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Franklin County Overdose Fatalities Data Brief: 2020

In 2020 Franklin County along with most of the nation experienced what is being called the epidemic within the pandemic, a huge increase in overdose fatalities. According to the National Center for Health Statistics Provisional Overdose Death Counts, from November of 2019 to November of 2020, the U. S. saw a 28.9% increase. This is with most states underreporting due to incomplete data. (Centers for Disease Control and Prevention, 2021)

Dr. Volkow, Director of the National Institute on Drug Abuse, sums up the probable reasons for the increase in her report at the 2021 FDA Science Forum "Challenges include access to medication for opiate use disorders, limited access to peer support groups, and the stress that social distancing generate. In addition, people taking opioids alone is much harder to actually reverse with Naloxone if no one is observing it happening. And then there is the loss of jobs, the homelessness, the despair -- those again are likely to have contributed to the vulnerability of people taking risks that otherwise they wouldn't have." (Food and Drug Administration, 2021)

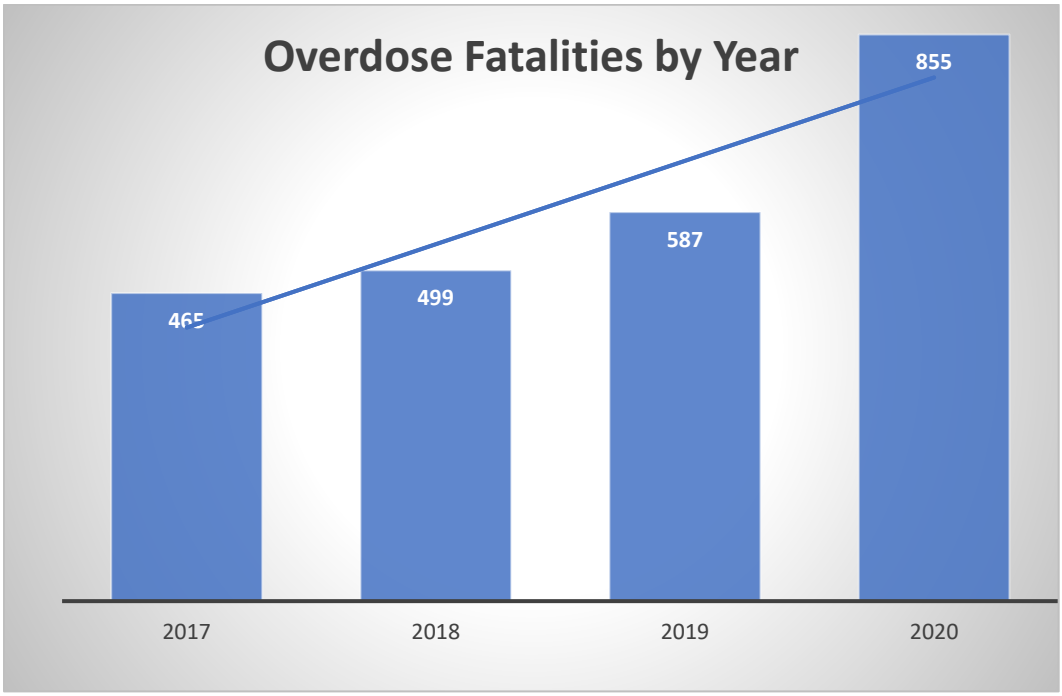
Our data brief is a short summary of the overdose fatalities Franklin County, Ohio experienced in 2020. Data for this report was derived from Franklin County coroner reports. Statistics for previous years have been reviewed and verified. These may be somewhat different from previous reporting of preliminary data for years 2017, 2018, 2019. Crude death rates were derived using postcensal Vintage 2020 population estimates from the U.S. Census Bureau (Bureau, 2021).

This report was funded through a grant received by Franklin County Public Health (FCPH) from the Centers for Disease Control and Prevention, Division of Overdose Prevention (DOP), National Center for Injury Prevention and Control (NCIPC).

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Yearly Totals

In 2020, Franklin County experienced a 45.6% increase in overdose deaths as compared to 2019. Looking at 2017 to 2020, Franklin County experienced an 83.9% increase in overdose deaths.

