

Vermont Social Autopsy Report

2018 Data Analysis

October 2021



The purpose of the Social Autopsy Report is to identify trends in how Vermonters who died of a drug overdose interacted with state systems prior to death to identify opportunities for intervention.

These reports are dedicated to the people who died of overdose, 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. These are Vermonters who unnecessarily lost their life.

The Vermont Department of Health, along with the partner departments and individuals that contributed to this project, analyze these data in the context of this humanity. We believe that the findings and recommendations within these documents are valuable assets for informing our collective work to prevent future losses of life due to overdose.

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Introduction

The 2018 Vermont Social Autopsy Report examined known points of contact that Vermont residents who died of an accidental or undetermined drug overdose in Vermont during 2018 (N=131) had with a variety of state services and databases. The 2018 Social Autopsy Report builds on the success of the first report, which was released in 2020 and included data from individuals who died in 2017. The goal of the Social Autopsy Report is to identify trends in how Vermonters who died of a drug overdose interacted with state systems prior to death to identify opportunities for intervention. For this iteration of the Report, the Vermont Department of Health partnered with the departments of Corrections (DOC), Children and Families (DCF), Vermont Health Access (Medicaid), Public Safety (DPS), and Mental Health (DMH) to examine individuals who died of a drug overdose in 2018 and their involvement with the programs managed by each department. Vermont's Social Autopsy Report was informed by the West Virginia report on system involvement of West Virginians who died of an overdose in 2016.¹

The Vermont Department of Health is a part of the Agency of Human Services (AHS) and includes Vermont's Vital Statistics Program, Alcohol and Drug Abuse Programs (ADAP), the Vermont Prescription Drug Monitoring System (VPMS), the Emergency Medical Services (EMS) program, the naloxone distribution program, the Impaired Driver Rehabilitation Program (IDRP), and the Office of the Chief Medical Examiner (OCME). Other AHS departments contributing to this report include Children and Families, Corrections, and Vermont Health Access (DVHA), which manages the Medicaid Program. These departments are key partners in overdose prevention. They have trained front-line staff to screen clients for substance use disorders and when indicated, refer them for intervention and treatment. DOC created medication assisted treatment (MAT) programs for opioid use disorder (OUD) in correctional facilities, and DVHA partnered with ADAP to develop Vermont's nationally recognized Hub and Spoke system for treating OUD.²

KEY POINTS

- **Nearly all (98%) of the 131 people who died of a drug overdose in 2018 interacted with at least one State of Vermont program or dataset, with 80% having had interactions with three or more State programs.**
- **Building on the success of the 2017 Social Autopsy Report, this 2018 iteration includes new data from the Impaired Driver Rehabilitation Program and the Department of Mental Health.**

CONTRIBUTING PARTNERS

- **Vermont Department of Health**
 - Health Surveillance
 - Alcohol and Drug Abuse Programs
 - Emergency Preparedness, Response and Injury Prevention
 - Office of Chief Medical Examiner
- **Department of Corrections**
- **Department for Children and Families**
 - Economic Services
 - Family Services
- **Department of Public Safety**
 - Vermont Intelligence Center
- **Department of Vermont Health Access**
- **Department of Mental Health**

¹ https://dhhr.wv.gov/bph/Documents/ODCP%20Reports%202017/2016%20West%20Virginia%20Overdose%20Fatality%20Analysis_004302018.pdf

² <https://www.healthvermont.gov/response/alcohol-drugs/treating-opioid-use-disorder>

Methodology

In preparation for the first iteration of this report, analyzing 2017 data and released in 2020, the Health Department approached each partner department separately to explain the project concept and goals. Agencies were asked to identify measures that would best represent the intersection between clients who overdosed, the department's programming, and the datasets available for inclusion. Given the sensitivity of the person-level data involved and the need to maintain trust between partners, the project team took a collaborative approach to the project. Each partner assisted in selecting the measures to be included in the analysis and validated the findings and conclusions in the report.

After identifying the measures, the project team received approval from the AHS Institutional Review Board (IRB) to assure privacy of those who died. Memorandums of understanding (MOUs) were developed and executed between the Health Department and each of the participating departments. The MOUs specified the data to be provided to the Health Department, how the data could be used, and the data suppression rules that the data-owning department required the Health Department to use to protect anonymity. Data were collected by DCF, DOC, and individual Health Department divisions and provided to the project analysts. Health Department project analysts received special clearance and training to collect data from the identified DPS and Medicaid data sets and completed the data analysis.

Upon completion of analysis, the findings were disseminated to the commissioners of the contributing agencies, and other key stakeholders, for their review. The recommendations at the conclusion of the report were collaboratively developed during the final review process.

The 2018 Social Autopsy report builds on the infrastructure (MOUs, measures, methodology, etc.) developed for the 2017 report. The same stakeholders that were involved in the 2017 report also contributed to the 2018 report, with the addition of the Vermont Department of Mental Health (DMH).

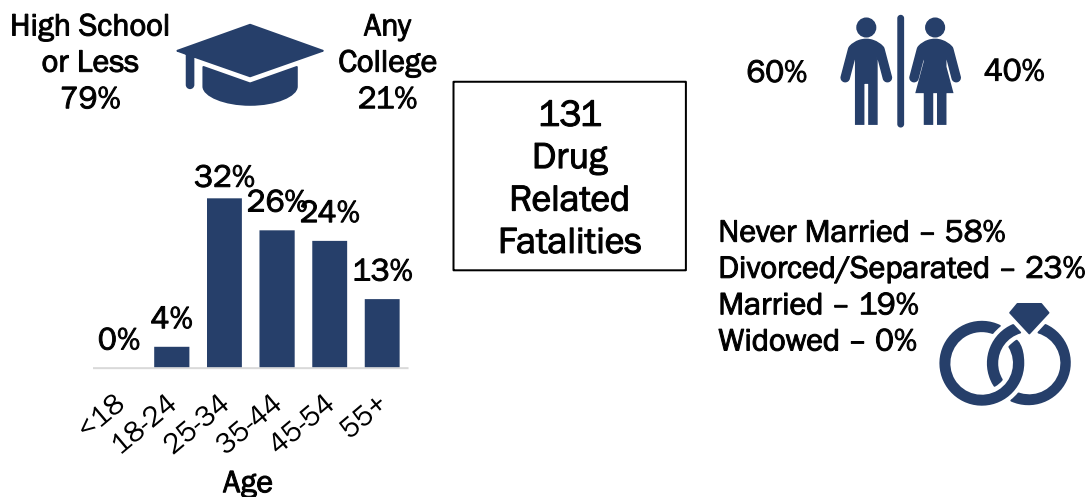
Death Certificate Information

(Source: Vermont Vital Statistics System)

Demographic Profile of People Who Died of a Drug Overdose in 2018

This section is comprised of data from Vermont's Vital Statistics System which was used to identify people who died of accidental or unintentional overdose. This information was used to link to the internal and external data sources used in this report. The individuals included in this report were Vermont residents who died in Vermont in 2018. Most were white and non-Hispanic (94%), male (60%), between the ages of 25 and 44 at the time of death (58%), had a high school education or less (79%), and were never married (58%) or were divorced/separated (23%).

Demographic Breakdown of People Who Died of a Drug Overdose in 2018



These demographics are different than others who died in 2018. Of all Vermont resident deaths in 2018 (N=5,371), 99% were white and non-Hispanic, half were male (50%), and 61% had a high school education or less. Only 18% were divorced, and 12% were never married. Most Vermont resident deaths occurred among those who were at least 55 years of age (89%), compared to only 13% of the 131 people who died of a drug overdose. All percentages presented above differ significantly compared to the 131 people who died of a drug overdose.

Fentanyl continues to be the most common drug identified in overdose deaths, but most deaths involve multiple drugs.

Death certificate data were analyzed to identify commonly occurring drugs and drug combinations identified through toxicology screening. Of the 131 deaths included in this analysis, opioids were involved in 111 (85%). Fentanyl was the most frequently identified individual drug (63%), followed by heroin (47%), cocaine (37%), and prescription opioids (24%).

Although certain individual drugs were identified more frequently than others, 92 of the 131 people (70%) had multiple drugs in their system when they died. The most common combinations were fentanyl with heroin (40%) and fentanyl with cocaine (29%). Because fentanyl is the most frequent individual drug associated with drug overdose death, four of the five most frequently identified drug combinations involved fentanyl as well.

Top Five Individual Drugs and Drug Combinations Identified in 2018 Drug-Related Fatalities

Individual Drugs:

1. Fentanyl (63%)
2. Heroin (47%)
3. Cocaine (37%)
4. Prescription Opioids (excludes Fentanyl) (24%)
5. Alcohol (19%)

Drug Combinations:

1. Fentanyl and Heroin (40%)
2. Fentanyl and Cocaine (29%)
3. Cocaine and Heroin (18%)
4. Cocaine, Heroin, and Fentanyl (16%)
5. Fentanyl and Prescription Opioids **or** Fentanyl and Alcohol (10% each)

Most people who died worked in industries and occupations related to service and construction.

Death certificates include information about the industry and occupation of those who have died. In this context, industry and occupation both refer to the work performed during most of the person's working life. Therefore, while a person may have been unemployed at the time of death, their death certificate could still include valid industry and occupation data. These data are collected through interviews with relatives or others who knew the deceased person, so this information is not always coded consistently, and some data are missing. Although all percentages presented in this section are out of the 131 people who died of an overdose, 23 (18%) were coded as missing. This 'missing' category is omitted from the graphics and tables presented in this section. While the United States Census Bureau defines industry as "the type of activity at a person's place of work," they refer to occupation as "the kind of work a person does to earn a living."³ In other words, industry describes where a person works and occupation describes what a person does at their job.

For example, the construction industry employs people working in a variety of occupations, including carpenters, accountants, and human resource personnel, among others.

Industry of 2018 Drug-Related Fatalities



Construction: 18%



Accommodation and Food Services: 17%



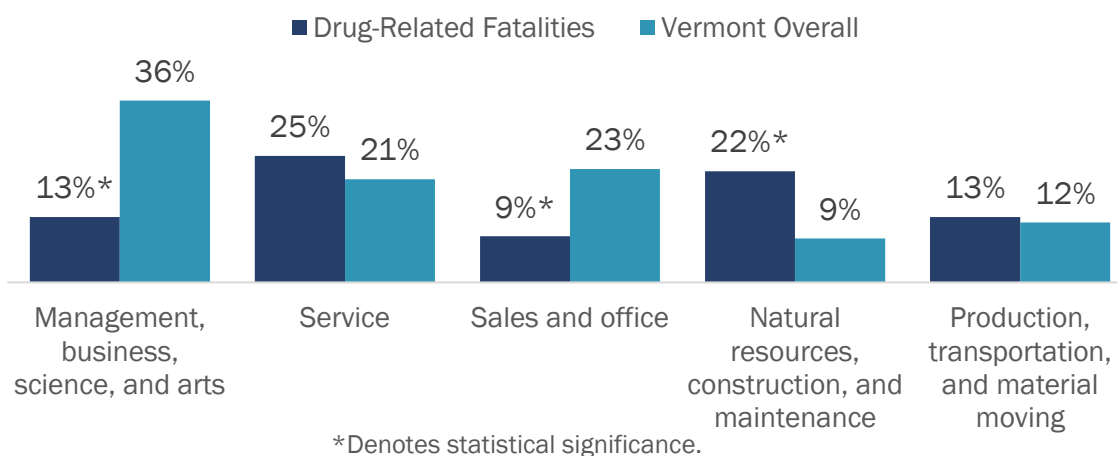
Manufacturing: 11%

³ <https://www.census.gov/topics/employment/industry-occupation/about/faq.html>

According to the Bureau of Labor Statistics, only 5% of Vermonters worked in construction in 2018. Of those who died of a drug overdose, **18% worked in the construction industry**, which is a statistically significantly higher percentage. This was followed by the **accommodation and food services industry (17%)** – which was significantly higher than the proportion of Vermonters overall (11%) – and finally, the **manufacturing (11%)** industry, however this was not significantly different from the proportion of Vermonters working in manufacturing overall (10%).

