

# 2015 Ohio Drug Overdose Data: General Findings

## Overview

Unintentional drug overdose continued to be the leading cause of injury-related death in Ohio in 2015, ahead of motor vehicle traffic crashes – a trend which began in 2007.

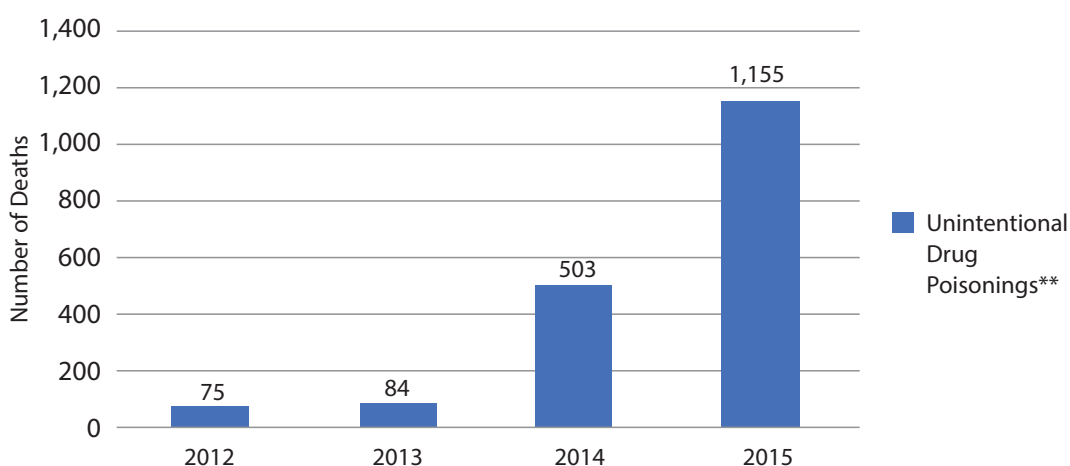
Unintentional drug overdoses caused the deaths of 3,050 Ohio residents in 2015,<sup>1</sup> the highest number on record, compared to 2,531 in 2014. The number of overdose deaths increased 20.5 percent from 2014 to 2015, which is similar to the increase from 2013 to 2014.

## Significant Rise in Fentanyl-Related Overdose Deaths

As in 2014, the continued illicit use of a powerful opioid called fentanyl was a significant contributor to the rise in drug overdose deaths in 2015.

- Fentanyl-related unintentional drug overdose deaths in Ohio more than doubled from 503 in 2014 to 1,155 in 2015 (figure 1).
- Most often used to treat patients with severe pain, fentanyl is a Schedule II synthetic narcotic that in its prescription form is estimated to be 30 to 50 times more potent than heroin and 50 to 100 times more potent than morphine.<sup>2</sup>
- Illicit fentanyl has been observed being mixed with other commonly abused drugs, such as heroin, resulting in increased deaths between 2005 and 2007, and it seems to be reemerging in the U.S.<sup>3</sup> People who use drugs may not know when illicit fentanyl has been combined with other drugs.

Figure 1. Fentanyl-Related Drug Overdoses, Ohio, 2012-15\*



\* Unintentional Drug Poisoning Death include deaths with manner on the death certificate listed as "accidental".

\*\* Does not include intentional (homicide and suicide) and undetermined fentanyl related deaths; Additional 4 in 2012, 8 in 2013, 1 in 2014, and 22 in 2015.

Source: Ohio Department of Health, Bureau of Vital Statistics; Analysis Conducted by ODH Injury Prevention Program.

There were 652 more unintentional fentanyl-related overdose deaths in 2015 than in 2014, and 1,071 more than in 2013.

<sup>1</sup> 2015 drug overdose data is based on information listed on death certificates, including Ohioans who died in other states.

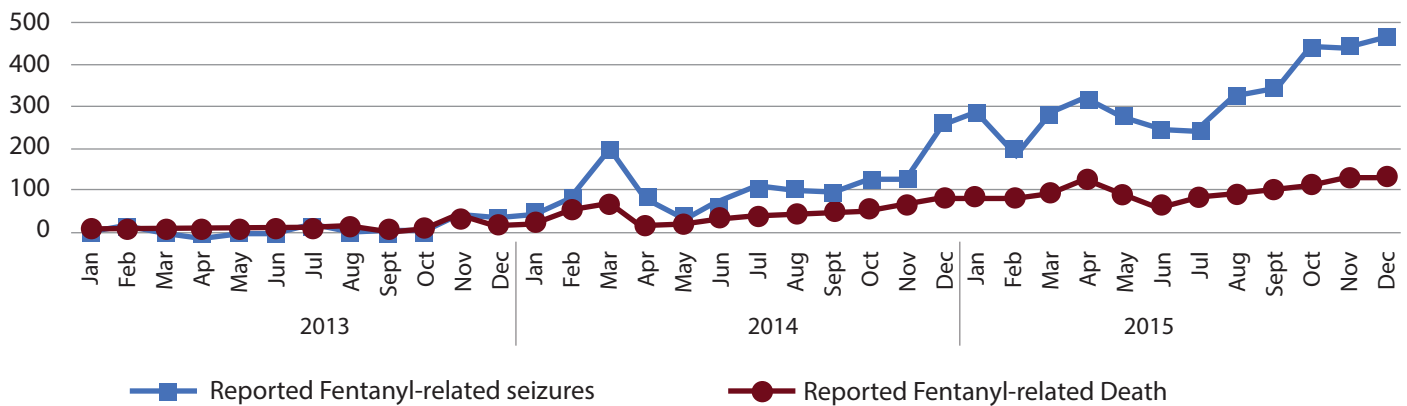
<sup>2</sup> U.S. Drug Enforcement Administration. 21 CFR part 1310. *Control of a Chemical Precursor Used in the Illicit Manufacture of Fentanyl as a List 1 Chemical*. Federal Register 2007; 72: 20039-47.

