

Vermont Social Autopsy Report

2019-2020 Data Analysis

August 2022



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 people 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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Executive Summary

The Vermont Social Autopsy Project was created to identify trends in how Vermonters who died of a drug overdose (including all legal and illicit drugs and alcohol) interacted with state systems prior to death to identify opportunities for intervention. This third iteration of the Social Autopsy Report examines interactions for people who died of overdose in 2019-2020. While the report provides data for each year separately, any percentages listed on this executive summary are from the 2020 data unless otherwise stated.

Overdoses most often involved fentanyl and took place at a home or alone.

- 74% of overdoses involved fentanyl, with combinations being common (29% fentanyl and cocaine; 22% fentanyl and heroin; 13% fentanyl and prescription opioids).
- 69% of overdoses occurred at a home, and 60% of deaths were at a home.
- More than half (52%) of those who died had no bystander present and drug use was not witnessed.

KEY POINTS

Of the 172 Vermonters who died of overdose in 2020:

- Fentanyl was involved in 74% of overdoses
- Most (82%) had a substance use disorder
- Nearly all (99%) interacted with at least one agency or data set
- Most (87%) interacted with three or more agencies or data sets

The majority of people who died of overdose were involved with the Vermont Medicaid Program and had a prescription for a controlled substance.

In 2020, of people who died of overdose:

- 64% had been enrolled in Medicaid within 90 days of death.
- Of those enrolled in Medicaid, 65% had a claim related to substance use in the past year.
- 85% had a controlled substance prescription within the six years prior to their death.
- 61% had a controlled substance prescription within one year of death.
- 28% had an active controlled substance prescription at the time of death.
- 26% had an active stimulant prescription at time of death in 2020, a striking increase compared to previous years (12% in 2019).

Most Vermonters who died of overdose had a mental health condition or substance use disorder.

According to data from State Unintentional Drug Overdose Reporting System (SUDORS),

- 92% had a substance use disorder.
- 32% had an alcohol use disorder.
- 52% had any mental health diagnosis.
- 26% had two or more mental health diagnoses.

According to data from the Department of Mental Health:

- 16% of people who died of overdose in 2020 (44% in 2019) interacted with a Vermont Designated Agency or Specialized Service Agency at some point before they died.
- Department of Mental Health services for substance-use related claims dropped from 38% in 2019 to 11% in 2020, while services related to severe stress (likely due to COVID-19) increased from 18% in 2019 to 25% in 2020.
- More than half (52%) of services received through the Department of Mental Health were community supports.

Nearly all people who died of overdose interacted with Emergency Medical Services, Vermont State Police, Department of Corrections, or the Impaired Driver Rehabilitation Program (IDRP).

Of people who died of overdose in 2020:

- 63% had at least one prior interaction with EMS between 2015 and their date of death
 - 61% of people who interacted with EMS prior to their overdose had interactions related to substance use.
 - 78% of people who interacted with EMS prior to their overdose either were declared dead on scene or died in the hospital after being transported by EMS.
- 85% interacted with Vermont State Police since 1988, with a median of 7 interactions, the most common type being non-criminal/other categories.
- 13% had been incarcerated within one year of their death, with a median stay of 10 days. People who had been incarcerated were predominantly male (73%), white (86%), and had a mean age of 43 years at time of death.
- 28% interacted with IDRP; of those, 94% who had at least one offense completed a screening.

**Additional information
including trend data
follow in the full 2019-
2020 Social Autopsy
Report**

Takeaway

The extensive data collected for this report present potential points of interest for screening, intervention, education, or outreach about the risks of substance use and overdose prevention. While many factors remained the same compared to previous years, some things were presumably affected by COVID-19 such as Department of Mental Health service utilization. Recommendations can be found in the following section, and trend data for all sections of the report are in the appendices.

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Recommendations

The following recommendations have been informed by the 2019-2020 Vermont Social Autopsy Report and were developed in collaboration with the departments and programs involved in the creation of the report.

1. Expand data collection and analysis to inform interventions.

- **Social Autopsy Report expansion** – Explore additional datasets that could be incorporated into future Social Autopsy Reports to provide additional context, such as Vermont Health Information Exchange (VITL), Vermont Health Care Uniform Reporting and Evaluation System (VHCURES), and Department of Motor Vehicles.
- **State Unintentional Drug Overdose Reporting System** – Create a social worker role at the Office of the Chief Medical Examiner to work with families and loved ones following an overdose death and collect additional data on the circumstances leading up to the overdose. This position and work will allow for improved data collection and more complete analysis to have a clearer focus on prevention.
- **Work-related risk factors** - Certain occupations and industries (such as construction and services) are high risk for overdose. The risk factors related to these trends should be further studied, along with protective factors and prevention strategies that could be strengthened in these groups.
- **Fentanyl and overdose lethality** – Fentanyl continues to play a disproportionate role in overdose fatalities in Vermont. Much work has been done to expand overdose prevention activities in Vermont. An analysis of overdose lethality over time is recommended to determine whether more people are overdosing as a whole or whether overdoses related to fentanyl appear to be making overdoses more fatal.
- **Treatment regimen enhancements** – Overdose recurrences are common, with one out of five individuals in this report having a history of a previous overdose. A study is recommended of the treatment needs for individuals who have repeat overdoses to determine whether this higher risk population has special treatment needs. This could include tracking needs for more escalated treatment regimens from the start and comparing rates stratified by original induction regimen.

2. Establish and enhance linkages to care.

- **Family Services Division, Department for Children and Families** – Vermont Family Services provide more focused substance use intervention for current and future youth with a DC (delinquent) or UC (unmanageable) case type. When looking at people who died of overdose in 2019 and 2020 and who had been in custody at some point as a child, the custody case type stands out. In 2019, 15% of people who died of overdose had been in custody as a child, and 12% in 2020. Of the 15% in 2019, 57% had a delinquent or unmanageable custody case type, and 88% in 2020.

- **Impaired Driver Rehabilitation Program** – Look more closely at the programming and treatment recommendation for young people who are charged with impaired driving offenses.
- **Department of Mental Health and Department of Health, Division of Substance Use Programs** – Collaboration between the Department of Mental Health and Division of Substance Use Programs for enhanced coordination and collaboration to apply the preferred provider required use of the American Society of Addiction Medicine (ASAM) criteria to all people seeking care. Additionally, the development and implementation of a triage tool fully consistent with ASAM criteria to be utilized by non-preferred provider program certified designated agencies upon initial inquiry for treatment or crisis contact with a person who has an identified substance use disorder. This would be whether substance use is the primary reason for contact or not, to determine provisional level of care recommendations focused to both optimize patient treatment and minimize risk outcomes. This recommendation is based on data showing that appropriate addiction treatment matching is linked to lower no-show rates and increased retention in treatment rates.¹

3. Integrate state and local prevention and response efforts.

- **Expand SBINS (Screening, Brief Intervention, and Navigation to Services)** - Focus on better integrating mental health with overall health and healthcare, recognizing the high rates of “co-occurring” disorders between substance use and mental health. There is a need for AHS-wide efforts to screen for both substance use disorders and mental health and refer to services as appropriate.
- **Wraparound care following release from an institution** – Findings in this report demonstrate a significant number of cases of overdose following release from an institution. More deliberate support should be focused on those at high risk of overdose following release from any institution, whether a correctional facility, residential treatment facility, or hospital.
- **First Responders** – Strengthen initiatives such as the Leave Behind Packs distributed by EMS and/or law enforcement following an overdose interaction. These packs can be utilized by a patient who refuses transport or by those around the patient who may also be at an increased risk of overdose. Explore and encourage other initiatives for first responders of overdose.
- **Statewide coordination of efforts and messaging** – Continual collaboration between AHS state agencies, other state agencies, and organizations throughout Vermont to address prevention and overall health. One approach could be reaching out to the Vermont Department of Labor and OSHA to examine the risks inherent in the

¹ Stallvik M, Gastfriend DR, Nordahl HM. Matching patients with substance use disorder to optimal level of care with the ASAM Criteria software. J Subs Use. 2015;20(6):389-98; Angarita GA, Reif S, Pirard S, Lee S, Sharon E, Gastfriend DR. No-Show for Treatment in Substance Abuse Patients with Comorbid Symptomatology: Validity Results from a Controlled Trial of the ASAM Patient Placement Criteria. J Addict Med;1(2):79-87

construction industry. Another could be increasing messaging around overdose prevention efforts, such as the KnowOD campaign.

Previous Recommendations: Continuous Quality Improvement Opportunities

1. Expand data collection and analysis to inform interventions.

- Enhance analytic capacity for identifying overdose trends by accessing additional datasets from partners.
- Continue to use the Vermont Prescription Monitoring System to inform prescribing quality improvement and education on non-opioid pain management among providers.

2. Establish and enhance linkages to care.

- Maintain standards of care defined in [Act 176](#), an act relating to the provision of Medication for Opioid Use Disorder (MOUD) for inmates, 2018.
- Enhance connectivity for law enforcement and peer recovery counselors, embedded counselors, EMS, emergency departments, and syringe service programs (SSPs) as potential sites for Rapid Access to MOUD (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.

3. Integrate state and local prevention and response efforts.

- Work across state agencies to promote screening for substance use disorder and 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 Agency of Human Services 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 (ACEs) in adolescents and young adults who are using or are at risk of using substances through a collaboration with the Health Department, Division of Maternal and Child Health and Agency of Human Services Trauma Prevention and Resilience Development expertise.

Introduction

The Vermont Social Autopsy Project began in 2020 by analyzing data from Vermont residents who died of accidental or undetermined drug overdoses in Vermont in 2017.² The goal of this project is to identify trends in how Vermonters who died of a drug overdose interacted with state systems prior to their death. These trends can inform opportunities for intervention. The 2019-2020 Vermont Social Autopsy Report is the third edition in the series and examines points of contacts for people who died of an accidental or undetermined drug overdose in Vermont in 2019 (N=113) and 2020 (N=172).

For this iteration of the Report, the Vermont Department of Health partnered with the departments of Corrections, Vermont Health Access (Medicaid), Public Safety, Mental Health, and the Department for Children and Families to examine people who died of a drug overdose in 2019 and 2020 and their involvement with the programs managed by each department. Programs within the Health Department that contributed to this report include Vermont's Vital Statistics program, the Division of Substance Use Programs (formerly Alcohol and Drug Abuse Programs), the Vermont Prescription Drug Monitoring System, Emergency Medical Services, the Impaired Driver Rehabilitation Program, and the Office of the Chief Medical Examiner.

These departments and programs are key partners in overdose prevention. Trained front-line staff screen clients for substance use disorders and, when indicated, refer them for intervention and treatment. The Department of Corrections implemented medication for opioid use disorder treatment programs in correctional facilities, and DVHA partnered with the Health Department's Division of Substance Use Programs to develop Vermont's nationally recognized Hub and Spoke system for treating opioid use disorder (OUD).³

CONTRIBUTING PARTNERS

Vermont Department of Health

- Commissioner's Office
- Health Statistics and Informatics
- Laboratory Sciences and Infectious Disease
- Substance Use Programs
- Emergency Preparedness, Response and Injury Prevention

Office of the Chief Medical Examiner

Department of Corrections

Department for Children and Families

- Economic Services
- Family Services

Department of Vermont Health Access

Department of Mental Health

Department of Public Safety

- Vermont Intelligence Center

² Overdose data published by the Department of Health typically refer to Vermont residents regardless of where they died (i.e., deaths that occurred in Vermont *and* out of state). Therefore, the data presented in this report will differ from other overdose data reports on the Department of Health website.

³ <https://www.healthvermont.gov/response/alcohol-drugs/treating-opioid-use-disorder>

Methodology

In preparation for the [first iteration of this report](#), which analyzed 2017 data and was released in 2020, the Health Department approached each partner department separately to explain the project concept and goals. Partners were asked to identify measures that would best represent the intersection between people who overdosed, their 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 worked with each partner to select the measures to be included in the analysis and to validate the findings and conclusions in the report.

After identifying the measures, the project team received approval from the Agency of Human Services Institutional Review Board (IRB) to assure the privacy of the people 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 the Department for Children and Families, Department of Corrections, 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 Department of Public Safety and Medicaid data sets and completed the data analysis.

Upon completion of analysis, the findings were disseminated to the commissioners and contributing staff of the partner agencies, as well as Department of Health staff and leadership, for their review. The recommendations at the conclusion of the report were collaboratively developed during the final review process.

A [second iteration of the Social Autopsy](#) analyzed data from 2018 and was released in October 2021. This iteration involved the same stakeholders and methodology as the previous report and added data from the Department of Mental Health and the Impaired Driver Rehabilitation Program, which is a program administered by the Health Department.

This third and current iteration involves the same stakeholders and methodology as previous reports. This report includes data from both 2019 and 2020 to improve timeliness of the report. Additionally, the collaborating departments contributed more directly to the formation of recommendations outlined at the end of the report. As a result of these enhancements, recommendations published in this, and future iterations will be even more relevant and impactful than previous reports.





Death Certificate Information

(Source: Vermont Vital Statistics System)

Demographic profile of people who died of overdose in 2019 and 2020:

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 (i.e., overdose deaths that are not classified as suicide or homicide). This information was also linked to the other data sources used in this report. The people included in this report are Vermont residents who died in Vermont in 2019 and 2020, with data separated by year of death where appropriate.

Between 2019 and 2020, 285 Vermonters died of a drug overdose in Vermont (113 in 2019 and 172 in 2020). Most Vermonters who died of overdose had a high school education or less (71% in 2019 and 70% in 2020), were male (66% in 2019 and 69% in 2020), never married (65% in 2019 and 59% in 2020), between the ages of 25 and 44 at the time of death (58% in 2019 and 49% in 2020), and white and non-Hispanic (89% in 2019 and 97% in 2020).

