Drug-Related Deaths in the United States, 2000–2023

Key Findings

- In 2023, there were 447,749 drug-related deaths, corresponding to an age-adjusted rate of 110.4 deaths per 100,000 people.

- In 2023, the age-adjusted rate of drug-related deaths among males was 2.0 times higher than the rate among females.

- In 2023, the American Indian or Alaska Native demographic had the highest age-adjusted rate of drug-related deaths, with 168.9 deaths per 100,000 people; Asian people had the lowest, with 19.7 per 100,000 people.

- In 2023, the five states with the highest age-adjusted rates of drug-related deaths were Wyoming, Tennessee, Maine, Kentucky, and West Virginia, while the five with the lowest were California, Hawaii, Georgia, Connecticut, and New Jersey.

- In 2023, 334,435 drug-related deaths had an underlying cause of death that was classified as a non-injury (e.g., heart disease), while 113,314 were classified as an injury (e.g., poisoning).

Drug-related mortality extends well beyond the number of overdose deaths. Drawing on ICD-10 codes that were categorized by the CDC, drug-related deaths record at least one of more than 100 drug-induced conditions as the underlying or contributing cause of death.[1] In the United States in 2023, there were 105,007 drug overdose deaths, 109,067 drug-induced deaths, and 447,749 drug-related deaths, according to the CDC's WONDER database.[2] A focus on drug-related mortality provides a more complete understanding of the extent of the drug crisis and the burden of harm attributable to drugs.

Drug-Related Deaths Since 2000

- In 2023, there were 447,749 drug-related deaths, corresponding to an age-adjusted rate of 110.4 deaths per 100,000 people (Figure 1, Table 1).

- Between 2000 and 2023, the number of drug-related deaths increased from 46,857 to 447,749, as the age-adjusted rate increased from 16.8 to 110.4 deaths per 100,000 people.

- After peaking in 2021, the number of drug-related deaths decreased by 5.3% through 2023, as the age-adjusted rate decreased by 8.5%.

- Between 2000 and 2023, there were 6,898,651 drug-related deaths.

Figure 1. Drug-related deaths, 2000-2023
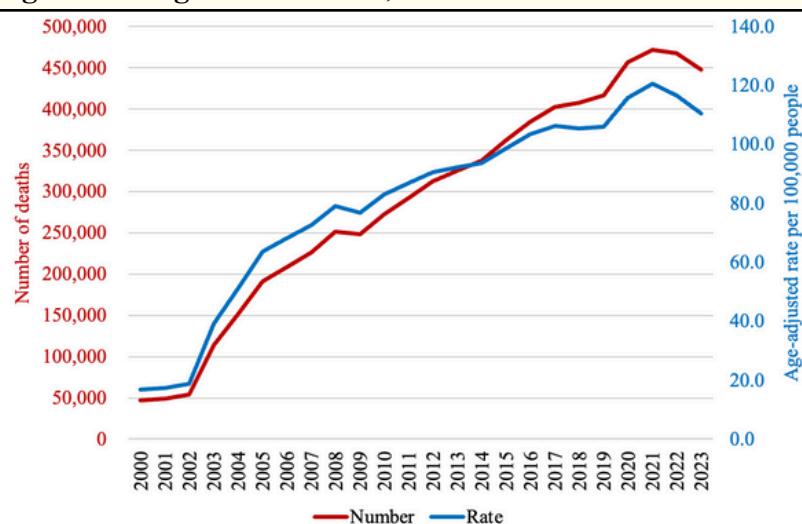
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Drug Overdose Deaths, Drug-Induced Deaths, and Drug-Related Deaths

- Between 2000 and 2023, the number of drug-related deaths (i.e., deaths in which a drug-induced condition was the underlying or contributing cause of death) increased from 46,587 to 447,749, as the age-adjusted rate increased from 16.8 to 110.4 deaths per 100,000 people (Figure 2, Table 2).

- Between 2000 and 2023, the number of drug-induced deaths (i.e., deaths in which a drug-induced condition was the underlying cause of death) increased from 19,705 to 109,067, as the age-adjusted rate increased from 7.0 to 32.4 deaths per 100,000 people.

- Between 2000 and 2023, the number of drug overdose deaths (i.e., deaths in which drug poisoning was the underlying cause of death) increased from 17,415 to 105,007, as the age-adjusted rate increased from 6.2 to 31.3 deaths per 100,000 people.

Figure 2. Age-adjusted rate of drug overdose deaths, drug-induced deaths, and drug-related deaths, 2000–2023
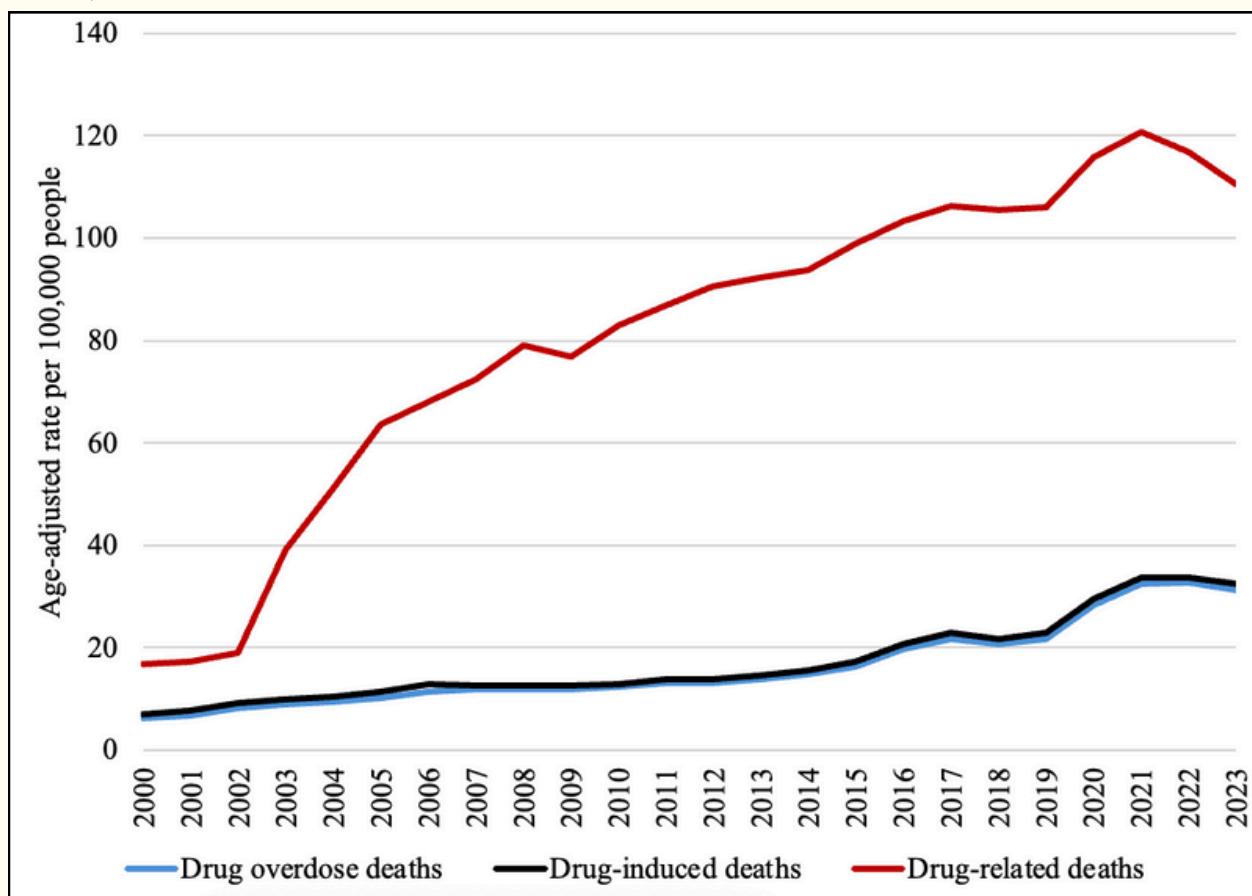
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Drug-Related Deaths by Sex

- In 2023, the age-adjusted rate of drug-related deaths among males was 2.0 times higher than the rate among females, with 150.0 and 75.5 deaths per 100,000 people, respectively (Figure 3.1, Table 3).