<sup>3</sup> U.S. Drug Enforcement Administration, Office of Diversion Control. 2015. *National Forensic Laboratory Information System Report: Opiates and Related Drugs Reported in NFLIS, 2009-2014*. Springfield, VA: U.S. Drug Enforcement Administration.

- Although pharmaceutical fentanyl may be diverted for abuse in the U.S., the majority of fentanyl drug reports and fentanyl reported with other drugs result from illegally produced and trafficked fentanyl, not diverted pharmaceutical fentanyl.<sup>3</sup>
- The number of fentanyl drug reports<sup>4</sup> based on law enforcement drug seizures increased in Ohio from 110 in 2013 to 3,882 in 2015. During the same period, fentanyl-related unintentional drug overdose deaths increased from 84 to 1,155 (figure 2).
- Fentanyl-related overdose deaths<sup>5</sup> are categorized nationally as prescription opiate deaths even though it is believed that the vast majority of such deaths are the result of illegally produced and trafficked fentanyl. Of the 1,155 fentanyl-related unintentional overdose deaths in Ohio in 2015, only 30 deaths had a fentanyl prescription within 90 days of their death.<sup>6</sup>

Like other parts of the U.S., Ohio experienced a substantial increase in the number of fentanyl drug reports by law enforcement.

Figure 2. Number of Fentanyl-Related Deaths and Reported Drug Seizure Cases, Ohio, 2013-2015



Source: National Forensic Laboratory Information System (provided by the State of Ohio Board of Pharmacy), and Ohio Department of Health, Bureau of Vital Statistics; Analysis Conducted by ODH Injury Prevention Program.

- Counties with the most fentanyl-related unintentional overdose deaths were Hamilton (195), Summit (111), Butler (104), Montgomery (102), Cuyahoga (83), Clermont (54), Clark (48), Lucas (41), Franklin (40), Stark (26), Trumbull (25), Lorain (21), and Greene (20). These counties account for 75% of fentanyl-related unintentional overdose deaths in Ohio.

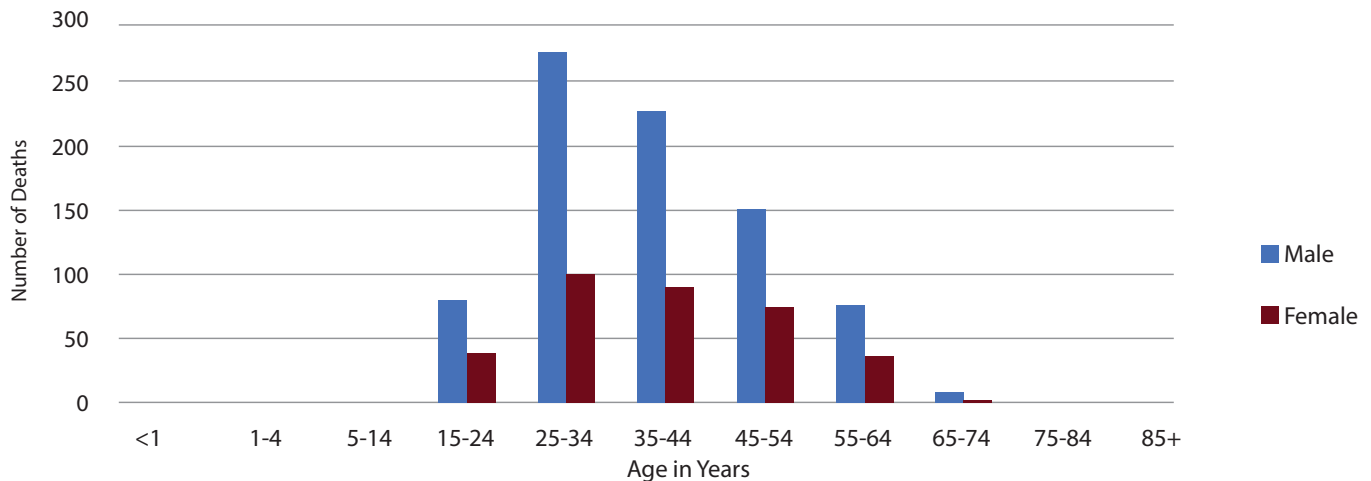
<sup>4</sup>The National Forensic Laboratory Information System (NFLIS) is a U.S. Drug Enforcement Administration program that collects drug chemistry analysis results from cases analyzed by state, local and federal forensic laboratories. These laboratories analyze substances secured in law enforcement operations across the country.

<sup>5</sup>Fentanyl-related drug deaths in this report were identified based on the literal cause of death mentioned on the death certificate. A mention of fentanyl on the death certificate does not mean that fentanyl was the sole cause of death. The presence of more than one drug can result in more than one mention from a single death.

<sup>6</sup>State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System.

- Fentanyl-related overdose death was highest among persons 25 to 34 years of age (32 percent); and males (70.5 percent) were about 2.4 times more likely to die from fentanyl-related overdose compared to women (29.5 percent) (figure 3).

**Figure 3: Fentanyl-Related Unintentional Overdose Deaths, by Age and Sex, Ohio, 2015**



Source: Ohio Department of Health, Bureau of Vital Statistics, Analysis Conducted by ODH Injury Prevention Program.