Compared to other Vermonters working in 2018, a significantly higher proportion of those who died of a drug overdose in 2018 worked in occupations related to “natural resources, construction, and maintenance” (22% vs 9%), while significantly fewer worked in “management, business, science, and arts” (13% vs 36%) and “sales and office” (9% vs 23%).

Occupation of People Dying of Drug Overdoses Compared to Vermont Overall in 2018



Although there is no indication as to whether the deceased person was working in a full- or part-time capacity at the time of their death, the most common industries and occupations listed on individuals’ death certificates typically employ workers part-time or seasonally. These positions tend to be lower-paying and more physically demanding.

Overdoses most frequently occurred in the person’s home.

The place of injury on an individual’s death certificate describes where the overdose occurred. Most people overdosed in their home (73%) or a friend’s home (8%). Less common locations for an overdose to occur were motels (2%), parking lots (2%) or at work (2%). Eighteen overdoses occurred in other specified locations or were not known (14%).

Place of Injury Among Individuals (2018)		
	Frequency	Percent
Home	95	73%
Friend's Home	11	8%
Motel	2	2%
Parking Lot	2	2%
Work/business	3	2%
Other/unknown	18	14%

The place of death may be different than where the overdose occurred. Most people died at either their home or a friend's home (74%) or in the hospital (10%). Within the hospital, an equal number of people died in the emergency room and inpatient care.

Place of Death Among Individuals (2018)		
	Frequency	Percent
At a Home	97	74%
Emergency Room	6	5%
Inpatient	6	5%
Nursing Home	1	1%
Other	21	16%

The majority of those who overdosed in their home or a friend's home died in that location. Of those who overdosed at home, 5% eventually died in the hospital. Records do not specify whether those who died in the hospital were transported by EMS, friends or family.

Place of Injury by Place of Death (2018)			
	Place of Death		
	Home	Hospital	Other/unknown
Individual's Home or Friend's Home	66%	5%	10%
Other	8%	4%	7%

How does this compare to 2017?

More people died of a drug overdose in 2018 than in 2017 (131 vs 109). These individuals were mostly similar demographically, however those who died in 2018 were more likely to be female (40% vs 28%) and have a high school education or less (79% vs 70%) than those who died in 2017. Manufacturing emerged as the third most common industry of work among those who died in 2018 while retail was the third most common industry in 2017.

Despite this difference, both industry and occupation were largely similar between 2017 and 2018 – with respect to the proportion of those who died working within each industry and occupation and their comparisons to Vermonters overall.

Finally, while 8 people died in the intensive care unit (ICU) in 2017, none of those who died in 2018 died in the ICU. This difference is noteworthy when considering that more people died in their home or a friend's home in 2018 than in 2017 (74% vs 62%), indicating that fewer people made it to the hospital after they overdosed.

History and Circumstances Surrounding Overdose

(Source: State Unintentional Drug Overdose Reporting System)

State Unintentional Drug Overdose Reporting System (SUDORS)

SUDORS is a dataset of information about people who died of an accidental or undetermined drug overdose. Data are extracted from death certificates, law enforcement reports, and medical examiner reports (including toxicology results). SUDORS includes demographics, overdose-specific circumstances, substances present on toxicology, and other reported drug overdose risk factors. While there is significant breadth of information in SUDORS, the availability of this information is subject to what is reported by medical examiners, law enforcement or in the death certificate. Therefore, there may be an underestimation of any given circumstance reported. For example, if a person overdoses and their friend leaves the location of the overdose, it would be difficult to determine whether the person's drug use was witnessed. Therefore, this information could be missing or incorrect, depending on the circumstances of the overdose.

Social Determinants of Health

Social determinants of health are the social, economic, and physical environment that affect a wide range of health, functioning, quality of life, risks and outcomes.⁴ The World Health Organization recognizes 10 factors that affect health and life expectancy: social gradient, stress, early life experiences, social exclusion, work, unemployment, social support, addiction, food and transportation.^{5,6} Throughout this report, there is clear illustration of the health disparities that exist among Vermonters who died of a drug overdose. When available, comparisons are made to the general Vermont adult population, as measured by the 2018 Vermont Behavioral Risk Factor Surveillance System (BRFSS), to look at differences and disparities of those who died of a drug overdose.⁷



Substance Use: Nearly all who died of a drug overdose had a reported substance use disorder (90%), which may, or may not have been clinically diagnosed. More than one-third (35%) had alcohol use disorder.



Education: Vermonters who died of a drug overdose are significantly more likely to have lower educational attainment defined as high school or less (73%) compared to the overall Vermont adult population (38%).



Reported Social Interactions: One in seven (15%) had their last reported contact two or more days before their death, indicating possible social isolation prior to death.



Unemployment: More than a quarter (28%) were unemployed at the time of death. This is nine times higher than the unemployment rate in Vermont adult population overall (3%).



Housing: Five percent were without housing at the time of death (5%). Without housing refers to people who did not have a permanent address of residence. Without housing does not include Vermonters who were living with a friend, family member, or other acquaintance.

⁴ https://www.healthvermont.gov/sites/default/files/documents/pdf/PLN_HE_Glossary.pdf

⁵ http://www.euro.who.int/data/assets/pdf_file/0005/98438/e81384.pdf

⁶ The social gradient is the extent of equity or the difference in wealth and opportunity between those with the most and those with the least.

⁷ [Healthvermont.gov/BRFSS2018](https://www.healthvermont.gov/BRFSS2018)

Multiple Health Conditions

Physical and mental wellness influence quality of life, health conditions and outcomes. Having multiple health conditions places a person at greater risk for poor quality of life and outcomes.



Mental Health: Forty-four percent of Vermonters who died of a drug overdose in 2018 had a mental health diagnosis (44%). The most commonly reported mental health diagnosis was depression (32%), followed by anxiety (18%). One in five (21%) had two or more mental health diagnoses, and eight percent (8%) had three or more mental health diagnoses. The prevalence of depression in Vermonters who died of a drug overdose is higher than the prevalence in the general Vermont population (21%).



Suicidal Thoughts or Behavior: Twelve percent (12%) had a history of thoughts of suicide and five percent (5%) had attempted suicide.



Chronic Disease⁸: The most common chronic health condition reported among those who died from an overdose was hypertension (14%). The prevalence of heart disease among Vermonters who died of a drug overdose (5%) is similar to the prevalence in the general Vermont adult population (8%) and hypertension is lower in Vermonters who died of an overdose (14%) compared to the general Vermont adult population (25%). Five percent of Vermonters who died of a drug overdose had diabetes (5%), similar to the prevalence of diabetes in the general Vermont adult population (9%). Asthma was reported for seven percent (7%) of Vermonters who died of a drug overdose, lower than the prevalence in the general Vermont adult population (12%). Chronic obstructive pulmonary disease was similar for those who died of a drug overdose (5%) and the general Vermont population (6%).



Chronic Pain: Four percent of Vermonters who died of a drug overdose had a history of back pain (4%) and five percent had other chronic pain, separate from back pain (5%).



Hepatitis C: Of Vermonters who died of a drug overdose, 5% had Hepatitis C.⁹



Underweight, Overweight, and Obesity: Four percent of Vermonters who died of a drug overdose were underweight (4%), 27% were normal weight, 28% overweight, and 41% were obese. The prevalence of being overweight in Vermonters who died of a drug overdose is similar to the general Vermont population (Vermont adults overweight 33%). However, obesity is higher in Vermonters who died of a drug overdose (41%) compared to the general Vermont population (29%).

⁸ Disclaimer: chronic disease, chronic/back pain, and hepatitis are not individual fields in the SUDORS system, they are based on free-text coding from the case narrative.

⁹ Those who have ever been diagnosed with hepatitis C.

Risk Factors for Overdose

SUDORS categorizes the type of overdose by capturing the context in which the drugs contributing to the fatal overdose were used by the individual. The purpose is to understand why the person who fatally overdosed used substances. Of those who died of a drug overdose, 90% had a history of substance use, as determined by interviews with the individual's friends, family, and doctor. Among the remaining Vermonters who died of a drug overdose, 2% had a medication that had been prescribed to them in their system when they overdosed, and the remaining 8% had insufficient information to determine the type of drug overdose.

28%

Had evidence of opioid use relapse

13%

Had evidence of recent release from jail, residential facility, or a hospital

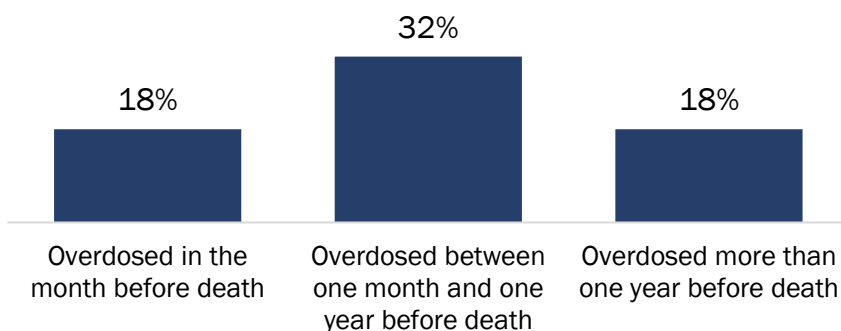
One in four Vermonters who died of a drug overdose (28%, N=37) had a history of relapsing, defined as overdosing after starting to use opioids again after a period of abstinence. While the timing of opioid use relapse is unclear for 59% of Vermonters (22 of 37), 27% had evidence of relapsing within two weeks, and 14% within three months of their death.

People recently released from a prison, jail, residential treatment facility, or hospital may be at elevated risk for overdose since their body may not tolerate the dose they had used in the past.¹⁰ More than one in eight people who died of a drug overdose had been released from a facility within a month of their death (13%). Among those with evidence of recent release, more than half had been released from prison (10 of 17), and some from a residential facility (3 of 17) or hospital (4 of 17).¹⁰ Of the Vermonters who died of a drug overdose who had evidence of opioid use relapse, 30% had been released from an institution within approximately one month of their death (11 of 37).

Intravenous drug use is also a risk factor for death including death by overdose.¹¹ Scene evidence suggests that intravenous use (51%) was the most common method of use among Vermonters who died from a drug overdose, followed by ingestion (22%), or snorting (21%).¹²

A history of a previous overdose was reported for 17% of Vermonters who died of a drug overdose. Of the Vermonters who had a previous overdose, 18% overdosed more than a year before and 18% had a previous overdose within the last month.

Of the 131 Vermonters who died, 17% had a previous overdose before they died. Of that 17%...



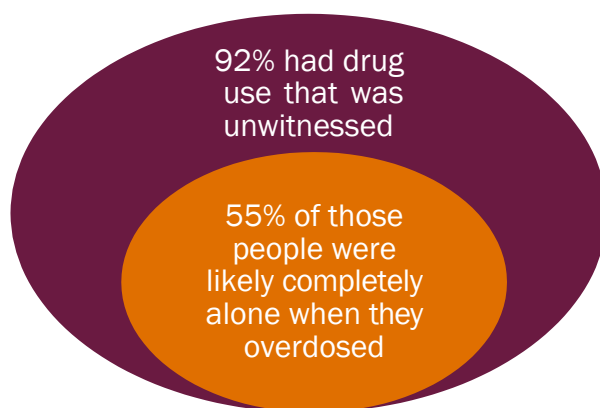
Most Vermonters who died of a drug overdose had drug use that was not witnessed by a bystander prior to

¹⁰ Residential facilities include treatment and other long-term facilities.

