

SUMMIT COUNTY PUBLIC HEALTH

Population Health Vital Statistics Brief: VOLUME 3: DRUG OVERDOSES, Jan 1 - Jun 30, 2017

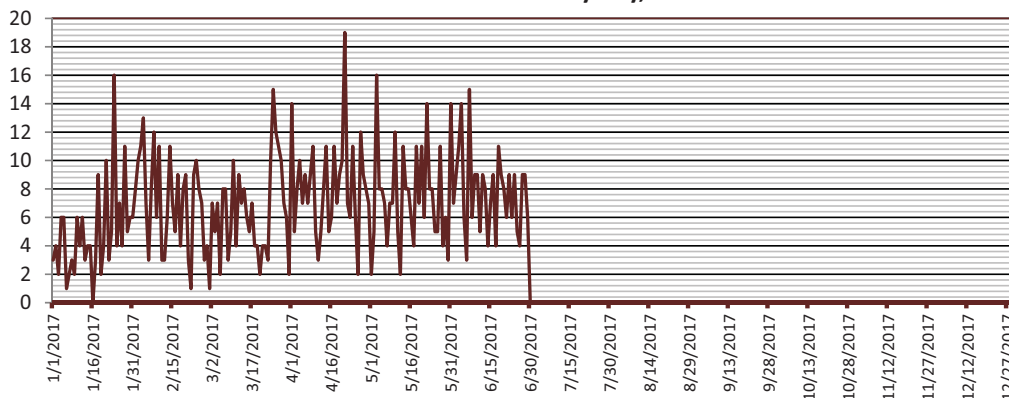


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Drug Overdose Visits to Hospital Emergency Rooms

From January 1, 2017 to June 30, 2017, emergency rooms serving Summit County residents have treated an estimated 1,269 drug overdoses (OD).^{*} Overdoses per day peaked in early February, late March, and again in late May. Since January 1st, overdoses have hit double-digits on 37 of the 180 days (about 21% of the time). By comparison, last summer's severe outbreak saw double-digit overdoses on 92 of the first 151 days of the outbreak (between July 5th and December 12th, 61%). Though lower than the OD per day figures at the height of the outbreak, the current moving average rate of 6.9 OD per day is still well above the rate seen during the first five months of 2016 (2.8 OD per day).

Overdose ER Visits by Day, 2017



Overdose ER Visits 7-Day Moving Average, 2017

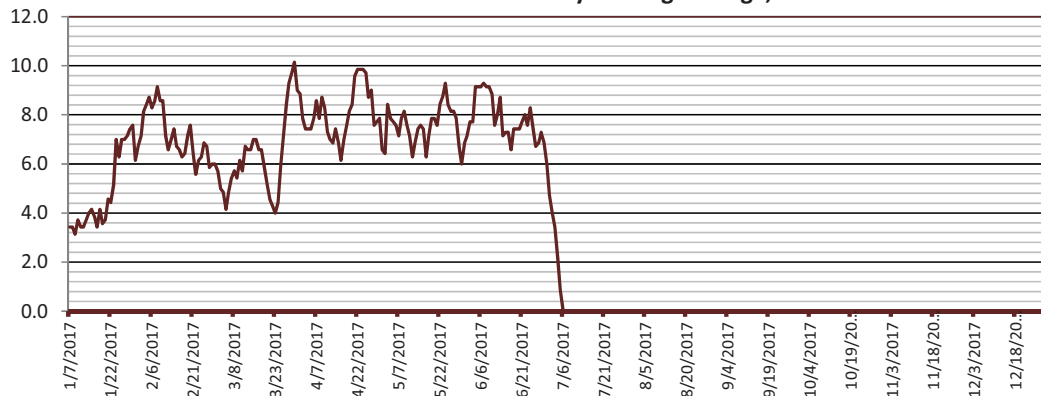


Figure 1a and 1b: Visits to the ER Due To Drug Overdoses By Day (top figure) and By Seven-Day Moving Average (bottom figure) -- Note: Because day-to-day total ER visits tend to fluctuate, a seven-day simple moving average chart is included to more clearly examine trends in the data. Source: EpiCenter

^{*} Drug overdose data is retrieved from the state's EpiCenter surveillance tool. "Overdose" cases include all emergency visits to a Summit County medical provider in which drugs were identified as the cause of traumatic injury. Overdose cases were further refined by selecting only those cases where the case notes included the terms "OD" or "overdose." Traumatic injuries due to drugs caused by suicide attempts, allergic reactions to normal medications, or accidental overdoses of everyday drugs (such as Tylenol or Ibuprofen) were removed where identified. Zip codes refer to the zip code of residence of the patient visiting the ER. Data cited in this report represents the full-day totals from the day before the report's release.