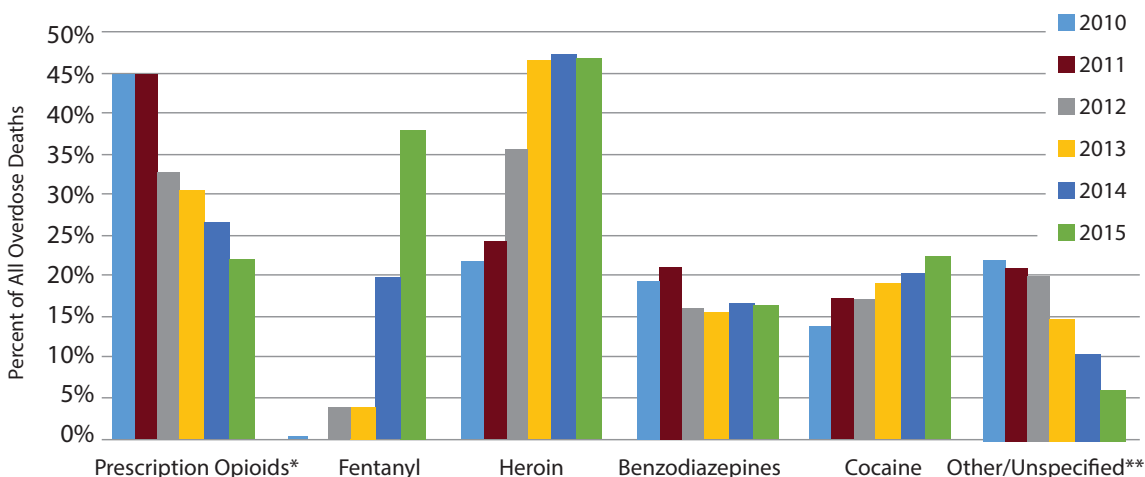
## Number of Heroin Overdose Deaths Increased

- Heroin-related deaths accounted for 1,424 unintentional drug overdose deaths in 2015, an increase from 1,196 in 2014. Heroin was involved in 46.7 percent of all overdose deaths.

## Prescription Opioid Overdose Deaths Declined

- Prescription opioid-related deaths accounted for 667 (21.9 percent) of unintentional drug overdose deaths in 2015, compared to 672 (26.6 percent) in 2014 (figure 4).

**Figure 4: Percentage of all Unintentional Drug Overdose Deaths Involving Selected Drug by Year, Ohio, 2010-2015**



The percentage of prescription opioid overdose deaths decreased in 2015 for fourth straight year.

\* Prescription Opioids not including fentanyl.

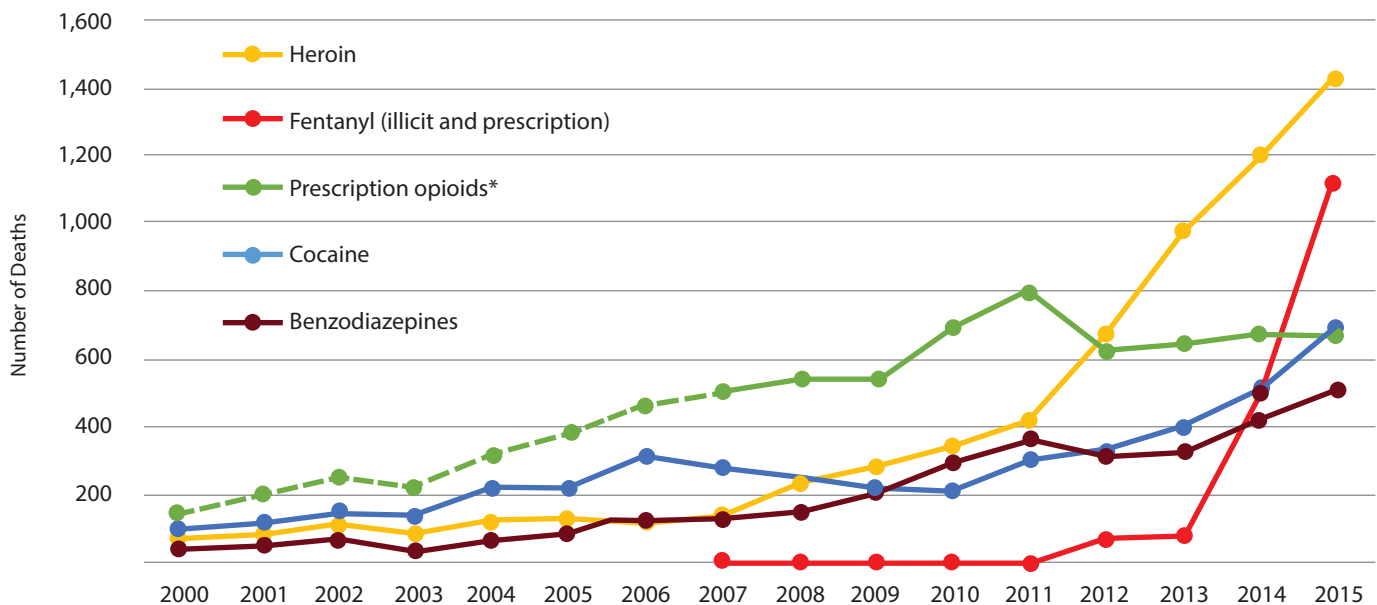
\*\* No specific drug was identified. In about 6 percent of the cases, no specific drug is identified in the death certificate data. As such, reported drugs are likely under-estimates of their true contribution to the burden of fatal drug overdoses in Ohio.

Source: Ohio Department of Health, Bureau of Vital Statistics, Analysis Conducted by ODH Injury Prevention Program.

## Opioids and Multiple Drug Use Help Drive Overdose Rate

- Opioids (heroin, fentanyl and prescription) remained the driving factor behind unintentional drug overdoses in Ohio. In 2015, 2,590 (84.9 percent) of drug overdoses involved any opioid, compared to 2,020 (79.8 percent) in 2014 (figure 5 and table 1).

