

Intentional Self-Harm Morbidity – Data Brief

Vermont Injury Prevention Program

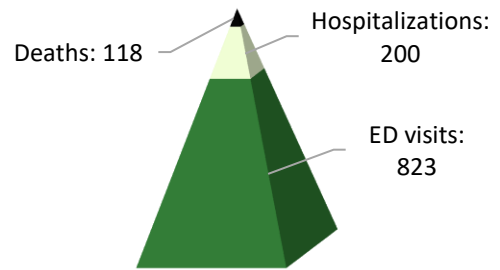
Background

Intentional self-harm, or self-directed violence is causing intentional injury to oneself that is not fatal. Intentional self-harm could either be intentionally inflicting pain towards oneself, or an attempt to take their life. Intentional self-harm can take the form as cutting, burning, poisoning, biting, poking, or a suicide attempt. A suicide attempt is an action taken by a person with the intent that the action will result in his or her death. The risk factors for intentional self-harm and suicide attempts are similar to those for suicide. These include depression and other mental health diagnoses, a substance abuse disorder, often in combination with a mental disorder, prior suicide attempt, firearms in the home, or a family history of suicide, mental disorders, substance abuse and family violence.¹ Healthy Vermonters 2020 lists various public health priorities for the state; including, reducing emergency department visits for self-harm injuries².

Annual Suicide Injuries

In 2016, there were 118 suicide deaths among Vermont residents, 200 hospitalizations and 823 Emergency Department (ED) visits for intentional self-harm among Vermont residents in Vermont hospitals. This does not include less severe cases who may be treated in a physician's office, outpatient facility or by an EMT. Also not captured are people who have suicidal thoughts, make a suicide plan, or have depressive disorders and do not interact with the health care system.

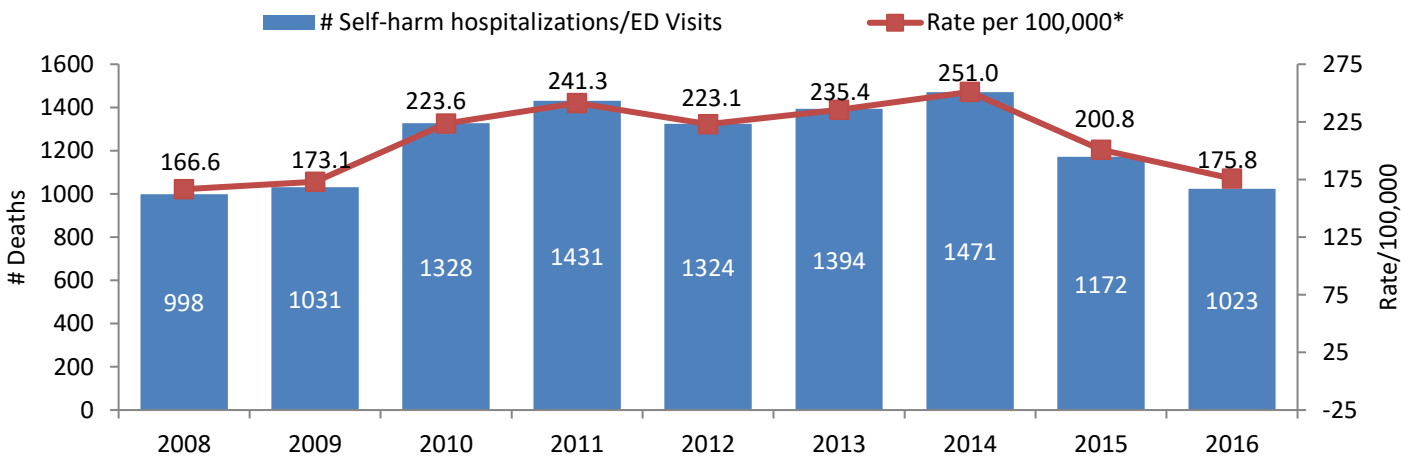
Number of Suicides, Hospitalizations and Emergency Department Visits for Intentional Self-Harm in 2016



Hospitalizations and ED Visits for Intentional Self-Harm

In 2016, there were a total of 1,023 hospitalizations or ED visits among Vermont residents at Vermont hospitals for intentional self-harm. Over the 9-year period 2008 to 2016, the combined hospitalization and ED visit rate of Vermont residents at Vermont hospitals due to intentional self-harm has not changed significantly. The method used for identifying intentional self-harm injuries in hospitalization and ED data changed part way through 2015. The decrease seen in 2015 and 2016 is likely influenced by this change and may not represent a true change in visits related to intentional self-harm³.

Number of Self-Harm Hospitalizations/ED Visits and Rate per 100,000 Vermont Residents 2007-2017



¹ Mann, J.J. (2002). *A Current Perspective of Suicide and Attempted Suicide*. Annals of Internal Medicine 136: 302-311.