It is important to note that these are estimated figures rather than a full and final count because initial diagnoses and/or details of a particular case may change from a patient's initial examination to his or her final outcomes, and because the limited case notes field in EpiCenter may not include all details necessary to firmly classify a case as an overdose.

It is also important to note that case notes available through EpiCenter rarely identify the specific drug or drugs involved in an overdose. Therefore the figures here can be associated with any drug, not just heroin and/or fentanyl.

Day of Week "Heat Map" - YTD 2017

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM
Sunday	5%	3%	4%	1%	1%	1%	1%	1%	3%	1%	3%	2%	2%	8%	6%	5%	4%	9%	9%	5%	7%	7%	4%	4%
Monday	2%	2%	2%	2%	2%	1%	2%	1%	2%	2%	4%	6%	2%	7%	7%	2%	7%	7%	5%	10%	5%	4%	5%	9%
Tuesday	2%	1%	2%	3%	3%	1%	1%	2%	2%	3%	5%	5%	3%	5%	3%	5%	8%	7%	11%	10%	4%	7%	2%	7%
Wednesday	3%	3%	3%	2%	2%	2%	1%	0%	2%	2%	5%	5%	6%	6%	6%	6%	7%	5%	10%	5%	8%	4%	6%	4%
Thursday	7%	4%	3%	1%	3%	1%	2%	2%	2%	1%	3%	3%	6%	6%	2%	6%	6%	6%	8%	6%	6%	5%	7%	3%
Friday	3%	2%	2%	2%	2%	2%	0%	2%	2%	1%	3%	6%	7%	7%	4%	7%	8%	9%	7%	6%	6%	8%	3%	4%
Saturday	5%	4%	2%	2%	2%	2%	1%	2%	2%	2%	3%	3%	6%	6%	8%	6%	8%	7%	8%	5%	7%	6%	5%	3%
Total	4%	3%	3%	2%	2%	1%	1%	1%	2%	1%	3%	4%	5%	6%	5%	5%	7%	7%	8%	7%	6%	6%	5%	5%

Figure 2: ER Visits by Time of Day and Day of Week -- The chart above presents total Summit County ER visits for each hour of each day. The chart is read left to right, and presents the percentage of each day's ER visits due to drug overdoses that occur in each hour of the day for all days from January 1, 2017 to June 30, 2017. The cells are also color coded to show a "heat map" effect of busier and slower times throughout each of the seven days of the week. Source: EpiCenter and SCPH calculations.

Percent of ER Visits By Hour - OD / Overdose-Related - YTD 2017

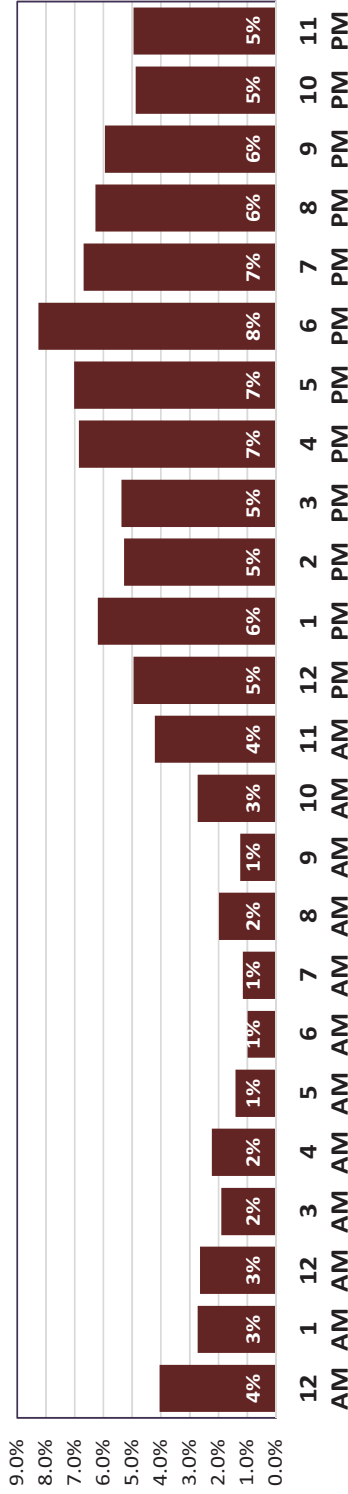


Figure 3: Summary Chart of ER Visits by Hour of the Day, January 1 - June 30, 2017
Source: EpiCenter and SCPH