Demographics of Vermonters Who Died of Drug Overdose		2019	2020
	High School or Less	71%	70%
	Any College	29%	30%
	Male	66%	69%
	Female	34%	31%
	Never Married	65%	59%
	Divorced/Separated	21%	27%
	Married	12%	13%
	Widowed	3%	2%
	<18	0%	1%
	18-24	6%	4%
	25-34	27%	26%
	35-44	31%	23%
	45-54	21%	29%
	55+	14%	17%
	White, non-Hispanic	89%	97%
	BIPOC	11%	3%

Demographics of people who died from an overdose are significantly different compared to others who died of any other cause of death in 2019 (N=5,254) and 2020 (N=5,784). In both years, most Vermonters who died were white and non-Hispanic (98% in 2019 and 2020), half were male (51% in 2019 and 52% in 2020), and 62% had a high school education or less (percentage is the same in 2019 and 2020). Vermonters who died of overdose died at a younger age than other Vermonters, with fewer who died of overdose being over 55 (14% in 2019 and 17% in 2020) compared to Vermonters who died overall (90% in 2019 and 89% in 2020).

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

Death certificate data were analyzed to identify commonly occurring drugs and drug combinations contributing to fatalities that were identified through toxicology screening. In most cases, people who died of overdose had an opioid in their system that contributed to their death (87% in 2019 and 85% in 2020). Fentanyl was the most frequently identified individual drug (74% in 2019 and 2020), followed by cocaine (44% in 2019 and 39% in 2020) and heroin (29% in 2019 and 23% in 2020).

Five Most Common Individual Drugs Identified in Vermonters Who Died of Drug Overdose

2019	2020
1. Fentanyl (74%)	1. Fentanyl (74%)
2. Cocaine (44%)	2. Cocaine (39%)
3. Heroin (29%)	3. Heroin (23%)
4. Prescription Opioids (excludes Fentanyl) (26%)	4. Prescription Opioids (excludes Fentanyl) (22%)
5. Alcohol (15%)	5. Prescription Stimulants (10%)

Most people who died of overdose had multiple drugs in their system when they died. Because fentanyl is the most frequent individual drug associated with drug overdose death, the most common combinations involved fentanyl.

Five Most Common Drug Combinations Identified in Vermonters Who Died of Drug Overdose

2019	2020
1. Fentanyl and Cocaine (35%)	1. Fentanyl and Cocaine (29%)
2. Fentanyl and Heroin (27%)	2. Fentanyl and Heroin (22%)
3. Fentanyl and Prescription Opioids (15%)	3. Fentanyl and Prescription Opioids (13%)
4. Cocaine and Heroin (12%)	4. Cocaine and Heroin (7%)
5. Fentanyl, Cocaine, and Heroin (12%)	5. Alcohol and Fentanyl (7%)

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




Death certificates include information about the industry and occupation of people 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 or retired 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 collected consistently, and some data are missing. All percentages presented in this section are out of the 113 people who died of overdose in 2019 and the 172 who died in 2020, although 23% of death certificates were missing this information in 2019 and 19% were missing in 2020. The ‘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.”⁴ 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.

Although there is no indication on the death certificate of 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 people’s death certificates typically employ workers part-time or seasonally. These positions tend to be lower-paying and more physically demanding. Additionally, while many positions switched to remote or hybrid work to protect workers from COVID-19 in 2020, the jobs worked by people who died of overdose may have been less likely to allow work from home.

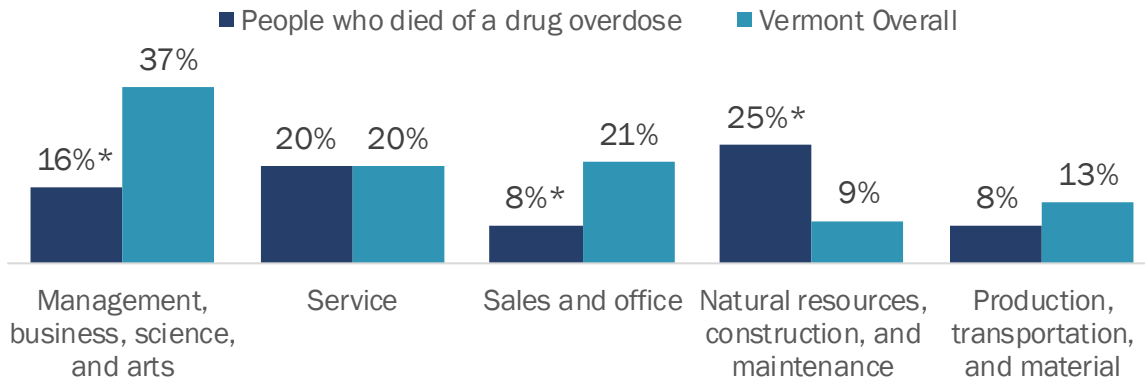
According to the Bureau of Labor Statistics, only 5% of Vermonters worked in the construction industry in 2019 and 2020, while about one out of five Vermonters who died of drug overdose worked in this industry (23% in 2019 and 22% in 2020). In 2019 and 2020, the most common industries where people who died of overdose worked, after construction, were accommodation and food services (12% in 2019 and 13% in 2020), and health care and social assistance (8% in 2019 and 9% in 2020).

Industry of Vermonters Who Died of Drug Overdose		2019	2020
	Construction	23%	22%
	Accommodation and Food Services	12%	13%
	Health Care and Social Assistance	8%	9%

⁴ <https://www.census.gov/topics/employment/industry-occupation/about/faq.html>

Compared to other Vermonters working in 2019, a significantly higher proportion of people who died of a drug overdose in 2019 worked in occupations related to “natural resources, construction, and maintenance” (25% vs 9%), while significantly fewer worked in “management, business, science, and arts” (16% vs 37%) or “sales and office” (8% vs 21%) occupations.

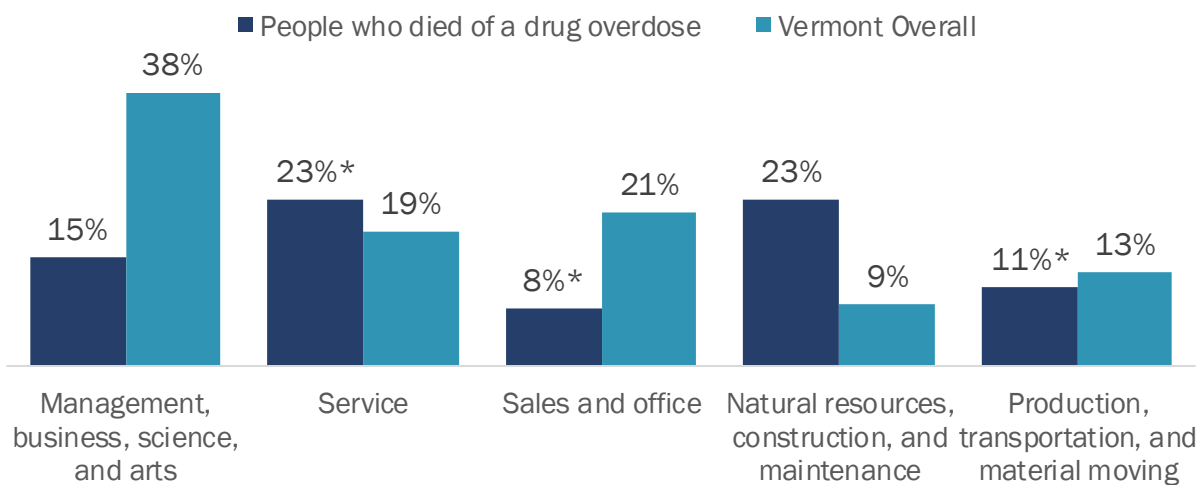
Occupation of People Who Died of Drug Overdose Compared to Vermont Overall in 2019



*Indicates a statistically significant difference.

Occupations in 2020 were similar to 2019 – a significantly higher proportion of people who died of overdose worked in construction occupations than Vermont overall (23% vs 9%), and a lower proportion worked in management (15% vs 38%) and sales occupations (8% vs 21%).

Occupation of People Who Died of Drug Overdose Compared to Vermont Overall in 2020



*Indicates a statistically significant difference.

Overdoses most frequently occurred at home.

The place of injury on a person's death certificate describes where the overdose occurred. Most people experienced a fatal overdose in their home or a friend's home (86% in 2019 and 69% in 2020). Overdoses were more likely to occur at a motel in 2020 (9%) than in 2019 (4%), while some overdoses occurred in other specified locations or were not known (7% in 2019 and 16% in 2020). People without housing were provided housing at motels through the General Assistance Program during the COVID-19 pandemic. This is likely a reason for the increase in overdoses occurring at motels between 2019 and 2020.

Place of Injury Among Vermonters Who Died of Drug Overdose				
	2019		2020	
	Frequency	Percent	Frequency	Percent
At a home	97	86%	119	69%
Motel	4	4%	16	9%
Parking lot/car	2	2%	9	5%
Work/business	2	2%	1	1%
Other/unknown	8	7%	27	16%

The place of death may be different from where the overdose occurred. Most people died at either their home or a friend's home (68% in 2019 and 60% in 2020), while some died at a hospital in either the emergency room, intensive care unit, or as an inpatient (13% in 2019 and 14% in 2020).

Place of Death Among Vermonters Who Died of Drug Overdose				
	2019		2020	
	Frequency	Percent	Frequency	Percent
At a home	77	68%	103	60%
Emergency room	9	8%	7	4%
Inpatient	4	4%	9	5%
Hospital intensive care unit	1	1%	8	5%
Other	22	19%	45	26%

How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 60](#).

History and Circumstances Surrounding Overdose

(Source: State Unintentional Drug Overdose Reporting System)

State Unintentional Drug Overdose Reporting System (SUDORS)

SUDORS collects detailed information on accidental and undetermined deaths from drug overdose using death certificates, law enforcement reports, and medical examiner reports (including toxicology results). This database includes demographics, overdose-specific circumstances, substances present on toxicology, and other reported drug overdose risk factors. While there is a 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, it is possible that any given circumstance could be underestimated.

Social Determinants of Health

Social determinants of health are the social, economic, and physical environments that affect a wide range of health, functioning, quality of life, risks, and outcomes.⁵ 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 (i.e., substance use disorder), food, and transportation.^{6,7} Throughout this report, there is clear illustration of the health disparities that exist among Vermonters who died of drug overdose. When available, comparisons are made to the Vermont adult population as a whole to look at differences and disparities from people who died of a drug overdose. These comparison values are from the Vermont Behavioral Risk Factor Surveillance System (BRFSS), an annual randomized survey of Vermont adults (age 18 and older).⁸

Social Determinants of Health Among Vermonters Who Died of Drug Overdose				
	2019		2020	
	Vermonters who Died of Overdose	VT Adults Overall	Vermonters who Died of Overdose	VT Adults Overall
Substance use disorder	95%		92%	
Alcohol use disorder	30%		32%	
Educational attainment of high school or less	71%	38%	70%	37%
Last heard from two or more days before their death	17%		13%	
Unemployed at the time of death	25%	4%	22%	6%
Without housing at the time of death ⁹	10%		8%	

⁵ https://www.healthvermont.gov/sites/default/files/documents/pdf/PLN_HE_Glossary.pdf

⁶ http://www.euro.who.int/data/assets/pdf_file/0005/98438/e81384.pdf

⁷ 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.

⁸ <https://www.healthvermont.gov/health-statistics-vital-records/population-health-surveys-data/brfss>

⁹ 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.

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. When available, comparisons are made to the Vermont adult population as a whole to look at differences and disparities from people who died of a drug overdose using BRFSS data.

Health Conditions Among Vermonters Who Died of Drug Overdose¹⁰				
	2019		2020	
	Vermonters who Died of Overdose	Vermont Adults Overall	Vermonters who Died of Overdose	Vermont Adults Overall
Mental Health				
Any mental health diagnosis	44%		52%	
2+ mental health diagnoses	20%		26%	
Depression	31%	22%	28%	23%
Anxiety	15%		27%	
History of suicidal thoughts	10%		9%	
Ever attempted suicide	9%		6%	
Chronic Conditions				
Hypertension	24%	26%	24%	25%
Heart disease	17%	9%	20%	8%
Diabetes	11%	9%	10%	8%
Asthma	10%	12%	11%	11%
COPD	15%	7%	16%	6%
Back pain	9%		7%	
Other chronic pain	17%		13%	
Hepatitis C	11%		10%	
Weight				
Underweight	4%	2%	5%	2%
Normal	31%	39%	42%	36%
Overweight	31%	32%	25%	35%
Obese	34%	27%	28%	27%

¹⁰ 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. Therefore, they are likely to be underreported.

Type of Overdose

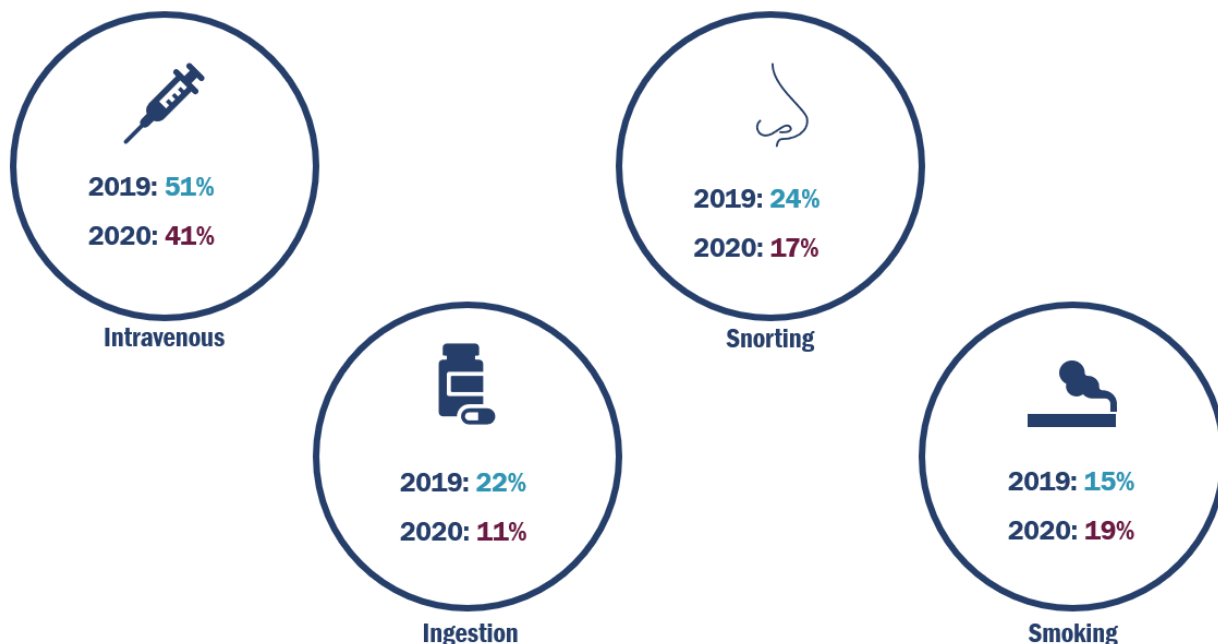
SUDORS categorizes the type of overdose by capturing the context in which the drugs contributing to the fatal overdose were used by the person who died. The purpose is to understand the circumstances surrounding the person's overdose. In both 2019 and 2020, nearly all Vermonters who died of a drug overdose had a substance use disorder, which may, or may not have been clinically diagnosed (96% in 2019 and 93% in 2020).

