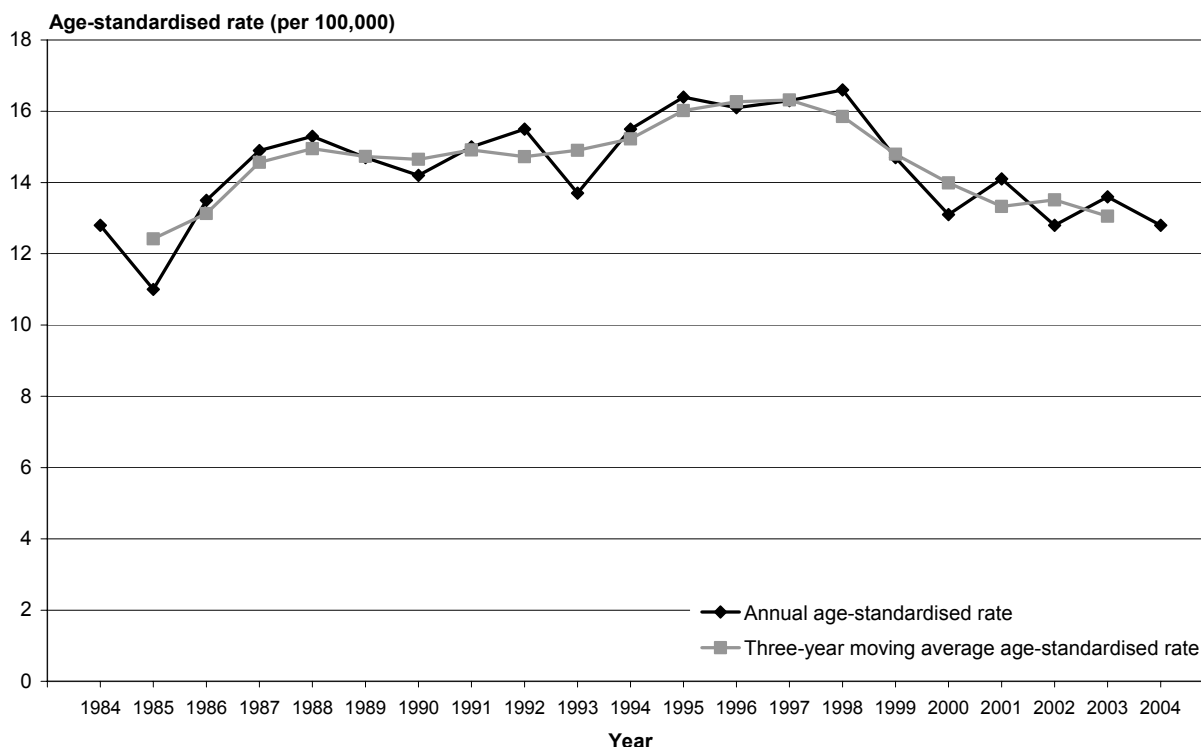
### **Ethnicity**

The ethnic breakdown for the total population was Māori, Pacific peoples, Asian peoples and European/Other. Prior to 1996 undercounting of Māori and Pacific peoples occurred because ethnicity was recorded differently on death registration forms and in the Census. Ethnicity was based on a biological concept (ie, percentage of blood) on death registration forms, and a sociocultural concept (ie, cultural affiliation) in the Census. From September 1995 the death certificate included a comparable question to the self-identified ethnicity question in the 1996 Census, including allowing for multiple ethnic identities. Completion of the ethnic field also became mandatory at this time. New Zealand Census–Mortality Study adjustors can be applied to mortality counts from 1996–1999; these adjust the data to account for an undercount of Māori and Pacific peoples. From 2000 onwards comparisons across all the ethnic groups are possible because adjustors are not necessary. For further discussion on inconsistencies in ethnicity collection, refer to *Decades of Disparity: Ethnic mortality trends in New Zealand 1980–1999* (Ajwani et al 2003).

## Suicide Deaths in 2004

- A total of 486 people died by suicide in 2004 (see Table A1 in Appendix 1 for further detail), compared with 517 in 2003.
- The age-standardised suicide rate for the total population was 12.8 per 100,000, compared with 13.6 per 100,000 population in 2003 (Figure 1) (see Table A2 in Appendix 1 for further detail).
- The three-year moving average age-standardised rate of suicide for the total population increased to a peak of 16.3 deaths per 100,000 population for the 1995–1997 and 1996–1998 periods and then declined until the most recent period (2002–2004) to 13.1 deaths per 100,000 population. This represents a decrease of 19.6%.
- The three-year moving average for 2002–2004 has decreased by 3.0% from 2001–2003 (13.5 per 100,000 population).
- The age-standardised rate and three-year moving average age-standardised rate are presented in Figure 1. The three-year moving average age-standardised rate provides a clearer picture of trends over time, smoothing out the variations in the annual age-standardised rate.

**Figure 1:** Suicide death rates, 1984–2004



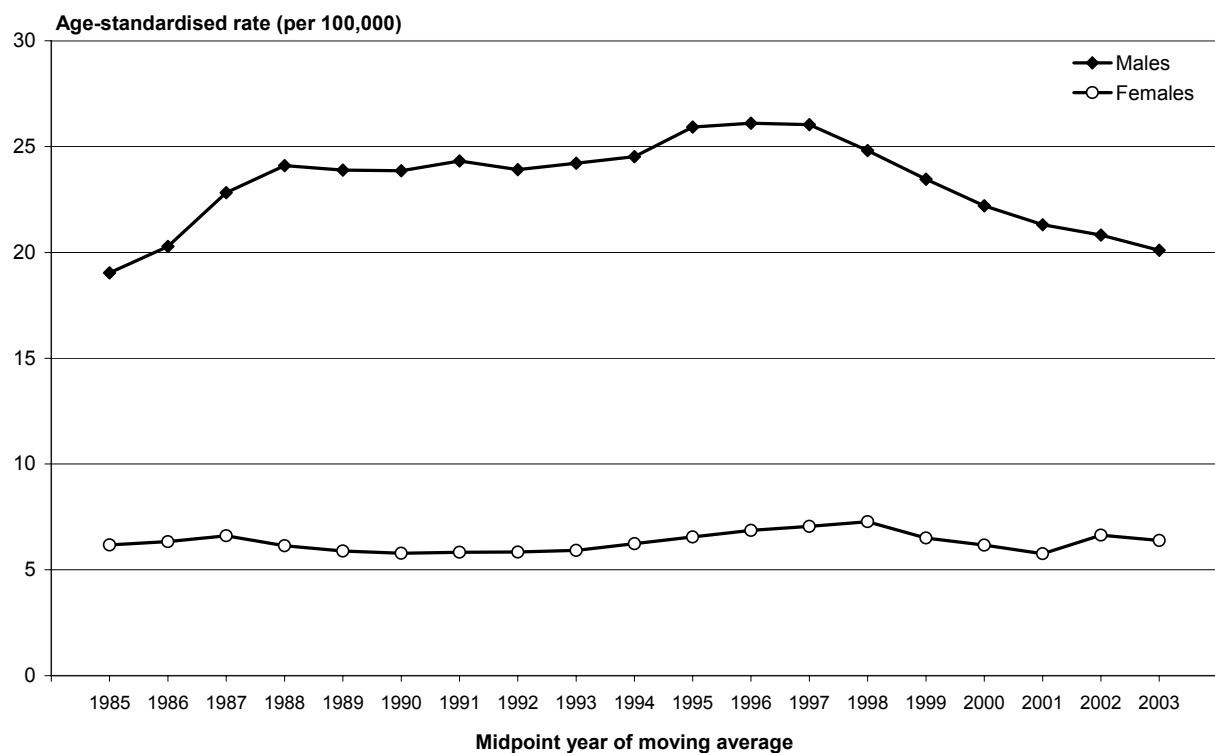
Source: New Zealand Health Information Service

