

**Data Brief 403. Urban–Rural Differences in Drug Overdose Death Rates, 1999–2019**

**Data table for Figure 1. Age-adjusted rates of drug overdose deaths, by urban and rural residence: United States, 1999–2019**

Year	Total		Rural		Urban	
	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	16,849	6.1	1,729	4.0	15,120	6.4
2000	17,415	6.2	2,007	4.6	15,408	6.5
2001	19,394	6.8	2,457	5.7	16,937	7.0
2002	23,518	8.2	3,006	6.9	20,512	8.4
2003	25,785	8.9	3,522	8.2	22,263	9.0
2004	27,424	9.4	4,030	9.4	23,394	9.4
2005	29,813	10.1	4,293	9.9	25,520	10.1
2006	34,425	11.5	5,104	11.7	29,321	11.5
2007	36,010	11.9	5,406	12.3	30,604	11.8
2008	36,450	11.9	5,588	12.7	30,862	11.8
2009	37,004	11.9	5,738	12.9	31,266	11.8
2010	38,329	12.3	6,006	13.6	32,323	12.1
2011	41,340	13.2	6,487	14.7	34,853	12.9
2012	41,502	13.1	6,238	14.2	35,264	13.0
2013	43,982	13.8	6,435	14.6	37,547	13.7
2014	47,055	14.7	6,783	15.6	40,272	14.6
2015	52,404	16.3	7,345	17.0	45,059	16.2
2016	63,632	19.8	8,036	18.7	55,596	20.0
2017	70,237	21.7	8,525	20.0	61,712	22.0
2018	67,367	20.7	8,101	19.0	59,266	21.0
2019	70,630	21.6	8,349	19.6	62,281	22.0

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* 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. Decedent’s county of residence was classified as urban or rural based on the 2013 NCHS Urban–Rural Classification Scheme for Counties.

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

Data Brief 403. Urban–Rural Differences in Drug Overdose Death Rates, 1999–2019

Data table for Figure 2. Urban–rural differences in age-adjusted rates of drug overdose deaths, by jurisdiction of residence: 2019

Area	Urban		Rural		Category
	Number of deaths	Deaths per 100,000	Number of deaths	Deaths per 100,000	
United States	62,281	22.0	8,349	19.6	Urban rate higher than rural rate
Alabama	614	17.0	154	14.1	Urban rate higher than rural rate
Alaska	90	17.7	42	17.7	No significant difference between urban and rural rates
Arizona	1,838	27.1	69	21.8	Urban rate higher than rural rate
Arkansas	268	14.6	120	11.7	Urban rate higher than rural rate
California	5,960	14.7	238	27.0	Rural rate higher than urban rate
Colorado	945	18.0	134	18.0	No significant difference between urban and rural rates
Connecticut	1,138	34.2	76	46.1	Rural rate higher than urban rate
Delaware	435	48.0	...	...	No rural counties in the state
District of Columbia	311	43.2	...	...	No rural counties in the jurisdiction
Florida	5,119	25.6	149	21.4	Urban rate higher than rural rate
Georgia	1,185	13.2	223	12.7	No significant difference between urban and rural rates
Hawaii	211	17.4	31	9.9	Urban rate higher than rural rate
Idaho	190	15.8	75	13.4	No significant difference between urban and rural rates
Illinois	2,558	22.5	232	17.1	Urban rate higher than rural rate
Indiana	1,383	27.2	316	24.5	No significant difference between urban and rural rates
Iowa	245	12.9	107	9.5	Urban rate higher than rural rate
Kansas	299	15.1	104	12.4	No significant difference between urban and rural rates
Kentucky	911	35.9	469	27.2	Urban rate higher than rural rate
Louisiana	1,100	29.2	167	23.7	Urban rate higher than rural rate
Maine	238	30.8	133	28.5	No significant difference between urban and rural rates
Maryland	2,310	38.0	59	46.8	No significant difference between urban and rural rates
Massachusetts	2,185	32.2	25	27.0	No significant difference between urban and rural rates
Michigan	2,135	26.3	250	15.6	Urban rate higher than rural rate
Minnesota	647	14.6	145	13.1	No significant difference between urban and rural rates
Mississippi	226	16.6	168	10.9	Urban rate higher than rural rate
Missouri	1,301	29.0	282	20.4	Urban rate higher than rural rate
Montana	62	17.1	81	12.6	No significant difference between urban and rural rates
Nebraska	121	9.7	40	6.9	Urban rate higher than rural rate
Nevada	590	20.1	57	19.9	No significant difference between urban and rural rates
New Hampshire	283	34.6	124	27.4	Urban rate higher than rural rate
New Jersey	2,805	31.7	...	...	No rural counties in the state
New Mexico	425	31.4	174	27.4	No significant difference between urban and rural rates
New York	3,399	18.3	218	17.7	No significant difference between urban and rural rates
North Carolina	1,720	21.0	546	27.7	Rural rate higher than urban rate
North Dakota	35	9.4	47	13.6	No significant difference between urban and rural rates
Ohio	3,563	39.6	688	33.3	Urban rate higher than rural rate
Oklahoma	442	17.1	203	15.7	No significant difference between urban and rural rates
Oregon	515	13.8	100	14.8	No significant difference between urban and rural rates
Pennsylvania	4,009	36.5	368	28.6	Urban rate higher than rural rate
Rhode Island	307	29.5	...	...	No rural counties in the state
South Carolina	988	23.0	139	20.9	No significant difference between urban and rural rates
South Dakota	52	12.3	34	8.6	No significant difference between urban and rural rates
Tennessee	1,708	32.5	381	26.2	Urban rate higher than rural rate
Texas	2,805	10.7	331	11.1	No significant difference between urban and rural rates
Utah	510	18.9	61	19.6	No significant difference between urban and rural rates
Vermont	31	15.4	102	29.1	Rural rate higher than urban rate
Virginia	1,299	17.2	248	27.3	Rural rate higher than urban rate
Washington	1,135	15.8	124	16.5	No significant difference between urban and rural rates
West Virginia	641	62.1	229	37.1	Urban rate higher than rural rate
Wisconsin	965	22.5	236	17.5	Urban rate higher than rural rate
Wyoming	29	16.4	50	12.9	No significant difference between urban and rural rates

