

# Trends in Mississippi's Drug Overdose Deaths, 2021



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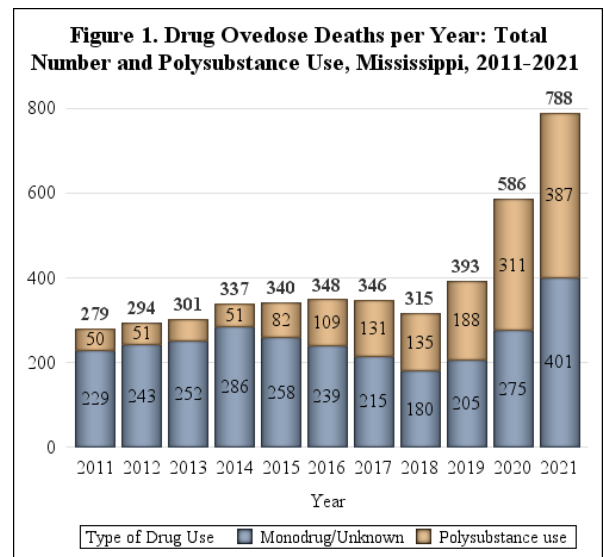
Epidemiological Report

**Key Findings:** In Mississippi, overdose deaths rose 34%, increasing from 586 in 2020 to 788 in 2021. During the same period, the number of deaths involving synthetic opioids (e.g., fentanyl) spiked by 51%. Alarming, one out of every three overdose deaths in 2021 was among people younger than 35 years of age. Although the majority overdose fatalities were among Caucasians, the proportion of overdose deaths among African Americans in 2021 increased, continuing a trend first observed in 2019. The collision of two parallel epidemics, the COVID-19 crisis and increased usage of fentanyl and fentanyl-contaminated drugs, is a major contributing factor in the steep rise in overdoses during the 2020-2021 period.

**Distribution of Deaths by Drug Type:** During 2021, there were more overdose deaths involving opioids than any other substance (70%). Alarming, deaths involving synthetic opioids such as fentanyl, accounted for 60% of drug-related fatalities (Table 1). This finding is in contrast to 2019 when synthetic opioids were involved in 35% of the cases. In 2021, amphetamines were also recorded frequently and were noted in 42% of overdose deaths. Heroin was involved less often and was documented in 5% of all overdose deaths.

**Change by Type of Drugs:** In two years, deaths due to synthetic opioids skyrocketed by 241%, from 139 in 2019 to 474 in 2021. Deaths involving amphetamines also escalated, raising by 154% from 129 in 2019 to 328 in 2021. Compared to 2019, one substance (heroin) was less frequently recorded on overdose death certificates in 2020 and 2021 (Table 1).

**Polysubstance Use:** The use of more than one substance has been a growing concern for the past several years. For example, multidrug overdose deaths soared between 2011 and 2021. During 2011, polysubstance use was recorded in 17.9% of all overdose fatalities. This percentage was 53.1% in 2020 and 49.1% in 2021—approximately half of all overdose fatalities had documented multiple drug use during the last three years (Figure 1).