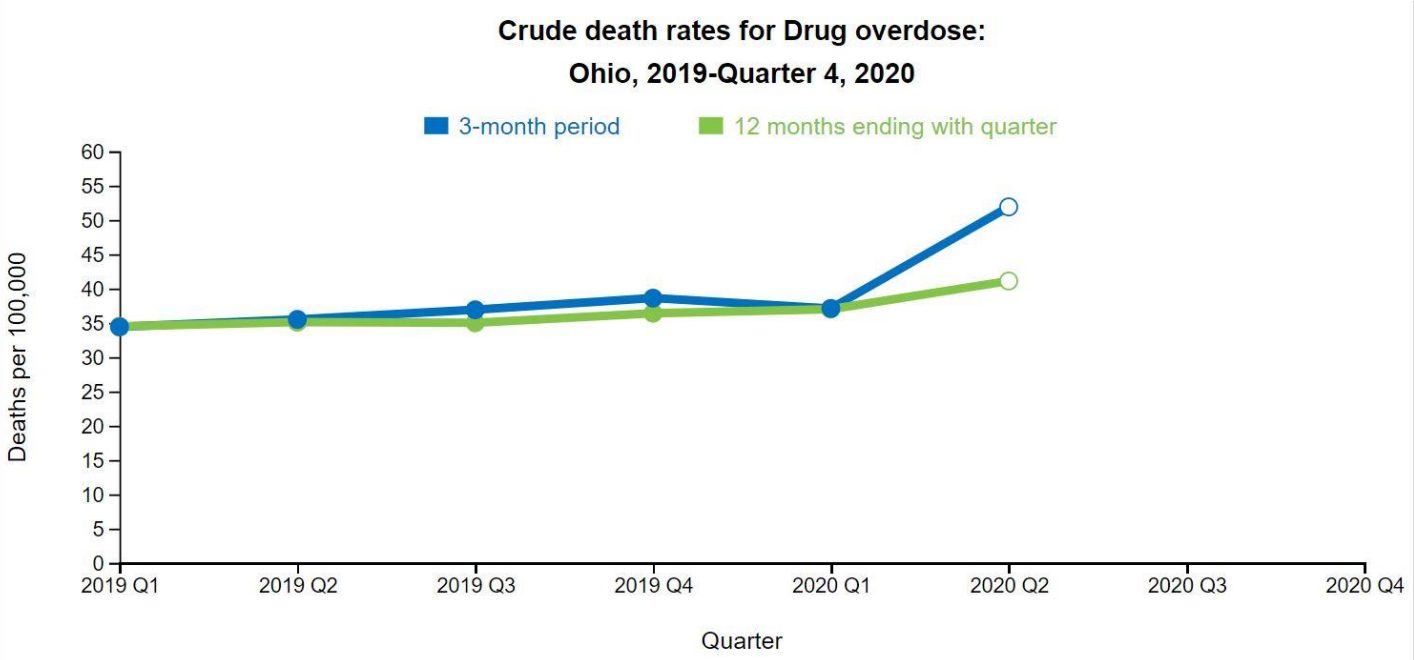


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An even more striking picture is revealed when we begin to look at crude death rate: rate of death per 100,000 of population.

Below is the crude death rate for Ohio from 2019 to second quarter of 2020.



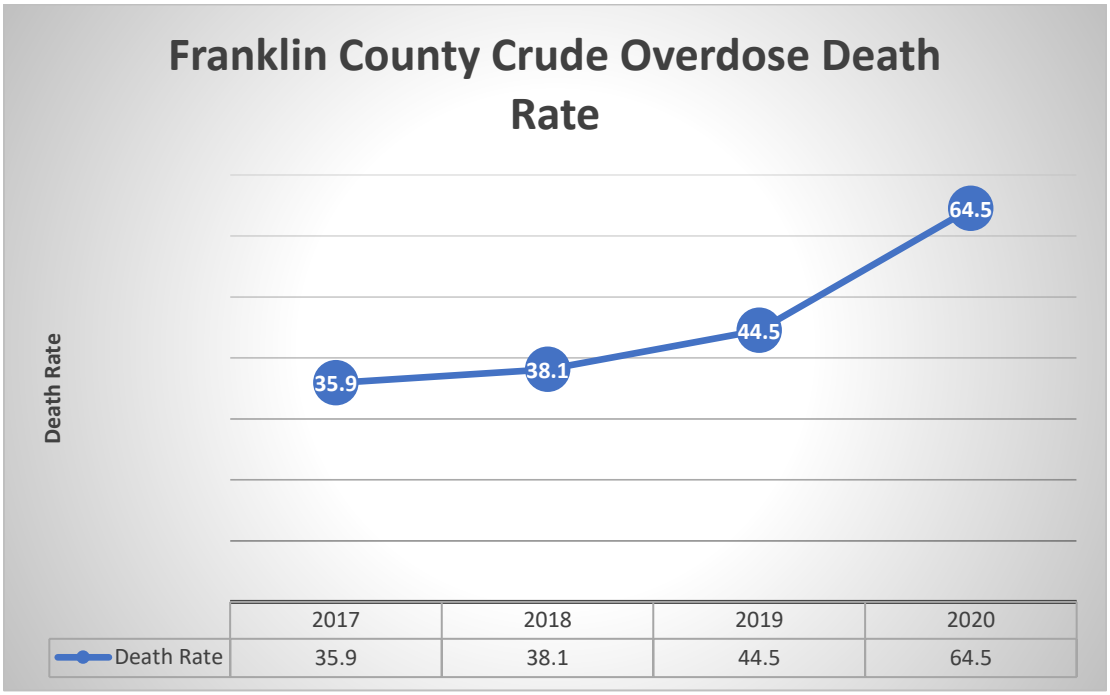
Drug overdose	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2020 Q2	2020 Q3	2020 Q4
Drug overdose, 12 months ending with quarter (Crude)	34.5	35.1	35.0	36.4	37.0	41.1*	---	---
Drug overdose, 3-month period (Crude)	34.4	35.5	36.9	38.6	37.1	51.9*	---	---

Ahmad FB, Cisewski JA. Quarterly provisional estimates for selected indicators of mortality, 2018-Quarter 4, 2020. National Center for Health Statistics. National Vital Statistics System, Vital Statistics Rapid Release Program. 2021.

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Below is the crude death rate for Franklin County from 2017 to 2020.



As you will note both the county and Ohio have seen striking increases in rates of those dying by overdoses for 2020. In addition, the sharp increase began by the end of 2019.

