Suicide Data Linkage Project

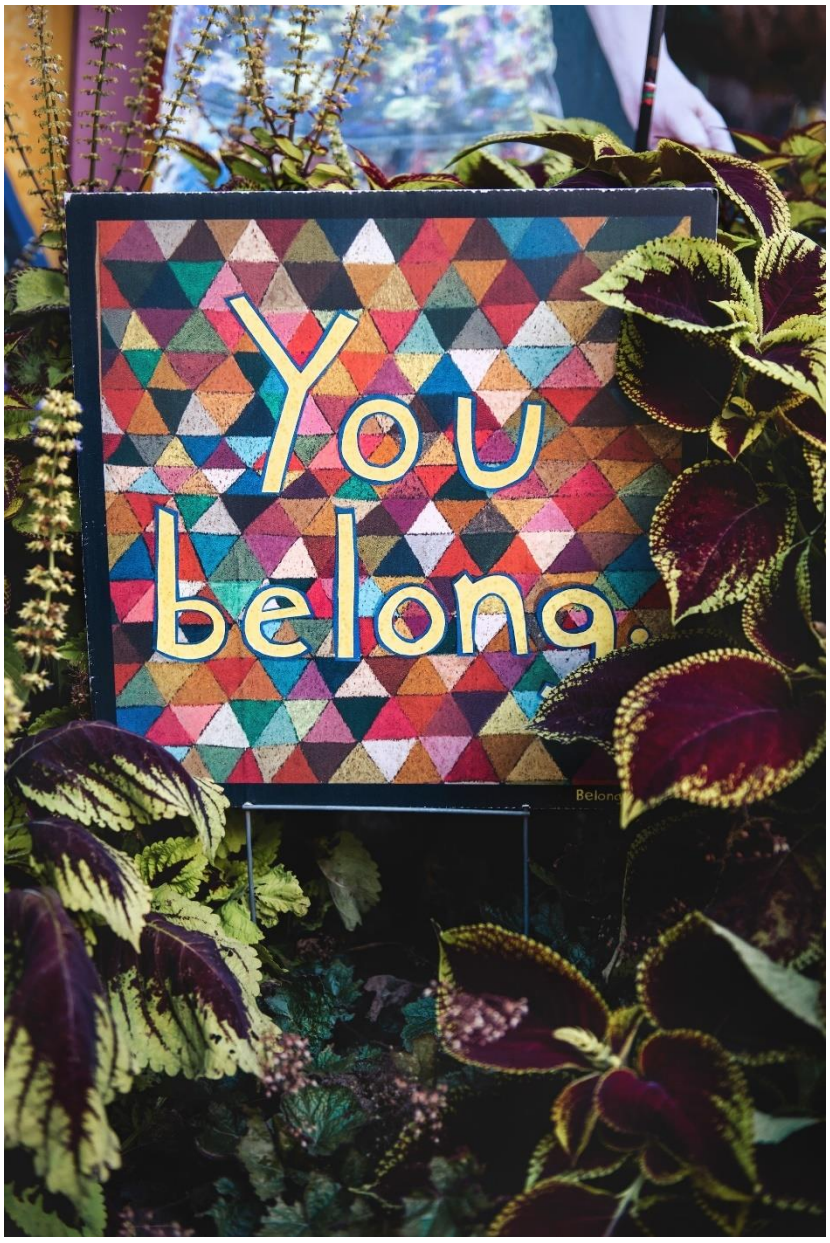
2022-2023 Data Analysis

September 2025

VERMONT

DEPARTMENT OF HEALTH

This report is dedicated to the many Vermonters who have died by suicide and their loved ones. While the work is data-driven, we must not lose sight of the fact that each data point is far more than that. The Vermont Department of Health, along with the partner departments and people that contributed to this project, analyze these data in the context of this humanity. We believe that the findings and recommendations within this document are valuable to informing our collective work to prevent future losses of life due to suicide.



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Executive Summary

Suicide is an important public health issue facing Vermont. Approximately 120 Vermonters die by suicide each year. Each of these suicide deaths impacts countless other family members, friends, and colleagues. As a state, Vermont needs to better understand the circumstances of these deaths and use this information to improve our efforts to prevent future suicides. The Suicide Data Linkage Project was created to improve the identification of risk factors for suicide, populations at disproportionate risk, and patterns in how Vermonters who died by suicide interacted with various state and community systems and services prior to death. The overall goal of this project is to use data to improve how Vermont agencies can promote support services and identify individuals who may be at risk for suicide. This is the second iteration of the Suicide Data Linkage Project and includes Vermont resident suicide deaths that occurred in Vermont during 2022 and 2023. In those two years, 226 people died by suicide.

Data Sources

This report includes data from several State of Vermont agencies and one organization outside of the State.

- Vermont Department of Health
  - Vital Statistics
  - Vermont Violent Death Reporting System
  - Vermont Prescription Monitoring System
  - Statewide Incident Reporting Network
- Vermont Health Care Uniform Reporting and Evaluation System
- Vermont Department of Mental Health
- Vermont Department of Disabilities, Aging, and Independent Living
  - Brain Injury Program
  - HireAbility
  - Adult Protective Services
- Vermont Department of Public Safety
- Vermont Department of Corrections
- Vermont Judiciary
- Vermont Department of Labor
- Vermont Department for Children and Families
  - Economic Services Division
  - Family Services Division
- Vermont National Guard
- Institute for Community Alliances
  - Homeless Management Information System

More information about these data sources can be found in the Methodology, Data Sources, and Limitations section of this report.

People who died by suicide often experienced stressors or crises shortly before their death.

Of people who died by suicide:

- 42% were involved with law enforcement in the year before they died, with traffic stops being the most common type (15%), followed by mental health-related incidents (7%).
- 33% experienced a crisis within two weeks of death. Almost two-thirds of those who experienced a crisis used a firearm (62%).
- 15% had a court case within a year of death, most of whom had a case that was still active within a month of death. Specific case types that were more likely to be closed within a month of death include relief from abuse orders, a recent divorce or dissolution, mental health applications for involuntary treatment, and misdemeanors.
- 4% were released from a correctional facility within a year of death. People who were recently released from a correctional facility were seven times more likely to die by suicide compared to the general population.

Experiencing a crisis or life stressor in combination with other risk factors may increase risk for suicide. These findings emphasize the importance of promoting protective factors and reducing risk factors, like access to lethal means, during a time of crisis.

Within a year of death, 76% of people interacted with health care services.

Of people who died by suicide:

- 46% had a visit to the emergency department (ED) within a year of death and 18% had a visit related to mental health or suicide during this time.
- 41% had a prescription for a controlled substance within a year of death.
- 32% had a primary care visit within a year of death.
- 27% had a psychiatric visit within a year of death.
- 24% had an inpatient visit within a year of death, and 12% had an inpatient visit related to mental health, suicidal ideation, a suicide attempt, or self-harm.
- 24% interacted with emergency medical services (EMS) within a year of death.
- 8% were seen by a Designated Mental Health Agency within six months of death.

People also interacted with non-health care entities within a year of death, with the most common being law enforcement.

Of people who died by suicide:

- 42% interacted with law enforcement within a year of death.
- 23% received a financial benefit from the Economic Services Division of the Department for Children and Families (DCF) within a year of death.
- 15% interacted with a court system within a year of death.
- 7% filed a claim for unemployment insurance benefits within a year of death.
- 6% were receiving a homeless service within a year of death.
- 6% interacted within the Family Services Division of DCF within a year of death.

Some people had multiple interactions with services and agencies within a year of death.

Of people who died by suicide:

- 29% had more than one interaction with law enforcement and 9% had more than two.
- 11% had more than one EMS interaction within a year of death.
- 8% had more than one case with the court system.
- 4% had been incarcerated within a year of death. A few of these individuals were incarcerated multiple times during this period.

People with more than one service interaction may have unmet health, social or financial needs. These results support the need for coordination of care between entities and enhanced supportive services for individuals with unmet needs.

While this analysis identified a number of populations who are disproportionately impacted by suicide death, it does not represent some populations with high suicide morbidity (i.e., suicidal ideation, suicide plans or attempts). Vermont data shows that Black, Indigenous, people of color (BIPOC) and youth populations have high suicide morbidity, but the data doesn't demonstrate high mortality. Vermont data also shows that individuals who identify as LGBTQIA+ have high suicide morbidity, but the data sources used in this analysis may not reliably capture sexual orientation or gender identity to correlate that high level of morbidity to mortality rates.

The total number of individuals who died by suicide in this analysis is statistically small so some groups cannot be analyzed in the same way as others. We acknowledge that all Vermonters are impacted by suicide in various ways and strive to ensure that their experiences are captured in this report.

Recommendations

The following recommendations were developed based on the data in this report and input from state and community partners who contributed to this report. In some cases, these recommendations indicate an expansion or modification of recommendations that were previously identified in the 2020-2021 Suicide Data Linkage Project Analysis and subsequently in Vermont's Suicide Prevention Strategic Plan.

Connect Vermonters at Risk for Suicide to Mental Health Resources and Support

- **Support criminal justice training to improve referrals to mental health crisis and treatment providers.** This would include work with 1) the Vermont Bar Association and law enforcement officers to ensure they have mental health-related referral resources for litigants, 2) Domestic Violence Accountability Program facilitators, 3) probation and parole staff, as well as community justice centers, to support identification and support of justice-involved individuals transitioning back into the community.
- **Improve promotion and awareness of 988 and Vermont Support Line.** Implement State and community communications strategies and adaptations to ensure messaging reaches populations at higher risk.
- **Increase public education and awareness campaigns** to 1) increase help-seeking behaviors among individuals who may be at risk and 2) increase "help-giving" among community members to support individuals who may be struggling. Where appropriate, public education and promotion should focus on disproportionately affected populations (e.g. promoting Man Therapy to Vermont men).
- **Support parents and families involved in Child Welfare Services** with mental health resources to address trauma associated with such involvement. Proactive assessments for mental wellbeing should be integrated throughout the investigation process. Investigators should be supported with trauma-informed care and suicidality training so they can support individuals who are engaged in their services.
- **Expand suicide awareness and support training** (e.g. Umatter, Question, Persuade Refer, Mental Health First Aid) among community members and groups disproportionately affected by suicide (e,g, Vermonters who own firearms) to improve identification and support of at-risk individuals.
- **Expand postvention resources and support for families and loved ones after a suicide loss.**

Expand Evidence-Based Suicide Care in Health and Mental Health Care Settings

- **Expand implementation of suicide-safe care in health care settings,** including primary care, emergency departments, inpatient programs, emergency medical services, mental health services, substance use services, pharmacies, Home and Community-Based Services (HCBS), geriatric specialists, and telehealth/tele-mental health providers. Healthcare providers can improve suicide care through the adoption of the

Zero Suicide Framework, which provides a structure and tools to implement safer suicide care and develop provider capacity.

- **Expand Screening, Brief Intervention, and Navigation to Services (SBINS) programming and continue to integrate mental health care with overall health care.** The risk for suicide often co-occurs or intersects with mental health disorders, substance use disorder, chronic physical illness, terminal physical illnesses, and disability. There is an ongoing need for Agency of Human Services (AHS) departments to increase collaborative efforts to expand screening for suicidal risk in a variety of settings, as many AHS programs interact with individuals experiencing these mental and physical challenges.

Expand Programming to Increase Firearm Safety Among Vermonters at Risk for Suicide

- **Expand training and resources for health care providers focused on reducing access to lethal means (e.g. firearms) for individuals at risk for suicide (e.g. Counseling on Access to Lethal Means, safety planning).**
- **Increase promotion of secure storage of firearms among all Vermonters.**
- **Increase resources and messaging to support secure storage of firearms and the temporary removal of lethal means (e.g. medications, firearms) during times of crisis (GunSafeVT.org).**

Expand Data Sharing, Collection, and Analysis to Inform Future Interventions

- **Improve analysis and investigation of suicide deaths by firearms** to receive better information on how the fatal firearm was accessed, and whether it was kept locked or loaded.
- **Improve analysis of contributing factors for individuals who experienced a crisis within two weeks of their death** and use this analysis to improve identification of at-risk individuals.
- **Continue collaboration with the Vermont National Guard and establish new collaboration with the Veterans Administration** to improve data sharing and analysis of service members and veterans who have died by suicide.
- **Improve data sharing and analysis to better understand the circumstances of disability and physical health** among people who have died by suicide.
- **Use data reports and other strategies to improve awareness of associated risk factors** for Vermonters who are disproportionately affected by suicide.
- **Explore opportunities to align and cross-reference documents that include recommendations for suicide prevention (e.g., Suicide Data Linkage Project, fatality reviews, strategic plans, and other needs assessments) to ensure a more consistent and connected approach.**

Enhance Protective Factors to Reduce Suicide Risk

Protective factors are personal or environmental characteristics that help protect people from suicide. Similarly, they occur at individual, relational, communal, and societal levels.

- **Work with health care and community providers to increase social connections** (e.g. Social Connection Map) for individuals facing declining health or other factors associated with social determinants of health.
- **Develop a more robust ecosystem of re-entry support systems for individuals** transitioning from incarceration to the community to improve protective factors associated with mental wellbeing.
- **For people experiencing homelessness, increase access to transportation, mental health counseling, crisis services, and other social supports.**
- **Expand programming to increase economic stability** among at-risk populations.

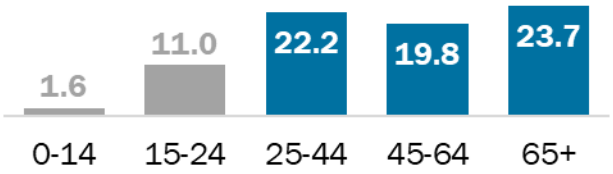
These recommendations were developed as a result of the data presented in the following sections of the report. Due to the frequent co-occurrence of substance use and mental health challenges, many of these recommendations align with the Vermont Social Autopsy Report on unintentional drug overdose deaths. For more recommendations specific to youth suicides, please refer to the Child Fatality Review Team's annual reports to the legislature (https://legislature.vermont.gov/reports-and-research/find/2024).

General Demographics and Method of Injury

During 2022 and 2023, 226 Vermont residents died by suicide in Vermont. Using information from death certificates, the following populations have the highest rates of suicide death per population: adults over the age of 25, males, white non-Hispanic people, those who are divorced or widowed, those with a high school education or less, those who live in rural areas of the state, and service members and veterans (SMVs).

Age

Adults 25 years and older have the highest rate of death.

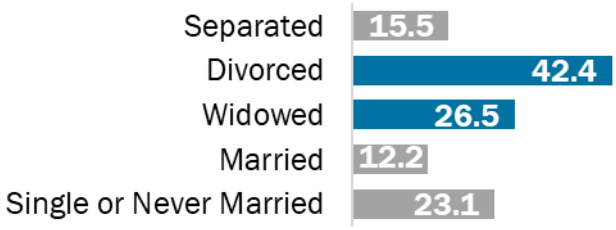


Biological Sex

Nearly 8 in 10 of those who died were male.

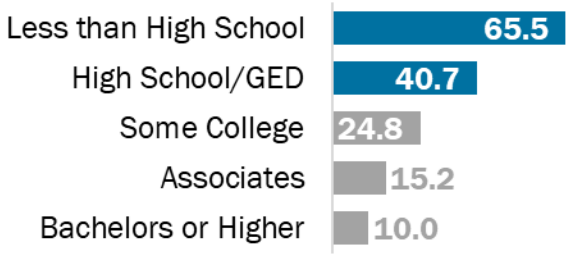
Marital Status

People who are divorced or widowed had the highest rate of death.



Education

People with a high school education or less had the highest rates of death.



Race & Ethnicity

96% who died were white non-Hispanic.