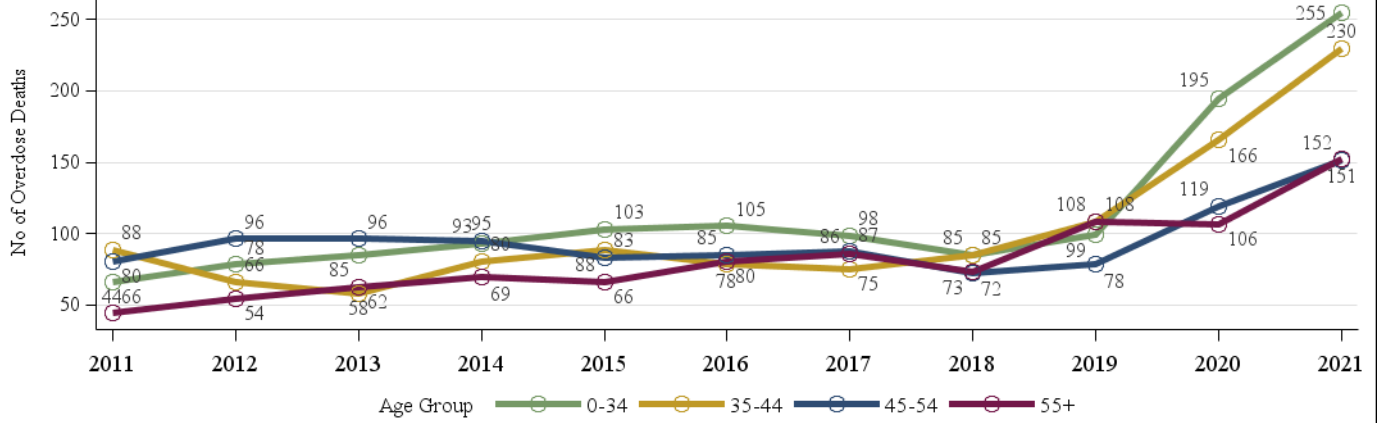


**Table 1. Drug Overdose Deaths by Type of Drugs Involved, Mississippi, 2011 and 2019-2021**

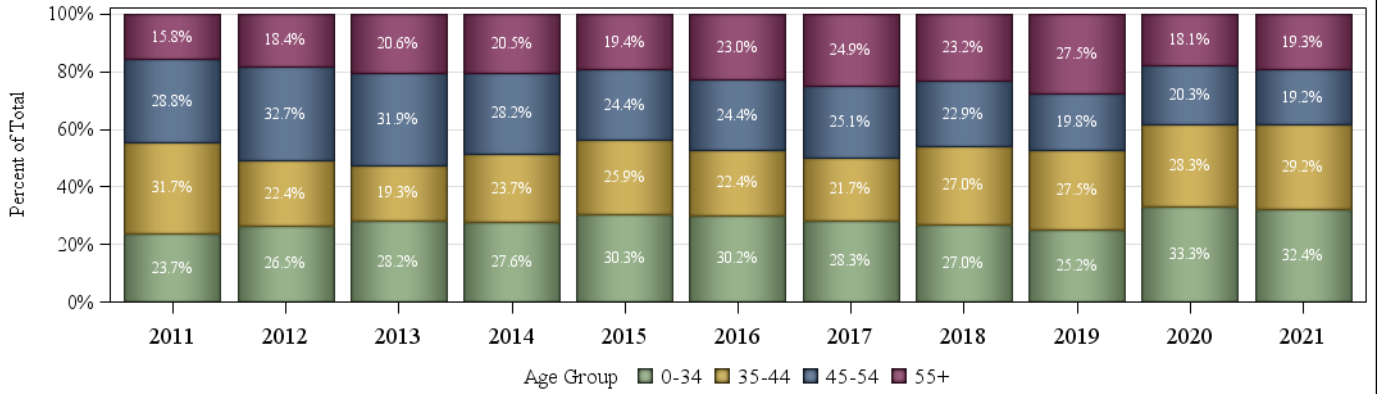
Type of drug involved (the listed categories are not mutually exclusive)	2011	2019	2020	2021	Percent of Total 2021	Absolute Change 2020-2021	Percent Change 2020-2021
Opioids	76	244	404	555	70%	+151	37%
Natural & semisynthetic opioids ( Rx opioids)	49	91	113	134	17%	+21	19%
Synthetic opioids (Fentanyl)	16	139	313	474	60%	+161	51%
Heroin	1	77	70	41	5%	-29	-41%
Methadone	11	7	12	14	2%	+2	17%
Other and unspecified narcotics (i.e., opioids)	6	7	13	10	1%	-3	-23%
Psychostimulants	2	129	228	328	42%	+100	44%
Benzodiazepines	42	76	82	86	11%	+4	5%
Cocaine	15	45	66	98	12%	+32	48%
Polysubstance use	50	188	311	387	49%	+76	24%
Unspecified	150	23	25	29	4%	+4	16%

**Distribution and Trends by Age Group:** In 2020 and 2021, 33% of all drug overdose deaths were among people younger than 35 years of age. Overdose deaths among this age group spiked by 158%, increasing sharply from 99 in 2019 to 255 in 2021 (Figures 2 and 3). During the same period, overdose deaths among the 35-44 age group jumped by 113%, climbing up from 108 in 2019 to 230 in 2021.