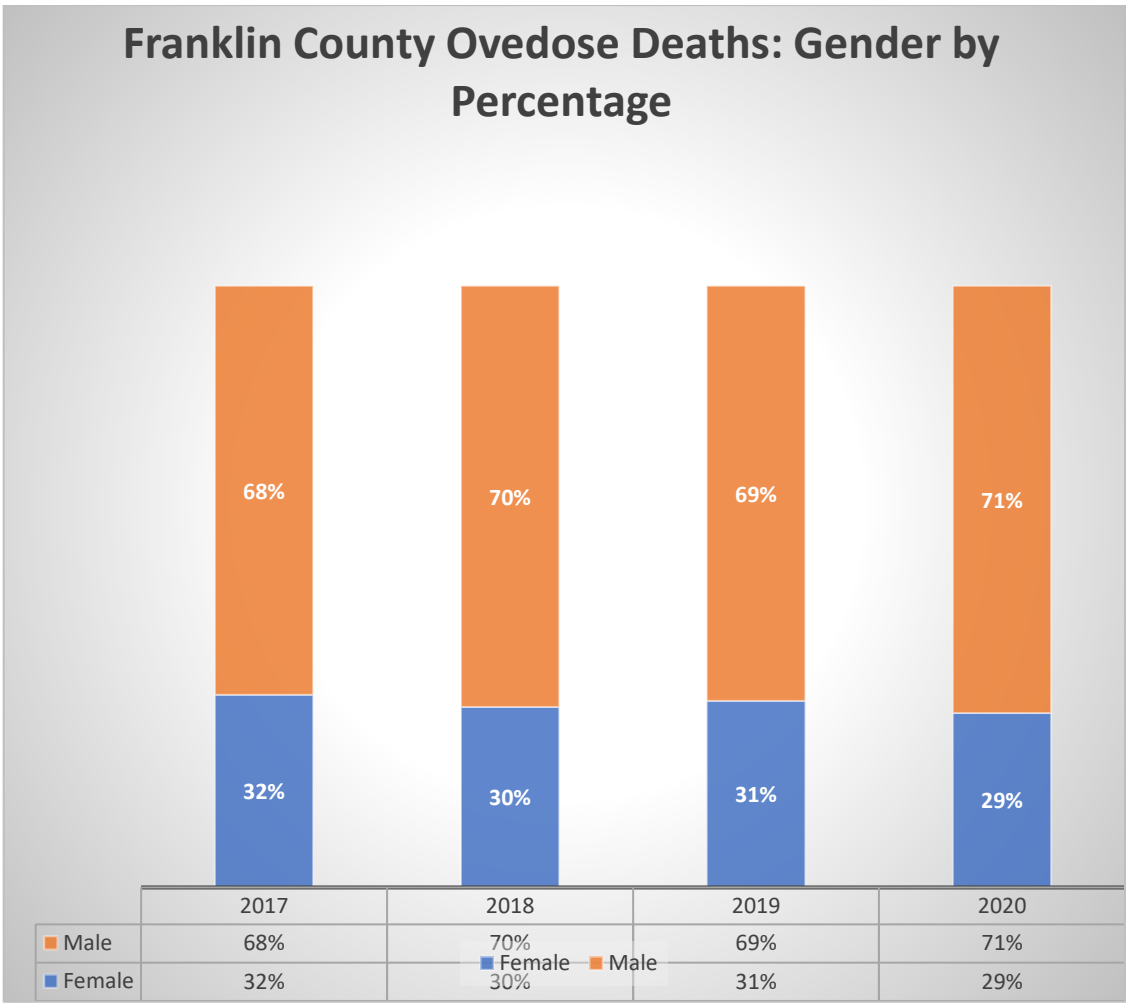
Now let's look at gender.

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Gender

As you will note in the accompanying chart, gender differences by percentage have not varied widely from 2017 to 2020.

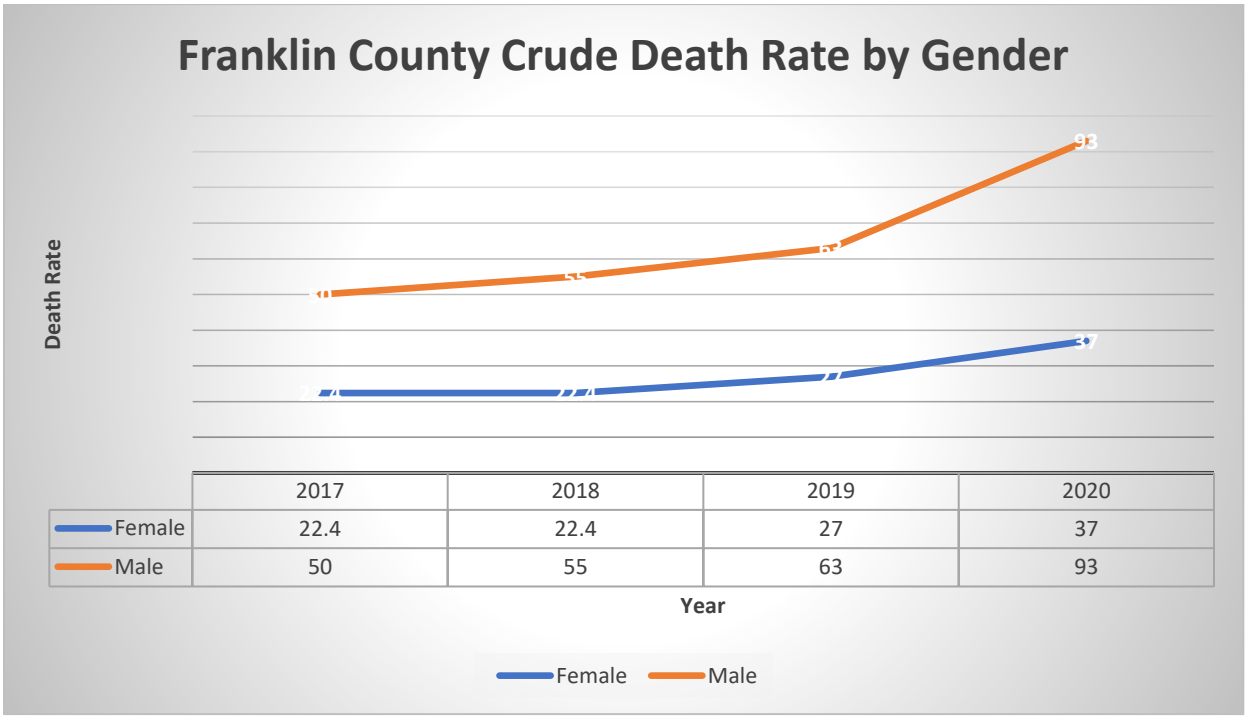


	2017	2018	2019	2020
Male	68%	70%	69%	71%
Female	32%	30%	31%	29%

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However, when looking at crude death rates by gender for Franklin County you will see a sharp increase in males dying by overdoses per 100,000 of male population.