Service Members/Veterans*

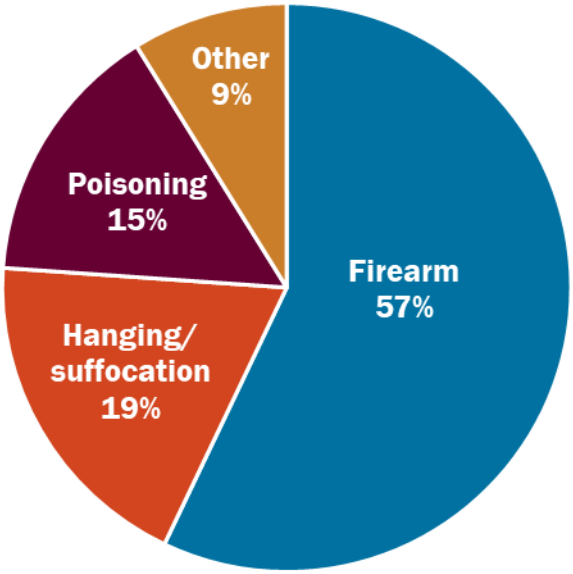
The suicide rate among SMVs is more than double the rate among non-SMVs.

Rates per 100,000 residents
Source: Vermont Vital Statistics, Vermont Residents who passed away in Vermont 2022-2023
*Among Vermont residents 18+.

Methods of Suicide (Cause of Death)

There were three common methods among suicide deaths during 2022 and 2023. Firearms accounted for 57% of deaths, followed by hanging or suffocation (19%), and poisoning (15%). Less than one in ten deaths were caused by cutting, jumping, drowning, fire or flames, or another method (8%).

Firearms account for more than half of suicide deaths.



Source: Vermont Vital Statistics, 2022-2023

Method of Suicide by Age

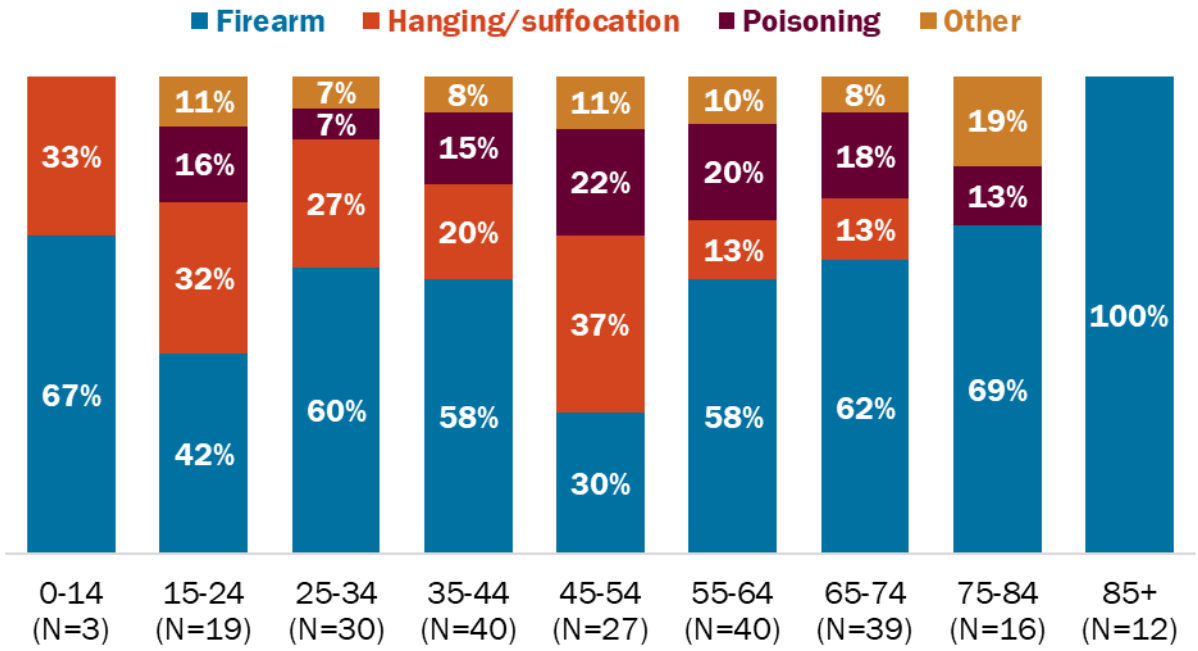
Method of suicide, or how an individual died, differed by age, though not statistically.[1] Firearms were the most common means among all age groups except for those 45-54, for whom firearms were second to hanging/suffocation. There are a few takeaways from the graph below:

- After 45-54, firearm usage as a means of suicide becomes more frequent for each subsequent age group. All of those who died who were 85 and older used a firearm.
- Hanging/suffocation is more common among people younger than 55 years old than older Vermonters.

[1] A Fisher's Exact Test with Monte Carlo simulation was performed to determine whether there was a statistical association between age group and means of suicide.

Poisoning and other methods were not used among the oldest and youngest age groups (0-14 and 85+). However, there was no clear trend in these means among the other age groups.

Firearms were the most commonly used method of suicide among most age groups.



Source: Vermont Vital Statistics, 2022-2023

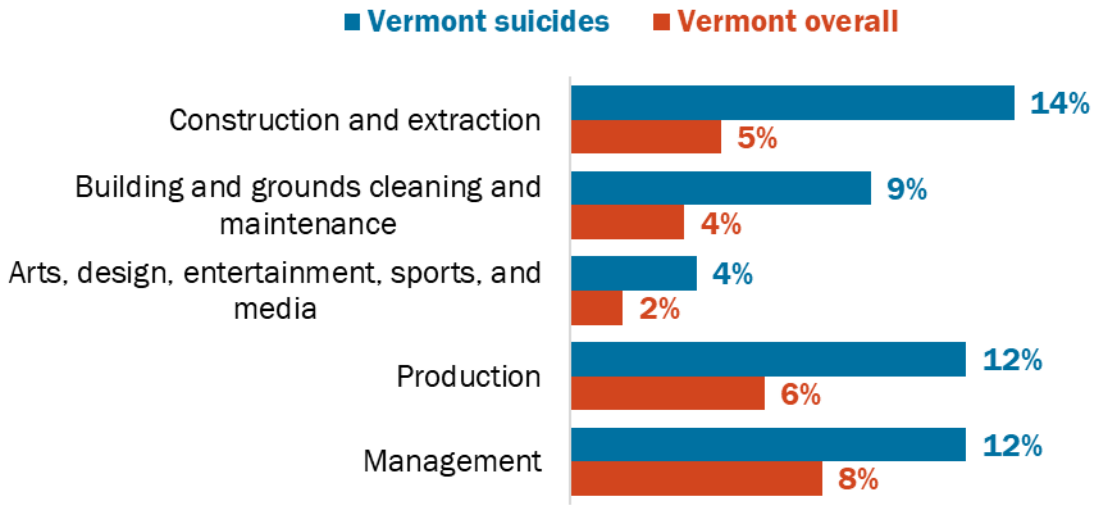
Industry and Occupation of Employment

Death certificates include information about the industry and occupation of people who have died.[2] In this context, industry and occupation both refer to the work performed during most of a person's working life. Therefore, while a person may have been unemployed or retired at the time of death, their death certificate could still include industry and occupation data. These data are collected for the death certificate through interviews with relatives or others who knew the deceased person. As a result, this information is not always collected consistently, and some data are missing. In 2022 and 2023, industry could not be categorized for 12% and occupation could not be categorized for 11% of the 226 people who died (this includes people whose industry or occupation were missing and those who had information that otherwise could not be categorized). Those people's records are excluded from the data presented below.

[2] The United States Census Bureau defines industry as "the kind of business of the [person's] employer" and occupation as "the kind of work a person does at their job." In other words, industry is the broad category of work that includes multiple types of occupations. For example, the construction industry employs people working in a variety of occupations, including carpenters, accountants, and human resource personnel, among others.

People who died by suicide were statistically more likely to work in five occupations compared to Vermont residents overall: (1) construction and extraction, (2) building and grounds cleaning and maintenance, (3) arts, design, entertainment, sports, and media, (4) production, and (5) management.

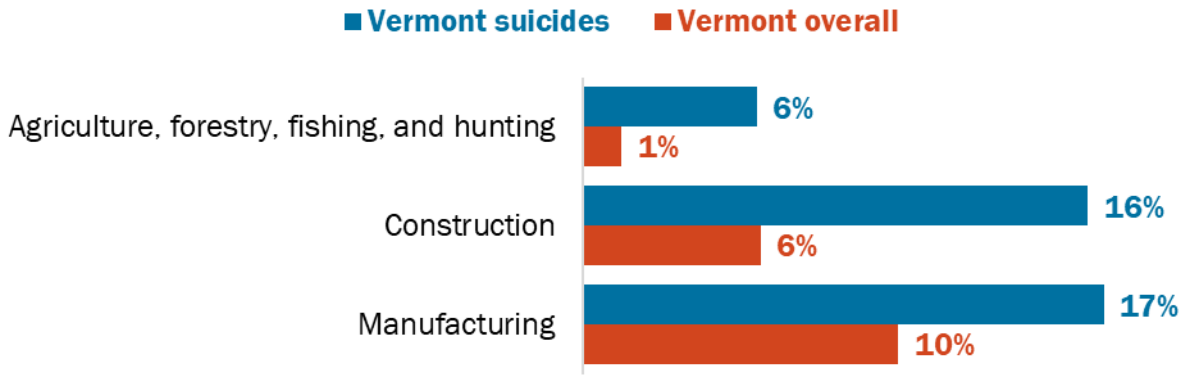
Occupation of Vermonters who Died by Suicide Compared to Vermont Overall



Source: Vermont Vital Statistics, 2022-2023

Those who died were statistically more likely to work in three industries compared to Vermont residents overall: (1) agriculture, forestry, fishing, and hunting, (2) construction, and (3) manufacturing.

Industry of Vermonters who Died by Suicide Compared to Vermont Overall



Source: Vermont Vital Statistics, 2022-2023

Health Care Interactions Within a Year of Death

Reviewing health care system interactions prior to death may identify where suicide prevention supports and safety measures would be beneficial. Data from medical billing claims, prescription dispensaries, emergency medical services, and Designated Mental Health Agencies shows the health services that the individual accessed prior to their death.

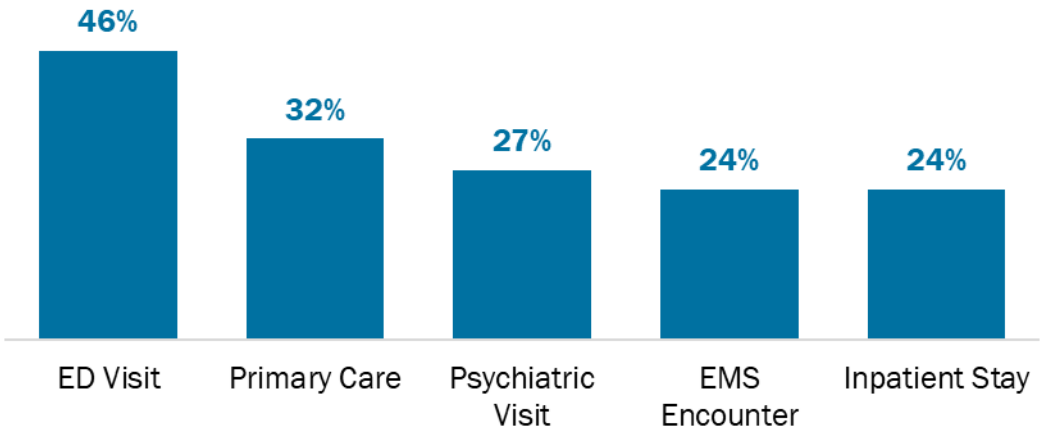
Evidence of Health Care Coverage

Most Vermonters who died by suicide were matched in VHCURES (96%), and a majority of those who died had health insurance that submitted claims data to VHCURES within a year of death (76%). A little less than a quarter of people who died by suicide did not have evidence of insurance, either because they did not have health insurance within one year of death or did not have health insurance that submitted claims to VHCURES (24%). For more information, see the Methodology, Data Sources, and Limitations section of this report. People aged 65 and older are more likely to have health insurance coverage. Ninety-one percent of people 65 and older had health insurance, compared to 75% of people aged 0-24, 73% of people aged 25-44, and 65% of people aged 45-64. Seventy-three percent of service members and veterans and 69% of people who used a firearm as means of death had evidence of health insurance. Eighty-two percent of people had evidence of health care insurance within 5 years of death.

Health Care Encounters

The most common type of health care encounter in the year before death was the emergency department (46%). Nearly one-third of Vermonters who died by suicide had a primary care visit the year before they died (32%). About a quarter of those who died had a psychiatric visit (27%), EMS encounter (24%), or inpatient stay (24%).

Percent of Vermonters who died by suicide with a primary care, ED, psychiatric, EMS, or inpatient encounter within a year of death.

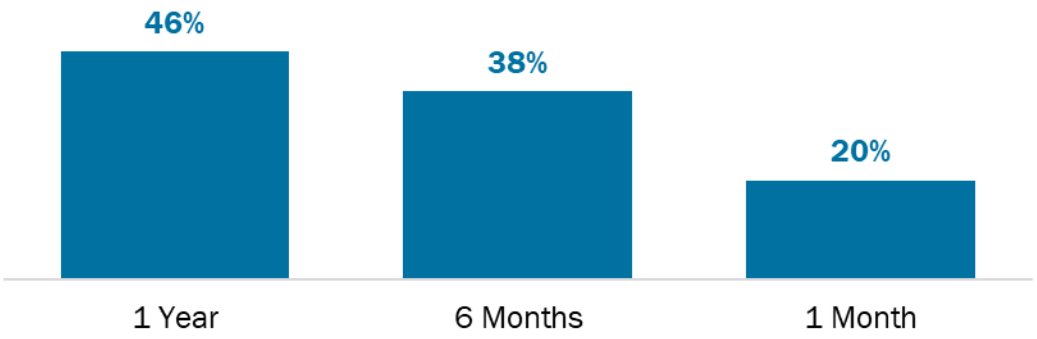


Source: VHCURES, 2021-2023. SIREN, 2021-2023.

Emergency Department Visit

The most common health care encounter was with the Emergency Department (ED), where 46% of people who died had an ED visit within one year of death. Within one month of death, one-fifth of people who died visited the ED. A higher percentage of people aged 65 and older visited the ED within a year of death, at 55%. Among service members and veterans, 47% visited the ED within a year of death, and 40% of people who died by means of firearm visited the ED within a year of death.

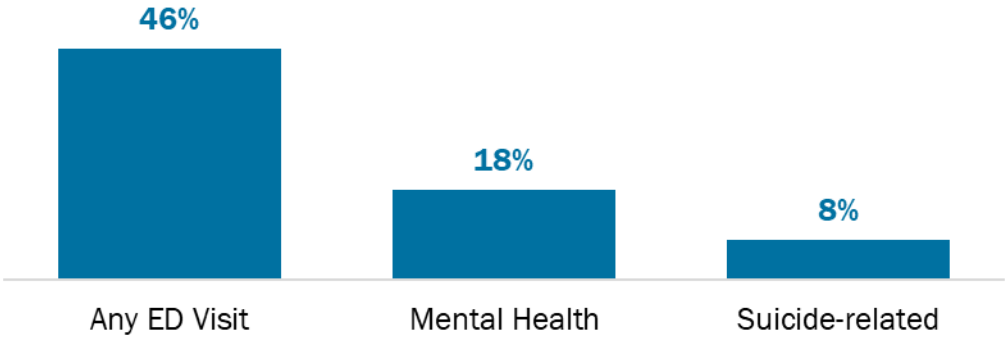
One fifth of people who died by suicide visited the ED within a month of death.



Source: VHCURES, 2021-2023

Nearly one-fifth of people who died had an ED visit related to mental health or suicide in the year before their death (18%). Eight percent of people had a visit related to suicide specifically.

Almost half of people who died by suicide had an ED visit within a year of death.