- Among males, the number of drug-related deaths increased from 29,509 in 2000 to 281,618 in 2023, as the age-adjusted rate increased from 23.0 to 150.0 deaths per 100,000 people (Figure 3.2).

- Among females, the number of drug-related deaths increased from 17,348 in 2000 to 166,131 in 2023, as the age-adjusted rate increased from 11.5 to 75.5 deaths per 100,000 people.

Figure 3.1. Age-adjusted rate of drug-related deaths, by sex, 2000–2023
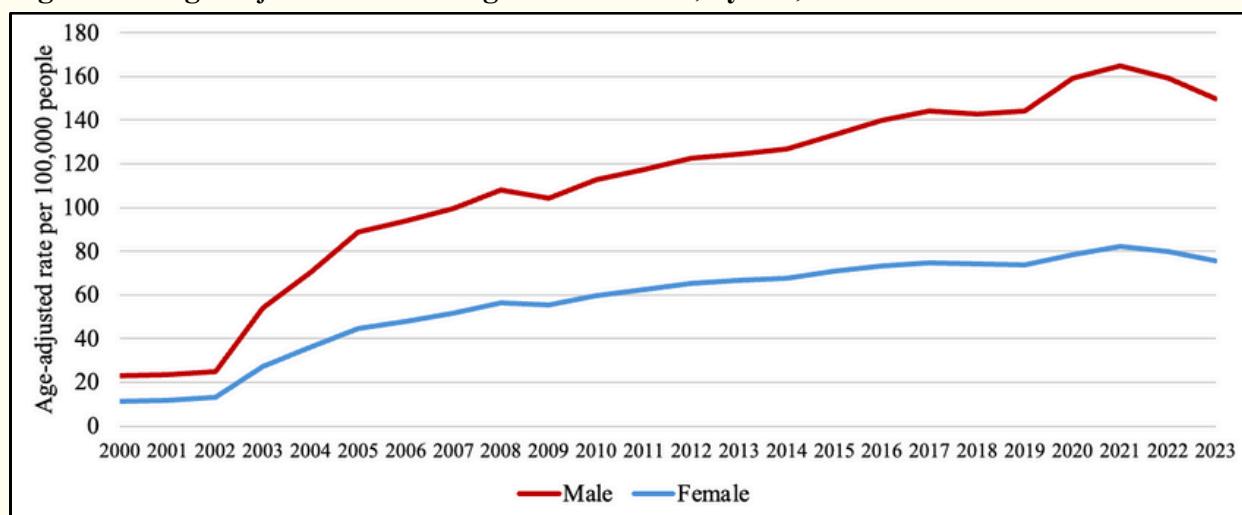
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Figure 3.2. Drug-related deaths, by sex, 2000–2023
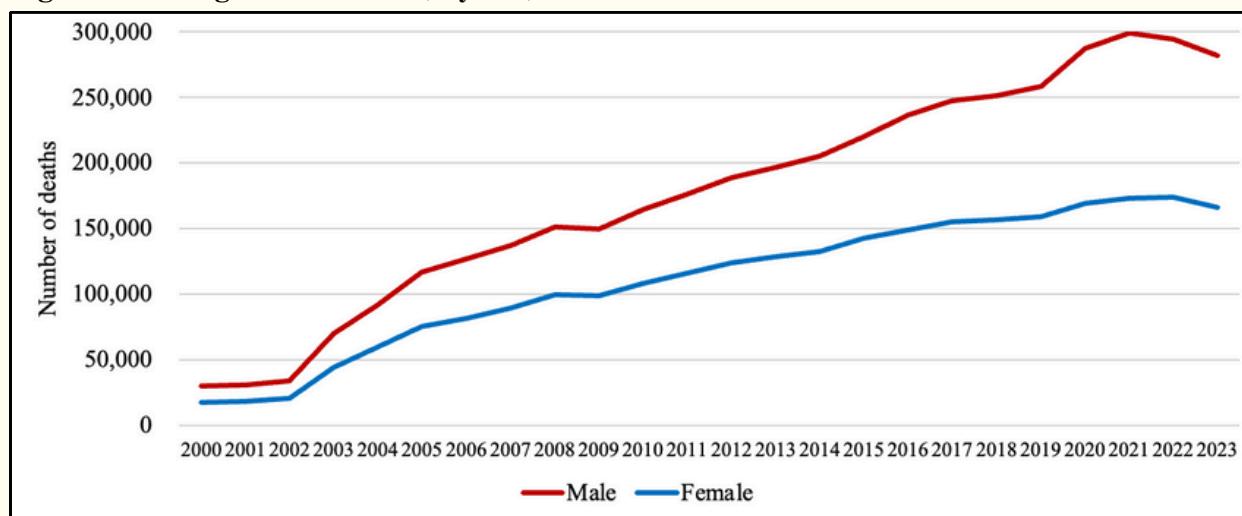
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Drug-Related Deaths by Age Group

- Between 2000 and 2023, the crude rate of drug-related deaths increased among all age groups (Figure 4.1, Table 4).

- In 2023, the crude rate of drug-related deaths was highest for individuals aged 85 or older, with 803.1 deaths per 100,000 people, and lowest for individuals aged 14 or younger, with 0.8 deaths per 100,000 people.

- In 2023, individuals aged 65–74 experienced the most drug-related deaths, with 110,520, while those younger than 14 experienced the fewest, with 452 (Figure 4.2).