Note: Rates per 100,000, age-standardised to the World Health Organization standard population.

## Sex

- 377 males died by suicide in 2004 (see Table A1 in Appendix 1 for further detail), compared with 376 in 2003.
- The three-year moving average age-standardised suicide rate for males was 20.1 per 100,000 population in 2002–2004, compared with 20.8 per 100,000 population in 2001–2003. This is a 22.8% decrease from 1996–1998 (Figure 2).
- 109 females died by suicide in 2004, compared with 141 in 2003.
- The three-year moving average age-standardised rate of suicide for females was 6.4 per 100,000 population in 2002–2004, compared with 6.6 per 100,000 population in 2001–2003. This has remained relatively steady since 1984.

**Figure 2:** Suicide death rates, by sex, three-year moving averages, 1984–2004



Source: New Zealand Health Information Service

Note: Rates per 100,000, age-standardised to the World Health Organization standard population.

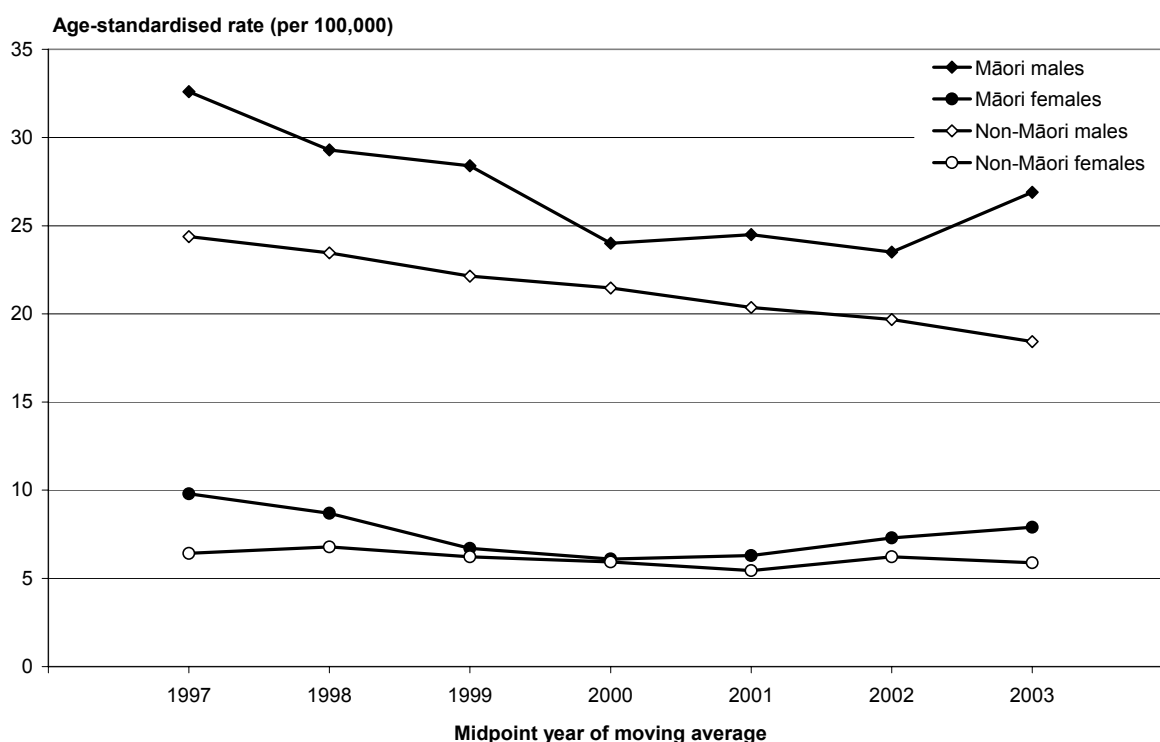
- The all-ages sex ratio for the three-year moving average age-standardised suicide rate for 2002–2004 was the same as that for 2001–2003: 3.1 male suicides to every female suicide in 2002–2004.
- The youth (15–24 years) three-year moving average age-specific suicide rate ratio was 2.3 male suicides to every female suicide in 2002–2004 (see Tables A4 and A5 in Appendix 1 for further detail on youth suicide).

## Ethnicity

### Māori

- 110 Māori died by suicide in 2004, compared to 87 in 2003.
- The three-year moving average age-standardised rate of suicide for Māori was 17.1 deaths per 100,000 population in 2002–2004. This is a 13.2% increase on that for 2001–2003 (15.1 per 100,000 population) and a 17.9% decrease on that for 1996–1998.
- 83 suicide deaths were male, compared to 67 in 2003.
- Figure 3 shows a 14.4% increase in the three-year moving average age-standardised rate of suicide for Māori males from 2001–2003 to 2002–2004. This should be interpreted with caution, because Figure 3 shows that these rates have fluctuated considerably over the previous eight years (see Appendix 1 for further detail on ethnicity).
- The three-year moving average age-standardised rate of suicide for Māori males was 26.9 deaths per 100,000 population in 2002–2004, compared to the non-Māori male rate of 18.4 per 100,000 population (Figure 3). This disparity is the widest it has been in the previous eight years.
- 27 suicide deaths were female, compared to 20 in 2003.
- The three-year moving average age-standardised rate of suicide for Māori females was 7.9 deaths per 100,000 population in 2002–2004, compared to the non-Māori female rate of 5.9 per 100,000 population.

