

Data Brief 394. Drug Overdose Deaths in the United States, 1999–2019

Data table for Figure 1. Age-adjusted drug overdose death rates, by sex: United States, 1999–2019

Year	Total		Male		Female	
	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	16,849	6.1	11,258	8.2	5,591	3.9
2000	17,415	6.2	11,563	8.3	5,852	4.1
2001	19,394	6.8	12,658	9.0	6,736	4.6
2002	23,518	8.2	15,028	10.6	8,490	5.8
2003	25,785	8.9	16,399	11.5	9,386	6.4
2004	27,424	9.4	17,120	11.8	10,304	6.9
2005	29,813	10.1	18,724	12.8	11,089	7.3
2006	34,425	11.5	21,893	14.8	12,532	8.2
2007	36,010	11.9	22,298	14.9	13,712	8.8
2008	36,450	11.9	22,468	14.9	13,982	8.9
2009	37,004	11.9	22,593	14.8	14,411	9.1
2010	38,329	12.3	23,006	15.0	15,323	9.6
2011	41,340	13.2	24,988	16.1	16,352	10.2
2012	41,502	13.1	25,112	16.1	16,390	10.2
2013	43,982	13.8	26,799	17.0	17,183	10.6
2014	47,055	14.7	28,812	18.3	18,243	11.1
2015	52,404	16.3	32,957	20.8	19,447	11.8
2016	63,632	19.8	41,558	26.2	22,074	13.4
2017	70,237	21.7	46,552	29.1	23,685	14.4
2018	67,367	20.7	44,941	27.9	22,426	13.6
2019	70,630	21.6	47,881	29.6	22,749	13.7

NOTES: Drug overdose deaths are identified using the *International Classification of Diseases, 10th Revision (ICD–10)* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

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Data table for Figure 2. Drug overdose death rates among those aged 15 and over, by selected age group: United States, 1999–2019

Year	15–24		25–34		35–44		45–54		55–64		65 and over	
	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	1,240	3.2	3,236	8.1	6,295	14.0	4,067	11.1	991	4.2	930	2.7
2000	1,435	3.7	3,169	7.9	6,469	14.3	4,389	11.6	1,013	4.2	854	2.4
2001	1,700	4.2	3,410	8.6	6,968	15.5	5,115	13.0	1,185	4.7	910	2.6
2002	2,095	5.1	4,125	10.5	8,064	18.1	6,466	16.2	1,601	6.0	1,060	3.0
2003	2,491	6.0	4,488	11.4	8,358	18.9	7,325	17.9	1,943	6.9	1,070	3.0
2004	2,751	6.6	4,680	11.9	8,439	19.3	8,040	19.3	2,283	7.8	1,104	3.0
2005	2,918	6.9	5,340	13.6	8,506	19.6	8,968	21.1	2,761	9.0	1,203	3.3
2006	3,460	8.1	6,346	16.1	9,373	21.7	10,421	24.1	3,355	10.5	1,321	3.6
2007	3,550	8.2	6,663	16.8	9,152	21.4	11,012	25.1	4,043	12.2	1,435	3.8
2008	3,487	8.0	6,739	16.8	8,885	21.1	11,222	25.2	4,396	12.9	1,587	4.1
2009	3,377	7.7	7,013	17.2	8,524	20.5	11,390	25.4	4,858	13.7	1,721	4.3
2010	3,571	8.2	7,572	18.4	8,546	20.8	11,299	25.1	5,486	15.0	1,722	4.3
2011	3,762	8.6	8,445	20.2	9,130	22.5	11,933	26.7	6,060	15.9	1,892	4.6
2012	3,518	8.0	8,508	20.1	8,948	22.1	11,895	26.9	6,423	16.6	2,094	4.9
2013	3,664	8.3	8,947	20.9	9,320	23.0	12,045	27.5	7,551	19.2	2,344	5.2
2014	3,798	8.6	10,055	23.1	10,134	25.0	12,263	28.2	8,122	20.3	2,568	5.6
2015	4,235	9.7	11,880	26.9	11,505	28.3	12,974	30.0	8,901	21.8	2,760	5.8
2016	5,376	12.4	15,443	34.6	14,183	35.0	14,771	34.5	10,632	25.6	3,075	6.2
2017	5,455	12.6	17,400	38.4	15,949	39.0	15,996	37.7	11,747	28.0	3,529	6.9
2018	4,633	10.8	16,200	35.5	15,794	38.3	14,688	35.3	11,946	28.3	3,972	7.6
2019	4,777	11.2	16,375	35.6	16,859	40.5	15,083	36.9	12,896	30.4	4,469	8.3

NOTE: Drug overdose deaths are identified using the *International Classification of Diseases, 10th Revision (ICD-10)* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

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Data table for Figure 3. Age-adjusted rates of drug overdose deaths involving opioids, by type of opioid: United States, 1999–2019

