

Data Brief

**Drug Overdose Deaths
in Mississippi
2011-2016**

Mississippi State Department of Health

DRUG OVERDOSE DEATHS IN MISSISSIPPI, 2011-2016

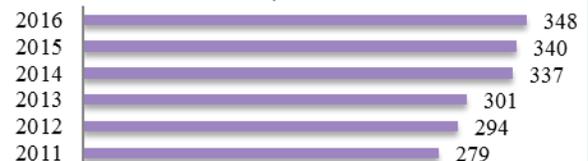


DATA BRIEF
6/27/2018

INTRODUCTION: Nationally, there were more than 63,600 drug overdose deaths in 2016.¹ This escalating mortality crisis is an increasing public health concern in Mississippi. The purpose of this brief is twofold: to summarize key statistics on all fatal drug overdoses during 2016 in Mississippi and to examine fatal overdose trends since 2011. Mortality data on drug overdose deaths were obtained from the Mississippi State Department of Health's Office of Vital Records. This analysis includes Mississippi residents only.

OVERVIEW OF DRUG OVERDOSE DEATHS: During 2016 there were 348 reported drug overdose deaths in Mississippi (Figure 1). This was an increase of 2.4% compared to 2015 and an increase of 24.7% compared to 2011. The age-adjusted death rate in 2016 was 11.9 deaths per 100,000 standard population, an increase of 20.2% from the 2011 rate of 9.9.

Figure 1. All Drug Overdose Deaths, MS, 2011-2016



OVERDOSE DEATHS BY TYPE OF DRUG INVOLVED

During 2016: Opioids, including prescription opioids, illicit fentanyl, heroin, and methadone, were involved in 172 (49.4%) cases. Benzodiazepines were recorded in almost one fifth (66 or 19.0%), psychostimulants with abusive potential (e.g., methamphetamine or prescription amphetamine-related drugs) in 16.4% (57 cases), and cocaine in 9.2% (32 cases) of all drug overdose deaths (Table 1). These drug categories are not mutually exclusive because deaths may involve more than one drug.

Mortality Trends: Deaths involving psychostimulants demonstrated the highest spike of 2,750.0%, from 2 deaths in 2011 to 57 deaths in 2016 (Table 1, Figure 2). During the same period, deaths involving opioids increased by 126.3%, deaths involving cocaine by 113.3%, and deaths involving benzodiazepines by 57.1%. From 2015 to 2016, however, deaths involving benzodiazepines showed the highest increase (53.5%) - an alarming finding. Fatalities with no drug recorded on the death certificate decreased from 150 (53.8% of all cases) in 2011 to 80 (23.0% of all cases) in 2016. Although this is a notable improvement of data categorization, nearly one out of four drug-related fatalities did not have any specific drug recorded in 2016.

Figure 2. Overdose Deaths by Drug Type, MS, 2011-2016

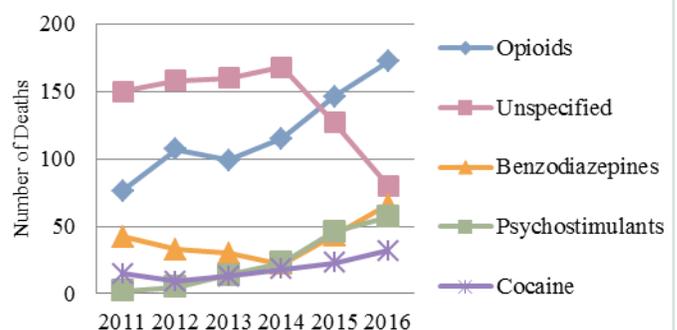
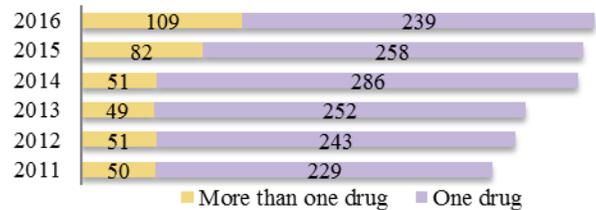


Table 1. Drug Overdose Deaths by Category of Involved Drugs: Numbers and Change, MS, 2011-2016

Type of Drug	2011	2012	2013	2014	2015	2016	Change (deaths) 2015-2016	Change (deaths) 2011-2016
Opioids	76	107	99	115	146	172	17.8% (26)	126.3% (96)
Unspecified	150	158	160	168	127	80	-37.0% (-47)	-46.7% (-70)
Benzodiazepines	42	33	30	22	43	66	53.5% (23)	57.1% (24)
Psychostimulants	2	5	14	23	46	57	23.9% (11)	2750.0% (55)
Cocaine	15	9	13	18	23	32	39.1% (9)	113.3% (17)

OVERDOSE DEATH CHARACTERISTICS: From 2011 to 2016, there were a total of 1,899 drug overdose deaths. Most of these deaths (1,644 or 86.6%) were unintentional. Suicides accounted for 157 cases (8.3%). The remaining 5.1% of all deaths were undetermined (96 cases) or due to homicides (2 cases). More than one drug was recorded in 392 (20.6%) of all cases (Figure 3). The number of multidrug overdose deaths was stable until 2014; however, these deaths more than doubled between 2014 and 2016.