... Category not applicable.

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* 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. Decedent's county of residence was classified as urban or rural based on the 2013 NCHS Urban–Rural Classification Scheme for Counties.

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

Data Brief 403. Urban–Rural Differences in Drug Overdose Death Rates, 1999–2019

Data table for Figure 3. Age-adjusted rates of opioid-involved drug overdose deaths, by type of opioid and urban or rural residence: United States, 1999–2019

Year	Urban						Rural					
	Natural and semisynthetic opioids		Synthetic opioids other than methadone		Heroin		Natural and semisynthetic opioids		Synthetic opioids other than methadone		Heroin	
	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	2,491	1.0	602	0.3	1,875	0.8	258	0.6	128	0.3	85	0.2
2000	2,556	1.1	661	0.3	1,767	0.7	361	0.8	121	0.3	75	0.2
2001	2,921	1.2	791	0.3	1,688	0.7	558	1.3	166	0.4	91	0.2
2002	3,805	1.6	1,083	0.4	2,007	0.8	611	1.4	212	0.5	82	0.2
2003	4,138	1.7	1,128	0.4	1,988	0.8	729	1.7	272	0.6	92	0.2
2004	4,391	1.8	1,291	0.5	1,778	0.7	840	2.0	373	0.9	100	0.2
2005	4,869	1.9	1,409	0.6	1,911	0.7	905	2.1	333	0.8	98	0.2
2006	5,871	2.3	2,281	0.9	1,988	0.8	1,146	2.6	426	1.0	100	0.2
2007	6,912	2.7	1,754	0.7	2,272	0.9	1,246	2.8	459	1.0	127	0.3
2008	7,627	2.9	1,783	0.7	2,865	1.1	1,492	3.4	523	1.2	176	0.4
2009	8,132	3.1	2,334	0.9	3,072	1.2	1,603	3.6	612	1.4	206	0.5
2010	9,064	3.4	2,383	0.9	2,865	1.1	1,879	4.3	624	1.4	171	0.4
2011	9,647	3.6	2,079	0.8	4,120	1.6	2,046	4.7	587	1.3	277	0.7
2012	9,253	3.4	2,039	0.7	5,510	2.1	1,887	4.3	589	1.3	415	1.0
2013	9,379	3.4	2,482	0.9	7,653	2.9	1,967	4.5	623	1.4	604	1.5
2014	10,004	3.6	4,687	1.7	9,740	3.6	2,155	4.9	857	2.0	834	2.1
2015	10,572	3.8	8,397	3.1	11,878	4.4	2,155	4.9	1,183	2.8	1,111	2.7
2016	12,310	4.3	17,521	6.5	14,197	5.2	2,177	5.0	1,892	4.6	1,272	3.2
2017	12,369	4.3	25,634	9.3	14,291	5.2	2,126	4.9	2,832	7.0	1,191	2.9
2018	10,813	3.8	28,475	10.3	13,828	5.0	1,739	3.9	2,860	7.1	1,168	2.9
2019	10,279	3.6	33,024	11.9	12,781	4.6	1,607	3.6	3,335	8.3	1,238	3.0