In 2019, 2% had an overdose related to taking a higher dose of medication than they were prescribed and 2% had insufficient information to determine the type of drug overdose. In 2020, 3% of fatal overdoses were related to overmedication from prescribed medications, 1% were related to unintentionally taking a drug or the wrong dose, and 2% had insufficient information to determine the type of overdose.

Risk Factors for Overdose

Method of Use¹¹

Intravenous drug use is a risk factor for death, including death by overdose. In 2019, scene evidence suggested that the most common methods of use among Vermonters who died from drug overdose were intravenous (51%), snorting (24%), and ingestion (22%). In 2020, the most common methods of use were intravenous (41%), smoking (19%), and snorting (17%).

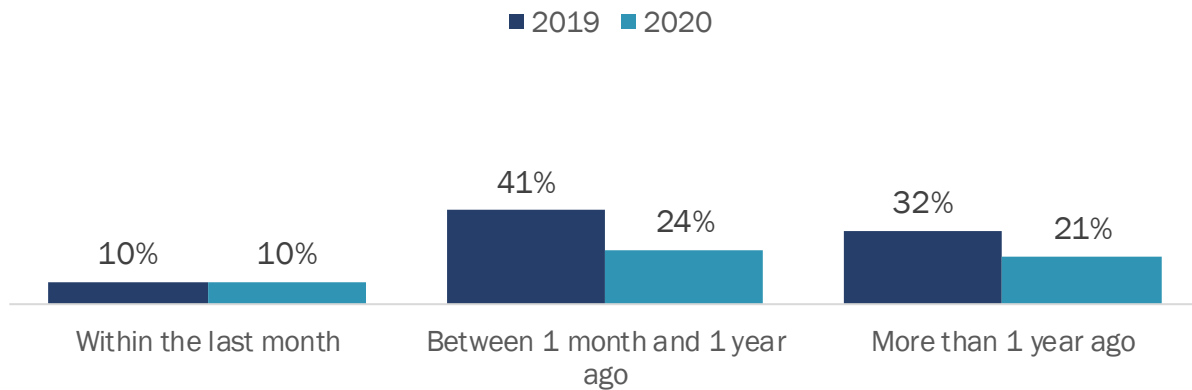


¹¹ There may have been evidence of more than one method of use; the route by which each substance was administered is unknown; there may be evidence of a method of use for a substance that did not contribute to the person's death; or there may be no scene evidence of the method of use for a substance that contributed to the person's death.

History of Overdose

A history of a previous overdose was reported for about one-fifth of Vermonters who died of overdose (20% in 2019 and 17% in 2020). Some people who had previously overdosed had done so more than a year before they died (32% in 2019 and 21% in 2020), while others had overdosed in the month before their death (9% in 2019 and 10% in 2020).

Among the 20% of Vermonters who overdosed in 2019 and the 17% who overdosed in 2020, the previous overdose occurred...



History of Recurrence of Use

In 2019, 17% of Vermonters who died of a drug overdose had a history of opioid use recurrence, defined as starting to use opioids again after a period of abstinence. Similarly, 21% of Vermonters who died of a drug overdose in 2020 had a recurrence in use. Many people who had returned to use did so within the two weeks before their death (26% in 2019 and 40% in 2020). Six percent of people who returned to use and died in 2020 did so between two weeks and three months before their death. Timing of return to use was unknown for the remaining people who had done so prior to their death.

Release from an Institution

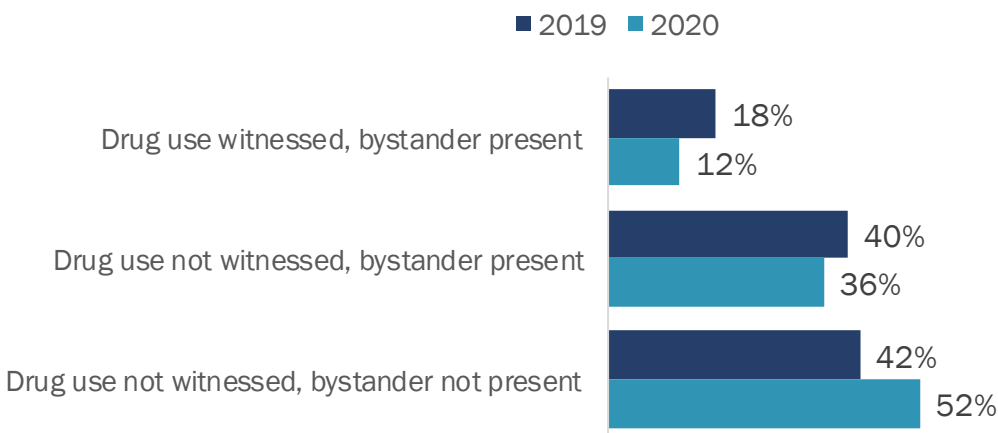
People recently released from an institution (e.g., correctional facility, residential treatment facility, or hospital) may be at elevated risk for overdose since their body may not tolerate the dose they used prior to admittance to the institution, depending on duration of stay.

In both 2019 and 2020, 9% of Vermonters who died of a drug overdose had evidence of being released from a facility within a month of their death. Among those with evidence of recent release in 2019, there were fewer than 6 people released from each facility type: hospital, residential facility, or correctional facility. Of people who died in 2020, 14 had evidence of recent release from a facility: 8 from hospitals and fewer than 6 each from residential and correctional facilities.

Presence of Others

In 2019, 42% of people who died of overdose were not witnessed using the drugs that led to the fatal overdose, nor did they have a bystander nearby during the fatal overdose (35 of 83). In 2020, this increased to 52% (54 of 103). Scene evidence also suggests that about one in ten people experienced a rapid overdose (12% in 2019 and 10% in 2020). Scene evidence used to determine whether a rapid overdose occurred may include: a needle still in the person who overdosed, the person slumped over the drugs they were using, presence of a bystander, body positioning relative to drug paraphernalia, and whether the person went into an overdose state within 10 minutes of using drugs. Of note, the proportion of people missing information on witnesses or bystanders was 23% in 2019 and 37% in 2020.

Presence of Others During Overdose



How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 63](#).

Interactions with Emergency Medical Services

(Source: Statewide Incident Reporting Network)

Interactions with EMS since 2015

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 report electronically into SIREN, however this is a new requirement as of February 2022. As a result, many agencies are in the process of transitioning from a written record to an electronic one. Previously, nearly half of first response agencies voluntarily reported data into SIREN, but some non-transporting agency data were not included. As more first response agencies begin to report electronically, the SIREN dataset will be more complete. The following section analyzes interactions with EMS personnel since 2015.

Of the 113 Vermonters who died of overdose in 2019, 97 were identified in the SIREN database for the years 2015-2019. Of those 97 people, 77 were either declared dead on scene by EMS personnel or died in the hospital after being transported by EMS (79%). Of the 172 Vermonters who died of overdose in 2020, 149 were identified in the SIREN database for the years 2015-2020. Of those 149 people, 116 were declared dead on scene or died in the hospital after being transported by EMS (78%).

A large proportion of people who died of overdose in 2019 and 2020 had at least one past interaction with EMS other than the interaction that resulted in a fatal overdose. Among the 113 people who died in 2019, 68 (60%) had a prior interaction with EMS. Of the 172 people who died in 2020, 108 (63%) had previously interacted with EMS. **The numbers presented below include only people who had an interaction with EMS prior to the call that resulted in a fatal overdose.**

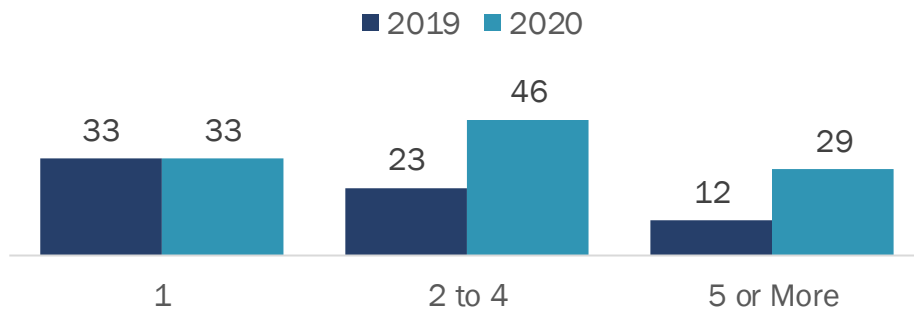
Among people who interacted with EMS in the years prior to their death, many had interactions that involved substance use (51% in 2019 and 61% in 2020). Mental health (28% in 2019 and 36% in 2020) and motor vehicle accidents (10% in 2019 and 21% in 2020) were also commonly identified as reasons for EMS interaction. An “other” category was created to include interaction types that could not be easily categorized. These include 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. This was the most common interaction type among those in SIREN (65% in 2019 and 63% in 2020).

EMS Interactions Among Vermonters who Died of Drug Overdose by Year of Death				
	2019		2020	
	Frequency	Percent	Frequency	Percent
People with a prior EMS involvement	68	60%	108	63%
Substance use	35	51%	66	61%
Mental health	19	28%	39	36%
Motor vehicle accident	7	10%	23	21%
"Other" involvement	44	65%	68	63%

Of note, the interaction categories described above are not mutually exclusive. In other words, people could have had interactions with EMS that involved substance use and mental health and would be considered in both categories. Additionally, while people could have had multiple interactions within the same category, the data below describe the percentage with *any* interaction of a given type.

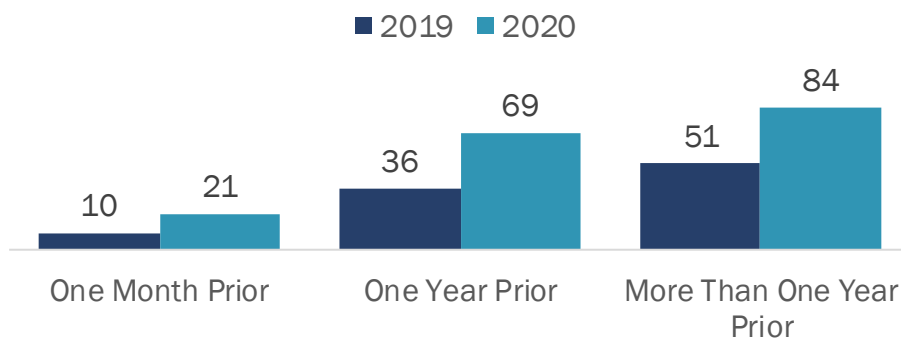
Those who interacted with emergency medical personnel typically had more than one incident between 2015 and the date of their death. Among people who died in 2019, 35 (51%) interacted with EMS two or more times, while 75 (69%) of people who died in 2020 had more than one interaction with EMS. People who died in 2019 had a median of two interactions, while those who died in 2020 had a median of three interactions between 2015 and the date of their death.

Number of Interactions with EMS Among Vermonters who Died of Drug Overdose



Most people had an interaction with EMS personnel one or more years before they died of overdose. Interactions with EMS personnel were less common in the month before death; there were 10 in 2019 and 21 in 2020.

Timing of Interactions with EMS Prior to Death Among Vermonters who Died of Drug Overdose



How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 67](#).

Controlled Substance Prescription History

(Source: Vermont Prescription Monitoring System)

Controlled Prescriptions History using VPMS Data

Vermont's prescription drug monitoring program, known as the Vermont Prescription Monitoring System (VPMS), is a statewide electronic database of controlled substance prescriptions dispensed by Vermont-licensed pharmacies. This includes mail-order pharmacies dispensing to Vermonters. The prescriptions collected in VPMS are those most likely to be misused or to cause dependence. 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:

- Analgesic opioids: opioids 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. With a few exceptions, any drug containing buprenorphine is considered an MOUD 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 [2019/2020 VPMS Annual Report](#).

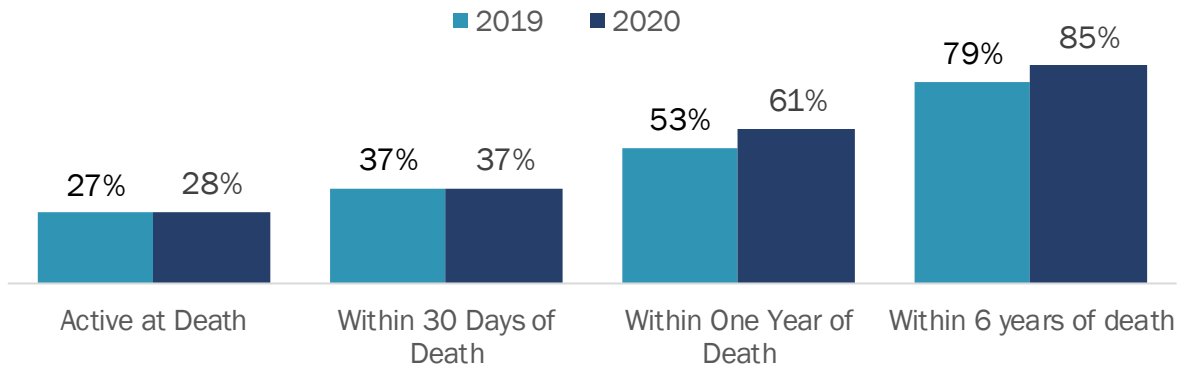
Prescribed medications contributed to the deaths of 14 people who died of drug overdose in 2019 and 16 in 2020. Nine of the 14 people in 2019 (and 7 out of the 16 in 2020) had an active prescription in VPMS for at least one of the substances listed on their death certificate as contributing to their death.¹² For the other 5 (2019) and 9 (2020) people, overuse or overdose of prescribed medication was listed among the causes of death. In addition, 3 people in 2019 and 10 in 2020 had received a prescription for one of the

¹² An "active prescription" refers to a prescription that covered the time frame in which the person died by overdose.

substances that contributed to their death up to six years before their death, the time frame for which VPMS data are available.

