

Key Points from the Opioid-Related Fatalities Brief, 2020 Preliminary Data

- The preliminary 2020 opioid-related accidental and undetermined fatality data show an increase in opioid-related fatalities. At this time, the data shows a 38% increase from 114 deaths in 2019 to 157 in 2020.
- Fentanyl continues to be the primary driver of opioid-related deaths in Vermont. Fentanyl was involved with 88% of opioid-related deaths in 2020.
- The percentage of opioid-related fatalities involving stimulants continues to be concerning. Cocaine was present in 37% of opioid-related fatalities in 2020, a slight decrease from 2019. Involvement of methamphetamine and prescription stimulants slightly increased.
- Heroin involvement in opioid-related fatalities continues to decrease from 33% in 2019 to 25% in 2020.
- This brief includes three additional 2019 Vermont resident deaths than were reported in the 2019 Annual Brief dated March 2020. Because out-of-state deaths can take longer to finalize than in-state deaths, 2020 data is preliminary. Due to these time lags, the Department of Health expects to revise the 2020 opioid-related death numbers when 2020 Vital Statistics data is finalized. At the date of this analysis, the Vermont Office of the Chief Medical Examiner (OCME) has 9 pending death investigations: 3 individuals who died in Vermont and 6 who died out of state.

OPIOID-RELATED FATALITY DATA DISCLAIMER

Vermont opioid-related fatalities data come from the Vermont Department of Health Vital Statistics System. The data in this report primarily describe deaths of Vermonters occurring in-state and out-of-state. Data for out-of-state residents who died in Vermont are included only where explicitly stated.

The drug-related fatalities reported here include accidents and fatalities with undetermined intent unless otherwise stated. All deaths involved at least one legal or illicit opioid.

This report does not include deaths due to chronic substance use (such as HIV, liver disease, or infection); death due to injury related to substance use (i.e., car accident or falls); or deaths due to medical administration error.

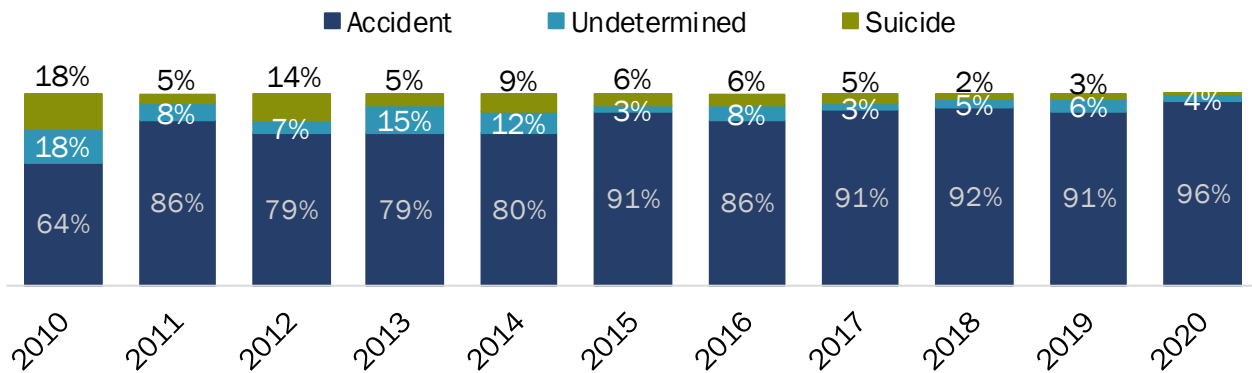
It is important to note that most drug-related fatalities involve combinations of substances (e.g., a prescription opioid and cocaine), not a single drug. Additionally, the circumstances under which each of these fatalities occurred are unique and cannot all be attributed to substance misuse or substance use disorder.

2020 data are considered preliminary.

Opioid-Related Fatality Overview

Of the 158 Vermont residents who died of an opioid overdose in 2020, nearly all were classified as being of accidental or undetermined intent (157). One death was determined to be a suicide. Since 2010, fewer opioid-related deaths are classified as undetermined manner of death. The percentage of suicides among all opioid-related fatalities have also decreased. At the date of this analysis, the Vermont Office of the Chief Medical Examiner (OCME) has 9 pending death investigations: 3 individuals who died in Vermont and 6 who died out-of-state.

Figure 1: Manner of Death in Opioid-Related Fatalities Among Vermont Residents

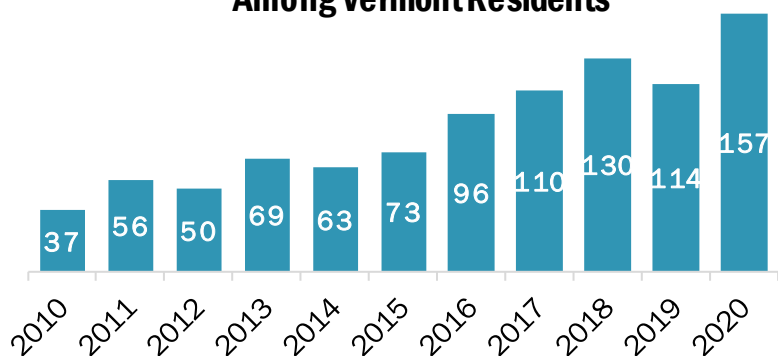


Accidental and Undetermined Opioid-Related Fatalities Among Vermonters

This data brief focuses on deaths that are accidental or undetermined intent unless specifically noted. Deaths due to suicide were removed to show deaths more likely associated with misuse and opioid use disorder – the type of death some consider an “overdose.” Preliminary data show 157 accidental and undetermined cause deaths among Vermont residents in 2020.