¹¹ C A Perucci, M Davoli, E Rapiti, D Abeni, and F Forastiere, 1991: Mortality of intravenous drug users in Rome: a cohort study. American Journal of Public Health 81, 1307-1310, <https://doi.org/10.2105/AJPH.81.10.1307>

¹² Eight deaths did not have enough information to determine how the person used drugs at the time of death.

overdose (92%, 98 of 107 valid responses). “Bystanders” are defined as individuals who were physically nearby during or shortly preceding the overdose. Most individuals who died of a drug overdose who had unwitnessed drug use did not have a bystander present at the time of overdose (55%, 54 of 98).¹³ Scene evidence also suggests that eleven percent of individuals had a rapid overdose (11%). Scene evidence used to determine whether a rapid overdose occurred may include: a needle still in the individual who overdosed, the individual slumped over the drugs they were using, body positioning relative to drug paraphernalia, presence of a bystander, and whether the individual went into an overdose state within 10 minutes of using drugs.



How does this compare to 2017?

Most measures of the social determinants of health and health conditions among individuals who died of an overdose were similar between 2017 and 2018 with a few exceptions. A higher proportion of those who died in 2018 were unemployed (28% vs 20%), while a slightly lower proportion of those in 2018 may have experienced social isolation prior to death (15% vs 20%). Additionally, the proportion of those who died in 2018 and were obese was significantly higher than the proportion of Vermonters who were obese in 2018. This proportion was statistically similar to Vermont among those who died in 2017.

Vermonters who died of an overdose in 2017 and 2018 differed by a number of overdose risk factors. Those who died in 2018 were more likely to have had a relapse (28% vs 20%), alcohol use disorder (35% vs 27%), and had unwitnessed drug use that prior to their overdose (92% vs 72%). Notably, fewer individuals who died in 2018 had a history of overdose (17% vs 28%), and a smaller proportion of those who had a history of overdose had overdosed in the month (18% vs 23%) or year (32% vs 44%) before they died.

¹³ 46 of the 78 Vermonters who had both complete information for drug use witnessed and bystander presence.

Interactions with Emergency Medical Services

(Source: Statewide Incident Reporting Network)

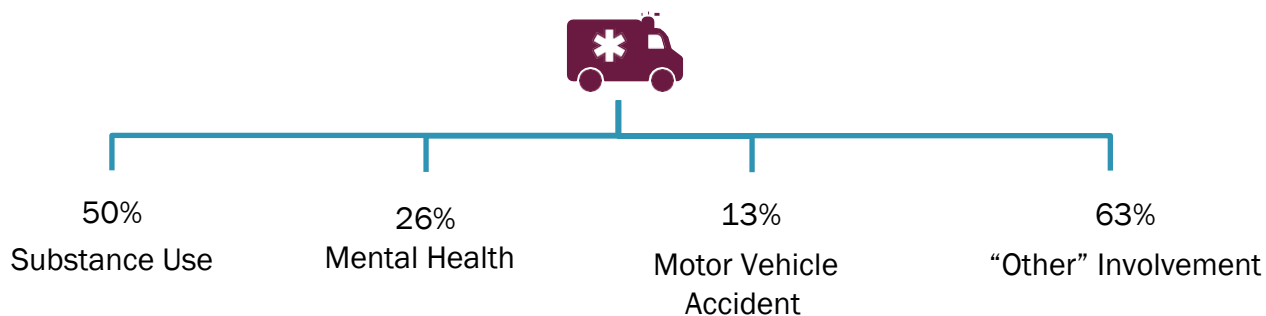
Interactions with EMS between 2015 and date of death in 2018

This section uses data from the Statewide Incident Reporting Network (SIREN). SIREN is Vermont's emergency medical services (EMS) electronic patient care reporting system. All EMS ambulance agencies with transport capabilities are required to use SIREN to document each incident within one business day of when it occurred. First response (non-transporting) EMS agencies are also required to document their calls; they are not required to report electronically into SIREN. Currently, nearly half of first response agencies voluntarily report data into SIREN but some non-transporting agencies' data are not included. The following analysis includes data from 2015 through 2018.

Of the 131 Vermonters who died of a drug overdose in 2018, 111 were identified in the SIREN database for the years 2015 – 2018. Of those 111, 93 were either declared dead on scene by EMS personnel or died in the hospital after being transported by EMS (84%). Of the 131 people who died of an overdose in 2018, 76 (58%) had at least one past interaction with EMS between 2015 and 2018 other than the interaction that resulted in a fatal overdose. **The numbers presented below include only people who had an interaction with EMS prior to the call that resulted in a fatal overdose.**

Out of the 76 people who died of an overdose and had an interaction with EMS prior to their death, half had an interaction with EMS that involved substance use (50%, N=38). Mental health (26%) and motor vehicle crashes (13%) were also commonly identified. Sixty-three percent had an incident categorized as "other" which includes miscellaneous injuries and other types of medical complaints (e.g., pain, allergic reactions, etc.), as well as cases that could not be classified due to lack of information. The interaction categories described above are not mutually exclusive. In other words, individuals could have had interactions with EMS that involved substance use and mental health and would be considered in both categories.

Of the 76 individuals with a prior EMS involvement:

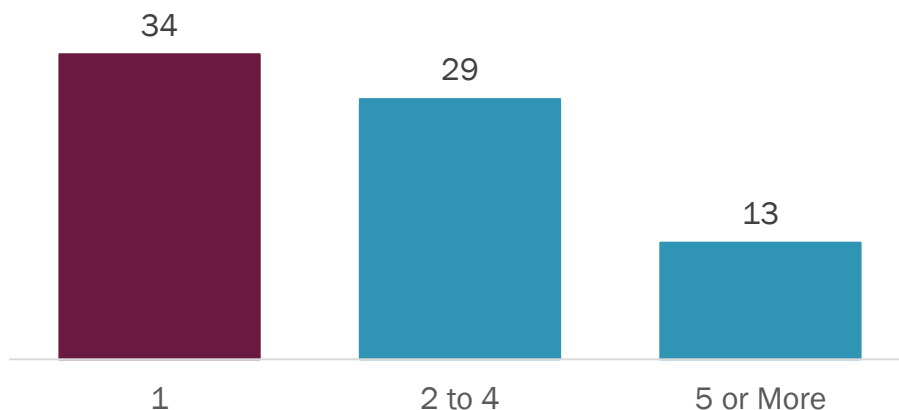


EMS interactions varied by age. Overall, the median age at time of death was 40 years old for the 76 people who had any previous interactions with EMS personnel. Those who had a substance use-related incident had a median age of 43 years old. This category along with the mental health category had the highest median age of the four interaction types. The youngest group of the four was those who had a motor vehicle accident interaction before they died (41 years old). These age differences between interaction types are small, as they only range from 41 to 43 years old.

Median Age by EMS Interaction Category	
Type of Interaction	Median Age
Any EMS Interaction (N = 76)	40
Substance Use (N = 38)	43
Mental Health (N = 20)	43
Motor Vehicle Accident (N = 10)	41
Other (N = 48)	42

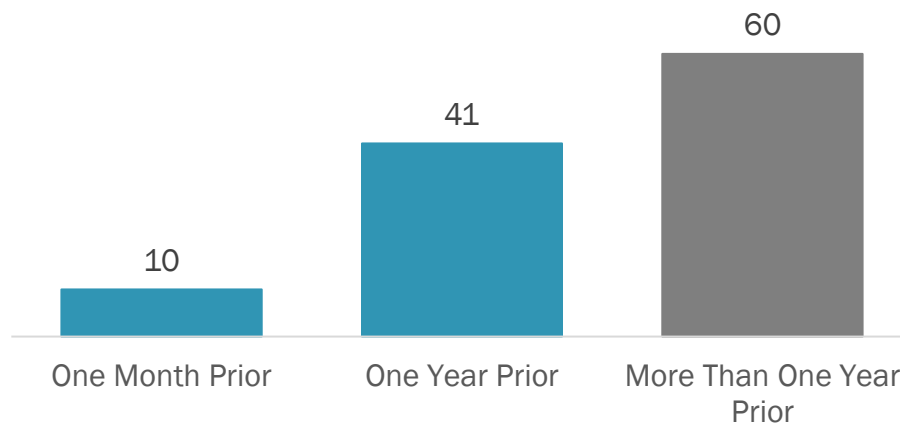
Those who interacted with emergency medical personnel **typically had one incident between 2015 and their date of death**. The median number of incidents decedents had with EMS was two and the mean was three. Thirteen people had five or more interactions.

Most individuals had only one previous interaction with EMS at any point before their death.



Most people had an interaction with EMS personnel one or more years before they died of an overdose. Interactions with EMS personnel were less common in the month before death (N=10).

Most individuals had an interaction with EMS more than one year before their death.



How does this compare to 2017?

Overall, the percentage of people who died of an overdose and had a previous interaction with EMS providers was higher in 2018 than in 2017. Additionally, three of the four interaction categories – substance use, mental health, and other – were slightly more represented among those who died in 2018.

There are a few possible explanations for these differences – the median age of those who died of an overdose and interacted with EMS was slightly higher in 2018 than in 2017 (40 vs 38), so it is possible that an older population would be more likely to require emergency care. Secondly, the 2017 Social Autopsy examined EMS interactions between 2015 and 2017, whereas this report examines data between 2015 and 2018, which would allow for an additional year for interaction with EMS. Finally, provider participation in and data quality of SIREN have increased over time. It is likely that this has increased the number of records and the ability to accurately classify EMS interactions associated with people who died of an overdose in 2018.

Controlled Substance Prescription History

(Source: Vermont Prescription Monitoring System)

Controlled prescriptions history using Vermont's PDMP data

Vermont's prescription drug monitoring program, known as the Vermont Prescription Monitoring System (VPMS) is a statewide electronic database of controlled substance prescriptions – prescriptions for substances that may be abused or cause dependence – dispensed by Vermont-licensed pharmacies. This includes mail-order pharmacies dispensing to Vermonters. Most prescriptions fit into the following drug classes, which are based on the U.S. Centers for Disease Control and Prevention's (CDC) treatment classes:

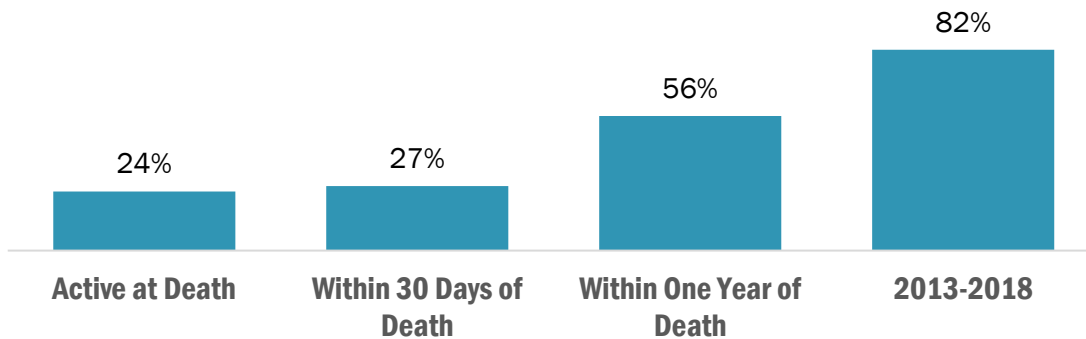
- Opioid analgesics: opioids used in the treatment of pain.
Examples: oxycodone, hydrocodone, prescribed fentanyl
- Medication Assisted Treatment (MAT) opioid agonist/antagonist: medications used to treat opioid use disorder. With a few exceptions, any drug containing buprenorphine is considered a MAT opioid. VPMS does not include medication assisted treatment prescriptions dispensed by specialty substance abuse treatment providers such as Opioid Treatment Programs (OTP) which are known as “hubs” in Vermont.
Examples: Suboxone, Subutex
- Benzodiazepines: sedatives to treat anxiety, insomnia, and other conditions.
Examples: lorazepam, clonazepam, diazepam
- Stimulants: medication to increase alertness, attention, and energy.
Examples: methylphenidate, amphetamine
- Other: all other schedule II-IV drugs that are not in the other categories

VPMS is a clinical tool that exists to promote the appropriate use of controlled substances for legitimate medical purposes, while deterring the misuse, abuse, and diversion of controlled substances. For more information on the above categories and VPMS in general, please see the [2018 VPMS Annual Report](#).