Figure 4.1. Crude rate of drug-related deaths, by age group, 2000 and 2023
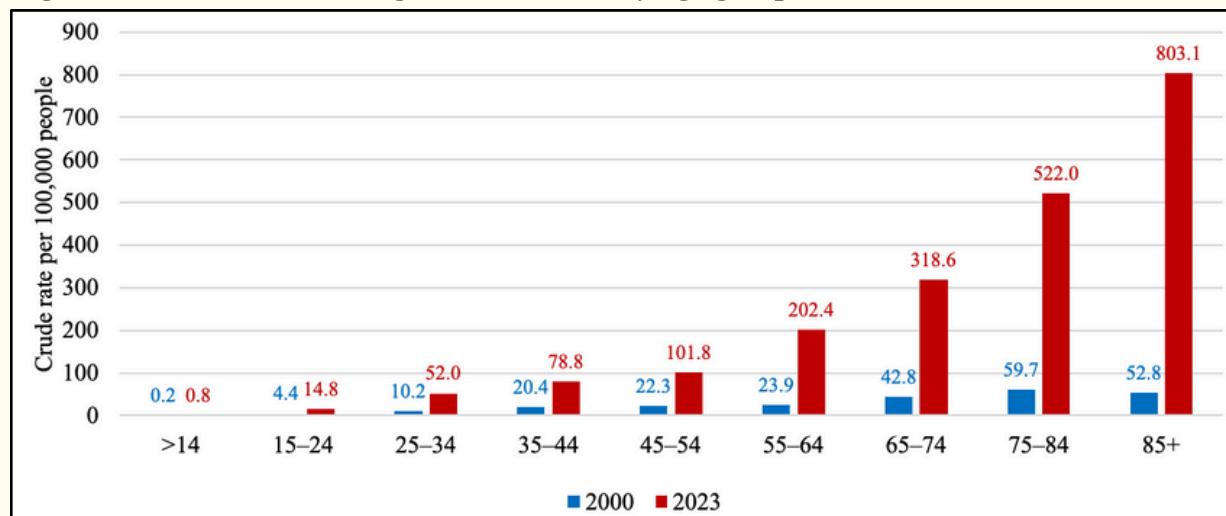
Note: 16 individuals in 2000 and 20 individuals in 2023 died from drug-related causes but were excluded from this section because their age was not reported on their death certificate.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Figure 4.2. Drug-related deaths, by age group, 2023
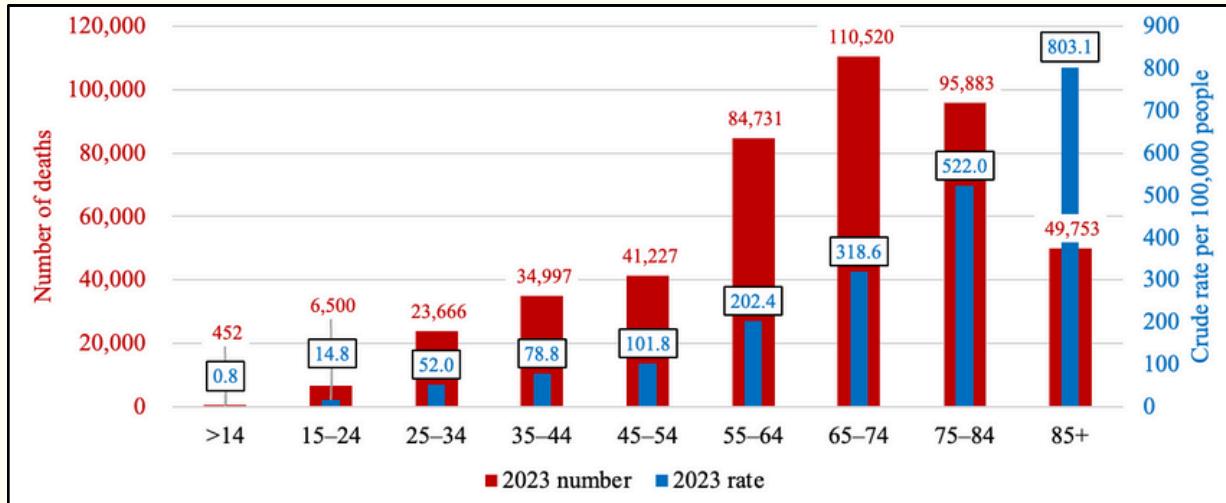
Note: 16 individuals in 2000 and 20 individuals in 2023 died from drug-related causes but were excluded from this section because their age was not reported on their death certificate.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Drug-Related Deaths by Race & Hispanic Origin

- Between 2020 and 2023, the age-adjusted rate of drug-related deaths increased by 2.0% among Black people, 2.2% among the American Indian or Alaska Native demographic, 3.7% among those who were more than one race, and 17.2% among the Native Hawaiian or Other Pacific Islander demographic (Figure 5, Table 5).

- Between 2020 and 2023, the age-adjusted rate of drug-related deaths decreased by 1.1% among Hispanic people, 5.9% among white people, and 8.8% among Asian people.

- In 2023, the American Indian or Alaska Native demographic had the highest age-adjusted rate of drug-related deaths, with 168.9 deaths per 100,000 people, while Asian people had the lowest, with 19.7 deaths per 100,000 people.

Figure 5. <u>Age-adjusted rate of drug-related deaths, by race and Hispanic origin, 2020 and 2023</u>
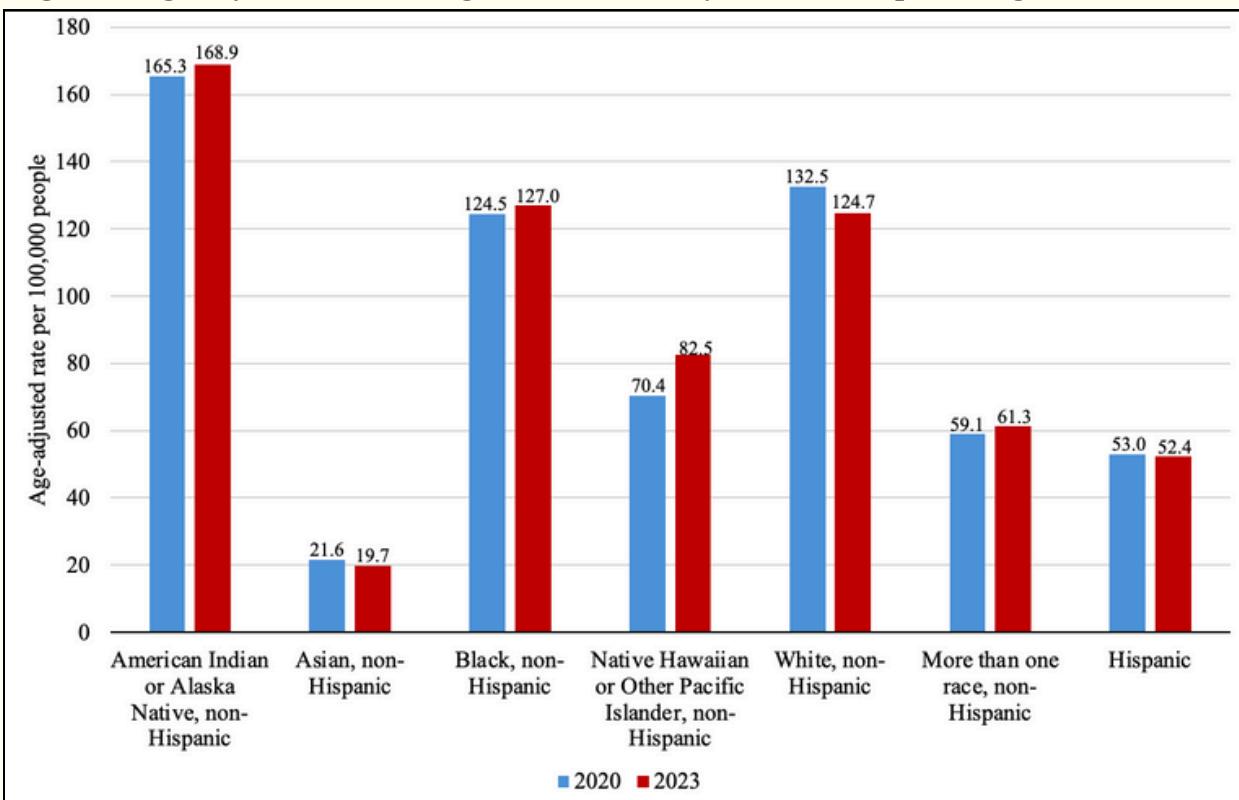
Notes: 2,316 individuals in 2020 and 1,498 individuals in 2023 died from drug-related causes but were excluded from this section because their Hispanic-origin status was not reported on their death certificate. Race and ethnicity categories are not fully comparable between 2000 and 2023 because the CDC began reporting racial categories differently in 2018.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Drug-Related Deaths by State

- In 2023, the age-adjusted rate of drug-related deaths ranged from a low of 39.5 deaths per 100,000 people in California to a high of 218.6 deaths per 100,000 people in West Virginia (Figure 6, Table 6).