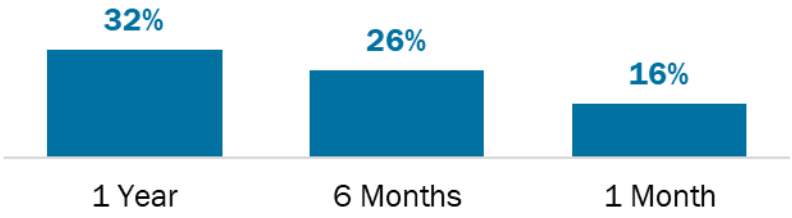


Source: VHCURES, 2021-2023

Primary Care Visit

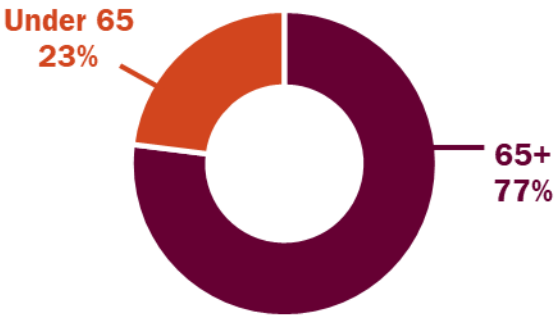
A primary care visit is a service that is provided by a family medicine physician, nurse practitioner, internal medicine physician, clinical nurse specialist, naturopath, pediatrician, physician assistant, or someone in general practice who offers office visits, consultations, preventative medicine, wellness visits, or a clinical visit. Thirty-two percent of people visited primary care within a year of death.[3] Ten percent of people who died had a primary care visit for mental health within a year of death.[4] People aged 65 and older were significantly more likely to have a primary care visit within a year of death, with 83% of people 65 and older having a visit. Half of service members and veterans and over one-third (35%) of people who died by firearm visited primary care within a year of death.

Almost a third of people who died by suicide had a primary care visit within a year of death.



Source: VHCURES, 2021-2023

Among Vermonters who died by suicide and had a primary care visit within in a year of death, over three quarters were 65 and older.



Source: VHCURES, 2021-2023

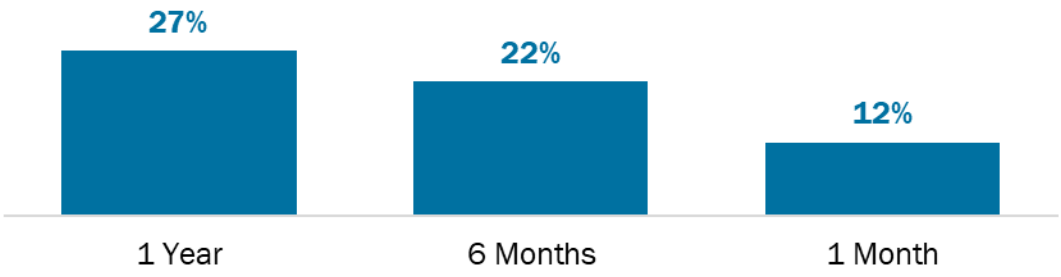
[3] For this analysis, the provider table was used to identify specific types of providers that typically provide primary care. The provider table does not include verified information on providers and may include inaccuracies.
[4] These visits had a primary billing code for a mental health diagnosis.

Psychiatric Visit

A claim for a psychiatric visit is when someone was provided counseling, psychotherapy, psychoanalysis, medication management, psychiatric services, or an evaluation. Over a quarter of people had a psychiatric visit within a year of death (27%). Seventeen percent of people who died had a psychiatric visit via telehealth.

- The most common mental health diagnoses people were in treatment for within a year of death included anxiety, stress-related conditions, and other non-psychotic mental disorders (15%), followed by depression (10%) and substance use disorders (8%).[5]
- A few people had a diagnosis for bipolar disorder or a diagnosis of schizophrenia, schizotypal, delusional, or another non-mood psychotic disorder, or a suicide-related diagnosis.[6]
- People aged 65 and older and people who used a firearm as a means of death had lower percentages of psychiatric visits. Seventeen percent of people aged 65 and older and 19% of people who used a firearm had mental health treatment within a year of death. Very few service members or veterans had a psychiatric visit within a year of death.

Over a quarter of people who died by suicide had a psychiatric visit within a year of death.



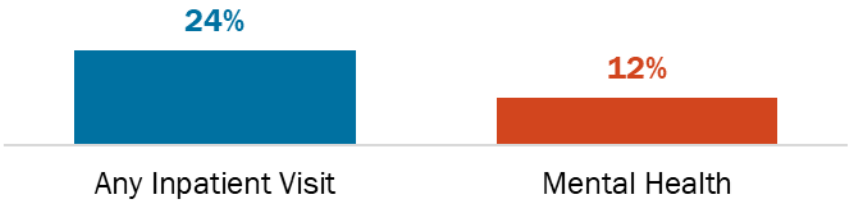
Source: VHCURES, 2021-2023

[5] These data are not mutually exclusive. For example, one person could have both a diagnosis for anxiety and depression. A claim for mental health treatment can have multiple diagnosis codes. This analysis looked at all diagnosis codes for a mental health diagnosis.
[6] A suicide-related diagnosis is suicidal ideation, intentional-self harm, or suicide attempt.

Inpatient Visit

Almost one quarter of people who died had an inpatient hospital visit within a year of death (24%). Half of these visits were related to mental health or suicide. Ten percent of people who died were discharged from an inpatient stay within a month of death. Twenty-eight percent of people aged 65 and older and 16% of people who used a firearm as a means of death had an inpatient hospital stay within a year of death. A few service members or veterans had an inpatient hospital stay within a year of death.

Almost one quarter of people who died by suicide had an inpatient hospital visit within a year of death.

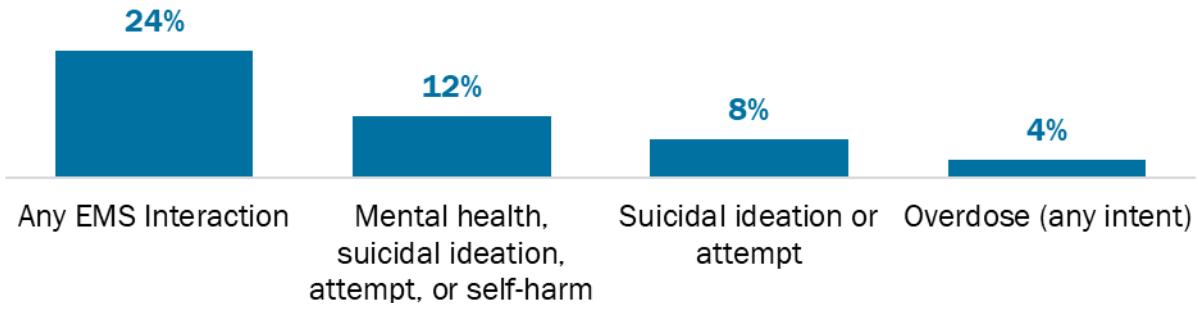


Source: VHCURES, 2021-2023

Interactions with Emergency Medical Services (EMS)

Within a year of death, 24% of people who died interacted with emergency medical services.[7] Half of those with an EMS interaction had an incident related to mental health, suicidal ideation, a suicide attempt, or self-harm (12% of the 226 who died by suicide). Most of these interactions were specifically related to suicidal ideation or a suicide attempt (8% of the 226). In nearly all interactions, the person was transported to a hospital. Eleven percent of people who died had more than one interaction with EMS.

Interaction types with EMS within a year of death.

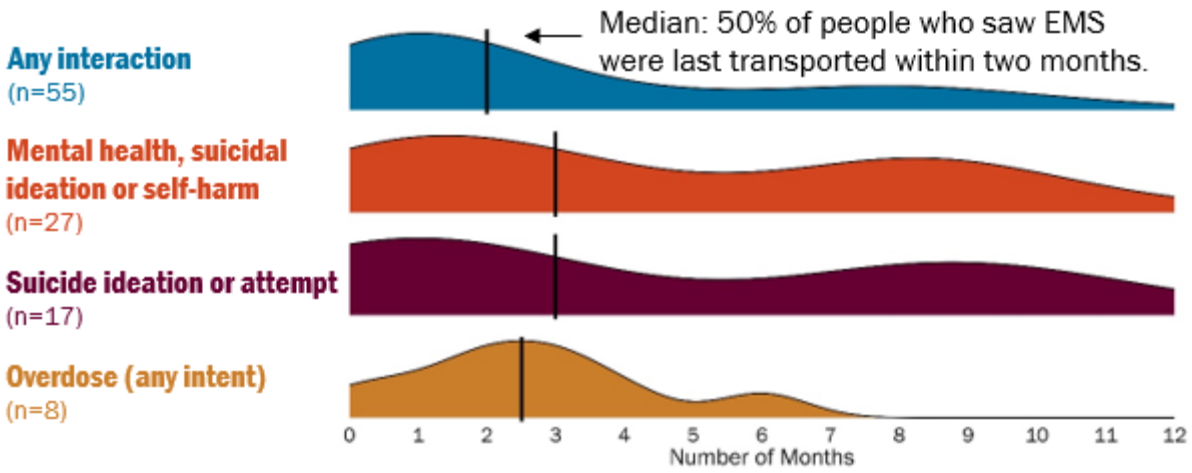


Source: SIREN, 2021-2023

[7] This analysis does not include the incidents where the injury resulted in death or where the person was found deceased. Fifty-five percent of people who died were responded to by EMS (i.e., either on the day of the injury that caused their death or the day they were found deceased).

Of the 27 people who had an EMS incident related to mental health, suicidal ideation, or self-harm in the year before their death, nearly half had their last incident of this type in the three months before they died. This suggests that in the time shortly after these incidents it is critical to implement suicide prevention interventions.

Number of months from last EMS interaction to death by suicide.

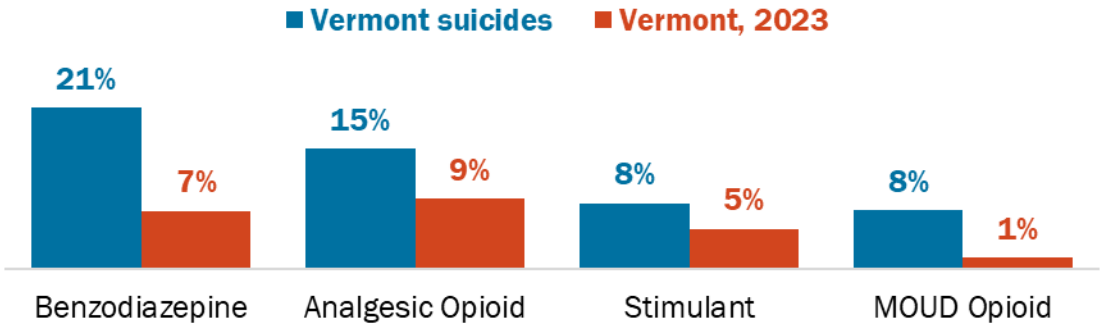


Source: SIREN, 2021-2023

Prescriptions for Controlled Substances

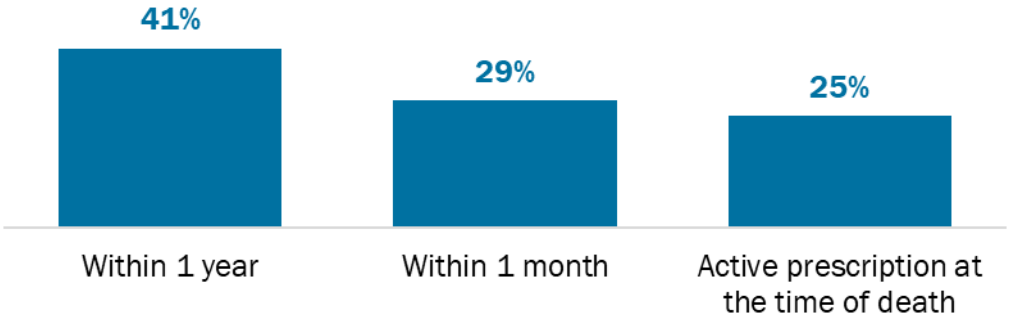
Those who died by suicide were more likely to have a prescription for a controlled substance within the year prior to their death compared to the general Vermont population. Benzodiazepines were the most common prescription treatment class prescribed to those who died by suicide, followed by analgesic opioids (opioids used to treat pain), stimulants, and medications for opioid use disorder (MOUD). In addition, more than half the people who died by suicide with a prescription for a controlled substance had an active prescription when they died. Descriptions and examples of the drug classes discussed in this section can be found in the Methodology, Data Sources, and Limitations section of this report.

People who died by suicide were more likely to have a prescription for a controlled substance compared to the general population within a year of their death.



Source: VPMS, 2021-2023

A quarter of people who died by suicide had an active prescription for a controlled substance when they died.

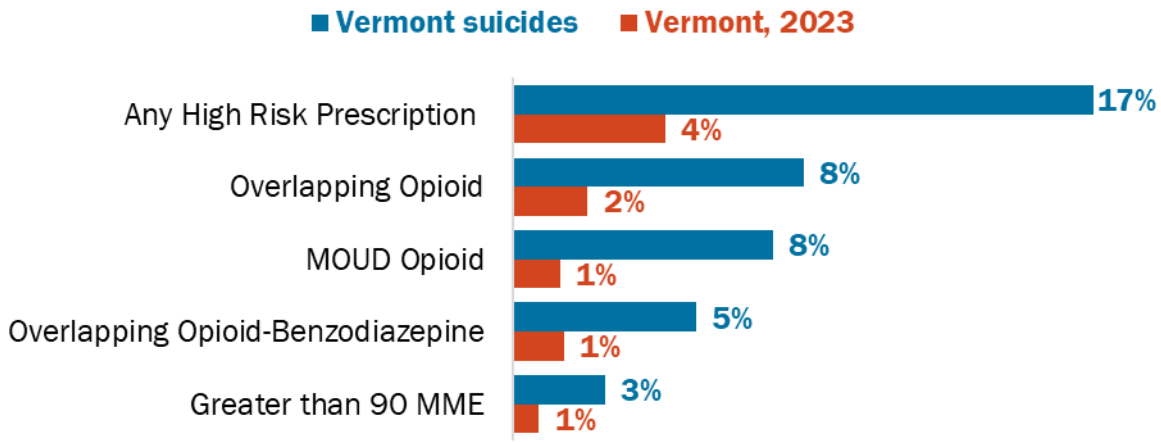


Source: VPMS, 2021-2023

Higher Risk Prescriptions

Some prescriptions for controlled substances are considered higher risk due to their potential for misuse or overdose. These include overlapping opioid prescriptions, medications for opioid use disorder (MOUD), overlapping opioid and benzodiazepine prescriptions, and opioid prescriptions that are greater than 90 morphine milligram equivalents (MME).

Within a year of their death, people who died by suicide were more likely to have a prescription that placed them at a higher risk for overdose.



Source: VPMS, 2021-2023

Mental Health Treatment at a Designated Mental Health Agency

Eight percent of people who died by suicide (17 of the 226) interacted with a Designated Agency within a year of death. All of these individuals were also seen within six months of death at a Designated Agency.

Designated Agencies provide a range of mental health treatment to people across the lifespan. Of note, the data does not reflect those who were in private mental health treatment outside of the state's public mental health system.

8% of people who died by suicide interacted with a Designated Mental Health Agency within six months of death.