At this time, the 157 deaths in 2020 represent a 38% increase from 114 deaths in 2019. The rate of death in 2020 is 25.2 per 100,000 Vermonters. The rate for 2019 is 18.3 fatalities per 100,000 Vermonters – a rate that is statistically different.

Figure 2: Number of Accidental and Undetermined Opioid-Related Fatalities Among Vermont Residents



Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

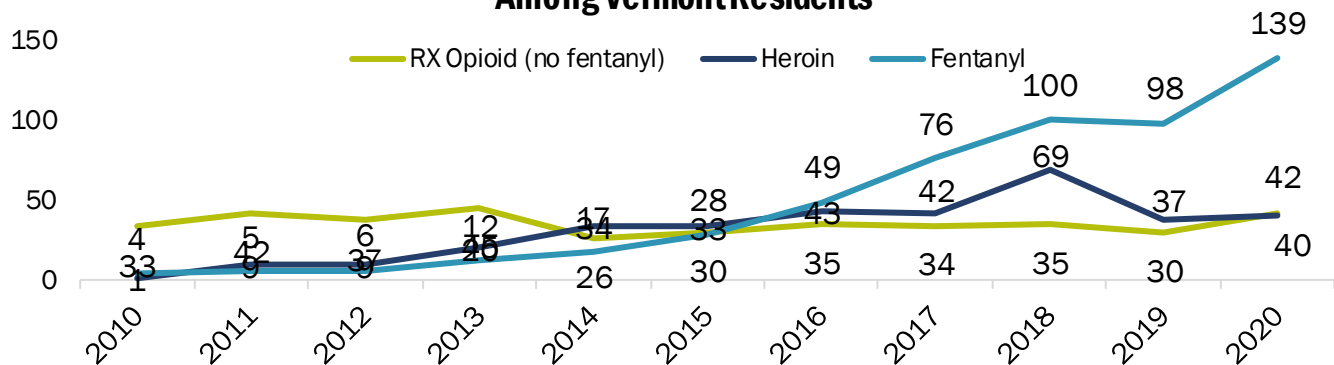
Males comprise 69% of 2020 accidental and undetermined opioid-related fatalities among Vermont residents. Women comprise 31% of these deaths. The average age of death is 41 years (median 40), with over half of these deaths occurring among persons between 30 and 50 years of age (55%). Nearly all accidental and undetermined opioid-related fatalities are among white, non-Hispanic Vermont residents (98%).

Fentanyl is involved in most opioid-related fatalities.

Fentanyl is currently the most prevalent substance involved in opioid-related deaths. In 2020, it was found in 88% of opioid-related fatalities and has increased each year since 2011 (9%). Of note, deaths involving fentanyl could include prescription and/or illicit fentanyl and fentanyl analogues.

Heroin involvement is the lowest it has been since 2015 (25%). The percentage of opioid-related fatalities involving prescription opioids did not change between 2019 and 2020, however this percentage has decreased since 2010 when nearly all (89%) opioid-related fatalities involved prescription opioids compared to 27% in 2020. Prescription opioids were overtaken by heroin as the leading contributor to opioid-related fatalities in 2014 but were then surpassed by fentanyl in 2016. Of note, the presence of these drugs are not mutually exclusive and will not sum to the total.

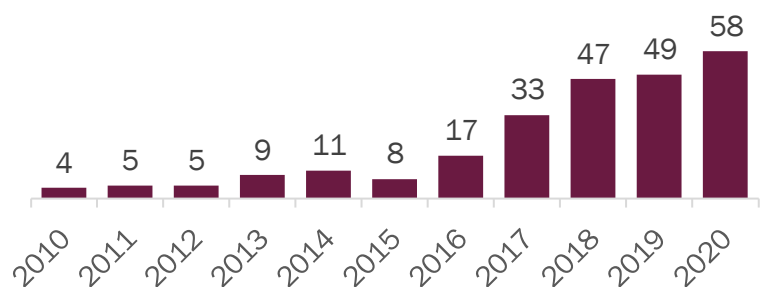
Figure 3: Number Accidental and Undetermined Opioid-Related Fatalities Among Vermont Residents



Cocaine was involved in over one-third of all opioid-related fatalities among Vermonters.

Cocaine (37%) was involved in more 2020 opioid-related fatalities than heroin (25%). The number of cocaine involved deaths has been steadily increasing since 2015. The percent of involvement slightly decreased compared to 2019 (43% vs. 37%). Trend information of other substances involved in opioid-related fatalities is included in Appendix 1.

