

# Suicide Associated Deaths and Hospitalizations Virginia 2000



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## Executive Summary

- In 2000, suicide accounted for 22% of all injury deaths in Virginia with a rate of 10.9 / 100,000 (n=770).
- Self-inflicted injuries accounted for 10% of all injury hospitalizations in Virginia with a rate of 54/100,000 (n= 3,833).
- Suicide by firearms was the most common method, accounting for 63% of all suicides.
- Self-inflicted injuries by poisoning were the most common method, accounting for 83% of all self-inflicted injuries.
- The age group of 65 and above had the highest suicide rates (20/100,000).
- The age group of 15 to 19 had the highest rate of self-inflicted injury hospitalizations (117/100,000).
- Males (17.3/100,000) were more than 3 times as likely as females (4.7/100,000) to die due to suicide.
- Females had a higher rate of self-inflicted injuries (69/100,000) than males (40/100,000).
- Whites were more than 2 times as likely as blacks to die of suicide.
- Races other than whites and blacks had a higher rate of self-inflicted injury hospitalizations (73/100,000) than whites (56/100,000) and blacks (39/100,000).
- Widowed males had the highest suicide rate at about 76/100,000.
- Average hospital charges for self-inflicted injuries were \$6,530 and the average length of stay was 3 days.
- The total cost for self-inflicted injury hospitalization was \$25,028,032.