**Figure 3:** Māori and non-Māori suicide death rates, three-year moving averages, 1996–2004



Source: New Zealand Health Information Service

Note: Rates per 100,000, age-standardised to the World Health Organization standard population.

- The Māori sex ratio for the three-year moving average age-standardised suicide rate was 3.4 male suicides to every female suicide in 2002–2004 (see Tables A1 and A2 in Appendix 1 for further detail).

### **Pacific peoples**

- 14 Pacific people died by suicide in 2004 (12 males and two females), compared to 22 deaths in 2003.

### **Asian peoples**

- 10 Asian people died by suicide in 2004 (six males and four females), compared to 28 deaths in 2003.

### **European/Others**

- 352 European/Others died by suicide in 2004 (276 males and 76 females), compared to 406 deaths in 2003.

### **Five-year age groups**

- In 2004, among males, those aged 85 years and over had the highest age-specific suicide rate (54.9 deaths per 100,000 population), followed by those aged 25–29 years (35.5 deaths per 100,000 population) and then those aged 20–24 years (33.6 deaths per 100,000 population).
- In 2004, among females, 15–19-year-olds (10.9 per 100,000) had the highest age-specific suicide rate, followed by 20–24-year-olds (10.0 per 100,000 population) and 30–34-year-olds (8.5 per 100,000 population) (Table 2).
- Among Māori, suicide is largely confined to those aged under 35 years. Please refer to *New Zealand Suicide Trends: Mortality 1921–2003, hospitalisations for intentional self-harm 1978–2004* for further age group data by ethnicity and sex (Ministry of Health 2006b).

**Table 2:** Suicide death rates, by five-year age group and sex, 2004

	Males		Females		Total	
	Number	Rate	Number	Rate	Number	Rate
5–9	0	–	0	–	0	–
10–14	4	–	2	–	6	1.9
15–19	33	21.4	16	10.9	49	16.3
20–24	49	33.6	14	10	63	22.0
25–29	44	35.5	6	4.7	50	19.8
30–34	31	22.1	13	8.5	44	15.0
35–39	44	30.1	13	8.3	57	18.8
40–44	39	25.1	7	4.3	46	14.4
45–49	31	22.1	10	6.9	41	14.4
50–54	18	14.5	7	5.5	25	10.0
55–59	23	20.6	9	8	32	14.2
60–64	17	19.5	3	–	20	11.4
65–69	9	13.3	2	–	11	7.9
70–74	8	13.9	4	–	12	10.0
75–79	11	24.1	1	–	12	11.9
80–84	7	25.3	2	–	9	12.7
85+	9	54.9	0	–	9	16.8
Total	377	20.3	109	5.8	486	12.8

Source: New Zealand Health Information Service

Note: A dash (–) indicates that the rate was suppressed because there were fewer than five deaths in this age group. Age group rates are age-specific per 100,000. Total rates are per 100,000 age-standard to the World Health Organization standard population.

## Deprivation

The least deprived areas had a three-year moving average age-standardised suicide rate of 9.3 per 100,000 population compared to 14.7 per 100,000 population in the most deprived areas.

**Table 3:** Suicide death rates, by NZDep2001 quintile, three-year moving averages, 2002–2004

NZDep01 quintile	Age-standardised rate (per 100,000)
1 (least deprived)	9.3
2	11.7
3	13.0
4	13.7
5 (most deprived)	14.7

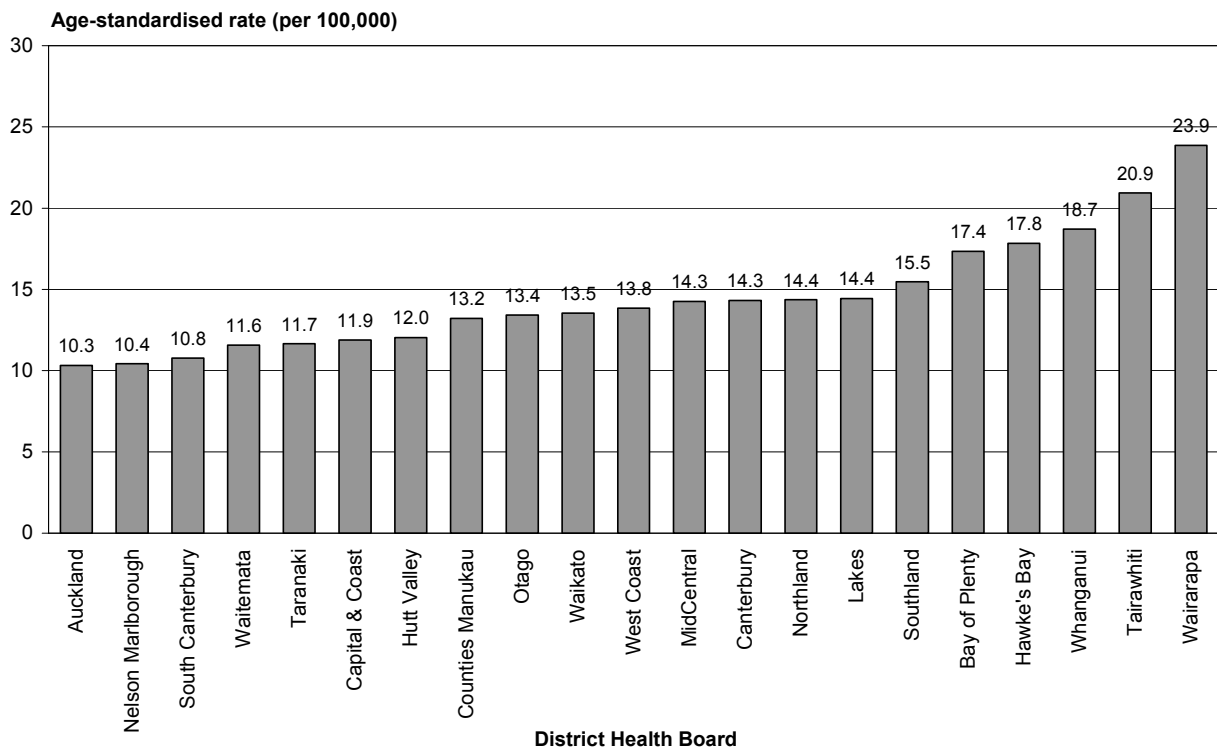
Source: New Zealand Health Information Service

Note: Rates per 100,000, age-standardised to the World Health Organization standard population.

