

Table 1. Number, crude and age-adjusted rates of drug overdose deaths involving fentanyl, hydrocodone, hydromorphone, oxycodone and oxymorphone, by U.S. Department of Health and Human Services region: 2018

	Public Health Region ¹	Number	Crude rate	Age-adjusted rate ²
Fentanyl^a				
U.S. Total		30,151	9.22	9.54
Region 1	CT, ME, MA, NH, RI, VT	3,412	22.97	24.24
Region 2	NJ, NY, and NYC	4,365	15.34	15.53
Region 3	DE, DC, MD, PA, VA, WV	5,971	19.36	19.87
Region 4	AL, FL, GA, KY, MS, NC, SC, TN	5,676	8.55	9.15
Region 5	IL, IN, MI, MN, OH, WI	7,194	13.69	14.42
Region 6	AR, LA, NM, OK, TX	691	1.63	1.68
Region 7	IA, KS, MO, NE	974	6.90	7.49
Region 8	CO, MT, ND, SD, UT, WY	194	1.60	1.60
Region 9	AZ, CA, HI, NV	1,356	2.65	2.69
Region 10	AK, ID, OR, WA	318	2.24	2.29
Hydrocodone				
U.S. Total		5,030	2.31	2.20
Region 1	CT, ME, MA, NH, RI, VT	112	1.13	1.05
Region 2	NJ, NY, and NYC	186	0.99	0.89
Region 3	DE, DC, MD, PA, VA, WV	380	1.85	1.76
Region 4	AL, FL, GA, KY, MS, NC, SC, TN	1,200	2.71	2.66
Region 5	IL, IN, MI, MN, OH, WI	1,060	3.03	2.87
Region 6	AR, LA, NM, OK, TX	738	2.61	2.54
Region 7	IA, KS, MO, NE	216	2.29	2.34
Region 8	CO, MT, ND, SD, UT, WY	212	2.62	2.51
Region 9	AZ, CA, HI, NV	710	2.08	1.94
Region 10	AK, ID, OR, WA	216	2.28	2.15
Hydromorphone				
U.S. Total		1,380	0.63	0.59
Region 1	CT, ME, MA, NH, RI, VT	84	0.85	0.73
Region 2	NJ, NY, and NYC	118	0.62	0.60
Region 3	DE, DC, MD, PA, VA, WV	150	0.73	0.70
Region 4	AL, FL, GA, KY, MS, NC, SC, TN	426	0.96	0.94
Region 5	IL, IN, MI, MN, OH, WI	164	0.47	0.45
Region 6	AR, LA, NM, OK, TX	116	0.41	0.45
Region 7	IA, KS, MO, NE	34	0.36	0.38
Region 8	CO, MT, ND, SD, UT, WY	76	0.94	0.90
Region 9	AZ, CA, HI, NV	158	0.46	0.44
Region 10	AK, ID, OR, WA	54	0.57	0.51
Oxycodone				
U.S. Total		10,084	4.63	4.50
Region 1	CT, ME, MA, NH, RI, VT	568	5.76	5.50
Region 2	NJ, NY, and NYC	1,064	5.64	5.47
Region 3	DE, DC, MD, PA, VA, WV	1,224	5.97	5.75
Region 4	AL, FL, GA, KY, MS, NC, SC, TN	2,766	6.26	6.12
Region 5	IL, IN, MI, MN, OH, WI	1,274	3.64	3.63
Region 6	AR, LA, NM, OK, TX	654	2.31	2.27
Region 7	IA, KS, MO, NE	378	4.01	4.09
Region 8	CO, MT, ND, SD, UT, WY	636	7.86	7.90
Region 9	AZ, CA, HI, NV	1,144	3.35	3.18
Region 10	AK, ID, OR, WA	376	3.97	3.79

Public Health Region ¹	Number	Crude rate	Age-adjusted rate ²
		Oxymorphone	
U.S. Total	1,362	0.63	0.63
Region 1	CT, ME, MA, NH, RI, VT	62	0.63
Region 2	NJ, NY, and NYC	116	0.62
Region 3	DE, DC, MD, PA, VA, WV	218	1.07
Region 4	AL, FL, GA, KY, MS, NC, SC, TN	498	1.13
Region 5	IL, IN, MI, MN, OH, WI	128	0.37
Region 6	AR, LA, NM, OK, TX	86	0.30
Region 7	IA, KS, MO, NE	28	0.30
Region 8	CO, MT, ND, SD, UT, WY	60	0.74
Region 9	AZ, CA, HI, NV	138	0.40
Region 10	AK, ID, OR, WA	28	0.30

³ Includes drug overdose deaths involving fentanyl, fentanyl analogs, and fentanyl metabolites.

