State of the Region's HEALTH 2004

Focus on Suicide

A Peel Health Status Report

Region of Peel
Working for you

Message from the Acting Medical Officer of Health

The annual State of the Region's Health reports highlight important health issues and trends affecting the one million residents of the Region of Peel. The 2004 report describes the local health consequences of suicide.

Suicide (taking one's own life) is a serious public health problem. This report shows the impact of suicide on those who attempt or commit suicide. This issue has consequences for families and communities too. Just as suicide gives rise to many consequences, it also has its origins in complex interactions between biological, psychological, social, and environmental factors. Suicide is not just a response to a single stressful event.

Understanding the causes and manifestations of suicide is essential in addressing this important health issue. Because of the stigma that surrounds suicide, it is sometimes not reported and therefore its full impact is underestimated. Lifting the secrecy that surrounds suicide will help to understand its full impact and improve efforts to prevent a major health problem which receives little public attention.

The latest health indicators, summarized in the section *Peel Health Facts,* continue to tell us that the Region's population enjoys relatively good overall health by provincial and national standards.

The Region of Peel works with individuals and organizations in the public and private sectors to prevent illness and promote good health. The information in this and other Peel Health status reports is intended to help chart a course to better health for everyone in Peel.

Howard Shapiro, MD, MSc, FRCPC
Acting Medical Officer of Health

State of the Region's HEALTH 2004

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State of the Region's HEALTH 2004

Focus on Suicide

Introduction

The State of the Region's Health Report *is published annually as a summary of the health status of residents of Peel region. It is intended to highlight key health issues and trends for the population of Peel.*

The *State of the Region's Health 2004* report focuses on suicide, a condition that touches the lives of many people and affects people of all ages.

This report describes risk factors associated with suicide and the occurrence of suicide in Canada, Ontario and Peel region, including data about suicidal thoughts, hospitalization for suicide attempts, and suicide mortality. In addition, the most common methods used in suicidal attempts and deaths are described.

At the end of this report, a section titled *Peel Health Facts (see page 24)* highlights the most recent health indicator data, including population projections, leading causes of mortality and premature mortality, leading causes of hospitalization and selected reproductive health statistics for Peel Region.

Suicide—an Overview

HIGHLIGHTS

- Suicide is one of the leading causes of mortality and hospitalization in Canada, Ontario and the Region of Peel.
- Many suicide deaths occur early in life and have a tremendous impact on potential years of life lost or premature death.
- Individuals who have suicidal thoughts are more likely to attempt suicide or to commit suicide.

Introduction

Suicide is defined as "the intentional self-infliction of death".[1] Suicide is an important cause of morbidity and mortality, and is one of the leading causes of mortality and hospitalization in Canada, Ontario and the Region of Peel.

Suicide for adolescents in Canada and the United States is the third leading cause of death after motor vehicle fatalities and other accidents.[2] The rate of suicide deaths for adolescents has increased in Canada from 3.3 per 100,000 in 1950 to 13.8 per 100,000 in 1991 (data not shown).

Because so many suicide deaths occur early in life, the impact on potential years of life lost (PYLL) is tremendous. PYLL is a measure of premature death and is calculated by subtracting the age at death in years from 75, which gives greater weight to deaths occurring at younger ages. In Canada, suicide mortality is the third leading cause of PYLL among males and the sixth leading cause of PYLL among females.[1]

There are several components to the study of suicide. These include:

- Suicidal thoughts,
- Suicide attempts, also referred to as "parasuicide", and
- Completed suicides, also referred to as "committed suicides" or "suicide deaths".

The risk of attempted or completed suicide is typically higher among those who have had suicidal thoughts. Eight out of every 10 persons who commit suicide have indicated that they would do so prior to the event.[3]

An estimated one-third of those who have attempted suicide previously will do so again, and 15 to 20 per cent will do so within three months of the last attempt.[3] In addition, between 10 to 13 per cent of individuals who attempt suicide eventually take their own lives.[1]

The overall estimated ratio between suicide attempts and actual deaths is between 30 to 50 per suicide for males and between 100 to 150 per suicide for females. This varies by age group and by sex.[1]

Risk Factors For Suicide

There are many factors which influence whether a person will attempt or commit suicide. Table 1 *(see below)* describes factors associated with suicidal behaviour. These factors have been summarized from *Suicide in Canada, Update of the Report of the Task Force on Suicide in Canada*[1], and the *Canadian Task Force on the Periodic Health Examination*.[3] Suicidal behaviour includes factors such as: feeling hopeless, helpless, or desperate; signs of depression; loss of interest in friends, hobbies or other previously enjoyed activities; expressing suicidal thoughts and expressing the intent to commit suicide.[4]

Table 1—Factors Associated with Suicidal Behaviours

Factor	Example
Biological and Neurobiological Findings	• Genetic predispositions to particular mental disorders • Low levels of brain serotonin neurotransmission • Terminal conditions such as AIDS
Psychiatric Conditions	• Presence of a mental disorder — Mood disorders such as depression — Schizophrenia — Organic brain syndrome — Substance abuse disorders — Personality disorders — Anxiety disorders — Eating disorders — Neurosis • Low self-esteem • Negative attitude about self • Impulsivity • Lack of skills or energy needed for coping
Socio-cultural Influences	• Demoralization or fragmentation of society • Permissive social attitudes towards suicide • Media attention to celebrity suicides • Social isolation or lack of solid social network • Role models or peers committing suicide • Unemployment • Environmental factors such as the availability of firearms
Family Background	• Family history of suicide • Poor relationship with parent • Death of a parent
Life Events	• Stressful life event such as losses or interpersonal conflicts
Personality and Psychological Influences	• Feelings of hopelessness and helplessness • Frantically anxious

The factors described in Table 1 *(see previous page)* influence suicide in different ways. Some factors, such as mental illness (e.g. depression), abuse, and family history make a person vulnerable to suicidal behaviour and are referred to as predisposing factors. Precipitating factors, such as interpersonal loss and conflict or financial difficulties, are defined as factors that create crises which are associated with suicidal behaviour. Contributing factors such as physical illness, sexual identity issues or social isolation are defined as factors which increase the exposure of the individual to predisposing factors or precipitating factors.[4]

Depression is an important cause of premature death in terms of suicide.[5] At least 15% of those with mood disorders commit suicide and at least 66% of suicides are preceded by depression.[6] In 2002, 4.5% of Canadians aged 15 years and older were classified as having a major depressive disorder*. Major depressive disorder is defined as having at least one episode lasting two weeks or more of persistent depressed mood and loss of interest or pleasure in normal activities, accompanied by problems such as decreased energy, altered sleep and appetite, impaired concentration, and negative feelings (i.e. guilt, hopelessness, or suicidal thoughts).

In Canada, the proportion of the population with major depressive disorder was slightly higher for women (5.5%) compared to men (3.4%) and was higher in the 15–24 year age group (6.2%) compared with those aged 25–64 years (4.7%) and 65 years and older (1.8%)*.

Individuals who are in the following categories may be described as being at higher risk for suicide:

- People with mental illness or drug and alcohol problems (risk is 2.4 to 23 times higher than in the general population)[1,3]
- People with chronic or terminal illness[3]
- Native or Aboriginal populations[1,3]
- Incarcerated individuals (risk is 8 to 47 times higher than in the general population)[1,3]
- People with a family history of suicide (risk is 9 times higher than general population)[3]
- First generation immigrant females (risk is twice as high among women of Asian or European origin)[3]
- Single or divorced individuals[5]
- Gay, lesbian and bisexual youth[5]
- Young males (aged 20–24 years)[1]
- Women aged 40–44 years[1]

* Data Source: Statistics Canada, Canadian Community Health Survey, Mental Health and Well-being, 2002.

Suicide in Canada

HIGHLIGHTS

- Approximately 4% of Canadians reported having suicidal thoughts in the past 12 months.
- In the fiscal year of 1998/1999 in Canada, there were 23,225 hospitalizations for attempted suicide.
- Almost 10 Canadians commit suicide per day.
- Approximately four times as many males commit suicide than females.

Introduction

The data presented in this report have several limitations. National survey data presented on suicidal thoughts and attempts are based on self-reported or proxy information. Self-reported data may be subject to errors in recall, over or under-reporting because of social desirability, and errors from proxy reporting.

Another source of data for suicide attempts is the number of hospitalizations. Hospitalization data do not present a complete picture about suicide attempts, as not all patients who attempt suicide are admitted to hospital. In addition, the hospitalization data presented in this report do not include outpatient visits to emergency rooms or other medical facilities,[7] or patients in psychiatric facilities.

Mortality data on suicide is collected nationally. It has been suggested that under-reporting of suicide deaths may occur for several reasons which are listed below:

- Reluctance of officials to certify a death as suicide. In one study in Ontario, 33% of coroners were reluctant to certify a death as suicide. Reasons for this included: emotional effects on the family; life insurance considerations; stigmatization of the deceased; as well as legal, religious and moral considerations. In addition, 38% of coroners also indicated that they would certify a probable suicide death as undetermined or would not indicate the manner of death[1]
- Difficulty in determining whether a death is in fact a suicide[1]

For more details about data contained in this report, please refer to the section entitled *Data Sources, Methods and Limitations* *(see page 29)*.

