

FAST FACTS

- In 2018, 3,764 Ohioans died from unintentional drug overdoses, which was a 22.5% decrease from 2017.
- Illicit fentanyl or fentanyl analogs were involved in 72.6% of 2018 overdose deaths, often in combination with other drugs.
- Deaths related to natural and semi-synthetic opioids (e.g. oxycodone, hydrocodone) decreased by 42.0% from 2017 to 2018.
- In 2018, black non-Hispanic males had the highest drug overdose death rate in Ohio compared to other sex and race/ethnicity groups.

Unintentional Drug Overdose Deaths in Ohio

- From 2017 to 2018, the rate of unintentional drug overdose deaths decreased by 22.7%, making it the lowest overdose death rate since 2015.
- Beginning in the second quarter of 2017, the number of unintentional overdose deaths began to decrease, and this trend continued into the first half of 2018. However, the number of deaths began to increase in the second half of 2018, with much of the increase occurring in the third quarter. Deaths began to decrease again in the fourth quarter of 2018.

Figure 1. Number and Age-Adjusted Rate of Unintentional Drug Overdose Deaths by Year, Ohio, 2009-2018

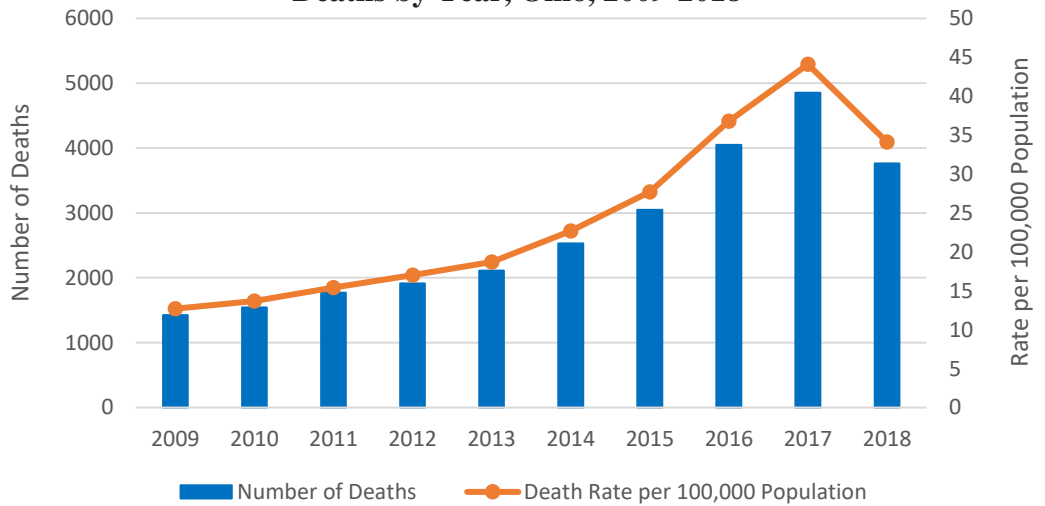


Figure 2. Number of Unintentional Drug Overdose Deaths by Quarter, Ohio, 2016-2018



Demographics

- For the second year in a row, black non-Hispanic males had the highest overdose death rate in Ohio compared to other sex and race/ethnicity groups. Prior to 2017, the last time this demographic group had the highest overdose death rate was in 2008. Black non-Hispanic females have the lowest unintentional overdose death rates.
- From 2017 to 2018, overdose death rates decreased for all sex and race/ethnicity groups. The largest decreases were among males; white non-Hispanic and black non-Hispanic males had a 24.5% and 23.4% decrease respectively. White non-Hispanic females had a 20.4% decrease, while black non-Hispanic females had a decrease of just 6.2%.
- In the second half of 2018, the number of deaths increased among all sex and race/ethnicity groups, with the largest increases among black non-Hispanics. Deaths among black non-Hispanic males increased 33.3% compared to a 7.2% increase among white non-Hispanic males. Deaths among black non-Hispanic females increased 18.3% compared to a 0.9% increase among white non-Hispanic females.

Figure 3: Age-Adjusted Rate of Unintentional Drug Overdose Deaths by Sex and Race/Ethnicity, Ohio, 2013-2018

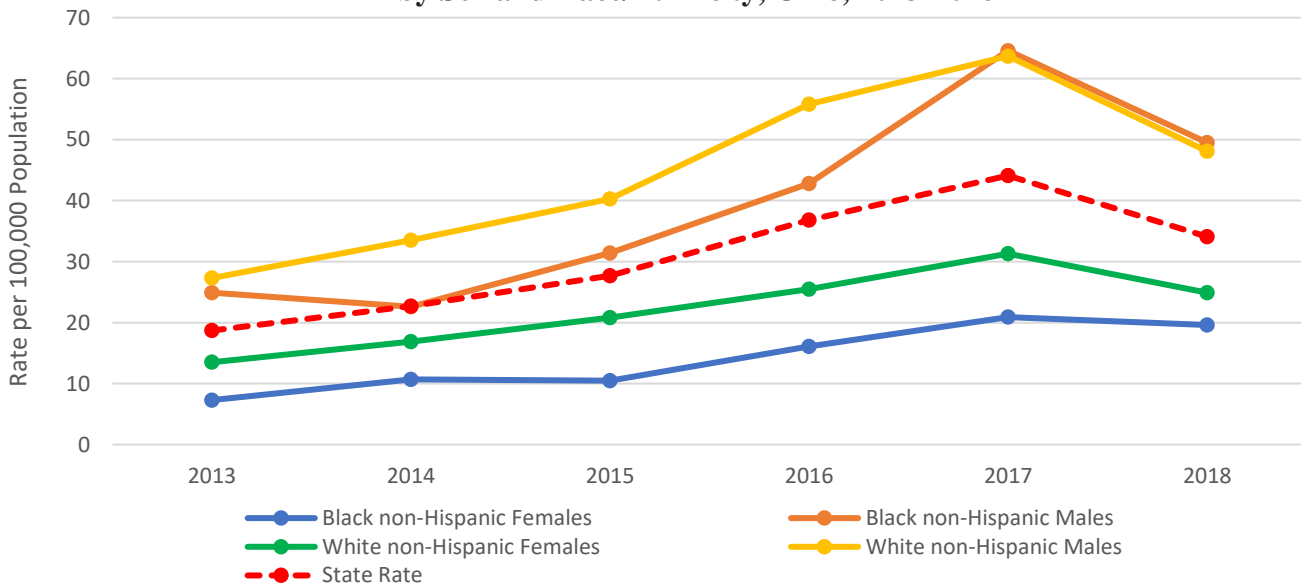


Figure 4. Number of Unintentional Drug Overdose Deaths Among White non-Hispanics, Ohio, 2017-2018