## District Health Boards (2002–2004)

- Deaths from the years 2002 to 2004 were summed to provide sufficient numbers to calculate robust rates and protect confidentiality.
- The lowest rate of suicide in 2002–2004 was recorded in Auckland DHB (10.3 suicides per 100,000 population).
- The highest rate of suicide in 2002–2004 was recorded in Wairarapa DHB (23.9 suicides per 100,000 population).
- See Table A6 in Appendix 1 for information on suicide by DHB and sex.

**Figure 4:** Suicide death rates, by District Health Board, 2002–2004



Source: New Zealand Health Information Service

Note: Rates per 100,000, age-standardised to the World Health Organization standard population.

## Hospitalisation for Intentional Self-harm in 2005

- The hospitalisation rate for intentional self-harm in 2005 was 152.7 per 100,000 population (4933 hospitalisations), compared with 152.5 per 100,000 population in 2004 (4943 hospitalisations).
- See Table A3 in Appendix 1 for further information.

### Sex

- More females are hospitalised for intentional self-harm than males. The female–male rate ratio for intentional self-harm in 2005 was 2.0 female hospitalisations to every male hospitalisation.
- The female hospitalisation rate for intentional self-harm was 203.1 per 100,000 population (3358 hospitalisations). The male hospitalisation rate for intentional self-harm was 100.5 per 100,000 population (1575 hospitalisations).

### Ethnicity

#### Māori

- Among Māori, the total age-standardised hospitalisation rate for intentional self-harm was 206.4 per 100,000 population (953 hospitalisations); this is nearly one and a half times that of non-Māori (142.5 per 100,000 population, 3980 hospitalisations).
- The age-standardised hospitalisation rate for Māori females for intentional self-harm was 249.2 per 100,000 population (612 hospitalisations), compared to 193.8 per 100,000 population (2746 hospitalisations) for non-Māori females.
- The age-standardised hospitalisation rate for Māori males for intentional self-harm was 160.5 per 100,000 population (341 hospitalisations); this is over 1.75 times the rate for non-Māori males (89.9 per 100,000 population, 1234 hospitalisations).

#### Pacific peoples

- The age-standardised hospitalisation rate for Pacific peoples for intentional self-harm was 92.8 per 100,000 population (189 hospitalisations).

#### Asian people

- The age-standardised hospitalisation rate for Asian people for intentional self-harm was 65.8 per 100,000 population (195 hospitalisations).

#### European/Others

- The age-standardised hospitalisation rate for European/Others for intentional self-harm was 156.5 per 100,000 population (3596 hospitalisations).

## Five-year age groups

- People in the 15–19 years age group had the highest age-specific hospitalisation rate for intentional self-harm (306.4 per 100,000 population, 821 hospitalisations) (Table 4).
- For males, the age groups with the highest age-specific hospitalisation rates for intentional self-harm were the 20–24 years age group (210.4 per 100,000 population, 222 hospitalisations) and the 25–29 years age group (207.1 per 100,000 population, 219 hospitalisations).
- For females, the age groups with the highest age-specific hospitalisation rates for intentional self-harm were the 15–19 years age group (477.5 per 100,000 population, 626 hospitalisations) and the 20–24 years age group (399.1 per 100,000 population, 430 hospitalisations).
- For Māori, the 20–24 years age group had the highest age-specific hospitalisation rate for intentional self-harm (440.5 per 100,000 population, 167 hospitalisations).
- For Māori males, the age group with the highest age-specific hospitalisation rate for intentional self-harm was the 20–24 years age group (407.4 per 100,000 population, 73 hospitalisations).
- For Māori females, the age group with the highest age-specific hospitalisation rate for intentional self-harm was the 15–19 years age group (587.2 per 100,000 population, 140 hospitalisations).

**Table 4:** Intentional self-harm hospitalisation rates, by five-year age group and sex, 2005

	Males		Females		Total	
	Number	Rate	Number	Rate	Number	Rate
5–9	0	–	1	–	1	–
10–14	37	23.1	137	89.2	174	55.5
15–19	195	142.5	626	477.5	821	306.4
20–24	222	210.4	430	399.1	652	305.8
25–29	219	207.1	357	299.5	576	256.1
30–34	194	157.1	412	286.1	606	226.6
35–39	189	129.9	332	204.6	521	169.3
40–44	149	99.6	398	245.5	547	175.4
45–49	132	104.5	305	226.8	437	167.6
50–54	100	73.0	164	116.3	264	95.0
55–59	60	60.1	96	93.4	156	77.0
60–64	25	30.1	45	51.1	70	40.9
65–69	12	19.9	18	28.3	30	24.2
70–74	15	25.0	10	16.0	25	20.4
75–79	12	25.4	8	13.7	20	19.0
80–84	8	31.9	10	24.0	18	27.0
85+	6	34.4	9	22.4	15	26.1
Total	1575	100.5	3358	203.1	4933	152.7

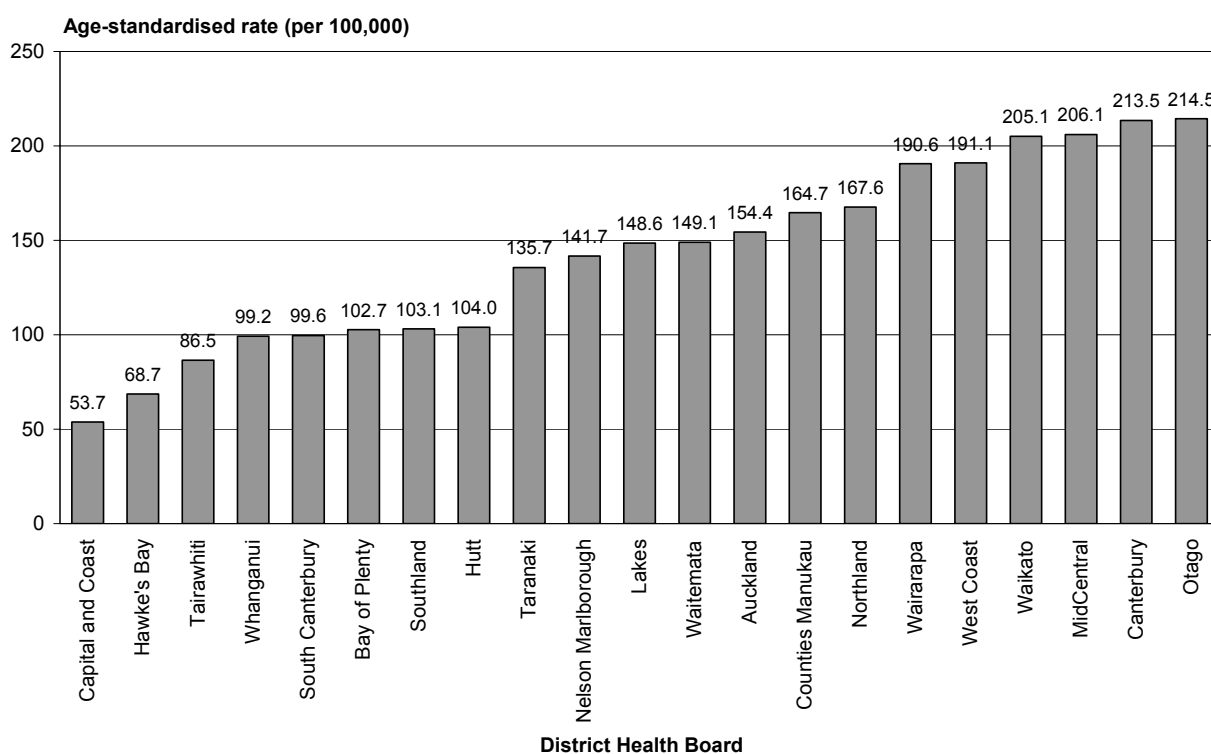
Source: New Zealand Health Information Service