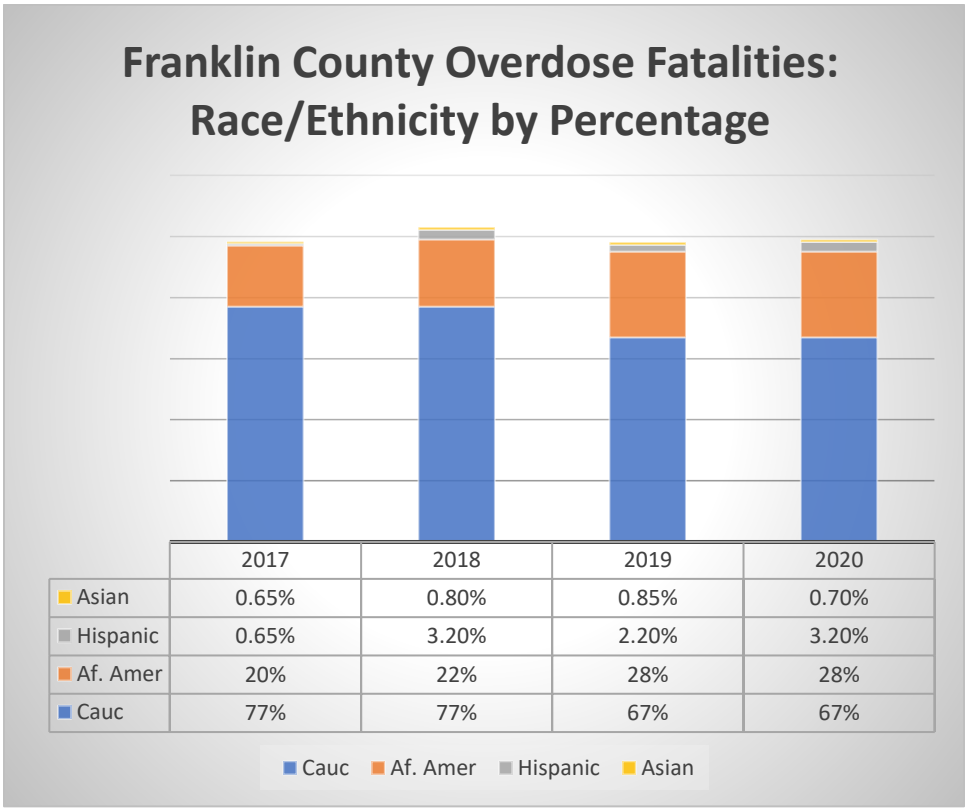
	2017	2018	2019	2020
Female	22.4	22.4	27	37
Male	50	55	63	93

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Race/Ethnicity

Looking at race and ethnicity, you will see a sharp rise in 2020 of the number of Caucasian, African American and Hispanics dying of overdoses. The Asian population has remained fairly stable.

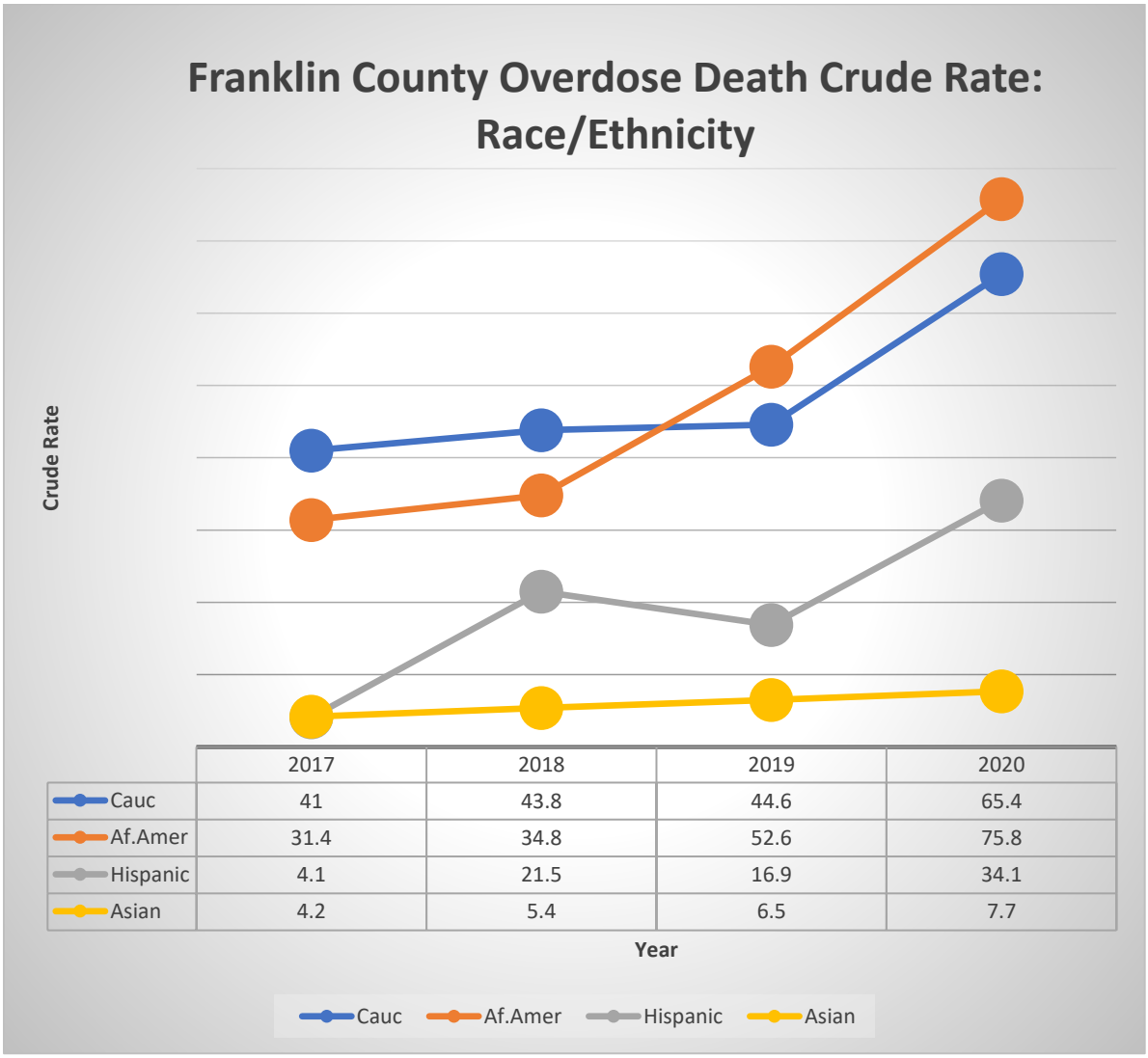


	2017	2018	2019	2020
Asian	0.65%	0.80%	0.85%	0.70%
Hispanic	0.65%	3.20%	2.20%	3.20%
Af. Amer	20%	22%	28%	28%
Cauc	77%	77%	67%	67%

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Looking at crude death rates however an even more startling trend emerges. The rate of African Americans dying by overdoses surpasses Caucasians in 2019 and continues to surpass all groups by 2020.