- The five states with the highest age-adjusted rates of drug-related deaths in 2023 were Wyoming (179.0 deaths per 100,000 people), Tennessee (180.0), Maine (183.6), Kentucky (203.0), and West Virginia (218.6).

- The five states with the lowest age-adjusted rates of drug-related deaths in 2023 were California (39.5 deaths per 100,000 people), Hawaii (79.2), Georgia (82.9), Connecticut (83.3), and New Jersey (86.3).

Figure 6. Age-adjusted rate of drug-related deaths, by state, 2023
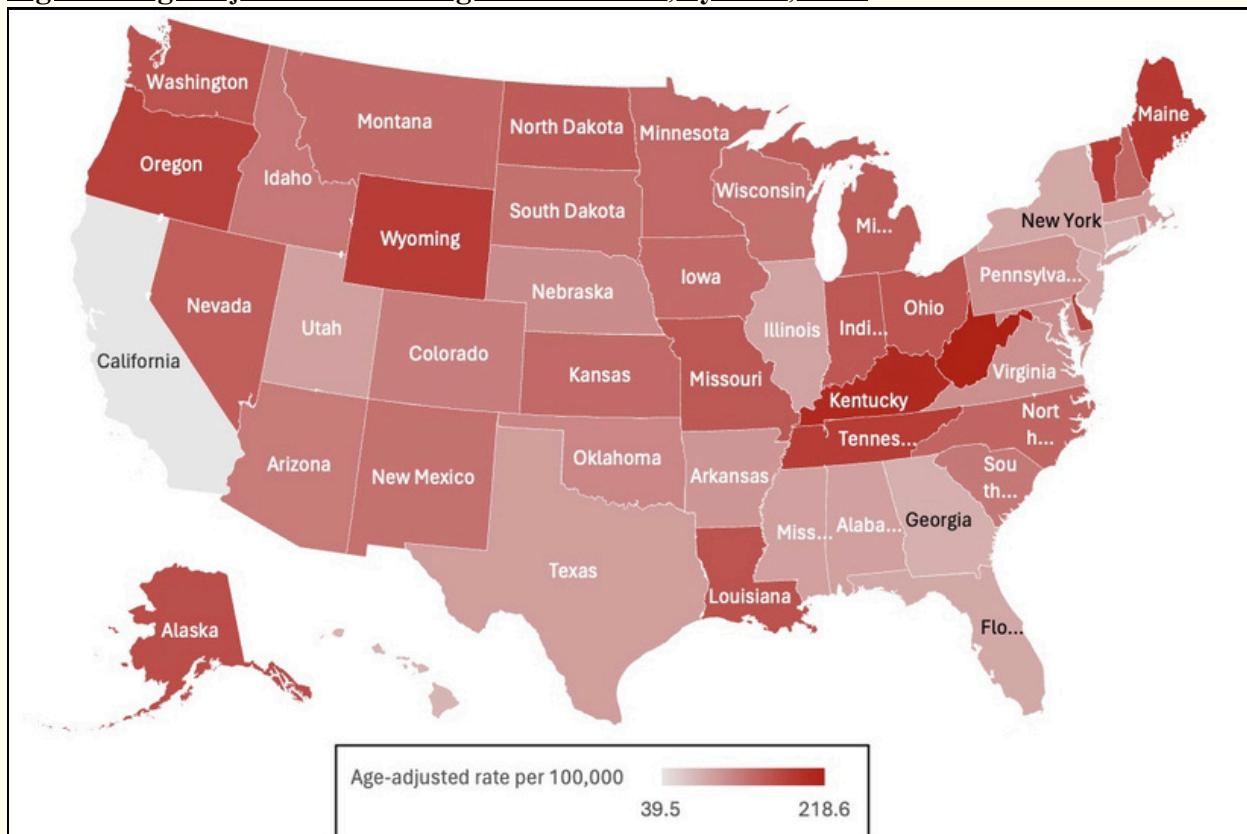
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Drug-Related Deaths by the Injury Mechanism and Non-Injury Causes

- In 2023, 334,435 drug-related deaths had an underlying cause of death that was classified as a non-injury (e.g., cancer or heart disease) (Figure 7, Table 7).

- In 2023, 113,314 drug-related deaths had an underlying cause of death that was classified as an injury (e.g., poisoning or drowning).

- In 2023, 105,655 drug-related deaths had an underlying cause of death of poisoning (primarily from drugs but also from other substances, such as alcohol).

Figure 7. Drug-related deaths, by the injury mechanism and non-injury causes, 2023
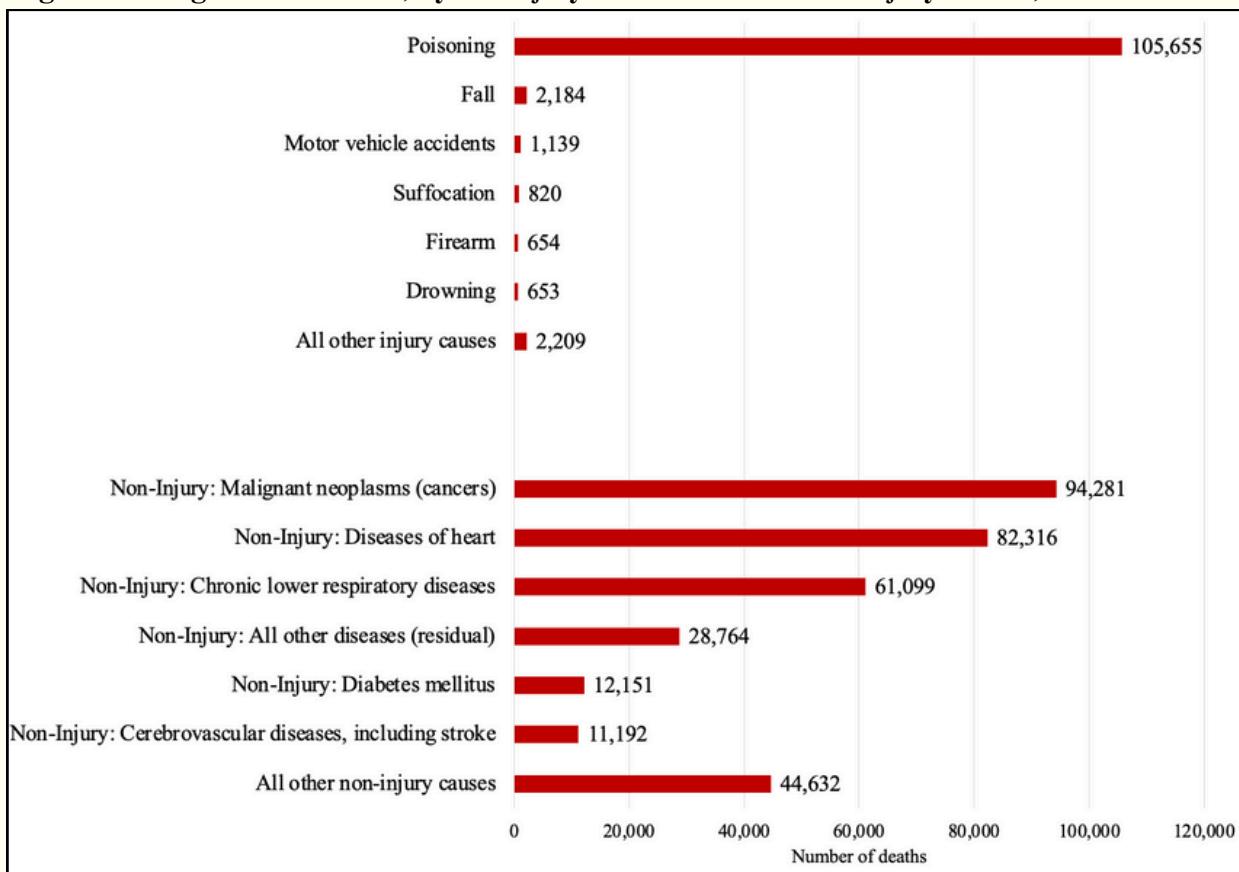
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Drug-Related Deaths by the ICD Chapter of the Underlying Cause of Death

- In 2023, 113,526 drug-related deaths had an underlying cause of death that was in the ICD chapter for external causes of morbidity and mortality, which includes overdoses (Figure 8, Table 8).