Prescribed medications contributed to the deaths of 19 of the drug overdose decedents. Nine of those 19 people had an active prescription in the VPMS for at least one of the substances listed on their death certificate as contributing to their death. For the other 10 people, overuse or overdose of prescribed medication was listed among the causes of death. In addition, 9 of the 19 people who died of a drug overdose in 2018 had received a prescription for one of the substances that contributed to their death between 2013 and 2018.

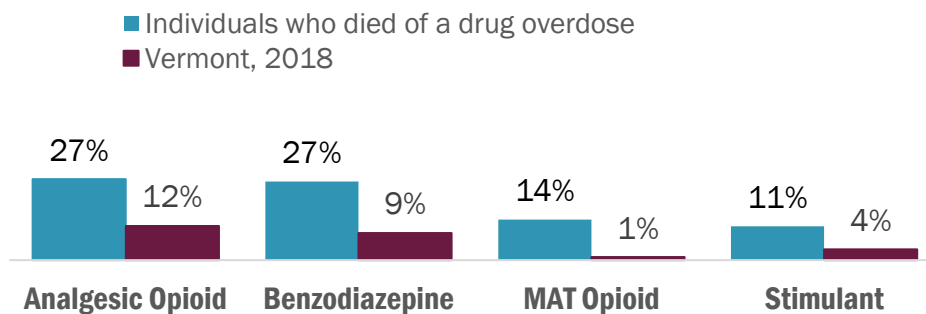
Eighty two percent (82%) of the Vermonters who died of a drug overdose in 2018 had at least one controlled substance prescription in VPMS between 2013 and 2018. One-quarter had an active prescription at the time of their death, and over half (56%) received a prescription within a year of their death.

Percent of People Who Died of an Overdose with at Least One Prescription in VPMS



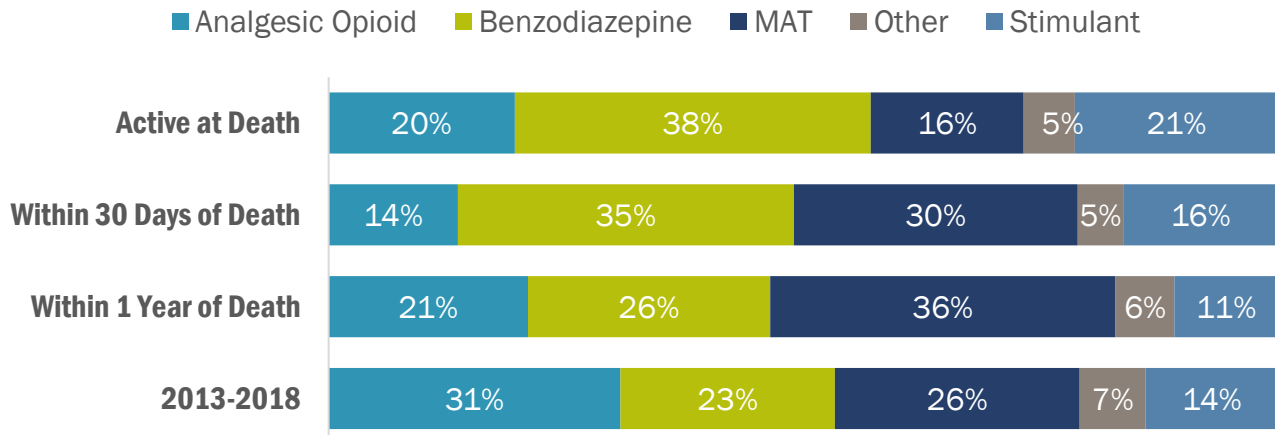
Compared to the Vermont population, people who died of a drug overdose in 2018 were more likely to receive prescriptions in each drug class in 2018 than the Vermont population who received prescriptions in 2018. Those who died were 14 times more likely to have a MAT prescription, three times more likely to have a stimulant or benzodiazepine prescription, and twice as likely to have had an analgesic opioid prescription.

Percent of Population with at Least One Prescription by Drug Class



For those who died of a drug overdose, benzodiazepines were the most common drug class active at the time of death. Benzodiazepines depress respiration and use with opioids is contraindicated. However, the most common drug class over the five-year period of 2013-2018 was analgesic opioids. Additionally, while MAT composed a large percentage of the prescriptions received by people who died of drug overdoses overall, few people had active MAT prescription at the time of death.

Prescriptions by Drug Class

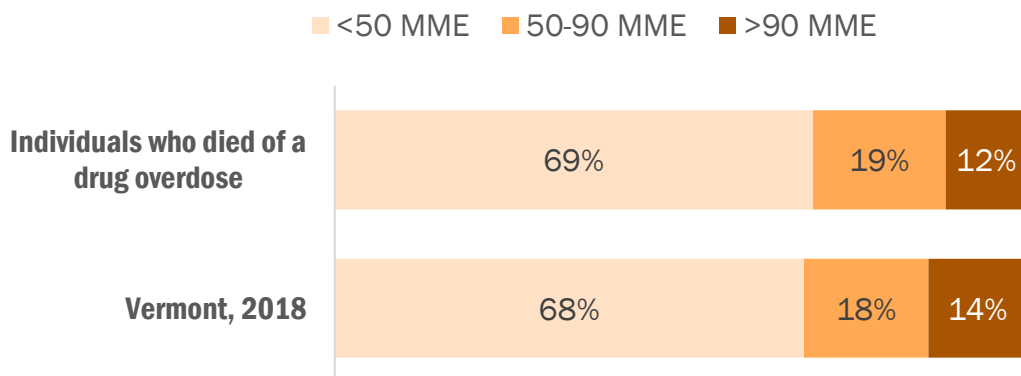


Morphine Milligram Equivalents (MME) are used to express the strength of an analgesic opioid prescription as a standardized measure to account for variance in opioid pain medication strengths and dosages.

The Centers for Disease Control and Prevention [Guidelines for Prescribing Opioids for Chronic Pain](#) categorizes prescriptions into three daily MME groups: <50 MME, 50-90 MME, and >90 MME with higher MMEs associated with a greater risk of overdose.

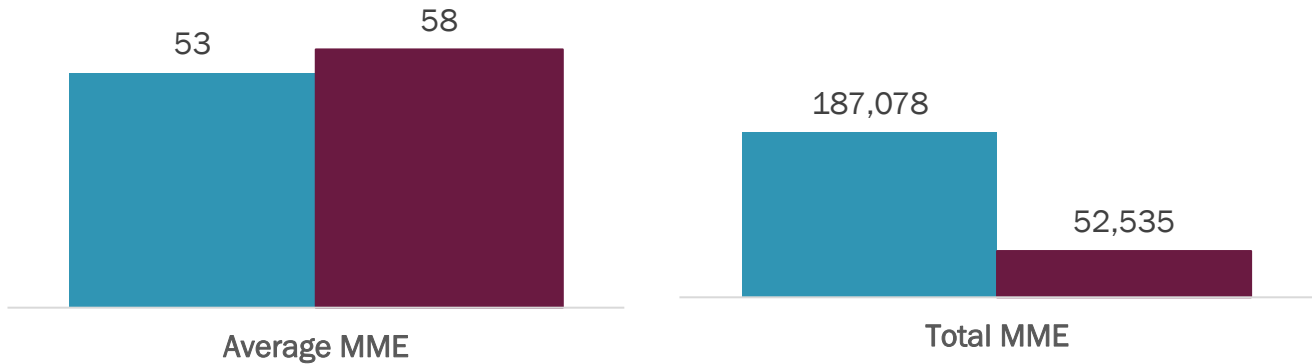
In comparison with analgesic opioid prescriptions received by all Vermonters in 2018, individuals who died of a drug overdose received a similar percentage of prescriptions in the three MME categories.

Analgesic Opioid Prescriptions by MME Category



The total amount of opioids (total MME) dispensed per 100 individuals who died of a drug overdose in the year before their death is almost four times the MME per 100 Vermonters in 2018. This shows that although the average MME of analgesic opioid prescriptions for those who died of a drug overdose is slightly lower than the average for Vermonters who received prescriptions in 2018, the total volume of opioids that they received is much higher.

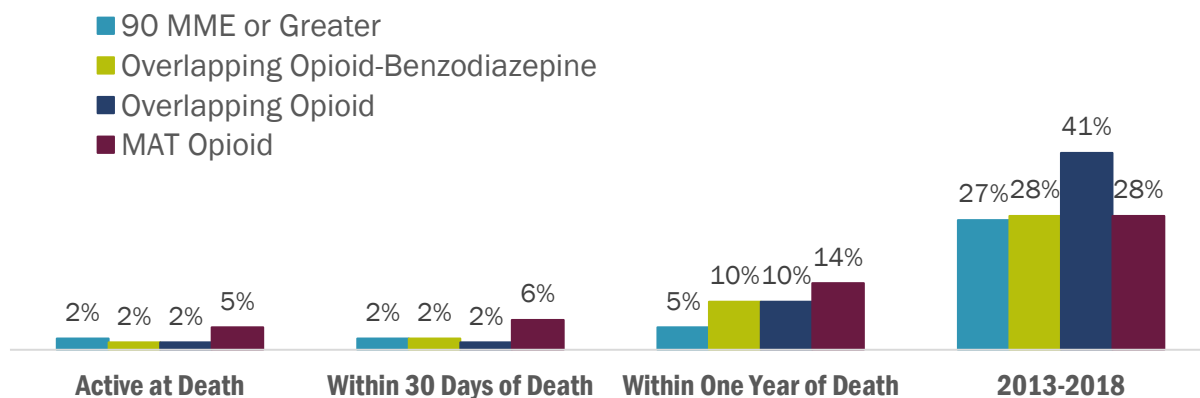
People who died of a drug overdose had a lower average daily MME but a higher total MME of prescriptions compared to Vermonters in 2018.



Some prescribing practices may put people at higher risk. These include overlapping opioid prescriptions, overlapping opioid and benzodiazepine prescriptions, opioid prescriptions equal to 90 MME or greater, and MAT prescriptions that may indicate an individual has an opioid use disorder.