Figure 5. Number of Unintentional Overdose Involving Selected Drugs, by Year, Ohio, 2000-2015



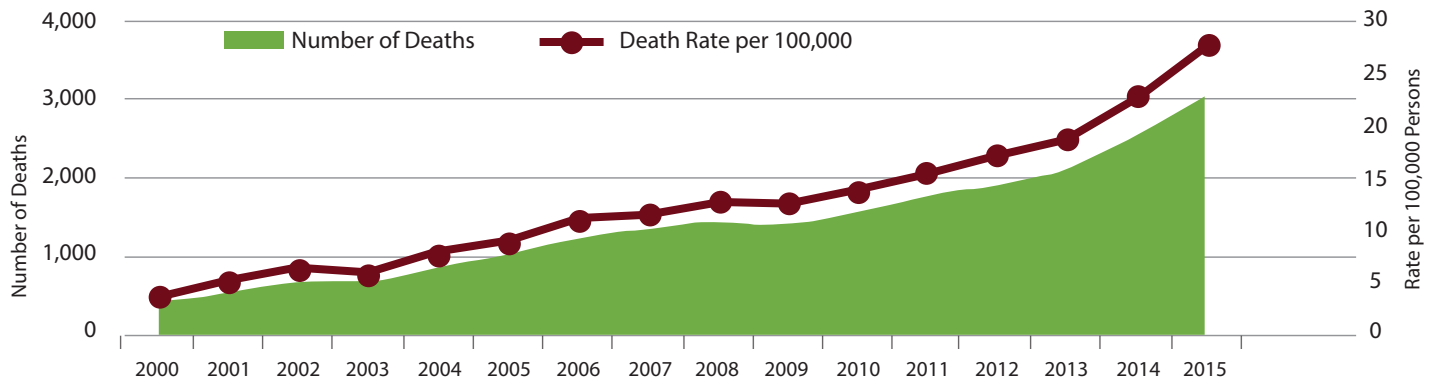
\* Prescription opioids not including fentanyl; fentanyl was not captured in the data prior to 2007 as denoted by the dashed line.

Source: Ohio Department of Health, Bureau of Vital Statistics; Analysis Conducted by ODH Injury Prevention Program.

Multiple drugs are usually involved in overdose deaths. Individual deaths may be reported in more than one category.

- Unintentional drug overdose death from multiple drug use (where the number of drugs involved was specified) accounted for 1,747 (57.3 percent) in 2015, compared to 1,321 (52.2 percent) in 2014.
- Ohio's annual age-adjusted death rate from unintentional drug overdoses in 2015 was 27.7 per 100,000 persons, compared to 22.8 in 2014 (figure 6).

Figure 6. Number of Deaths and Annual Age-Adjusted Death Rate\* per 100,000 Population from Unintentional Drug Overdose by Year, Ohio Residents, 2000-2015



Source: Ohio Department of Health, Bureau of Vital Statistics; Analysis Conducted by ODH Injury Prevention Program.

\*Beginning with the 2015 Ohio Drug Overdose Report, the death rate is presented as age-adjusted which allows a comparison of death rates between populations (e.g. counties and states). The rates are adjusted to the U.S. 2000 standard population to allow a comparison of the overall risk of dying between different populations.

## National Data

According to the most recent national data available:

- In the U.S., 47,055 people died from a drug overdose in 2014. Since 2000, the age-adjusted drug overdose death rate has more than doubled, from 6.2 per 100,000 in 2000 to 14.7 per 100,000 in 2014.<sup>7</sup>
- The 2013 National Survey on Drug Use and Health showed that 4.5 million Americans used opiates and related substances non-medically in 2013.<sup>8</sup>

<sup>7</sup> Rudd R, Aleshire N, Zibbell J, Gladden R. Increases in Drug and Opioid Overdose Deaths-United states 2000-2014. 2016; 64(50):1378-82.

<sup>8</sup> U.S. Drug Enforcement Administration, Office of Diversion Control. 2015. *National Forensic Laboratory Information System Report: Opiates and Related Drugs Reported in NFLIS, 2009-2014*. Springfield, VA: U.S. Drug Enforcement Administration.

# Opioid Prescribing Trends in Ohio

Ohio officials have worked with the medical community to find the right balance between making sure that opioid pain interventions are available to patients who need them, and limiting the number of leftover opioid prescription medications available for diversion and abuse.

Established in 2011, the Governor’s Cabinet Opiate Action Team issued opioid prescribing guidelines for emergency departments and acute care facilities in 2012, prescribing guidelines for the management of chronic pain in 2013, and prescribing guidelines for the outpatient management of acute pain such as following surgery in 2016.