Suicidal Thoughts

In Canada in 2002*, almost 920,000 people (3.7%) aged 15 years and older (3.8% of women and 3.6% of men) reported having suicidal thoughts in the past 12 months. Overall, young people aged 15–24 years had the highest self-reports of suicidal thoughts in the past 12 months (6%) compared to those aged 25–64 (3.6%) and 65 years and older (1.7%†).

Reported suicidal thoughts in the past 12 months were higher among women aged 15–24 years than men (7.3% compared to 4.7% respectively). Suicidal thoughts were comparable by sex for the other age groups.

Suicide Attempts and Hospitalizations

Hospitalizations for suicide attempts in Canada increased between 1987 and 1994, peaked in 1995 and have declined slightly since that time[4] (data not shown).

In the fiscal year of 1998/1999 in Canada, there were 23,225 reported hospitalizations related to suicide and intentional self-inflicted injuries.[7] Persons who attempt suicide stay in hospital for an average of seven days.[7] Whereas males are more likely to commit suicide, females are more likely to attempt suicide[7]. Males are more likely to die from their first suicide attempt than are females.[7]

Individuals who attempt suicide and are treated in hospital tend to use less lethal methods than those who commit suicide. In the fiscal year of 1998/1999, poisoning accounted for 83% of all suicide hospitalizations.[7]

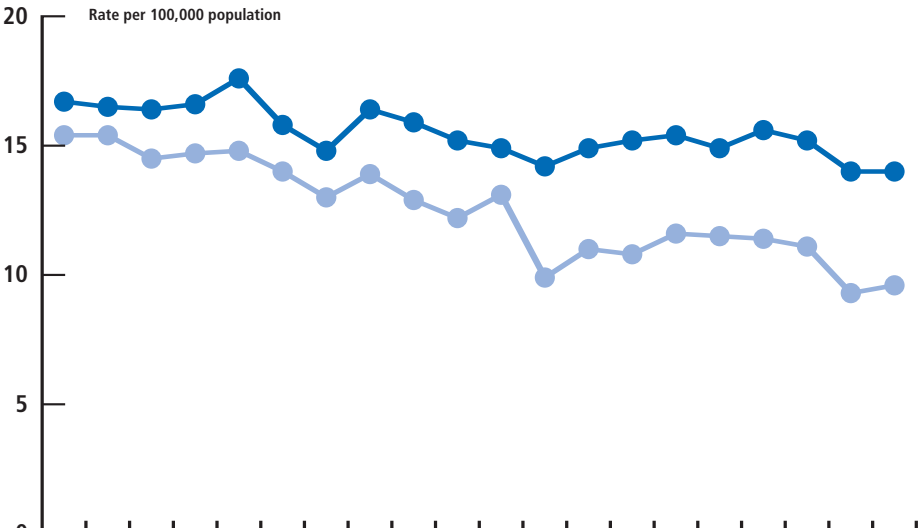
Suicide Deaths

Suicide accounted for approximately 2% of all deaths in Canada in 1998.[3] In 1998, approximately 3,700 Canadians aged 10 years and older committed suicide for an age-standardized rate of 14 deaths per 100,000[7]. An average of 10 people per day commit suicide in Canada.[7]

Figure 1 *(see following page)* shows rates of suicide mortality for the years 1979–1998. Suicide mortality rates have declined for both Canada and Ontario since 1979. Suicide mortality rates in Ontario are lower than those for Canada. This difference between Canada and Ontario may be attributed to variations in coding practices for causes of death, timeliness of reporting mortality data and the percentage of deaths classified as undetermined.[7] In Ontario in 1998, the number of undetermined deaths divided by the number of suicides was 16%. The only other province with a higher ratio of undetermined deaths to suicides was Manitoba at 24%. Other provinces such as New Brunswick and Quebec had ratios of 1% and 3% respectively.[7]

* Data source: Statistics Canada, Canadian Community Health Survey, Mental Health and Well-being, 2002.
† Use data with caution

Figure 1: Mortality from Suicide by Year, Canada and Ontario, 1979–1998



	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98
Canada	16.7	16.5	16.4	16.6	17.6	15.8	14.8	16.4	15.9	15.2	14.9	14.2	14.9	15.2	15.4	14.9	15.6	15.2	14.0	14.0
Ontario	15.4	15.4	14.5	14.7	14.7	14.0	13.0	13.9	12.9	12.2	13.1	9.9	11.0	10.8	11.6	11.5	11.4	11.1	9.3	9.6

Year

Note: Rates age-standardized using 1991 Canadian population aged 10 years or older, adjusted for net census undercoverage and non-permanent residents.

Source: Langlois S and Morrison P. *Suicide deaths and suicide attempts.* Health Reports 2002; 13(2):9-22.

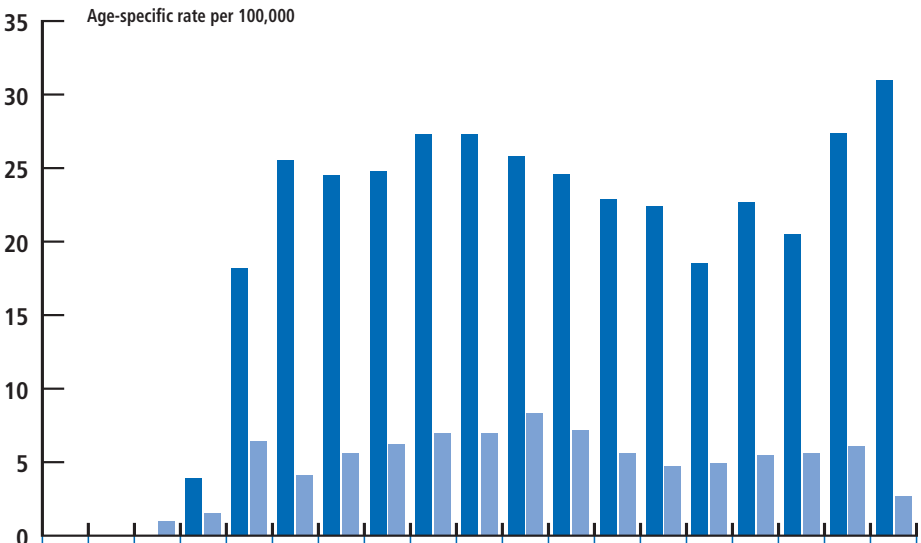
Overall, almost four times as many Canadian males commit suicide as females. In 1998, there were 2,925 deaths due to suicide in males compared to only 773 deaths in females[7]. This trend is consistent across all age groups as shown in Figure 2 *(see following page)*. Males are also more likely to die from their first suicide attempt than are females.[7]

Suicide mortality increases substantially by age 15–19 years, and is highest among males aged 80 years and older, followed by males aged 35–44 years. For females, mortality rates increase at age 15–19 years, and are highest among women aged 45–49 years.

Suicide has a tremendous impact on potential years of life lost (PYLL) in young people, and in particular, in young men. Overall, in Canada in 1997, the rate of PYLL was 431.4 per 100,000 (683.7 per 100,000 for males and 177.1 per 100,000 for females) (data not shown)[*].

* Data sources: Statistics Canada, Canadian Vital Statistics, Death Database and Demography Division (population estimates). Potential years of life lost—all suicides (ICD-9 E950–E959), rate per 100,000 population and confidence interval, population aged 0 to 74, by sex, Canada, provinces, territories, health regions and peer groups, 1997 [database on the Internet]. [Cited 2004 June 3]. Available from www.statcan.ca/english/freepub/82-221-XIE/01103/tables/html/14272_97.htm

Figure 2: Mortality from Suicide by Age Group and Sex, Canada, 1998



	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
Male	0	0	0	2.9	18.2	25.5	24.5	24.8	27.3	27.3	25.8	24.6	22.9	22.4	18.5	22.7	20.5	27.4	31.0
Female	0	0	1.0	1.5	6.4	4.1	5.6	6.2	7.0	7.0	8.3	7.2	5.6	4.7	4.9	5.5	5.6	6.1	2.7

Age Group (Years)

Source: Health Canada. *A Report on Mental Illnesses in Canada*. Ottawa, Canada 2002.

Suicide mortality rates in males are high across all age groups; however, suicide mortality as a proportion of all causes of death is the highest in males and females aged 15–24 years as shown in Table 2 *(see below)*.

Table 2—Proportion of Deaths Due to Suicide by Age Group and Sex, Canada, 1998

	Age Group (years)				
	<15	15–24	25–44	45–64	65+
Male	1.8	26.3	19.3	4.0	0.4
Female	1.3	16.9	9.3	1.8	0.1
Total	1.6	23.8	15.9	3.1	0.2

Source: Health Canada. *A Report on Mental Illnesses in Canada*. Ottawa, Canada 2002.