Figure 4: Number Accidental and Undetermined Opioid-Related Fatalities Involving Cocaine Among Vermont Residents



Stimulant involvement in opioid-related fatalities including methamphetamine and prescriptions stimulants increased slightly in 2020.

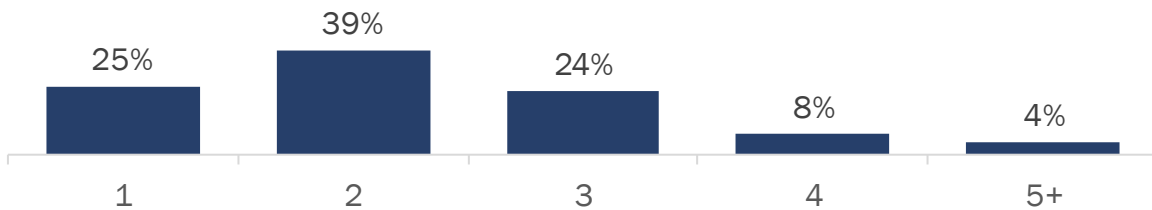
Methamphetamine, prescription stimulants and fentanyl involvement in opioid-related fatalities slightly increased compared to the previous year. Additional trend information of other substances involved in opioid-related fatalities is included in Appendix 1.

Substance Involved	2020	
	#	%
Alcohol	15	10%
Benzodiazepines	6	4%
Buprenorphine	2	1%
Cocaine	58	37%
Fentanyl	139	88%
Heroin	40	25%
Methadone	18	11%
Methamphetamine	10	6%
RX opioid (no fentanyl)	42	27%
RX stimulants	17	11%
Tramadol	6	4%

Most opioid-related fatalities include a combination of substances.

Most opioid-related deaths involve multiple substances. In 2020, 75% of opioid-related fatalities involved 2 or more drugs, with 12% involving 4 or more drugs.

Figure 5: Number of Drugs Listed on the Death Certificate in Vermont-Resident Opioid-Related Fatalities (2020)



Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

The most common combination of substances among individuals who died in 2020 was fentanyl and cocaine, which accounted for 33% of all opioid-related fatalities. This was followed by fentanyl and heroin (25%) and fentanyl and prescription opioids (18%).

Combination of Substances	2020	
	#	%
Cocaine and Heroin	12	8%
Cocaine and RX Opioids	15	10%
Fentanyl and Cocaine	52	33%
Fentanyl and Alcohol	13	8%
Fentanyl and Heroin	39	25%
Fentanyl and RX Opioids (no fentanyl)	27	18%
Fentanyl and RX Stimulants	15	10%
Heroin and RX Stimulants	2	1%
Heroin, Cocaine, and Fentanyl	11	7%

In 2010, when prescription opioids were involved in 89% of opioid-related fatalities, the top three drug combinations all involved prescription opioids. Because fentanyl is now involved in more deaths than any other drug, the most common combinations now all involve fentanyl.

Figure 6: Top Three Drug Combinations Listed on the Death Certificate in Vermont-Resident Opioid-Related Fatalities (2010 vs 2020 Comparison)



Sources:

All data are from the Vermont Vital Statistics System and only include deaths that occurred among Vermont residents unless otherwise stated. Data from 2020 are preliminary. This brief is a product of the Vermont Department of Health, Division of Health Surveillance.

For more information: Amanda Jones, amanda.jones@vermont.gov; Jeffrey Trites, jeffrey.trites@vermont.gov; Lindsay Bonesteel, Lindsay.bonesteel@vermont.gov, Gretchen Mertes gretchen.mertes@vermont.gov

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Appendix 1: Data Tables

Table 1: Number and Percentage of Accidental and Undetermined Opioid-Related Fatalities Among Vermont Residents – Individual Substances Involved

Substance*	2010		2011		2012		2013		2014	
	#	%	#	%	#	%	#	%	#	%
Alcohol	4	11%	8	14%	10	20%	14	20%	10	16%
Benzodiazepines	9	24%	4	7%	9	18%	12	17%	5	8%
Buprenorphine	0	0%	5	9%	1	2%	4	6%	3	5%
Cocaine	4	11%	5	9%	5	10%	9	13%	11	17%
Fentanyl	4	11%	5	9%	6	12%	12	17%	17	27%
Heroin	1	3%	9	16%	9	18%	20	29%	34	54%
Methadone	9	24%	12	21%	18	36%	14	20%	5	8%
Methamphetamine	0	0%	0	0%	0	0%	0	0%	0	0%
RX opioid (no fentanyl)	33	89%	42	75%	37	74%	45	65%	26	41%
RX stimulants	0	0%	1	2%	2	4%	2	3%	4	6%
Tramadol	1	3%	3	5%	2	4%	2	3%	1	2%

Table 1 (Continued): Number and Percentage of Accidental and Undetermined Opioid-Related Fatalities Among Vermont Residents – Individual Substances Involved