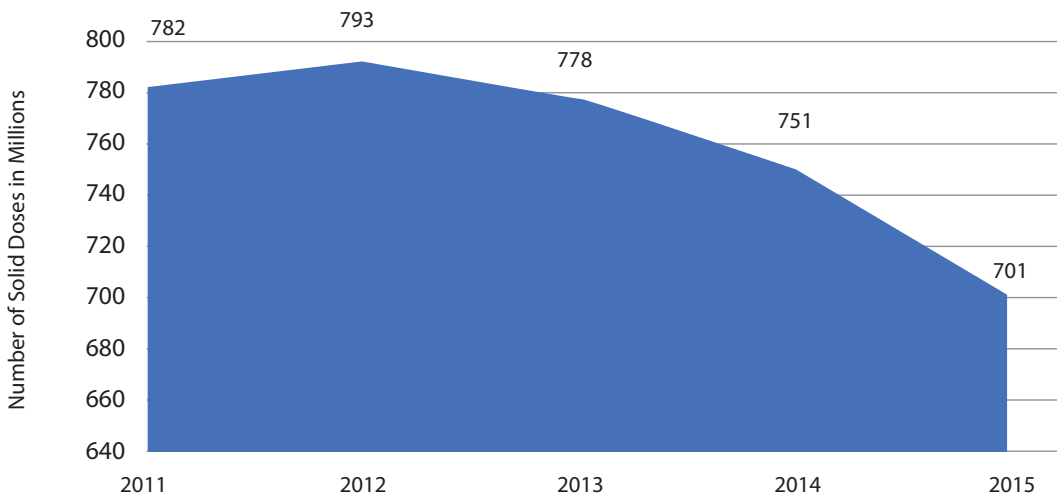
- The prescribing guidelines are designed to prevent “doctor shopping” for prescription opioids, to urge prescribers to first consider non-opioid therapies and pain medications to avoid the potential misuse and abuse of opioids, to reduce overprescribing leading to leftover opioids diverted for abuse, and to encourage prescribers to check the Ohio Automated Rx Reporting System (OARRS) before prescribing opioids to see what other controlled medications a patient might already be taking.
- In 2015, Ohio Gov. John R. Kasich announced an investment of up to \$1.5 million a year to integrate OARRS directly into electronic medical records and pharmacy dispensing systems across the state, allowing instant access for prescribers and pharmacists. Also in 2015, the Ohio Board of Pharmacy linked OARRS data to ODH overdose death data, enabling the identification of patterns linking a number of overdose deaths to specific prescribers. The Pharmacy Board partners with prescriber regulatory boards to conduct joint investigations of such prescribers for violations of criminal laws.



OARRS data shows that during the past five years:

- There were 81 million fewer opioid solid doses dispensed to Ohio patients in 2015 compared to 2011 (figure 7).

**Figure 7. Number of Opioid Doses\* Dispensed to Ohio Patients 2011-2015**



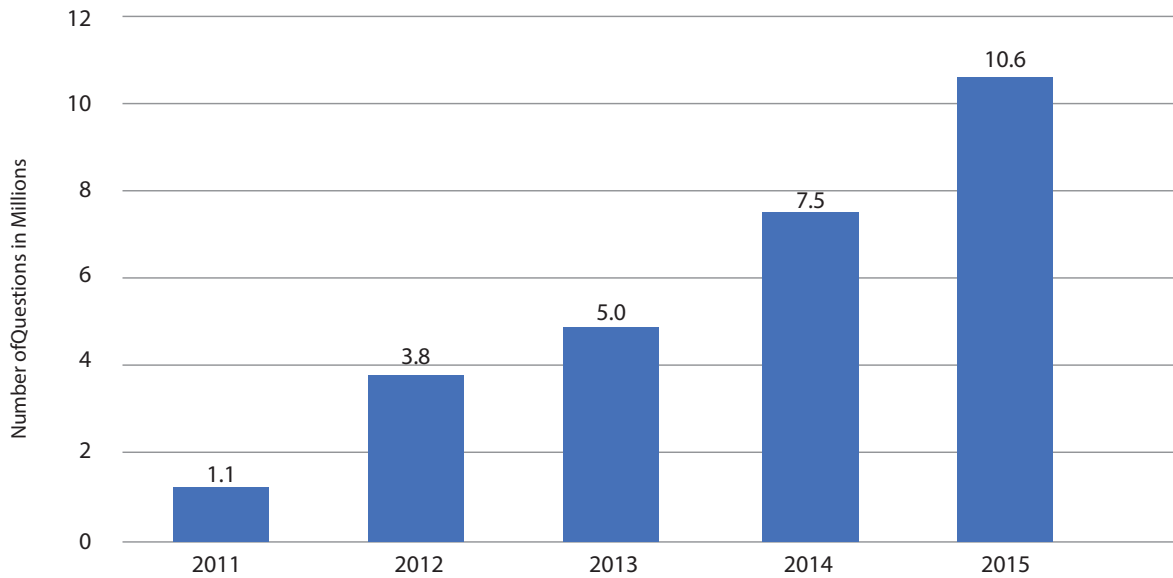
There were 81 million fewer doses of opioids dispensed to Ohio patients in 2015 compared to 2011.

Source: State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System.

\*Does not include liquids

- There were 9.5 million more prescriber queries to OARRS in 2015 compared to 2011 (figure 8).

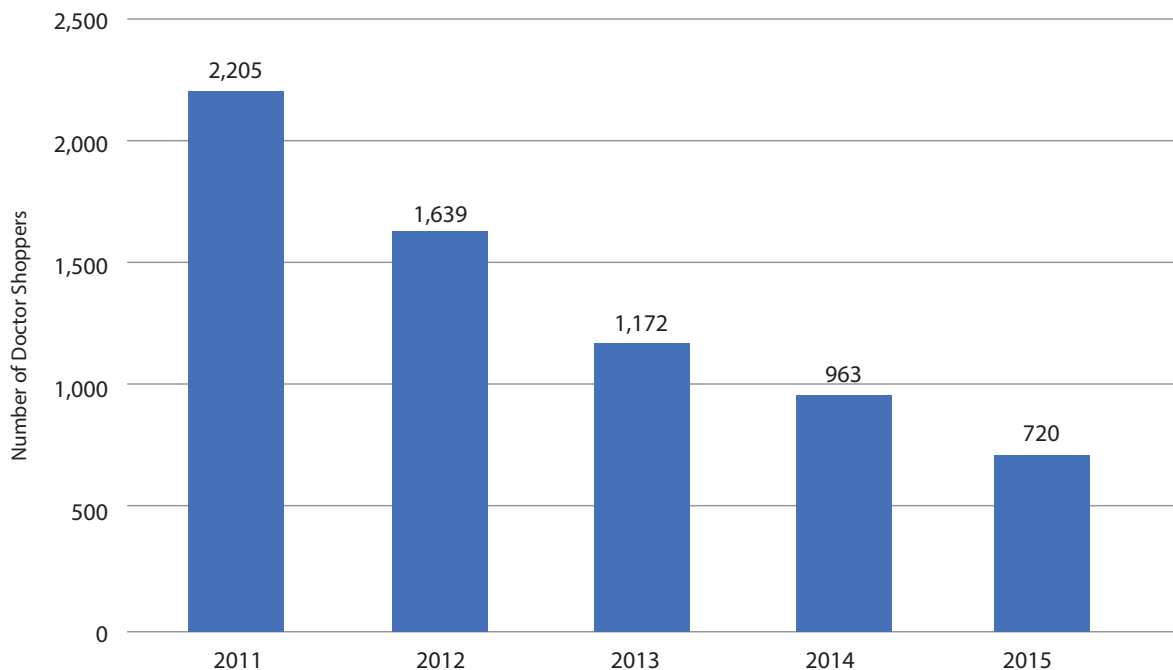
**Figure 8. Prescriber OARRS Queries, Ohio, 2011-2015**