² <http://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf>

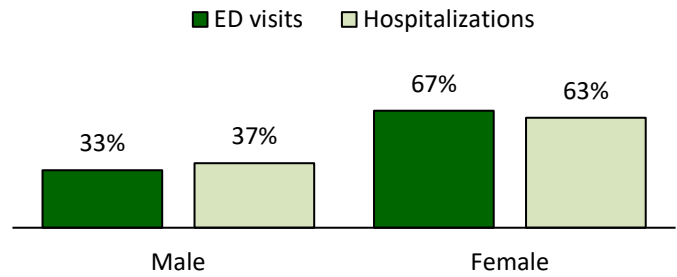
³ In the last quarter of 2015 the International Classifications of Diseases coding system changed from the 9th version to the 10th. While the different versions attempt to describe the same conditions, changes may lead to increases or decreases in counts/rates due to differing definitions.

*Suicide ED and hospitalization rates are age adjusted to the U.S. 2000 population

Gender

Of those hospitalized, two-thirds (67%) were female, and of those visiting the ED, 63% were female. This is in contrast to suicide [deaths](#), where more males die as a result of suicide than females⁴.

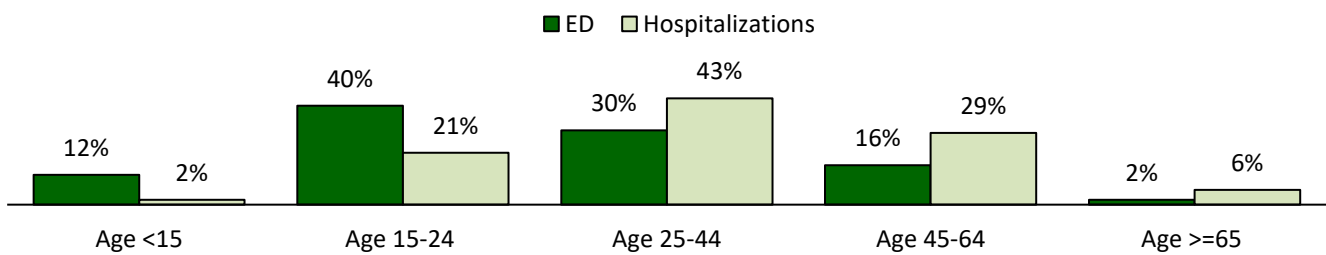
Intentional Self-Harm ED Visits/Hospitalizations by Gender and Type of Visit, 2015-2016



Age

In 2015 and 2016, most hospitalizations and ED visits for intentional self-harm were among those aged 15-24 (35%) and 25-44 (33%). Vermonters 45-64 made up one fifth of hospitalizations and ED visits. Those less than 15 years of age represented 10% and three percent of intentional self-harm hospitalizations and ED visits were among those 65 and older.

Intentional Self-Harm ED Visits/Hospitalizations by Age and Type of Visit 2015-2016

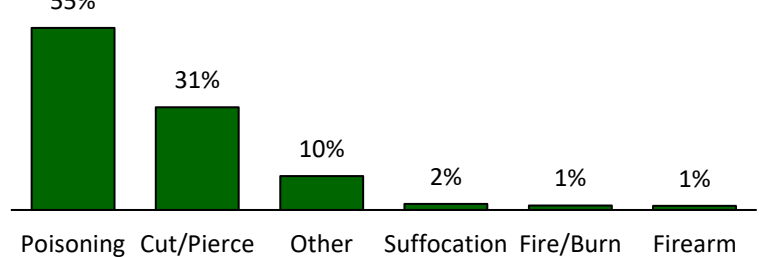


In 2015-2016, Vermonters aged 15-24 represented the largest proportion of ED visits (40%) for intentional self-harm, while those 25-44 comprised the largest percentage of intentional self-harm hospitalizations (43%). The reason why younger people visit the ER at a higher rate than older adults for intentional self-harm is unclear. It could be that self-inflicted injuries are more serious among the older age groups but may also be because parents bring and advocate for their children to visit the ED after an incident of intentional self-harm more so than older Vermonters do for themselves. Additionally, part of the reason fewer Vermonters over 65 years old visit the ED or are hospitalized may be because suicide deaths are higher among this group³.

Cause

In 2015-2016, poisoning accounted for more than half (55%) of visits to the ED/hospitalizations for self-harm, while cut/pierce accounted for three in ten visits (31%). Cut/pierce⁵. The next leading cause was “Other”, which includes unspecified and not classifiable causes of self-harm. Two percent of ED visits and hospitalizations were due to suffocation, while one percent were due to fire/burn and firearms. Less than one percent each were due to drowning/submersion, falls and motor vehicle crashes. While firearm deaths only accounted for one percent of self-harm hospitalizations and emergency department visits, the majority of suicide deaths are caused by a gunshot wound⁶.