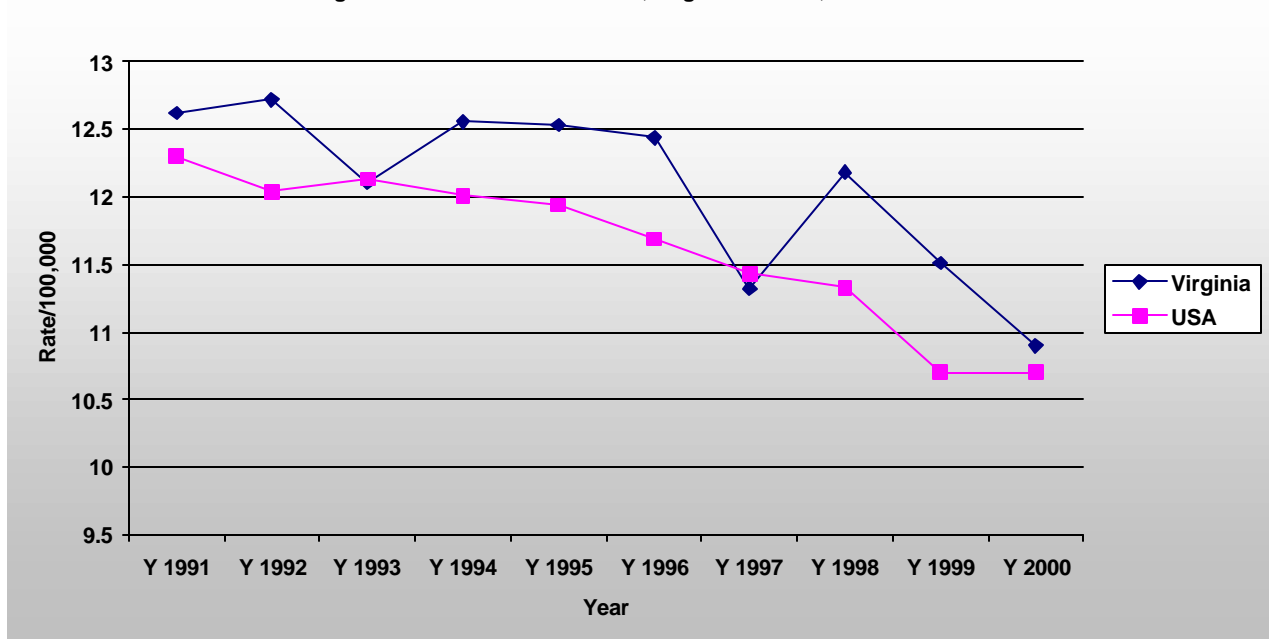
## Introduction

Suicide is a major social and public health problem in Virginia. During 2000, 21.5 % of recorded injury related deaths in Virginia were due to suicide. Suicide resulted in 770 deaths. The suicide rate of 10.9/100,000 was 76.2 % higher than homicide (6.2/100,000). White males showed the highest suicide rates (20.3/100,000). Senior citizens of age 65 and above had the highest rates (20.1/100,000) and age group 35-44 years old ranked as the second with suicide rate of 16.2 per 100,000. Widowed males had the highest suicide rate at about 76/100,000, followed by divorced males at a rate of 54/100,000. The most common method used in suicide was firearm. Self-inflicted injuries (which may be considered suicide attempts, as the injuries were serious enough to require hospital admission) accounted for 10 % of all injury hospitalizations. Females of races other than whites or blacks recorded the highest rates of self-inflicted injuries (100/100,000). Poisoning was the most common method in self-inflicted injuries (83 %). Total hospital charges for self-inflicted injuries were \$25,028,032 (75% of the charges were forwarded to treat self-inflicted poisonings).

## Trend in Suicide Rates

In the period from 1991 to 2000 the trend in rates of suicide has been slightly fluctuating. The suicide rates in Virginia have been higher than the national rates in all years except in years 1993 and 1997 (Figure 1).

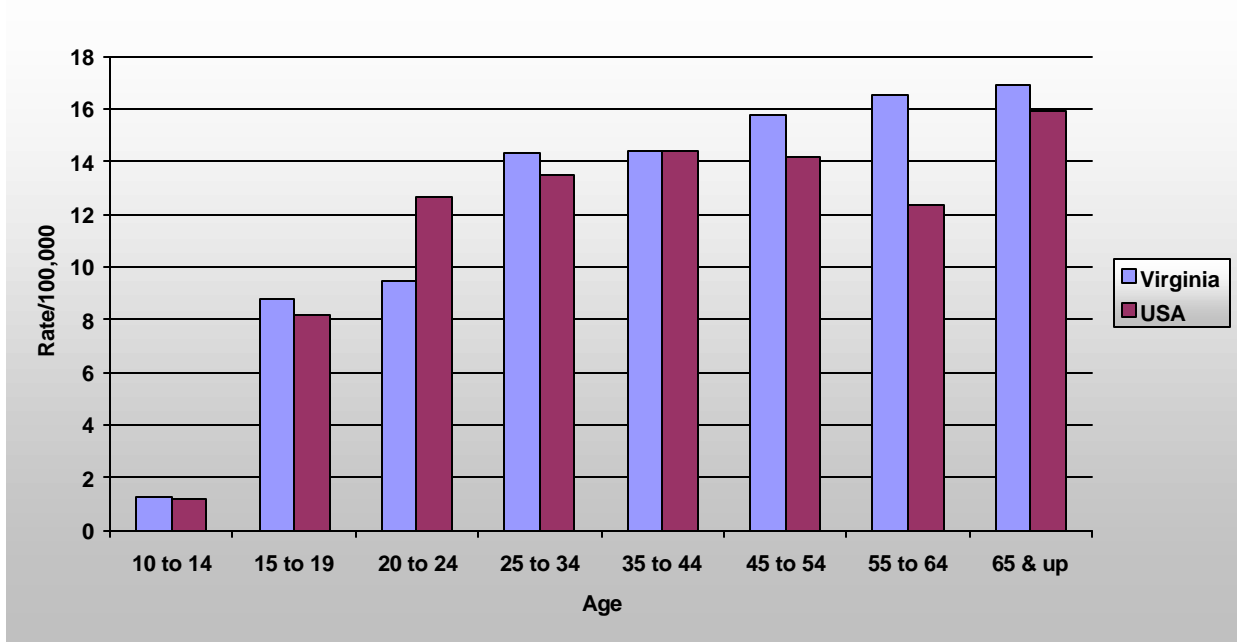
Figure 1: Trend in Suicide Rates, Virginia vs. USA, 1991 to 2000



## Comparison Between The Rates of Suicide, Virginia Vs. USA 1999

As the national data on suicide for 2000 is not sufficient to make a comparison we used the data from 1999. In 1999, the suicide rates in Virginia were higher than the national rates for all age groups except for age group 20 to 24 years old (Figure 2).

Figure 2: Suicide Rates by Age, Virginia vs. USA, 1999



### Suicide and Self-inflicted Injuries by Age

The age group of 65 and above had the highest suicide rates (20.1/100,000), followed by those of 35 to 44 years (16.2/100,000) and those of 45 to 54 years (13.9/100,000). In 2000, children as young as 13 years died as a result of suicide.