- In 2023, 102,665 drug-related deaths had an underlying cause of death that was in the ICD chapter for diseases of the circulatory system, which includes the heart.

Figure 8. Drug-related deaths, by the ICD chapter of the underlying cause of death, 2023
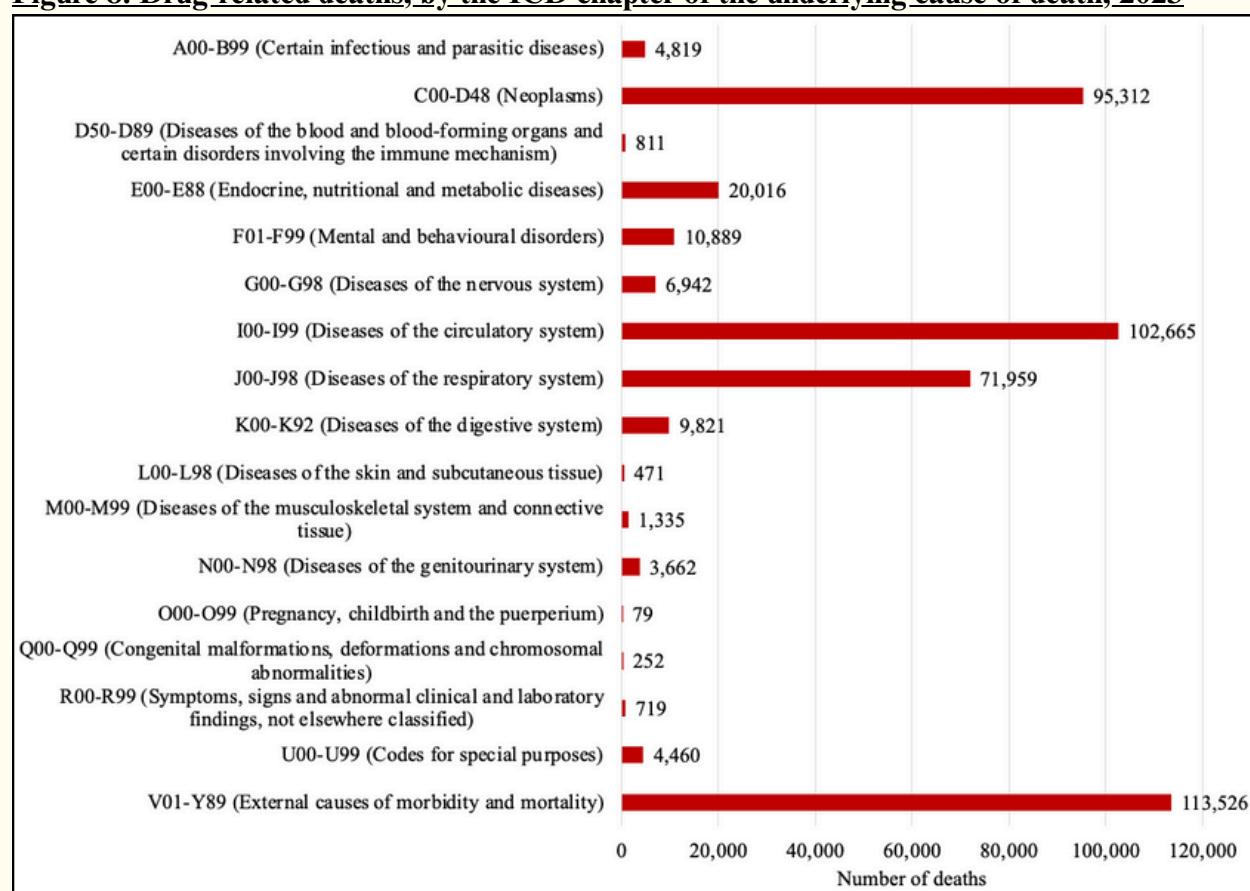
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Summary

In 2023, 105,007 drug overdose deaths, 109,067 drug-induced deaths, and 447,749 drug-related deaths occurred within the United States. Alongside the rise in overdose deaths, which led to the declaration of the opioid crisis as a public health emergency,[3] more than 100 drug-induced conditions—and their corresponding ICD-10 codes—can be recorded as an underlying or contributing cause of death. ICD-10 codes are used by health care providers, insurance companies, and public health organizations to document and track disease prevalence. These drug-induced conditions, which were categorized by the CDC, range from drug-induced osteoporosis to behavioral disorders due to substance use.[4]

Among the 109,067 drug-induced deaths in 2023, 105,007 were drug overdose deaths and 4,060 were non-overdose deaths that cited a drug-induced condition as the underlying cause of death. When these drug-induced conditions are included as either the underlying *or contributing* cause of death, the number of drug-related deaths in 2023 rises to 447,749. The rates of drug-related deaths varied by sex, age, race, and geography. Drug-related deaths increased from 46,857 in 2000 to 447,749 in 2023.

Policymakers have the opportunity to reconceptualize their understanding of the drug crisis and work to reduce all harms attributable to drugs.[5,6] Although the drug policy field has been focused on reducing acute harms like overdose deaths, the CDC explained that "there are other types of deaths that may involve drugs, such as deaths from disease caused by chronic drug use, deaths from existing disease or other condition(s) exacerbated by drug use, deaths from anaphylaxis or adverse effects of drugs, and traumatic deaths in which the decedent was intoxicated."[7] Few of these deaths have been included in discussions about the drug crisis, evidenced by the fact that the Trump and Biden administrations adopted policy goals to reduce the number of overdose deaths and the Obama administration adopted goals to reduce the number of drug-induced deaths.[8–11]

Of note, this analysis undercounts the true number of deaths attributable to drugs, as only deaths that explicitly cited a drug-induced condition as the underlying or contributing cause of death were included (i.e., it does not include deaths that were attributable to drugs but did not record a drug-induced condition on the death certificate). It also does not include ICD-10 codes that plausibly could have represented a drug-related death but were not referenced in the CDC's list of drug-induced conditions (e.g., F55 and T96). Efforts should be made to more accurately model the burden of harm attributable to drugs for both fatal and non-fatal health loss. For example, the CDC developed the Alcohol-Related Disease Impact (ARDI) application, which estimated that an average of 178,307 alcohol-attributable deaths occurred in 2020 and 2021.[12] In comparison, the CDC's WONDER database noted that there were 98,767 alcohol-related deaths in 2020 and 108,571 in 2021 (Figure 9).