Methods of Suicide Deaths

In Canada in 1998, the most common method of suicide deaths was suffocation, hanging and strangulation (39%); followed by poisoning (26%); and use of firearms (22%). Between 1978 and 1998, male suicides by firearms declined from 41 to 26 per cent, while suicide by suffocation, hanging and strangulation increased from 24 to 40 per cent.[7]

The methods of committing suicide vary greatly for males and females as males tend to choose more violent methods of committing suicide. A much higher proportion of males choose the use of firearms (26%) compared to females (7%). In comparison, a higher proportion of females choose poisoning (41%) compared to males (22%) (data not shown). This may explain why there are more suicide deaths for males than for females.

The Cost of Suicide

There have been many studies conducted about the cost of suicide. A Canadian study that included direct and indirect costs was conducted in New Brunswick in 1996. The findings from this study estimated that the average cost per suicide was $849,878.[8]

Direct costs related to suicides included ambulance, hospital, physician, autopsy, and funeral/cremation services as well as police investigations. Indirect costs included a calculation of potential years of life lost and discounted future earnings.[8]

Suicide in the Region of Peel and Ontario

HIGHLIGHTS

- In 2001/2002 in the Region of Peel, 6.2% of residents reported that they had suicidal thoughts in their lifetime. Almost 2% reported having suicidal thoughts within the past 12 months.
- In the Region of Peel, between 1997 and 2001, there was an average of 784 hospitalizations per year for suicide attempts.
- In the Region of Peel, hospitalization rates for suicide attempts was highest among the 20–49 year age group.
- In the Region of Peel, the most common method of attempting suicide and being hospitalized was poisoning.
- In the Region of Peel and Ontario, suicide mortality declined between 1993 and 2000.
- In the Region of Peel, approximately 56 people commit suicide per year.
- In the Region of Peel, mortality rates for suicide are highest for males aged 80 years and older and females aged 40–49 years; however the proportion of overall deaths is highest for males aged 10–19 years, and females aged 20–29 years.
- The most common method of suicide for the Region of Peel is poisoning (36%); followed by hanging, strangulation and suffocation (34%); and firearms and explosives (11%).

Suicidal Thoughts

In 2000/2001 as part of the Canadian Community Health Survey (CCHS), Peel residents aged 12 years and older were asked: "Have you ever seriously considered committing suicide or taking your own life?" and "Has this happened in the past 12 months?"

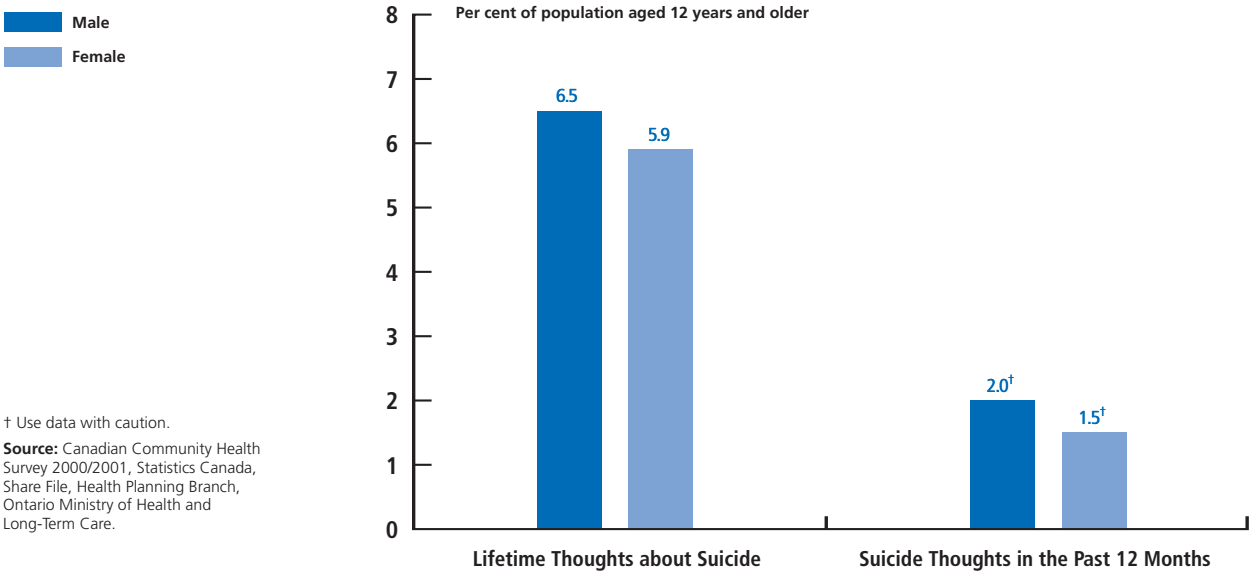
According to results for Peel from the CCHS, 6.2% of residents reported that they had suicidal thoughts sometime in their life (representing about 53,300 people). Overall, 1.7%† of Peel residents (about 15,000 people) reported that they had suicidal thoughts in the past 12 months. Data are not available for Ontario as not all health regions in the province asked these questions in the survey.

A slightly higher proportion of males (6.5%) reported that they had suicidal thoughts in their lifetime compared to females (5.9%) as shown in Figure 3 *(see following page)*. This finding was similar for suicidal thoughts in the past 12 months, which was reported by 2%† of males compared to 1.5%† of females.

In 2001 in Ontario, the Ontario Student Drug Use Survey (OSDUS) found that 11% of students in Grades 7 to 13 had considered suicide in the past year. The percentage of adolescents who reported having suicidal thoughts

† Use data with caution

Figure 3: Suicidal Thoughts by Sex, Region of Peel, 2000/2001



† Use data with caution.

Source: Canadian Community Health Survey 2000/2001, Statistics Canada, Share File, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

increased by grade from 8.8% in Grade 9, to 12.8% in Grade 10, to 13.9% in Grade 11, and to 14.1% in Grade 12.[2] Female students were more likely to report that they had considered suicide than were males (13% compared to 9% respectively) (data not shown).

Data collected from the Ontario Student Drug Use Survey (OSDUS) highlighted other factors which were associated with adolescents having suicidal thoughts. These data are described in Table 3 *(see below)*.

Table 3—Factors Associated with Suicidal Thoughts in Youths, Ontario, 2001

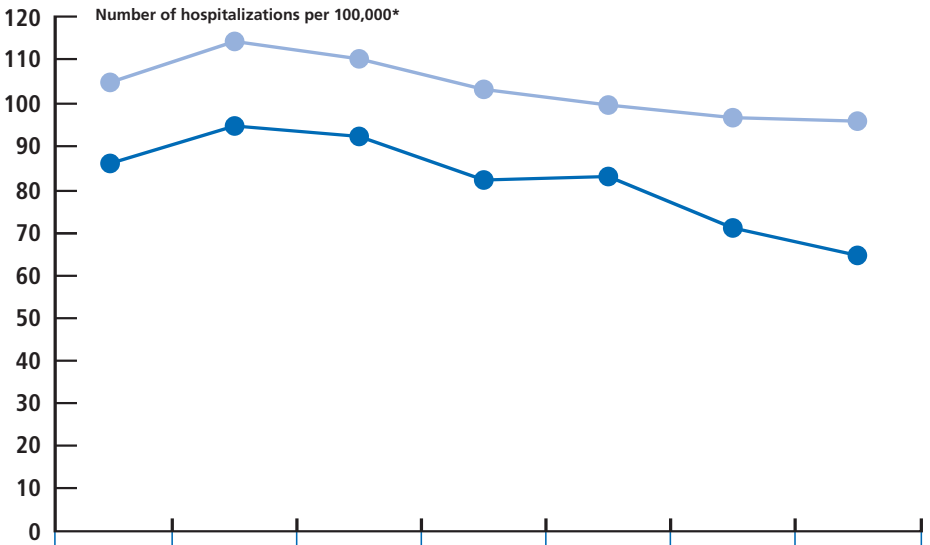
Factor	Comments
Family Structure	• Suicidal thoughts are more common among students living with one parent (16%) compared to two parents (10%)
Relationship with Parents	• Suicidal thoughts are more common among students who do not have a good relationship with parents (39%) compared to students who do (10%)
Feeling Safe at School	• Suicidal thoughts are more common among students who report they do not feel safe at school (22%) compared to students who do feel safe at school (7%)
Bullying (either being a victim of bullying or bullying others)	• Suicidal thoughts are more common among students involved with bullying. The proportion of students reporting suicidal thoughts associated with bullying is as follows: 19% for students who are both bullying victims and bullies themselves, 17% for students who are victims of bullying, 12% for students who are bullies, compared to 8% of students who have no involvement in bullying.

Source: Centre for Addiction and Mental Health. *One in Ten Ontario Students Contemplates Suicide.* CAMH Population Studies eBulletin. 2003 Jan/Feb; 18.

Suicide Attempts and Hospitalizations

In the Region of Peel between 1997 and 2001, there was an average of 784 hospitalizations per year for suicide attempts. Hospitalizations for suicide attempts were lower across all years in Peel compared to Ontario, as shown in Figure 4 *(see below)*. In 2001, the age-standardized rate of hospitalization for suicide attempts in Peel was 65.2 per 100,000 compared to 96 per 100,000 for Ontario. The rate of hospitalization for suicide attempts has been declining for both Peel and Ontario since 1996.