¹ US. Department of Health and Human Services (HHS) regions: Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont), Region 2 (New Jersey, New York, and New York City), Region 3 (Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia), Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee), Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin), Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas), Region 7 (Iowa, Kansas, Missouri, and Nebraska), Region 8 (Colorado, Montana, North Dakota, South Dakota,

² Age-adjusted death rates (deaths per 100,000 standard population) were calculated using the direct method and adjusted to the 2000 standard population.

NOTES: Drug overdose deaths were identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Deaths may involve other drugs in addition to the referent drug group. Deaths involving more than one referent drug group (e.g., a death involving both heroin and cocaine) were counted in both totals. To avoid counting the same death multiple times, the numbers and percentages for drug-specific deaths should not be summated. Caution should be used when comparing numbers and rates across regions. In 2018, the reporting of at least one specific drug in the literal text varied by region (Region 1, 95.5%; Region 2, 94.1%; Region 3, 85.6%; Region 4, 86.3%; Region 5, 90.0%; Region 6, 79.1%; Region 7, 84.3%; Region 8, 88.1%; Region 9, 85.9%; Region 10, 90.7%).

SOURCE: NCHS National Vital Statistics System, Mortality files linked with death certificate literal text, 2018.

Table 2. Number of drug overdose deaths involving select drugs, by age group and sex: United States, 2018

	Total		Female		Male	
	Number of deaths	Population	Number of deaths	Population	Number of deaths	Population
Fentanyl						
All Ages	30,151	327,167,434	8,128	166,038,755	22,023	161,128,679
<15 years	24	60,885,444	12	29,778,412	12	31,107,032
15 - 24 years	2,580	42,970,800	784	20,994,345	1,796	21,976,455
25 - 34 years	9,452	45,697,774	2,588	22,487,065	6,864	23,210,709
35 - 44 years	7,826	41,277,888	2,035	20,690,288	5,791	20,587,600
45 - 54 years	5,804	41,631,699	1,577	21,090,497	4,227	20,541,202
55 - 64 years	3,715	42,272,636	999	21,873,773	2,716	20,398,863
65+ years	743	52,431,193	132	29,124,375	611	23,306,818
Hydrocodone						
All Ages	2,515	327,167,434	1,227	166,038,755	1,288	161,128,679
<15 years	7	60,885,444	4	29,778,412	3	31,107,032
15 - 24 years	102	42,970,800	27	20,994,345	75	21,976,455
25 - 34 years	301	45,697,774	103	22,487,065	198	23,210,709
35 - 44 years	494	41,277,888	236	20,690,288	258	20,587,600
45 - 54 years	625	41,631,699	343	21,090,497	282	20,541,202
55 - 64 years	673	42,272,636	348	21,873,773	325	20,398,863
65+ years	312	52,431,193	166	29,124,375	146	23,306,818
Hydromorphone						
All Ages	690	327,167,434	333	166,038,755	357	161,128,679
15 - 24 years	23	42,970,800	5	20,994,345	18	21,976,455
25 - 34 years	104	45,697,774	46	22,487,065	58	23,210,709
35 - 44 years	144	41,277,888	72	20,690,288	72	20,587,600
45 - 54 years	176	41,631,699	95	21,090,497	81	20,541,202
55 - 64 years	168	42,272,636	83	21,873,773	85	20,398,863
65+ years	75	52,431,193	32	29,124,375	43	23,306,818
Oxycodone						
All Ages	5,042	327,167,434	2,215	166,038,755	2,827	161,128,679
<15 years	9	60,885,444	3	29,778,412	6	31,107,032
15 - 24 years	234	42,970,800	65	20,994,345	169	21,976,455
25 - 34 years	749	45,697,774	246	22,487,065	503	23,210,709
35 - 44 years	1,073	41,277,888	455	20,690,288	618	20,587,600
45 - 54 years	1,321	41,631,699	630	21,090,497	691	20,541,202
55 - 64 years	1,237	42,272,636	598	21,873,773	639	20,398,863
65+ years	418	52,431,193	218	29,124,375	200	23,306,818
Oxymorphone						
All Ages	681	327,167,434	262	166,038,755	419	161,128,679
<15 years	1	60,885,444			1	31,107,032
15 - 24 years	40	42,970,800	13	20,994,345	27	21,976,455
25 - 34 years	130	45,697,774	43	22,487,065	87	23,210,709
35 - 44 years	146	41,277,888	51	20,690,288	95	20,587,600
45 - 54 years	165	41,631,699	70	21,090,497	95	20,541,202
55 - 64 years	152	42,272,636	65	21,873,773	87	20,398,863
65+ years	46	52,431,193	20	29,124,375	26	23,306,818

NOTES: Drug overdose deaths were identified using underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Deaths may involve other drugs in addition to the referent drug group. Deaths involving more than one referent drug group (e.g., a death involving both heroin and cocaine) were counted in both totals. To avoid counting the same death multiple times, the numbers and percentages for drug-specific deaths should not be summated.

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