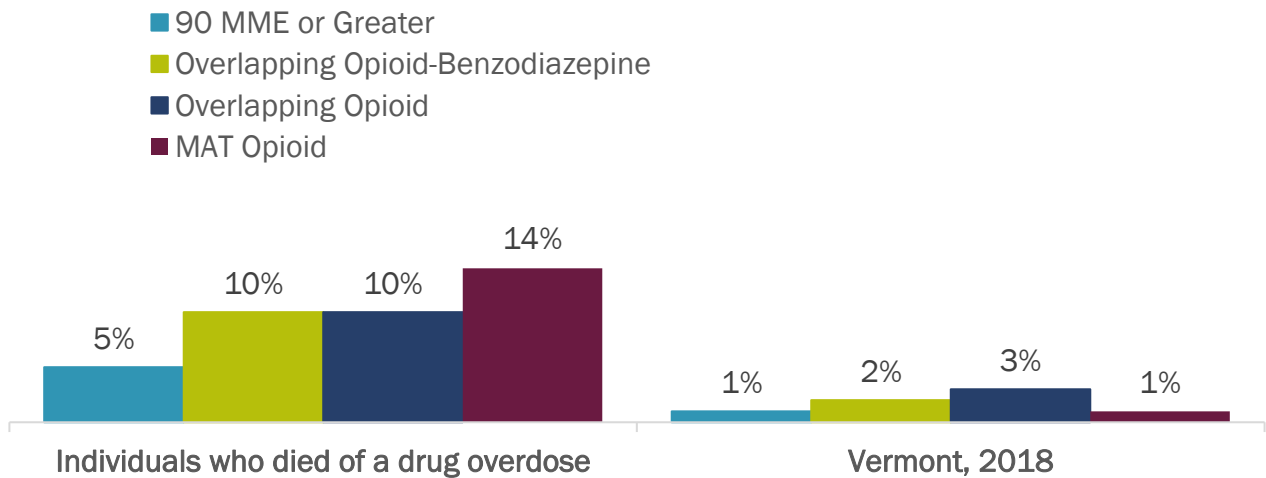
Between 27% and 41% of people who died of a drug overdose received some type of high-risk prescription at least once between 2013 and 2018. While few people had active prescriptions in these categories at the time of their death, in almost all categories at least one in ten (10-14%) received a high-risk prescription within a year of their death.

Percent of People who Died of an Overdose with High Risk or MAT Prescriptions



The percentage of those who died of an overdose and received a high-risk prescription within one year of death is much higher than the percentage of Vermonters who received these high-risk prescriptions in 2018.

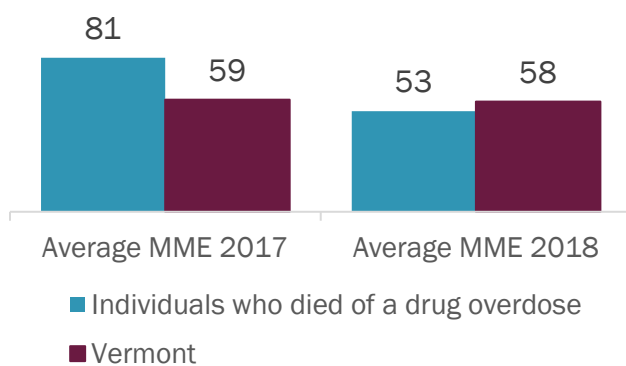
Percent of Population with High Risk or MAT Prescriptions



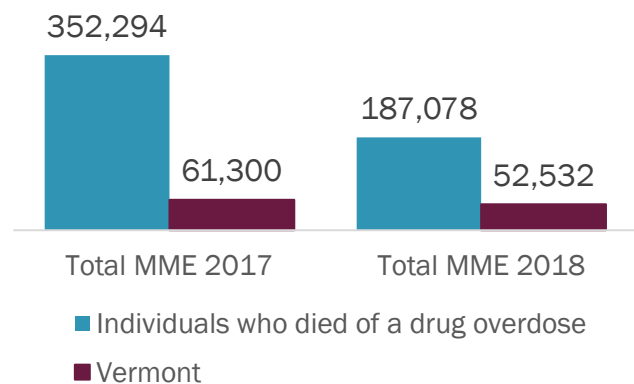
How does this compare to 2017?

When comparing people who died of a drug overdose in 2018 to those who died in 2017, the most striking differences were the changes in average MME and total MME of dispensed prescriptions. Both average MME and total MME noted dramatic decreases since the new rules governing the prescribing of opioid analgesics went into effect in June 2017.¹⁴

Average MME, 2017 vs 2018



Total MME, 2017 vs 2018



¹⁴ <https://www.healthvermont.gov/sites/default/files/documents/pdf/Opioid%20Prescribing%20Rule%202.1.19.pdf>

Medicaid Enrollment and Utilization

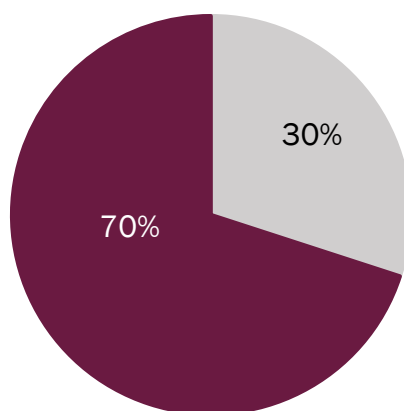
(Source: Department of Vermont Health Access)

Healthcare Utilization Patterns Using Vermont's Medicaid Claims Data

[Department of Vermont Health Access \(DVHA\)](#) is responsible for the management of Vermont's publicly funded health insurance programs, also known as the Vermont Medicaid Program. Medicaid claims were analyzed to look for enrollment status prior to death in addition to health care utilization measures.

Near or at the time of death, 92 (70%) of the 131 people who died of a drug overdose in 2018 were enrolled in Medicaid. Of the 92 people who were enrolled in Medicaid, 86 (93%) had at least one claim in the year before they died. Most of those individuals had claims within three months of death.

70% of people who died of an overdose in 2018 were enrolled in Medicaid.



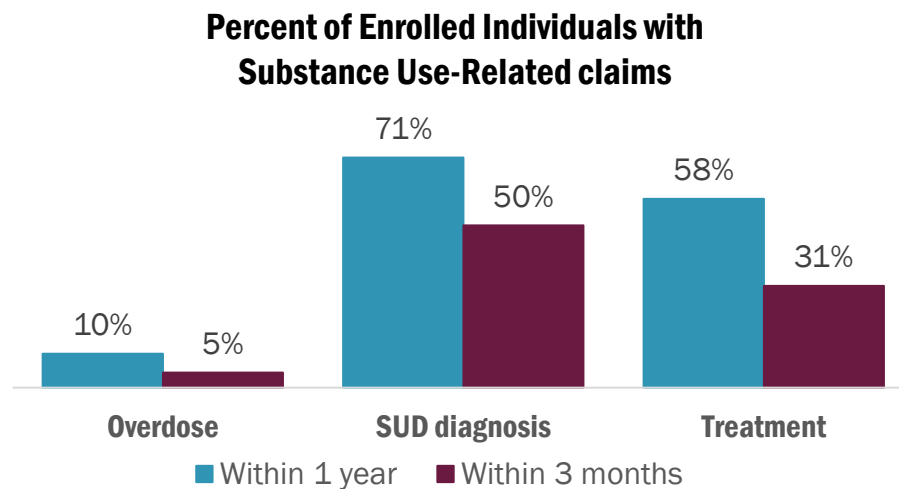
More than two-thirds of people with a claim had a claim related to substance use.

The most common diagnoses and procedure codes among Medicaid enrollees who died of a drug overdose in 2018 were related to substance use or mental health.

Of the 86 people who had claims within a year of death, more than two-thirds (71%) had a claim with a substance use disorder (SUD) diagnosis and of those, most had an opioid diagnosis. The second most common SUD was alcohol use disorder.

In addition, 10% of those with a claim had a claim associated with an overdose in the past year. Of those, 33% had an overdose claim within three months. A few of these individuals had multiple overdose claims within a year of death.

Most of the people enrolled in Medicaid had a claim related to substance use treatment. All forms of treatment are included such as MAT, residential treatment, and outpatient services. Nearly two-thirds of people with a claim for treatment were in MAT. Treatment percentages drop closer to death which suggests leaving treatment is a risk factor for fatal overdose.



How does this compare to 2017?

The interpretation of 2018 results compared to 2017 is similar, but the overall percentages differ. The percentages of people who died of an overdose who were enrolled in Medicaid had a claim for SUD diagnosis or had a claim for treatment within the year prior to death were higher in 2018 than in 2017.

The percentage of those who died that had a claim for treatment was higher in 2018 than in 2017. This could be due to an increase in access to treatment during that time. However, the percent with a treatment claim within the 3 months prior to death decreased in 2018 compared to 2017.

Interactions with Family Services and Economic Services

(Source: Department for Children and Families)

Family Services Division

The [Family Services Division \(FSD\) of the Department for Children and Families \(DCF\)](#) is responsible for ensuring children and youth are safe from abuse. The FSD data system was established in 1982. There were 52 people born after 1982 who died of a drug overdose in 2018. As children, 25% of these 52 individuals had a history of involvement with the FSD of the DCF in Vermont.



25% were involved with FSD as children.

27% were involved with FSD as parents.

As parents, 27% of the 131 people who died of a drug overdose had a history of involvement with the FSD of the DCF.

Economic Services Division

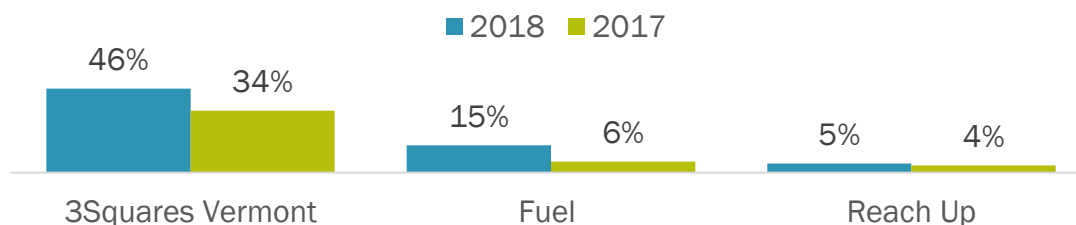
The Economic Services Division (ESD) of DCF provides financial assistance to families and individuals in need. This analysis focuses on three ESD benefit programs – 3Squares Vermont, fuel assistance, and Reach Up – although the Division provides additional programs.¹⁵ 3Squares Vermont is a supplemental nutrition assistance program offered to low-income Vermonters. The fuel assistance program helps pay for heating bills for low-income Vermonters who rent or own a home. Reach Up provides case management and financial supports to low-income families.

Some people who died of an overdose were enrolled in economic services the month or year of their death. 3Squares Vermont was the program most frequently utilized by those who died of a drug overdose in 2018 (46%). The fuel assistance program (15%) and Reach Up (5%) were less likely to be utilized by people who died of a drug overdose in 2018 compared to 3Squares Vermont. There was an increase in people who utilized fuel and 3Squares Vermont in 2018 compared to 2017.

In addition to the three economic service programs offered to low-income Vermonters, the Economic Services Division will also pay for burials of people without financial assets.

Roughly one-third (35%) of Vermonters who died of a drug overdose had their burial paid for by the Department for Children and Families. Vermonters who died of a drug overdose made up 7% of all burials paid for by DCF in 2018.

3Squares Vermont is utilized more by people who died of drug overdoses compared to fuel benefits or Reach Up.



¹⁵ <https://dcf.vermont.gov/esd/benefits>

How does this compare to 2017?

Compared to those who died in 2017, a higher proportion of people who died in 2018 interacted with FSD as children (25% vs 13%). Interaction with FSD as an adult was also slightly higher in 2018 than in 2017 (27% vs 22%).

Additionally, the percent of people accessing economic services at DCF, with the exception of Reach Up, increased in 2018. This suggests more people interacted with DCF overall in 2018 compared to 2017.