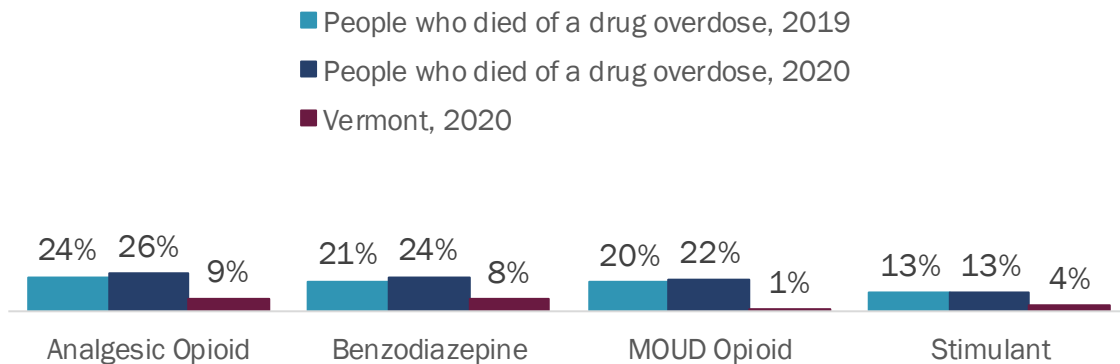
Seventy-nine percent of the Vermonters who died of drug overdose in 2019 and 85% who died in 2020 had at least one controlled substance prescription in VPMS within six years prior to their death. Twenty-seven percent of people who died in 2019 had an active prescription at the time of their death, while 28% of people who died in 2020 had an active prescription. More than half of the people who died of overdose (53% in 2019 and 61% in 2020) received a prescription within a year of their death.

Percent of People who Died of an Overdose with at Least One



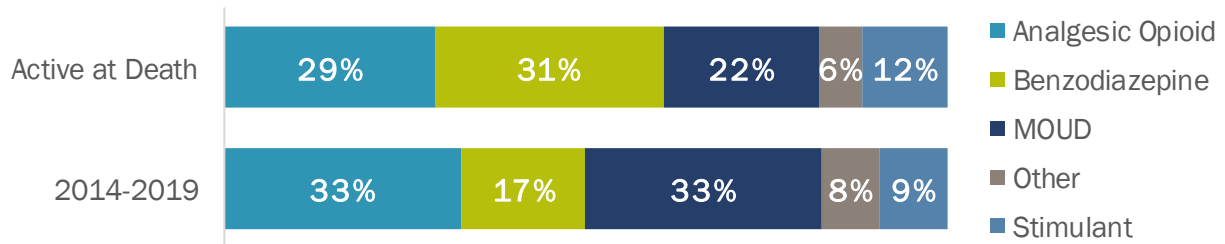
People who died of a drug overdose in 2019 and 2020 were more likely to receive prescriptions in each drug class than the Vermont population who received prescriptions during this time. People who died were 20 times more likely in 2019 and 22 times more likely in 2020 to have an MOUD prescription, three times more likely to have a stimulant or benzodiazepine prescription, and 2.5 times as likely to have had an analgesic opioid prescription. Vermont population data for both 2019 and 2020 were almost identical.

Percent of Population with at Least One Prescription by Drug

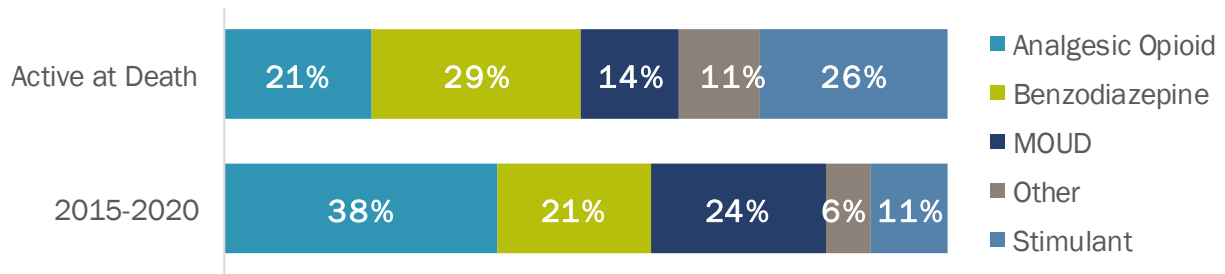


For people who died of a drug overdose in both 2019 and 2020, benzodiazepines were the most common prescription type active at the time of death. Benzodiazepines depress respiration and use with opioids is contraindicated. However, the most common drug class over the six-year period prior to death was analgesic opioids. Additionally, while people who died of overdose were more likely to be prescribed MOUD than other drug types in the years prior to their death, few had active MOUD prescriptions when they died. Of note, there has been a marked increase in stimulants dispensed, with an increased percentage of those who died of overdose who had an active stimulant prescription at time of death (12% in 2019 and 26% in 2020).

Prescriptions by Drug Class, 2019



Prescriptions by Drug Class, 2020

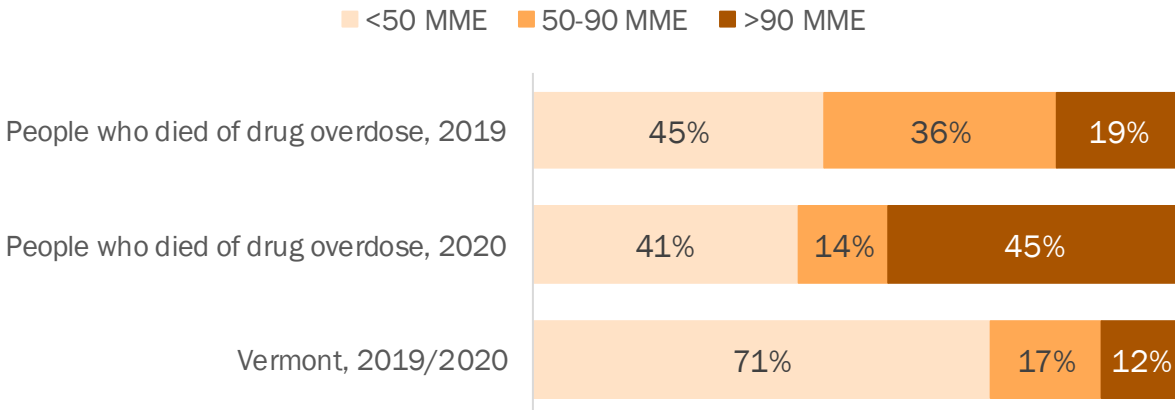


Morphine Milligram Equivalents (MME) are a measurement used by medical providers to express the strength of an opioid prescription for pain management. MME is a standardized measure to help compare different drug strengths and dosages. MME helps prescribing providers to make pain management decisions that are safe and effective for their patients.

The Centers for Disease Control and Prevention [Guidelines for Prescribing Opioids for Chronic Pain](#) categorizes prescribing based on three daily MME groups: <50 MME, 50-90 MME, and >90 MME. Higher MMEs are associated with greater risks of harm.

In comparison with analgesic opioid prescriptions received by all Vermonters in 2019/2020, people who died of a drug overdose in 2019 and 2020 received a greater percentage of high-dose opioid prescriptions (greater than 90 MME) and a correspondingly lower percentage of low-dose prescriptions (less than 50 MME). For all of Vermont these percentages have not changed.

Analgesic Opioid Prescriptions by MME Category, One Year from Death*

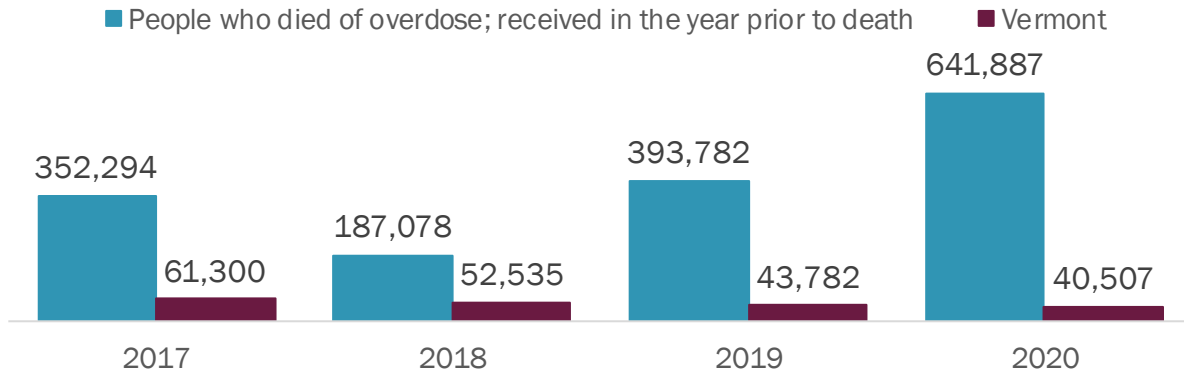


*Out of the 172 people who died of overdose in 2020, a small number (fewer than 6) were dispensed extremely high-MME prescriptions. These prescriptions make it appear as though 2020 has increased dramatically relative to previous years, however, because of these outliers, any results from 2020 involving MME should be interpreted with caution.

This difference in MME received is also evident in the average MME of prescriptions received by Vermonters in 2019/2020 (54 for both years) and by people who died of a drug overdose (73 in 2019 and 191 in 2020). The total amount of opioids (total MME) dispensed per 100 people who died of a drug overdose in the year before their death is 9 times the MME per 100 Vermonters in 2019 and 16 times the MME in 2020.

Of note, while the downward trend for both average and total MME continues in the general Vermont population, this trend has been reversed for people who died of drug overdose.

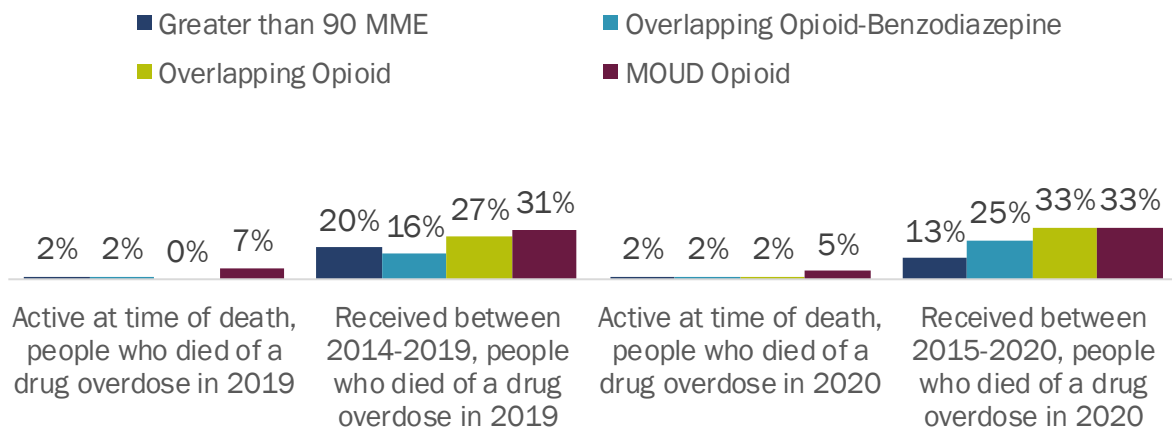
Total MME Per 100 People, 2017-2020



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 MOUD prescriptions that may indicate a person has an opioid use disorder.

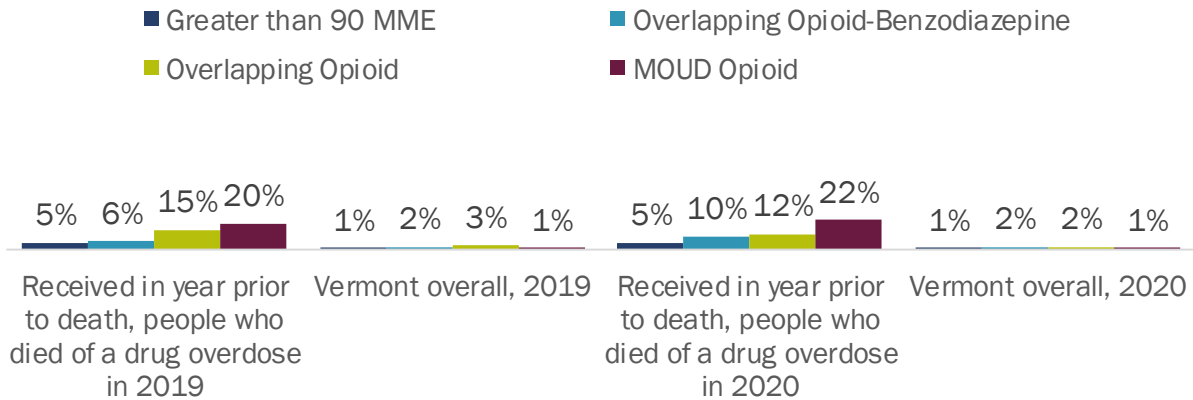
Between 13% and 33% of people who died of a drug overdose received some type of high-risk prescription at least once in the six-year period before their death. However, few people who died of a drug overdose had high-risk prescriptions that were active at the time of their death.