Percent of ER Visits By Day - OD / Overdose-Related - YTD 2017

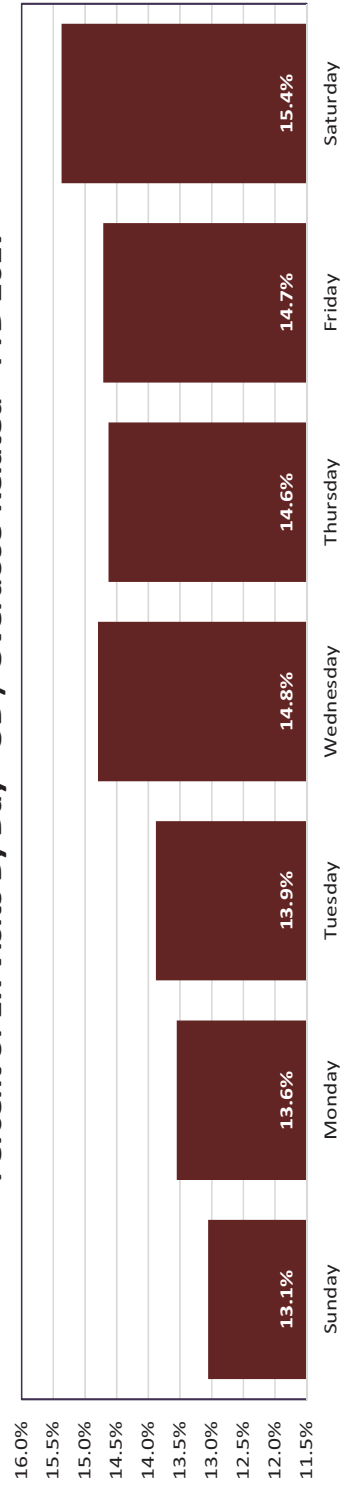


Figure 4: Summary Chart of ER Visits by Day of the Week, January 1 - June 30, 2017
Source: EpiCenter and SCPH

Demographic and Geographic Profile of Overdoses, YTD 2017

Age - People in the 25-34 and 35-49 age categories (40% and 27%, respectively) still have the highest percentage of overdoses. Another 15% were in the 18-24 category, while people age 50-64 accounted for 14%. People in the under 18 and over 65 categories accounted for a combined 4.5%.

Gender - Males made up 63% of overdoses so far in 2017; females 37%.

Geography* - Overdoses have happened throughout the county, with zip code 44203 having the highest number of overdoses at 177 (13.9% of all cases). Zip Code 44312 had the second-highest number of overdoses at 122 (9.6% of all cases), while 44305 had 88 cases, which was 6.9% of the county-wide total. Combined, these three zip codes account for 30% of all overdoses through May. Combined, Akron currently makes up 58% of all overdoses in 2017, while suburban communities make up the remaining 42%.

Number and Percent of Overdoses by Zip Code, January 1 - June 30, 2017

Row Labels	Count	Percent
44203	177	13.9%
44312	122	9.6%
44305	88	6.9%
44314	87	6.9%
44306	79	6.2%
44310	77	6.1%
44319	61	4.8%
44221	57	4.5%
44301	51	4.0%
44320	49	3.9%
44313	48	3.8%
44685	43	3.4%
44223	33	2.6%
44311	31	2.4%
44224	27	2.1%
44309	25	2.0%
44307	24	1.9%
44278	24	1.9%
44056	18	1.4%
44087	17	1.3%
44302	16	1.3%
44308	15	1.2%
44067	15	1.2%
44216	14	1.1%
44333	13	1.0%
44236	13	1.0%
44304	12	0.9%
44303	11	0.9%
44321	7	0.6%
44262	7	0.6%
44250	3	0.2%
44232	2	0.2%
44264	2	0.2%
44222	1	0.1%
Grand Total	1,269	100.0%