Figure 9. Drug- and alcohol-attributable deaths, 2021
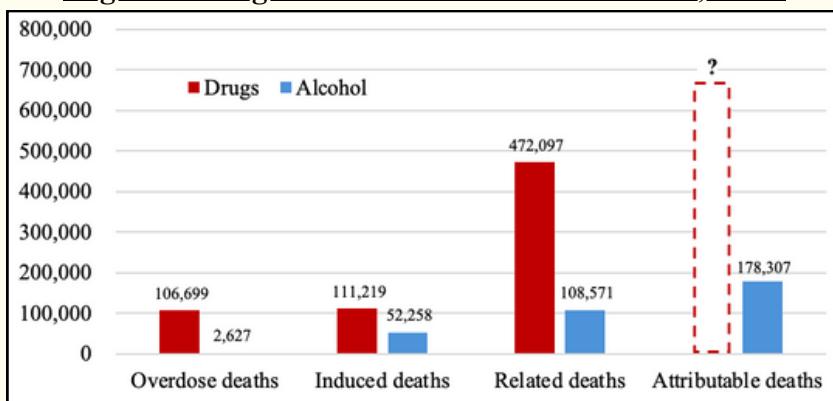
Methods

Data were obtained from the National Vital Statistics System within the CDC's WONDER database at https://wonder.cdc.gov/, which includes information about deaths that occurred within the 50 states and Washington, DC. The most recent year for final data was 2023.

Drug overdose deaths were defined as having an *International Classification of Diseases, 10th Revision* (ICD-10) underlying cause-of-death code of X40–X44, X60–X64, X85, or Y10–Y14.

Drug-induced deaths were defined as having an ICD-10 underlying cause-of-death code of D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E23.1, E24.2, E27.3, E66.1, F11.1–F11.5, F11.7–F11.9, F12.1–F12.5, F12.7–F12.9, F13.1–F13.5, F13.7–F13.9, F14.1– F14.5, F14.7–F14.9, F15.1–F15.5, F15.7–F15.9, F16.1–F16.5, F16.7–F16.9, F17.3–F17.5, F17.7–F17.9, F18.1–F18.5, F18.7–F18.9, F19.1–F19.5, F19.7–F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2, J70.3, J70.4, K85.3, L10.5, L27.0, L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1, R78.2, R78.3, R78.4, R78.5, X40–X44, X60–X64, X85, or Y10–Y14. The CDC stated that "the category of drug-induced causes includes deaths from drug overdose as well as from other medical conditions caused by use of legal or illegal drugs," noting that "the drug-induced category excludes deaths indirectly related to drug use, as well as newborn deaths due to the mother's drug use."[13]

Drug-related deaths were defined as having an ICD-10 underlying or contributing cause-of-death code of D52.1, D59.0, D59.2, D61.1, D64.2, E06.4, E23.1, E24.2, E27.3, E66.1, F11.1–F11.5, F11.7–F11.9, F12.1–F12.5, F12.7–F12.9, F13.1–F13.5, F13.7–F13.9, F14.1– F14.5, F14.7–F14.9, F15.1–F15.5, F15.7–F15.9, F16.1–F16.5, F16.7–F16.9, F17.3–F17.5, F17.7–F17.9, F18.1–F18.5, F18.7–F18.9, F19.1–F19.5, F19.7–F19.9, G21.1, G24.0, G25.1, G25.4, G25.6, G44.4, G62.0, G72.0, I95.2, J70.2, J70.3, J70.4, K85.3, L10.5, L27.0, L27.1, M10.2, M32.0, M80.4, M81.4, M83.5, M87.1, R50.2, R78.1, R78.2, R78.3, R78.4, R78.5, X40–X44, X60–X64, X85, or Y10–Y14.

Alcohol overdose deaths were defined as having an ICD-10 underlying cause-of-death code of X45, X65, or Y15. **Alcohol-induced deaths** were defined as having an ICD-10 underlying cause-of-death code of E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, and Y15. **Alcohol-related deaths** were defined as having an ICD-10 underlying or contributing cause-of-death code of E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, R78.0, X45, X65, and Y15. The CDC stated that the category of alcohol-induced deaths "includes deaths from dependent and nondependent use of alcohol, and deaths from accidental poisoning by alcohol. It excludes unintentional injuries, homicides, and other causes indirectly related to alcohol use, and deaths due to fetal alcohol syndrome."[14]

The ICD-10 codes for drug- and alcohol-induced deaths were categorized by the CDC's National Center for Health Statistics.[15] The CDC's category for drug-induced deaths includes deaths due to mental and behavioral disorders due to tobacco use (F17.3–F17.5, F17.7–F17.9). The Department of Health and Human Services' Healthy People 2020[16] and the White House Office of National Drug Control Policy's Drug Control Data Dashboard,[17] following the CDC's categorization,[18] included these deaths in their measure of drug-induced mortality. This has also been done at the state level, including by Arizona, California, and Massachusetts. In alignment with the CDC's approach, this analysis included these tobacco-related codes in the measure of drug-related mortality. For reference, when these codes are excluded, the number of drug-induced deaths in 2023 would be 108,465 (down from 109,067) and the number of drug-related deaths would be 128,150 (down from 447,749).

In 2024, *KFF* conducted an analysis of alcohol-related deaths in a similar manner, including deaths in which the ICD-10 codes for alcohol-induced conditions, as categorized by the CDC, were recorded as the underlying or contributing cause of death.[19]

Drug-Induced Conditions, ICD-10 Codes

ICD-10 Code	
D52.1	Drug-induced folate-deficiency anaemia
D59.0	Drug-induced autoimmune haemolytic anaemia
D59.2	Drug-induced non-autoimmune haemolytic anaemia
D61.1	Drug-induced aplastic anaemia
D64.2	Secondary sideroblastic anaemia due to drugs & toxins
E06.4	Drug-induced thyroiditis
E16.0	Drug-induced hypoglycaemia without coma
E23.1	Drug-induced hypopituitarism
E24.2	Drug-induced Cushing syndrome
E27.3	Drug-induced adrenocortical insufficiency
E66.1	Drug-induced obesity
F11.1–F11.5, F11.7–F11.9, F12.1–F12.5, F12.7–F12.9, F13.1–F13.5, F13.7–F13.9, F14.1–F14.5, F14.7–F14.9, F15.1–F15.5, F15.7–F15.9, F16.1–F16.5, F16.7–F16.9, F17.3–F17.5, F17.7–F17.9, F18.1–F18.5, F18.7–F18.9, F19.1–F19.5, F19.7–F19.9	Mental & behavioural disorders due to psychoactive substance use
G21.1	Other drug-induced secondary parkinsonism
G24.0	Drug-induced dystonia
G25.1	Drug-induced tremor
G25.4	Drug-induced chorea
G25.6	Drug-induced tics & other tics of organic origin
G44.4	Drug-induced headache, NEC
G62.0	Drug-induced polyneuropathy
G72.0	Drug-induced myopathy
I95.2	Hypotension due to drugs
J70.2	Acute drug-induced interstitial lung disorders
J70.3	Chronic drug-induced interstitial lung disorders
J70.4	Drug-induced interstitial lung disorder, unspecified
K85.3	Drug-induced acute pancreatitis
L10.5	Drug-induced pemphigus
L27.0	Generalized skin eruption due to drugs & medicaments
L27.1	Localized skin eruption due to drugs & medicaments
M10.2	Drug-induced gout
M32.0	Drug-induced systemic lupus erythematosus
M80.4	Drug-induced osteoporosis with pathological fracture
M81.4	Drug-induced osteoporosis
M83.5	Other drug-induced osteomalacia in adults
M87.1	Osteonecrosis due to drugs
R50.2	Drug-induced fever
R78.1	Finding of opiate drug in blood
R78.2	Finding of cocaine in blood
R78.3	Finding of hallucinogen in blood
R78.4	Finding of other drugs of addictive potential in blood
R78.5	Finding of psychotropic drug in blood
X40–X44	Accidental poisoning by & exposure to drugs/medicaments/biologicals
X60–X64	Intentional self-poisoning (suicide) by drugs/medicaments/biologicals
X85	Assault (homicide) by drugs/medicaments/biologicals
Y10–Y14	Poisoning by drugs/medicaments/biologicals, undetermined intent

Contributors

Connor Kubeisy, MPH, and Heather Soucy, MSN, MPH, contributed to the content of the data brief. Marcus Edelstein assisted with the design.