Interactions with Vermont State Police

(Source: Department of Public Safety)

Law Enforcement Interactions Using Department of Public Safety's Database

The Vermont Department of Health partnered with the Vermont Department of Public Safety to identify and characterize interactions overdose decedents had with Vermont State Police (VSP) over the course of their lives, prior to death. Department of Health staff analyzed State Police records exclusively, as local police records were not analyzed. Records were gathered from one of Vermont's law enforcement records management systems and were available dating back to 1988.

Of the 131 people who died of a drug overdose in 2018, 106 (81%) had interacted with VSP at some point before they died. In total, the 106 people had 3,841 State Police interactions, with a median of nearly 9 interactions per person and an average of 38. The range of interactions varied from as few as one to well over two hundred. It is important to note people can have a variety of roles with law enforcement interactions such as witness, person of interest, or offender/arrestee.

In reviewing case records that involved an interaction with Vermont State Police, 21 categories of cases were used to classify interactions. Some examples were assault, nonfatal overdose, death investigation, driving under the influence (DUI), suspicious, domestic violence, family issue, driving with a license suspended (DLS), theft/burglary/larceny, alcohol or drugs, and non-criminal/other. Some categories were created as areas of interest prior to or during the analysis, while others were categories native to the database. Placement of each case into a given category was left to the discretion of the analysts.

The most common category was **“Non-Criminal or Other” (1,660 involvements)**, which included a variety of interactions, typically those that did not result in charges or further State Police involvement. This was followed by cases related to **“Theft, Burglary, Larceny or Fraud” (463 involvements)**. There were **174 involvements related to criminal DLS** and **173 involvements related to alcohol or drugs**. Of note, interactions related to alcohol or drugs are separated out of the DUI interactions. Interactions related to alcohol or drugs usually indicate use or possession of substances.

Total State Police Interactions – Common Categories



Non-Criminal/Other – 1,660

Theft/Burglary/Larceny/Fraud – 463

Driving with a Suspended License – 174

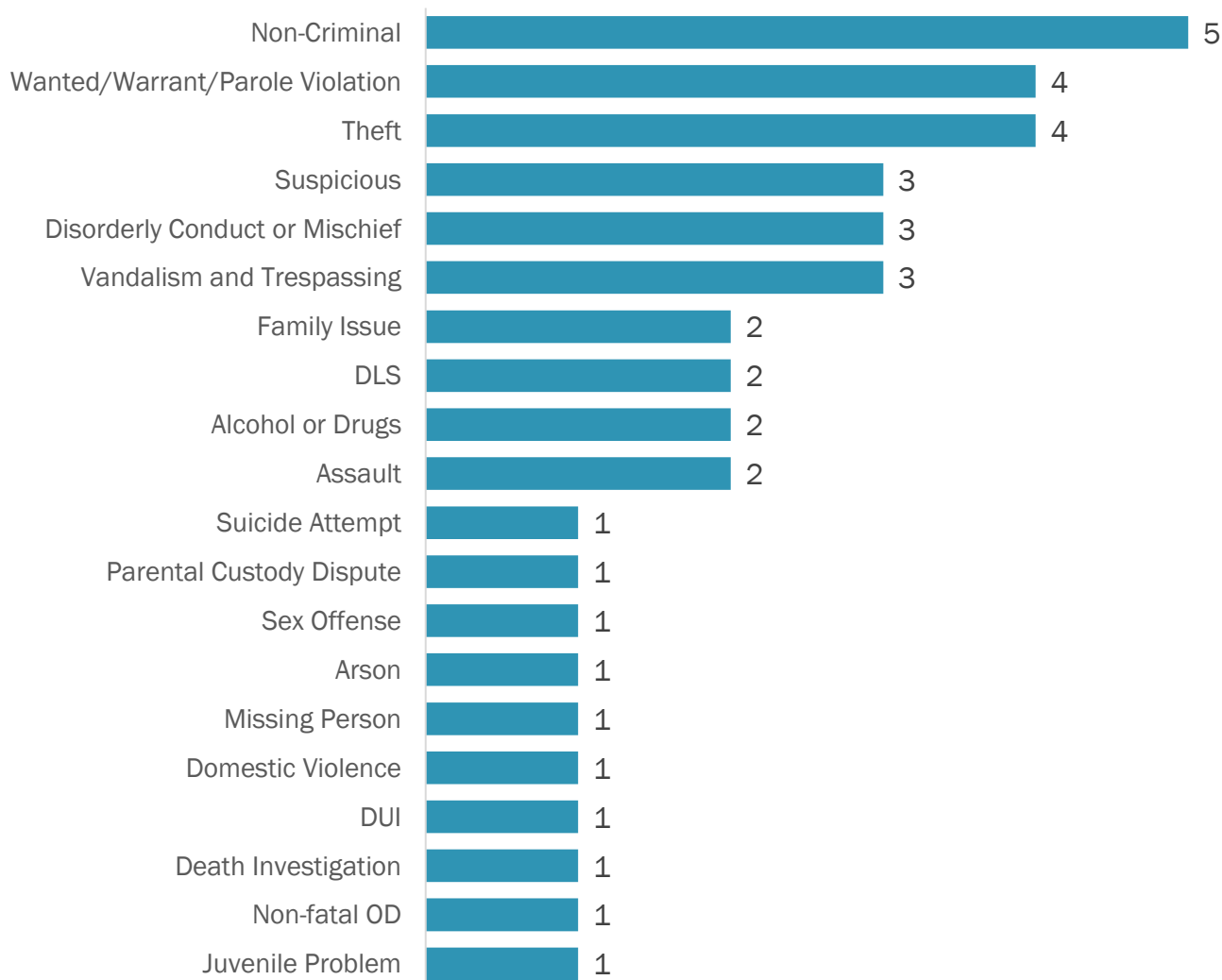
Alcohol or Drugs – 173

The top categories of interactions people had with Vermont State Police are similar to those reported in the FBI Crime Data Explorer for Vermont overall.¹⁶ Between 2010 and 2017, “other” offenses (excluding traffic offenses) accounted for the greatest proportion of arrests in Vermont, followed by DUI, simple assault, and larceny/theft. The population described in this report differs from that of Vermont overall in that public safety interactions involving assault were slightly less frequent compared to those who died of overdose. Although the data reported by the FBI exclusively refer to arrests, they are similar to the interaction types observed in this study.

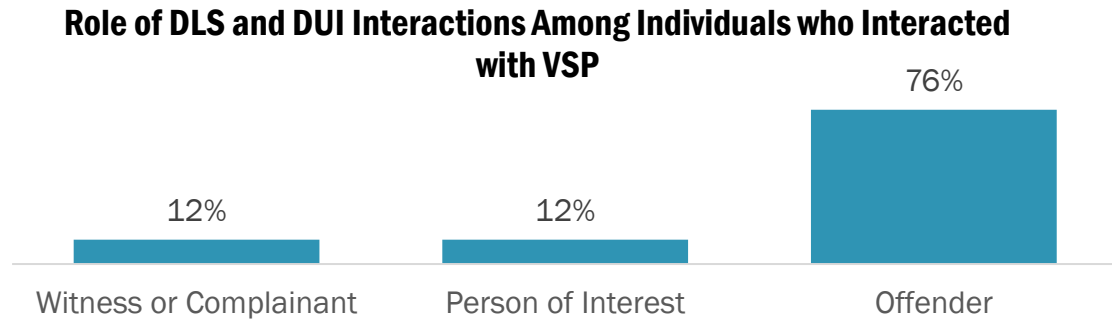
¹⁶ <https://crime-data-explorer.fr.cloud.gov/explorer/state/vermont/arrest>

Within the non-criminal/other category, people who died of an overdose had a median of 5 interactions. This is followed by theft/burglary/larceny cases (4 interactions), wanted/warrant/parole violations (4 interactions), and suspicious interactions (3 interactions). These medians further reflect how common these case types were among those who died of a drug overdose, regardless of whether the person was implicated as the offender. For most interaction types, the person was usually listed as the offender or a person of interest. Some interactions may be higher since some are included together such as theft and burglary.

Median Number of Interactions by Case Type for People who Died of a Drug Overdose in 2018



In cases of DUI and DLS, 76% of people were classified as an offender/arrestee/defendant, and 12% were a person of interest. Of note, a “person of interest” designation within the database does not always imply a suspicion that the person was involved as a possible offender in the case. Rather, the person could have been interviewed for additional information related to the case or they could have been named by another individual involved with the case.



How does this compare to 2017?

It is difficult to compare 2018 to 2017 for interactions involving Vermont State Police as the Health Department used different methodology to extract the 2018 DPS data in 2021 due to COVID-19. The categories with the most interactions were similar in both years. However, in 2018 there were more interaction categories.

Incarceration History

(Source: Department of Corrections)

Incarceration History Using Department of Corrections Data

The Department of Health partnered with the Department of Corrections (DOC) to determine whether any of the 131 people who died of a drug overdose in 2018 had been recently incarcerated. These data were also used to determine whether any people who died of drug overdose and had a history of incarceration had participated in a substance use screening during their incarceration. Notably, the DOC's medication assisted treatment (MAT) program was in a pilot phase in 2017 and allowed the continuation of all forms of federally approved MAT for inmates with a verified prescription. During the timeframe, continuation – rather than induction – was the only standard of care.

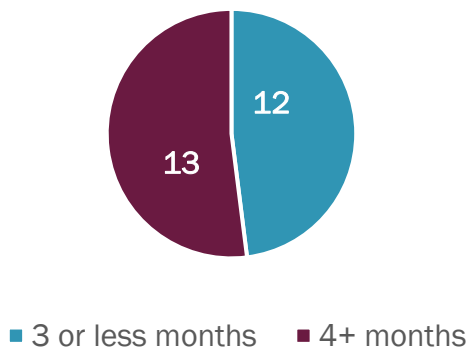
When Act 176 went into effect on July 1, 2018, the DOC was directed to continue all forms of federally approved and verified MAT, and to induct inmates on buprenorphine when it was medically necessary and the inmate elected to begin the treatment.¹⁷ Thus, there is limited MAT data for this cohort because the standard of care early in 2018 did not include inducting inmates on MAT while in a correctional facility.

Of the 131 people who died of a drug overdose in 2018, 25 (19%) had been incarcerated within one year of their death, with a median length of stay of 19 days for their most recent incarceration. Individuals with a recent incarceration were all white, predominately male (76%), and had a mean age of 35 years at the time of death.

Of the 25 people in 2018 with a recent history of incarceration, 20 (80%) were screened for substance-use disorder upon entering a correctional facility. Four of the individuals who were not screened were released from incarceration within 24 hours; one individual was not screened due to delays in Healthcare Receiving Screening and was released before screening could take place (released 3 days after incarceration).¹⁸ Screening for SUD has changed between 2016 and December 2018, at which time a new screening instrument was implemented.

Of these 25 people, 22 did not have a verified community-based MAT prescription and therefore did not receive MAT while in a DOC facility; one of the 25 received MAT in a facility. Again, MAT induction did not commence in DOC facilities until after July 1, 2018. In addition, 12, or roughly half (48%), of the 25 people died within the first three months after release from a correctional facility.

Months from Release from Incarceration to Death (N=25)



¹⁷ <https://legislature.vermont.gov/Documents/2018/Docs/ACTS/ACT176/ACT176%20As%20Enacted.pdf>

¹⁸ <https://doc.vermont.gov/sites/correc/files/documents/policy/correctional/351-healthcare-services.pdf>

It is important to note that the analyses in this report do not purport to fully describe the scope of, or reflect on, the DOC's current treatment practices of those with substance-use disorder within Vermont correctional facilities. Moreover, because the frequencies included in this report are very small (N=25), with little time spent within the correctional facility (median = 19 days), and use only one year of data, larger, longitudinal datasets are needed to draw predictive conclusions and provide a more comprehensive narrative.