Note: A dash (–) indicates that the rate was suppressed because there were fewer than five deaths in this age group. Age group rates are age-specific per 100,000. Total rates are per 100,000 age-standardised to the World Health Organization standard population.

## District Health Boards (2005)

- The lowest rate of hospitalisation for intentional self-harm was recorded in Capital and Coast DHB (53.7 hospitalisations per 100,000 population).
- The highest rate of hospitalisation for intentional self-harm was recorded in Otago DHB (214.5 hospitalisations per 100,000 population).
- See Table A7 in Appendix 1 for information on intentional self-harm hospitalisations by DHB and sex.
- Some of the regional differences between the rates of DHBs are due to different practices in reporting and patient management.

**Figure 5:** Intentional self-harm hospitalisation rates, by District Health Board, 2005



Source: New Zealand Health Information Service

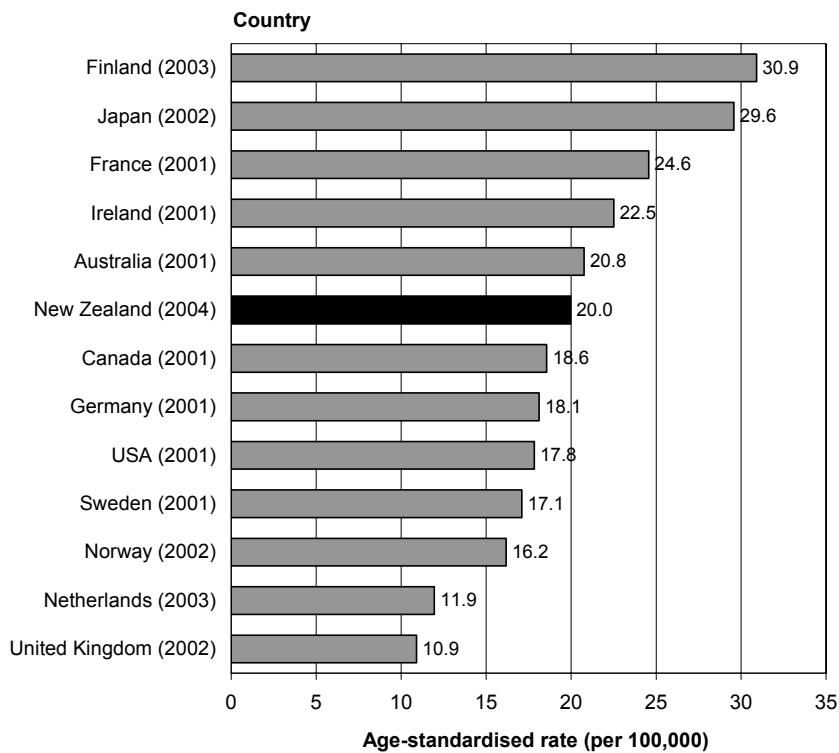
Note: Rates per 100,000, age-standardised to the World Health Organization standard population.

## International Comparisons

This section displays New Zealand suicide rates compared with selected OECD countries.<sup>2</sup> Caution is recommended when comparing international suicide figures, as many factors affect the recording and classification of suicide in different countries that may result in undercounts. These factors include the level of proof required for a verdict, stigma, religion, social class, occupation and confidentiality (Andriessen 2006). Deaths that may be classified as suicide in some countries may be classified as undetermined intent in others.

In comparison with the countries displayed in Figures 6 and 7, the New Zealand (2004) suicide rates for males and females lie near the middle. The male rate is similar to that of Australia (2001) and the female rate is similar to that of Norway (2002).

**Figure 6:** Age-standardised suicide rates for selected OECD countries, males

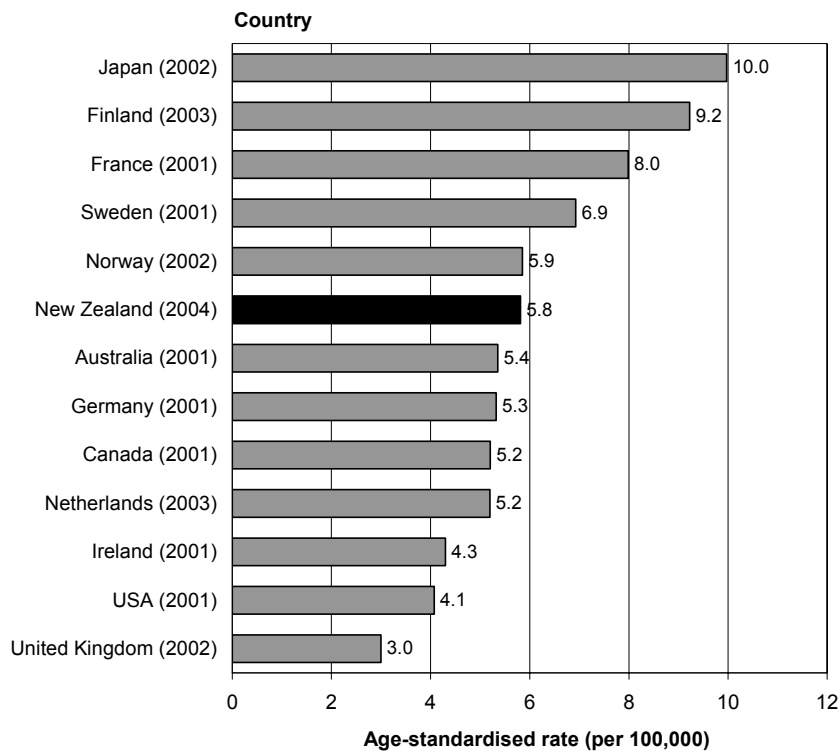


Source: World Health Organization

Note: Rates per 100,000, age-standardised to the World Health Organization standard population. The New Zealand rate presented here is different to that presented elsewhere in this publication, because it has been recalculated in the same manner as the calculations for the other countries presented.