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Data Tables

Table 1. Drug-related deaths, 2000–2023

Year	Total	
	Number	**Deaths per 100,000**
2000.	46,857	16.8
2001.	48,983	17.3
2002.	54,333	18.9
2003.	113,993	39.2
2004.	150,716	51.0
2005.	191,632	63.7
2006.	208,046	68.0
2007.	226,069	72.5
2008.	251,111	79.1
2009.	248,639	76.8
2010.	272,582	82.9
2011.	292,061	86.8
2012.	312,024	90.6
2013.	325,050	92.3
2014.	337,671	93.8
2015.	362,622	98.8
2016.	384,680	103.4
2017.	402,564	106.2
2018.	408,105	105.5
2019.	416,639	105.9
2020.	456,553	115.7
2021.	472,097	120.7
2022.	467,875	116.8
2023.	447,749	110.4

Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 2. Age-adjusted rate of drug overdose deaths, drug-induced deaths, and drug-related deaths, 2000–2023

| Year | Drug overdose deaths | | Drug-induced deaths | | Drug-related deaths | |
	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
2000.	17,415	6.2	19,705	7.0	46,857	16.8
2001.	19,394	6.8	21,687	7.6	48,983	17.3
2002.	23,518	8.2	26,025	9.1	54,333	18.9
2003.	25,785	8.9	28,703	9.9	113,993	39.2
2004.	27,424	9.4	30,690	10.5	150,716	51.0
2005.	29,813	10.1	33,520	11.3	191,632	63.7
2006.	34,425	11.5	38,382	12.8	208,046	68.0
2007.	36,010	11.9	38,370	12.6	226,069	72.5
2008.	36,450	11.9	38,649	12.6	251,111	79.1
2009.	37,004	11.9	39,147	12.6	248,639	76.8
2010.	38,329	12.3	40,393	12.9	272,582	82.9
2011.	41,340	13.2	43,544	13.9	292,061	86.8
2012.	41,502	13.1	43,819	13.8	312,024	90.6
2013.	43,982	13.8	46,471	14.6	325,050	92.3
2014.	47,055	14.7	49,714	15.5	337,671	93.8
2015.	52,404	16.3	55,403	17.2	362,622	98.8
2016.	63,632	19.8	67,265	20.8	384,680	103.4
2017.	70,237	21.7	73,990	22.8	402,564	106.2
2018.	67,367	20.7	71,147	21.8	408,105	105.5
2019.	70,630	21.6	74,511	22.8	416,639	105.9
2020.	91,799	28.3	96,096	29.5	456,553	115.7
2021.	106,699	32.4	111,219	33.6	472,097	120.7
2022.	107,941	32.6	112,109	33.8	467,875	116.8
2023.	105,007	31.3	109,067	32.4	447,749	110.4

Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 3. Age-adjusted rate of drug-related deaths, by sex, 2000–2023

Year	Male		Female	
	Number	Deaths per 100,000	Number	Deaths per 100,000
2000.	29,509	23.0	17,348	11.5
2001.	30,760	23.4	18,223	11.9
2002.	33,678	25.2	20,655	13.4
2003.	69,966	54.3	44,027	27.3
2004.	91,496	70.5	59,220	36.1
2005.	116,632	88.6	75,000	44.7
2006.	126,678	94.1	81,368	47.8
2007.	136,903	99.7	89,166	51.5
2008.	151,373	108.2	99,738	56.6
2009.	149,760	104.5	98,879	55.3
2010.	164,220	112.7	108,362	59.7
2011.	176,278	117.6	115,783	62.6
2012.	188,575	122.7	123,449	65.3
2013.	196,736	124.7	128,314	66.6
2014.	204,980	126.7	132,691	67.5
2015.	220,316	133.3	142,306	71.0
2016.	236,231	140.2	148,449	73.1
2017.	247,715	144.0	154,849	74.9
2018.	251,409	143.0	156,696	74.2
2019.	257,991	144.1	158,648	73.9
2020.	287,634	159.1	168,919	78.5
2021.	298,664	164.9	173,433	82.3
2022.	294,213	159.1	173,662	80.0
2023.	281,618	150.0	166,131	75.5

Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 4. Crude rate of drug-related deaths, by age group, 2000 and 2023

	2000		2023	
Age Group	**Number**	**Deaths per 100,000**	**Number**	**Deaths per 100,000**
14 or younger.	93	0.2	452	0.8
15–24	1,740	4.4	6,500	14.8
25–34	4,073	10.2	23,666	52.0
35–44	9,228	20.4	34,997	78.8
45–54	8,410	22.3	41,227	101.8
55–64	5,800	23.9	84,731	202.4
65–74	7,877	42.8	110,520	318.6
75–84	7,383	59.7	95,883	522.0
85 or older	2,237	52.8	49,753	803.1
Age not stated	16	N/A	20	N/A

Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 5. Age-adjusted rate of drug-related deaths, by race and Hispanic origin, 2020 and 2023

	2020		2023	
Race and Hispanic Origin	**Number**	**Deaths per 100,000**	**Number**	**Deaths per 100,000**
American Indian or Alaska Native, non-Hispanic	4,082	165.3	4,367	168.9
Asian, non-Hispanic	4,401	21.6	4,425	19.7
Black, non-Hispanic	53,211	124.5	56,628	127.0
Native Hawaiian or Other Pacific Islander, non-Hispanic	405	70.4	528	82.5
White, non-Hispanic.	364,424	132.5	347,596	124.7
More than one race, non-Hispanic	2,665	59.1	3,127	61.3
Hispanic.	25,867	53.0	28,754	52.4

Notes: 2,316 individuals in 2020 and 1,498 individuals in 2023 died from drug-related causes but were excluded from this section because their Hispanic-origin status was not reported on their death certificate. Race and ethnicity categories are not fully comparable between 2000 and 2023 because the CDC began reporting racial categories differently in 2018.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 6. Age-adjusted rate of drug-related deaths, by state, 2023

State	Number	Deaths per 100,000
Alabama.	5,687	94.8
Alaska	1,245	164.7
Arizona.	11,545	124.1
Arkansas.	3,891	103.0
California	16,701	39.5
Colorado	8,143	123.2
Connecticut	3,769	83.3
Delaware	2,352	174.6
District of Columbia	782	111.7
Florida	26,944	88.5
Georgia.	10,206	82.9
Hawaii	1,569	79.2
Idaho	3,029	128.6
Illinois.	14,280	93.1
Indiana.	12,738	155.1
Iowa	5,855	139.2
Kansas	5,023	139.7
Kentucky	11,155	203.0
Louisiana	8,407	159.9
Maine.	3,724	183.6
Maryland	8,190	109.7
Massachusetts	8,480	97.8
Michigan	19,522	149.3
Minnesota	10,086	140.8
Mississippi.	3,298	94.7
Missouri.	11,962	154.5

Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 6. Age-adjusted rate of drug-related deaths, by state, 2023 (Cont.)