Source: State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System.

- The number of individuals “doctor shopping” for opioids and other controlled substances decreased from 2,205 in 2011 to 720 in 2015 (figure 9).

**Figure 9. Number of “Doctor Shoppers,”\* Ohio 2011-2015**



\*A doctor shopper is defined as an individual receiving a prescription from 5 or more prescribers in 1 calendar month.

Source: State of Ohio Board of Pharmacy, Ohio Automated Rx Reporting System.

**Table 1. Unintentional Drug Overdose Deaths of Ohio Residents Involving Specific Drug(s), as Mentioned on Death Certificate, by Year, 2003-2015<sup>1-3</sup>**

Drug Category	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	% of 2015 deaths
All opioids*	296	429	489	551	631	733	783	980	1,163	1,272	1,539	2,020	2,590	84.9%
Heroin	87	124	131	117	146	233	283	338	431	680	983	1,196	1,424	46.7%
Fentanyl					4	6	7	5	0	75	84	503	1,155	37.9%
Prescription opioids**	221	319	388	462	504	538	543	692	795	628	644	672	667	21.9%
Benzodiazepines	38	69	90	121	133	154	211	300	376	311	328	420	504	16.5%
Cocaine	140	221	223	317	287	252	220	213	309	326	405	517	685	22.5%
Alcohol	40	38	58	89	135	181	173	195	226	282	304	383	380	12.5%
Methadone	55	116	144	161	176	168	169	155	156	123	112	103	108	3.5%
Hallucinogens	7	8	8	10	13	14	9	26	31	31	43	49	61	2.0%
Barbiturates	5	3	5	3	7	3	5	13	11	6	10	6	19	0.6%
Other/unspecified drugs only***	154	256	289	378	453	475	396	343	376	389	319	274	194	6%
Multiple Drug Involvement									888 <sup>4</sup>	980 <sup>5</sup>	1,016 <sup>6</sup>	1,014 <sup>7</sup>	1,321 <sup>8</sup>	1,747 <sup>9</sup>
Total unintentional poisoning deaths	658	904	1,020	1,261	1,351	1,473	1,423	1,544	1,772	1,914	2,110	2,531	3,050	
Age-adjusted annual death rate per 100,000	5.8	7.9	8.9	11.0	11.7	12.8	12.5	13.7	15.6	17.1	18.8	22.8	27.7	

Source: Ohio Department of Health, Bureau of Vital Statistics; Analysis by ODH Injury Prevention Program.

1. Total includes out of state deaths of Ohio residents for all years.
2. Individual drugs do not add up to totals as more than one drug may be listed on the death certificate for one death.
3. Data completeness varies from year to year for residents who died out of state; approximately 2 percent of the fatal overdoses on average each year.
4. 343 deaths in 2010 involved an unknown number of drugs.
5. 376 deaths in 2011 involved an unknown number of drugs; multiple drug involvement count is based on 1,396 deaths with known number of drugs included on death certificate.
6. 389 deaths in 2012 involved an unknown number of drugs; multiple drug involvement count is based on 1,525 deaths with known number of drugs included on death certificate.
7. 319 deaths in 2013 involved an unknown number of drugs; multiple drug involvement count is based on 1,791 deaths with known number of drugs included on death certificate.
8. 274 deaths in 2014 involved an unknown number of drugs; multiple drug involvement count is based on 2,257 deaths with known number of drugs included on death certificate.
9. 194 deaths in 2015 involved an unknown number of drugs; multiple drug involvement count is based on 2,856 deaths with known number of drugs included on death certificate.

\*Includes prescription opioids, fentanyl and heroin;

\*\* Prescription Opioids not including Fentanyl; Fentanyl was not captured in the data prior to 2007;

\*\*\*Includes only those instances where no other drug than T50.9 (other/unspecified) is included as contributing to death.