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Among deaths with drug overdose as the underlying cause, the following multiple cause-of-death codes indicate the drug type(s) involved: Heroin (T40.1), Natural and semisynthetic opioids (T40.2), and Synthetic opioids other than methadone (T40.4). Natural and semisynthetic opioids include drugs such as oxycodone, hydrocodone, and codeine. Synthetic opioids other than methadone include drugs such as fentanyl, fentanyl analogs, and tramadol. Deaths involving more than one opioid category (e.g., a death involving both heroin and a natural and semisynthetic opioid such as oxycodone) are counted in both categories. Deaths may involve other drugs in addition to opioids. 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. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Decedent's county of residence was classified as urban or rural based on the 2013 NCHS Urban–Rural Classification Scheme for Counties.

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

Data Brief 403. Urban–Rural Differences in Drug Overdose Death Rates, 1999–2019

Data table for Figure 4. Age-adjusted rates of stimulant-involved drug overdose deaths, by type of stimulant and urban or rural residence: United States, 1999–2019

Year	Urban				Rural			
	Cocaine		Psychostimulants with abuse potential		Cocaine		Psychostimulants with abuse potential	
	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000	Number	Deaths per 100,000
1999	3,629	1.5	484	0.2	193	0.4	63	0.1
2000	3,339	1.4	514	0.2	205	0.5	64	0.1
2001	3,620	1.5	481	0.2	213	0.5	82	0.2
2002	4,343	1.8	823	0.3	256	0.6	118	0.3
2003	4,828	2.0	1,003	0.4	371	0.9	176	0.4
2004	5,018	2.0	1,113	0.4	425	1.0	192	0.5
2005	5,700	2.3	1,379	0.6	508	1.2	229	0.5
2006	6,813	2.7	1,286	0.5	635	1.5	176	0.4
2007	5,973	2.3	1,200	0.5	539	1.3	178	0.4
2008	4,717	1.8	1,137	0.4	412	1.0	165	0.4
2009	4,012	1.5	1,409	0.5	338	0.8	223	0.5
2010	3,900	1.5	1,576	0.6	283	0.7	278	0.6
2011	4,344	1.6	1,950	0.7	337	0.8	316	0.7
2012	4,081	1.5	2,242	0.8	323	0.8	393	0.9
2013	4,595	1.7	3,075	1.1	349	0.8	552	1.3
2014	5,023	1.8	3,623	1.3	392	0.9	675	1.6
2015	6,284	2.3	4,823	1.7	500	1.2	893	2.1
2016	9,686	3.5	6,315	2.3	689	1.7	1,227	3.0
2017	12,936	4.6	8,665	3.1	1,006	2.4	1,668	4.0
2018	13,694	4.9	10,513	3.8	972	2.3	2,163	5.2
2019	14,872	5.3	13,400	4.8	1,011	2.4	2,767	6.7

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Among deaths with drug overdose as the underlying cause, the following multiple cause-of-death codes indicate the drug type(s) involved: Cocaine (T40.5) and Psychostimulants with abuse potential (T43.6). Psychostimulants with abuse potential include drugs such as methamphetamine, amphetamine, and methylphenidate. Deaths involving more than one stimulant category (e.g., a death involving both cocaine and methamphetamine) are counted in both categories. Deaths may involve other drugs in addition to stimulants. 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. Age-adjusted death rates were calculated using the direct method and the 2000 U.S. standard population. Decedent’s county of residence was classified as urban or rural based on the 2013 NCHS Urban–Rural Classification Scheme for Counties.

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