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



While few people who died of a drug overdose had active high-risk prescriptions at the time of their death, in almost all categories at least 5% (5-22%) received a prescription within a year of their death. This percentage is much higher than the percentage of Vermonters who received these high-risk prescriptions in 2019 and 2020.

Percent of Population with High Risk or MOUD Prescriptions, Received in Year Prior to Death Compared with Vermont Overall



How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 68](#).

Medicaid Enrollment and Utilization

(Source: Department of Vermont Health Access)

Healthcare utilization patterns using Vermont's Medicaid claims data:

The [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.

Of the 285 people who died of a drug overdose in 2019 and 2020, 84% (239) ever had a record in Medicaid. Of those people, 92% (219) were enrolled in the year prior to death, 75% (179) were enrolled within three months prior to death and 65% (155) were actively enrolled in Medicaid at death.

Of the 219 people enrolled in Medicaid in the last year (75 in 2019 and 113 in 2020), 86% had at least one claim in the year before they died. Most people had claims within three months of death.

Less than two-thirds of people who died of overdose were enrolled in Medicaid within 90 days of death.

Two-thirds of people with a claim had a claim related to substance use for both years.

The most common diagnoses and procedure codes among Medicaid enrollees who died of a drug overdose in 2019 and 2020 were related to substance use or mental health.

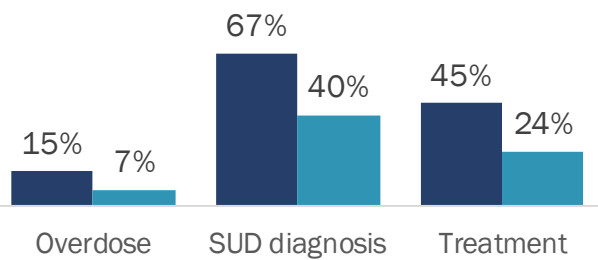
Of the 188 people who had claims within a year of death in 2019 and 2020, about two-thirds had a claim with a substance use disorder (SUD) diagnosis in the last year. Most had an opioid diagnosis. Alcohol use disorder was the second most common diagnosis. There were also claims related to other substance use such as cocaine use, stimulant use disorder, cannabis use, and other substances. However, these were less frequently identified than opioid or alcohol use diagnoses.

In addition, 15% of people in 2019 and 16% in 2020 enrolled in the last year had an overdose-related claim. A few people had multiple overdose claims within a year of death.

Most people who died of overdose and were enrolled in Medicaid had a claim related to substance use treatment. All forms of treatment are included such as medications for opioid use disorder (MOUD), residential treatment, and outpatient services. About half of people with a claim for treatment were accessing MOUD. Treatment percentages decrease closer to death, which suggests discontinuing treatment as a risk factor for fatal overdose.

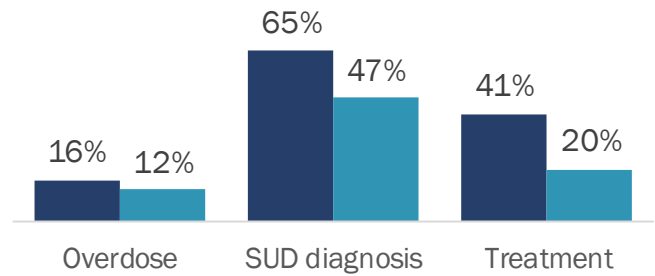
Percent of Enrolled People with Substance Use-Related claims in 2019

■ Within 1 year ■ Within 3 months



Percent of Enrolled People with Substance Use-Related claims in 2020

■ Within 1 year ■ Within 3 months



How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 72](#).

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 is responsible for ensuring children and youth are safe from abuse. The FSD data system was launched in 1982, so people born after 1982 are excluded from the following FSD data.



In 2020, 31% were involved with FSD as children.

In 2020, 25% were involved with FSD as parents.

There were 47 people born after 1982 who died of drug overdose in 2019 and 67 in 2020. As children, 32% of the 47 people in 2019 and 31% of the 67 people in 2020 were involved with the Vermont Family Services Division.

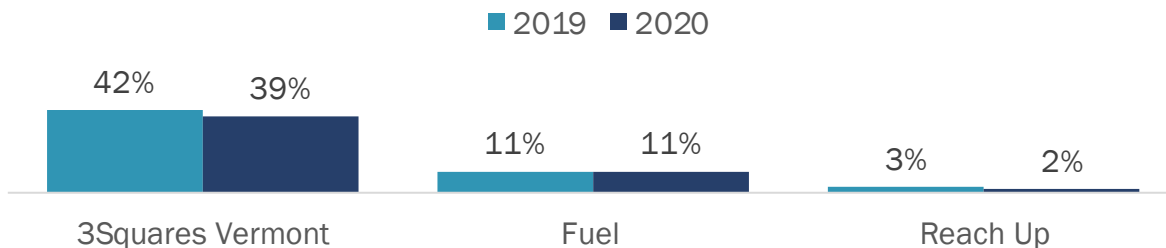
As parents, 36% had a history of involvement with the Family Services Division in 2019 and 25% in 2020.

Economic Services Division

The Economic Services Division (ESD) of the Department for Children and Families provides financial assistance to families and people in need. This analysis focuses on three ESD benefit programs – 3Squares Vermont, fuel assistance, and Reach Up – although the Division provides additional programs.¹³ 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 from overdose were enrolled in economic services in the month or year of their death. The program most frequently utilized was 3Squares Vermont (47% in 2019 and 49% in 2020). The fuel assistance program was less likely to be received by people who died of overdose in 2019 and 2020 compared to 3Squares Vermont, with 12% accessing fuel assistance in 2019 and 11% in 2020. Reach Up was the program used the least in both years (5% in 2019 and 3% in 2020).

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



¹³<https://dcf.vermont.gov/esd/benefits>

In addition to the three economic services offered to low-income Vermonters, the Economic Services Division will also pay for burials of people without financial assets. Nearly four out of 10 (39%) Vermonters who died of overdose had their burial paid for by the Department for Children and Families in 2019. This increased to 45% in 2020.

How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 73](#).

Interactions with Vermont State Police

(Source: Department of Public Safety)

Lawenforcement interactions using Department of Public Safety’s database:

The Department of Health partnered with the Department of Public Safety to identify and characterize interactions people who experienced fatal overdose had with Vermont State Police prior to death. The Department of Health analyzed Vermont State Police records exclusively, as local police records were not available to be analyzed. Records were gathered from one of Vermont’s law enforcement records management systems and were available dating back to in 1988.

Of the 113 people who died of overdose in 2019, 96 (85%) had interacted with Vermont State Police at some point before they died. The 96 people had 854 state police interactions, with a median of 5 interactions per person and a mean of 9. Among the 172 people who died in 2020, 146 (85%) interacted with state police a total of 1,543 times, with a median of 7 interactions and a mean of 11. The number of interactions ranged between 1 and 45 among those who died in 2019 and 1 and 52 among those who died in 2020.

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) of alcohol or drugs, 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 other categories were native to the database.

The most common category in both 2019 and 2020 was “Non-Criminal or Other” (295 involvements in 2019 and 507 in 2020), 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” (107 involvements in 2019 and 204 in 2020). The third most common interaction type in 2019 and 2020 was “Suspicious” cases (92 involvements in 2019 and 175 in 2020).

Total State Police Interactions - Common Categories		
	2019	2020
Non-criminal/other	295	507
Theft/burglary/larceny/fraud	107	204
Suspicious	92	175

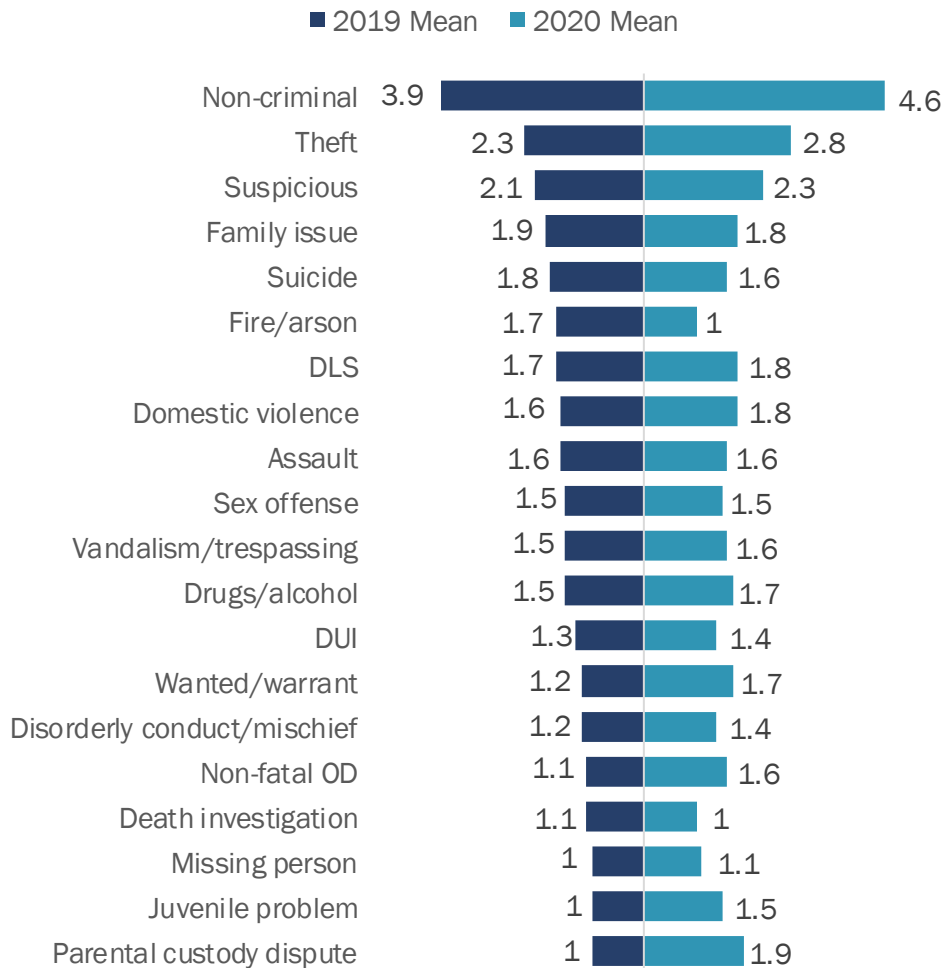
The top categories among people who interacted with Vermont State Police are somewhat similar to those reported in the Federal Bureau of Investigation (FBI) Crime Data Explorer for Vermont overall in 2019 and 2020.¹⁴ Arrest data from the Crime Data Explorer indicate that “other” offenses (excluding traffic offenses) accounted for the greatest proportion of arrests in Vermont, followed by DUI, simple assault, and larceny/theft. The population described in

¹⁴ <https://crime-data-explorer.fr.cloud.gov/pages/explorer/crime/arrest>

this report differs from that of Vermont overall in that public safety interactions involving DUI were less frequent among people who died of overdose in 2019 and 2020 than Vermonters overall. Although the data reported by the FBI exclusively refer to arrests, the interaction types described are similar to those observed in this study.

Within the non-criminal/other category, people who died of overdose had a mean of 3.9 interactions in 2019 and 4.6 interactions in 2020. This is followed by theft/burglary/larceny cases (2.3 in 2019 and 2.8 in 2020), suspicious interactions (2.1 in 2019 and 2.3 in 2020), and family issues (1.9 in 2019 and 1.8 in 2020). People who died in 2020 had more interactions within most categories compared to those who died in 2019. Additionally, while there are differences in the rankings of the averages between 2019 and 2020, the categories with the three highest averages are the same in both years (non-criminal, theft, and suspicious). Of note, cases categorized as “suicide” involve both attempts and suicidal ideation, with most involving the latter.

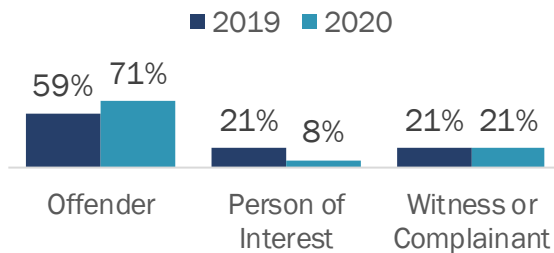
Mean Number of Interactions by Case Type Among People who Died of a Drug Overdose in 2019 and 2020



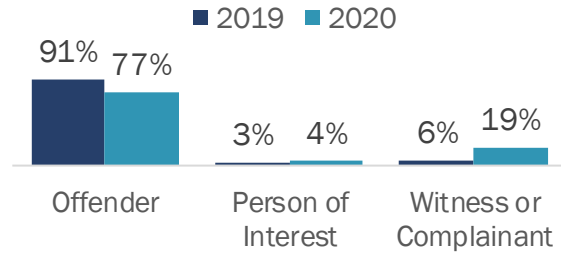
The above averages further reflect how common these case types were among people who died of a drug overdose, regardless of whether the person was implicated as the offender. For most interaction categories, the person was usually listed as the offender or a person of interest with the exception of death investigations. Most people were listed as the victim in the case of death investigations, but a few were witnesses in these cases. Additionally, some interaction categories may have higher averages because they combine similar categories, such as theft and burglary.

In cases of driving under the influence and driving with a license suspended most people were classified as an offender/arrestee/defendant. The second most common role was a witness or complainant to each crime.

Role in DUI Interactions Among People who Died of Overdose who Interacted with VSP



Role in DLS Interactions Among People who Died of Overdose who Interacted with VSP



How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 74](#).