Emergency Room Visits Due to Drug Overdose, Summit County by Home Zip Code of Patient, All Summit County Provider Types, As Of 6/30/2017

Location	#	%
Akron	735	57.9%
Suburb	534	42.1%
Total	1,269	100.0%

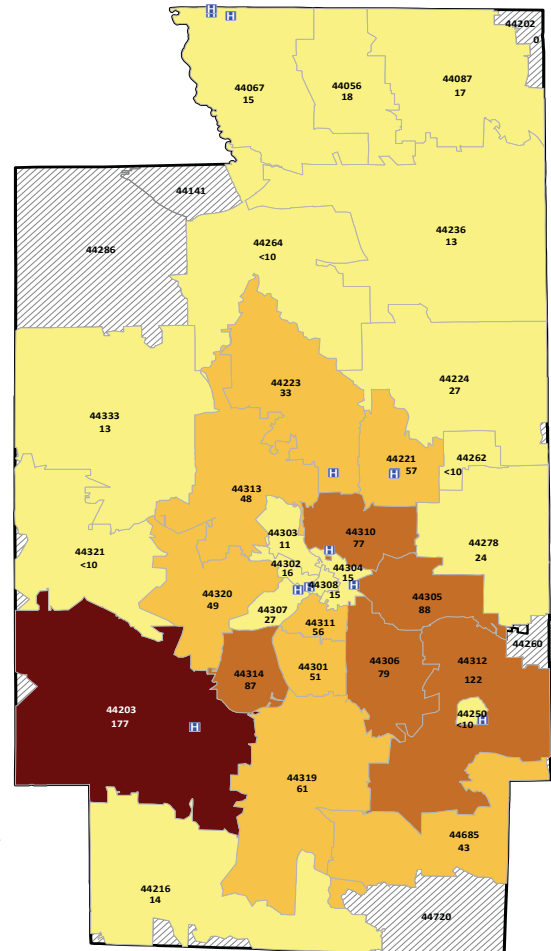
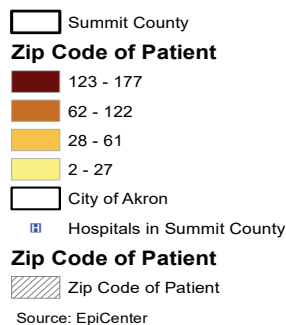


Figure 5: Number and Percent of ER Visits Due to Drug Overdoses, YTD 2017
 Source: EpiCenter and SCPH. Note: Figures for zip codes with fewer than 10 overdoses are not shown to preserve confidentiality.

* - Overdoses for the 44250 zip code area (Lakemore) may have been reported by EpiCenter as being in 44312.

Demographic and Geographic Profile of Overdoses, YTD 2017 (cont)

Overdoses Per 1,000 by Zip Code (through May 31) - Figure 5 shows the raw number of overdoses by patient zip code. Figure 6 shows the number of overdoses per 1,000 population by zip code. As the map shows, the heaviest concentration of overdoses per 1,000 population come from zip codes in the center of the county, running roughly from Barberton to the west, through southern Akron and into the Springfield / Lakemore area to the east, with additional hot spots in northern Akron. These areas have consistently seen the highest rates per 1,000 since the overdose crisis began. Zip Code 44311 zip code has the highest rate of the zip codes with at least 10 total overdoses (5.9 per 1,000), while the 44203 and 44311 zip codes had overdose rates of 4.3 and 3.7 per 1,000, respectively. The lowest rate for zip codes with at least 10 total overdoses is 44236, with a rate of 0.5 overdoses per 1,000 population.

Emergency Room Visits Due to Drug Overdose Per 1,000 Population, Summit County January 1 - June 30, 2017