Substance*	2015		2016		2017		2018		2019	
	#	%	#	%	#	%	#	%	#	%
Alcohol	9	12%	16	17%	14	13%	21	16%	12	11%
Benzodiazepines	6	8%	10	10%	6	5%	8	6%	6	5%
Buprenorphine	2	3%	1	1%	0	0%	6	5%	2	2%
Cocaine	8	11%	17	18%	33	30%	47	36%	9	43%
Fentanyl	28	38%	49	51%	76	69%	100	77%	98	86%
Heroin	33	45%	43	45%	42	38%	69	53%	37	33%
Methadone	7	10%	14	15%	12	11%	11	8%	9	8%
Methamphetamine	0	0%	0	0%	3	3%	5	4%	2	2%
RX opioid (no fentanyl)	30	41%	35	36%	34	31%	35	27%	30	27%
RX stimulants	0	0%	0	0%	5	5%	10	8%	4	4%
Tramadol	3	4%	2	2%	1	1%	5	4%	0	0%

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 1 (Continued): Number and Percentage of Accidental and Undetermined Opioid-Related Fatalities Among Vermont Residents – Individual Substances Involved

Substance*	2020		2021		2022		2023		2024	
	#	%	#	%	#	%	#	%	#	%
Alcohol	15	10%								
Benzodiazepines	6	4%								
Buprenorphine	2	1%								
Cocaine	58	37%								
Fentanyl	139	88%								
Heroin	40	25%								
Methadone	18	11%								
Methamphetamine	10	6%								
RX opioid (no fentanyl)	42	27%								
RX stimulants	17	11%								
Tramadol	6	4%								

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Substance*	2010		2011		2012		2013		2014	
	#	%	#	%	#	%	#	%	#	%
Cocaine and Heroin	1	3%	2	4%	1	2%	1	1%	8	13%
Cocaine and RX Opioids	3	8%	3	5%	4	8%	6	9%	2	3%
Fentanyl and Cocaine	1	3%	0	0%	0	0%	3	4%	4	6%
Fentanyl and Alcohol	0	0%	1	2%	2	4%	1	1%	0	0%
Fentanyl and Heroin	0	0%	0	0%	0	0%	0	0%	6	10%
Fentanyl and RX Opioids (no fentanyl)	2	5%	0	0%	1	2%	6	9%	5	8%
Fentanyl and RX Stimulants	0	0%	1	2%	0	0%	2	3%	1	2%
Heroin and RX Stimulants	0	0%	0	0%	0	0%	0	0%	0	0%
Heroin, Cocaine, and Fentanyl	0	0%	0	0%	0	0%	0	0%	2	3%

Substance*	2015		2016		2017		2018		2019	
	#	%	#	%	#	%	#	%	#	%
Cocaine and Heroin	5	7%	13	14%	14	13%	27	21%	15	13%
Cocaine and RX Opioids	1	1%	5	5%	9	8%	10	8%	11	10%
Fentanyl and Cocaine	3	4%	6	6%	25	23%	42	32%	44	39%
Fentanyl and Alcohol	3	4%	4	4%	9	8%	15	12%	10	9%
Fentanyl and Heroin	10	14%	21	22%	32	29%	59	45%	35	31%
Fentanyl and RX Opioids (no fentanyl)	6	8%	6	6%	12	11%	16	12%	17	15%
Fentanyl and RX Stimulants	0	0%	0	0%	3	3%	8	6%	3	3%
Heroin and RX Stimulants	0	0%	0	0%	0	0%	6	5%	0	0%
Heroin, Cocaine, and Fentanyl	1	1%	3	3%	10	9%	23	18%	14	12%

*Combinations are not mutually exclusive. For example, a death involving cocaine, fentanyl, and heroin would be counted three separate categories in the table above (cocaine and fentanyl; cocaine and heroin; fentanyl and heroin).

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Substance*	2020		2021		2022		2023		2024	
	#	%	#	%	#	%	#	%	#	%
Cocaine and Heroin	12	8%								
Cocaine and RX Opioids	15	10%								
Fentanyl and Cocaine	52	33%								
Fentanyl and Alcohol	13	8%								
Fentanyl and Heroin	39	25%								
Fentanyl and RX Opioids (no fentanyl)	27	18%								
Fentanyl and RX Stimulants	15	10%								
Heroin and RX Stimulants	2	1%								
Heroin, Cocaine, and Fentanyl	11	7%								

**Combinations are not mutually exclusive. For example, a death involving cocaine, fentanyl, and heroin would be counted three separate categories in the table above (cocaine and fentanyl; cocaine and heroin; fentanyl and heroin).*