Table 1: Suicide Deaths by Age Group, VA 2000

Age Group	Suicide Deaths	Col (%)*	All Deaths**	Suicide Deaths (%)!	Rate!!
5-14 Y	5	1%	152	3.3%	0.5
15-19 Y	46	6%	325	14.2%	9.5
20-24 Y	38	5%	385	9.9%	7.9
25-34 Y	110	14%	957	11.5%	10.6
35-44 Y	194	25%	2212	8.8%	16.2
45-54 Y	139	18%	3989	3.5%	13.9
55-64 Y	79	10%	6223	1.3%	12.5
65 & Up	159	21%	41059	0.4%	20.1
<b>Total</b>	<b>770</b>	<b>100%</b>	<b>56093</b>	<b>1.4%</b>	<b>10.9</b>

For self-inflicted injuries, the age group of 15 to 19 had the highest rates (117/100,000), followed by a decreasing pattern with the lowest rates of self-inflicted injuries in the age group of 65 and above (19/100,000) (Figure 3).

\* Percent of suicide deaths to total injury deaths for all age groups

\*\* Total deaths of all causes within the same age group

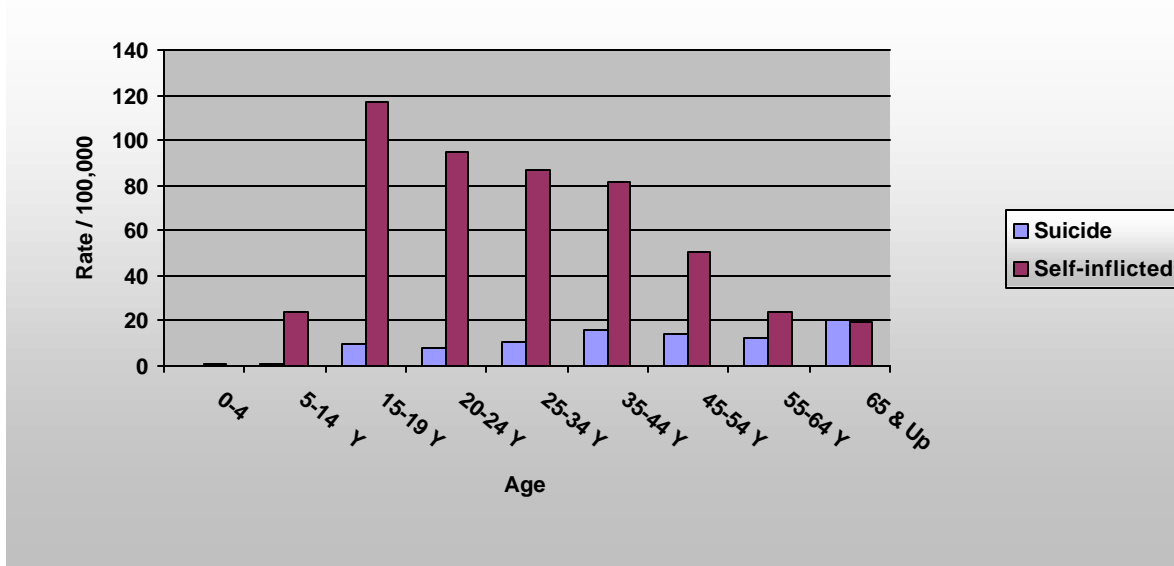
! Percent of suicide deaths to all causes of deaths within the same age group

!! Rate per 100,000 population

## Suicide and Self-inflicted Injuries by Age

The age group of 65 and above had the highest suicide rates (20.1/100,000), followed by those of 35 to 44 years (16.2/100,000) and those of 45 to 54 years (13.9/100,000). In 2000, children as young as 13 years died as a result of suicide.