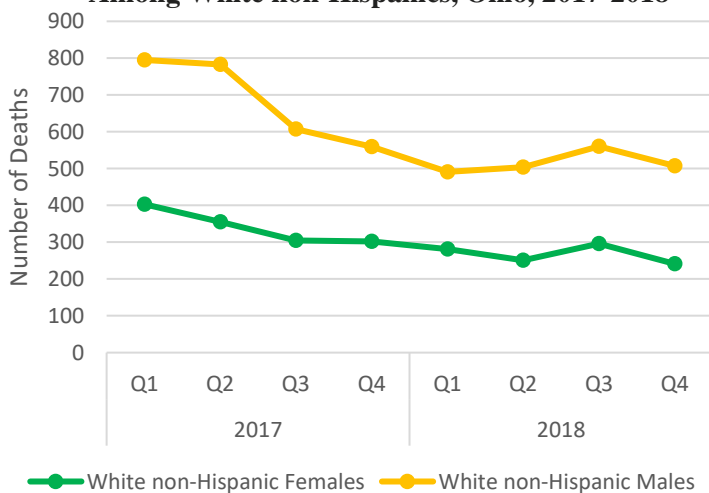
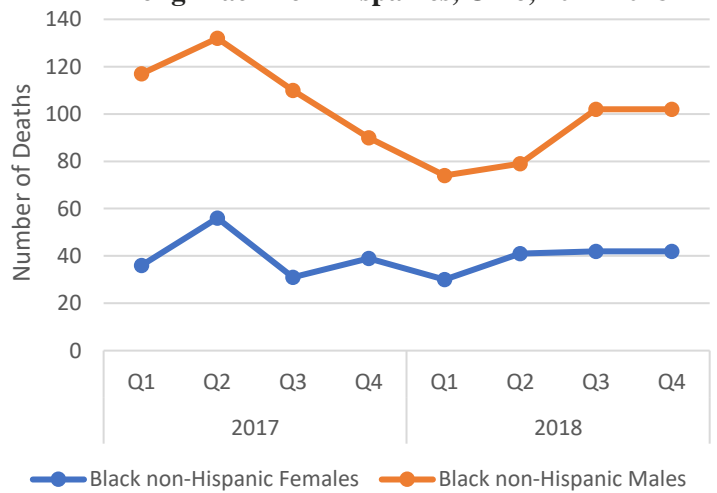


Figure 5. Number of Unintentional Drug Overdose Deaths Among Black non-Hispanics, Ohio, 2017-2018



Demographics

- In 2018, 35-44 year olds (followed by 25-34 year olds) had the highest overdose death rate among all sex and race/ethnicity groups with the exception of black non-Hispanic males. Among black non-Hispanic males, 55-64 year olds had the highest rate.
- The highest rates for black non-Hispanic females have previously been among older age groups (45-54 and 55-64), not those within the reproductive years (ages 15-44). Substance use disorder among reproductive-aged females is of particular concern because fetal exposure to opioids and other substances during pregnancy can result in infants born with neonatal abstinence syndrome (NAS).*

Figure 6. Rate of Unintentional Drug Overdose Deaths by Age, Sex and Race/Ethnicity, Ohio, 2018