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 3: Opioid-Related Fatalities Occurring Among Vermont Residents		2010			2011			2012			2013			2014		
		% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents			% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents			% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents			% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents			% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents		
				Rate Per 100K of Sub Group			Rate Per 100K of Sub Group			Rate Per 100K of Sub Group			Rate Per 100K of Sub Group			Rate Per 100K of Sub Group
Total VERMONT Residents Accidental and Undetermined OPIOID-Related Fatalities		37	--	5.9	56	--	8.9	50	--	8.0	69	--	11.0	63	--	10.1
By Gender	Male	21	57%	6.8	29	52%	9.4	33	66%	10.7	44	64%	14.2	41	65%	13.3
	Female	16	43%	5.0	27	48%	8.5	17	34%	5.4	25	36%	7.9	22	35%	6.9
By Age	< 30	3	8%	1.3	13	23%	5.7	11	22%	4.9	12	17%	5.3	16	25%	7.1
	30 - 39	8	22%	11.3	12	21%	17.3	10	20%	14.4	15	22%	21.4	22	35%	31.3
	40 - 49	9	24%	9.8	15	27%	16.9	17	34%	19.7	17	25%	20.6	9	14%	11.3
	50 +	17	46%	7.3	16	29%	6.7	12	24%	4.9	25	36%	10.1	16	25%	6.3
Average Age		47			41			41			43			39		
By Race/Ethnicity	White, Non-Hispanic	37	100%	NA	55	98%	NA	48	96%	8.2	65	94%	11.1	62	98%	10.6
	Racial or Ethnic Minority	0	0%	NA	1	2%	NA	2	4%	5.4	4	6%	10.4	1	2%	2.5

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 3 (Continued): Opioid-Related Fatalities Occurring Among Vermont Residents		2015			2016			2017			2018			2019		
		<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>		
				<u>Rate Per 100K of Sub Group</u>			<u>Rate Per 100K of Sub Group</u>			<u>Rate Per 100K of Sub Group</u>			<u>Rate Per 100K of Sub Group</u>			<u>Rate Per 100K of Sub Group</u>
Total VERMONT Residents Accidental and Undetermined OPIOID-Related Fatalities		73	--	11.7	96	--	15.4	110	--	17.6	130	--	20.8	114	--	18.3
By Gender	Male	51	70%	16.5	63	66%	20.4	78	71%	25.3	77	59%	24.9	78	68%	24.3
	Female	22	30%	6.9	33	34%	10.4	32	29%	10.1	53	41%	16.7	36	32%	11.4
By Age	< 30	15	21%	6.7	20	21%	9.0	30	27%	13.6	30	23%	13.6	22	19%	10.1
	30 - 39	29	40%	40.9	32	33%	44.8	38	35%	52.6	45	35%	61.5	40	35%	54.4
	40 - 49	11	15%	14.3	25	26%	33.5	16	15%	21.9	23	18%	31.7	25	22%	34.9
	50 +	18	25%	7.1	19	20%	7.4	26	24%	10.1	32	25%	12.3	27	24%	10.3
Average Age		39			40			39			40			40		
By Race/ Ethnicity	White, Non-Hispanic	69	95%	11.8	95	99%	16.3	106	96%	18.2	127	98%	21.9	104	91%	18.0
	Racial or Ethnic Minority	4	5%	9.5	1	1%	2.3	4	4%	9.2	3	2%	6.9	10	9%	21.5

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 3 (Continued): Opioid-Related Fatalities Occurring Among Vermont Residents		2020			2021			2022			2023			2024		
		<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>			<u>% of Accidental and Undetermined Manner Opioid-Related Fatalities Occurring Among Vermont Residents</u>		
				<u>Rate Per 100K of Sub</u>			<u>Rate Per 100K of Sub</u>			<u>Rate Per 100K of Sub Group</u>			<u>Rate Per 100K of Sub Group</u>			<u>Rate Per 100K of Sub Group</u>
Total VERMONT Residents Accidental and Undetermined OPIOID-Related Fatalities		157	--	25.2		--			--			--			--	
By Gender	Male	109	69%	35.3												
	Female	48	31%	15.2												
By Age	< 30	27	17%	12.4												
	30 - 39	47	30%	64.0												
	40 - 49	40	25%	55.9												
	50 +	43	27%	16.5												
Average Age		41														
By Race/ Ethnicity	White, Non-Hispanic	154	98%	26.0												
	Racial or Ethnic Minority	3	2%	6.5												