**Table 2. Number of Unintentional Drug Overdose Deaths of Ohio Residents and Average Crude and Age-Adjusted Annual Death Rates Per 100,000 Population, by County, 2010-2015<sup>1,2,3</sup>**

County	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2010-2015 Total	Crude Rate	Age Adjusted Rate	Ratio County to State
BROWN	2	8	5	5	10	12	13	17	11	14	17	17	23	99	37.2	40.2	2.1
MONTGOMERY	55	127	116	125	130	145	121	113	119	150	199	251	239	1,071	33.4	35.3	1.8
CLERMONT	14	25	22	31	36	38	32	49	49	56	65	80	105	404	33.7	35.2	1.8
BUTLER	23	21	31	47	45	55	68	59	80	92	120	151	195	697	31.2	33.2	1.7
ADAMS	3	1	6	6	5	6	10	6	6	10	6	10	12	50	29.5	32.7	1.7
SCIOTO	10	14	17	15	19	20	24	22	25	17	18	23	30	135	28.8	31.0	1.6
CLINTON	7	12	4	6	8	10	11	3	6	13	16	13	20	71	28.3	30.2	1.6
CLARK	11	25	15	18	20	19	19	19	34	36	28	38	71	226	27.5	29.5	1.5
JEFFERSON	10	9	12	12	9	15	23	13	25	14	17	21	16	106	25.9	28.8	1.5
ROSS	6	7	14	11	19	20	24	17	18	12	15	29	38	129	27.7	28.3	1.5
FAYETTE	1	4	3	5	5	2	4	3	5	5	4	12	16	45	26.0	28.1	1.5
TRUMBULL	23	38	29	30	58	41	43	43	57	34	37	54	89	314	25.3	27.7	1.4
MARION	3	5	7	3	8	9	9	8	13	19	18	27	22	107	27.0	27.3	1.4
JACKSON	2	4	4	14	7	8	5	7	8	9	12	8	9	53	26.9	27.3	1.4
PIKE	5	0	3	2	6	4	9	4	13	3	6	5	11	42	24.6	26.2	1.4
HAMILTON	62	72	86	98	96	113	101	110	150	159	212	248	335	1,214	25.2	25.7	1.3
ERIE	2	2	3	4	5	6	6	18	12	12	16	17	23	98	21.4	23.3	1.2
ASHTABULA	3	8	6	5	7	10	11	18	18	26	15	27	21	125	20.8	22.5	1.2
MAHONING	17	16	29	25	25	42	38	48	47	48	41	48	60	292	20.7	22.2	1.2
LAWRENCE	5	7	5	7	8	13	11	9	17	10	9	8	23	76	20.5	22.0	1.1
PREBLE	1	1	4	3	7	11	9	7	5	11	6	8	15	52	20.7	21.9	1.1
LAKE	6	13	18	29	26	15	20	39	42	48	43	53	50	275	20.0	21.0	1.1
GALLIA	3	3	4	6	2	4	5	3	6	3	7	6	9	34	18.5	20.6	1.1
COLUMBIANA	4	4	1	7	7	8	9	8	18	17	27	19	30	119	18.7	19.9	1.0
GUERNSEY	2	2	2	0	3	2	4	12	3	3	7	9	9	43	18.1	19.9	1.0
LUCAS	21	21	49	44	75	73	49	54	57	88	72	115	118	504	19.2	19.8	1.0
GREENE	15	16	19	21	16	31	21	27	23	23	21	40	43	177	18.0	19.6	1.0
PICKAWAY	0	3	3	5	5	5	9	9	14	12	10	8	10	63	18.6	19.4	1.0
HIGHLAND	2	2	6	4	4	4	5	6	7	3	8	12	9	45	17.4	19.3	1.0
<b>OHIO TOTAL</b>	<b>658</b>	<b>904</b>	<b>1,020</b>	<b>1,261</b>	<b>1,351</b>	<b>1,473</b>	<b>1,423</b>	<b>1,544</b>	<b>1,772</b>	<b>1,914</b>	<b>2,110</b>	<b>2,531</b>	<b>3,050</b>	<b>12,921</b>	<b>18.6</b>	<b>19.2</b>	
CHAMPAIGN	1	2	0	4	1	4	1	7	6	6	4	11	6	40	16.9	19.1	1.0
LORAIN	13	12	13	18	16	18	25	21	25	70	69	71	63	319	17.6	18.7	1.0
HURON	4	1	5	5	6	5	8	4	8	8	14	17	10	61	17.2	18.7	1.0
DARKE	1	6	4	1	7	9	3	5	5	9	9	11	13	52	16.5	18.7	1.0
HARDIN	3	4	2	10	6	6	3	6	6	1	10	1	8	32	16.8	18.7	1.0
RICHLAND	6	8	13	16	10	12	18	14	15	11	22	31	36	129	17.5	18.4	1.0
ATHENS	4	3	7	9	13	8	10	6	12	10	8	8	8	52	13.3	18.4	1.0

**Table 2. Number of Unintentional Drug Overdose Deaths of Ohio Residents  
and Average Crude and Age-Adjusted Annual Death Rates  
Per 100,000 Population, by County, 2010-2015<sup>1,2,3</sup>**