Figure 4: Hospitalization for Suicide Attempts by Year, Region of Peel and Ontario, 1995–2001



	1995	1996	1997	1998	1999	2000	2001
Peel	86.3	94.9	92.5	82.5	83.3	71.5	65.2
Ontario	104.9	114.3	110.3	103.3	99.7	96.8	96.0

* Rate age-standardized to 1991 (adjusted) Canadian population

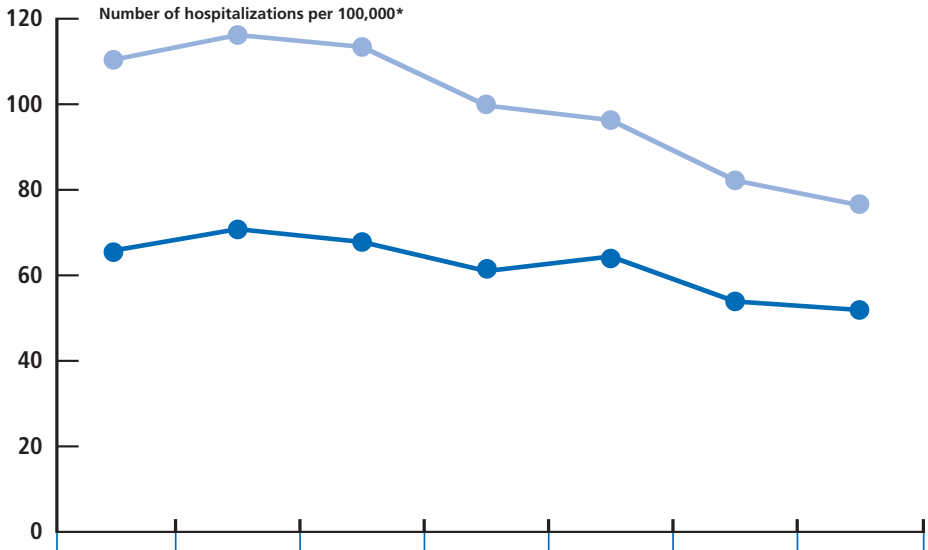
Sources: Hospital In-Patient Data 1995–2001, Provincial Health Planning Database (PHPDB), Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Population Estimates 1995–2001, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Hospital admissions for suicide attempts differ substantially by sex. Figure 5 *(see following page)* shows hospitalization rates for suicide attempts in Peel by sex. A much higher proportion of females are admitted for suicide attempts than are males. It has been suggested that a possible reason for this finding is that women tend to make suicide attempts that are less violent and therefore less lethal than those made by males.[7]

In 2001 in Peel, the age-standardized rate of hospitalization for suicide attempts was 76.4 per 100,000 for females and 51.9 per 100,000 for males. Hospitalization rates in Peel have been declining since 1996 for both males and females; however, this decline is much more noticeable for females.

Figure 5: Hospitalization for Suicide Attempts by Year and Sex, Region of Peel, 1995–2001



	1995	1996	1997	1998	1999	2000	2001
Male	65.8	70.8	67.8	61.0	64.4	53.9	51.9
Female	110.4	116.2	113.4	99.7	96.3	82.2	76.4

Year

* Rate age-standardized to 1991 (adjusted) Canadian population.

Sources: Hospital In-Patient Data 1995-2001, Provincial Health Planning Database (PHPDB), Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

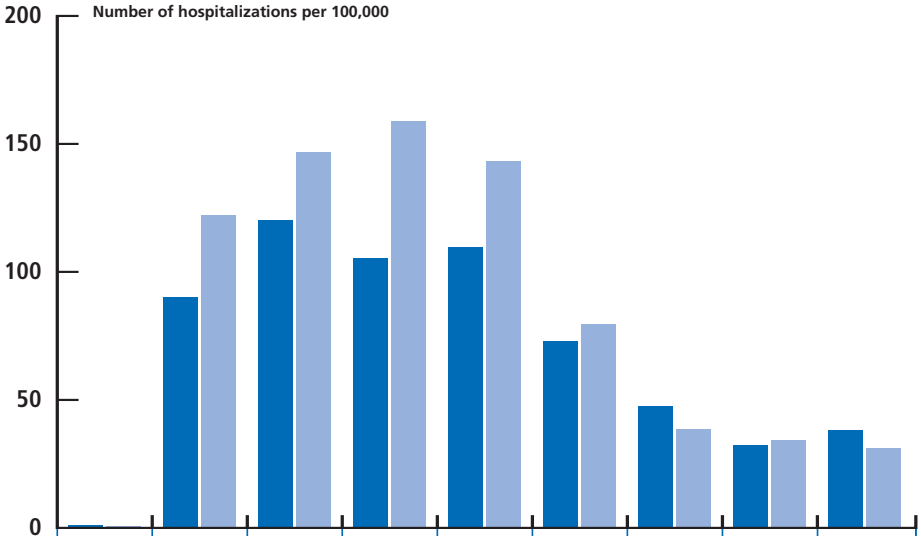
Population Estimates 1995-2001, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Hospitalization rates for suicide attempts are highest in the 20–49 year age groups in both Peel and Ontario *(see Figure 6 on following page)*. Rates of hospitalization for suicide attempts are higher in Ontario across all age groups with the exception of those aged 60–69 and 80 years and older.

Hospitalization for suicide attempts by age group and sex for Peel are shown in Figure 7 *(see following page)*. Hospitalization rates for suicide attempts are higher for females across all age groups except those aged 80 years and older, where males surpass females. Some possible reasons for this higher rate among males aged 80 years and older that have been cited in the literature include: loss of a spouse; health issues such as terminal illnesses; and decreased mobility.[1]

The majority of suicide hospitalizations in Peel and Ontario involve poisoning (90% and 87% respectively). Methods of suicide attempts are quite similar for both males and females (data not shown).

Figure 6: Hospitalization for Suicide Attempts by Age Group, Region of Peel and Ontario, 1997–2001 Combined



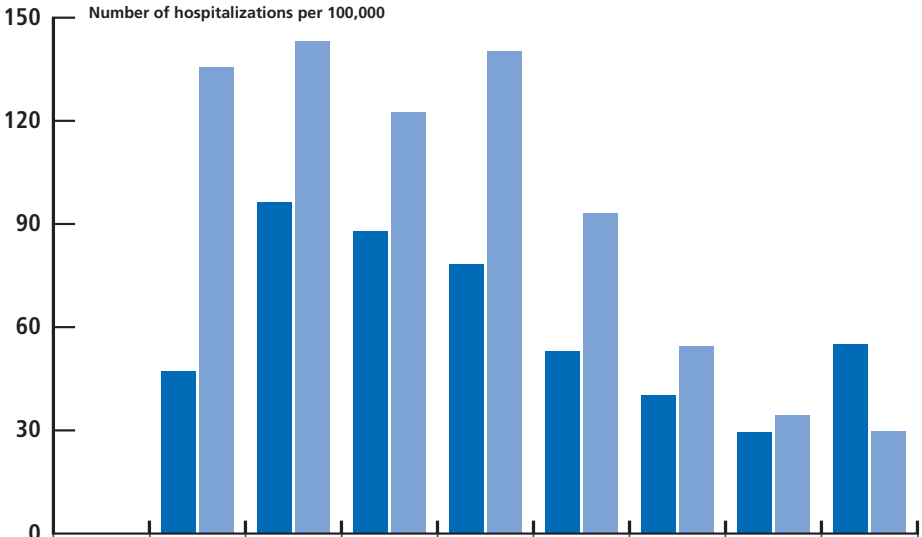
	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80+
Peel	1.1	90.2	120.0	105.3	109.7	72.9	47.3	32.3	38.2
Ontario	0.7	122.1	146.5	158.8	143.1	79.6	38.3	34.3	31.0

Age Group (Years)

Sources: Hospital In-Patient Data 1997–2001, Provincial Health Planning Database (PHPDB), Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Population Estimates 1997–2001, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Figure 7: Hospitalization for Suicide Attempts by Age Group and Sex, Region of Peel, 1997–2001 Combined



	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80+
Male	NR	47.3	96.5	88.0	78.5	53.1	40.2	29.6	55.0
Female	NR	135.7	143.2	122.6	140.3	93.1	54.4	34.4	29.8

Age Group (Years)

NR=Not releasable

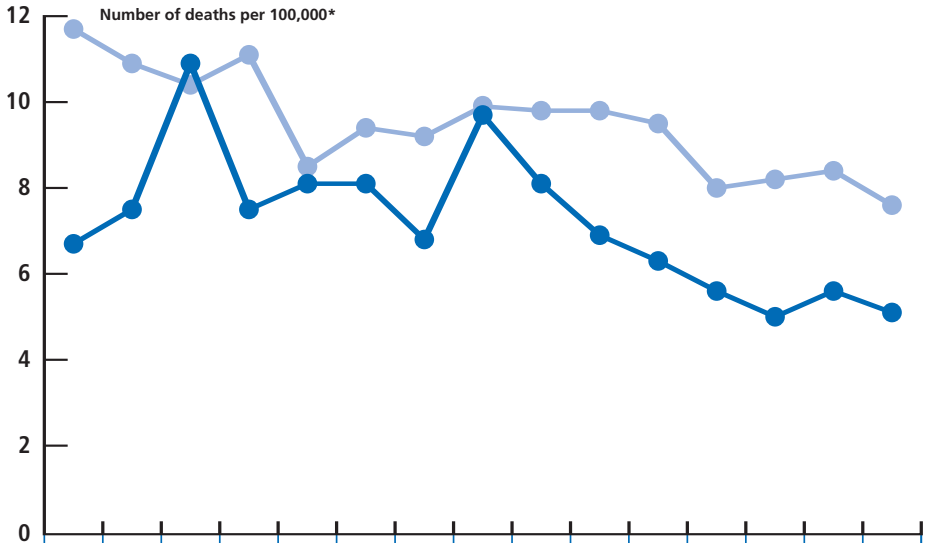
Sources: Hospital In-Patient Data 1997–2001, Provincial Health Planning Database (PHPDB), Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Population Estimates 1997–2001, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Suicide Deaths

Suicide mortality in both Peel and Ontario has been declining since 1993. Suicide mortality rates in Ontario are slightly higher than in Peel. Between 1991 and 2000, Peel had an average of about 56 deaths per year due to suicide. In 2000, the mortality rate from suicide in Peel was 5.1 per 100,000 compared to 7.6 per 100,000 for Ontario.