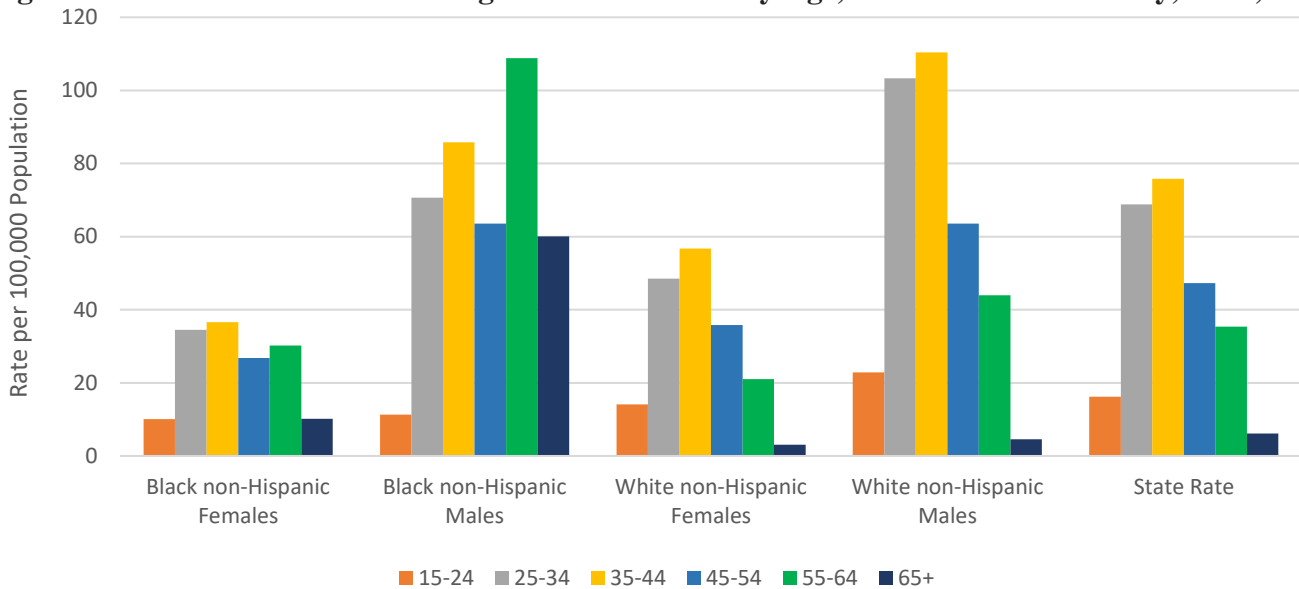
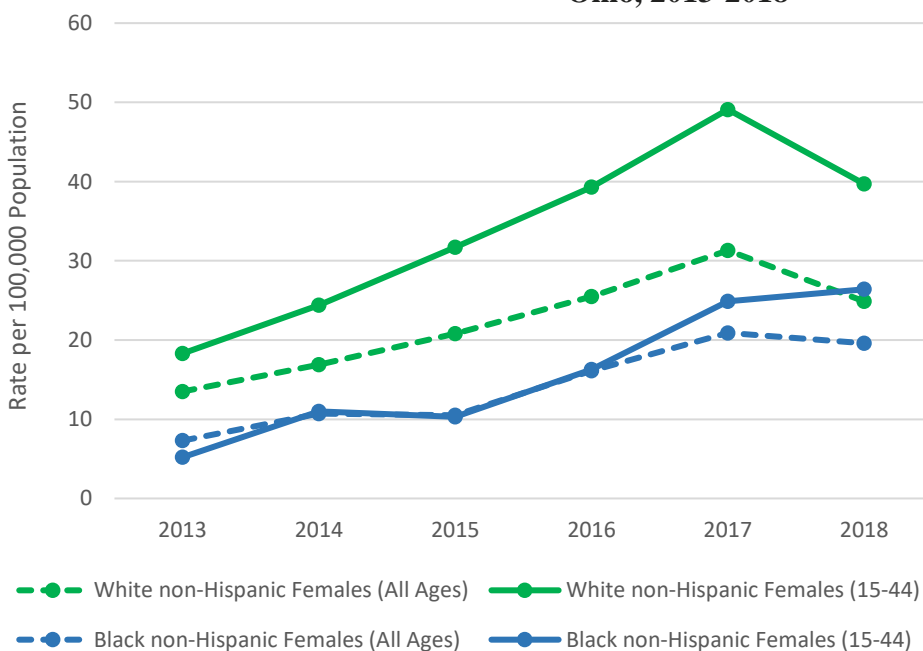


Figure 7. Rate of Unintentional Drug Overdose Deaths Among Females by Age and Race/Ethnicity, Ohio, 2013-2018



- Female overdose death rates decreased by 19.2% in 2018. However, key differences appear when age and race/ethnicity are taken into account.
- Death rates among white non-Hispanic females decreased 20.4%, while rates among black non-Hispanic females decreased only 6.2%.
- Even greater differences exist among females of reproductive age (15-44). Rates among white non-Hispanic females (15-44) decreased 19.1%; however, rates among black non-Hispanic females (15-44) continued to increase (6.0%).

Drug Involvement

- The number of fentanyl-related overdose deaths decreased in 2018. However, the percentage of total unintentional overdose deaths involving fentanyl continued to increase, with fentanyl contributing to 72.6% of unintentional overdose deaths in Ohio. The number of deaths involving the fentanyl analog, carfentanil, decreased by 92.6% from 2017 to 2018. In 2017, carfentanil made up 29.4% of fentanyl-related deaths. This number dropped to just 2.7% in 2018.
- The percent of unintentional overdose deaths related to psychostimulants (e.g. methamphetamine) also continued to increase. In 2018, 15.0% of unintentional overdose deaths involved psychostimulants.

Figure 8. Number and Percentage of Fentanyl-Related Unintentional Drug Overdose Deaths by Year, Ohio, 2013-2018