County	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2010-2015 Total	Crude Rate	Age Adjusted Rate	Ratio County to State
VINTON	0	2	4	3	4	2	2	1	1	5	2	3	1	13	16.3	18.3	1.0
SUMMIT	49	60	50	53	66	46	54	66	56	91	76	118	173	580	17.9	18.1	0.9
HARRISON	1	2	0	0	1	0	1	1	4	0	3	2	4	14	14.9	18.1	0.9
CUYAHOGA	87	114	115	168	134	144	144	159	212	230	255	255	275	1,386	18.3	18.0	0.9
HOCKING	1	2	1	1	9	8	4	4	7	4	8	4	3	30	17.2	17.2	0.9
FRANKLIN	63	72	102	154	187	179	139	192	209	191	196	196	279	1,263	17.4	17.0	0.9
CRAWFORD	2	4	10	9	12	10	7	7	5	5	2	9	10	38	14.8	16.7	0.9
MORROW	1	1	3	5	2	2	5	8	5	2	9	6	3	33	15.7	16.6	0.9
MIAMI	6	8	11	8	10	20	15	14	12	16	12	19	17	90	14.5	16.0	0.8
BELMONT	3	7	6	5	3	8	8	5	5	10	8	14	18	60	14.3	15.7	0.8
SHELBY	2	4	2	3	7	12	8	5	8	5	9	7	8	42	14.3	15.7	0.8
WARREN	14	11	21	17	17	33	34	25	26	32	27	40	42	192	14.6	15.4	0.8
MEIGS	1	0	2	5	3	1	2	3	5	2	4	4	3	21	14.9	15.4	0.8
KNOX	1	4	3	4	5	7	10	7	9	7	12	8	7	50	13.6	15.1	0.8
MADISON	2	0	1	2	5	4	5	10	3	7	7	7	7	41	15.7	15.0	0.8
SANDUSKY	2	5	1	7	8	9	2	4	11	4	5	13	12	49	13.5	14.7	0.8
FULTON	0	1	1	1	2	1	2	6	5	9	3	5	6	34	13.3	14.5	0.8
DEFIANCE	0	1	2	1	5	1	2	3	5	3	5	7	7	30	12.9	14.4	0.8
GEAUGA	1	3	3	5	2	5	2	7	11	8	11	11	15	63	11.2	14.0	0.7
PORTAGE	9	9	7	12	8	5	16	14	6	16	22	30	36	124	12.8	13.8	0.7
LICKING	12	13	10	13	15	27	20	24	22	13	23	23	29	134	13.3	13.5	0.7
WASHINGTON	5	1	5	9	4	5	8	4	6	7	7	12	8	44	11.9	13.4	0.7
PERRY	0	2	2	2	4	3	2	4	4	7	0	4	7	26	12.0	13.4	0.7
SENECA	3	1	3	3	2	1	7	0	8	6	7	11	9	41	12.2	13.3	0.7
STARK	10	15	16	25	25	30	21	39	40	35	42	59	59	274	12.2	13.0	0.7
LOGAN	4	5	3	6	6	5	5	6	0	5	9	4	8	32	11.7	12.8	0.7
ALLEN	0	5	4	6	6	9	5	5	9	14	15	12	18	73	11.5	12.7	0.7
VAN WERT	2	0	1	4	1	4	1	3	6	1	4	4	1	19	11.1	12.4	0.6
MORGAN	0	0	1	1	1	0	3	1	1	0	4	4	0	10	11.2	12.0	0.6
CARROLL	0	1	2	2	1	3	2	3	0	4	2	3	5	17	10.0	11.7	0.6
HANCOCK	3	4	3	1	2	4	8	7	10	5	4	11	13	50	11.1	11.6	0.6
FAIRFIELD	5	12	8	7	13	7	17	15	12	19	17	15	16	94	10.5	11.1	0.6
WAYNE	1	3	6	7	0	11	7	6	13	7	4	13	24	67	9.7	10.4	0.5
MEDINA	2	3	8	7	8	9	13	7	13	17	14	17	27	95	9.1	10.3	0.5
TUSCARAWAS	1	0	3	8	1	3	4	7	13	8	11	6	8	53	9.5	9.6	0.5
WOOD	1	3	4	10	5	9	14	9	7	10	4	16	22	68	8.8	9.4	0.5
COSHOCTON	0	2	5	2	2	4	1	2	4	3	4	2	3	18	8.2	9.2	0.5

**Table 2. Number of Unintentional Drug Overdose Deaths of Ohio Residents and Average Crude and Age-Adjusted Annual Death Rates Per 100,000 Population, by County, 2010-2015<sup>1,2,3</sup>**

County	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2010-2015 Total	Crude Rate	Age Adjusted Rate	Ratio County to State
AUGLAIZE	0	0	2	1	2	3	3	3	3	5	3	2	9	25	9.1	8.9	0.5
UNION	2	3	4	5	1	6	4	10	3	3	3	6	5	30	9.4	8.8	0.5
OTTAWA	2	0	2	2	5	2	6	2	4	3	4	3	5	21	8.5	8.8	0.5
MUSKINGUM	3	6	1	6	4	5	4	5	2	7	10	5	13	42	8.1	8.5	0.4
MERCER	0	1	1	2	3	1	2	2	4	1	5	5	3	20	8.2	8.4	0.4
HENRY	1	2	3	1	0	0	0	1	0	2	1	2	6	12	7.1	8.2	0.4
DELAWARE	2	3	5	7	13	11	12	12	10	16	15	12	12	77	7.0	7.3	0.4
WILLIAMS	0	0	1	1	1	2	2	3	1	1	5	2	1	13	5.8	6.0	0.3
ASHLAND	1	2	3	4	1	1	1	2	4	0	1	3	6	16	5.0	5.4	0.3
PUTNAM	0	0	0	1	1	2	2	1	0	1	2	3	4	11	5.4	5.3	0.3
WYANDOT*	1	0	0	1	1	1	1	2	2	1	1	0	2	8			
NOBLE*	1	0	0	1	2	2	1	1	0	0	1	0	5	7			
PAULDING*	0	0	2	1	0	3	2	2	0	2	0	3	0	7			
MONROE*	1	0	0	1	0	0	2	0	0	1	0	4	1	6			
HOLMES*	0	1	0	0	1	0	0	1	1	0	1	0	0	3			

<sup>1</sup>Table includes Ohio residents who died due to unintentional drug poisoning (primary underlying cause of death X40-X44).

<sup>2</sup>Sources: Ohio Department of Health, Bureau of Vital Statistics; analysis by Injury Prevention Program; U.S. Census Bureau (population estimates).

<sup>3</sup>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.

\*Rate suppressed if < 10 total deaths for 2010-2015.

Additional data, resources and background information are available at:

<http://www.healthy.ohio.gov/vipp/data/rxdata.aspx>