Figure 8: Mortality from Suicide by Year, Region of Peel and Ontario, 1986–2000



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Peel	6.7	7.5	10.9	7.5	8.1	8.1	6.8	9.7	8.1	6.9	6.3	5.6	5.0	5.6	5.1
Ontario	11.7	10.9	10.4	11.1	8.5	9.4	9.2	9.9	9.8	9.8	9.5	8.0	8.2	8.4	7.6

Year

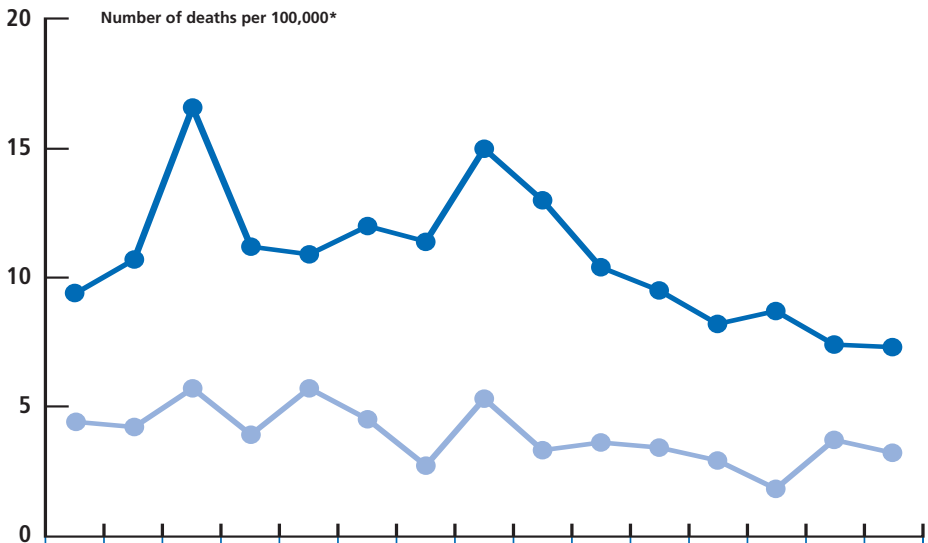
* Rate age-standardized to 1991 (adjusted) Canadian population.

Sources: Ontario Mortality Database, 1986-2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Population Estimates 1986-2000, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

The literature has shown that immigrants (regardless of their continent of birth) are less likely to commit suicide than native-born Canadians.[9] The Region of Peel has a higher immigrant population in comparison to Ontario which may partially explain the lower rates seen in Peel.

Figure 9: Mortality from Suicide by Year and Sex, Region of Peel, 1986–2000



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Male	9.4	10.7	16.6	11.2	10.9	12.0	11.4	15.0	13.0	10.4	9.5	8.2	8.7	7.4	7.3
Female	4.4	4.2	5.7	3.9	5.7	4.5	2.7	5.3	3.3	3.6	3.4	2.9	1.8	3.7	3.2

Year

* Rate age-standardized to 1991 (adjusted) Canadian population.

Sources: Ontario Mortality Database, 1986–2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

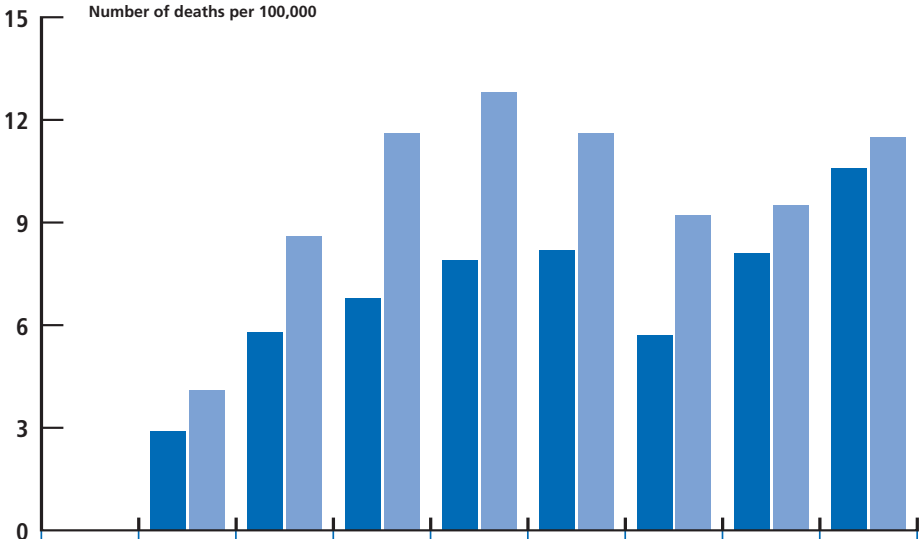
Population Estimates 1986–2000, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

In Peel, rates of suicide mortality are almost double for males compared with females as shown in Figure 9 *(see above)*. Mortality rates due to suicide in males have declined from 12 per 100,000 in 1991 to 7.3 per 100,000 in 2000. The decline in female rates has been less dramatic. Between 1991 and 2000, in Peel, an average of 15 women per year committed suicide compared to an average of 42 males per year.

In Ontario, age-specific rates of suicide mortality are higher across all age groups compared to Peel; however, this difference is less noticeable for those aged 80 years and older *(see Figure 10 on following page)*.

Some of this discrepancy between Peel and Ontario rates may be explained by the population of immigrants, as described earlier. In the immigrant population (who typically come to Canada between the ages of 25–40 years), the risk of suicide is much lower compared to the Canadian-born; however, the risk of suicide in immigrants increases with age and becomes similar to those who are Canadian-born.[9] Other factors, such as having a smaller proportion of Aboriginals in Peel compared to Ontario, may also help to explain the difference in rates. Rates of suicide in Aboriginals are two to three times higher than in the general population.[10]

Figure 10: Mortality from Suicide by Age Group, Region of Peel and Ontario, 1996–2000 Combined



	0–9	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80+
Peel	NR	2.9	5.8	6.8	7.9	8.2	5.7	8.1	10.6
Ontario	NR	4.1	8.6	11.6	12.8	11.6	9.2	9.5	11.5

Age Group (Years)

NR=Not releasable

Sources: Ontario Mortality Database, 1996-2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Population Estimates 1996-2000, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

In the Region of Peel in 1997, there were 188.8 potential years of life lost (PYLL) per 100,000 population as a result of suicide compared to 283.2 per 100,000 for Ontario (data not shown)*. The proportion of the population who are Aboriginal is higher in northern Ontario, which may explain why the rate for Ontario is higher than in Peel.

In Peel, mortality rates due to suicide are highest among males aged 80 years and older and among females aged 40–49 years (data not shown); however, the proportion of all deaths due to suicide is highest in the younger age groups. For males, the highest proportion of suicide deaths is among those aged 10–19 years and among females aged 20–29 years as shown in Table 4 *(see following page)*.