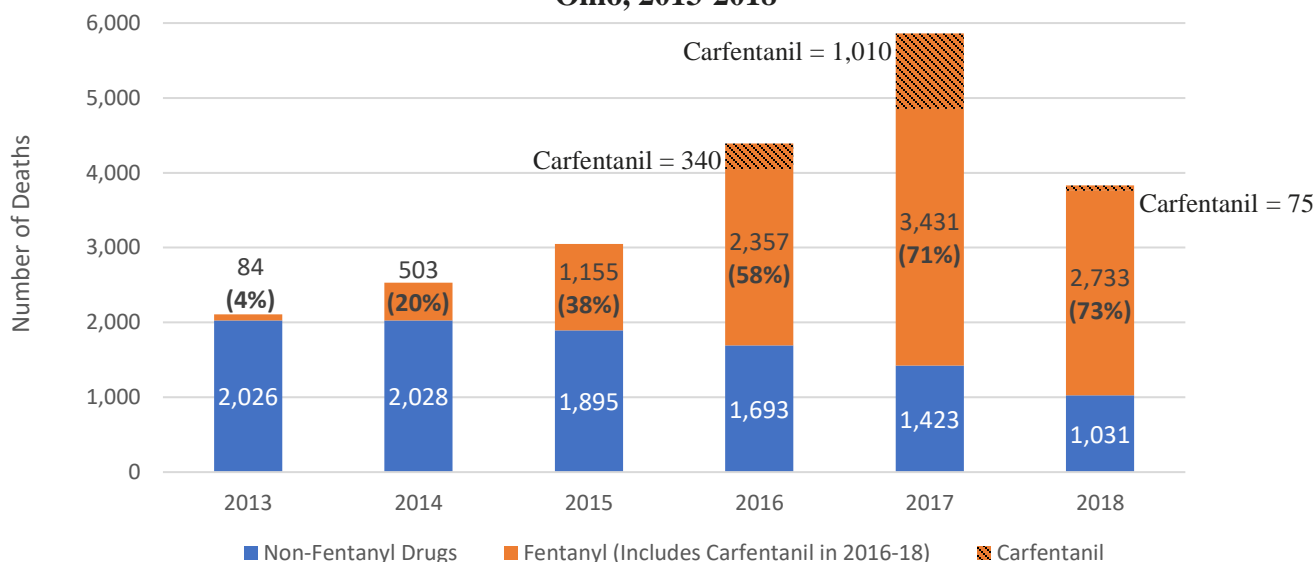
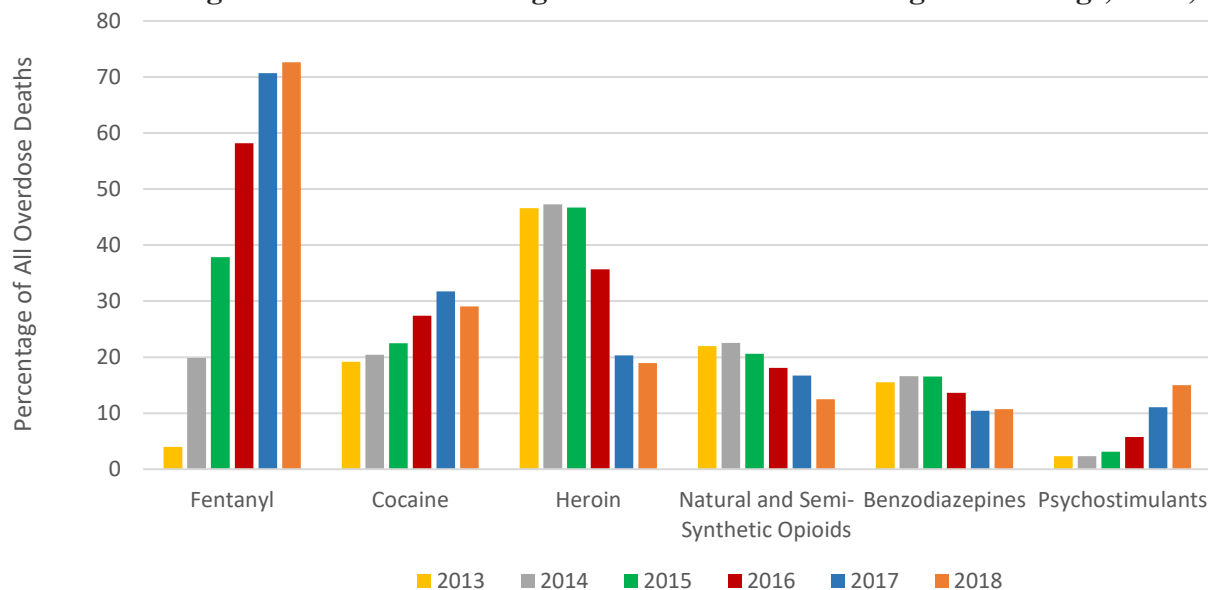


Figure 9. Percentage of Unintentional Drug Overdose Deaths Involving Select Drugs, Ohio, 2013-2018



Drug Involvement

- From 2017 to 2018, the number of unintentional overdose deaths related to psychostimulants increased, while deaths related to all other drug categories decreased.
- Deaths involving natural and semi-synthetic opioids (e.g. oxycodone, hydrocodone) had the largest decrease during this time period (42.0%).

Figure 10. Number of Unintentional Drug Overdose Deaths Involving Select Drugs by Year, Ohio, 2009-2018

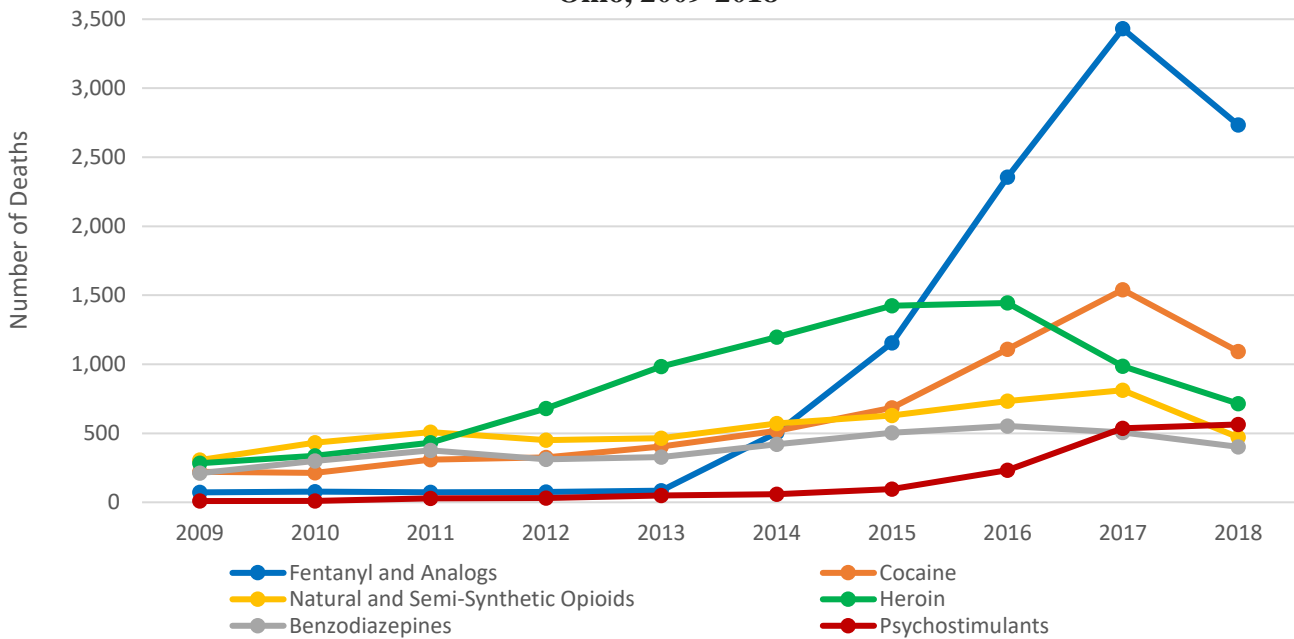
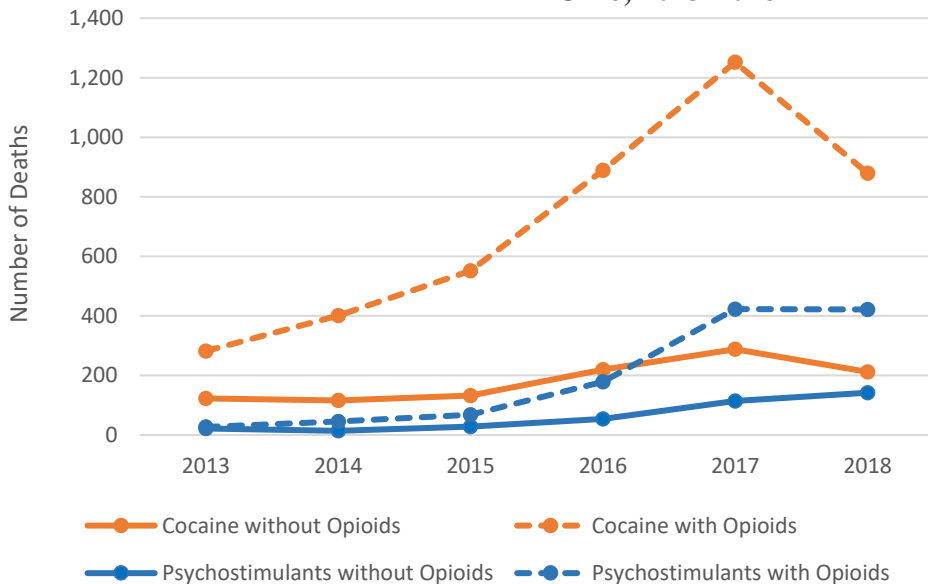