Intentional Self-Harm ED Visits/Hospitalizations by Cause 2015-2016

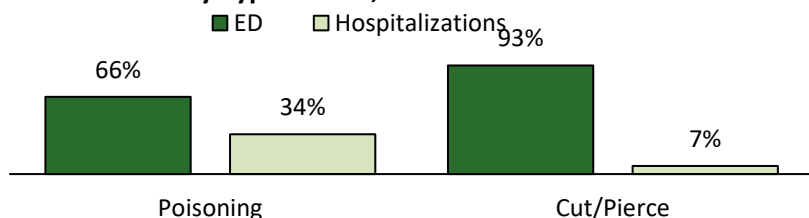


⁴ For more information on suicide mortality in Vermont, please refer to the Suicide Mortality Data Brief: http://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_injury_suicidemortality_2017.pdf

⁵ Cut/Pierce includes injuries caused by cutting and piercing instruments such as: knives, swords, daggers, power lawn mowers, power hand tools, household appliances.

⁶ For more information on gunshot wound deaths, please refer to the Gunshot Wound Death Data Brief: http://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_Injury_Firearm_Deaths.pdf

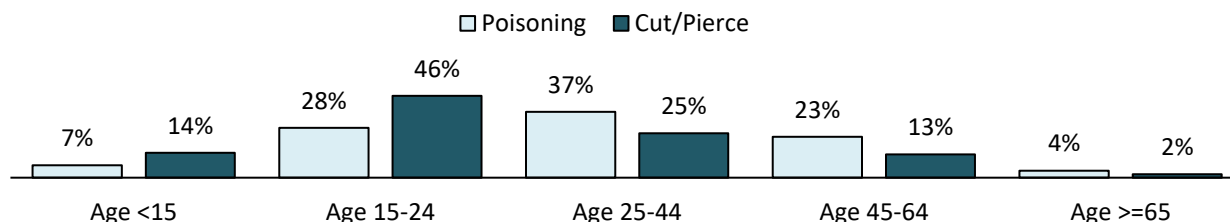
Leading Cause of Intentional Self-harm ED Visit/Hospitalization by Type of Visit, 2015-2016



Of self-harm visits for poisoning and cut/pierce, most were ED visits, however, a larger proportion of poisoning cases were hospitalized (34%) compared to cut/pierce (7%). Females made up more than two-thirds of those who were hospitalized or visited the ED due to self-inflicted cut/pierce injuries and poisoning.

Among those less than 24 years old, most of the ED visits and hospitalizations were due to self-inflicted cut/pierce. Poisoning ED visits and hospitalizations were most common among those aged 25-44.

Leading cause of Intentional Self-harm ED Visit/Hospitalization by Type of Visit 2015-2016



Cost of Suicide

Quantifying the burden of suicide and self-harm is difficult. One way to attempt to measure the cost burden of suicide morbidity is to examine cost of a hospitalization/ER visit due to intentional self-harm. It is important to remember that hospital billing reflects only charges for treatment during the duration of the hospital stay/ED visit for the self-harm injury and does not capture costs associated with other types of medical treatment or therapy. Additionally, it does not capture the mental health impact on those making an attempt on their lives, their family, and their community. In 2016, the median charge for a Vermont resident admitted to a Vermont hospital (200 people) was \$12,632 and the median charge for a Vermont resident visiting a Vermont emergency department (823 people) was \$2,331.

In addition to costs associated with suicide morbidity, there is also a burden associated with suicide mortality. One way to attempt to measure this burden is by calculating the Years of Potential Life Lost (YPLL). YPLL is defined as the sum of the years of life lost by persons who suffered early deaths, for those whose death occurred before 75⁷. In 2015, the age adjusted YPLL due to suicide in Vermont was 449 years per 100,000 persons aged 1-74, statistically similar to the U.S. rate of 429 per 100,000⁸. Suicide accounted for seven percent of total YPLL among Vermont residents in 2015.

Suicide Prevention Resources:

Suicide is preventable when appropriate public health interventions are implemented. This includes ensuring mental health services are provided to those who attempt suicide, but also include addressing familial, community and societal issues that contribute to intentional self-harm.

- National Suicide Prevention Lifeline: 800-273-TALK (8255); VT Suicide Prevention Lifeline: (802) 273-8255
- Dial 211 for a counselor if you are in VT
- Confidential online chat: www.suicidepreventionlifeline.org
- For more information about resources in Vermont, please visit: <http://vtspc.org/>

For more information on Injury Surveillance Data or Suicide Data, please contact [Jessie Hammond](#), MPH.

⁷ Years of potential life lost (YPLL) is a standard measure of the extent of premature mortality in a population and is based on the life expectancy in the US. <https://webappa.cdc.gov/sasweb/ncipc/ypll.html>

⁸ National Center for Health Statistics. Health, United States, 2016: With Chartbook on Long-term Trends in Health. Hyattsville, MD. 2017. (<https://www.cdc.gov/nchs/data/abus/abus16.pdf>).