**Figure 3: Suicide and Self-inflicted Injuries by Age, Virginia 2000**

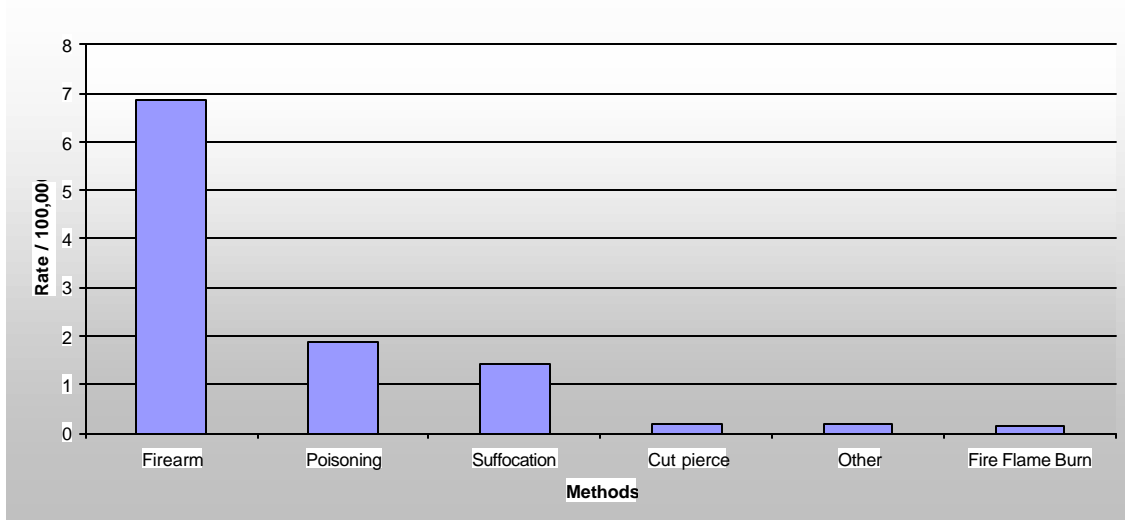


Rate per 100,000 population

## Methods of Suicide and Self-inflicted Injuries

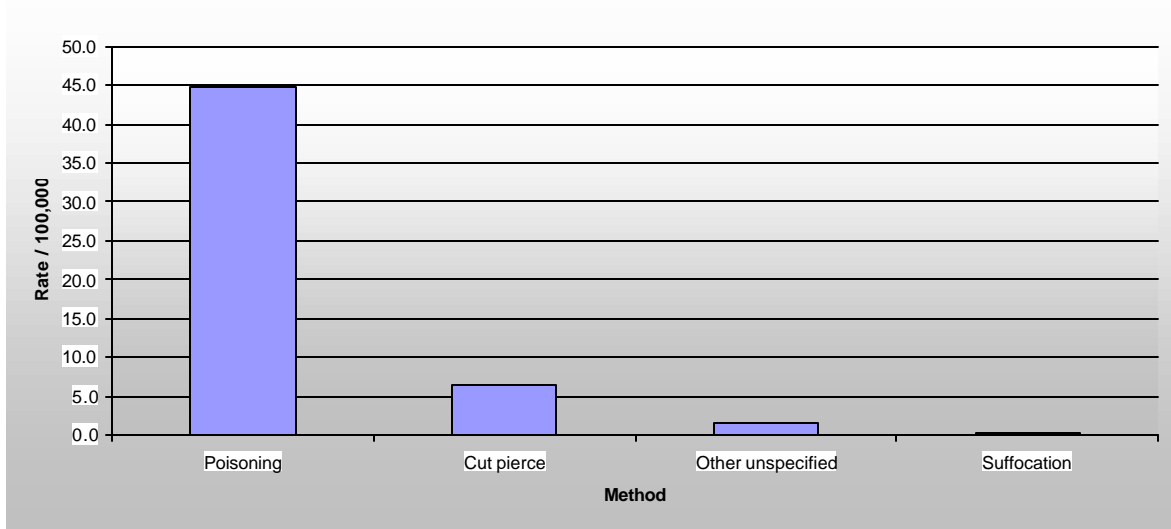
Firearm was the most common method used in suicide for all age groups with a rate of 6.8/100,000, followed by poisoning with a rate of 1.9/100,000 and suffocation with a rate of 1.4/100,000 (Figure 4).

**Figure 4: Methods of Suicide, Virginia 2000**



Poisoning was the most common method used to inflict self injury with a rate of 45/100,000 followed by self-inflicted cutting and piercing injuries with a rate of 6/100,000 (Figure 5).