Source: DMH, 2021-2023

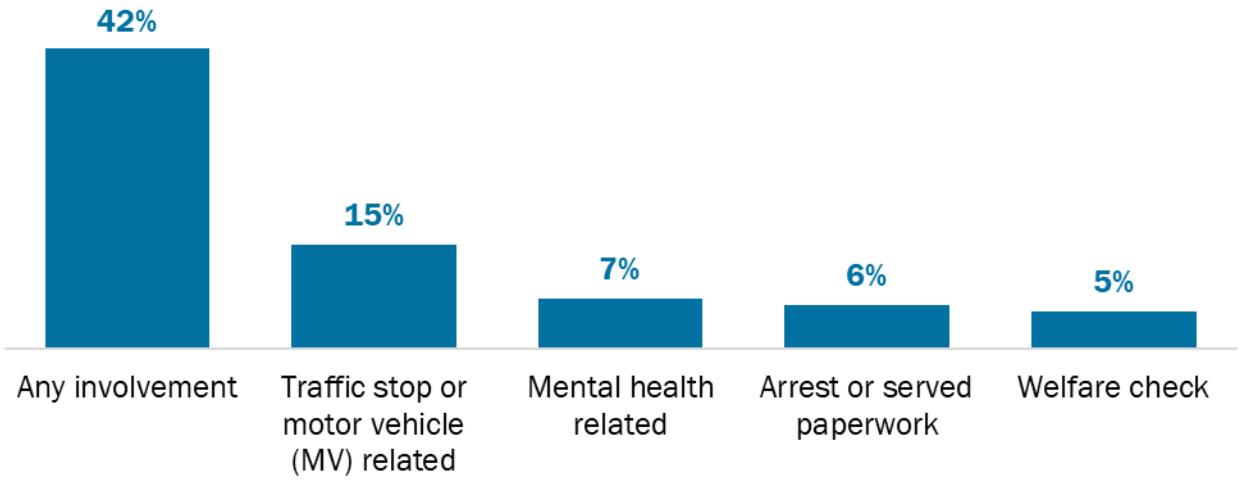
Interactions with Non-Health Care Organizations Within a Year of Death

The purpose of this section is to identify non-health care related intervention points that occur closely to a person's suicide death.

Law Enforcement

Forty-two percent of people who died by suicide interacted with law enforcement within a year of death, and 26% had an interaction within two months of death.[8] There were four common interaction types seen among people who died by suicide, with traffic stops being the highest.[9] Most people's last interactions with law enforcement occurred within six months of death. Twenty-one percent of people who died had more than one interaction with law enforcement, and 9% had more than two. No one had more than three interactions with law enforcement.

Nearly half of people who died had an interaction with law enforcement within a year of death.

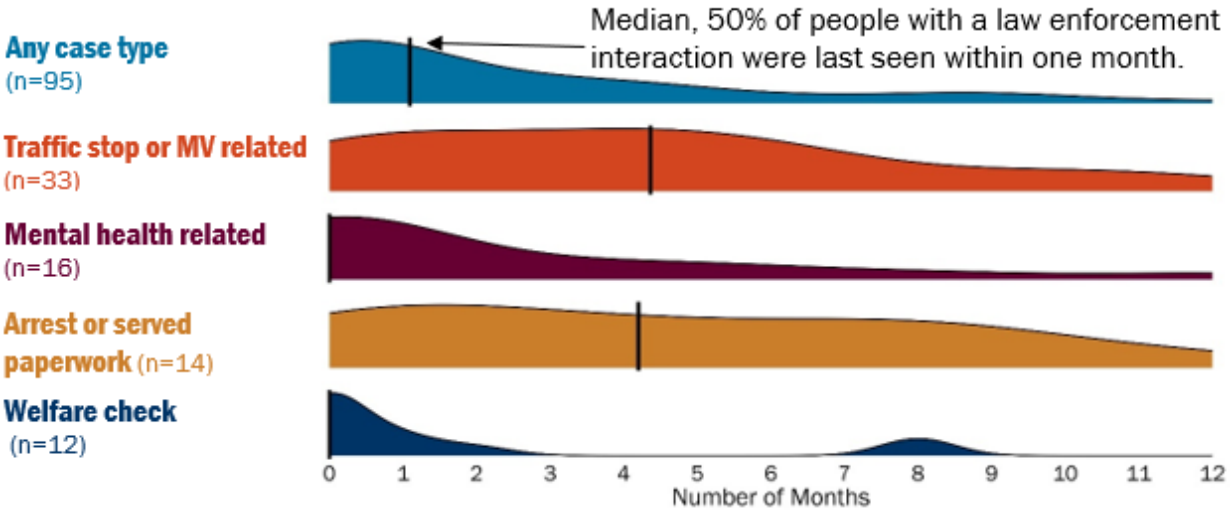


Source: Valcour, 2021-2023

[8] Interactions with law enforcement exclude when the individual was found deceased.
[9] A category for domestic disturbances and assaults, included in the previous iteration of this report, was excluded from this report because fewer than six people had an interaction in that category within a year of death.

Interactions related to mental health and welfare checks typically occurred more closely to an individual's death than other interactions. Of the 16 people with an interaction related to mental health and the 12 with an interaction related to a welfare check, half had their last incident of this type in the last month of their life. This suggests that incidents of this type in particular may be a critical time for suicide prevention interventions.

Among people with a law enforcement interaction, most people's last interaction occurred within 6 months of death.



Source: Valcour, 2021-2023

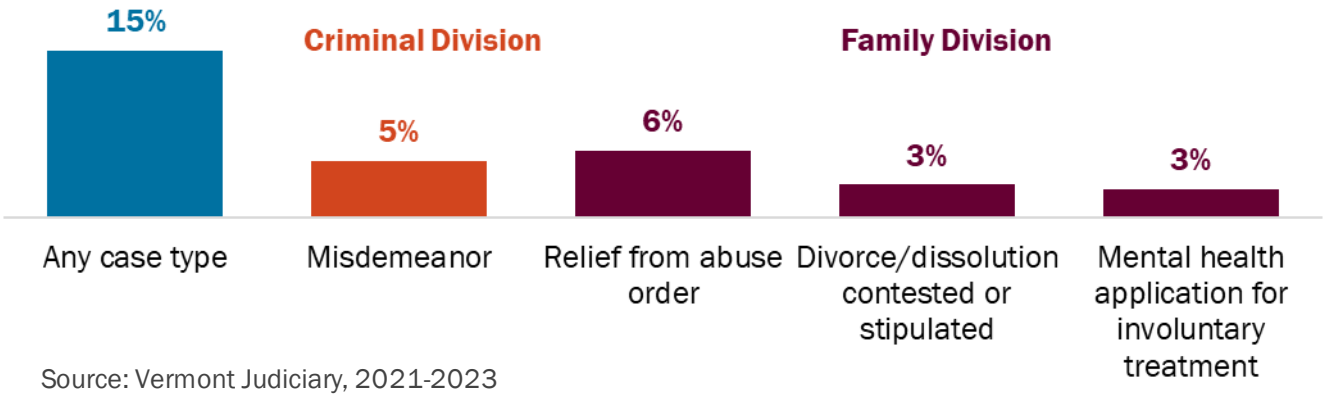
Vermont Judiciary: State Court System

Fifteen percent of people who died by suicide were involved in a state court case within a year of their death.[10] Among those with court involvement, half had a case that was still open within four months of death. Nearly one-in-ten people who died had more than one case pending within a year of death (8%).

[10] Cases involving will and estate matters that were opened due to an individual's death were omitted from this part of the analysis. In addition to these case types, 12% of people who died by suicide were involved in a case within a year of death where no further information is available due to sealing or expungement of the record. The 12% with a sealed or expunged case may or may not have another case type within a year of death. A Vermont conviction or charge may be sealed or expunged as a matter of Vermont law under certain limited circumstances, such as when the conviction is no longer prohibited by law, for certain qualifying misdemeanors and felonies, certain matters relating to a child who has been adjudicated delinquent, or for successful completion of a court diversion program. *See generally* 13 V.S.A. § 7602; 33 V.S.A. § 5119; 3 V.S.A. § 163; 3 V.S.A. § 164. Expungement means that all the records related to the criminal charge are physically destroyed by court order. Sealing means the criminal history record is placed in a confidential file but is not physically destroyed.

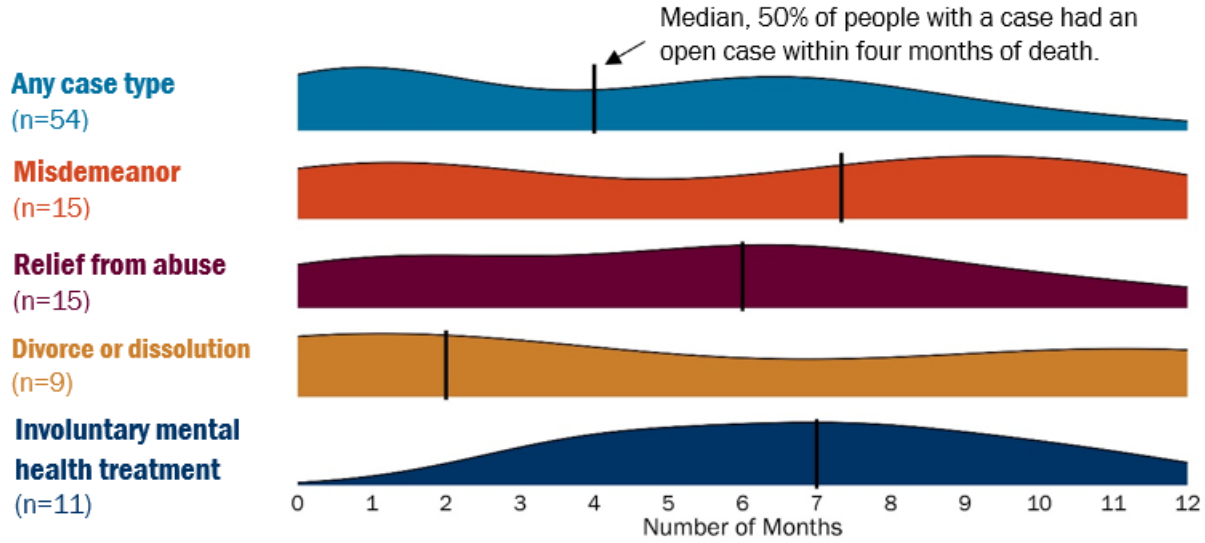
There were several case types pending within a year of death among people who died by suicide. Relief from abuse (RFA) and misdemeanors being the most common (6% and 5%, respectively).[11] Most individuals who were parties to an RFA case who died by suicide were the defendant.

Nearly one-sixth of people who died had a case with the court system within a year of death.



Source: Vermont Judiciary, 2021-2023

Among people with court involvement, half had a case that was still open within four months of death.



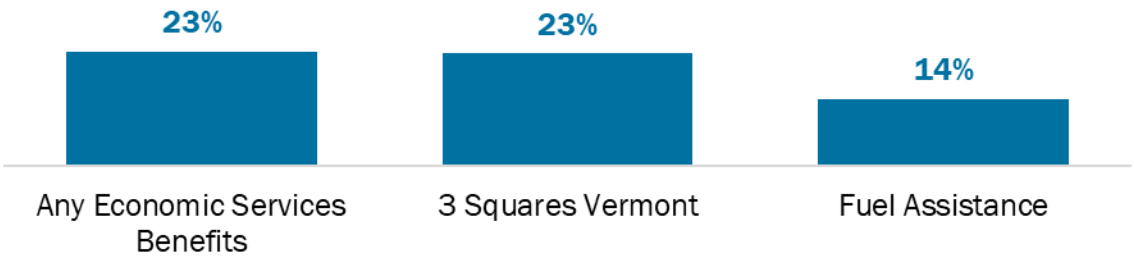
Source: Vermont Judiciary, 2021-2023

[11] Categories for felony cases and civil suspension of an individual's license or commercial driving privileges, included in the previous iteration of this report, were excluded from this report because fewer than six people had cases in that category within a year of death.

Low Income

The Economic Services Division (ESD) of the Department for Children and Families provides financial assistance to families and people in need. Within a year of death, 23% of Vermonters who died by suicide received at least one benefit from 3Squares Vermont, the Fuel Assistance program, Reach Up, or Emergency/General Assistance.[12] Nearly all of those who received a benefit within a year of death also received one in the six months before they died. Part of the eligibility requirements for 3Squares Vermont and the Fuel Assistance program is for an individual's household income level to be at or below the 185% Federal Poverty Level.

One-fifth of people who died by suicide were at or below the 185% Federal Poverty Level within a year of death.

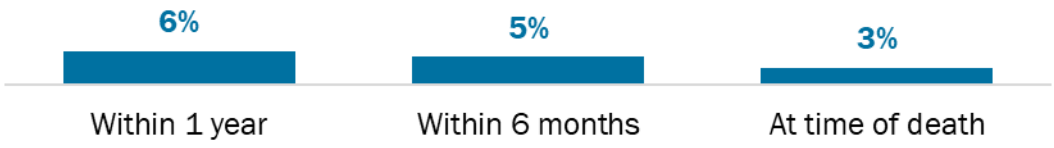


Source: Economic Services Division, 2021-2023

Homeless Services

In Vermont, individuals who receive services for experiencing homelessness are captured in the Homeless Management Information System (HMIS). Within a year of death, 6% of people who died by suicide received a homeless service. Within six months of death, 5% received a homeless service. Three percent were receiving homeless services when they died.

Six percent of people who died by suicide received a homeless service in the year before they died.



Source: HMIS, 2021-2023

[12] Fewer than 12 people received Reach Up or Emergency/General Assistance benefits. Therefore, these categories have been excluded from the graphs in this section.

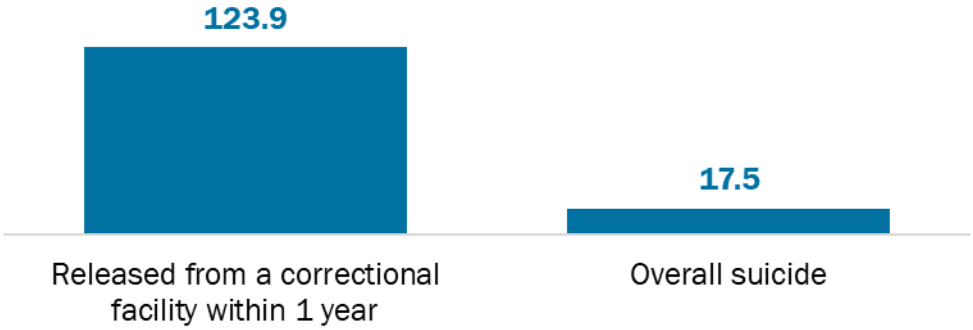
Corrections

Recent release from incarceration is a risk factor for suicide. One study found that suicide risk was 62% higher among previously incarcerated individuals compared to the general population.[13] The rate of suicide for people in Vermont recently released from prison in 2022 and 2023 was 123.9 per 100,000 released inmates, significantly higher than the rate of suicide among the general population (17.5).[14]

Four percent of people who died by suicide were incarcerated in the year before their death. Of those, half were detained awaiting trial for the most recent incarceration prior to their death. Some of those who were incarcerated within a year of death were incarcerated multiple times within that year alone.

People recently released from a correctional facility were seven times more likely to die by suicide.

Rate per 100,000



Source: Department of Corrections, 2021-2023; Vermont Vital Statistics, 2022-2023

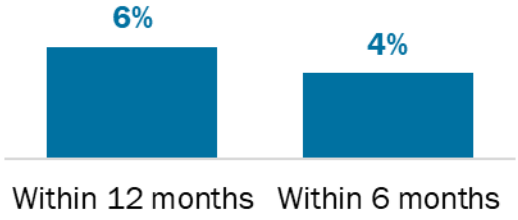
[13] Morgan, E. R., Rivara, F. P., Ta, M., Grossman, D. C., Jones, K., & Rowhani-Rahbar, A. (2022). Incarceration and subsequent risk of suicide: A statewide cohort study. *Suicide and Life-Threatening Behavior*, 52, 467– 477. https://doi.org/10.1111/sltb.12834

[14] The rate of suicide among those who were released from a correction facility within 1 year of death was calculated by taking the number of individuals who died by suicide between 2022-2023 and were released from a correctional facility within 1 year of death and dividing that by the number of individuals who were released from a correctional facility in 2022 and 2023.