**Figure 2. Number of Drug Overdose Deaths by Age Group, Mississippi, 2011-2021**

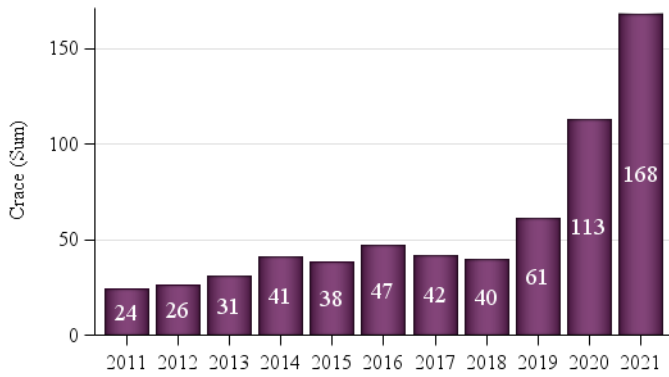


**Figure 3. Drug Overdose Deaths by Age Group: Percent of Total per Year, Mississippi, 2011-2021**

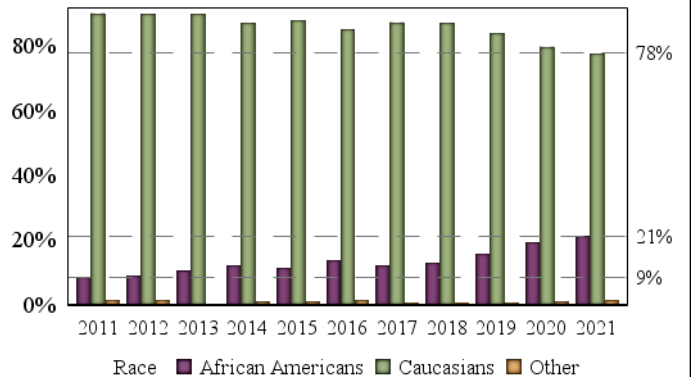


**Distribution and Trends by Race:** In 2021, 21% of all drug overdose deaths were among African Americans (Figures 4 and 5). By comparison, only 9% of all drug overdoses were among African Americans in 2011. Synthetic opioids were responsible for 63% (105 of 168) of all drug overdose deaths among African Americans in 2021. The number of overdose deaths involving synthetic opioids among this racial group increased nearly five times in three years, from 22 in 2019 to 105 in 2021.

**Figure 4. Number of Drug Overdose Deaths among African Americans, Mississippi, 2011-2021**

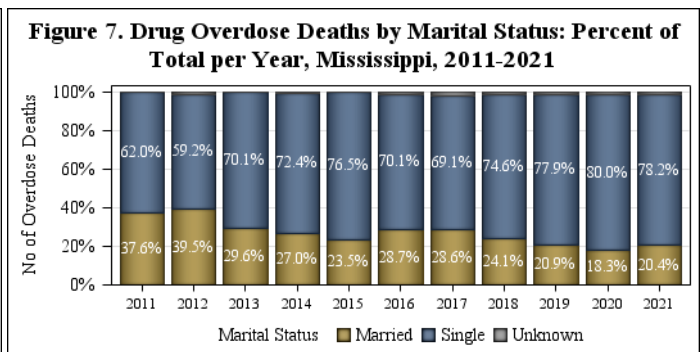
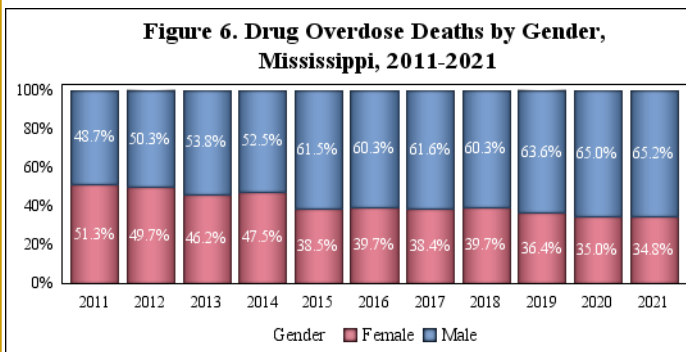


**Figure 5. Drug Overdose Deaths by Race, Mississippi, 2011-2021**

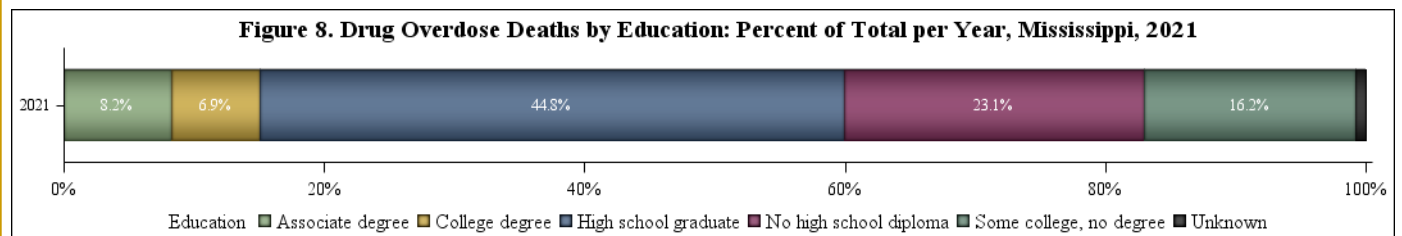


**Distribution and Trends by Gender:** The gender distribution also revealed some interesting dynamics. At the beginning of the eleven-year study period, overdose deaths were more prevalent among females. This trend started to reverse in 2013. Since then, the proportion of male overdose deaths has been increasing. In 2020 and 2021, nearly two-third of such deaths were among males (Figure 6).