* Data sources: Statistics Canada, Canadian Vital Statistics, Death Database and Demography Division (population estimates). Potential years of life lost—all suicides (ICD-9 E950–E959), rate per 100,000 population and confidence interval, population aged 0 to 74, by sex, Canada, provinces, territories, health regions and peer groups, 1997 [database on the Internet]. [Cited 2004 June 3]. Available from www.statcan.ca/english/freepub/82-221-XIE/01103/tables/html/14272_97.htm

Table 4 — Proportion of Deaths due to Suicide by Age Group and Sex, Region of Peel, 1996–2000 Combined

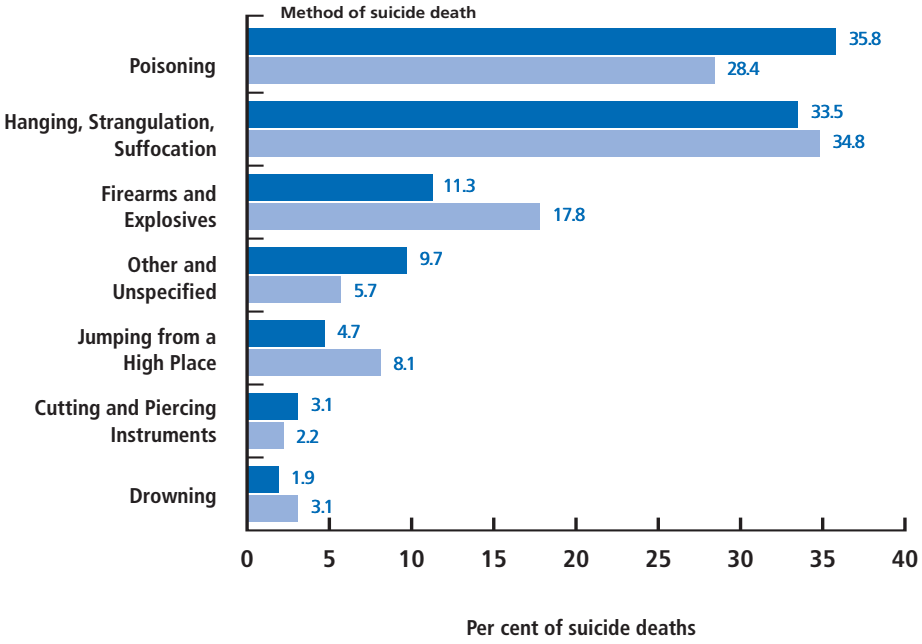
	Age Group (years)							
	10–19	20–29	30–39	40–49	50–59	60–69	70–79	80+
Male	21.3	14.7	16.4	7.2	2.7	0.6	0.4	0.2
Female	4.4	18.3	6.4	4.6	1.5	0.4	0.2	0.1
Total	15.1	15.8	12.6	6.1	2.2	0.5	0.3	0.1

Source: Ontario Mortality Database, 1996–2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Methods of Suicide Deaths

Overall, the most common methods of suicide death in Peel and Ontario are: poisoning; hanging, strangulation and suffocation; and use of firearms and explosives, as shown in Figure 11 *(see below)*.

Figure 11: Methods of Suicide Deaths, Region of Peel and Ontario, 1996–2000 Combined

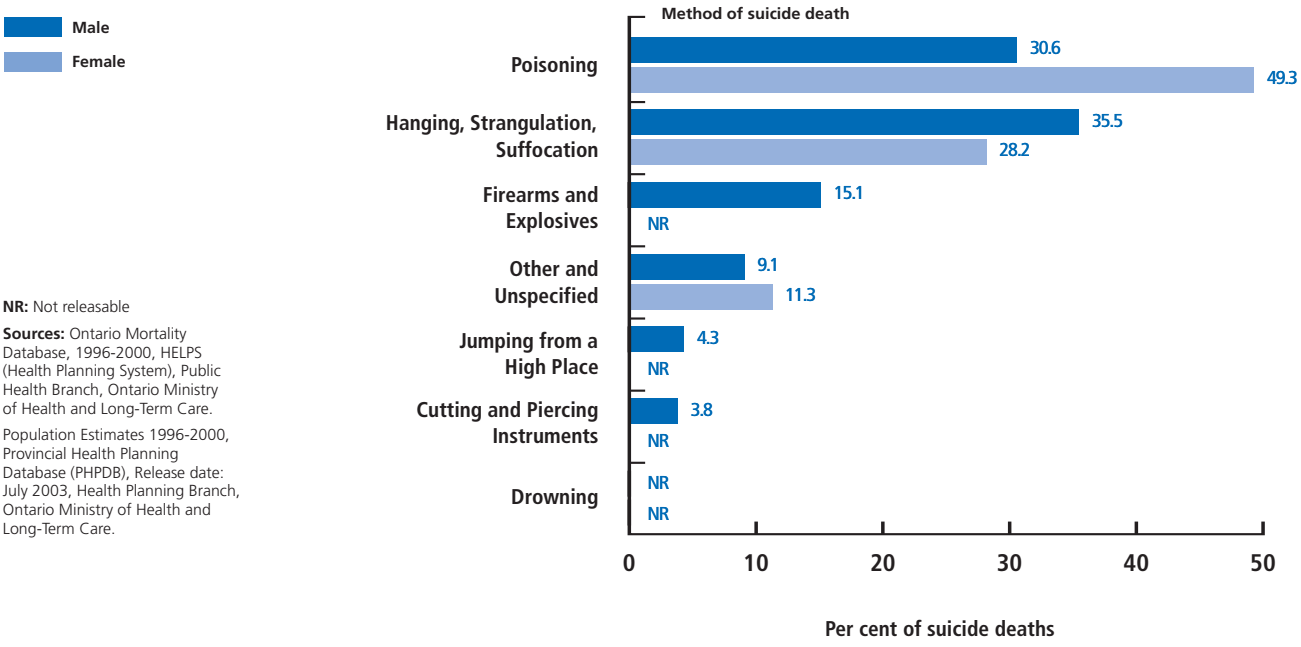


Sources: Ontario Mortality Database, 1996–2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Population Estimates 1996–2000, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

The proportion of the population who chose these methods differs between Peel and Ontario. Compared to Ontario, a significantly higher proportion of Peel residents commit suicide by poisoning (36% compared to 28%), and "other and unspecified means" (10% compared to 6%). In comparison, significantly fewer Peel residents than Ontario residents commit suicide by use of firearms and explosives (11% compared to 18% respectively) and by jumping from a high place (5% compared to 8% respectively).

Figure 12: Methods of Suicide Deaths by Sex, Region of Peel, 1996–2000 Combined



NR: Not releasable

Sources: Ontario Mortality Database, 1996-2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Population Estimates 1996-2000, Provincial Health Planning Database (PHPDB), Release date: July 2003, Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

As can be seen in Figure 12 *(see above)*, methods of suicide also differ by sex. A significantly higher proportion of females commit suicide by poisoning (49%) compared to males (31%). Although not significantly different, a higher proportion of males commit suicide by hanging, strangulation and suffocation (36%) compared to females (28%). Very few females chose firearms and explosives as a means of committing suicide (results were too small to be released); however, this is the third most common means of committing suicide for males (15%).

Summary

Suicide is an important cause of morbidity and mortality, and one of the leading causes of mortality and hospitalization in Canada, Ontario and the Region of Peel. Many suicide deaths occur early in life and therefore have a tremendous impact on potential years of life lost. The risk of completed suicide is higher among those who have suicidal thoughts. Between 10 to 13 per cent of individuals who attempt suicide eventually take their own lives.

There are many risk factors that influence whether a person will attempt or commit suicide. A history of mental illness, and in particular depression, is strongly associated with suicidal behaviour.

In Canada, approximately 4% of the population have had suicidal thoughts in the past 12 months. People in younger age groups (15–24 years) were more likely to report this than older age groups. Hospitalizations for suicide attempts in Canada have been declining since 1995. In 1998, suicide deaths accounted for approximately 2% of all deaths in Canada. On average, 10 people per day commit suicide in Canada. Four times as many males commit suicide as do females.

In 2000/2001, in the Region of Peel, 6.2% of residents reported having suicidal thoughts sometime in their life. Almost 2% of residents reported having suicidal thoughts in the past 12 months. On average, there are 784 hospitalizations for suicide attempts per year which is equivalent to two per day in the Region of Peel. Hospitalizations for suicide attempts are highest in the 20–49 year age group and are also higher for females compared to males. The majority of people attempting suicide used poisoning as their method (90%). The Region of Peel has lower rates of hospitalization due to suicide attempts than Ontario.

The Region of Peel has an average of 56 suicide deaths per year which is equivalent to one suicide death per week. Suicide mortality rates are twice as high in males as they are in females. Rates of mortality due to suicide are lower in the Region of Peel compared to Ontario. In the Region of Peel, most suicide deaths are the result of poisoning, followed by hanging, strangulation and suffocation; and firearms and explosives. A much higher proportion of males tend to choose violent methods such as hanging, strangulation and suffocation; and firearms and explosives compared to females, who tend to choose poisoning when committing suicide.

Peel Health Facts

Population

Population Projections—2004, Region of Peel and Municipalities

	Mississauga	Brampton	Caledon	Peel
Male	318,004	188,688	27,476	534,084
Female	326,991	191,315	27,524	545,922
Total*	**645,000**	**380,000**	**55,000**	**1,080,000**

* Total numbers have been rounded.

Source: Region of Peel Planning department.

Life Expectancy

Life Expectancy (in years) at Birth by Sex, Region of Peel and Ontario, 2000

	Peel	Ontario
Males	78.9	76.9
Females	83.3	82.0

Source: Ontario Mortality Database 2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care. Life table template distributed by the Central East Health Information Partnership.