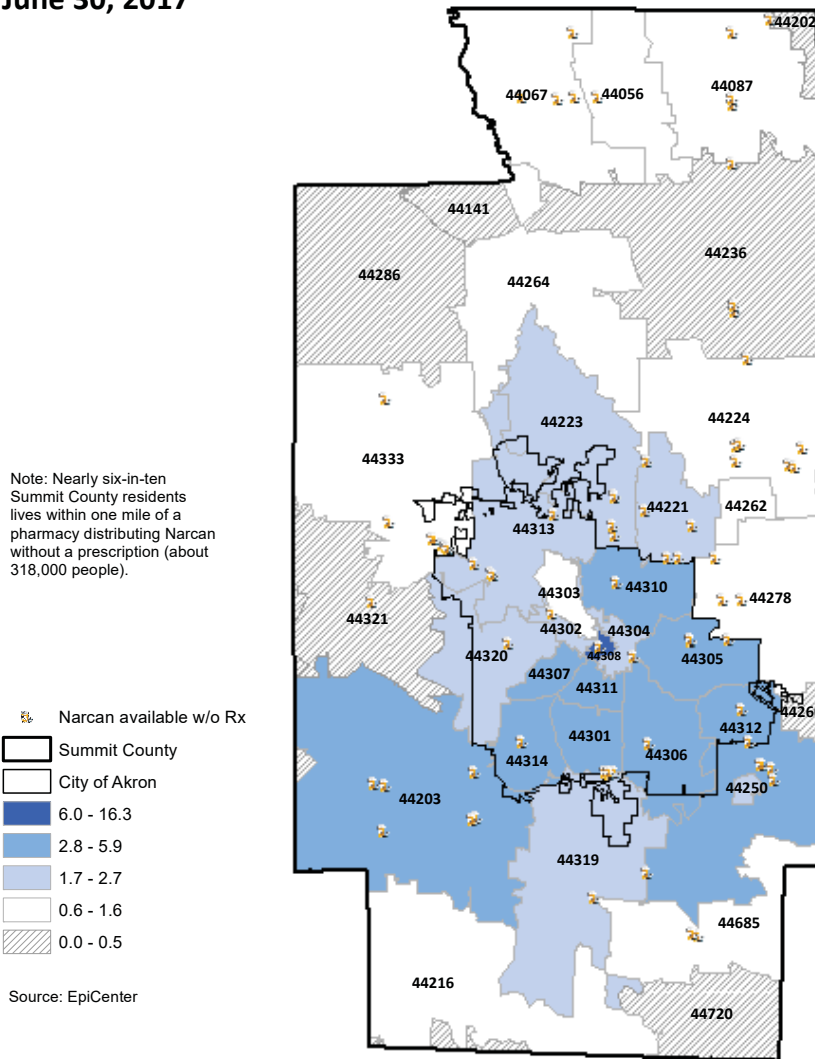


Figure 6: Drug Overdoses Per 1,000 Population, YTD 2017
 Source: EpiCenter, U.S. Census Bureau, Ohio Pharmacy Board (Narcan distribution)

Overdose Deaths In 2016

During the first 26 weeks of 2016, just before the overdose epidemic hit the community, Summit County was averaging approximately 4.9 OD deaths per week (128 total). Beginning in the 27th week, deaths immediately began to accelerate, with 27 confirmed deaths in the first two weeks of the epidemic alone. The number of deaths during the worst of the 2016 overdose epidemic (July 1 to September 30) averaged 8.7 per week; nearly double the rate seen during the first six months of the year.

All told, Summit County suffered at least 307 unintentional overdose-related deaths in 2016.* This figure represents the total number of deaths with an overdose-related cause and a signed death certificate on file with the Summit County Public Health Vital Statistics office received as of the end of May 2017. Though additional overdose-related death certificates from 2016 may still come in, estimates from the Summit County Medical Examiner’s office show the final death toll from the overdose epidemic in 2016 will be approximately 300. The long delay in final totals is due to the ongoing overdose crisis, which still heavily burdens medical examiners’ offices around the state.