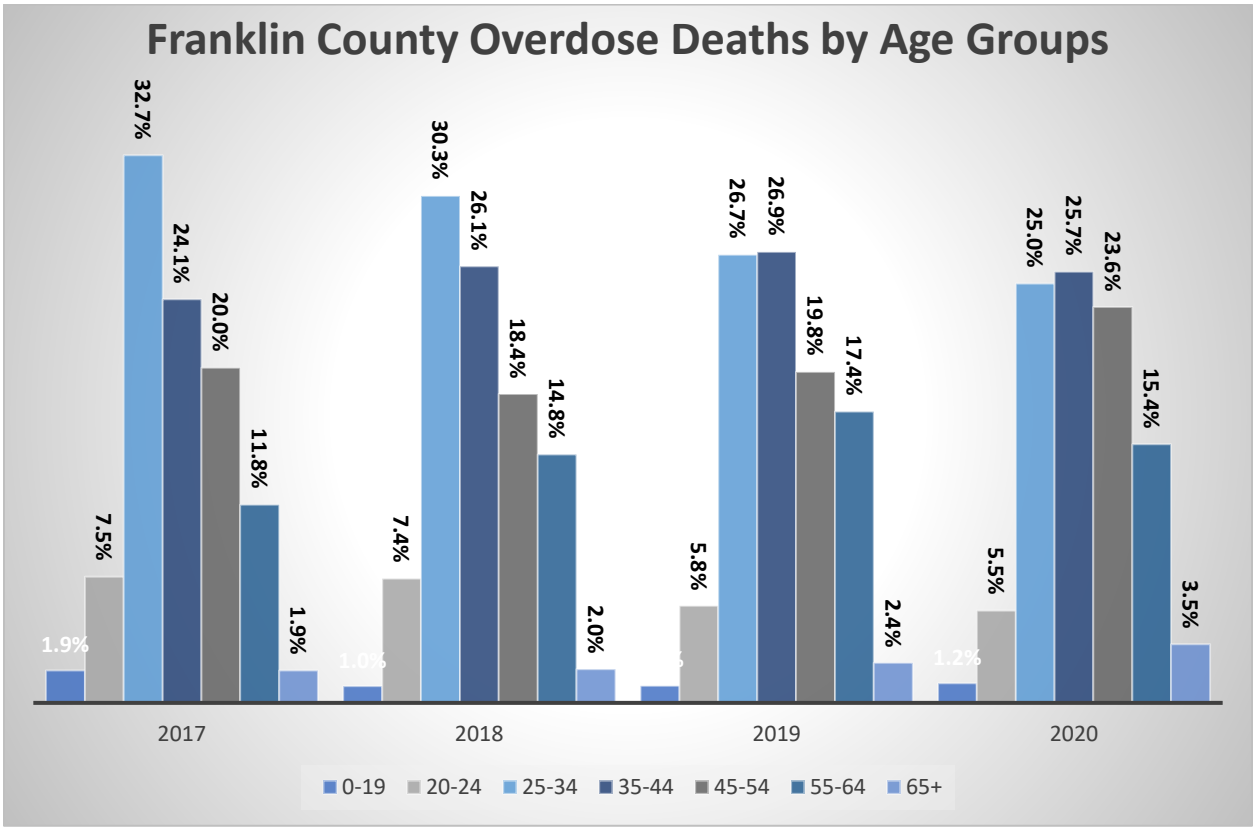
	2017	2018	2019	2020
Cauc	41	43.8	44.6	65.4
Af.Amer	31.4	34.8	52.6	75.8
Hispanic	4.1	21.5	16.9	34.1
Asian	4.2	5.4	6.5	7.7

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Age Range

Accidental overdose deaths in Franklin County Ohio occur across all ages. In 2020, the highest proportion of reported accidental overdose cases fell within the 25-35, 35-44, and 45-54 age categories, with each representing approximately one-quarter of the deaths (25.0%, 25.7%, and 23.6%, respectively). The 55-64 age category represented the next highest proportion of accidental overdose deaths, with just over 15% of the deaths falling within this category. Despite representing only a four (4) year period, the 20-24 year age group presented with over 5% of the reported accidental overdose deaths, suggesting this group contains a significant portion of the accidental overdose deaths as well. Finally, accidental overdose deaths were present in both youth and elderly populations as well, with 1.2% and 3.5% of the accidental overdose deaths being reported in the 0-19 age range and the 65+ age range, respectively.



Source: Justice Trax 2017-2020

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Historically, the greatest proportion of accidental overdose deaths have been reported in the 25-34 age category, which represents approximately one-fourth to one-third of the reported accidental overdose deaths in each year of the four (4) year review period. Higher prevalence was noted between 2017-2018, with a decrease in the proportion of cases within this age range noted in 2019 and extending into 2020.

While the next highest category (35-44 age range) remained consistent across the four (4) year period accounting for approximately one-quarter (25%) of the cases each year, it appears the that 45-54 age group gained in proportion over the review period, representing approximately 19% of the population in earlier years to nearly 24% of the fatal overdose population in 2020. A group with a similar growth in proportion is the 65+ category, which saw a proportion of approximately 4% of the accidental overdose deaths in 2020, compared to approximately 2% of the deaths during the previous year(s).

Finally, despite having one of the largest age ranges (0-19), the youth category remains one of the smallest proportions of accidental overdose deaths in the county, representing around 1% of the reported accidental overdose deaths each year.