Selected Reproductive Health Indicators

Live Births, Region of Peel and Ontario, 2000

	Number	Crude Birth Rate*
Peel	12,759	12.6
Ontario	126,985	10.9

***** rate per 1,000 population

Source: Ontario Live Birth Database 2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Infant Mortality, Region of Peel and Ontario, 2000

	Number	Infant Mortality Rate*
Peel	64	5.0
Ontario	702	5.5

* rate per 1,000 live births

Source: Ontario Mortality Database 2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Top 15 Causes of Death in Men

Deaths by Selected Leading Causes, Region of Peel and Ontario, 2000

Rank	Cause of Death	Peel #	Peel %	Ontario %
1	Ischemic heart disease	384	20.3	22.1
2	Lung cancer	171	9.0	7.9
3	All other heart disease and diseases of the arteries, arterioles and capillaries	117	6.2	6.9
4	Stroke (cerebrovascular disease)	112	5.9	6.2
5	Prostate cancer	64	3.4	3.3
6	Colorectal cancer	62	3.3	3.2
7	Chronic obstructive pulmonary disease	61	3.2	4.3
8	Diabetes mellitus	61	3.2	3.5
9	Cancer of lymphoid, hematopoietic and related tissues	53	2.8	3.0
10	Chronic liver disease and cirrhosis	46	2.4	1.5
11	Motor vehicle traffic collisions	45	2.4	1.3
12	Alzheimer's disease	36	1.9	1.4
13	Suicide	33	1.7	1.7
14	Pneumonia	27	1.4	1.7
15	Esophageal cancer	24	1.3	1.1
	Other Causes	595	31.5	30.9
	ALL CAUSE TOTAL	**1,891**	**100.0**	**100.0**

Top 15 Causes of Death in Women

Deaths by Selected Leading Causes, Region of Peel and Ontario, 2000

Rank	Cause of Death	Peel #	Peel %	Ontario %
1	Ischemic heart disease	244	13.5	19.3
2	All other heart diseases and diseases of the arteries, arterioles and capillaries	168	9.3	8.5
3	Stroke (cerebrovascular disease)	157	8.7	8.9
4	Lung cancer	114	6.3	6.0
5	Breast cancer	98	5.4	4.8
6	Alzheimer's disease	67	3.7	3.1
7	Diabetes mellitus	62	3.4	3.5
8	Cancer of lymphoid, hematopoietic and related tissues	59	3.3	2.5
9	Chronic obstructive pulmonary disease	54	3.0	3.6
10	Colorectal cancer	52	2.9	2.8
11	Pneumonia	51	2.8	2.2
12	Dementia	42	2.3	2.7
13	Ovarian cancer	32	1.8	1.4
14	Accidental falls	26	1.4	0.8
15	Pancreatic cancer	24	1.3	1.4
	Other Causes	564	31.1	28.4
	ALL CAUSE TOTAL	**1,814**	**100.0**	**100.0**

Source: Ontario Mortality Database 2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Top 15 Causes of Premature Death in Men

Potential Years of Life Lost by Selected Leading Causes, Region of Peel and Ontario, 2000

Rank	Cause of Death	Peel #	Peel %	Ontario %
1	Ischemic heart disease	2,518	11.9	13.9
2	Motor vehicle traffic collisions	1,711	8.1	5.6
3	Lung cancer	1,565	7.4	6.7
4	Suicide	1,031	4.9	6.8
5	All other heart diseases and diseases of the arteries, arterioles and capillaries	959	4.5	4.0
6	Cancer of lymphoid, hematopoietic and related tissues	776	3.7	3.6
7	Colorectal cancer	678	3.2	2.8
8	Chronic liver disease and cirrhosis	653	3.1	2.5
9	Cancer of the meninges, brain and other parts of the central nervous system	553	2.6	1.7
10	Diabetes mellitus	446	2.1	2.4
11	Stroke (cerebrovascular disease)	405	1.9	2.6
12	Cancer of the lip, oral cavity and pharynx	288	1.4	0.7
13	Esophageal cancer	265	1.3	1.1
14	Cancer of the liver and intrahepatic bile ducts	254	1.2	0.9
15	Pancreatic cancer	243	1.1	1.2
	Other Causes	8,798	41.6	43.4
	ALL CAUSE TOTAL	**21,143**	**100.0**	**100.0**

Top 15 Causes of Premature Death in Women

Potential Years of Life Lost by Selected Leading Causes, Region of Peel and Ontario, 2000

Rank	Cause of Death	Peel #	Peel %	Ontario %
1	Breast cancer	1,347	9.8	9.1
2	Lung cancer	1,061	7.7	8.7
3	Cancer of lymphoid, hematopoietic and related tissues	692	5.0	3.7
4	Suicide	603	4.4	3.4
5	All other heart disease and diseases of the arteries, arterioles and capillaries	538	3.9	3.8
6	Colorectal cancer	509	3.7	2.9
7	Ischemic heart disease	498	3.6	6.7
8	Stroke (cerebrovascular disease)	435	3.2	3.0
9	Motor vehicle traffic collisions	426	3.1	3.5
10	Ovarian cancer	352	2.6	2.5
11	Cervical cancer	294	2.1	1.2
12	Diabetes mellitus	196	1.4	2.3
13	Cancer of the meninges, brain and other parts of the central nervous system	175	1.3	1.7
14	Pancreatic cancer	161	1.2	1.4
15	Chronic liver disease and cirrhosis	159	1.2	1.4
	Other Causes	6,347	46.0	44.6
	ALL CAUSE TOTAL	**13,793**	**100.0**	**100.0**

Source: Ontario Mortality Database 2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.

Top 15 Causes of Hospitalization in Men

Hospital Separations by Selected Leading Causes, Region of Peel and Ontario, 2001

Rank	Cause of Hospitalization	Peel #	Peel %	Ontario %
1	Ischemic heart disease	2,736	7.9	9.2
2	Injury and poisoning	2,430	7.0	8.1
3	All other heart disease and diseases of the arteries, arterioles and capillaries	1,526	4.4	6.0
4	Chronic obstructive lung disease	1,102	3.2	2.8
5	Pneumonia and influenza	799	2.3	2.8
6	Arthropathies	724	2.1	2.1
7	Stroke (cerebrovascular disease)	607	1.7	2.3
8	Schizophrenia	368	1.1	1.2
9	Affective psychoses	344	1.0	1.5
10	Diabetes mellitus	302	0.9	1.1
11	Prostate cancer	301	0.9	1.0
12	Colorectal cancer	225	0.6	0.9
13	Cancer of lymphoid, hematopoietic and related tissue	206	0.6	0.7
14	Lung cancer	167	0.5	0.8
15	Benign neoplasms	153	0.4	0.4
	Other causes	22,709	65.4	59.1
	ALL CAUSE TOTAL	**34,699**	**100.0**	**100.0**

Top 15 Causes of Hospitalization in Women

Hospital Separations by Selected Leading Causes, Region of Peel and Ontario, 2001

Rank	Cause of Hospitalization	Peel #	Peel %	Ontario %
1	Labour, delivery and associated complications	12,494	24.6	17.0
2	Complications of pregnancy	2,596	5.1	5.0
3	Injury and poisoning	2,273	4.5	5.9
4	Ischemic heart disease	1,351	2.7	3.9
5	All other heart disease and diseases of the arteries, arterioles and capillaries	1,433	2.8	4.0
6	Benign neoplasms	1,059	2.1	1.8
7	Chronic obstructive lung disease	908	1.8	2.0
8	Arthropathies	888	1.8	2.1
9	Miscarriage, abortion and complications	719	1.4	0.9
10	Pneumonia and influenza	700	1.4	2.0
11	Affective psychoses	673	1.3	1.8
12	Stroke (cerebrovascular disease)	637	1.3	1.7
13	Schizophrenia	283	0.6	0.7
14	Breast cancer	267	0.5	0.9
15	Diabetes mellitus	228	0.4	0.7
	Other causes	24,206	47.7	49.4
	ALL CAUSE TOTAL	**50,715**	**100.0**	**100.0**

Source: Hospital In-Patient Data 2001, Provincial Health Planning Database (PHPDB), Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Top 15 External Causes of Hospitalization in Men

External Causes of Hospital Separations by Selected Leading Causes, Region of Peel and Ontario, 2001

Rank	External Cause of Hospitalization	Peel #	Peel %	Ontario %
1	Accidental falls	1,036	3.0	3.5
2	Drugs causing adverse effects	563	1.6	2.1
3	Other accidents*	477	1.4	1.4
4	Motor vehicle traffic collisions	280	0.8	0.8
5	Suicide and self-inflicted injury	274	0.8	0.8
6	Assault	98	0.3	0.4
7	Road and air transport accidents	73	0.2	0.2
8	Accidental poisonings	63	0.2	0.2
9	Motor vehicle non-traffic accidents	48	0.1	0.2
10	Late effects of accidental injury	47	0.1	0.3
11	Foreign body entering eye or other orifice	45	0.1	0.1
12	Undetermined injury	40	0.1	0.2
13	Environmental and natural factors	36	0.1	0.1
14	Suffocation, including choking	20	0.1	0.1
15	Accident caused by fire and flames	16	0.0	0.1
	Other causes	3,549	10.2	12.3
	All External Causes	6,665	19.2	22.8
	ALL CAUSE TOTAL	**34,699**	**100.0**	**100.0**

Top 15 External Causes of Hospitalization in Women

External Causes of Hospital Separations by Selected Leading Causes, Region of Peel and Ontario, 2001