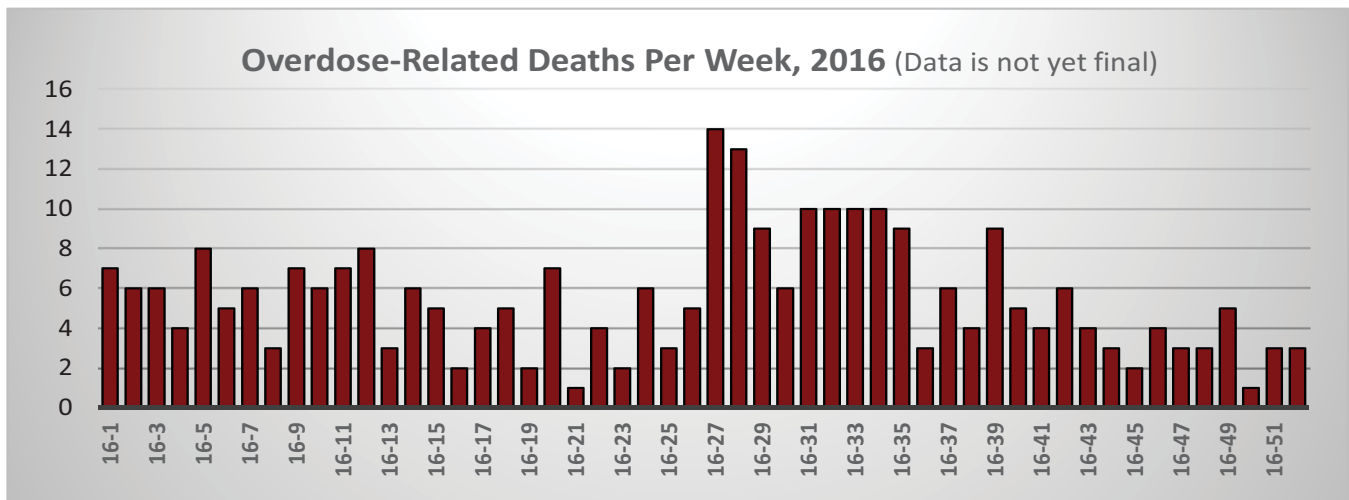


Figure 7: Drug Poisoning Deaths in Summit County, 2000 Through 2016 (2016 data is not yet final)
Source: SCPH Vital Statistics Death Certificate records

Figure 8 shows the classification of drugs causing the 214 drug poisoning deaths in 2016 for which detailed death certificate data from the Ohio Department of Health are currently available. The category of narcotics and psychodysleptics, which contains opiates, was responsible for two-thirds of overdose deaths. Most of the remaining deaths were caused by other and unspecified drugs.

Accidental poisoning by and exposure to...	Number	Percent
...narcotics and psychodysleptics [hallucinogens], not elsewhere classified	143	66.8%
...other and unspecified drugs, medicaments and biological substances	61	28.5%
...antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified	9	4.2%
...other drugs acting on the autonomic nervous system	1	0.5%
Grand Total	214	100.0%

Figure 8: Drug Poisoning Deaths By Type of Drug, Summit County, 2016 (2016 data is not yet final)
Source: SCPH Vital Statistics Death Certificate records

* An additional 12-16 people were victims of intentional drug overdose; suicide where the method of suicide was intentionally overdosing on one or more drugs. These deaths are tracked separately because they were caused by an intentional act of the victim rather than an accidental ingestion of a lethal dose.

Long-Term Trends in Overdose Deaths

Deaths due to accidental poisoning and exposure to various types of drugs held fairly steady for most of the decade of the 2000s, fluctuating between nine and 12 deaths per 100,000 from 2002 to 2009. However, deaths due to drug overdoses rose sharply in five of the next seven years. In fact, overdose death rates were nearly five times higher in 2016 than 2010, rising from 12 per 100,000 in 2010 to just over 56 per 100,000 by 2016. Deaths due to poisoning by narcotics and hallucinogens led the way, making up nearly 54% of all drug poisoning deaths since 2000 (761 total deaths); a much larger number and percentage than in any other single category. In addition, narcotic and hallucinogen poisonings have been growing as a percentage of all

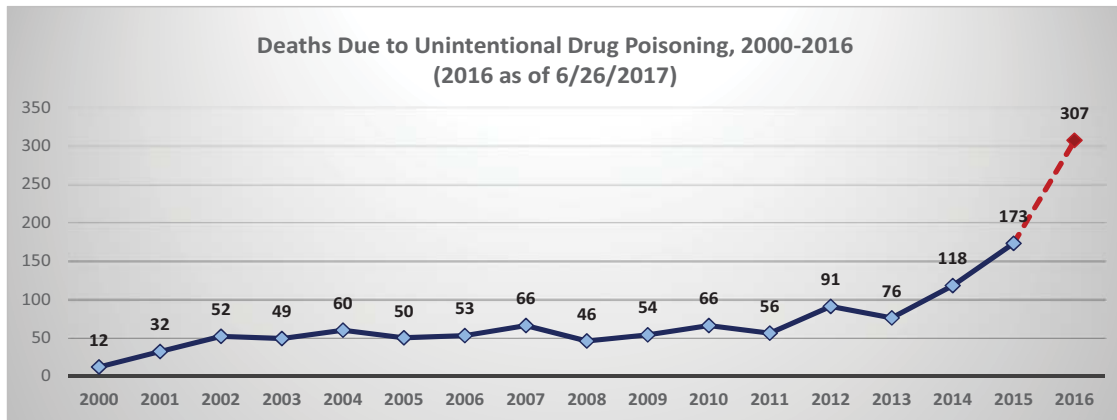


Figure 8: Drug Poisoning Deaths, 2000-2016 (primary underlying cause of death X40 - X44), *Source: Ohio Department of Health Death Records, SCPH* Note: ODH OD death figures for Summit County from 2015 have been revised from 131 to 173.