<sup>2</sup> These countries have been chosen for consistent comparisons with New Zealand over time.

**Figure 7:** Age-standardised suicide rates for selected OECD countries, females

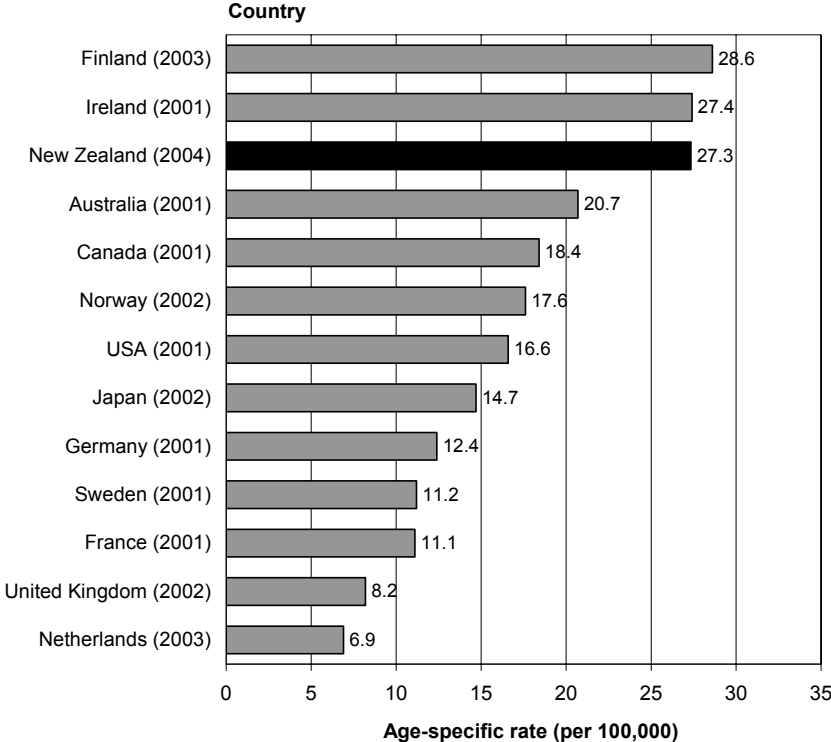


Source: World Health Organization

Note: Rates per 100,000, age-standardised to the World Health Organization standard population. The New Zealand rate presented here is different to that presented elsewhere in this publication, because it has been recalculated in the same manner as the calculations for the other countries presented.

In comparison with the countries displayed in Figure 8, the New Zealand (2004) suicide rate for males aged 15–24 years is high. The male rate is similar to that of Ireland (2001).

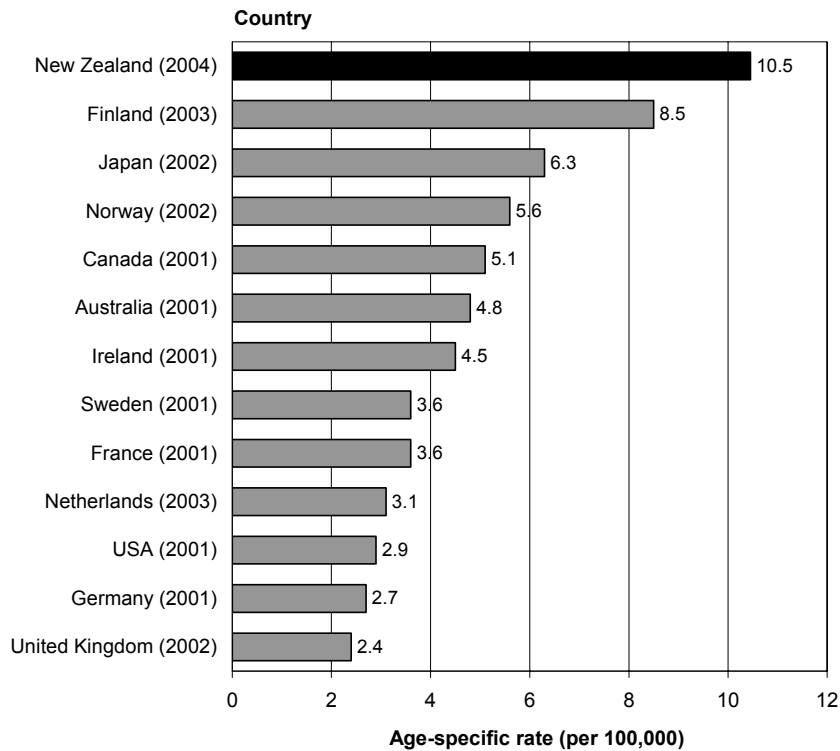
**Figure 8:** Age-specific suicide rates for selected OECD countries, males, 15–24 years



Source: World Health Organization

In comparison with the countries displayed in Figure 9, the New Zealand (2004) suicide rate for females aged 15–24 years is the highest, and 23.5% higher than that of Finland (2003).

**Figure 9:** Age-specific suicide rates for selected OECD countries, females, 15–24 years



Source: World Health Organization

## References

Ajwani S, Blakely T, Robson B et al. 2003. *Decades of Disparity: Ethnic mortality trends in New Zealand 1980–1999*. Wellington: Ministry of Health and University of Otago.

Andriessen K. 2006. Do we need to be cautious in evaluating suicide statistics? *European Journal of Public Health*. 16(4): 445–447.

Associate Minister of Health. 2006. *The New Zealand Suicide Prevention Strategy 2006–2016*. Wellington: Ministry of Health.

Collings S, Beautrais A. 2005. *Suicide Prevention in New Zealand: A contemporary perspective*. Wellington: Ministry of Health.

Ministry of Health. 2006a. *Public Health Intelligence Analytical Standards*. Wellington: Ministry of Health.

Ministry of Health. 2006b. *Suicide Trends: Mortality 1921–2003, hospitalisations for intentional self-harm 1978–2004*. Wellington: Ministry of Health.

National Centre for Classification in Health. 1998. *The International Statistical Classification of Diseases and Related Health Problems, 10th Revision, Australian Modification (ICD-10-AM)*. Sydney: National Centre for Classification in Health.