Rank	External Cause of Hospitalization	Peel #	Peel %	Ontario %
1	Accidental falls	1,481	2.9	4.0
2	Drugs causing adverse effects	727	1.4	1.9
3	Suicide and self-inflicted injury	427	0.8	1.0
4	Motor vehicle traffic collisions	201	0.4	0.5
5	Other accidents*	177	0.3	0.5
6	Accidental poisonings	95	0.2	0.2
7	Late effects of accidental injury	40	0.1	0.2
8	Environmental and natural factors	39	0.1	0.1
9	Undetermined injury	38	0.1	0.1
10	Road and air transport accidents	34	0.1	0.1
11	Foreign body entering eye or other orifice	31	0.1	0.1
12	Assault	17	0.0	0.1
13	Other water transport accidents	9	0.0	0.0
14	Motor vehicle non-traffic accidents	7	0.0	0.0
15	Accident caused by fire and flames	6	0.0	0.0
	Other causes	3,608	7.1	9.2
	All External Causes	6,937	13.7	18.0
	ALL CAUSE TOTAL	**50,715**	**100.0**	**100.0**

*Other accidents include: those caused by being struck by, against or between objects or persons; those involving machinery, cutting or piercing objects, firearms, explosive materials, hot, caustic or corrosive materials, electric currents, or radiation; or those resulting from overexertion and strenuous movements or other environmental factors

Source: Hospital In-Patient Data 2001, Provincial Health Planning Database (PHPDB), Health Planning Branch, Ontario Ministry of Health and Long-Term Care.

Data Sources, Methods and Limitations

Data sources, and limitations of the data used in this report are described below:

National Surveys

2000/2001 Canadian Community Health Survey

The 2000/2001 Canadian Community Health Survey was conducted nationally by Statistics Canada. Data are available provincially and for specified regions within each province. Responses to these surveys were limited to respondents aged 12 years and older.

Data from national surveys used in this report are all based on self-reports from survey respondents or their proxies. Self-reported data may be subject to errors in recall, over or under-reporting because of social desirability, or errors from proxy reporting.

Certain proportions in this report which include the notation, "use with caution", reflect estimates that may have high sampling variability.

Hospitalization

Hospitalization data in this report are from the Canadian Institute for Health Information (CIHI). Data for Peel from 1986 to 1994 were obtained from the Ontario Ministry of Health and Long-Term Care, while data for 1995 through 1998 were distributed to Peel Health from the Central East Health Information Partnership (CEHIP). For 1999 and 2000, data were obtained through the Provincial Health Planning Database (PHPDB) initiative at the Ontario Ministry of Health and Long-Term Care.

CIHI data for the years 1986 to 2000 were coded based on the International Classification of Diseases, 9th Revision (ICD-9) system of classifying causes of death and hospital stay, with attempted suicide having the external cause of injury code of E950–E959 (suicide and self-inflicted injury).

Limitations of the hospital separation data include:

- Only cases serious enough to require hospital admission are captured;
- Codes presented in the hospital separation data set reflect the cause of stay upon discharge, not admission;
- People admitted to hospital more than once in a year for the same cause are counted for each hospital stay, not as an individual case; and
- Other reasons, such as factors related to physician referral, screening and admission practices, may explain changes in the data over time.

Data on suicide attempts are not systematically collected and therefore present an estimate of the problem. For example, if a suicide attempt does not result in a need for medical assistance such as hospitalization, it will not be reported.

In *Peel Health Facts*, external causes of hospitalizations describe the causes of hospitalizations associated with injury and poisoning.

Mortality

Peel and Ontario mortality data for this report are from the Mortality Data File, collected by the Office of the Registrar General (of Ontario) and distributed to Peel Health through the Health Planning System (HELPS) initiative of the Ontario Ministry of Health and Long-Term Care. At the time this report was prepared, final data were available up to 2000. Mortality data for the years 1986–1999 are coded based on the International Classification of Diseases, 9th Revision (ICD-9) system of classifying causes of death, with suicide having the external cause of injury code of E950–E959 (suicide and self-inflicted injury).

Mortality data regarding suicide for the year 2000 are defined using the International Classification of Diseases, 10th Revision (ICD-10-CA) with suicide having the external cause of injury code of X60–X84 and Y870.

For both hospitalization and mortality data files, data are not able to be released when numbers are fewer than five cases, based on data release guidelines provided by the Ontario Ministry of Health and Long-Term Care. These occurrences are notated using "NR", meaning data were not releasable.

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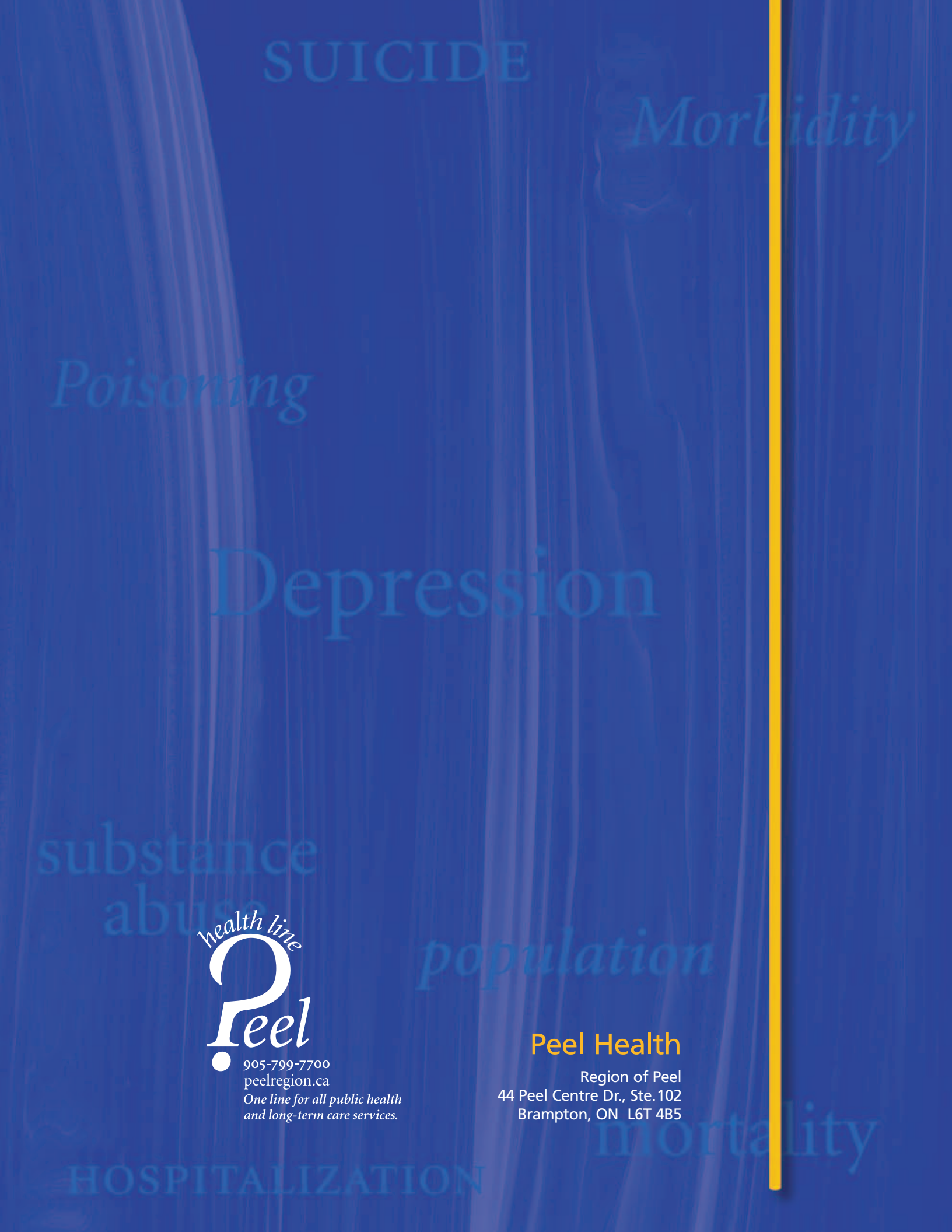
Appendix

Number and Per cent of Suicides by Method and Sex
Region of Peel, 1996–2000 Combined

Method	Number			Per cent		
	Males	Female	Total	Male	Female	Total
Cutting and piercing	7	NR	8	3.8	NR	3.1
Firearms and explosives	28	NR	29	15.1	NR	11.3
Hanging, strangulation and suffocation	66	20	86	35.5	28.2	33.5
Jumping from a high place	8	NR	12	4.3	NR	4.7
Other and unspecified means	17	8	25	9.1	11.3	9.7
Submersion (drowning)	NR	NR	5	NR	NR	1.9
Poisoning	57	35	92	30.6	49.3	35.8
TOTAL	**186**	**71**	**257**	**100.0**	**100.0**	**100.0**

NR: Not releasable

Source: Ontario Mortality Database, 1996–2000, HELPS (Health Planning System), Public Health Branch, Ontario Ministry of Health and Long-Term Care.



health line Peel

905-799-7700
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One line for all public health and long-term care services.

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