drug poisoning deaths, rising from 46% of all drug poisoning deaths between 2000 and 2009 to 69% of all drug poisoning deaths by 2016.

overdoses in 2015 and 2016 (480) as died in the entire decade from 2000-2009 (474).

Taken together, as many people died of drug

Drug poisoning deaths rose both in raw numbers and per 100,000 population. Figure 9 below shows that drug poisoning deaths rose from 9.2 per 100,000 between 2000 and 2011, to 17.2 per 100,000 between 2012 and 2014, and again to 36.5 per 100,000 in 2015-2016; a four-fold increase.

However, the growth in death rates by race differ sharply. African-American drug poisoning rates are now three times higher, and white rates nearly 10 times higher, than the first decade of the 2000s (see Figure 9). While not directly comparable because of different methodologies, this sharper rise among whites is consistent with recent findings around the nation that whites are becoming victims of the heroin overdose epidemic in greater proportions than other races.

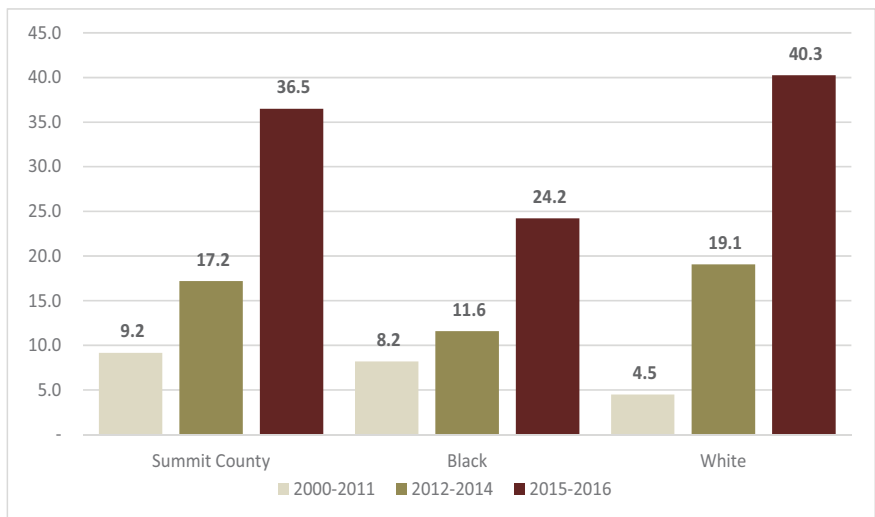


Figure 9: Age-Adjusted Drug Poisoning Deaths Per 1,000 Population, Total And By Race, 2000-2016 (primary underlying cause of death X40 - X44), *Source: Ohio Department of Health Death Records, SCPH*

For example, a 2015 CDC study of heroin use rates between 2002 and 2013 showed that the white rate of heroin use during the past year rose from 1.4 per 1,000 whites between 2002 and 2004 to 3.0 per 1,000 between 2011 and 2013.²

What these figures make clear is that the overdose epidemic is a community-wide crisis. The epidemic is striking all parts of the community; city and suburban, white and black, male and female, young and old.

Figures 10 to 13 present some basic demographic information about the 214 drug poisoning deaths in 2016 for which detailed death certificate data is currently available.

- The biggest single age group is 25-34, which accounted for 29% of total drug poisoning deaths, closely followed by those in the 45-54 age group (24%).
- Nearly three-quarters of the deaths were male (69%) and the remainder female (31%).
- The vast majority of drug poisoning deaths were to those with an educational attainment level of some college or less (88%). Only 12% of deaths were to those with a 2-year degree or more.
- The vast majority of deaths in 2015 were white (86%), while 11% are African-American.