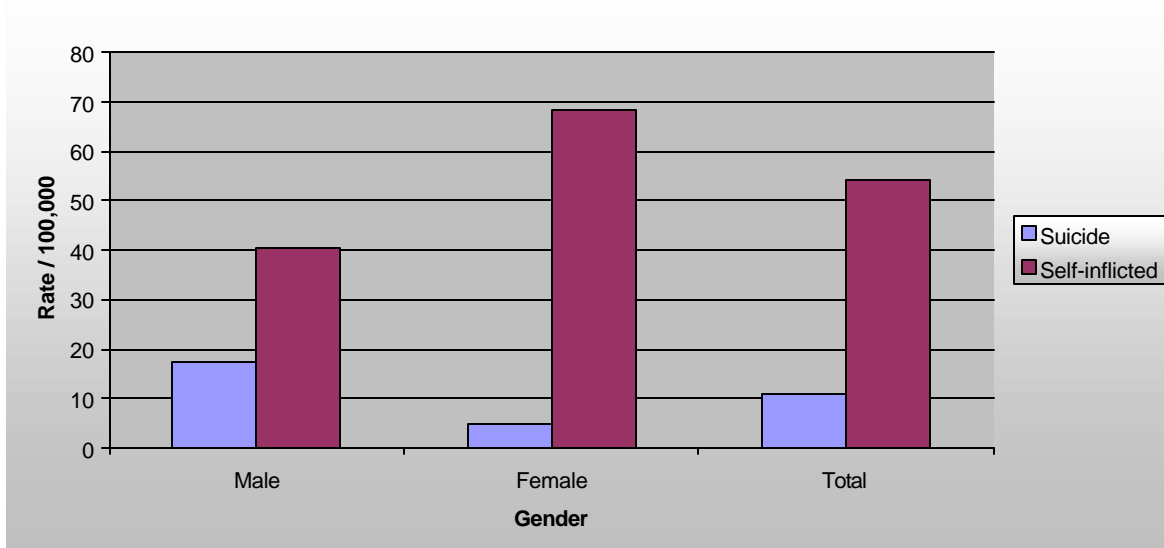
**Figure 5: Methods of Self-inflicted Injuries, Virginia 2000**



**Suicide and Self-inflicted Injuries by Gender**

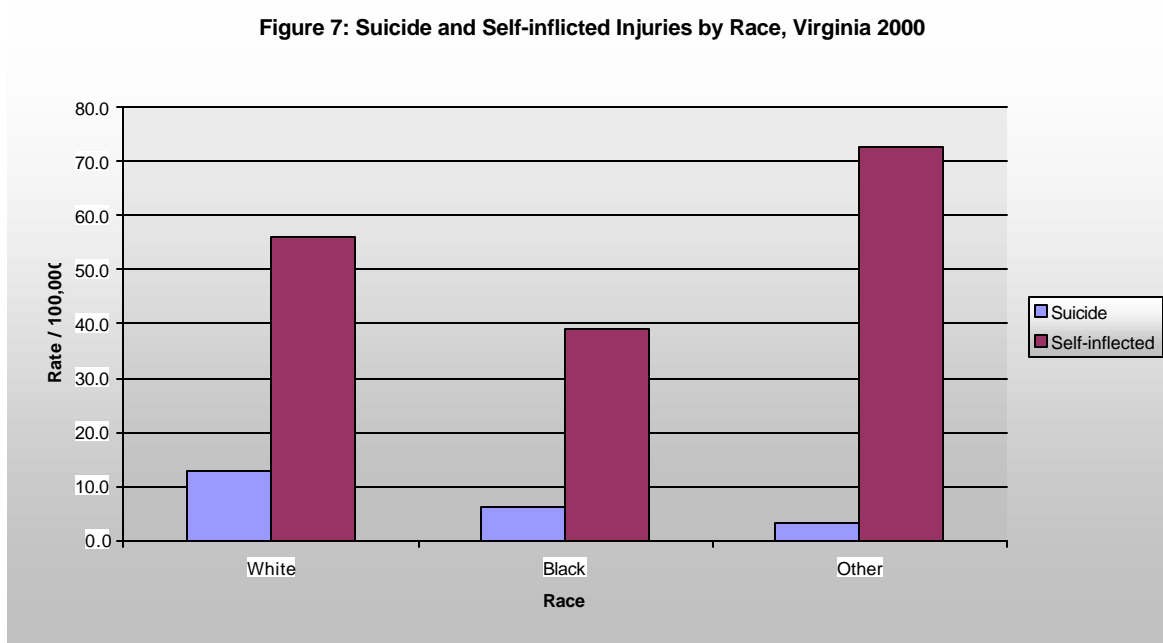
Males were more than 3 times as likely as females to die due to suicide; males had a suicide rate of 17.3/100,000 while females had a rate of 4.7/100,000. Females had a higher rate of self-inflicted injuries (68.6 / 100,000) than males (40.3 / 100,000) (Figure 6).