## Appendix 1: Further Tables

**Table A1:** Suicide deaths, by ethnicity, age and sex, 2004

Ethnicity	Sex	Total	Age group (years)															
			10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+
Māori	Total	110	3	21	20	12	18	10	14	3	2	4	1	1	0	1	0	0
	Males	83	2	13	15	11	14	7	11	2	2	3	1	1	0	1	0	0
	Females	27	1	8	5	1	4	3	3	1	0	1	0	0	0	0	0	0
Pacific	Total	14	1	3	3	2	0	1	1	1	0	0	0	1	1	0	0	0
	Males	12	0	3	3	2	0	1	1	1	0	0	0	0	1	0	0	0
	Females	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Asian	Total	10	0	4	1	1	0	0	1	0	1	1	0	0	0	0	0	1
	Males	6	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	1
	Females	4	0	1	1	0	0	0	0	0	1	1	0	0	0	0	0	0
European/Other	Total	352	2	21	39	35	26	46	30	37	22	27	19	9	11	11	9	8
	Males	276	2	14	31	30	17	36	26	28	16	20	16	8	7	10	7	8
	Females	76	0	7	8	5	9	10	4	9	6	7	3	1	4	1	2	0
Total	Total	486	6	49	63	50	44	57	46	41	25	32	20	11	12	12	9	9
	Males	377	4	33	49	44	31	44	39	31	18	23	17	9	8	11	7	9
	Females	109	2	16	14	6	13	13	7	10	7	9	3	2	4	1	2	0

Source: New Zealand Health Information Service

**Table A2:** Age-standardised suicide rates, by ethnicity and sex, 1996–2004

Ethnicity	Sex	Year								
		1996	1997	1998	1999	2000	2001	2002	2003	2004
Māori	Total	20.1	20.3	21.9	14.1	15.6	14.6	15.1	15.6	20.3
	Males	31.0	30.7	35.6	21.8	28.0	22.3	23.3	24.9	32.3
	Females	10.0	10.3	9.1	6.9	4.1	7.4	7.5	7.0	9.2
Non-Māori	Total	15.1	15.3	15.3	14.4	12.5	13.7	12.0	12.7	11.3
	Males	24.6	24.5	24.0	21.9	20.6	21.9	18.6	18.7	18.0
	Females	6.0	6.3	6.8	7.2	4.7	5.9	5.7	7.0	4.9
Total	Total	16.1	16.3	16.6	14.7	13.1	14.1	12.8	13.6	12.8
	Males	26.1	26.0	26.0	22.4	21.9	22.2	19.8	20.2	20.3
	Females	6.7	7.0	7.5	7.4	4.6	6.4	6.2	7.3	5.8

Source: New Zealand Health Information Service

Note: Rates per 100,000, age-standardised to the World Health Organization standard population.

**Table A3:** Intentional self-harm hospitalisations, by ethnicity, age and sex, 2005

Ethnicity	Sex	Age group (years)																
		5-	10-	15-	20-	25-	30-	35-	40-	45-	50-	55-	60-	65-	70-	75-	80-	85+
Māori	Total	1	48	192	167	133	143	106	76	42	26	13	4	0	1	1	0	0
	Males	0	10	52	73	52	50	40	28	18	10	6	1	0	0	1	0	0
	Females	1	38	140	94	81	93	66	48	24	16	7	3	0	1	0	0	0
Pacific	Total	0	10	39	49	34	18	14	9	8	4	1	2	0	0	1	0	0
	Males	0	3	11	20	17	12	7	0	7	2	1	1	0	0	1	0	0
	Females	0	7	28	29	17	6	7	9	1	2	0	1	0	0	0	0	0
Asian	Total	0	6	37	68	28	20	15	6	5	7	1	0	0	1	0	1	0
	Males	0	0	6	13	10	5	2	0	2	1	1	0	0	1	0	0	0
	Females	0	6	31	55	18	15	13	6	3	6	0	0	0	0	0	1	0
European/ Other	Total	0	110	553	368	381	425	386	456	382	227	141	64	30	23	18	17	15
	Males	0	24	126	116	140	127	140	121	105	87	52	23	12	14	10	8	6
	Females	0	86	427	252	241	298	246	335	277	140	89	41	18	9	8	9	9
Total	Total	1	174	821	652	576	606	521	547	437	264	156	70	30	25	20	18	15
	Males	0	37	195	222	219	194	189	149	132	100	60	25	12	15	12	8	6
	Females	1	137	626	430	357	412	332	398	305	164	96	45	18	10	8	10	9

**Table A4:** Suicide deaths and age-specific rates, by ethnicity and sex, 15–24 years, 1996–2004

Year	Number						Rate					
	Māori deaths			Non-Māori deaths			Māori deaths			Non-Māori deaths		
	Males	Females	Total	Males	Females	Total	Males	Females	Total	Males	Females	Total
1996	29	9	38	76	29	105	59.6	17.8	38.4	34.6	13.4	24.1
1997	27	9	36	86	20	106	51.1	16.9	33.9	38.7	9.3	24.3
1998	30	13	43	75	22	97	56.1	24.4	40.3	34.2	10.5	22.6
1999	23	10	33	60	27	87	42.4	18.7	30.6	27.7	13.1	20.5
2000	24	4	28	57	11	68	43.5	–	25.7	26.4	5.4	16.2
2001	20	9	29	67	14	81	35.6	16.4	26.1	31.3	6.7	19.1
2002	23	10	33	42	20	62	43.7	18.8	31.2	18.4	9.1	13.9
2003	20	11	31	46	20	66	37.1	20.2	28.6	19.3	8.8	14.2
2004	28	13	41	54	17	71	50.5	23.3	36.9	22.1	7.3	14.9

Source: New Zealand Health Information Service

Note: A dash (–) indicates that the rate was suppressed because there were fewer than five deaths in this age group.