How does this compare to 2017?

The percent of people who had a history of recent incarceration was similar (19% in 2018 vs 17% in 2017). In 2017 over half (58%) of the people overdosed within three months of release compared to less than half (48%) in 2018.

Impaired Driving Offenses

(Source: Impaired Driver Rehabilitation Program)

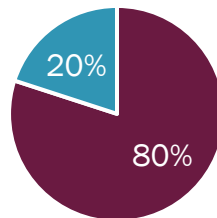
New for the 2018 Report: Impaired Driver Rehabilitation Program (IDRP)

IDRP is a program within ADAP that provides screening, education, and treatment services for people who have received a conviction for operating a motor vehicle under the influence of alcohol or other substances. People are not eligible to have their driver's license reinstated by the Department of Motor Vehicles until the person has successfully completed the IDRP. IDRP Clinical Evaluators screen individuals with a first offense to determine if additional SUD treatment with a licensed counselor is required.

Of the 131 people who died in 2018 of a drug overdose, 30 (23%) had an offense in the IDRP database between 2000 and 2018. Twenty-two were male (73%), and the average age at time of death was 42. Most of the offense types were first or juvenile (i.e., under 18 years old) offenders (80%) compared to multiple offenses (20%). This distribution is similar to the individuals who participated in IDRP in 2018.

Six individuals had more than one offense recorded in the IDRP database. It should be noted that a person with an impaired driving offense may plead down to a lesser charge such as negligent operation. As a result, it is possible for a person to have multiple "First Time" offenses, as some of these offenses were classified.

Percent by Type of Offense



■ First or Juvenile Offense ■ Second Offense

All IDRP participants are required to complete the IDRP class and are evaluated for possible referral to treatment with a licensed counselor. Of the 30 people who had at least one offense in the IDRP database, 87% had a completed assessment.

89% of individuals who attended an IDRP class completed it.

While the treatment component of IDRP falls outside of the scope of this report, all of the individuals who had an offense attended the IDRP class, and nearly all of the individuals completed the class (89%). This is similar to the overall percentage of IDRP clients completing the class.

How does this compare to 2017?

IDRP data were not included in the 2017 Social Autopsy report. Therefore, there is no comparison to data from that report.

Interactions with Mental Health Services

(Source: Department of Mental Health)

New for the 2018 Report: Interactions with the Department of Mental Health (DMH)

The Department of Health partnered with the Department of Mental Health (DMH) to identify and characterize interactions overdose decedents had with DMH prior to death. Out of all 131 people who died of a drug overdose, 28 (21%) interacted with DMH in 2018.

More than half of the primary diagnoses DMH reported for these individuals were substance use related, whereas one in four were mental health diagnoses. There were a few other types of diagnoses which made up a small percent of the total.



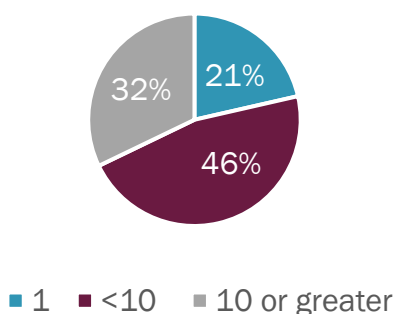
54% of the diagnoses were substance-use related.



39% were mental health diagnoses such as major depressive disorder and anxiety disorders.

Overall, the 28 individuals received a total of 709 services (i.e., individual interactions) with DMH before they died. One in five individuals received services with DMH only once while nearly half had between 2 and 10 services with DMH. One-third had 10 or more services with DMH.

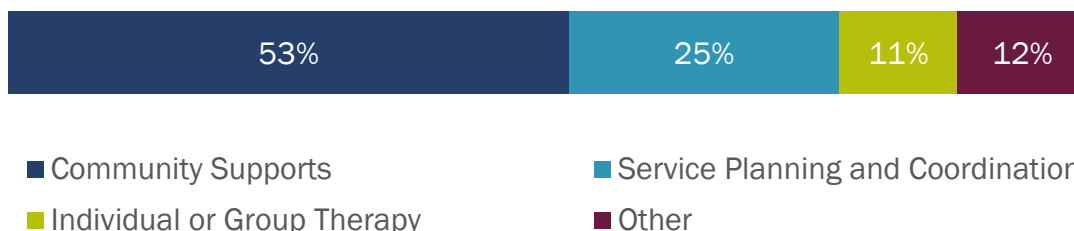
Frequency of Services Received by Individuals who Died of a Drug Overdose in 2018 (N=28)



Of the 709 services people who died of an overdose in 2018 received from DMH, the most common types of services received were community support services (53%). These services help people who have mental illness in their efforts to increase independent functioning and quality of life, by providing them with support, life skill development, access to local resources and treatment.

The next most common services received were service planning and coordination (25%) and individual or group therapy (11%). The remaining 'Other' service type is comprised of several other types of services that each account for a small percentage of the 709 interactions.

The type of services most frequently received by those who died of a drug overdose were community supports.



The 709 services most often took place in an office setting (65%). However, people also commonly received mental health services in their community (16%) and at home (15%). Few of these individuals received services in places such as schools and hospitals.

	Percent
Office	65%
Community	16%
Home	15%
Other (ER, schools, hospitals)	4%

How does this compare to 2017?

Department of Mental Health data was not included in the first Social Autopsy that analyzed 2017 data, and therefore cannot be compared. However, it is important to note that in January of 2020 DMH released its [VISION 2030: A Ten-Year Plan for an Integrated and Holistic System of Care](#), which includes action areas related to the data reviewed in the above section. The Ten-Year Plan is the result of a state-wide public engagement process that DMH carried out in 2019.

In the Ten-Year Plan, there are eight action areas, each with short-, mid-, and long-term strategies identified. Action Areas 4 and 5 address expanding access to community-based care and enhancing intervention and discharge services to Vermonters in crisis, both of which are likely to improve access to treatment and crisis intervention for people struggling with mental health and substance use disorder.

Action Area 4: This action area highlights the need to improve access to community-based care through expansion and enhancement of existing programming and exploration of promising approaches, especially in more rural areas. Initial steps we will take toward an integrated system with access for all who need it include the following:

- Assess gaps in our care continuum and use a data-driven approach to practice
- improvement and resource allocation
- Improve client navigation supports
- Increase outreach and education in communities

Action Area 5: This action area presents longitudinal strategies across three primary focus areas to improve crisis intervention, treatment and discharge planning: Access, Transitions, and Outreach & Coordination. Vermonters need additional supports in times of crisis. We must also provide needed and appropriate supports, interventions and planning that save both resources and lives.

Action Area 5 presents longitudinal strategies across three primary focus areas: Access; Transitions; Outreach and Coordination. Key requirements to achieve these strategies are below:

- Clear, consistent information and support for people in crisis
- Implementing practices that improve an individual's experience while in a crisis
- Education and training for community providers in trauma-informed, person-led care
- Strengthening prevention, care coordination, and hospital diversion programs
- Development of alternative options to utilization of emergency departments

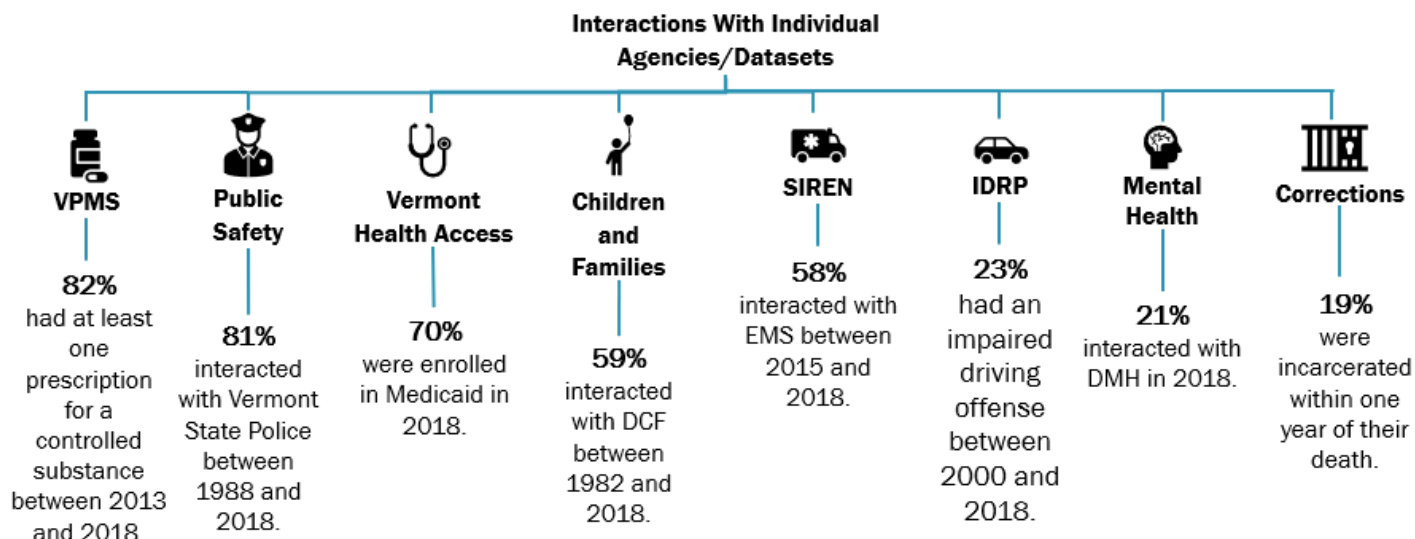
Overall Interactions

Overall interactions with state agencies or datasets prior to death

Five Department of Health datasets and data from five other State of Vermont agencies were included in this project. Data from Vital Statistics, State Unintentional Drug Overdose Reporting System (SUDORS), Statewide Incident Reporting Network (SIREN), Vermont Prescription Monitoring System (VPMS), and Impaired Driver Rehabilitation Program (IDRP) are managed by the Department of Health. Data from the Departments of Public Safety (DPS), Corrections (DOC), Vermont Health Access (DVHA), Mental Health (DMH) and the Department for Children and Families (DCF) were included as datasets external to the Department of Health.

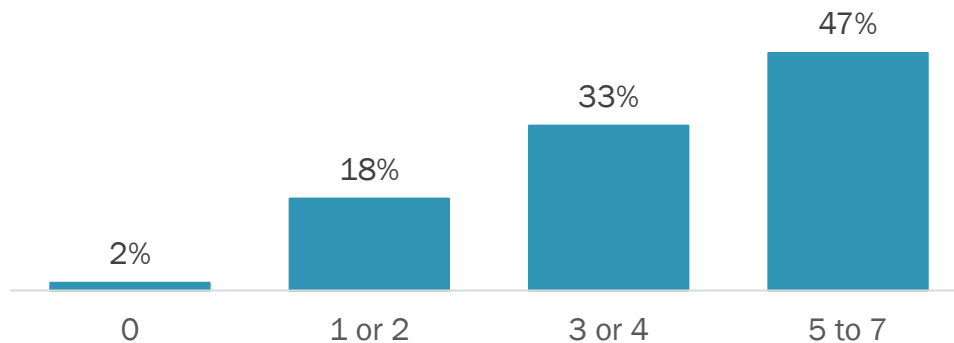
In addition to the analyses presented throughout this report related to each individual agency or dataset, interactions across agencies and datasets were also analyzed. This section excludes data from Vital Statistics and SUDORS because all 131 people are in each of these datasets, and this information is collected after death.