Figure 11: Number of Unintentional Drug Overdose Deaths Involving Select Drug Combinations, Ohio, 2013-2018



- From 2015 to 2017, there were substantial increases in deaths related to cocaine and psychostimulants, with many of these deaths also involving an opioid such as fentanyl.
- In 2018, the number of psychostimulant-related deaths that also involved an opioid remained stable, while those that did not involve an opioid increased by 24.6%. Cocaine-related deaths decreased with and without opioid involvement.

Table 1. Number of Unintentional Drug Overdose Deaths Involving Select Drugs, Ohio, 2009-2018

Drug Category	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Percent of 2018 Unintentional Drug Overdose Deaths
All opioids ¹	783	980	1,163	1,272	1,539	2,020	2,590	3,495	4,162	3,150	83.7%
Fentanyl ²	72	77	73	75	84	503	1,155	2,357	3,431	2,733	72.6%
Cocaine	220	213	309	326	405	517	685	1,109	1,540	1,092	29.0%
Heroin	283	338	431	680	983	1,196	1,424	1,444	987	714	19.0%
Psychostimulants ³	9	10	28	30	49	59	96	233	537	564	15.0%
Natural and Semi-Synthetic Opioids ⁴	306	432	509	451	464	570	628	733	812	471	12.5%
Alcohol ⁵	173	195	226	282	304	383	380	539	580	442	11.7%
Benzodiazepines	211	300	376	311	328	420	504	553	506	403	10.7%
Methadone	169	155	156	123	112	103	108	94	98	65	1.7%
Hallucinogens	9	26	31	31	43	49	61	100	108	60	1.6%
Barbiturates	5	13	11	6	10	6	19	14	18	12	0.3%
Other/Unspecified Drugs Only ⁶	396	343	373	389	319	274	194	182	180	171	4.5%
Multiple Drug Involvement ⁷	*	888	980	1,016	1,014	1,321	1,747	2,451	2,957	2,266	60.2%
Total Unintentional Drug Overdose Deaths	1,423	1,544	1,772	1,914	2,110	2,531	3,050	4,050	4,854	3,764	
Age-Adjusted Rate per 100,000 Population	12.7	13.7	15.4	17.0	18.7	22.7	27.7	36.8	44.1	34.1	

Source: Ohio Department of Health, Bureau of Vital Statistics. Analysis: ODH Violence and Injury Prevention Section. Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44). Multiple drugs are usually involved in overdose deaths. Individual deaths may be reported in more than one category.

1. All opioids includes prescription opioids, illicit fentanyl, and heroin.

2. Fentanyl includes fentanyl and fentanyl analogs (e.g. carfentanyl).

3. Psychostimulants include methamphetamine and other psychostimulants with potential for abuse (ICD-10 code T43.6).

4. Natural and Semi-Synthetic Opioids (e.g. oxycodone, hydrocodone) correspond to ICD-10 code T40.2.

5. Alcohol was present along with other drugs. Alcohol is considered a non-drug poisoning in ICD-10 coded mortality data and is not included in total unintentional drug overdose deaths.

6. Other/Unspecified drugs includes those instances where only ICD-10 code T50.9 (other/unspecified) is listed as the drug contributing to death.

7. Multiple drug involvement is calculated from the number of multiple cause of death codes used to identify specific drug types (T36.0-T50.8, T51.1-T51.9).