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Toxicology

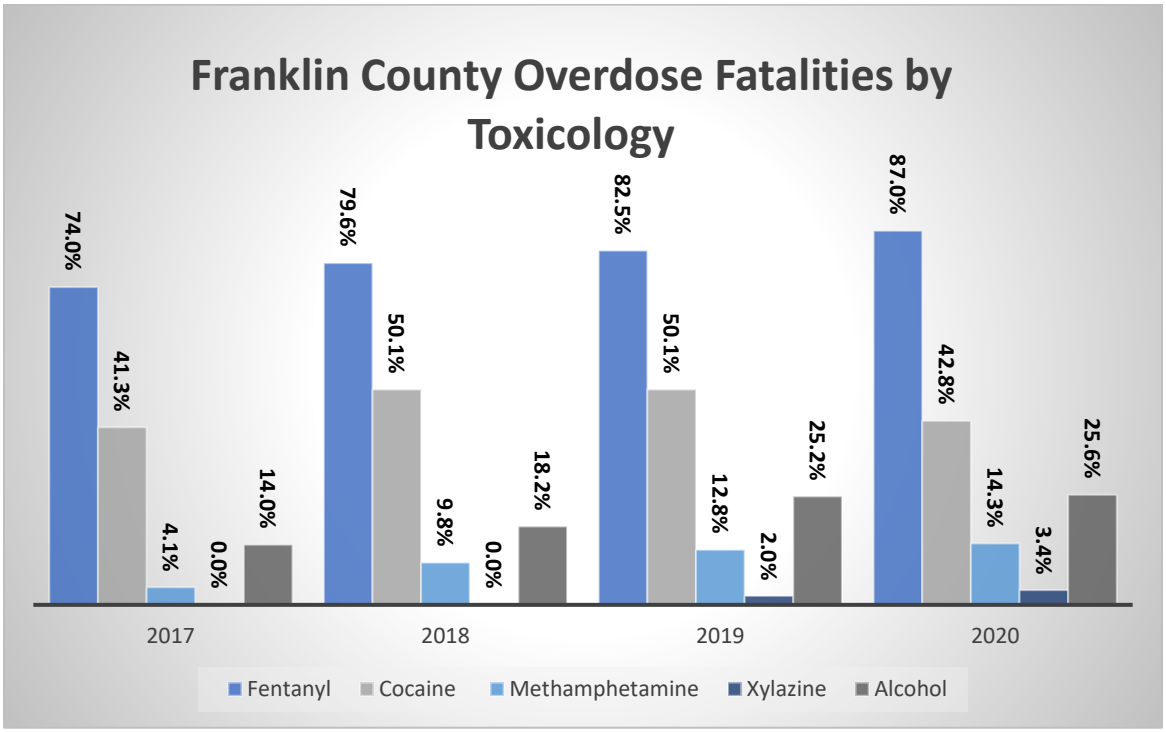
The toxicology data in this section and the companion section ("Drug Class Combinations") were abstracted directly from decedent death certificate information via JusticeTrax LIMS-plus (version 3), the case management software used by the Franklin County Coroner's Office during the reported data years (2017-2020). Overdose deaths were determined by the presence of at least one (1) substance, indicated at a toxic level, within the postmortem toxicological screen of a decedent, where no greater, intervening cause of death, such as trauma, was also apparent in the death. The cases were limited to accidental overdose deaths for the scope of this report.

Contributory substances are regularly documented on the death certificate under the "Cause of Death". Substance use may also be documented in the "Other Significant Condition" section of the death certificate, which also outlines factors that were contributory in the death. It should be noted that it is possible for multiple illicit and/or prescription substances to be present in a decedent's system at the time of death. Particularly in the context of illicit drug use, these cases are referred to as "Polysubstance Use", accounting for the multiple substances present and contributing to the death.

Several substances are more frequently reported in Franklin County overdose deaths. The graphic below illustrates that fentanyl, cocaine, methamphetamine, and alcohol, are frequently reported substances present in local deaths.

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Source: Justice Trax 2017 – 2020. Note: Percentages will not sum to 100, due to polysubstance use. Polysubstance use is reflected in the toxicological screen of decedents, who have more than one substance present at the time of the screen. The categories above are therefore not mutually exclusive.

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Fentanyl

In Franklin County in 2020, there were 744 fentanyl-related overdose deaths reported, which accounted for 87.0% of the total overdose deaths in 2020. This is a higher proportion than in the three (3) most recent years, where fentanyl was involved in approximately 74-83% of all overdose deaths.

The presence of fentanyl and related analogs has experienced a steady increase over the last four (4) data years, with no apparent decrease in use in the central Ohio community. These local data are largely consistent with nationally reported trends in synthetic opiate use, with the CDC even issuing a Health Network (HAN) Advisory to public health departments in December 2020 to warn of the increased presence of the related substances in overdose deaths, particularly between the 2018-2019 and 2019-2020 data years, and to provide recommendations to reduce related mortality.

Cocaine

In Franklin County for 2020, 366 cases (42.8% of overdose deaths) reported cocaine use on the death certificate. This proportion is reduced from 2018 and 2019, where cocaine use was documented in approximately 50% of the overdose cases each of those years. While the percentage of cases involving cocaine has reduced in 2020, the raw number of cases has increased, with approximately 70 additional cases documenting the use of cocaine in the reported data year, suggesting cocaine use, while a smaller proportion of the reported cases, is still on the rise.

Methamphetamine

Methamphetamine-related overdose deaths in Franklin County accounted for 122 deaths, or approximately 14.3% of all overdose deaths in 2020. While the proportion of deaths that are attributed to methamphetamine use are statistically fewer than those involving cocaine or fentanyl, methamphetamine use is on a noted rise within the central Ohio area, with only approximately 4% of overdose deaths reporting the presence of methamphetamine in 2017, to approximately 10% and 12% reporting use in 2018 and 2019, respectively.

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Alcohol

Alcohol-related intoxication deaths for 2020 comprised 25.6% of the total Franklin County overdose deaths. Much like methamphetamine, alcohol-related overdose fatalities have increased over the past four (4) years, with reports of around 14% of overdose deaths noted for 2017 and 18% of overdose deaths reported in 2018.