**Figure 6: Suicide and Self-inflicted Injuries by Gender, Virginia 2000**



## Suicide and Self-inflicted Injuries by Race

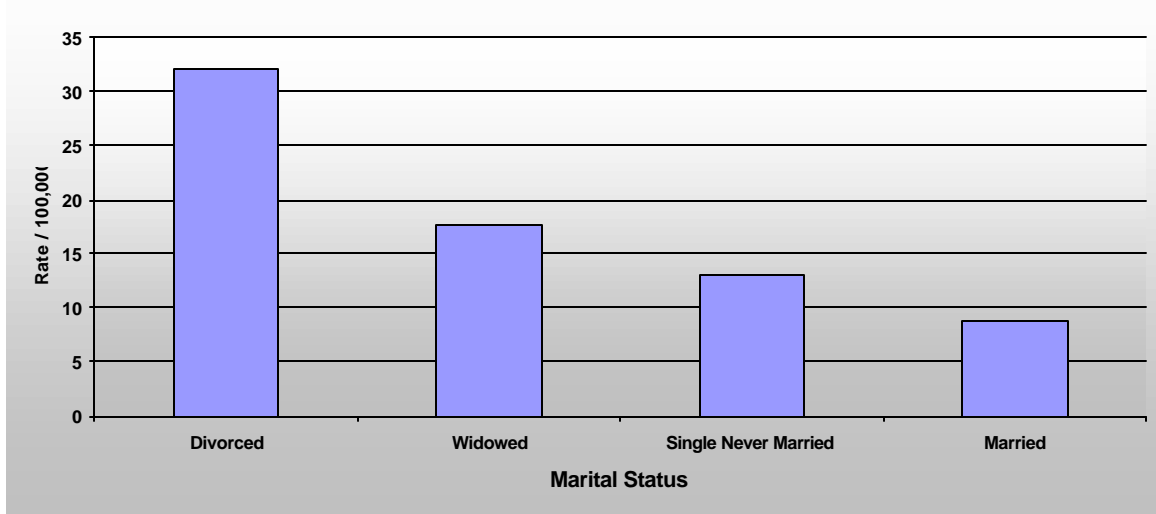
Whites were more than 2 times as likely as blacks to die of suicide. Whites had a suicide rate of 13/100,000, blacks had a rate of 6/100,000 and other races combined had a rate of 3/100,000. Races other than whites and blacks had a higher rate of self-inflicted injury hospitalizations (72.7/100,000) than whites (56.2/100,000) and blacks (39.0/100,000) (Figure 7).



## Suicide Deaths by Marital Status

Suicide death rates showed a strong relationship with the marital status. Widowed males had the highest suicide rate of 75.6/100,000, followed by divorced males at a rate of 54.1/100,000. For both sexes combined divorced persons had the highest rate of 32.1/100,000 followed by widowed persons at a rate of 17.7/100,000, single and never married at a rate of 13.1/100,000 and married persons at a rate of 8.7/100,000 (Figure 8).

Figure 8: Suicide Rates by Marital Status, Virginia 2000



### Cost of Self-inflicted Injury Hospitalizations

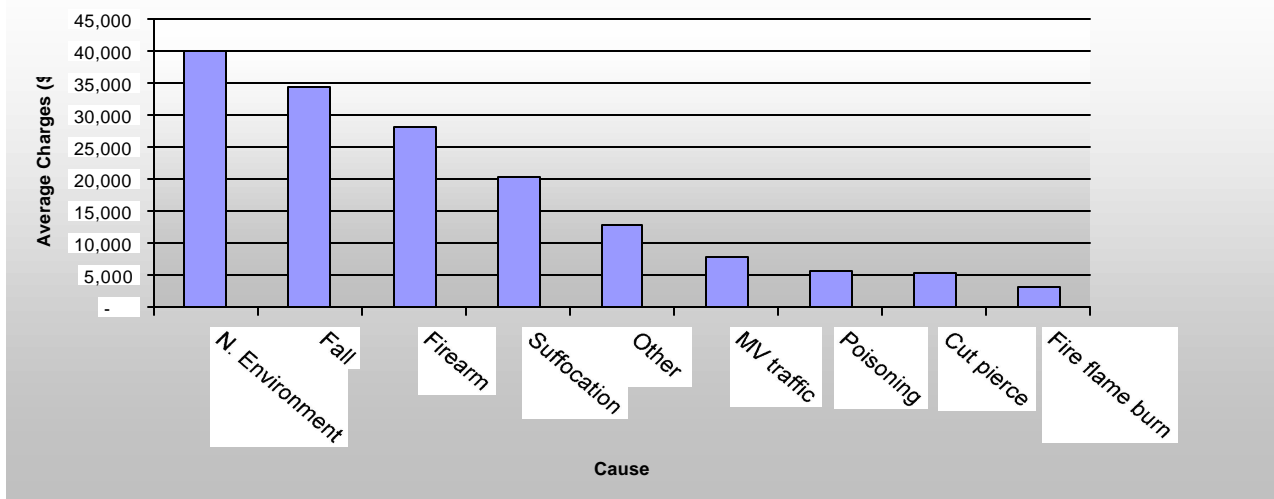
Total hospital charges for self-inflicted injuries were \$25,028,032, which accounted for 4% of the total hospital charges due to injuries. Self-inflicted poisonings accounted for 75% of the total charges due to self-inflicted injuries. Although self-inflicted injuries through exposure to natural environment (extremes of cold) resulted in only 2 cases, this type of injury had the highest average cost of hospitalizations due to self-inflicted injuries (Table 2 and Figure 9).