Family Services Division (FSD) within the Department for Children and Families

Six percent of people who died by suicide between 2022-2023 were involved with FSD within a year of death. Of this 6%, most were adults being investigated for abuse or neglect of a child. A few adults had children in custody, all of whom (i.e., the adults) had identified mental health-related needs. Four percent of people who died were involved with FSD within six months of death, and a few of these people had cases still open at the time of death.

Percent of people who died by suicide with FSD involvement within a year of death.



Most involvements within a year of death were adults who were being investigated for abuse or neglect of a child.

Source: Department of Children and Families, Family Services Division, 2021-2023

Brain Injury Program, HireAbility, and Adult Protective Services

The Department of Disabilities, Aging, and Independent Living (DAIL) provides services to older adults and individuals with disabilities, including those with moderate to severe brain injury. Within a year of death, fewer than six individuals received services. While the number of individuals is too small to share in this report, it is important to recognize that both having a disability and experiencing a traumatic brain injury are risk factors for suicide. The number of individuals participating in these programs is relatively small, approximately 80 adults are served by the Brain Injury Program and approximately 5,200 adults are served annually by HireAbility. Future analyses could combine more years of data to minimize the need for data suppression.

Adult Protective Services (APS) through DAIL also conducts investigations for abuse, neglect and exploitation in adults. On average, APS conducts around 1,060 field cases per year. Within a year of death, fewer than six individuals were part of an investigation (as either a victim or perpetrator) with APS.

Service Members and Veterans

People who have served in the military are at higher risk from suicide compared to those who have not.[15] Although the Department of Health does not have comprehensive data regarding military service from all branches of the US Armed Forces, death certificate data indicates whether the person who died was ever a member of the US Armed Forces. Risk

[15] https://www.mentalhealth.va.gov/docs/data-sheets/2024/2024-Annual-Report-Part-2-of-2_508.pdf

factors and previous interactions with services among service members and veterans (SMVs) who died by suicide are described in more detail later in this report.

Other Risk Factors Among Vermonters who Died by Suicide

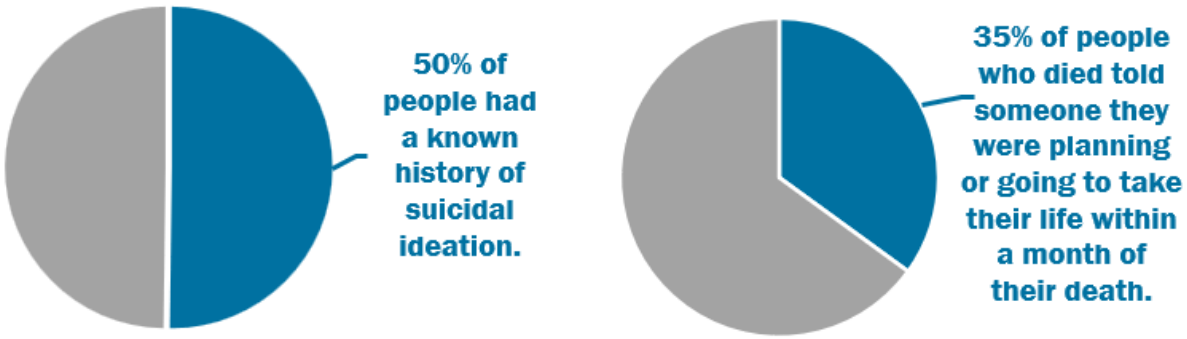
There are several risk factors for suicide. The purpose of this section is to identify the prevalence of risk factors among those who have died by suicide in Vermont. The risk factors examined include having a mental health diagnosis, a history of suicidal thoughts or behaviors, experiencing homelessness or incarceration, being unemployed, experiencing abuse or neglect as a youth, or experiencing a recent crisis.

History of Suicidal Thoughts or Behaviors and Self-Harm

Having a history of suicidal thoughts or behaviors is a risk factor for suicide death. Among those who died, 50% had a known history of suicidal thoughts or plans and 24% had a known past suicide attempt.

Some people may express their intentions of suicide to others before they take their life. Thirty-five percent of those who died had disclosed their intentions or plans to take their life to a family member, intimate partner, friend, or on social media within a month of their death.

Half of those who died had a history of suicidal thoughts or plans that was known to family members or loved ones.



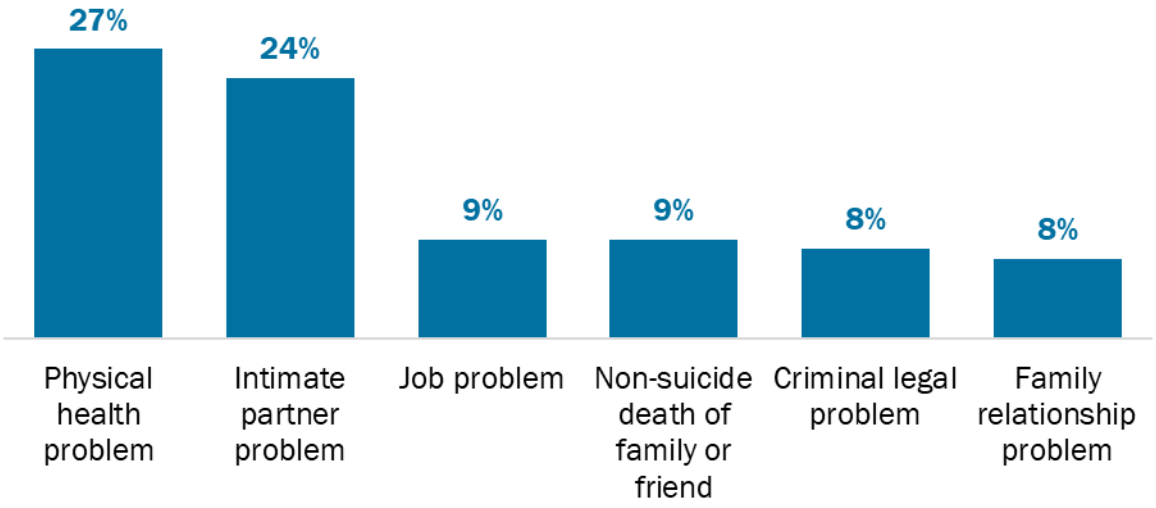
Source: VTVDRS, 2022-2023

Circumstances and Crises

There can be many reasons or contributors to a suicide death, which may or may not be disclosed to family members or people who knew the person who died by suicide. The most

commonly known circumstance among those who died by suicide was a physical health problem (27%), followed by a problem with a current or former intimate partner (24%).[16]

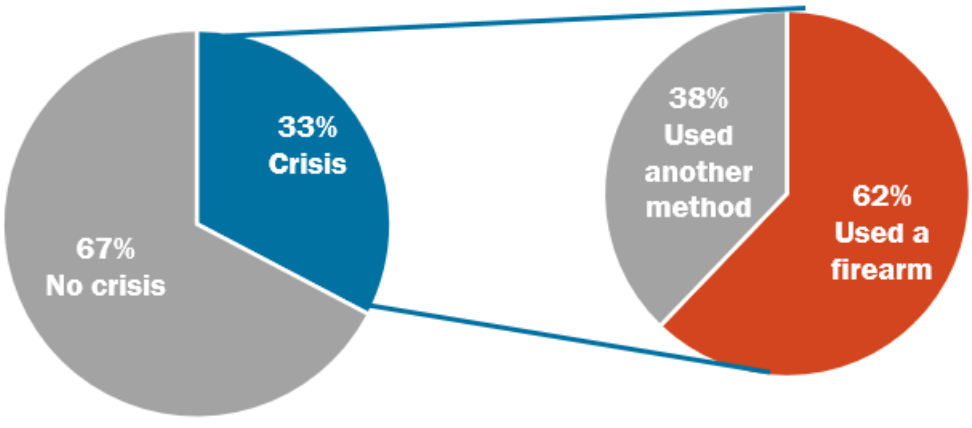
Some people who died by suicide had circumstances noted that contributed to their death.



Source: VTVDRS, 2022-2023

Thirty-three percent of people who died experienced a crisis within two weeks of death. Of those who experienced a crisis, 62% used a firearm to take their life. In other words, those who experienced a crisis were more likely to use a firearm compared to any other method. Those who experienced a crisis and used a firearm represent 21% of suicide deaths.

One-third of people who died by suicide experienced a crisis within two weeks of death; among them nearly two-thirds used a firearm.



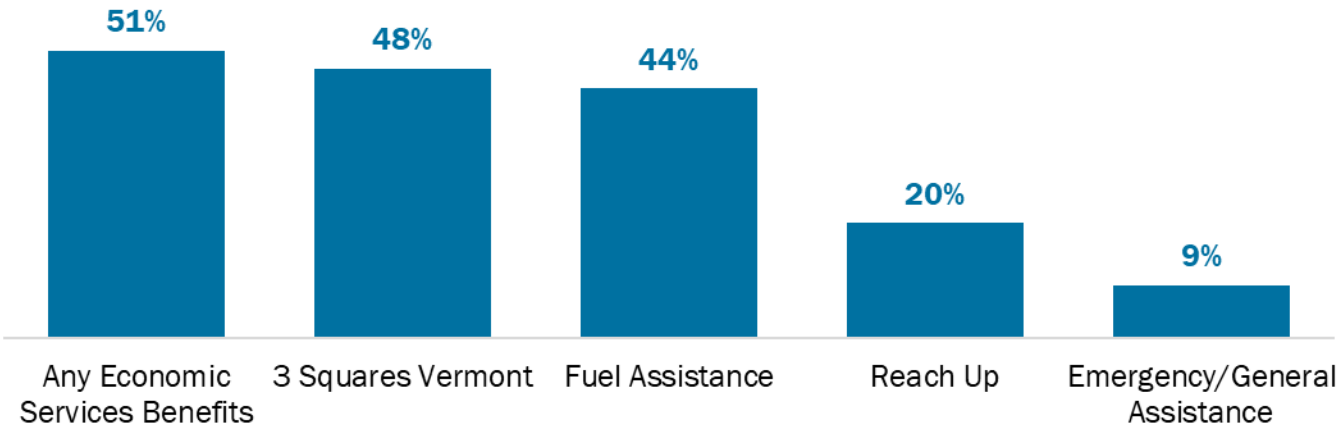
Source: VTVDRS, 2022-2023

[16] A family relationship problem does not include a problem with an intimate partner. An intimate partner problem can include domestic violence, divorce, break-up, arguments, jealousy, or other conflict.

Low Income

Having lower income may be associated with an increased risk for suicide.[17] Over half of Vermonters who died by suicide had a history of ever receiving at least one financial benefit from the Economic Services Division.[18] Nearly all of those who received a benefit received it through 3Squares Vermont or the Fuel Assistance program (48% and 44%, respectively).

Over half of people who died by suicide ever received a financial benefit.



Source: ESD, 1993-2023

History of Incarceration

Individuals with a history of incarceration have been shown to be at risk for negative health outcomes, including suicide.[19] In Vermont, one-in-ten individuals who died by suicide had a history of ever being incarcerated (11%). Of these individuals, the release date from incarceration spanned from 1987 to within a year of death (median=14 years). Almost all these individuals were incarcerated multiple times throughout their lifetime.

11% of people who died by suicide had a history of being incarcerated.

Source: DOC, 1970s (approximate)-2023

[17] Liang, A. (2022). Does Money Buy Enough Happiness: Investigating the Relationship Between Income and Suicide Rates.
[18] The income eligibility during this timeframe varies year to year, so no exact income threshold is provided.
[19] Morgan, E. R., Rivara, F. P., Ta, M., Grossman, D. C., Jones, K., & Rowhani-Rahbar, A. (2022). Incarceration and subsequent risk of suicide: A statewide cohort study. *Suicide and Life-Threatening Behavior*, *52*(3), 467-477.

Experiencing Homelessness or Housing Insecurity

Experiencing homelessness is associated with an increased risk for suicide.[20] In Vermont, individuals who receive homeless services, which include services for people who are at risk of or experiencing homelessness, are captured in the Homeless Management Information System (HMIS). Among those who died by suicide, 10% had a history of receiving a homeless service.

10% of people who died by suicide had a history of receiving a homeless service.

Source: HMIS, 2001-2023.

Unemployment

Job insecurity and unemployment increases the risk for suicidal behaviors and death by suicide.[21] Forty-five percent of people who died by suicide had evidence of employment in the year leading up to their death. For comparison, 68% of the general Vermont population was employed at some point during 2021-2022.[22] Seven percent of those who died by suicide filed a claim for unemployment insurance benefits within the year before their death. For the general population, the rate was 6%.[23] There is a portion of those who died without employment wage records or a history of unemployment insurance claims whose situation is unknown. These individuals could be in school, retired, on medical leave due to a disability, or some other situation.

7% of people who died by suicide filed a claim for unemployment insurance benefits within a year of death.

Source: VDOL, 2021-2022

[20] Bommersbach, T., et al. (2020) Suicide Attempts and Homelessness: Timing of Attempts Among Recently Homeless, Past Homeless and Never Homeless Adults. Psychiatric Services. https://doi.org/10.1176/appi.ps.202000073

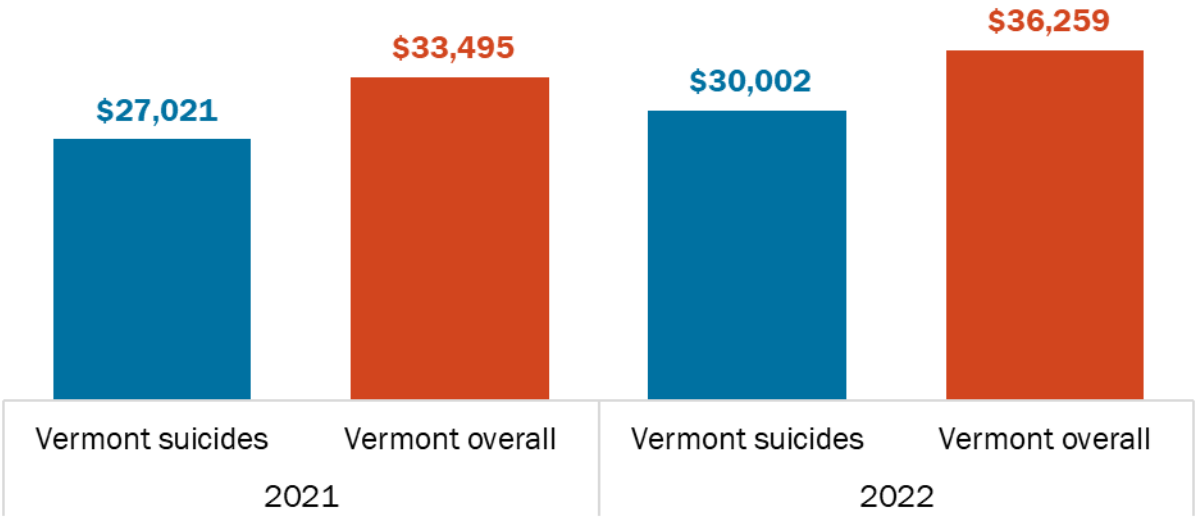
[21] Morgan, E. R., Rivara, F. P., Ta, M., Grossman, D. C., Jones, K., & Rowhani-Rahbar, A. (2022). Incarceration and subsequent risk of suicide: A statewide cohort study. *Suicide and Life-Threatening Behavior*, *52*(3), 467-477.

[22] Employment-to-population ratio 2021-2022 derived from Bureau of Labor Statistics (BLS)'s Local Area Unemployment Statistics (LAUS) program using civilian population 16 years and over.

[23] Unemployment insurance claimants-to-population ratio 2021-2022 derived from VDOL administrative records and BLS's LAUS program using civilian population 16 years and over.