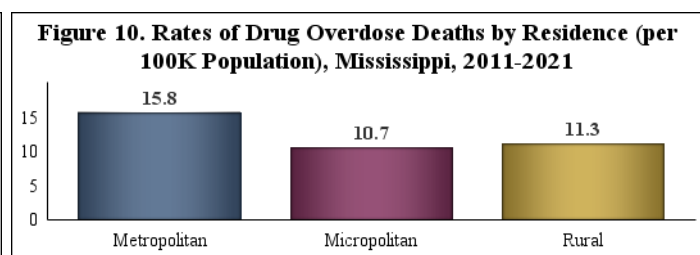
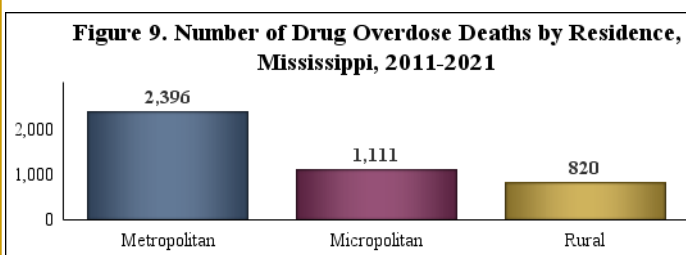
**Distribution and Trends by Marital Status:** Education and family relations are some of the most important social determinants of health. To illustrate how these factors are implicated in Mississippi’s overdose deaths, we stratified the data by educational levels and marital status. The percent of single people who suffered fatal overdoses increased dramatically over the eleven-year period. In 2021, for example, one-fifth (20%) of all decedents were married or not separated at the time of their death. Public health structures should increase awareness of this risk factor among people suffering from substance use disorder and seek community support for such patients. Researching and implementing strategies to combat social isolation may help to provide essential social support to persons with substance use disorder (Figure 7).



**Education:** Only 6.9% of all decedents from opioid overdoses had a bachelor’s degree or higher level of education in 2021 (Figure 8). This finding may reflect Mississippi’s poor educational rankings. In 2019, only 22% of Mississippi’s adults age 25 and older had a college education, which was 14 percentage points below the national average of 36%.<sup>1</sup> Investing in Mississippi’s system of higher education and improving educational performance, therefore, may be important steps for increasing the well-being of state residents and preventing substance use disorder and deaths.



**Geographic distribution:** Although populations in all counties are at risk for drug overdoses, the vast majority of Mississippi’s 82 counties are sparsely populated. As a result of their small population size, many of these counties have reported a correspondingly small number of overdose-related death events. Therefore, rates were calculated by collapsing counties into three groups: metropolitan, micropolitan and rural areas.<sup>2</sup> Based on this analysis, both numbers and rates of overdose deaths were highest in metropolitan areas (Figures 9 and 10). Metropolitan areas also showed the highest increase in overdose death rates, from 12.7 in 2020 to 15.8 per 100,000 population in 2021.