Incarceration History

(Source: Department of Corrections)

Incarceration history using Department of Corrections data:

The Department of Health partnered with the Department of Corrections to determine whether people who had died of overdose in 2019 and 2020 had been incarcerated in the year prior to death. These data were also used to determine whether any people who died of overdose and had a history of incarceration had participated in a substance use screening during their incarceration. Notably, the Department of Corrections' program to provide people who are incarcerated medication for opioid use disorder (MOUD) was in a pilot phase in 2017 and allowed the continuation of all forms of federally approved MOUD for people who are incarcerated 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 Department of Corrections was directed to continue all forms of federally approved and verified MOUD, and to induct people who are incarcerated on buprenorphine when it was medically necessary and the person elected to begin the treatment.¹⁵ Therefore, some people who died in 2019 had limited data related to MOUD because the standard of care early in 2018 did not include inducting people who are incarcerated on MOUD while in a correctional facility. Conversely, people who died in 2020 are the first group of people where the standard of care included inducting people who are incarcerated in a correctional facility, allowing for complete data in that year.

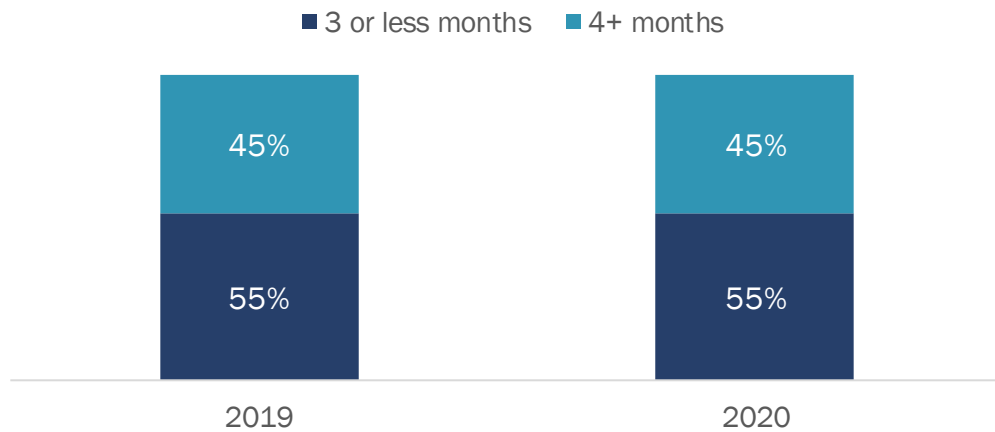
Of the 113 people who died of overdose in 2019, 11 (10%) had been incarcerated within one year of their death, with a median length of stay of 101 days (3.4 months) for their most recent incarceration. People with a recent incarceration were all white, with just over half male (55%), and had a mean age of 36 years at the time of death.

Of the 172 people who died of overdose in 2020, 22 (13%) were incarcerated within one year of their death, with a median length of stay of 10 days for their most recent incarceration. People who died in 2020 were predominantly male (73%), white (86%, compared to 14% Black), and had a mean age of 43 years at the time of death.

Out of the people who had a recent history of incarceration, most were screened for substance use disorder upon entering a correctional facility (100% in 2019 and 91% in 2020). People who were not screened were released from incarceration within two days. Among people who died in 2019 and 2020 and had been incarcerated in the year before they died, nearly two-thirds received MOUD while incarcerated (64% in 2019 and 59% in 2020). People who did not receive treatment did so due to a variety of reasons: not screening positive for SUD, refusing treatment, treatment noncompliance, and being released within 48 hours of admission. In both 2019 and 2020, 55% (six out of 11 in 2019 and 12 out of 22 in 2020) of people who had a history of incarceration died less than four months after release from a correctional facility.

¹⁵ <https://legislature.vermont.gov/Documents/2018/Docs/ACTS/ACT176/ACT176%20As%20Enacted.pdf>

Months from Release from Incarceration to Death Among Vermonters who Died of Drug Overdose



It is important to note that the analyses in this report do not purport to fully describe the scope of, or reflect on, the Department of Corrections' current treatment practices of people with substance use disorder within Vermont correctional facilities. Moreover, because the frequencies included in this report are very small (N=11 in 2019 and 22 in 2020), with little time spent within the correctional facility (median = 3.4 months in 2019 and 10 days in 2020), and use only 2 years of data, larger, longitudinal datasets are needed to draw predictive conclusions and provide a more comprehensive narrative.

How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 76](#).

Impaired Driving Offenses

(Source: Impaired Driver Rehabilitation Program)

Impaired driving offenses using data from the Impaired Driver Rehabilitation Program:

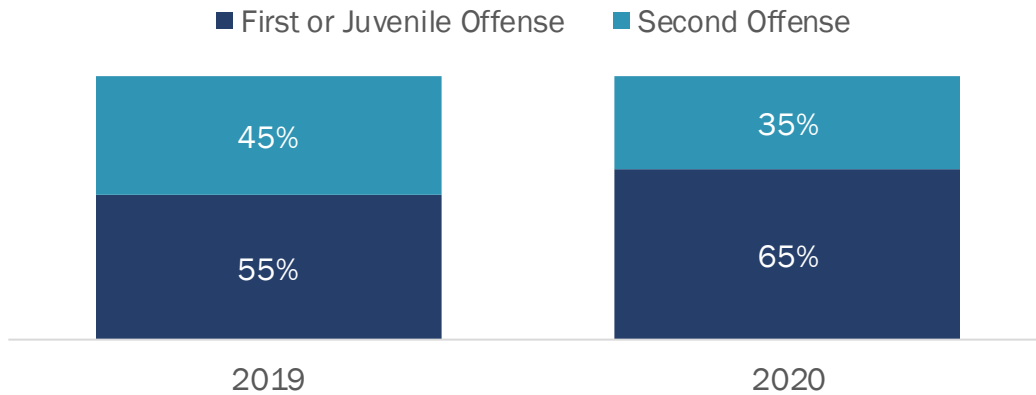
The Impaired Driver Rehabilitation Program (IDRP) is a program within the Department of Health, Division of Substance Use Programs that provides screening, education, and treatment services for people who have received a conviction for operating a motor vehicle under the influence of alcohol or other substances. People are not eligible to have their unrestricted driver’s license reinstated by the Department of Motor Vehicles until the person has successfully completed the IDRP. IDRP Clinical Evaluators screen people with a first offense to determine if additional SUD treatment with a licensed counselor is required – people with more than one impaired driving offense are required to complete treatment.

A similar amount of people who died of a drug overdose in 2019 and 2020 had an impaired driving offense in the IDRP database between 2000 and their date of death (27% in 2019 and 28% in 2020). Among people who died in 2019 and 2020 who had an impaired driving offense, most were male (77% in both years) and in their early-to-mid forties (average age at time of death was 42 in 2019 and 44 in 2020). Most offense types were first or juvenile (i.e., under 18 years old) offenses (55% in 2019 and 65% in 2020), with multiple offenses being less common (45% in 2019 and 35% in 2020). The proportion of people who died of overdose and had a first or juvenile offense was lower than that of the general population of people who participated in IDRP.

Demographic information of Vermonters who died of overdose and interacted with IDRP				
	2019		2020	
	Frequency	Percent	Frequency	Percent
Vermonters who died of drug overdose in Vermont	113		172	
People who interacted with IDRP (denominator for below)	31	27%	48	28%
Male	24	77%	37	77%
Female	7	23%	11	23%

Of people who died in 2019, 10 had more than one offense in the IDR database, while 12 people who died in 2020 had more than one offense. 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 in the IDR database.

Offense Type by Year Among Vermonters who Died of Drug Overdose



All IDR participants are required to complete the IDR class and are screened for possible referral to treatment with an IDR Clinical Evaluator, who is a licensed counselor. Of the 31 people who died in 2019 who had at least one offense in the IDR database, 97% had a completed screening. Ninety-four percent of the 48 people who died in 2020 who had at least one offense completed a screening.

While the treatment component of IDR falls outside of the scope of this report, most people who had an offense attended the IDR class (94% in 2019 and 100% in 2020). The class completion rate was also high (100% in 2019 and 98% in 2020). These percentages are similar to the overall percentage of IDR clients who completed the class in 2019 and 2020.

Nearly all the people who attended an IDR class completed it.

How does this compare to previous years?

Data from 2018 through 2020 can be found in the Appendix on [page 77](#).

Interactions with Department of Mental Health

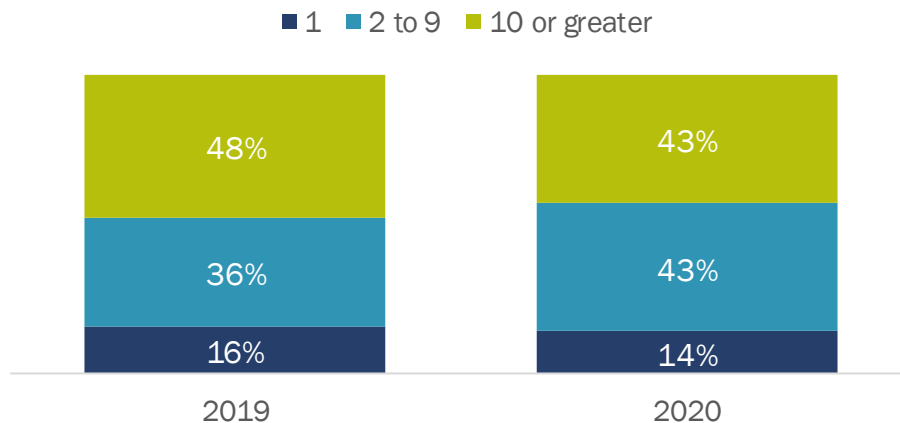
(Source: Department of Mental Health)

Interactions with the Department of Mental Health

The Department of Health partnered with the Department of Mental Health to identify and characterize interactions that people who died of overdose had with the Department of Mental Health over the course of their lives. Additionally, with the onset of the COVID-19 pandemic in 2020, Vermont’s mental health care system had to adapt many different changes in service delivery guidelines, as well as adjust to workforce capacity fluctuations as it became necessary to ensure a public health-informed response for all Vermonters. The COVID-19 pandemic has had a sustained impact on Vermont’s health care system overall, and the mental health system of care is continuing to experience the pandemic’s full impact.

In 2019, 50 of the 113 (44%) Vermonters who died of overdose interacted with a [Vermont Designated Agency \(DA\) or Specialized Service Agency \(SSA\)](#) at some point before they died, while 28 of the 172 (16%) people who died in 2020 interacted with one of these agencies. This decrease is likely associated with the emergence of the COVID-19 pandemic in Vermont in March of 2020. With fewer opportunities for in-person interactions, the transition to telehealth services during the pandemic, and the increased demand for mental health services, Vermonters were less likely to access care or may have experienced barriers to accessing mental health services during the first year of the pandemic.

Frequency of Services Among Vermonters who Died of Overdose



Fewer than 40% of the diagnoses the Department of Mental Health reported for people who died of overdose in 2019 – and only 11% of diagnoses in 2020 – were substance-use related. Most were diagnoses related to mental health, such as anxiety disorder or major depressive disorder. Of note, some Department of Mental Health providers provide specialized SUD care.



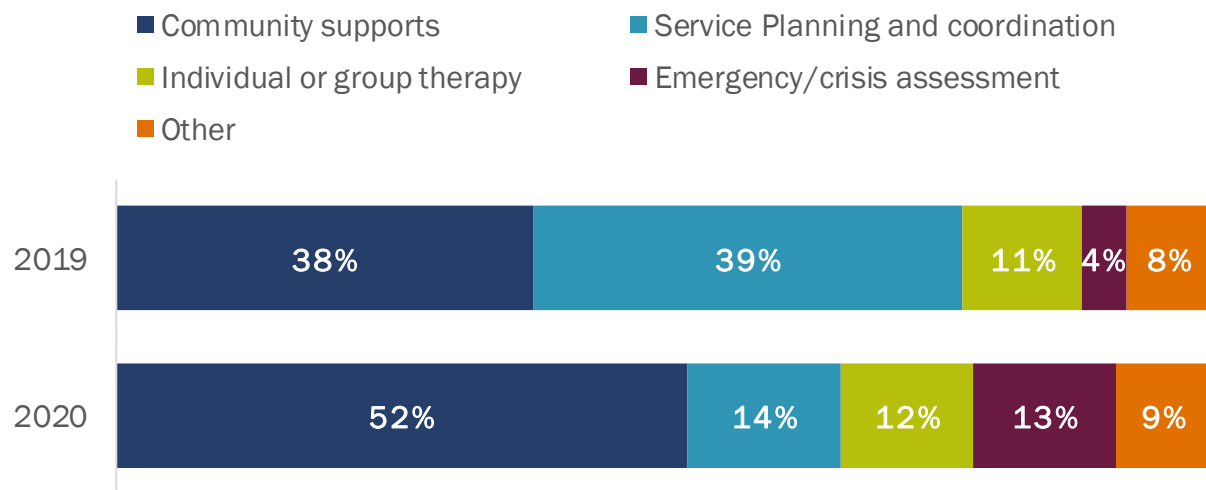
38% of the diagnoses were substance-use related in 2019 and decreased to 11% in 2020.



18% in 2019 and 25% in 2020 were mental health diagnoses related reactions to severe stress.

Additionally, the 50 Vermonters who died of overdose in 2019 received a total 2,349 services (i.e., individual interactions), while the 28 Vermonters who died of overdose in 2020 received 588 services. The most common types of services used in 2019 and 2020 included: service planning and coordination, community supports, individual or group therapy, and emergency/crisis assessments. The remaining types made up a small percentage of the total types of services.

Service Types Received Among Vermonters who Died of a Drug Overdose



Of the 2,349 services in 2019 and 588 services in 2020, 58% and 57% of these services took place in an office setting, respectively. Additionally, there was a 23% increase in services provided in a home and a 10% increase in other locations that include emergency departments, schools, or hospitals from 2019 to 2020. Also, 7% of services in 2020 were delivered via telemedicine.

Percentage of Services by Location		
	2019	2020
Office	58%	57%
Community	36%	4%
Home	5%	28%
Other (ER, schools, hospitals)	1%	11%

How does this compare to previous years?

Data from 2018 through 2020 can be found in the Appendix on [page 78](#).

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, Corrections, Vermont Health Access, Mental Health, and the Department for Children and Families were included as datasets external to the Health Department.

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 285 people who died of overdose in 2019 and 2020 are in each of these datasets, and the information included in these datasets is collected after death.