Xylazine

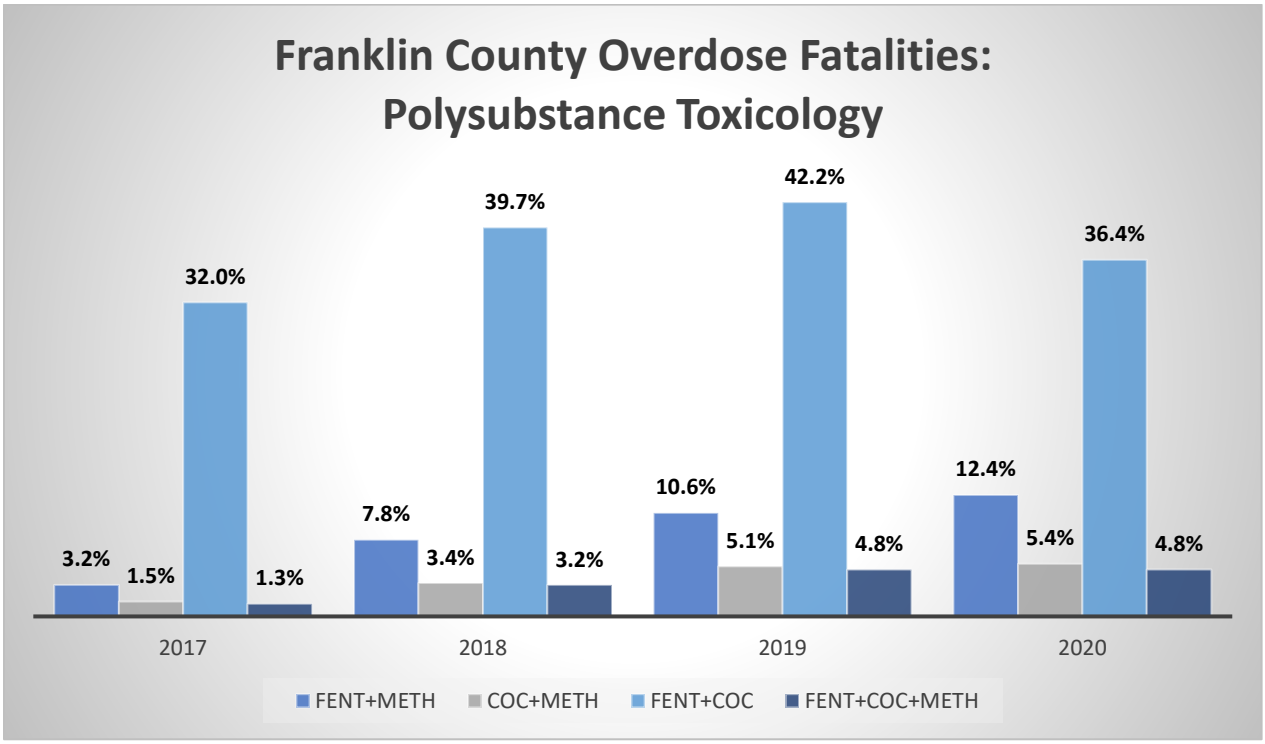
In addition to the frequently reported substances noted above, an additional substance has been reported among Franklin County overdose deaths in the last two (2) years (2019-2020). This substance, known as Xylazine, is an uncontrolled veterinary sedative[4]. The substance was noted as a drug of abuse in Puerto Rico nearly a decade ago[5], though it appears to have been present in increasing amounts relatively locally, with the Philadelphia Medical Examiner's Office reporting increased detection of Xylazine within their opiate overdoses over a 10 year period.[6] In Franklin County, Xylazine comprised 3.4% of the overall overdose deaths in Franklin County for 2020, which is an increase from 2.0% in 2019, the first year it was reported as a contributory cause of death in Franklin County.

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Drug Class Combinations (Polysubstance Use)

As noted earlier, "polysubstance use" is indicated by the presence of more than one substance, particularly illicit, within the decedent's toxicological screen. Substances that are present in a large majority of the overdose deaths for the county are often seen in combination with other highly prevalent substances.



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Fentanyl and Cocaine

One of the most frequently occurring combination of substances reported in decedent toxicological screens of Franklin County Overdose deaths is Fentanyl and Cocaine. This combination is present in approximately one-third of the deaths each data year, with a noticeable increase in proportion of cases over time from approximately 32% of the cases in 2017 to approximately 42% of the cases in 2019. 2020 experienced a decrease in the proportion of cases involving both fentanyl and cocaine, with only 36.4% of the reported population containing the two substances on the death certificates. Similar to the report of cocaine earlier, while the percentage of cases involving this combination has decreased, the raw number of cases with cocaine and fentanyl documented on the death certificate has increased between 2019 and 2020, with 2020 presenting over 60 additional cases of the combination than the year previous, which was the highest recorded year on record.

Fentanyl and Methamphetamine

Following fentanyl and cocaine, the combination of fentanyl and methamphetamine is the next highest proportional combination in toxicological samples. Unlike the relatively steady presence of the fentanyl-cocaine combination, the fentanyl-methamphetamine combination has grown in prevalence across the four (4) year data period. This combination represented a mere 3% of cases in 2017, as compared with approximately 12% of cases in 2020.

Fentanyl, Methamphetamine, and Cocaine

A small but increasing number of overdose cases in the Franklin County community present with a combination of three (3) potentially lethal substances: fentanyl, methamphetamine, and cocaine. This combination represented only approximately 1% of deaths in 2017, while approximately 5% of 2020 overdose fatalities contained the combination.

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Cocaine and Methamphetamine

Finally, cocaine and methamphetamine use has also continued to grow, with the highest prevalence of the combination present in reported overdose cases from 2020 at approximately 5%, as compared with a prevalence in 2017 of only approximately 1.5%. The increase in this particular combination may be due, in part, to the general increase in methamphetamine use for the area, as documentation of cocaine-related deaths has remained relatively consistent across the four (4) year review period.