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 4: Opioid-Related Fatalities by County of Residence and County of Death (Vermont and Non-Vermont Residents)	2010			2011			2012			2013			2014		
	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County
By County of Residence*															
Addison	3	7%	8.1	2	3%	5.4	1	2%	2.7	5	7%	13.6	3	5%	8.1
Bennington	2	5%	5.4	1	2%	2.7	3	6%	8.2	4	6%	10.9	5	8%	13.7
Caledonia	2	5%	6.4	0	0%	0.0	0	0%	0.0	1	1%	3.2	5	8%	16.1
Chittenden	11	26%	7.0	15	25%	9.5	15	29%	9.5	17	24%	10.7	13	20%	8.1
Essex	0	0%	0.0	1	2%	15.9	2	4%	32.1	1	1%	16.1	1	2%	16.3
Franklin	2	5%	4.2	4	7%	8.3	3	6%	6.2	7	10%	14.5	6	9%	12.3
Grand Isle	0	0%	0.0	0	0%	0.0	1	2%	14.3	0	0%	0.0	1	2%	14.3
Lamoille	0	0%	0.0	3	5%	12.1	2	4%	8.0	3	4%	12.0	3	5%	12.0
Orange	2	5%	6.9	3	5%	10.3	1	2%	3.5	4	6%	13.8	1	2%	3.5
Orleans	0	0%	0.0	1	2%	3.7	5	10%	18.4	4	6%	14.7	3	5%	11.1
Rutland	4	10%	6.5	9	15%	14.7	2	4%	3.3	11	15%	18.1	7	11%	11.6
Washington	2	5%	3.4	5	8%	8.4	6	12%	10.1	7	10%	11.8	1	2%	1.7
Windham	4	10%	9.0	7	12%	15.8	4	8%	9.1	2	3%	4.6	8	12%	18.3
Windsor	5	12%	8.8	5	8%	8.8	5	10%	8.9	3	4%	5.4	6	9%	10.7
Non-VT Residents who Died in VT (Rate Per 100K Vermonters)	5	12%	0.8	3	5%	0.5	1	2%	0.2	2	3%	0.3	2	3%	0.3
By County of Death															
Addison	3	7%	8.1	1	2%	2.7	0	0%	0.0	4	6%	10.9	2	3%	5.4
Bennington	2	5%	5.4	4	7%	10.8	3	6%	8.2	4	6%	10.9	4	6%	11.0
Caledonia	1	2%	3.2	0	0%	0.0	0	0%	0.0	1	1%	3.2	5	8%	16.1
Chittenden	13	31%	8.3	16	27%	10.2	16	31%	10.1	18	25%	11.3	19	29%	11.8
Essex	0	0%	0.0	1	2%	15.9	2	4%	32.1	1	1%	16.1	0	0%	0.0
Franklin	2	5%	4.2	3	5%	6.2	4	8%	8.3	7	10%	14.5	5	8%	10.3
Grand Isle	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0	0	0%	0.0
Lamoille	1	2%	4.1	3	5%	12.1	2	4%	8.0	3	4%	12.0	2	3%	8.0
Orange	1	2%	3.5	5	8%	17.2	1	2%	3.5	3	4%	10.4	1	2%	3.5
Orleans	0	0%	0.0	1	2%	3.7	4	8%	14.8	4	6%	14.7	2	3%	7.4
Rutland	6	14%	9.7	9	15%	14.7	2	4%	3.3	11	15%	18.1	7	11%	11.6
Washington	2	5%	3.4	5	8%	8.4	6	12%	10.1	7	10%	11.8	1	2%	1.7
Windham	3	7%	6.7	6	10%	13.6	4	8%	9.1	3	4%	6.8	7	11%	16.0
Windsor	5	12%	8.8	5	8%	8.8	5	10%	8.9	3	4%	5.4	6	9%	10.7
Out of State (Rate Per 100k Vermonters)	3	7%	0.5	0	0%	0.0	2	4%	0.3	2	3%	0.3	4	6%	0.6

*Some deaths are missing county of residence. These are included in overall totals but not included in the table above.

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 4 (Continued): Opioid-Related Fatalities by County of Residence and County of Death (Vermont and Non-Vermont Residents)	2015			2016			2017			2018			2019		
	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County
By County of Residence*															
Addison	1	1%	2.7	4	4%	10.8	2	2%	5.4	2	1%	5.4	2	2%	5.4
Bennington	2	3%	5.5	6	6%	16.6	4	3%	11.2	13	10%	36.5	11	10%	30.9
Caledonia	1	1%	3.2	4	4%	13.2	5	4%	16.6	7	5%	23.1	11	10%	33.0
Chittenden	17	22%	10.5	21	19%	13.0	29	25%	17.9	14	10%	8.5	17	15%	10.3
Essex	3	4%	48.7	0	0%	0.0	0	0%	0.0	0	0%	0.0	2	2%	32.0
Franklin	10	13%	20.5	7	6%	14.3	9	8%	18.4	12	9%	24.3	5	4%	10.1
Grand Isle	2	3%	29.2	2	2%	28.9	1	1%	14.3	0	0%	0.0	0	0%	0.0
Lamoille	0	0%	0.0	3	3%	11.8	3	3%	11.8	4	3%	15.8	4	3%	15.8
Orange	3	4%	10.4	4	4%	13.8	5	4%	17.3	3	2%	10.3	0	0%	0.0
Orleans	6	8%	22.1	6	6%	22.3	4	3%	14.9	3	2%	11.1	5	4%	18.6
Rutland	10	13%	16.7	13	12%	21.9	11	9%	18.6	19	14%	32.4	12	10%	18.7
Washington	4	5%	6.8	8	7%	13.7	13	11%	22.3	12	9%	20.6	11	10%	18.9
Windham	2	3%	4.6	3	3%	7.0	13	11%	30.3	25	18%	58.5	18	16%	39.8
Windsor	12	15%	21.5	14	13%	25.2	11	9%	20.0	16	12%	28.9	13	11%	23.5
Non-VT Residents who Died in VT (Rate Per 100K Vermonters)	6	8%	1.0	13	12%	2.1	6	5%	1.0	6	4%	1.0	4	3%	0.6
By County of Death															
Addison	0	0%	0.0	6	6%	16.2	1	1%	2.7	1	1%	2.7	2	2%	5.4
Bennington	1	1%	2.8	6	6%	16.6	3	3%	8.4	10	7%	28.1	12	10%	33.8
Caledonia	2	3%	6.5	5	5%	16.5	5	4%	16.6	4	3%	13.2	9	8%	30.0
Chittenden	20	25%	12.4	24	22%	14.9	35	30%	21.6	18	13%	10.9	19	17%	11.6
Essex	1	1%	16.2	1	1%	16.2	0	0%	0.0	0	0%	0.0	1	1%	16.2
Franklin	7	9%	14.3	7	6%	14.3	7	6%	14.3	7	5%	14.2	3	3%	6.1
Grand Isle	1	1%	14.6	1	1%	14.5	1	1%	14.3	0	0%	0.0	1	1%	13.8
Lamoille	1	1%	4.0	3	3%	11.8	3	3%	11.8	2	1%	7.9	5	4%	19.7
Orange	3	4%	10.4	4	4%	13.8	4	3%	13.8	2	1%	6.9	0	0%	0.0
Orleans	6	8%	22.1	6	6%	22.3	2	2%	7.5	2	1%	7.4	5	4%	18.5
Rutland	14	18%	23.4	11	10%	18.5	10	9%	16.9	16	12%	27.3	13	11%	22.3
Washington	4	5%	6.8	8	7%	13.7	10	9%	17.2	13	10%	22.4	9	8%	15.4
Windham	2	3%	4.6	6	6%	13.9	14	12%	32.7	24	18%	56.1	15	13%	35.1
Windsor	12	15%	21.5	18	17%	32.4	12	10%	21.8	18	13%	32.6	8	7%	14.5
Out of State (Rate Per 100k Vermonters)	5	6%	0.8	3	3%	0.5	9	8%	1.4	19	14%	3.0	16	14%	2.6