Unintentional Drug Overdose Deaths Involving Specific Drug Combinations

- Illicit fentanyl or fentanyl analogs were involved in 72.6% of 2018 unintentional overdose deaths, often in combination with other drugs.
- The percentage of fentanyl involvement with other substances varies by drug category.
 - Of all deaths related to:
 - Heroin: 79.7% also involved fentanyl
 - Cocaine: 74.0% also involved fentanyl
 - Psychostimulants (e.g. methamphetamine): 67.2% also involved fentanyl
 - Natural and semi-synthetic opioids (e.g. oxycodone): 55.2% also involved fentanyl

Table 2: Number of Unintentional Drug Overdose Deaths Involving Select Drug Combinations, Ohio, 2009-2018

Drug Category	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Percent of 2018 Unintentional Drug Overdose Deaths
Fentanyl	72	77	73	75	84	503	1,155	2,357	3,431	2,733	72.6%
Fentanyl + Cocaine	5	7	10	9	8	101	239	619	1,072	808	21.5%
Fentanyl + Heroin	1	2	0	1	15	170	490	750	720	569	15.1%
Fentanyl + Psychostimulants	0	0	1	1	0	12	34	117	368	379	10.1%
Fentanyl + Natural and Semi-Synthetic Opioids	15	22	17	24	14	79	170	367	477	260	6.9%
Total Unintentional Drug Overdose Deaths	1,423	1,544	1,772	1,914	2,110	2,531	3,050	4,050	4,854	3,764	

Source: Ohio Department of Health, Bureau of Vital Statistics. Analysis: ODH Violence and Injury Prevention Section. Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44). Fentanyl includes fentanyl and fentanyl analogs (e.g. carfentanil). Psychostimulants include methamphetamine and other psychostimulants with potential for abuse (ICD-10 code T43.6). Natural and Semi-Synthetic Opioids (e.g. oxycodone, hydrocodone) correspond to code T40.2. Multiple drugs are usually involved in overdose deaths. Individual deaths may be reported in more than one category.

Table 3. Demographic Summary of Unintentional Drug Overdose Deaths, Ohio, 2013-2018

	2013	2014	2015	2016	2017	2018		2013-2018	
Demographics	Number	Number	Number	Number	Number	Number	Rate ¹	Number	Rate ¹
Age									
<15	2	0	2	4	5	4	*	17	0.1
15-24	145	215	253	345	361	247	16.2	1,566	16.8
25-34	525	656	835	1,143	1,330	1,063	68.8	5,552	61.8
35-44	483	632	792	1,022	1,283	1,054	75.8	5,266	62.9
45-54	597	601	676	886	1,051	703	47.3	4,514	48.2
55-64	292	361	417	557	700	571	35.4	2,898	30.3
65+	60	61	75	93	124	122	6.1	535	4.8
Sex									
Female	696	860	1,017	1,284	1,560	1,250	22.7	6,667	19.9
Male	1,408	1,666	2,033	2,766	3,294	2,514	45.8	13,681	41.7
Race/Ethnicity									
American Indian, non-Hispanic	1	2	4	4	16	6	*	33	18.2
Asian/Pacific Islander, non-Hispanic	1	6	4	8	14	11	3.2	44	2.4
Black, non-Hispanic	227	239	298	426	611	512	33.5	2,313	26.1
White, non-Hispanic	1,838	2,235	2,674	3,538	4,109	3,131	36.5	17,525	33.4
Hispanic	33	38	61	69	98	93	21.7	392	17.1
Race/Ethnicity and Sex²									
Black non-Hispanic Females	58	81	81	126	162	155	19.6	663	14.3
Black non-Hispanic Males	169	158	217	300	449	357	49.5	1,650	39.6
White non-Hispanic Females	629	768	915	1,127	1,365	1,069	24.9	5,873	22.1
White non-Hispanic Males	1,209	1,467	1,759	2,411	2,744	2,062	48.1	11,652	44.7
Hispanic Females	8	4	15	22	22	20	9.0	91	8.1
Hispanic Males	25	34	46	47	76	73	33.4	301	25.4
Total³	2,110	2,531	3,050	4,050	4,854	3,764	34.1	20,359	30.7

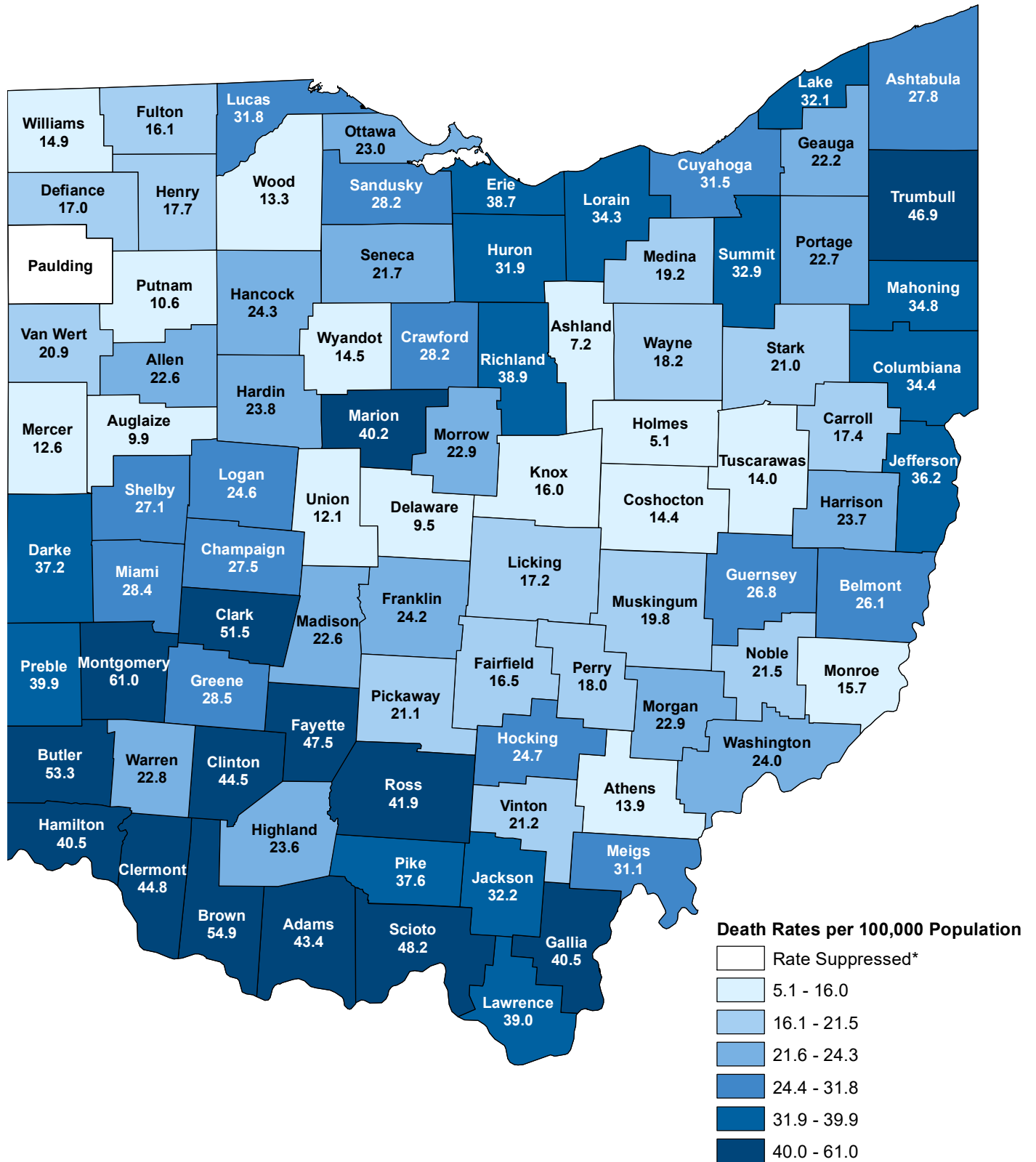
Source: Ohio Department of Health, Bureau of Vital Statistics. Analysis: ODH Violence and Injury Prevention Section. Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).