Additionally, median wages were lower for people who died by suicide compared to Vermont residents overall. Those who died in 2022 had a median wage of $27,021 in the year before they died – this is more than $6,000 lower than the median wage of Vermonters who were employed in 2021 ($33,495). There is also a comparable difference among Vermonters who died by suicide in 2023 and Vermonters who were employed in 2022.

The median wages of Vermonters who died by suicide in the year before they died was at least $6,000 lower than Vermonters overall.



Source: VDOL, 2021-2022

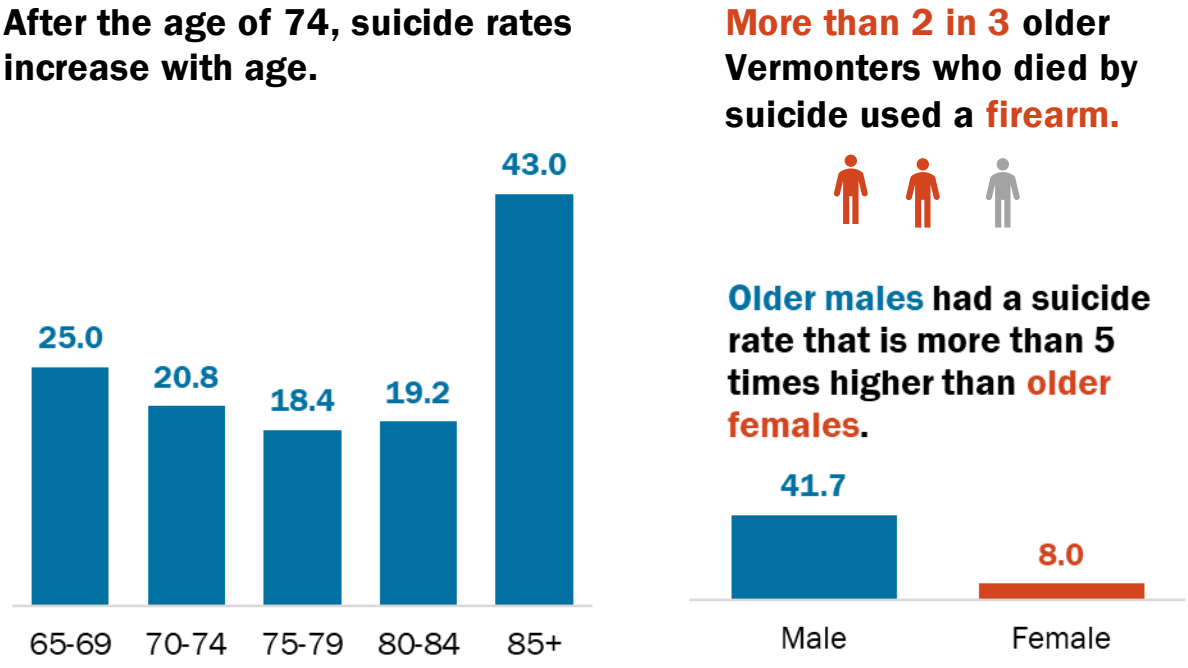
Interactions and Risk Factors: Vermonters 65 Years and Older

The purpose of this section is to examine recent interactions and risk factors faced by older Vermonters (65 years and older) who have died by suicide. Older Vermonters consistently experience some of the highest rates of suicide of any age group.

Demographics

Older Vermonters made up 30% of suicide deaths in 2022 and 2023. The rate of suicide for older Vermonters was statistically higher than the rate of suicide in the general population (23.7 per 100,000 older Vermonters vs. 17.5 per 100,000 Vermonters). The rate of suicide decreases between 65 and 79 years old and increases after 79. In addition, rates for older Vermonters are over five times higher for males than females, a ratio that is higher than the overall suicide rates by sex (3.2 times higher for males). All suicide deaths among older Vermonters were identified as white, non-Hispanic and a majority were residents of rural areas (87%). Service members and veterans make up 29% of the older Vermonters who died by suicide.

Most older Vermonters used a firearm as a method of suicide (70%), which was higher (though not statistically) compared to the use of firearms in all Vermonters who die by suicide (57%).

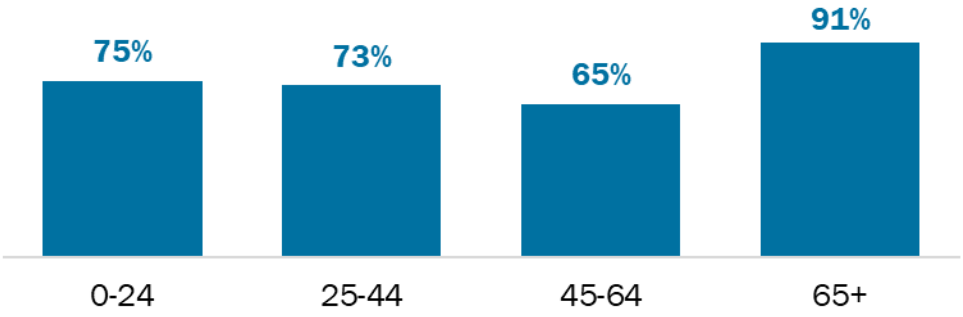


Rates per 100,000 residents
Source: Vermont Vital Statistics, 2022-2023

Interactions with Health Care

Most older Vermonters who died by suicide had evidence of insurance in VHCURES (97%). In general, older Vermonters used the health care system within a year of death at a higher proportion compared to all other age groups.

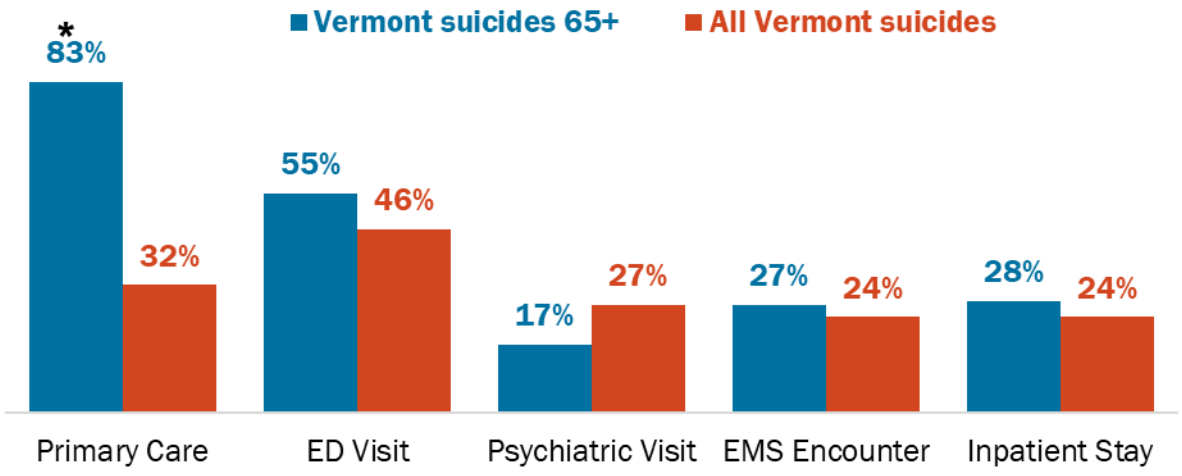
91% of older Vermonters who died by suicide had any health care claim within a year of death.



Source: VHCURES, 2021-2023

- Among older Vermonters, the most common health care encounter was with primary care, where 83% of adults older Vermonters who died by suicide had a visit within a year. Older Vermonters were significantly more likely to visit primary care than all Vermonters who died by suicide (83% vs. 32%).
    - A few of those visits were related to mental health.
- Fifty-five percent of older Vermonters who died by suicide sought care at an emergency department within a year of death.
    - A few of those visits were related to mental health.
- Older Vermonters were 10% less likely to have had a psychiatric visit within a year before death compared to all Vermonters who died by suicide, though the difference is not statically significant (17% vs. 27%).
- Twenty-eight percent of older Vermonters had an inpatient stay within a year of death.
- Twenty-seven percent of older Vermonters who died by suicide had an interaction with EMS within a year of death. Twenty-four percent had an interaction within 6 months of death. Nine percent had more than one incident in the past year. There were no patterns in the type of incidents that were found.

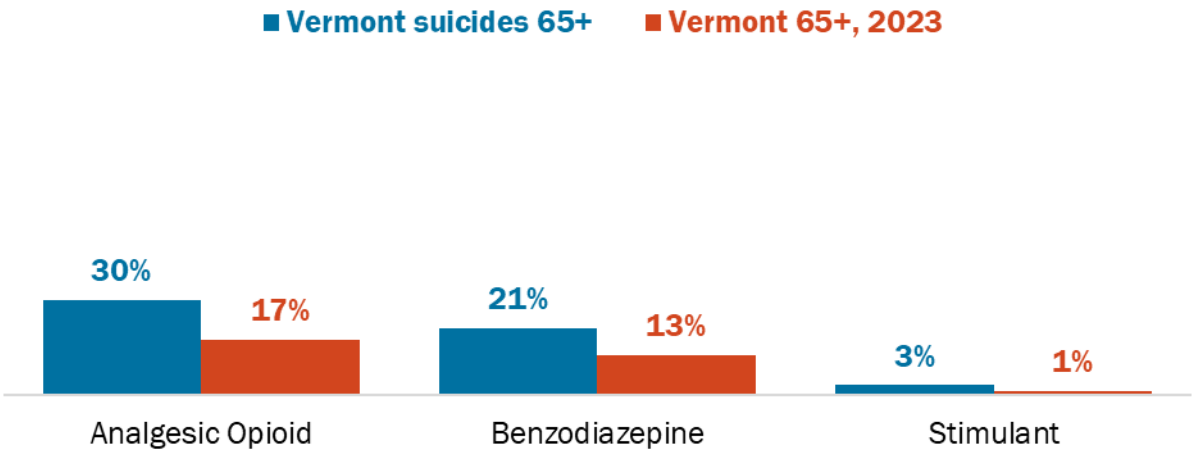
Older Vermonters were significantly more likely to have a primary care visit than all Vermonters who died by suicide.



Source: VHCURES, 2021-2023; SIREN, 2021-2023
*Statistical difference

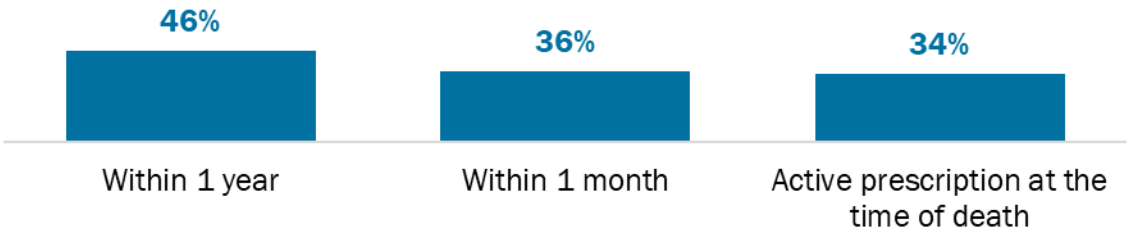
Older Vermonters who died by suicide were more likely to have a prescription for a benzodiazepine within a year of death compared to older Vermonters in general (30% vs. 17%).

Older Vermonters who died by suicide were more likely to have a prescription for a benzodiazepine.



Source: VPMS, 2021-2023

A little less than half of older Vermonters who died by suicide had a prescription for a controlled substance within a year of death.



Source: VPMS, 2021-2023

Additionally, older Vermonters were nearly twice as likely to have overlapping opioid prescriptions (16% vs 8%) and overlapping opioid and benzodiazepine prescriptions (9% vs 5%) — both considered high-risk combinations — compared to Vermonters who died by suicide in 2022 and 2023 overall.

Interactions with Other Services and Agencies

The most common touchpoint outside of health care for older Vermonters was with law enforcement. Fifteen percent of older Vermonters had at least one interaction with law enforcement within a year, most of which were motor vehicle-related.

15% of older Vermonters interacted with law enforcement within a year of death.

Source: Valcour, 2021-2023

Risk Factors

Older Vermonters who have died by suicide are significantly more likely to have had a physical health problem or to have experienced a crisis within two weeks of their death. They are also significantly more likely to have experienced a crisis and use a firearm compared to other Vermonters who died by suicide.

Sixty-one percent of older adults had a physical health problem that contributed to their death. Additionally, 25% experienced a crisis in the two weeks before their death, and most who experienced a crisis used a firearm (82% of the 25% who experienced a crisis). Nearly half of older Vermonters had a history of suicidal ideation as reported by family members and loved ones (45%).

Prevalence of chronic conditions among older Vermonters who died by suicide

61% of older Vermonters had a physical health problem.

25% of older Vermonters experienced a crisis.

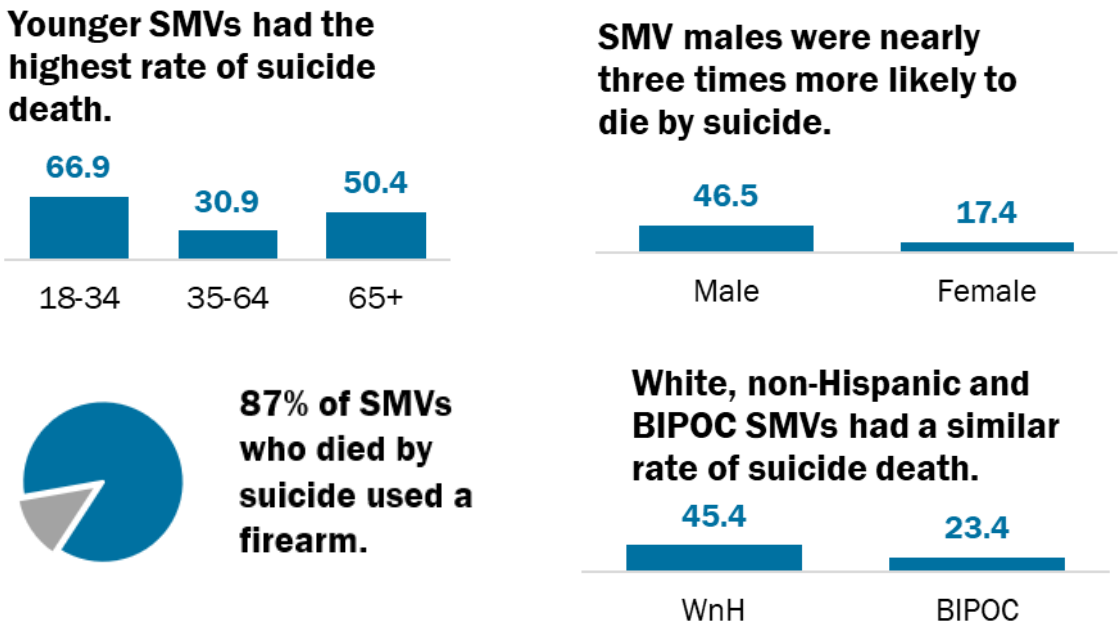
Source: VTVDRS, 2022-2023

Interactions and Risk Factors: Service Members and Veterans

The purpose of this section is to examine recent interactions and risk factors for people who ever served in the U.S. armed forces (Service Members and Veterans, or SMV) and have died by suicide.[24] SMVs experience a high rate of suicide in Vermont, with the rate in 2022 being 32% higher than the U.S. (2022 Vermont rate 45.9 per 100,000 vs. U.S. rate 34.7).[25]

Demographics

SMVs comprised 14% of suicide deaths in 2022 and 2023. The rate of suicide for SMVs was more than double, a significant difference, than the rate of suicide in the general population (44.0 per 100,000 SMVs vs. 19.0 per 100,000 Vermonters). Suicide rates for SMVs were highest for those 18 to 34 years of age, followed by those 65 years and older, and then those 34 to 64. Male SMVs had a higher rate of suicide compared to females. The rate of suicide for white, non-Hispanic and BIPOC were statistically similar (45.4 and 23.4 per 100,000, respectively). Similar to overall suicide deaths (79%), 83% of SMVs who died by suicide lived in rural areas. Firearms were more likely to be used by SMVs compared to suicide deaths overall (87% vs. 57%).