*Some deaths are missing county of residence. These are included in overall totals but not included in the table above.

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 4 (Continued): Opioid-Related Fatalities by County of Residence and County of Death (Vermont and Non-Vermont Residents)	2020			2021			2022			2023			2024		
	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County	# and % of All Accidental and Undetermined Opioid-Related Fatalities		Rate per 100k in County
By County of Residence*															
Addison	3	2%	8.2												
Bennington	9	6%	25.4												
Caledonia	11	7%	36.7												
Chittenden	26	17%	15.9												
Essex	0	0%	0.0												
Franklin	5	3%	10.1												
Grand Isle	3	2%	41.5												
Lamoille	5	3%	19.7												
Orange	7	4%	24.2												
Orleans	6	4%	22.2												
Rutland	20	13%	34.4												
Washington	21	13%	36.0												
Windham	12	8%	28.4												
Windsor	28	18%	50.9												
Non-VT Residents who Died in VT (Rate Per 100K Vermonters)	4	3%	0.6												
By County of Death															
Addison	2	1%	5.4												
Bennington	7	4%	19.7												
Caledonia	12	8%	40.0												
Chittenden	33	21%	20.1												
Essex	1	1%	16.2												
Franklin	3	2%	6.1												
Grand Isle	2	1%	27.6												
Lamoille	5	3%	19.7												
Orange	8	5%	27.7												
Orleans	4	3%	14.8												
Rutland	20	13%	34.4												
Washington	17	11%	29.1												
Windham	14	9%	33.2												
Windsor	27	17%	49.0												
Out of State (Rate Per 100k Vermonters)	9	6%	1.4												

*Some deaths are missing county of residence. These are included in overall totals but not included in the table above.

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

2020 Preliminary Data

The following tables include monthly opioid-related fatality data. As these data are preliminary, previously published data may change. All data should be considered preliminary until final data are published. The following tables include fatalities of Vermont residents, regardless of place of death (i.e., in Vermont vs. out-of-state).

Table 5 2020 Month of Death	Total Number of Opioid-Related Accidental and Undetermined Manner Fatalities			
	Total*	RX opioid (no fentanyl)	Heroin	Fentanyl
January	12	1	6	12
February	9	3	1	8
March	11	5	2	9
April	18	5	3	13
May	16	7	4	13
June	6	1	2	6
July	14	2	1	14
August	18	5	5	17
September	9	2	0	8
October	13	3	2	12
November	15	4	7	13
December	16	4	7	14
Total Vermont Residents	157	42	40	139
Vermonters in Vermont	146	38	39	128
Vermonters Out of State	11	4	1	11
Non-Vermont Residents	9	1	2	8

*NOTE: Prescription opioid, fentanyl, and heroin deaths are not mutually exclusive.