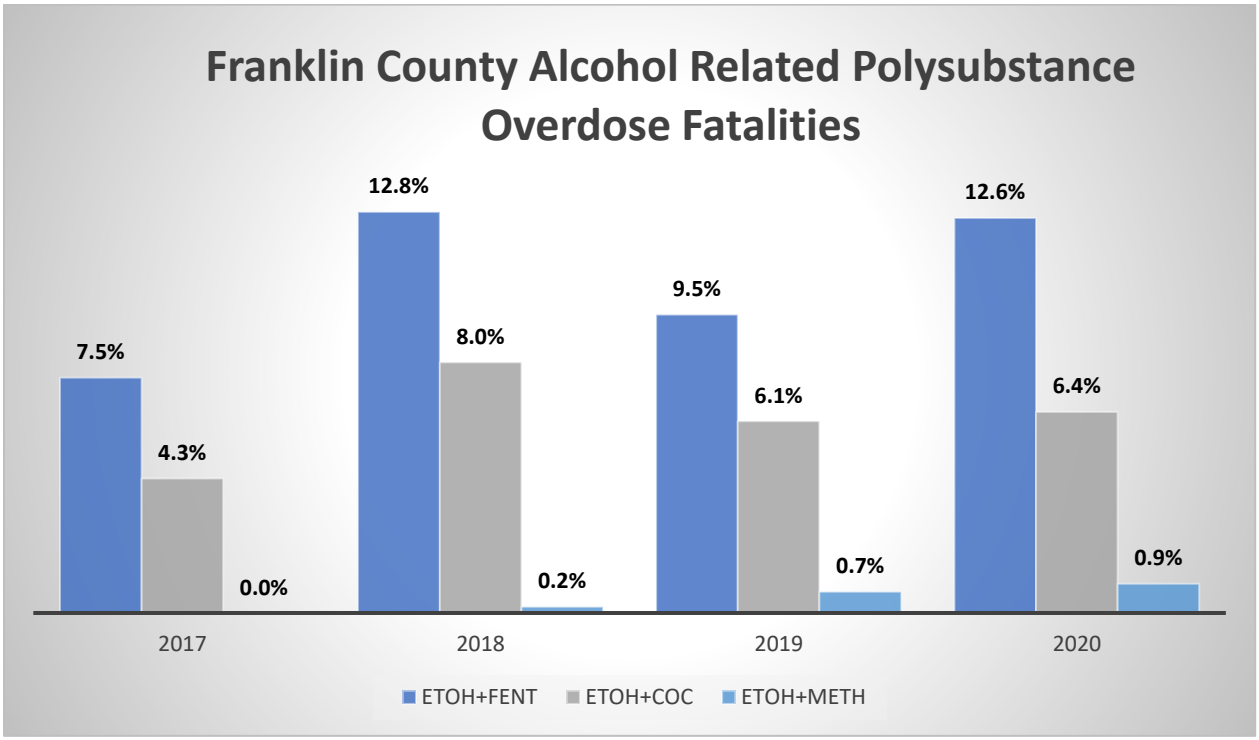
Alcohol and Illicit Substance Use

As documented previously, the presence of contributory alcohol in the toxicological screen has increased over the last four (4) years, with the highest prevalence in 2020 documented in nearly one-quarter (25.6%) of the overdose fatalities for that year.

Similar to prescription and illicit substances, alcohol can play a role in polysubstance use, where the pairing of alcohol and at least one (1) other substance, often illicit, is documented in the decedent's reviewed toxicological screen. The most common pairings with alcohol appear to be alcohol and fentanyl and alcohol and cocaine, though the combination of alcohol and methamphetamine has been reported in recent years as well.

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Alcohol and Fentanyl

Of all the reported combinations, alcohol and fentanyl present the highest proportion of Franklin County alcohol and polysubstance combinations. The presence of this combination has fluctuated throughout the review period, starting at 7.5% in 2017 and 12% in 2018 and 2020. There was a brief decline in the reported proportion of cases in 2019 in spite of the fact that each of those substances separately continued to have higher reported proportions than prior years.

Alcohol and Cocaine

The combination of alcohol and cocaine represented the next highest proportion of cases involving a substance and alcohol. The proportion of cases presented the largest jump between 2107 and 2018, where it represented 4.3% and 8.0% of the cases, respectively. In 2019 and 2020, the percentage of accidental overdose cases containing both alcohol and cocaine was reduced to just over 6% of the case. Once again, the raw number of cases present in this category increased from year to year, suggesting that tandem alcohol and cocaine use is still noted and increasing over the year, though they represent a smaller proportion of the overall case combinations for the year.

Alcohol and Methamphetamine

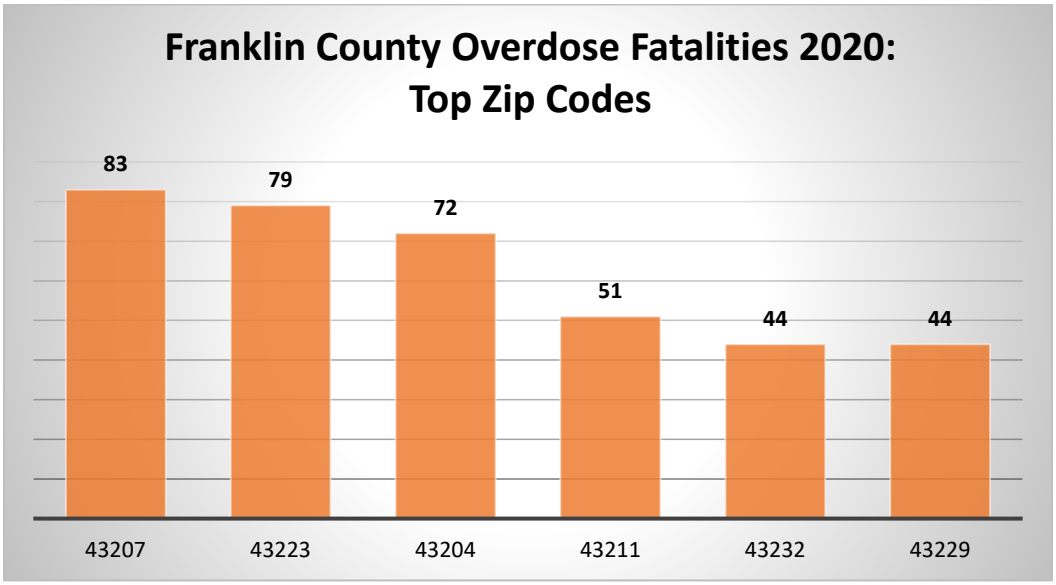
While not nearly as prevalent as the other two alcohol combinations, the combination of alcohol and methamphetamine has been noted in an increasing pattern over the years of the review period. In 2017, there were not reported cases contributing methamphetamine and alcohol as a cause of death. 2018 was the first year of the review period to document this occurrence, representing approximately 0.2% of the case, then moving to 0.7% and 0.9% of cases, respectively.

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Zip Codes

Geographically Franklin County has seen the majority of overdose fatalities in the same areas for the past few years. In 2020 the five zip codes with the highest number of overdose fatalities are displayed in the chart below.



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This report was funded through a grant received by Franklin County Public Health (FCPH) from the Centers for Disease Control and Prevention, Division of Overdose Prevention (DOP), National Center for Injury Prevention and Control (NCIPC).