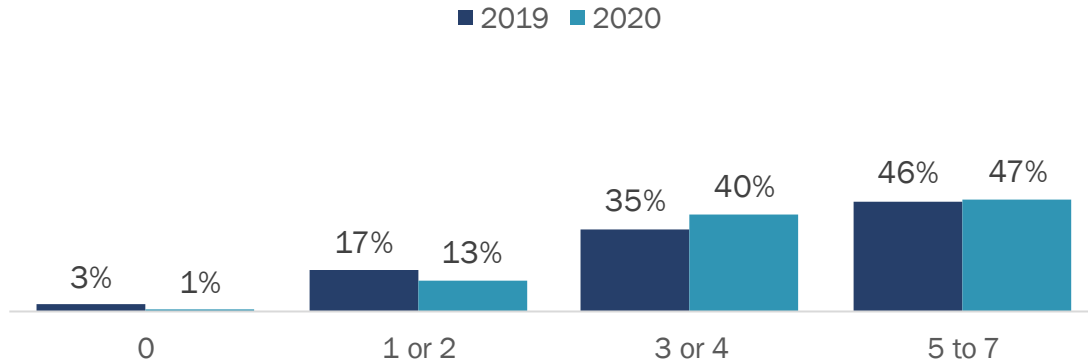
Overall, people who died of overdose in 2019 and 2020 were most likely to interact with DPS (85% in 2019 and 2020) and VPMS (79% in 2019 and 85% in 2020). The datasets referenced in this report varied in the years that were available for analysis. This likely impacted the number of involvements that were found among those in this study.

Interactions with Individual Agencies/Datasets Among Vermonters Who Died of Overdose

	Agency/Dataset	Description	2019	2020
	Public Safety	Interacted with Vermont State Police between 1988 and date of death.	85%	85%
	VPMS	Had at least one prescription for a controlled substance in the 6 years prior to death.	79%	85%
	Vermont Health Access	Were enrolled in Medicaid in year prior to death.	61%	64%
	Children and Families	Interacted with DCF between 1982 and date of death.	61%	55%
	SIREN	Interacted with EMS between 2015 and date of death.	60%	63%
	Mental Health	Interacted with a Vermont Designated Agency or Specialized Service Agency in year prior to death.	44%	16%
	IDRP	Had an impaired driving offense between 2000 and date of death.	27%	28%
	Corrections	Were incarcerated within one year of their death.	10%	13%

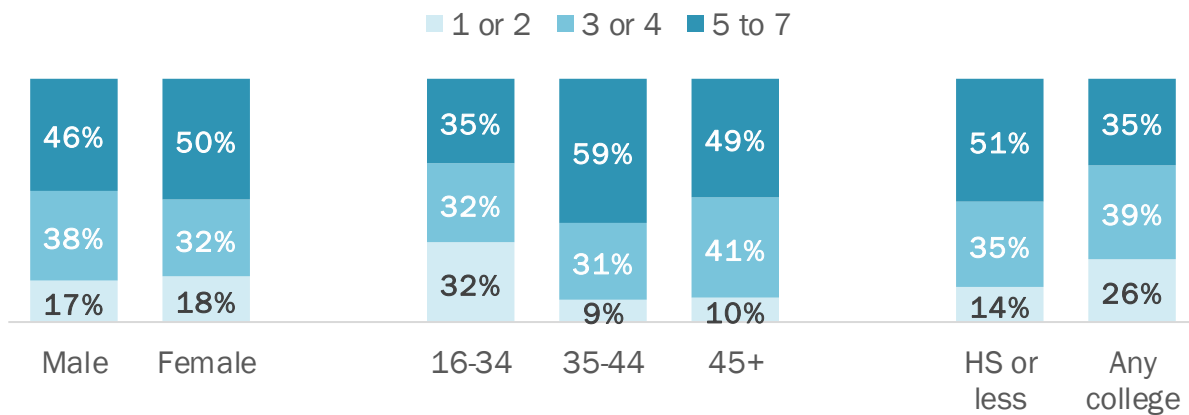
Nearly all the 285 people who died of overdose between 2019 and 2020 interacted with at least one agency or dataset in the years before they died (97% in 2019 and 99% in 2020). Because most people had interacted with either VPMS or DPS individually, this was expected. However, most people interacted with three or more agencies or datasets in the years before they died (81% in 2019 and 87% in 2020).

Number of State Agencies or Datasets Interacted with Before Death Among Vermonters who Died of Overdose



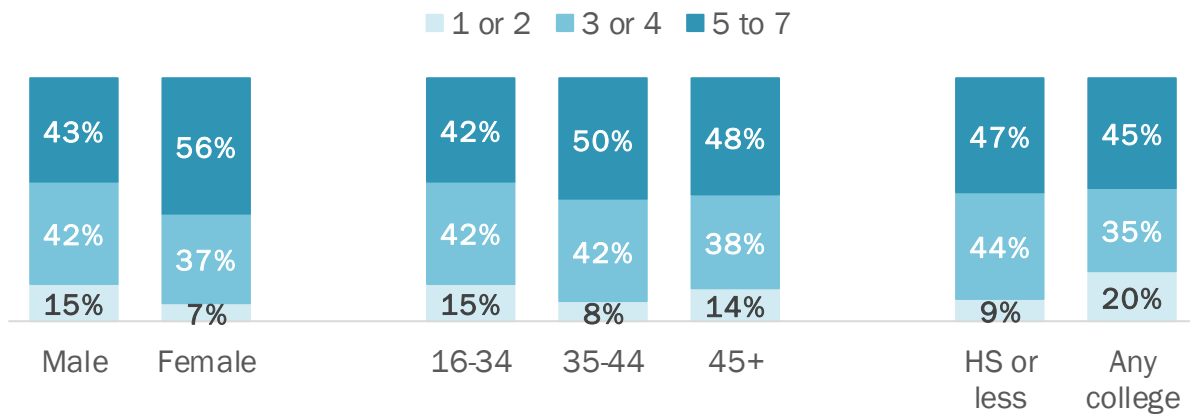
Of the people who died in 2019 and interacted with at least one agency prior to their death, the demographic groups who interacted with the greatest number of agencies or datasets were women, people between the ages of 35 and 44, and people who had a high school education or less. Of note, the number of agencies or datasets people interacted with differed significantly by age but was statistically similar by sex and education.

Number of State Agencies Interacted with by Sex, Age, and Education Among Vermonters who Died of Overdose in 2019



Demographics were similar among people who died of overdose in 2020 compared to those who died in 2019. Women, people between the ages of 35 and 44, and people who had a high school education or less interacted with the greatest number of agencies or datasets. The number of agencies or datasets people interacted with did not significantly differ by demographic group.

Number of State Agencies Interacted with by Sex, Age, and Education Among Vermonters who Died of Overdose in 2020



How does this compare to previous years?

Data from 2017 through 2020 can be found in the Appendix on [page 79](#).

Conclusions

Conclusions

This third iteration of the Vermont Social Autopsy Report analyzed the interactions that people who died of overdose in 2019 and 2020 had with various State of Vermont programs prior to death. Of the 113 people who died of overdose in 2019, 97% were involved with state government programs or datasets, with 81% having had interactions with three or more programs. In 2020, 99% of the 172 people interacted with at least one program and 87% with three or more. Not all interactions were necessarily related to a person's substance use. The extensive data collected for this report present potential points of interest for screening, intervention, education, or outreach about the risks of substance use and overdose prevention. Key findings are highlighted below and trend data for all sections of the report are in the appendices.

A history of substance use disorder and current or previous controlled substance prescriptions were common to most people who died of overdose. People who died of overdose were more likely to have a prescription of any type of controlled substance compared to the general Vermont population, with analgesics and benzodiazepines being the most common type of controlled substance prescriptions. The significance of fentanyl in an overdose cannot be overstated, as three-quarters of deaths involved fentanyl in both years and the top three combinations included fentanyl (with cocaine, heroin, and prescription opioids).

As in previous years, people who died of overdose were more likely to work in the construction industry compared to Vermont overall, with about a quarter of people who died working in this field compared to about 5% of Vermonters overall. Physically demanding industries that typically required in-person work during the COVID-19 pandemic (construction, service, health care and social assistance) were the most common industries for people who died of overdose. In both 2019 and 2020, people who died of overdose were also less likely to be in management, business, science, and arts occupations compared to Vermont overall.

Data from SUDORS noted a previous overdose in one out of five people who died of overdose in 2019 and 2020. More than half of people who had previous interactions with EMS providers had EMS involvement relating to substance use. People who died in 2020 and had EMS interactions were more likely to have two or more previous interactions with EMS, indicating multiple opportunities for engagement. Most people (86% in 2019 and 69% in 2020) were at a home when they overdosed, and many (68% in 2019 and 60% in 2020) died at a home as well. About half of people who died of overdose died alone.

Most of the people who died of overdose had a record in Medicaid at some point in their life, with over 60% in each year enrolled within 90 days of death. Of the people who interacted with the Department for Children and Families, about one-third did so as children and similar amounts as parents. About half of the people who died of overdose participated in 3Squares Vermont.

The majority of people who died of overdose interacted with Vermont State Police before they died (85% in both 2019 and 2020), with most of the interactions being non-criminal or “other” offenses. The top categories of offenses were similar to Vermont overall. About 10% of people who died of overdose were incarcerated during the year prior to their death, with all screened for substance use disorder in 2019, and 91% screened in 2020. About two-thirds of people who were previously incarcerated died less than four months after release from a correctional facility (55%, or 6 out of 11 in 2019 and 12 out of 22 in 2020).

About a quarter of people who died interacted with the Impaired Driver Rehabilitation Program (IDRP). Three-quarters were male, and the majority were for first or juvenile offenses. Nearly all the people who attended an IDRP class completed it.

More people who died in 2019 were involved with the Department of Mental Health (44%) than in 2020 (16%), with an overall rate for the two years of 27%. The decrease in 2020 is likely associated with COVID-19, which simultaneously increased the demand for telehealth services and mental health services for Vermonters. Substance-use related diagnoses for people who died of overdose decreased from 2019 to 2020 while mental health diagnoses related to severe stress increased.

To have a healthy Vermont, where people flourish, and substance use disorder, 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 results summarized above, and other results detailed further throughout this report, demonstrate many opportunities for engagement or quality improvement. 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.

For more information: Rachel Newton, Overdose Data to Action (OD2A) program manager, AHS.VDHod2a@vermont.gov

Appendix

Vermont Social Autopsy Report (2019-2020)

Vital Statistics

Death Certificate Information (Vital Statistics)

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Education				
High school or less	70%	79%	71%	70%
Any college	30%	21%	29%	30%
Sex				
Male	72%	60%	66%	69%
Female	28%	40%	34%	31%
Age				
<18	0%	0%	0%	1%
18 to 24	10%	4%	6%	4%
25 to 34	31%	32%	27%	26%
35 to 44	25%	26%	31%	23%
45 to 54	19%	24%	21%	29%
55+	15%	13%	14%	17%
Marital status				
Never married	55%	58%	65%	59%
Divorced/separated	29%	23%	21%	27%
Married	14%	19%	12%	13%
Widowed	3%	0%	3%	2%
Race/ethnicity				
BIPOC	5%	6%	11%	3%
White, non-Hispanic	95%	94%	89%	97%

Vermont Social Autopsy Report (2019-2020)

Drug involvement				
Fentanyl	61%	63%	74%	74%
Heroin	36%	47%	29%	23%
Prescription opioids (excluding fentanyl)	30%	24%	26%	22%
Cocaine	34%	37%	44%	39%
Alcohol	16%	19%	15%	9%
Fentanyl and heroin	27%	40%	27%	22%
Fentanyl and cocaine	22%	29%	35%	29%
Cocaine and heroin	13%	18%	12%	7%
Fentanyl and prescription opioids	10%	10%	15%	13%
Cocaine, heroin, and fentanyl	9%	16%	12%	6%
Occupation				
Management, business, science, arts	11%	13%	16%	15%
Service	23%	25%	20%	23%
Sales and office	12%	9%	8%	8%
Natural resources, construction, and maintenance	24%	22%	25%	23%
Production, transportation, and material moving	17%	13%	8%	11%
Industry (top 3)				
1	Construction (18%)	Construction (18%)	Construction (23%)	Construction (22%)
2	Accommodation/ Food Services (14%)	Accommodation/ Food Services (17%)	Accommodation/ Food Services (12%)	Accommodation/ Food Services (13%)
3	Retail (9%)	Manufacturing (11%)	Health Care and Social Assistance (8%)	Health Care and Social Assistance (9%)

Vermont Social Autopsy Report (2019-2020)

Place of injury				
Home	79%	81%	86%	69%
Motel	2%	2%	4%	9%
Parking lot/car	3%	2%	2%	5%
Work	2%	2%	2%	1%
Other/unknown	15%	14%	7%	16%
Place of death				
Home	62%	74%	68%	60%
Emergency room	7%	5%	8%	4%
Inpatient	7%	5%	4%	5%
Hospital intensive care unit	7%	0%	1%	5%
Nursing home	0%	1%	0%	0%
Other	16%	16%	19%	26%

Vermont Social Autopsy Report (2019-2020)

State Unintentional Drug Overdose Reporting System

State Unintentional Drug Overdose Reporting System (SUDORS)

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Substance use history				
Substance use disorder	95%	90%	95%	92%
Alcohol use disorder	27%	35%	30%	32%
Educational attainment				
High school diploma/GED or less	70%	73%	71%	70%
Social isolation				
Last heard from two or more days before their death	20%	15%	17%	13%
Unemployed	20%	28%	25%	22%
Without housing	6%	5%	10%	8%
Mental health	42%	44%	44%	52%
Depression	29%	32%	31%	28%
Anxiety	17%	18%	15%	27%
Two or more mental health diagnoses	18%	21%	20%	26%
Three or more mental health diagnoses	9%	8%	11%	9%
Suicidal thoughts or behavior				
Thoughts of suicide	15%	12%	10%	9%
Past suicide attempt	8%	5%	9%	6%

Vermont Social Autopsy Report (2019-2020)