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

Table 6 Total Number of Opioid-Related Accidental and Undetermined Fatalities, Preliminary 2020 Data by County of Residence													
County of Residence	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Addison County	0	0	0	0	1	0	1	0	0	0	0	1	3
Bennington County	1	0	0	1	0	0	1	3	0	1	1	1	9
Caledonia County	0	0	0	1	1	1	1	0	0	2	5	0	11
Chittenden County	3	3	4	2	1	1	0	3	0	3	3	3	26
Essex County	0	0	0	0	0	0	0	0	0	0	0	0	0
Franklin County	1	1	0	1	2	0	0	0	0	0	0	0	5
Grand Isle County	0	0	0	1	0	1	0	0	0	0	0	1	3
Lamoille County	0	0	0	0	1	0	2	1	1	0	0	0	5
Orange County	0	1	1	0	0	1	1	1	1	0	0	1	7
Orleans County	0	0	1	1	0	0	1	0	0	1	1	1	6
Rutland County	0	1	1	7	2	0	0	3	1	2	1	2	20
Washington County	1	1	0	1	2	1	3	4	3	1	2	2	21
Windham County	2	1	1	1	3	0	0	1	1	2	0	0	12
Windsor County	4	1	3	2	2	1	4	2	2	1	2	4	28
Missing County of Residence	0	0	0	0	1	0	0	0	0	0	0	0	1
VERMONT Total	12	9	11	18	16	6	14	18	9	13	15	16	157
Non-Vermont Residents	0	0	0	0	0	1	0	1	1	2	2	2	9
Pending Cases	0	0	0	0	0	1	0	0	0	1	2	5	9

The number of pending cases represents the total number of cases for each month which have not yet been assigned a cause of death in the Vermont Vital Statistics System. Cases still pending six to eight weeks after the end of the month of death are not necessarily drug-related.

Vermont Methodology for Calculating Drug-Related Fatalities

The Vermont Department of Health utilizes a unique methodology for calculating a drug-related fatality. The VDH method differs from the CDC methodology, as described in MMWR: Increases in Drug and Opioid-Involved Overdose Deaths – United States, 2010–2015:

“The National Vital Statistics System multiple cause-of-death mortality files were used to record drug overdose deaths. Drug overdose deaths were identified using the International Classification of Disease, Tenth Revision (ICD-10), based on the ICD-10 underlying cause-of-death codes X40–44 (unintentional), X60–64 (suicide), X85 (homicide), or Y10–Y14 (undetermined intent). Among deaths with drug overdose as the underlying cause, the type of opioid is indicated by the following ICD-10 multiple cause-of-death codes: opioids (T40.0, T40.1, T40.2, T40.3, T40.4, or T40.6); natural/semisynthetic opioids (T40.2); methadone (T40.3); synthetic opioids other than methadone (T40.4); and heroin (T40.1). Some deaths involved more than one type of opioid; these deaths were included in the rates for each subcategory. Therefore, categories of deaths presented are not mutually exclusive.”

<https://www.cdc.gov/mmwr/volumes/65/wr/mm655051e1.htm>

Determining a drug-related fatality is a multi-step process. Any death certificate with a pending investigation or natural death classification is removed before analyses. All causes of death, including any contributing conditions, are scanned to recognize any ICD code that represents a drug poisoning (including alcohol). Next, all literal text fields, including the injury description text are also examined to identify any listed alcohol or drugs. Fatalities related to chronic alcohol use, medical complications of medication administration, end of life care, intrauterine or gestational exposure, helium, or exposure/injury in the context of intoxication are excluded as they do not represent a likely “overdose”.

There are two main differences between the methodologies used by VDH and the CDC. First, VDH considers all causes of death, contributing conditions, and injury descriptions as opposed to underlying cause of death only. Second, VDH examines a broader list of ICD-10 codes than those used by the CDC. Beyond the list of ICD-10 codes used by the CDC, VDH examines the following additional ICD-10 codes to identify its initial list of drug-related fatalities:

ICD Codes Used in Drug-Related Fatalities Analysis (beyond those used by CDC)			
X45	F10.0	F14.0	F17.0
X65	F10.1	F14.1	F17.1
Y15	F11.0	F15.0	F18.0
T36-T50	F11.1	F15.1	F18.1
T51.0	F13.0	F16.0	F19.0
	F13.1	F16.1	F19.1

Opioid-Related Fatalities Among Vermonters, 2020 Annual Data Brief

While the CDC does examine multiple cause-of-death codes for those described in the MMWR excerpt above (T40.0, T40.1, T40.2, T40.3, T40.4, or T40.6), they do so only for individuals who have an underlying cause-of-death code equal to X40-44, X60-64, X85, or Y10-Y14.

In an example of how the VDH and CDC methodologies differ based on use of ICD codes and literal text analysis, an underlying cause of death may be listed as cardiovascular disease and identified in the death record with the ICD-10 code I25.0 (CVD). This individual would not be included as a drug-related fatality using the CDC methodology. However, upon closer inspection of literal text and additional cause of death fields, the injury description lists “substance abuse” with a contributing condition of “acute cocaine intoxication” and ICD codes indicating poisoning by narcotics (T45.0). Based on this additional information, VDH would classify this as a drug-related fatality.

As a result of its broader inclusion criteria, the Vermont Department of Health’s method of fatality identification reveals an average 5% more fatalities (range -1% to 14%) compared to the CDC’s findings for Vermont.

	Number of Drug-Related Fatalities*	
	CDC Methodology	Vermont Methodology
2014	83	96
2015	99	103
2016	125	127
2017	134	137
2018	153	159
2019	*	142

*2020 and 2019 CDC data are not yet available.