Source: Vermont Vital Statistics, 2022-2023
Rate per 100,000 SMVs

[24] In this analysis, a Service Member or Veteran is defined as a person whose death certificate indicates the individual served in the U.S. armed forces.

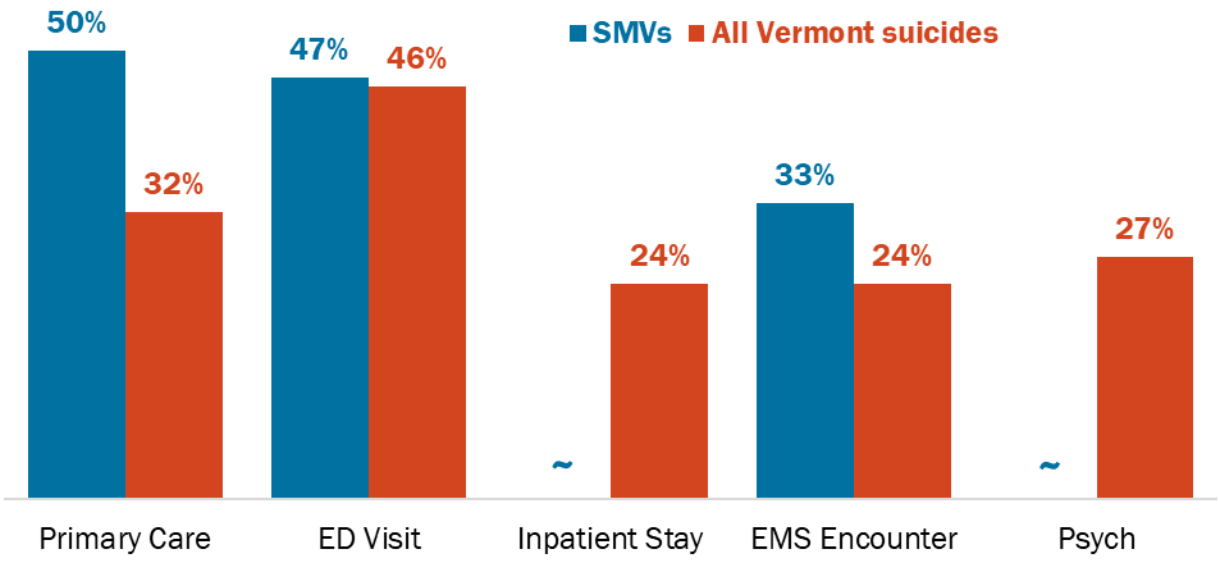
[25] https://www.mentalhealth.va.gov/docs/data-sheets/2022/2022_State_Data_Sheets_Vermont_508.pdf. Of note, the rate for Vermont SMVs was statistically similar to the national SMV rate.

Interactions with Health Care

All SMVs who died by suicide had evidence of insurance in VHCURES (100%). Of these, most had a claim within a year of death (73%). However, SMVs using the Veterans Administration, Tricare, or Federal Employee Health Benefits insurance are not reflected in VHCURES, so these numbers may underrepresent actual health care interactions among this population.

- The most common interaction type was with primary care, where 50% of SMVs who died saw primary care within a year of death. A few people had a primary care visit related to mental health.
- 47% were seen at an ED within a year of death. A few people had an ED visit for suicide or mental health within a year of death.
- 33% had an interaction with EMS. Nearly all had only one incident in the year before they died.
- A few had an inpatient stay within a year of death.
- A few had a psychiatric visit within a year of death.

Percent of SMVs who died by suicide with a primary care, ED, inpatient, or EMS encounter within a year of death.

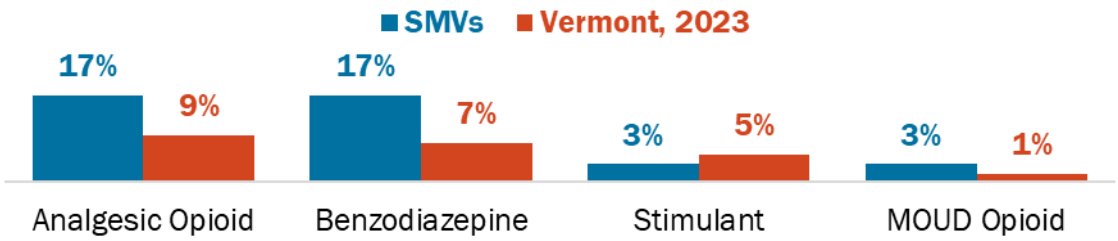


Source: VHCURES, 2021-2023; SIREN 2021-2023.

~Suppressed for confidentiality.

SMVs were more likely to have a prescription for a benzodiazepine or analgesic opioid within a year of death compared to the general population.

SMVs who died by suicide were more likely to have had a prescription for a benzodiazepine or analgesic opioid.



Source: VPMS, 2021-2023

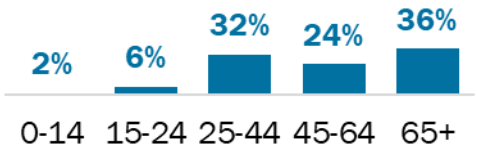
Interactions and Risk Factors: People who Used a Firearm as a Method of Suicide

The purpose of this section is to examine recent interactions and risk factors for people who used a firearm as a method of suicide. More than half of Vermont's suicide deaths each year are among people who used a firearm instead of other means.[26]

Demographics

Fifty-seven percent of people who died by suicide in 2022 and 2023 used a firearm. Most people who used a firearm were men (89%). Older Vermonters (65+) account for the highest percentage of suicide deaths by firearm, followed by 25-44-year-olds, 45-64-year-olds, and then people under 25. Nearly all were white, non-Hispanic (96%). Twenty-one percent of those who used a firearm were Service Members or Veterans (SMVs), and 39% had a known mental health treatment history.

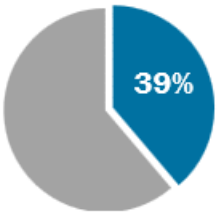
Most firearm-involved suicides were among those 65 and older.



Nine-in-ten suicide deaths involving a firearm were among men.

One in five people who used a firearm were SMVs.

Nearly everyone who used a firearm was white, non-Hispanic.



More than one-third of those who used a firearm had a known mental health treatment history.

Source: Vermont Vital Statistics, 2022-2023

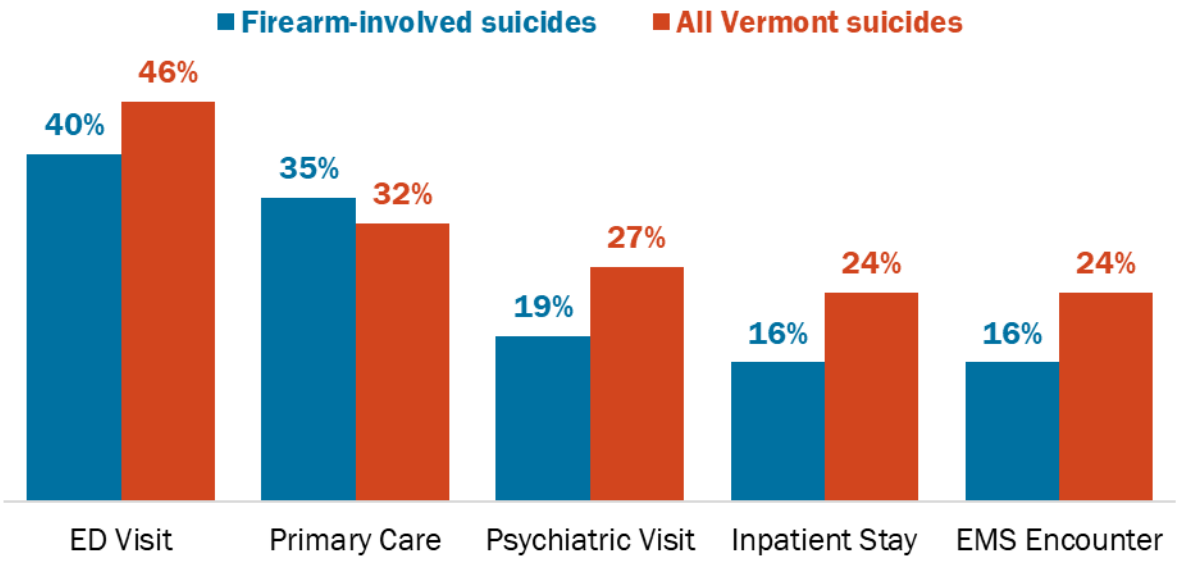
[26] https://www.healthvermont.gov/sites/default/files/document/hsi-injury-2024-suicide-report.pdf

Interactions with Health Care

Among those who used a firearm,

- The most common health care interaction was with the emergency department. Forty percent of people who used a firearm visited the ED within a year of death.
    - A few of those visits were related to mental health.
- Thirty-five percent of people who used a firearm had a primary care visit within a year of death.
    - A few of those visits were related to mental health.
- Nineteen percent of people who used a firearm had a psychiatric visit within a year of death.
- Sixteen percent of people who used a firearm had an inpatient stay within a year of death.
- Sixteen percent had an interaction with EMS. Most of those had more than one incident in the year before they died.

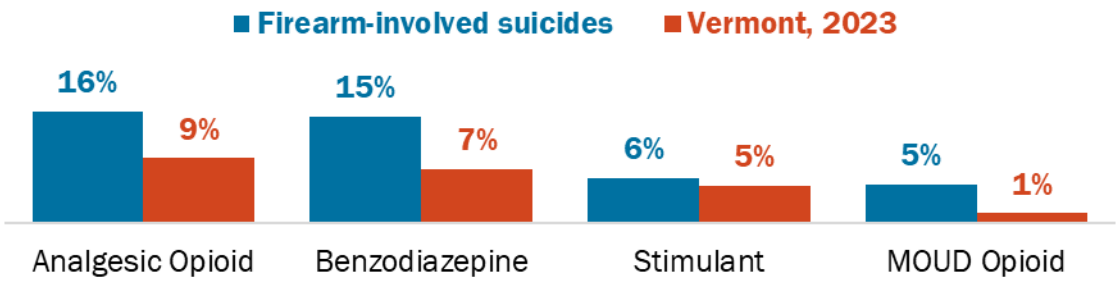
Percent of people who used a firearm with a primary care, ED, inpatient, psychiatric, or EMS encounter within a year of death.



Source: VHCURES, 2021-2023; SIREN 2021-2023

People who used a firearm were more likely to have a prescription for a benzodiazepine or analgesic opioid within the year of death compared to the general population.

People who used a firearm who died by suicide were more likely to have had a prescription for a benzodiazepine or analgesic opioid.



Source: VPMS, 2021-2023

Interactions with Other Services and Agencies

Thirty-six percent of those who used a firearm had at least one interaction with law enforcement within a year, most of which were motor vehicle-related. Just over half of those who used a firearm had more than one encounter with law enforcement in the year that they died.

36% of Vermonters who used a firearm interacted with law enforcement within a year of death.

Source: Valcour, 2021-2023

Risk Factors

The percentage of Vermonters who used a firearm and experienced a crisis in the two weeks before their death was statistically similar to the percentage of Vermonters who died by suicide overall who experienced a crisis (36% vs 33%).

36% of Vermonters who used a firearm experienced a crisis.

Source: VTVDRS, 2022-2023

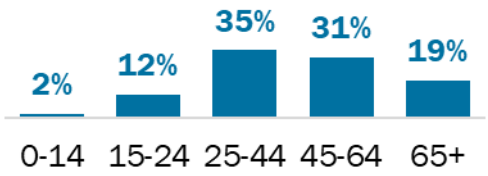
Interactions and Risk Factors: People with a History of Mental Health Treatment

The purpose of this section is to examine recent interactions and risk factors faced by people who had a history of mental health treatment.

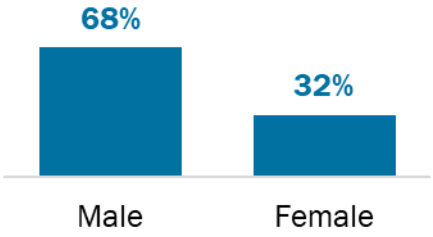
Demographics

Nearly half of Vermonters who died by suicide in 2022 and 2023 had a known history of mental health treatment (48%). Most of them were between 25 and 64 years old (66%). Two-thirds of those who died by suicide and had a history of mental health treatment were men, and nearly all were white, non-Hispanic. Ten percent of those who died were Service Members or Veterans (SMVs). Although method does not differ statistically for those with a history of mental health treatment compared to Vermonters who died by suicide overall, fewer with a history of mental health treatment used a firearm (46% vs 57%).

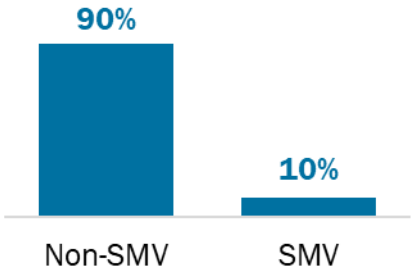
Most suicides among those with a history of mental health treatment were 25-64.



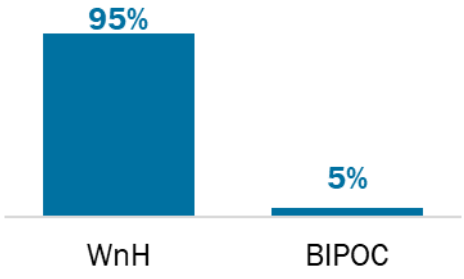
Two-thirds of suicide deaths involving someone with a history of mental health treatment were among men.



One in ten people with a history of mental health treatment were SMVs.



Nearly everyone with a history of mental health treatment was white, non-Hispanic.



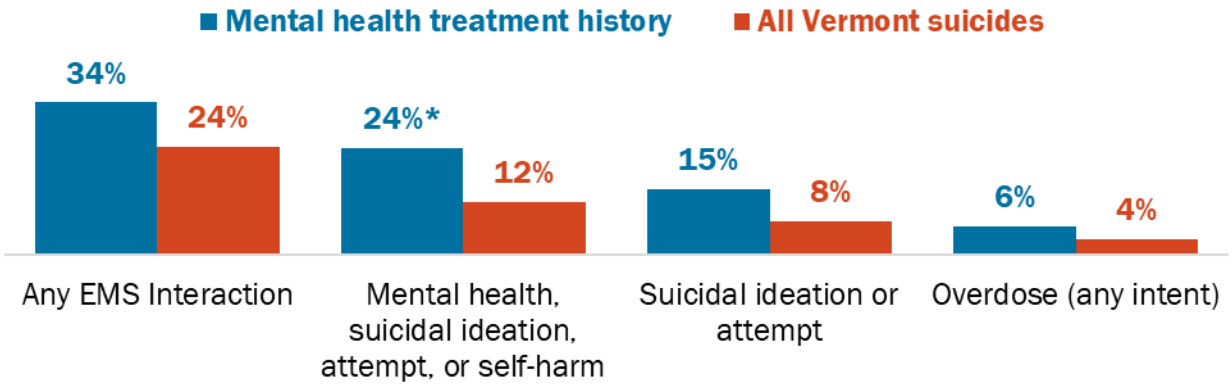
Fewer than half of those with a history of mental health treatment used a firearm.

Source: Vermont Vital Statistics, 2022-2023

Interactions with Health Care

Among those with a history of mental health treatment, 34% had an interaction with EMS. Half of those who died had more than one incident. Nearly a quarter of those with a history of mental health treatment had an EMS incident related to mental health, suicidal ideation, a suicide attempt, or self-harm (24%). Most of these interactions were specifically related to suicidal ideation or a suicide attempt (15% of those with a mental health treatment history).