**Table A5:** Suicide deaths and age-specific rates, by sex, 15–24 years, 1948–2004

Year	Males		Females		Total	
	Number	Rate	Number	Rate	Number	Rate
1948	16	11.4	2	–	18	6.5
1949	13	9.2	5	3.7	18	6.5
1950	14	9.9	0	–	14	5.1
1951	11	7.9	1	–	12	4.4
1952	12	8.6	1	–	13	4.7
1953	10	7.1	2	–	12	4.3
1954	5	3.5	0	–	5	1.8
1955	7	4.8	5	3.5	12	4.2
1956	6	4.0	2	–	8	2.7
1957	15	9.6	1	–	16	5.2
1958	13	8.0	3	–	16	5.1
1959	14	8.4	3	–	17	5.2
1960	10	5.8	4	–	14	4.2
1961	15	8.3	2	–	17	4.8
1962	8	4.2	5	2.8	13	3.5
1963	19	9.5	4	–	23	5.9
1964	5	2.4	8	4.0	13	3.2
1965	13	5.9	8	3.8	21	4.9
1966	11	4.9	12	5.6	23	5.2
1967	21	9.2	6	2.7	27	6.0
1968	20	8.5	5	2.2	25	5.4
1969	22	9.2	14	6.0	36	7.6
1970	30	12.1	9	3.8	39	8.0
1971	24	9.4	12	4.9	36	7.2
1972	23	8.9	13	5.2	36	7.1
1973	27	10.1	12	4.7	39	7.5
1974	27	9.8	9	3.4	36	6.7
1975	37	13.2	15	5.6	52	9.4
1976	34	11.9	8	2.9	42	7.5
1977	59	20.3	11	4.0	70	12.3
1978	47	16.0	8	2.8	55	9.6
1979	36	12.2	11	3.9	47	8.2
1980	58	19.5	23	8.1	81	13.9
1981	50	16.9	10	3.5	60	10.4
1982	52	17.5	11	3.8	63	10.8
1983	58	19.2	12	4.1	70	11.8
1984	57	18.7	15	5.1	72	12.0
1985	60	19.6	15	5.1	75	12.6
1986	68	22.9	23	8.0	91	15.6
1987	93	31.2	20	6.9	113	19.3
1988	106	35.7	25	8.7	131	22.4
1989	111	37.9	20	7.0	131	22.6
1990	111	38.0	19	6.7	130	22.5
1991	109	38.7	16	5.8	125	22.4
1992	112	39.9	17	6.2	129	23.3
1993	110	39.4	16	5.9	126	22.9

Year	Males		Females		Total	
	Number	Rate	Number	Rate	Number	Rate
1994	111	39.9	26	9.7	137	25.1
1995	122	44.1	34	12.8	156	28.7
1996	105	39.1	38	14.3	143	26.7
1997	113	41.1	29	10.8	142	26.2
1998	105	38.5	35	13.3	140	26.1
1999	83	30.6	37	14.2	120	22.6
2000	81	29.9	15	5.8	96	18.1
2001	87	32.2	23	8.7	110	20.6
2002	65	23.2	30	11.0	95	17.2
2003	66	22.5	31	11.0	97	16.9
2004	82	27.3	30	10.5	112	19.1

Source: New Zealand Health Information Service

Note: A dash (–) indicates that the rate was suppressed because there were fewer than five deaths in this age group.

**Table A6:** Suicide deaths and age-standardised rates, by District Health Board (DHB) and sex, 2002–2004

DHB	Males		Females	
	Number	Rate	Number	Rate
Northland	41	23	12	6.3
Waitemata	117	18.6	33	5.2
Auckland	80	13.5	46	7.4
Counties Manukau	95	18.4	46	8.3
Waikato	98	22.6	21	4.7
Lakes	28	22.2	9	7.2
Bay of Plenty	69	28	20	7.6
Tairāwhiti	22	38.1	3	–
Hawke's Bay	49	26.2	19	10.1
Taranaki	27	20	5	3.6
MidCentral	52	23.7	14	5.2
Whanganui	19	22.9	13	14.4
Capital and Coast	72	19.7	19	4.9
Hutt Valley	33	17.9	11	6.5
Wairarapa	20	40.9	4	–
Nelson Marlborough	28	15.2	11	5.8
West Coast	12	25.7	1	–
Canterbury	145	22.3	45	6.7
South Canterbury	14	18.9	2	–
Otago	47	18.7	21	8.5
Southland	35	24.6	8	6.4

Source: New Zealand Health Information Service

Note: A dash (–) indicates that the rate was suppressed because there were fewer than five deaths in this age group. Rates per 100,000, age-standardised to the World Health Organization standard population.

**Table A7:** Intentional self-harm hospitalisations and age-standardised rates, by District Health Board (DHB) and sex, 2005

DHB	Males		Females	
	Number	Rate	Number	Rate
Northland	49	96	134	238.7
Waitemata	187	98.3	409	198.6
Auckland	200	109.9	363	197.6
Counties Manukau	200	120.1	365	207.9
Waikato	163	131	368	276.3
Lakes	32	81.9	86	212.6
Bay of Plenty	58	80.9	91	123.3
Tairāwhiti	11	63.6	20	107.6
Hawke's Bay	23	50.4	51	86.3
Taranaki	44	115.2	67	157.5
MidCentral	98	170.6	163	240.9
Whanganui	15	76.9	28	120.7
Capital and Coast	27	23.8	97	81.6
Hutt Valley	33	65.3	81	141.9
Wairarapa	21	157.9	34	230.9
Nelson Marlborough	42	84.3	103	197.8
West Coast	13	100.7	36	285
Canterbury	217	119.7	584	304.8
South Canterbury	11	64.8	22	134.5
Otago	95	137.9	198	285.9
Southland	30	71.8	56	134.4

Source: New Zealand Health Information Service

Note: A dash (–) indicates that the rate was suppressed because there were fewer than five deaths in this age group. Rates per 100,000, age-standardised to the World Health Organization standard population.

## Appendix 2: Further Information

### General information about suicide prevention

For general information about suicide and suicide prevention, contact:

SPINZ (Suicide Prevention Information New Zealand)  
PO Box 10051  
Dominion Road  
Auckland 1446  
Ph: (09) 300 7035  
Fax: (09) 300 7020  
Email: [info@spinz.org.nz](mailto:info@spinz.org.nz)  
Website: [www.spinz.org.nz](http://www.spinz.org.nz)

To find out more about the New Zealand Suicide Prevention Strategy, see the Ministry of Health's suicide prevention web page ([www.moh.govt.nz/suicideprevention](http://www.moh.govt.nz/suicideprevention)).

### Statistics

For health data, including suicide statistics, contact:

Public Health Intelligence  
Ministry of Health  
PO Box 5013  
Wellington  
Ph: (04) 496 2000  
Fax: (04) 496 2340  
Email: [phi@moh.govt.nz](mailto:phi@moh.govt.nz)  
Website: [www.moh.govt.nz/phi](http://www.moh.govt.nz/phi)

Or contact:

New Zealand Health Information Service  
Ministry of Health  
PO Box 5013  
Wellington  
Ph: (04) 922 1800  
Fax: (04) 922 1899  
Email: [inquiries@nzhis.govt.nz](mailto:inquiries@nzhis.govt.nz)  
Website: [www.nzhis.govt.nz](http://www.nzhis.govt.nz)

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PO Box 932  
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Ph: (04) 496 2277  
Email: [moh@wickliffe.co.nz](mailto:moh@wickliffe.co.nz)  
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