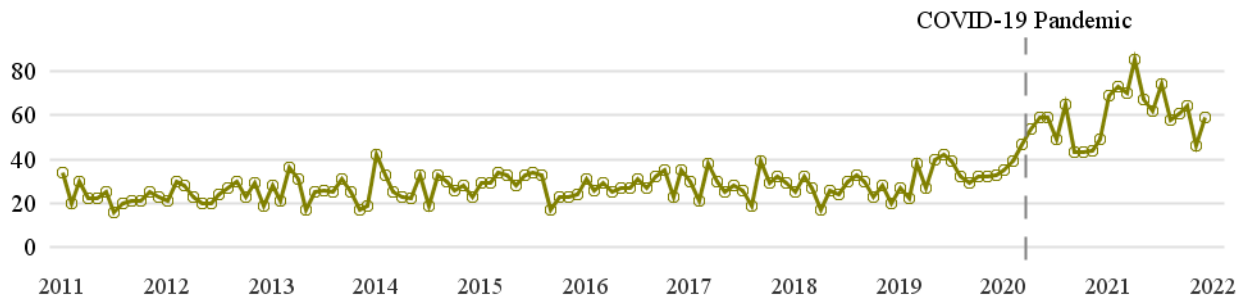
## OVERDOSES: COVID-19 AND FENTANYL

Although overdose deaths in Mississippi started to climb before the onset of the pandemic, such deaths soared during the COVID-19 crisis (Figures 11 and 12). In April 2021—approximately one year after the onset of the COVID-19 pandemic—overdose deaths reached a monthly peak of 85 fatalities and began to decline afterwards. According to our data, fentanyl was the main driver of this spike in overdose deaths. In the pre-pandemic period (2018-2019), fentanyl-related overdose deaths increased by 83% (Figure 13). Between 2019 and 2020, however, these deaths skyrocketed, escalating by 125% during the first phase of the pandemic. This explosive uptrend started to moderate in the pandemic’s second year.

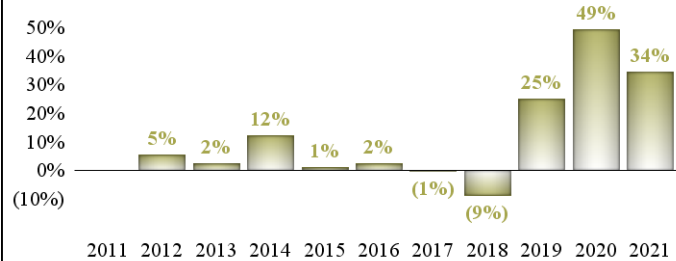
### LIFE SAVING MEASURES

Fentanyl is a highly potent synthetic opioid and small doses of it can be fatal. Frequently, other illicit drugs are laced with fentanyl—posing a serious and ongoing public health emergency. Some of these tragic deaths could be prevented by two simple and effective harm-reduction methods: increasing the availability and use of the opioid antidote naloxone and of fentanyl test strips (FTS) that can detect the presence of hidden fentanyl in any illicit drug. In Mississippi, naloxone is now available by mail without a prescription and at no cost. We encourage patients suffering from drug use disorder and their families to contact the Mississippi State Department of Health and obtain naloxone ([Get Naloxone - ODFree.org - Mississippi Overdose Data, Prevention & Treatment](https://www.getnaloxone.org/)). Unlike naloxone, FTS—at present—are not available legally in Mississippi; however, our state legislature is currently considering a bill that would legalize their use. More information on FTS and their use can be found at: [Fentanyl Test Strips: A Harm Reduction Strategy \(cdc.gov\)](https://www.cdc.gov/fentanyl/test-strips/).

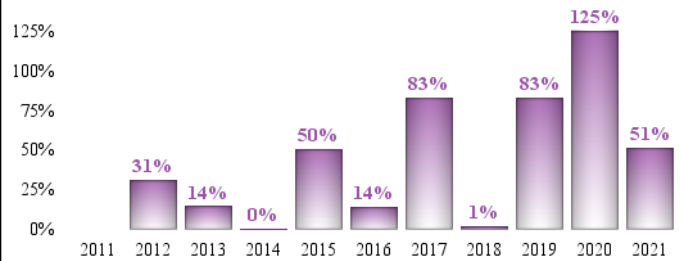
**Figure 11. Drug Overdose Deaths by Month, Mississippi, 2011-2021**



**Figure 12. All Drug Overdose Deaths: Change from the Previous Year, Mississippi, 2011-2021**



**Figure 13. Drug Overdose Deaths Involving Fentanyl: Change from the Previous Year, Mississippi, 2011-2021**



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**Data Analysis:** The data for this report were obtained from the Office of Vital Records at the Mississippi State Department of Health. Only Mississippi residents were included in the analyses. Drug overdose deaths were identified by International Classification of Diseases, Tenth Revision (ICD-10) underlying cause-of-death codes: X40-44 (accidental drug poisoning), X60-X64 (intentional self-drug poisoning), X85 (assault by drug poisoning), Y10-Y14 (drug poisoning by undetermined intent). Specific drug categories and multdrug use was identified by: T40.0-T40.4, and T40.6 (opioids), cocaine (T40.5), T40.7 (cannabis), T40.8 (lysergide), T40.9 (other and unspecified psychodysleptics), T43.6 (psychostimulants with abuse potential), T42.2-42.8 (antiepileptic, sedative-hypnotic and antiparkinsonism), and T50.9 (unspecified).

**References:**

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