State	Number	Deaths per 100,000
Montana.	2,136	139.1
Nebraska	2,689	110.7
Nevada.	5,623	149.0
New Hampshire.	2,719	142.1
New Jersey.	9,848	86.3
New Mexico.	3,424	134.0
New York.	21,822	88.7
North Carolina	18,767	142.7
North Dakota	1,391	151.5
Ohio	23,302	158.1
Oklahoma.	5,298	115.6
Oregon	9,632	176.4
Pennsylvania	18,220	108.8
Rhode Island	1,600	114.2
South Carolina.	8,432	127.1
South Dakota.	1,520	133.0
Tennessee.	15,197	180.0
Texas	30,608	97.5
Utah.	2,989	94.4
Vermont.	1,598	179.0
Virginia.	11,393	108.4
Washington	14,618	158.2
West Virginia.	4,952	218.6
Wisconsin.	10,066	133.4
Wyoming	1,322	179.0

Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 7. Drug-related deaths, by the injury mechanism and non-injury causes, 2023 (Cont.)

Injury mechanism and leading non-injury causes	Number	Deaths per 100,000
Cut/Pierce.	87	0.0
Drowning	653	0.2
Fall	2,184	0.5
Fire/Flame	638	0.2
Hot object/Substance.	*	*
Firearm.	654	0.2
Machinery.	14	*
Motor vehicle accidents	1,139	0.3
Other pedal cyclist	20	0.0
Other pedestrian.	41	0.0
Other land transport.	55	0.0
Other transport.	20	0.0
Natural/Environmental	425	0.1
Overexertion.	*	*
Poisoning	105,655	31.5
Struck by or against.	45	0.0
Suffocation.	820	0.2
Other specified, classifiable injury.	140	0.0
Other specified, not elsewhere classified injury.	259	0.1
Unspecified injury	458	0.1
Non-Injury: Intestinal infections.	381	0.1
Non-Injury: Tuberculosis.	63	0.0
Non-Injury: Whooping cough.	*	*
Non-Injury: Scarlet fever and erysipelas	0	N/A
Non-Injury: Meningococcal infection.	*	*
Non-Injury: Septicemia	2,371	0.6

* = data were suppressed or unreliable. The number of deaths was suppressed when it was between 1–9, and the rate was unreliable when it included fewer than 20 deaths.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 7. Drug-related deaths, by the injury mechanism and non-injury causes, 2023 (Cont.)

Injury mechanism and non-injury causes	Number	Deaths per 100,000
Non-Injury: Syphilis	*	*
Non-Injury: Acute poliomyelitis	0	N/A
Non-Injury: Arthropod-borne viral encephalitis	0	N/A
Non-Injury: Measles	0	N/A
Non-Injury: Viral hepatitis	402	0.1
Non-Injury: Human immunodeficiency virus (HIV) disease	592	0.2
Non-Injury: Malaria	0	N/A
Non-Injury: Other and unspecified infectious and parasitic diseases and their sequelae	5,449	1.3
Non-Injury: Malignant neoplasms (cancers)	94,281	21.0
Non-Injury: In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior	1,031	0.2
Non-Injury: Anemias	372	0.1
Non-Injury: Diabetes mellitus	12,151	2.8
Non-Injury: Nutritional deficiencies	1,129	0.2
Non-Injury: Meningitis	33	0.0
Non-Injury: Parkinson's disease	825	0.2
Non-Injury: Alzheimers disease	2,522	0.6
Non-Injury: Diseases of heart	82,316	19.1
Non-Injury: Essential (primary) hypertension and hypertensive renal disease	4,175	1.0
Non-Injury: Cerebrovascular diseases, including stroke	11,192	2.6
Non-Injury: Atherosclerosis	396	0.1
Non-Injury: Other diseases of the circulatory system	4,156	1.0
Non-Injury: Other disorders of circulatory system	430	0.1
Non-Injury: Influenza and pneumonia	3,113	0.7

* = data were suppressed or unreliable. The number of deaths was suppressed when it was between 1–9, and the rate was unreliable when it included fewer than 20 deaths.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 7. Drug-related deaths, by the injury mechanism and non-injury causes, 2023 (Cont.)

Injury mechanism and non-injury causes	Number	Deaths per 100,000
Non-Injury: Other acute lower respiratory infections.	27	0.0
Non-Injury: Chronic lower respiratory diseases	61,099	13.8
Non-Injury: Pneumoconioses and chemical effects.	132	0.0
Non-Injury: Pneumonitis due to solids and liquids.	1,308	0.3
Non-Injury: Other diseases of respiratory system.	6,289	1.4
Non-Injury: Peptic ulcer.	372	0.1
Non-Injury: Diseases of appendix.	22	0.0
Non-Injury: Hernia	146	0.0
Non-Injury: Chronic liver disease and cirrhosis.	4,631	1.1
Non-Injury: Cholelithiasis and other disorders of gallbladder.	227	0.1
Non-Injury: Nephritis, nephrotic syndrome and nephrosis. .	2,636	0.6
Non-Injury: Infections of kidney.	68	0.0
Non-Injury: Hyperplasia of prostate.	49	0.0
Non-Injury: Inflammatory diseases of female pelvic organs. .	10	*
Non-Injury: Pregnancy with abortive outcome.	*	*
Non-Injury: Other complications of pregnancy, childbirth and the puerperium	77	0.0
Non-Injury: Certain conditions originating in the perinatal period.	*	*
Non-Injury: Congenital malformations, deformations and chromosomal abnormalities	252	0.1
Non-Injury: Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	719	0.2
Non-Injury: All other diseases (residual).	28,764	6.9
Non-Injury: Complications of medical and surgical care	212	0.0

* = data were suppressed or unreliable. The number of deaths was suppressed when it was between 1–9, and the rate was unreliable when it included fewer than 20 deaths.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.

Table 8. Age-adjusted rate of drug-related deaths, by the ICD chapter of the underlying cause of death, 2023

ICD Chapter	Number	Deaths per 100,000
A00-B99 (Certain infectious and parasitic diseases).	4,819	1.1
C00-D48 (Neoplasms).	95,312	21.3
D50-D89 (Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism). .	811	0.2
E00-E88 (Endocrine, nutritional and metabolic diseases) . . .	20,016	4.7
F01-F99 (Mental and behavioural disorders).	10,889	2.7
G00-G98 (Diseases of the nervous system).	6,942	1.7
H00-H57 (Diseases of the eye and adnexa).	*	*
H60-H93 (Diseases of the ear and mastoid process).	*	*
I00-I99 (Diseases of the circulatory system)	102,665	23.9
J00-J98 (Diseases of the respiratory system).	71,959	16.3
K00-K92 (Diseases of the digestive system).	9,821	2.3
L00-L98 (Diseases of the skin and subcutaneous tissue)	471	0.1
M00-M99 (Diseases of the musculoskeletal system and connective tissue).	1,335	0.3
N00-N98 (Diseases of the genitourinary system)	3,662	0.9
O00-O99 (Pregnancy, childbirth and the puerperium).	79	0.0
P00-P96 (Certain conditions originating in the perinatal period).	*	*
Q00-Q99 (Congenital malformations, deformations and chromosomal abnormalities).	252	0.1
R00-R99 (Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified).	719	0.2
U00-U99 (Codes for special purposes)	4,460	1.0
V01-Y89 (External causes of morbidity and mortality)	113,526	33.6

* = data were suppressed or unreliable. The number of deaths was suppressed when it was between 1–9, and the rate was unreliable when it included fewer than 20 deaths.
Source: CDCP analysis of the National Vital Statistics System on CDC WONDER.