Table 2: Charges and Length of Stay (LOS)\* due to Self-inflicted Injuries by Cause, E-coded Data, Virginia 2000

Cause	Frequency	Col %	Total Charges (\$)	Average Charges (\$)	Total LOS	Average LOS
Cut/pierce	453	12	2,520,293	5,564	1,904	4.2
Fall	15	0	517,793	34,520	146	9.7
Fire flame burn	3	0	9,686	3,229	9	3.0
Firearm	44	1	1,240,484	28,193	318	7.2
MV traffic	4	0	31,504	7,876	11	2.8
N. Environment	2	0	80,162	40,081	24	12.0
Poisoning	3176	83	18,686,252	5,884	8,410	2.6
Suffocation	24	1	486,356	20,265	229	9.5
Other	112	3	1,455,502	12,996	802	7.2
<b>Total</b>	<b>3833</b>	<b>100</b>	<b>25,028,032</b>	<b>6,530</b>	<b>11,853</b>	<b>3.1</b>

\* Length of Stay

Figure 9: Average Hospital Charges for Self-inflicted Injuries by Cause, Virginia 2000



### Comment

At the national level, suicide is the 11th leading cause of death for all Americans, and is the third leading cause of death for young people aged 10-24 (CDC, 2000). In the United States, every day, 14 young people (ages 15 to 24) die by suicide (approximately 1 every 100 minutes). Research has shown that more than 90 percent of people who kill themselves have depression or another diagnosable mental or substance abuse disorder; the majority have more than one. Fifty-three percent of young people who commit suicide abuse substances. Four times as many men as women die by suicide, but young women attempt suicide three times more frequently than young men. Suicidal behavior is complex. Some risk factors vary with age, gender and ethnic group and may even change over time. The risk factors for suicide frequently occur in combination.

The needless and senseless death due to suicide can be prevented. Your knowledge about this subject may help save the life of a friend, a family member...or even yourself. Of any ten persons who kill themselves, eight have given definite warning of their intentions. The suicidal person gives many clues and warnings regarding their suicidal intentions. Most suicidal people are undecided about living or dying, and they "gamble with death," leaving it to others to save them. Many people who wish to kill themselves are suicidal only for a limited period of time.

For more details on Virginia suicide prevention activities and resources, please visit our web site at: [www.preventsuicideva.org](http://www.preventsuicideva.org)

## **Resources**

American Association of Suicidology

[www.suicidology.org](http://www.suicidology.org)

American Foundation for Suicide Prevention

[www.afsp.org](http://www.afsp.org)

Center for Disease Control and Prevention, Preventing Suicide.

[www.cdc.gov/safeusa/suicide](http://www.cdc.gov/safeusa/suicide)

Center for Injury and Violence Prevention, Virginia Department of Health

[www.vahealth.org/civp](http://www.vahealth.org/civp)

National Institute of Mental Health (NIMH)

[www.nimh.nih.gov](http://www.nimh.nih.gov)

National Strategy for Suicide Prevention, Goals and Objectives for Action

[www.mentalhealth.org/suicideprevention/](http://www.mentalhealth.org/suicideprevention/)

Virginia Center for Health Statistics

[www.vdh.state.va.us/stats/stats](http://www.vdh.state.va.us/stats/stats)

Virginia Health Information, Inc.

[www.vhi.org](http://www.vhi.org)