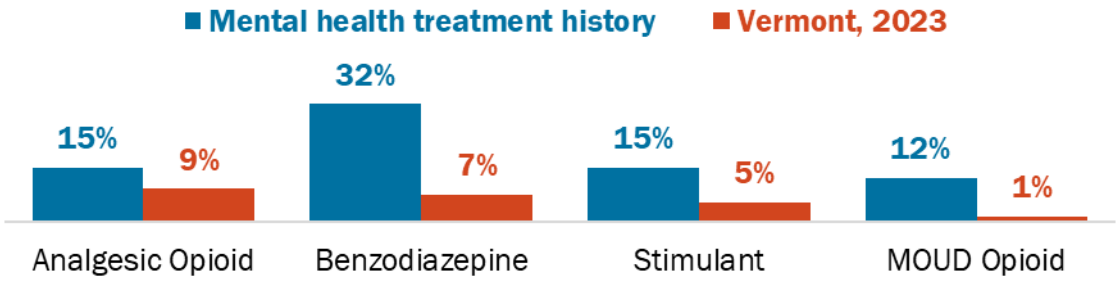
People with a history of mental health treatment were twice as likely to have an EMS incident related to mental health compared to those who died by suicide overall.



Source: SIREN, 2021-2023
*Denotes a statistically significant difference.

Of those Vermonters who died by suicide and who had a history of mental health treatment, 56% had a prescription for a controlled substance in the year before they died. Just over one-third had an active prescription at the time of their death. Vermonters who had a mental health treatment history and died by suicide had higher rates of prescriptions in all drug classes.

People with a mental health treatment history who died by suicide were more than four times as likely to have a benzodiazepine prescription.



Source: VPMS, 2021-2023

Interactions with Other Services and Agencies

Half of the Vermonters who died by suicide who had a history of mental health treatment interacted with law enforcement (51%). They were also more likely to receive financial benefits from the Economic Services Division of DCF in the year before they died compared to Vermonters who died by suicide overall (35% vs 23%).

Vermonters with a history of mental health treatment were 50% more likely to receive a benefit from ESD.

Risk Factors

Those with a history of mental health treatment were statistically more likely to express suicidal ideation to their family members and loved ones compared to Vermonters who died by suicide overall (64% vs 50%). Additionally, 37% of those with a history of mental health treatment experienced a crisis in the two weeks before they died, which was statistically similar to the 33% of Vermonters who died by suicide overall.

64% of Vermonters with a history of mental health treatment expressed suicidal ideation to family or loved ones.

37% of Vermonters with a history of mental health treatment experienced a crisis.

Source: VTVDRS, 2022-2023

Discussion

Suicide prevention is a complex public health issue that requires a multi-faceted, comprehensive approach, including a dedicated workforce, passionate advocates, improved data collection, creative thinking, and innovative programs. To address the needs identified in this report, Vermont needs to implement a broad set of public health strategies. Only then can we meet people with the right intervention in a timely and effective manner, reduce risk, and promote protective factors to enhance mental health wellbeing.

Since the first publication of Suicide Data Linkage Report in 2023, Vermont has made significant gains in developing a comprehensive approach and expanding our capacity to support suicide prevention. In acknowledgment of suicide as a priority in Vermont, the 2023 Vermont State Legislature passed Act 56. Legislators assigned the Director of Suicide Prevention to lead the state's suicide prevention efforts, intervention supports, and postvention initiatives while supporting the development of the state's first Suicide Prevention Strategic Plan. Using the Strategic Plan as a roadmap, the Department of Mental Health (DMH) and Department of Health (VDH) have continued to expand suicide prevention programming over the last two years and increase collaborations with community partners like the Vermont Program for Quality Improvement, the Center for Health and Learning, the American Foundation for Suicide Prevention, and Invest EAP to support suicide prevention strategies outlined in the plan. DMH and VDH have also continued to support public campaigns (e.g. FacingSuicideVT, 988) to increase help-seeking and awareness of mental health resources for individuals at risk, as well as educating Vermonters about how to support someone who they are worried about.

Vermont has also experienced a decrease in suicide deaths over the past 3 years. This shift gives us hope. It reflects the tireless work happening across the state to build pathways to care, connection, and recovery.

The data in this report also indicate areas that need sustained attention. Suicide remains a leading cause of injury and death in Vermont, with higher risk among men, rural residents, service members and veterans, and LGBTQ+ youth. Firearms continue to be the most common method, reminding us of the importance of ongoing efforts around lethal means safety and secure storage. While numbers help us understand trends, we must always remember that behind every statistic is a person, a family, a community.

Everyone can play a role to prevent suicide. There are a number of ways to make a difference, and there are a few listed below:

- Sign up for the quarterly FacingSuicideVT newsletter to stay informed about resources, trainings, recent data, and Strategic Plan implementation.
- Participate and attend the Vermont Suicide Prevention Coalition meetings.
- Visit the FacingSuicideVT.org site to discover ways to get help, give help, get involved, and access resources.

Methodology, Data Sources, and Limitations

Suicide deaths were identified using death certificate data from Vermont Vital Statistics. This analysis examines Vermont residents who died by suicide in Vermont during 2022 or 2023. Data matching was made possible through the establishment of data sharing agreements with each partner. Depending on the permissible types of data sharing with that partner, data was returned for analysis either in an aggregate format, a de-identified line level format, or a line level format. Data matching was completed by matching the decedent's first and last name, date of birth, and sometimes Social Security number or additional demographic information to the partner's data source.

Throughout the report, many data points are presented as an interaction or encounter with an agency or service within a given timeframe. Some sections of this report describe the number of months or days before an individual's death, which were calculated using the individual's death date from the date of interaction, hospital discharge, or the date the court case was closed. For individuals missing a day of death (23% of suicide deaths), the date they were pronounced deceased was used.

There are a few limitations of the analysis that may impact the representativeness and reliability of the results. For one, not all individuals were identified in every data source, this could be due to the availability or completeness of the data fields that were used for matching, or that the individual was captured in another data source not used in the analysis. Second, this analysis didn't look at every possible risk factor or interaction type that an individual may have had. This means some important populations (e.g., individuals who identify as LGBTQIA+), risk factors, or interactions may be missing. Third, some of the findings are based on a small number of individuals. This decreases the certainty that the same results will be true over time, impacting the reliability of findings.

Vermont Vital Statistics collects death certificate information from people who died in Vermont. This is the primary data source used to identify suicide deaths and was linked to the data sources seen throughout the report. Suicide deaths are determined using the manner of death field (listed as "Suicide") or the ICD-10 code for the underlying cause of death (X60-X84, Y87.0, U03).

Suicide deaths do not include deaths from assisted death/suicide, death with dignity, or medical aid in dying.

Rural status was defined using the county of residence. All individuals living outside of Chittenden County were defined as rural residents.

The **Vermont Health Care Uniform Reporting and Evaluation System (VHCURES)** is Vermont's All-Payer claims database, which collects medical and pharmacy claims, as well as eligibility status from private and public payers. The Green Mountain Care Board acts as the steward of the VHCURES data. Most Vermonters who died by suicide were matched in VHCURES (96%). Claims dating back to 2019 were included in this analysis.

The payers in VHCURES include 75% of commercial insurers, certain third-party administrators/self-funded (e.g., State of Vermont health plan, University of Vermont, Vermont Education Health Initiative, and opt-in employers), 100 % of Medicare and Medicare Advantage, and 100% of Medicaid beneficiaries but ~50% of Medicaid visits (~50% of Medicaid is capitated). Some of the following payers are not included in the VHCURES data: most non-governmental self-insured employers, uninsured and self-paying individuals, individuals covered under the Veteran Administration (VA), TRICARE, Federal Employees Health Benefits Program (FEHBP), and payers with Vermont resident enrollment less than 200. The VHCURES data analysis is therefore not fully representative of all Vermonters who died by suicide, either because they don't have a payer that submits to VHCURES, or the person did not have insurance. The following visit types were defined as per recommendations by OnPoint, the Green Mountain Care Board's contracted data collection and consolidation vendor:

- Emergency department visits were defined using the variable "emergency room flag" is "Y" (yes). This variable captures place of service codes, revenue codes, and procedure codes associated with the emergency room.
- Inpatient visits were defined if either of the following variables had a response of "Y" (yes) for the inpatient acute flag or inpatient nonacute flag variables. These variables capture place of service codes, revenue codes and procedure codes associated with an inpatient visit.
- Primary care visits can be defined in several ways. For this analysis, they were defined using a two-step approach per the recommendation of OnPoint. First, claims had to have a provider identification code associated with persons who would be administering primary care. Then, a claim needed to have a procedure code, revenue code, or a place of service code associated with primary care visits.
- Mental health treatment was defined when the psychiatric flag variable had a response of "Y" (yes). This variable captures claims with various procedure codes associated with psychiatric visits or therapy.

The analyses, conclusions, and recommendations drawn from the VHCURES data are solely those of VDH and are not necessarily those of the Green Mountain Care Board.

The **Vermont Prescription Monitoring System (VPMS)** is a statewide electronic database of controlled substance prescriptions dispensed by Vermont-licensed pharmacies. VPMS collects Schedule II-IV prescriptions, which are those that are more likely to be misused or cause dependence. The prescriptions described in this report are in the following drug classes:

- **Opioid Analgesics:** opioid medications used in the treatment of pain.
  Examples: oxycodone, hydrocodone, prescribed fentanyl
- **Medication for Opioid Use Disorder (MOUD):** opioid agonist/antagonist, medications used to treat opioid use disorder.

Examples: Suboxone, Subutex

- **Benzodiazepines:** sedatives used to treat anxiety, insomnia, and other conditions. *Examples: lorazepam, clonazepam, diazepam*
- **Stimulants:** medications to increase alertness, attention, and energy. *Examples: methylphenidate, amphetamine*

Data provided from the **Department of Corrections (DOC)** reflects individuals who were incarcerated by the Vermont Department of Corrections, not those who were only under community supervision. This data comes from the Offender Management System (OMS). The OMS tracks an individual's progression from intake and assessment, through treatment and referral, and eventual release, whether through the end of detainment, sentence completion, or transition to community supervision.

The **Statewide Incident Reporting Network (SIREN)** is Vermont's emergency medical services (EMS) electronic patient care reporting system. All Vermont-licensed EMS agencies are required to document each incident electronically to SIREN within one business day of when it occurred. This rule went into effect in January 2022. Because this report describes EMS incidents between 2021-2023, it is possible that some data related to first response or non-transporting EMS agencies are not reflected. SIREN interaction types included in this analysis (e.g., mental health, suicide ideation or attempt, overdose) were defined using the record's working diagnosis, situation complaint, and information from the narrative which was manually reviewed to ensure accuracy.

The **Vermont Violent Death Reporting System (VTVDRS)** collects information on deaths resulting from violence, including suicide, from a variety of data sources. These sources include death certificates; medicolegal death investigator, autopsy, and toxicology reports from the Office of the Chief Medical Examiner; reports and press releases from law enforcement; electronic medical records; EMS incident records; and prescription drug monitoring data. Not all of these data sources routinely collect the variables in VTVDRS; therefore, some data may be underestimated.

The Institute for Community Alliances is the nonprofit organization that manages the **Homeless Management Information System (HMIS)** database. The Chittenden County Homeless Alliance and the Vermont Coalition to End Homelessness work with shelters and service providers across the state to ensure people have access to affordable housing. HMIS data captures people of any age receiving a homeless service. Those receiving a homeless service include people experiencing homelessness, people at risk for homelessness, and people who were using a service that prevents homelessness. The data may exclude providers of services to victims of abuse, street outreach only services, and anyone who is not actively seeking assistance from providers.

The **Vermont Department of Labor (VDOL)** provided data on employment. The employment data comes from jobs covered by Vermont Unemployment Insurance laws. By law, employers are required to report wages to the Vermont Department of Labor for all Vermont-based

employees. Unemployment Insurance laws cover around 95% of all jobs per national estimates. Self-employed individuals, railroad workers, most agriculture-related jobs, and small religious or non-profit organizations are notable exceptions from Vermont Unemployment Insurance laws. Data excludes individuals involved in any of those employment circumstances. Employment counts are a snapshot based on quarterly reporting requirements, so employment during the six months before death is any employment in the quarter of death or the two quarters prior to death. Likewise, employment during the one year prior to death is any employment in the quarter of death or the four quarters before death.

Data on law enforcement interactions came from **Valcour**. Valcour collects information from all but three law enforcement agencies (Hartford, Norwich and Windsor) in the state.

The **Vermont Judiciary** is a unified court system that consists of an appellate court, which is the Vermont Supreme Court, and a trial court, also known as the Vermont Superior Court. The Superior Court has 14 units, one for each county, and two statewide divisions — the Environmental Division and the Judicial Bureau. The Vermont Judiciary hears civil, criminal, environmental, family, probate, and minor civil violations including traffic violations and municipal ordinance violations. The data provided by the Vermont Judiciary include state court cases filed in the State of Vermont across all divisions. The Vermont Judiciary attempted to find records of people who died by suicide in 2022 or 2023. Legal cases may predate the year of death, but for this analysis, only cases where the deceased was involved in a case that was pending or opened in the year before their death are used. Results could therefore be impacted by limitations or inaccuracies in the reported name or other identifying information. Due to the phased transition of the Vermont Judiciary from its legacy case management system (VTADS) to its new case management system (Enterprise Justice), which occurred between June 2019 and February 2021, there is a lack of comparability between some data elements in the two systems. Some errors due to this transition may exist. The Vermont Judiciary does not warrant that the data or information in this report are complete or accurate, makes no representations regarding the identity of any persons whose names appear in data or information, and does not assume any liability whatsoever resulting from the release or use of the data or information.

Two divisions from the **Department for Children and Families (DCF)** provided data for this report. Data provided from the **Economic Services Division (ESD)** focused on three ESD benefit programs:

- 3Squares Vermont is a supplemental nutrition assistance program offered to Vermonters with low income.
- The fuel assistance program helps pay heating bills for Vermonters with low income who rent or own a home.
- Reach Up provides case management and financial support to families with low income.

Data provided by the **Family Services Division (FSD)** identified if someone who had died by suicide was involved with FSD as a child, adult, or both at any time in their life.

The **Department of Mental Health (DMH)** works with private nonprofit community mental health centers, known as Designated Agencies (DAs), to provide mental health care to Vermonters. There are 10 DAs throughout Vermont, which provide a subset of mental health services to almost 30,000 Vermonters, including approximately 10,000 children and youth annually. DMH does not collect data from mental health providers in private practice, therefore it is unknown whether any of the 226 Vermonters seen at a DA within a year of death were also seen by clinicians in private practice. Of note, health care claims related to mental health and psychiatric visits are summarized in this report using data from VHCURES. These data were not linked to DMH records and are presented separately.

The **Vermont National Guard** provided data on people who died by suicide and served in either the Vermont Army National Guard or the Vermont Air National Guard. This includes both service members and veterans of the Vermont National Guard.

Three programs from the **Department for Disabilities, Aging, and Independent Living (DAIL)** provided data for this project:

- The **Brain Injury Program (BIP)** provides rehabilitation and life skills services to help Vermonters with a moderate to severe traumatic brain injury live successfully in community-based settings. This is a rehabilitation-based, choice-driven program intended to support people to achieve their optimum independence and help them return to work. The BIP provided data on the number of people who applied, were assessed, or enrolled in the BIP, as well as those who were assessed or enrolled in the Choices for Care program.
- **HireAbility Vermont** provided data on the number of people enrolled in their program. HireAbility serves people with disabilities in Vermont who face barriers to employment by offering free, flexible services to any Vermonter or employer dealing with a disability that affects employment.
- Vermont's **Adult Protective Services (APS)** program is responsible for investigating allegations of abuse, neglect, and exploitation of vulnerable adults. APS provided data on instances of alleged or confirmed abuse, neglect, or exploitation of a vulnerable adult and whether the person was a victim or perpetrator.