Figure 3. Multidrug Overdose Deaths, MS, 2011-2016



DEMOGRAPHICS: Between 2011 and 2016, more drug overdose deaths occurred in the age group of 45-54 years old (Figure 4). Caucasians accounted for 88.1% of all drug overdose deaths during 2011-2016 (Figure 5). In 2016, Caucasians had four times higher age-adjusted mortality rates due to drug overdose than African Americans: 17.2 deaths versus 4.2 deaths per 100,000 persons. From 2011 to 2016, the number of drug overdose deaths, however, rose more rapidly among African Americans (95.8% increase) as compared to Caucasians (17.9% increases).

Figure 4. Age Distribution, MS, 2011-2016

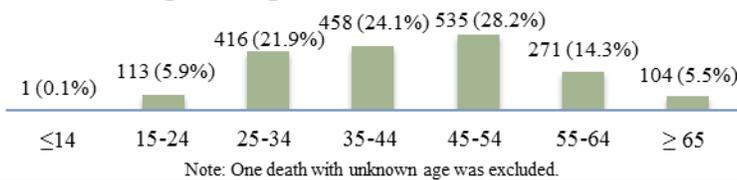
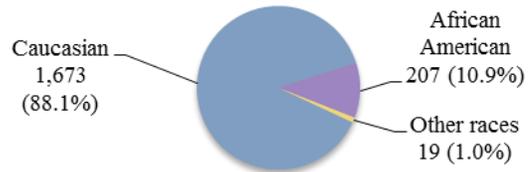


Figure 5. Race Distribution, MS, 2011-2016



EMERGING TRENDS: This analysis uncovered two emerging and concerning trends: an increase in deaths across all drug categories and a spike in deaths involving more than one drug. Nationally, similar evolving trends have been reported. According to a recent research by the Centers for Disease Control and Prevention (CDC) such trends are fueled by mixing of illicitly manufactured fentanyl (IMF) with heroin, cocaine, and counterfeit benzodiazepines and opioids.² The influx of IMF began around 2013, when a significant increase in overdose deaths involving synthetic opioids was noted. This prompted the Drug Enforcement Administration (DEA) and CDC to issue alerts about the danger of IMF in 2015.³ In addition to illicit drugs, however, the use of prescription medications, including opioids, benzodiazepines, and amphetamines may cause overdoses. To mitigate such risks, CDC recommends that health care providers should prescribe controlled substances judiciously and avoid combinations therapies of opioids and benzodiazepines.

DRUG MORTALITY SURVEILLANCE: On average, every day in 2016 someone died from a drug overdose in Mississippi. This shocking number, however, may be a considerable underestimate due to underreporting and the lack of a coordinated, multi-source drug mortality surveillance system. For example, toxicology testing and reporting for all suspected drug-related deaths would improve data completeness. In addition to using information from death certificates, an improved system of surveillance also should be multisource and include additional data from toxicology results, prescription drug monitoring programs, and autopsy and coroners' reports.⁴ Such changes would ensure that Mississippi's data on this pressing national issue are as thorough and reliable as possible.

FROM DATA TO ACTION: In 2017, Governor Bryant's Opioid and Heroin Study Task Force released forty one recommendations aimed at curtailing the drug morbidity and mortality crisis in Mississippi.⁵ Some of these recommendations call for measures to improve death investigation and reporting such as assuring adequate training for coroners, passing legislation for mandatory toxicology testing, and providing resources for the Mississippi Crime Lab. Other suggested initiatives are expanding the state addiction treatment capacity and popularizing harm-reduction strategies such as the increased distribution and use of naloxone. For a list of all recommendations, please visit: <http://www.mbp.ms.gov/Pages/Governor%27s-Opioid-and-Heroin-Study-Task-Force.aspx>.

Data Analysis: 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 multidrug 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), T42.4 (benzodiazepines), and T50.9 (unspecified). Age-adjusted death rates were calculated using the direct method and adjusted to the 2000 U. S. population.

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