Overall, the largest proportion of people interacted with VPMS (82%), followed by DPS (81%) and DVHA (70%). The datasets referenced in this report varied in the years that were available for analysis. This likely impacted the number of involvements that were found among those in this study.



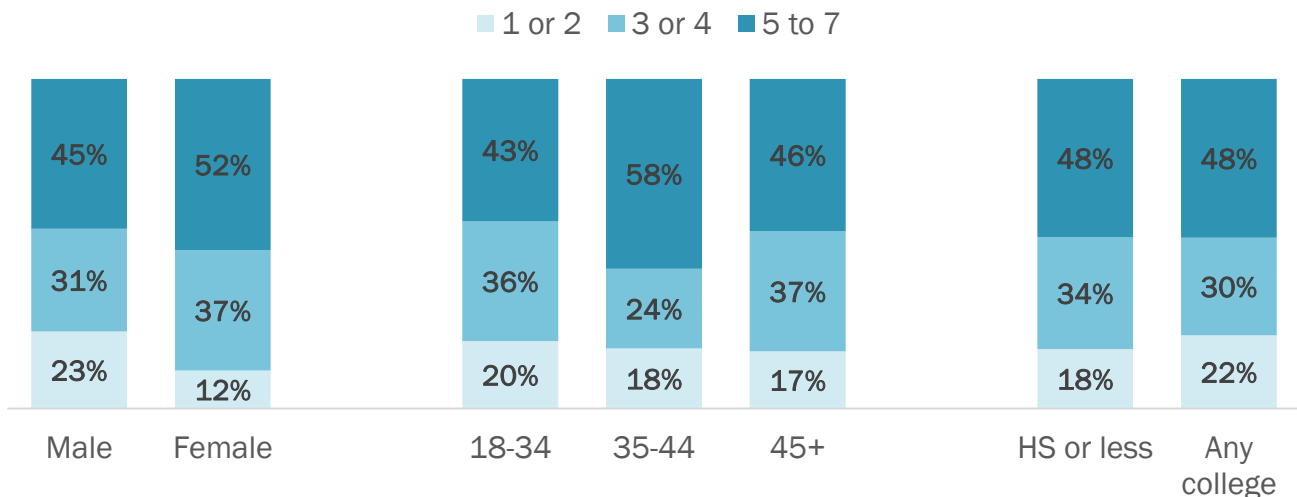
Nearly all of the 131 people who died of a drug overdose in 2018 interacted with at least one agency or dataset in the years before they died (98%). Because most people had interacted with either VPMS or DPS individually, this was expected. However, 80% of the 131 people interacted with three or more agencies or datasets in the years before they died. No one interacted with all eight agencies or datasets.

Number of State Agencies or Datasets Interacted with Before Death



Of the people who interacted with at least one agency or dataset, the demographic groups who interacted with the greatest number of agencies or datasets were women, individuals between the ages 35-44, and those who had a high school education or less. Of note, the number of agencies or datasets people interacted with did not significantly differ by demographic group.

Number of State Agencies or Datasets Interacted with by Sex, Age, and Education



How does this compare to 2017?

People who died in 2018 interacted with more agencies or datasets than those who died in 2017. However, the 2018 Social Autopsy includes two additional datasets (DMH and IDRP) which could be a reason for this difference. The demographic groups who interacted with the largest number of agencies or datasets were the same in 2017 and 2018.

Conclusions and Recommendations

Conclusions

The Vermont Social Autopsy Report provides a retrospective analysis of the interactions that people who died of drug overdose in Vermont in 2018 had with various State programs prior to death. Nearly all (98%) of the 131 people who died of a drug overdose in 2018 interacted with State of Vermont programs or datasets, with 80% having had interactions with three or more State programs. While the interactions that Vermonters who died of a drug overdose had with State programs may, or may not, have been related to their substance use, the points of contact represent opportunities for education and outreach about the risks of substance misuse and overdose, and overdose prevention.

The report also presents compelling overdose surveillance data that provides insights into the demography and context surrounding overdose deaths in Vermont in 2018. At the time of death, 90% of decedents were reported as having had substance use disorder. Further, toxicology screening data reveals that fentanyl continues to be the most common individual drug involved in drug-related fatalities. 73% of people who died of a drug overdose did so in their own home with 41% of decedents likely being completely alone when they overdosed. These data are of great value as we work to tailor our overdose prevention efforts to meet the needs of those at risk of overdose in Vermont.

To have a healthy Vermont, where people flourish, and addiction, suicide and chronic disease are rare, we must ensure people have access to the services that meet their needs. This can be accomplished through an iterative quality improvement process of data analysis, refining intervention methods, and ongoing quality measurement. Working on an integrated Vermont data system is key to success, with a focus on more participation and expanded linkages state-wide. This Social Autopsy Project is an example of such data integration that will be needed to improve targeted intervention and treatment. The following section includes recommendations from the commissioners of the state agencies that provided datasets for this report with a summary on the progress made since the last report was released. It must be noted that, due to the COVID-19 global pandemic, the recommendations included in the 2017 iteration of the Social Autopsy Report were not acted upon.

The next iteration of the Social Autopsy will include an analysis of deaths that occurred in 2019 and 2020. This will allow for trend analysis using data from 2017 through 2020, and subsequent reports will include more current data to inform future recommendations.

The Health Department will continue to explore where people who died of a drug overdose in 2019 or 2020 interacted with state systems and identify additional opportunities for intervention.

Recommendations

The following recommendations were included in the 2020 Social Autopsy Report:

Expand data collection and analysis to inform interventions.

- Enhance analytic capacity for identifying overdose trends by accessing additional datasets from partners such as the Impaired Driver Rehabilitation Program, Department of Motor Vehicles, Department of Mental Health, and local law enforcement.
- Continue to use the Vermont Prescription Monitoring System to inform prescribing quality improvement and education on non-opioid pain management among providers.

Establish and enhance linkages to care.

- Maintain standards of care defined in [Act 176](#), an act relating to the provision of Medication Assisted Treatment (MAT) for inmates, 2018.
 - Develop and maintain quality assurance measures and review processes for:
 - Timeliness and quality of assessment; medical necessity determinations; treatment plans
 - MAT Care Coordination at release
 - Assessing inmates who do not have a history of community-based MAT
 - Re-assessing inmates who have been medically removed from MAT while incarcerated and for whom a release date is known
- Collaborate with the Department of Vermont Health Access (DVHA) to ensure Medicaid enrollment at release to support continuity of care.
- Collaborate with DVHA to offer opioid use disorder chronic care coordination, post incarceration.
- Enhance connectivity for law enforcement and peer recovery counselors, embedded counselors, Emergency Medical Services, Emergency Departments (EDs) and Syringe Service Programs (SSPs) as potential sites for Rapid Access to MAT (RAM).
- Support the [Department of Mental Health's VISION 2030 Plan for Integrated and Holistic System of Care](#), specifically Action Areas 4 and 5, which address expanding access to community-based care and enhancing intervention and discharge services to Vermonters in crisis.

Integrate state and local prevention and response efforts.

- Work across state agencies to promote screening for substance use disorder and/or mental health as a standard of practice, with the goal of increasing access to applicable recovery and harm reduction services such as recovery centers, peer recovery programs, RAM in EDs, and SSPs.
- Engage leadership across the Vermont Agency of Human Services (AHS) in an overdose death prevention working group to explore cross-agency and cross-system strategies to share data, implement screening practices and connect people to resources and services.
- Address Adverse Childhood Experiences in adolescents and young adults who are using or are at risk of using substances through a collaboration with the Division of Maternal and Child Health and AHS Trauma Prevention and Resilience Development expertise.

Those recommendations were based on the findings of that initial, 2020 iteration of this report which analyzed 2017 data. The evolving COVID-19 global pandemic has altered the landscape of overdose prevention and response in Vermont. Despite the challenges posed by COVID-19, progress was made on the recommendations included in the 2020 report:

Expand data collection and analysis to inform interventions.

- Analytic capacity for identifying overdose trends was enhanced by including two new datasets from 2018 (Impaired Driver Rehabilitation Program and Department of Mental Health) were included in the 2021 version of the report.
- In May of 2021, Vermont connected to RxCheck, an interstate prescription drug monitoring program (PDMP) data integration system. By connecting with RxCheck, prescribers that use Vermont's PDMP, the Vermont Prescription Drug Monitoring System, will have a more comprehensive record of a patient's prescription history and improved ability to identify Vermonters at risk of substance misuse and overdose.
- Health Surveillance staff of the Vermont Department of Health have responded to community partners requests to timely and accurate data to inform local intervention efforts.

Establish and enhance linkages to care.

- Between August 1, 2020 and August 26, 2021, 8,513 harm reduction packs that include Narcan and other overdose prevention and risk reduction resources were distributed. New partnerships were developed to increase the distribution of these resources, enhancing the knowledge of resources and how to access these resources both amongst those receiving the Harm Reduction Packs, as well as the new organizations distributing those. This in turn may increase access overall with more organizations understanding and having the ability to support Vermonters in access those resources.
- In August 2020 a new protocol was implemented that requires all Vermont EMS providers to offer overdose prevention education, and Narcan to individuals or their friends and family members at the scene of a non-fatal opioid overdose and in other situations in which opioid use could be indicated. Included in the Narcan Leave Behind Kits is information on how to access treatment, harm reduction, and recovery services throughout Vermont. This program will be implemented by several Vermont law enforcement departments in calendar year 2022.
- New Rapid Access Medication Assisted Treatment (RAM) sites have been brought online over the last year to improve timely access to MAT. The twelve sites currently offering RAM enhances Vermont's hub and spoke treatment system for OUD by smoothing the pathways for Vermonters to access and remain in treatment resulting in a reduction in the number of days between when a Vermonter with OUD first makes contact with a treatment provider and the date they receive their first dose of medication.
- The Vermont Department of Corrections has made significant progress in ensuring our incarcerated population has access to the medication assisted treatment to support their pathway to recovery while incarcerated and creating bridges to continued treatment following their release.

- Act 176, enacted in 2018, allows for individuals who are incarcerated the opportunity to continue their MAT treatment of opioid use disorder if receiving MAT when incarcerated, or to begin treatment upon incarceration if medically indicated.
- Since the inception of Act 176 in 2018, which allows for individuals who are incarcerated to continue their MAT treatment of opioid use disorder if receiving MAT when incarcerated, or to begin treatment upon incarceration if medically indicated, 1,506 individuals in DOC custody began MAT while incarcerated, helping to meet a currently unmet need for these individuals.
- In total, 2,571 individuals leaving incarceration have worked with DOC to continue their treatment once released. DOC staff work with community providers and the individual leaving incarceration to ensure a pathway to continued treatment upon release, lowering the risk of overdose for these individuals, and increasing the chances of continued recovery.

Integrate state and local prevention and response efforts.

- Eleven Linkage to Care Enhancement Grants were awarded to address community-identified overdose risks related to COVID-19, with priority being to enhance connectivity among law enforcement and peer recovery counselors, embedded counselors, Emergency Medical Services, Emergency Departments (EDs) and Syringe Service Programs (SSPs).
- The Division of Alcohol and Drug Abuse Programs of the Vermont Department of Health held 12 regional community roundtables, facilitated by Deputy Commissioner Kelly Dougherty, Division Director Cynthia Seiwright, and our 12 regional [Prevention Consultants](#) to gather community-level feedback on the evolving needs of our substance misuse, prevention, harm reduction, and recovery partners. The information gathered is being used to inform immediate response efforts and ongoing planning.

The forthcoming 2022 version of this report will include 2019 and 2020 data which will allow for trend analyses that will include all data from 2017 through 2020 included in the Social Autopsy Reports. The recommendations included in that report will be updated based on more current data, addressing more recent needs.