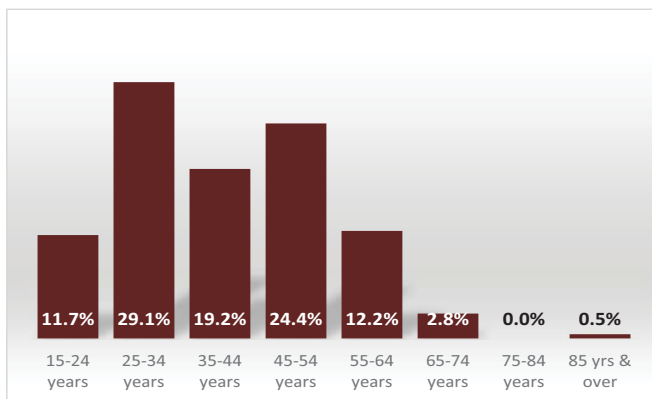


Figure 10: Age At Death of Persons Dying of Accidental Drug Poisoning, 2016, Source: Ohio Department of Health Death Records, SCPH

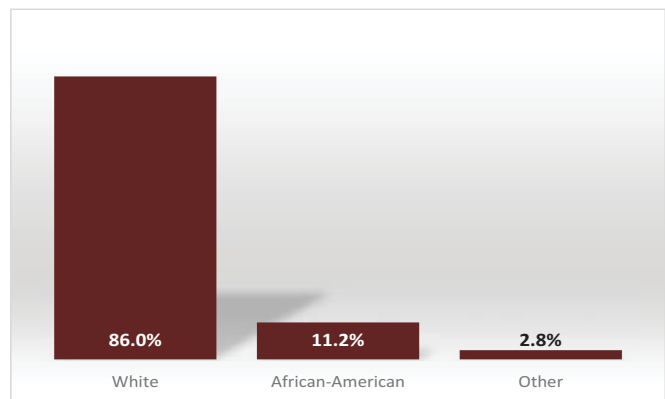


Figure 11: Race of Persons Dying of Accidental Drug Poisoning, 2016, Source: Ohio Department of Health Death Records, SCPH

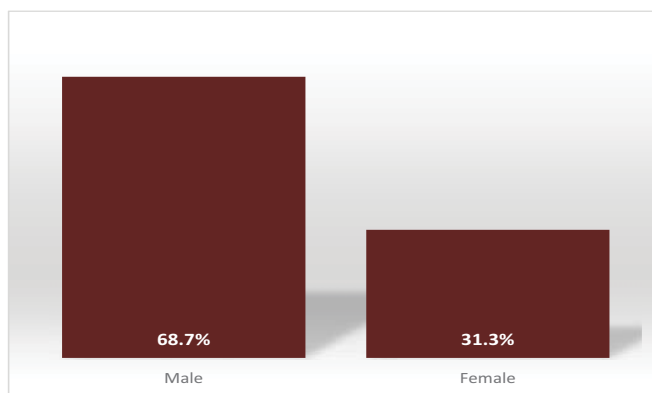


Figure 12: Sex of Persons Dying of Accidental Drug Poisoning, 2016, Source: Ohio Department of Health Death Records, SCPH

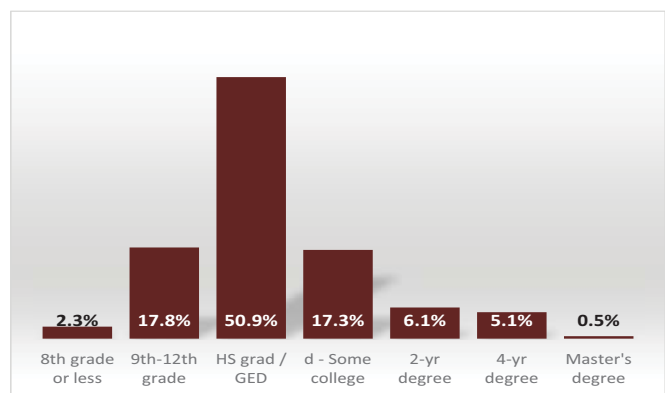


Figure 13: Educational Attainment of Persons Dying of Accidental Drug Poisoning, 2016, Source: Ohio Department of Health Death Records, SCPH

² Centers for Disease Control and Prevention (CDC); Vital Signs: Demographic and Substance Use Trends Among Heroin Users — United States, 2002–2013; <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6426a3.htm>.