Year	Any opioid		Heroin		Natural and semisynthetic opioids		Methadone		Synthetic opioids other than methadone	
	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	8,050	2.9	1,960	0.7	2,749	1.0	784	0.3	730	0.3
2000	8,407	3.0	1,842	0.7	2,917	1.0	986	0.4	782	0.3
2001	9,496	3.3	1,779	0.6	3,479	1.2	1,456	0.5	957	0.3
2002	11,920	4.1	2,089	0.7	4,416	1.5	2,358	0.8	1,295	0.4
2003	12,940	4.5	2,080	0.7	4,867	1.7	2,972	1.0	1,400	0.5
2004	13,756	4.7	1,878	0.6	5,231	1.8	3,845	1.3	1,664	0.6
2005	14,918	5.1	2,009	0.7	5,774	1.9	4,460	1.5	1,742	0.6
2006	17,545	5.9	2,088	0.7	7,017	2.3	5,406	1.8	2,707	0.9
2007	18,516	6.1	2,399	0.8	8,158	2.7	5,518	1.8	2,213	0.7
2008	19,582	6.4	3,041	1.0	9,119	3.0	4,924	1.6	2,306	0.8
2009	20,422	6.6	3,278	1.1	9,735	3.1	4,696	1.5	2,946	1.0
2010	21,089	6.8	3,036	1.0	10,943	3.5	4,577	1.5	3,007	1.0
2011	22,784	7.3	4,397	1.4	11,693	3.7	4,418	1.4	2,666	0.8
2012	23,166	7.4	5,925	1.9	11,140	3.5	3,932	1.2	2,628	0.8
2013	25,052	7.9	8,257	2.7	11,346	3.5	3,591	1.1	3,105	1.0
2014	28,647	9.0	10,574	3.4	12,159	3.8	3,400	1.1	5,544	1.8
2015	33,091	10.4	12,989	4.1	12,727	3.9	3,301	1.0	9,580	3.1
2016	42,249	13.3	15,469	4.9	14,487	4.4	3,373	1.0	19,413	6.2
2017	47,600	14.9	15,482	4.9	14,495	4.4	3,194	1.0	28,466	9.0
2018	46,802	14.6	14,996	4.7	12,552	3.8	3,023	0.9	31,335	9.9
2019	49,860	15.5	14,019	4.4	11,886	3.6	2,740	0.8	36,359	11.4

NOTES: Drug overdose deaths are identified using the *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories are identified by specific multiple-cause-of-death codes: any opioid, T40.0–T40.4 and T40.6; heroin, T40.1; natural and semisynthetic opioids, T40.2; methadone, T40.3; and synthetic opioids other than methadone, T40.4. Deaths involving more than one opioid category (e.g., a death involving both methadone and a natural or semisynthetic opioid) are counted in both categories. Natural and semisynthetic opioids include drugs such as morphine, oxycodone, and hydrocodone; and synthetic opioids other than methadone include drugs such as fentanyl, fentanyl analogs, and tramadol. The percentage of drug overdose deaths that identified the specific drugs involved varied by year, ranging from 75%–79% from 1999 through 2013 and increasing from 81% in 2014 to 94% in 2019.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

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Data table for Figure 4. Age-adjusted rates of drug overdose deaths involving stimulants, by type of stimulant: United States, 1999–2019

Year	Cocaine		Psychostimulants with abuse potential	
	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	3,822	1.4	547	0.2
2000	3,544	1.3	578	0.2
2001	3,833	1.3	563	0.2
2002	4,599	1.6	941	0.3
2003	5,199	1.8	1,179	0.4
2004	5,443	1.9	1,305	0.4
2005	6,208	2.1	1,608	0.5
2006	7,448	2.5	1,462	0.5
2007	6,512	2.2	1,378	0.4
2008	5,129	1.7	1,302	0.4
2009	4,350	1.4	1,632	0.5
2010	4,183	1.3	1,854	0.6
2011	4,681	1.5	2,266	0.7
2012	4,404	1.4	2,635	0.8
2013	4,944	1.6	3,627	1.2
2014	5,415	1.7	4,298	1.4
2015	6,784	2.1	5,716	1.8
2016	10,375	3.2	7,542	2.4
2017	13,942	4.3	10,333	3.2
2018	14,666	4.5	12,676	3.9
2019	15,883	4.9	16,167	5.0

NOTES: Drug overdose deaths are identified using the *International Classification of Diseases, 10th Revision* (ICD–10) underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Drug overdose deaths involving selected drug categories are identified by specific multiple-cause-of-death codes: cocaine, T40.5; and psychostimulants, T43.6. Psychostimulants with abuse potential include drugs such as methamphetamine, amphetamine, and methylphenidate. Deaths may involve more than one drug. The percentage of drug overdose deaths that identified the specific drugs involved varied by year, ranging from 75%–79% from 1999 through 2013 and increasing from 81% in 2014 to 94% in 2019.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.