Chronic disease				
Hypertension	19%	14%	24%	24%
Heart disease	6%	5%	17%	20%
Diabetes	8%	5%	11%	10%
Asthma	6%	7%	10%	11%
Chronic obstructive pulmonary disease	3%	5%	15%	16%
Back pain	9%	4%	9%	7%
Other chronic pain	7%	5%	17%	13%
Hepatitis C	4%	5%	11%	10%
Body mass index weight category				
Underweight	4%	4%	4%	5%
Healthy weight	30%	27%	31%	42%
Overweight	28%	28%	31%	25%
Obese	38%	41%	34%	28%
Type of overdose				
Related to substance use/misuse	92%	90%	96%	93%
Related to overmedication from prescribed medications	5%	2%	2%	3%
Unintentionally took a drug or the wrong dose	0%	0%	0%	1%
Other	0%	0%	0%	1%
Insufficient information on type of overdose	4%	8%	2%	2%

Vermont Social Autopsy Report (2019-2020)

History of opioid use recurrence	20%	28%	17%	21%
Of people with a history of recurrence, the recurrence occurred...				
Within two weeks of death	32%	27%	26%	40%
Within three months of death	23%	14%	0%	6%
Timing unclear	45%	59%	74%	54%
Recent release from institution	12%	13%	9%	9%
Of people with recent release, the facility was a...				
Jail, prison, or detention facility	50%	59%	30%	20%
Hospital (including psychiatric hospital)	21%	24%	50%	53%
Residential facility	29%	18%	20%	27%
Of people who experienced a recurrence in use, % who were recently released from an institution	41%	30%	16%	20%
History of overdose	28%	17%	20%	17%
Of people who had previously experienced an overdose, the overdose occurred...				
Within the last month	23%	18%	9%	10%
Between 1 month and 1 year before death	44%	32%	41%	24%
More than 1 year before death	20%	18%	32%	21%
Route of drug administration				
Injection	49%	51%	51%	41%
Ingestion	42%	22%	22%	11%
Snorting	24%	21%	24%	17%
Smoking	-	-	15%	19%

Vermont Social Autopsy Report (2019-2020)

Substance use was not witnessed*	80%	92%	82%	89%
And a bystander was not present at the time of the overdose	47%	46%	42%	52%
Evidence of rapid overdose	21%	11%	12%	10%
*2017 and 2018 values will vary slightly due to a methodology change in data analysis that was implemented for 2019 and 2020.				

Vermont Social Autopsy Report (2019-2020)

Statewide Incident Reporting Network

Interactions with Emergency Medical Services (SIREN)

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
In SIREN database since 2015	91	111	97	149
Declared dead by EMS	72	93	77	116
Had EMS interaction prior to death (denominator for below)	56	76	68	108
Interaction types				
Substance use	48%	50%	51%	61%
Mental health	20%	26%	28%	36%
Motor vehicle accident	18%	13%	10%	21%
Other	59%	63%	65%	63%
Number of interactions				
1	50%	45%	49%	31%
2 to 4	30%	38%	34%	43%
5 or more	20%	17%	18%	27%
Median	1.5	2	2	3
Timing of interactions prior to death				
One month prior	14%	13%	15%	19%
One year prior	50%	54%	53%	64%
More than one year prior	75%	79%	75%	78%

Vermont Social Autopsy Report (2019-2020)

Vermont Prescription Monitoring System

Controlled Substance Prescription History (VPMS)

Measure*	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Prescriptions contributing to death	17	19	12	16
Prescriptions active at death	11	9	7	7
Prescriptions listed as cause of death	6	10	5	9
Additional cases with active prescriptions up to 6 years before death	4	9	4	10
Percent of population with at least one prescription in class, 2020 or one year prior to death				
At least one opioid prescription in year before death	25%	27%	24%	26%
At least one benzodiazepine prescription in year before death	22%	27%	21%	24%
At least one MOUD prescription in year before death	12%	14%	20%	22%
At least one stimulant prescription in year before death	9%	11%	13%	13%
Prescriptions by MME category in year before death				
<50 MME	50%	69%	45%	41%
50-90 MME	22%	19%	36%	14%
>90 MME	27%	12%	19%	45%
Total MME per 100 individuals	352,294	187,078	393,782	641,887
Average MME	81	53	73	191

Vermont Social Autopsy Report (2019-2020)

Percent of population with high-risk prescriptions				
MOUD prescription	13%	14%	20%	22%
>90 MME	7%	5%	5%	5%
Overlapping opioid prescriptions	15%	10%	15%	12%
Overlapping opioid-benzodiazepine prescriptions	13%	10%	6%	10%
Active prescription				
At time of death	20%	24%	27%	28%
Within 30 days of death	30%	27%	37%	37%
Within 1 year of death	57%	56%	53%	61%
Within 1 to 6 years of death	84%	83%	79%	85%
Active MOUD prescription				
At time of death	5%	5%	7%	5%
Within 30 days of death	5%	6%	10%	8%
Within 1 year of death	13%	14%	20%	22%
Within 1 to 6 years of death	22%	28%	31%	33%
Active high-dose analgesic prescription				
At time of death	3%	2%	2%	2%
Within 30 days of death	3%	2%	3%	4%
Within 1 year of death	7%	5%	5%	5%
Within 1 to 6 years of death	21%	28%	20%	13%
Active overlapping opioid prescriptions				
At time of death	5%	2%	0%	2%
Within 30 days of death	6%	2%	4%	5%
Within 1 year of death	15%	10%	15%	12%
Within 1 to 6 years of death	31%	41%	27%	33%

Vermont Social Autopsy Report (2019-2020)

Active overlapping opioid-benzodiazepine prescriptions				
At time of death	6%	2%	2%	2%
Within 30 days of death	6%	2%	3%	6%
Within 1 year of death	13%	10%	6%	10%
Within 1 to 6 years of death	23%	27%	16%	25%
Percent of prescription type active at time of death				
Analgesics	25%	20%	29%	21%
Benzodiazepines	33%	38%	31%	29%
MOUD	20%	16%	22%	14%
Stimulants	18%	21%	12%	26%
Other	3%	5%	6%	11%
Percent of prescription type active within 30 days of death				
Analgesics	25%	14%	25%	27%
Benzodiazepines	26%	35%	22%	24%
MOUD	27%	30%	38%	26%
Stimulants	16%	16%	12%	18%
Other	5%	5%	4%	6%
Percent of prescriptions in each drug class, within 1 year of death				
Analgesics	34%	21%	24%	27%
Benzodiazepines	18%	26%	18%	22%
MOUD	28%	36%	43%	31%
Stimulants	15%	11%	11%	14%
Other	4%	6%	4%	5%

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Percent of prescription type active within 1 to 6 years of death				
Analgesics	43%	31%	33%	38%
Benzodiazepines	19%	23%	17%	21%
MOUD	21%	26%	33%	24%
Stimulants	12%	14%	9%	11%
Other	5%	7%	8%	6%

*Of the 172 people who died of overdose in 2020, a small number (fewer than 6) were dispensed extremely high-MME prescriptions. These prescriptions make it appear as though 2020 has increased dramatically relative to previous years, however, because of these outliers, any results from 2020 involving MME should be interpreted with caution.

Vermont Social Autopsy Report (2019-2020)

Department of Vermont Health Access

Medicaid Enrollment and Utilization (DVHA)

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Medicaid enrolled within 90 days	64%	70%	61%	64%
Overdose within one year prior to death	13%	10%	15%	16%
Overdose within 90 days prior to death	10%	5%	7%	12%
SUD diagnosis within year prior to death	47%	71%	67%	65%
SUD diagnosis 90 days prior to death	40%	50%	40%	47%
Treatment within year prior to death	45%	58%	45%	41%
Treatment within 90 days prior to death	35%	31%	24%	20%

Vermont Social Autopsy Report (2019-2020)

Department for Children and Families

Interactions with Family Services and Economic Services (DCF)

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Family Services Division (FSD)				
Involved with the FSD as a parent	22%	27%	36%	27%
Involved with FSD as a child	13%	25%	32%	30%
Economic Services Division (ESD)				
Receiving 3SVT	34%	46%	47%	49%
Fuel benefits	6%	15%	12%	11%
Reach Up	4%	5%	5%	3%
Burial costs paid by DCF	33%	35%	39%	45%

Vermont Social Autopsy Report (2019-2020)

Department of Public Safety

Interactions with Vermont State Police (DPS)

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Interacted with DPS (denominator for below)	89	106	96	146
Total interactions*	790	3,841	854	1,543
Mean number of interactions**	9	9	9	11
Interaction types (top 3)				
1	Non-Criminal (357)	Non-Criminal (1,660)	Non-Criminal (295)	Non-Criminal (507)
2	Theft (145)	Theft (463)	Theft (107)	Theft (204)
3	DLS/DUI (75)	DLS (174)	Suspicious (92)	Suspicious (175)
Mean number of interactions by case type**				
Non-criminal	4.6	5	3.9	4.6
Theft	3.8	4	2.3	2.8
Suspicious	1.6	3	2.1	2.3
Family issue	2.1	2	1.9	1.8
Suicide***		1	1.8	1.6
DLS	2.5	2	1.7	1.8
Fire/arson		1	1.7	1
Assault	1	2	1.6	1.6
Domestic violence	1.9	1	1.6	1.8
Drugs/alcohol		2	1.5	1.7
Vandalism/trespassing		3	1.5	1.6

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Sex offense		1	1.5	1.5
DUI	1.4	1	1.3	1.4
Disorderly conduct/mischief		3	1.2	1.4
Wanted/warrant		4	1.2	1.7
Death investigation	1	1	1.1	1
Non-fatal OD	1.2	1	1.1	1.6
Parental custody dispute		1	1	1.9
Juvenile problem		1	1	1.5
Missing person		1	1	1.1

* Due to differences in methodology in 2018 compared to other years, the total number of interactions is inflated. Additionally, the total number of interactions varies based on the number of people who died of overdose in a given year. For a more reliable representation of year-to-year differences, please refer to the "Mean Number of Interactions" row.

** Blank categories had a mean of zero interactions or were not added until 2018. 2018 data are presented as the median number of interactions.

*** Interactions in this category may not have included suicidal ideation in 2018. Most of these cases in 2019-2020 involved ideation compared to attempts.

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Department of Corrections

Interactions with Department of Corrections (DOC)

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Incarcerated in year prior to death (denominator for below)	19	25	11	22
Median length of stay (in days)	10	19	101	10
Screened for substance use disorder	95%	80%	100%	91%
Received MOUD while incarcerated*	5%	4%	64%	59%
Months between release from incarceration and death				
3 or fewer months	58%	48%	55%	55%
4+ months	42%	52%	45%	45%
* Act 176 went into effect on July 1, 2018, allowing DOC to induct people who are incarcerated on buprenorphine (MOUD) when it was medically necessary and the person elected to begin treatment. This is likely the cause of the increase between 2017-2018 and 2019-2020.				

Vermont Social Autopsy Report (2019-2020)

Impaired Driver Rehabilitation Program

Impaired Driving Offenses (IDRP)

Measure	2018	2019	2020
Vermonters who died of overdose in Vermont	131	113	172
Offense in IDRP database (denominator for below)	30	31	48
Offense types			
First or juvenile offense	80%	55%	65%
Second offense	20%	45%	35%
Completed assessment after offense	87%	97%	94%
Attended IDRP class	100%	94%	100%
Completed IDRP class (percent of people who attended)	89%	100%	98%

Vermont Social Autopsy Report (2019-2020)

Department of Mental Health

Interactions with Department of Mental Health (DMH)

Measure	2018	2019	2020
Vermonters who died of overdose in Vermont	131	113	172
Interacted with a DA or SSA	28	50	28
Frequency of services among people who interacted with DA or SSA			
1	21%	16%	14%
2 to 9	46%	36%	43%
10+	32%	48%	43%
Total number of services provided (denominator for below)	709	2,349	588
Types of services provided			
Community supports	53%	38%	52%
Service planning and coordination	25%	39%	14%
Individual or group therapy	11%	11%	12%
Emergency/crisis assessment*	0%	4%	13%
Other	12%	8%	9%
Location of services provided			
Office	65%	58%	57%
Community	16%	36%	4%
Home	15%	5%	28%
Other (ER, schools, hospitals)	4%	1%	11%
*Emergency/Crisis Assessment is a new service category as of 2019.			

Vermont Social Autopsy Report (2019-2020)

Overall Interactions

Overall Interactions with State Agencies/Datasets

Measure	2017	2018	2019	2020
Vermonters who died of overdose in Vermont	109	131	113	172
Number of state agencies or datasets interacted with before death				
0	2%	2%	3%	1%
1 or 2	31%	18%	17%	13%
3 or 4	36%	33%	35%	40%
5 to 8*	31%	47%	46%	47%
Demographics by number of agencies interacted with*				
1 or 2 agencies				
Sex				
Male	32%	23%	17%	15%
Female	30%	12%	18%	7%
Age				
16-34	30%	20%	32%	15%
35-44	27%	18%	9%	8%
45+	37%	17%	10%	14%
Education				
HS or less	31%	18%	14%	9%
Any college	31%	22%	26%	20%
3 or 4 agencies				
Sex				
Male	40%	31%	38%	42%
Female	27%	37%	32%	37%

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Age				
16-34	42%	36%	32%	42%
35-44	31%	24%	31%	42%
45+	34%	37%	41%	38%
Education				
HS or less	32%	34%	35%	44%
Any college	47%	30%	39%	35%
5 to 8 agencies**				
Sex				
Male	27%	45%	46%	43%
Female	43%	52%	50%	56%
Age				
16-34	28%	43%	35%	42%
35-44	42%	58%	59%	50%
45+	29%	46%	49%	48%
Education				
HS or less	36%	48%	51%	47%
Any college	22%	48%	35%	45%
<p>*Too few people are included in the “0 Agencies” category to provide meaningful demographic comparisons. **The 2017 Social Autopsy included a maximum of 6 agencies people could have interacted with prior to death. All subsequent years of data include a maximum of 8 agencies. As a result, differences between 2017 and 2018-2020 should be interpreted with caution.</p>				