1. The death rates presented for age groups are age-specific. The death rates presented for sex and race/ethnicity are age-adjusted to the U.S. 2000 standard population to allow a comparison of the overall risk of dying between different populations. Rates are suppressed when there are fewer than 10 total deaths.

2. Other race groups are not represented due to small numbers.

3. Total includes all unintentional drug overdose deaths among Ohio residents.

Figure 12. Average Age-Adjusted Rate of Unintentional Drug Overdose Deaths by County, Ohio, 2013-2018



Source: Ohio Department of Health, Bureau of Vital Statistics, U.S. Census Bureau (Vintage 2018 population estimates). Analysis: ODH Violence and Injury Prevention Section. Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).

*Rates are suppressed when there are fewer than 10 total deaths for 2013-2018.

Table 4. Number and Age-Adjusted Rate of Unintentional Drug Overdose Deaths by County, Ohio, 2009-2018

County ¹	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Rate ²	2013-2018 Rate ²	Order ³
OHIO TOTAL	1,423	1,544	1,772	1,914	2,110	2,531	3,050	4,050	4,854	3,764	34.1	30.7	
ADAMS	10	6	6	10	6	10	12	12	14	11	40.5	43.4	10
ALLEN	5	5	9	14	15	12	18	31	39	15	15.4	22.6	54/55
ASHLAND	1	2	4	0	1	3	6	3	3	4	*	7.2	86
ASHTABULA	11	18	18	26	15	27	21	39	26	22	22.2	27.8	36
ATHENS	10	6	12	10	8	8	8	6	6	5	*	13.9	79
AUGLAIZE	3	3	3	5	3	2	9	4	6	1	*	9.9	84
BELMONT	8	5	5	10	8	14	18	20	18	18	32.5	26.1	40
BROWN	13	17	11	14	17	17	23	18	31	26	65.7	54.9	2
BUTLER	68	59	80	92	120	151	195	211	260	176	50.9	53.3	3
CARROLL	2	3	0	4	2	3	5	3	6	4	*	17.4	68
CHAMPAIGN	1	7	6	6	4	11	6	10	17	10	27.9	27.5	37
CLARK	19	19	34	36	28	38	71	73	96	72	62.6	51.5	4
CLERMONT	32	49	49	56	65	80	105	96	91	78	40.0	44.8	8
CLINTON	11	3	6	13	16	13	20	12	30	13	30.0	44.5	9
COLUMBIANA	9	8	18	17	27	19	30	39	48	35	39.6	34.4	23
COSHOCTON	1	2	4	3	4	2	3	4	6	7	*	14.4	77
CRAWFORD	7	7	5	5	2	9	10	8	17	14	43.8	28.2	34/35
CUYAHOGA	144	159	212	230	255	255	275	547	598	443	35.5	31.5	30
DARKE	3	5	5	9	9	11	13	19	28	18	39.8	37.2	20
DEFIANCE	2	3	5	3	5	7	7	6	3	6	*	17.0	70
DELAWARE	12	12	10	16	15	12	12	11	28	28	13.6	9.5	85
ERIE	6	18	12	12	16	17	23	37	32	25	45.2	38.7	18
FAIRFIELD	17	15	12	19	17	15	16	23	43	25	17.7	16.5	71
FAYETTE	4	3	5	5	4	12	16	7	26	8	*	47.5	6
FRANKLIN	139	192	209	191	196	196	279	314	431	476	35.6	24.2	44
FULTON	2	6	5	9	3	5	6	10	3	7	*	16.1	72
GALLIA	5	3	6	3	7	6	9	11	18	17	62.8	40.5	12/13
GEAUGA	2	7	11	8	11	11	15	24	25	12	16.2	22.2	56
GREENE	21	27	23	23	21	40	43	44	63	49	32.9	28.5	32
GUERNSEY	4	12	3	3	7	9	9	13	10	8	*	26.8	39
HAMILTON	101	110	150	159	212	248	335	318	444	357	45.1	40.5	12/13
HANCOCK	8	7	10	5	4	11	13	19	32	23	34.3	24.3	43
HARDIN	3	6	6	1	10	1	8	7	9	5	*	23.8	46
HARRISON	1	1	4	0	3	2	4	1	5	4	*	23.7	47
HENRY	0	1	0	2	1	2	6	5	3	10	42.3	17.7	67

Table 4. Number and Age-Adjusted Rate of Unintentional Drug Overdose Deaths by County, Ohio, 2009-2018

County ¹	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Rate ²	2013-2018 Rate ²	Order ³
HIGHLAND	5	6	7	3	8	12	9	6	13	5	*	23.6	48
HOCKING	4	4	7	4	8	4	3	5	8	11	43.5	24.7	41
HOLMES	0	1	1	0	1	0	0	4	2	4	*	5.1	87
HURON	8	4	8	8	14	17	10	16	27	16	31.8	31.9	28
JACKSON	5	7	8	9	12	8	9	7	10	13	44.5	32.2	26
JEFFERSON	23	13	25	14	17	21	16	14	28	27	48.3	36.2	21
KNOX	10	7	9	7	12	8	7	8	15	4	*	16.0	73
LAKE	20	39	42	48	43	53	50	94	91	71	34.7	32.1	27
LAWRENCE	11	9	17	10	9	8	23	27	32	30	54.9	39.0	16
LICKING	20	24	22	13	23	23	29	18	41	40	22.4	17.2	69
LOGAN	5	6	0	5	9	4	8	14	15	10	26.8	24.6	42
LORAIN	25	21	25	70	69	71	63	146	133	101	35.0	34.3	24
LUCAS	49	54	57	88	72	115	118	157	153	166	40.8	31.8	29
MADISON	5	10	3	7	7	7	7	15	20	6	*	22.6	54/55
MAHONING	38	48	47	48	41	48	60	83	112	98	48.1	34.8	22
MARION	9	8	13	19	18	27	22	24	30	29	50.5	40.2	14
MEDINA	13	7	13	17	14	17	27	41	42	35	23.6	19.2	64
MEIGS	2	3	5	2	4	4	3	9	4	14	62.9	31.1	31
MERCER	2	2	4	1	5	5	3	5	7	2	*	12.6	81
MIAMI	15	14	12	16	12	19	17	39	41	28	31.7	28.4	33
MONROE	2	0	0	1	0	4	1	1	2	5	*	15.7	74
MONTGOMERY	121	113	119	150	199	251	239	320	521	275	55.4	61.0	1
MORGAN	3	1	1	0	4	4	0	4	2	4	*	22.9	50/51
MORROW	5	8	5	2	9	6	3	6	11	7	*	22.9	50/51
MUSKINGUM	4	5	2	7	10	5	13	7	21	35	45.8	19.8	63
NOBLE	1	1	0	0	1	0	5	1	1	4	*	21.5	58
OTTAWA	6	2	4	3	4	3	5	14	7	13	41.6	23.0	49
PAULDING	2	2	0	2	0	3	0	0	3	3	*	*	*
PERRY	2	4	4	7	0	4	7	6	6	13	40.2	18.0	66
PICKAWAY	9	9	14	12	10	8	10	6	17	20	35.4	21.1	60
PIKE	9	4	13	3	6	5	11	7	13	14	55.6	37.6	19
PORTAGE	16	14	6	16	22	30	36	46	39	28	18.7	22.7	53
PREBLE	9	7	5	11	6	8	15	21	29	11	29.7	39.9	15
PUTNAM	2	1	0	1	2	3	4	4	3	3	*	10.6	83
RICHLAND	18	14	15	11	22	31	36	68	49	51	45.5	38.9	17
ROSS	24	17	18	12	15	29	38	40	29	37	50.5	41.9	11

Table 4. Number and Age-Adjusted Rate of Unintentional Drug Overdose Deaths by County, Ohio, 2009-2018

County ¹	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2018 Rate ²	2013-2018 Rate ²	Order ³
SANDUSKY	2	4	11	4	5	13	12	22	23	17	31.2	28.2	34/35
SCIOTO	24	22	25	17	18	23	30	35	51	47	68.3	48.2	5
SENECA	7	0	8	6	7	11	9	5	19	13	27.7	21.7	57
SHELBY	8	5	8	5	9	7	8	15	21	10	21.9	27.1	38
STARK	21	39	40	35	42	59	59	97	91	74	22.3	21.0	61
SUMMIT	54	66	56	91	76	118	173	298	239	128	24.7	32.9	25
TRUMBULL	43	43	57	34	37	54	89	111	135	79	45.8	46.9	7
TUSCARAWAS	4	7	13	8	11	6	8	14	22	10	13.1	14.0	78
UNION	4	10	3	3	3	6	5	7	10	9	*	12.1	82
VAN WERT	1	3	6	1	4	4	1	8	8	4	*	20.9	62
VINTON	2	1	1	5	2	3	1	2	2	4	*	21.2	59
WARREN	34	25	26	32	27	40	42	58	81	40	18.8	22.8	52
WASHINGTON	8	4	6	7	7	12	8	20	14	13	24.7	24.0	45
WAYNE	7	6	13	7	4	13	24	36	20	18	17.5	18.2	65
WILLIAMS	2	3	1	1	5	2	1	9	4	8	*	14.9	75
WOOD	14	9	7	10	4	16	22	21	17	14	11.3	13.3	80
WYANDOT	1	2	2	1	1	0	2	4	3	7	*	14.5	76

Source: Ohio Department of Health, Bureau of Vital Statistics. Analysis: ODH Violence and Injury Prevention Section. Includes Ohio residents who died due to unintentional drug poisoning (underlying cause of death ICD-10 codes X40-X44).

1. County is based on county of residence. Beginning in 2015, the residence county value was derived from the geocoded county value based on the decedent's residence street address when the geocode was considered of high quality.

2. Rates are suppressed when there are fewer than 10 total deaths.

3. Order is based on the 2013-2018 average age-adjusted rate.