

PATTERNS OF AND TRENDS IN SUBSTANCE USE IN FLORIDA

Overall and by Region

Annual **UPDATE** Report, 2020

Released April 2021



Sponsored by the Florida Alcohol and Drug Abuse Association, a subsidiary of the Florida Behavioral Health Association, and the State of Florida, Department of Children and Families

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Suggested citation: Hackworth, B. T. (2021) Patterns of and Trends in Substance Use in Florida,
Overall and by Managing Entity Region: 2021 Annual Update Report.

TABLE OF CONTENTS

INTRODUCTION	5
METHODS	5
INJURY PYRAMID FOR SUBSTANCE USE	5
MANAGING ENTITIES	7
AGE	8
DATA SOURCES	9
POPULATION	10
SUBSTANCE USE	11
OPIOIDS	12
<i>Pain Reliever Misuse among Adults</i>	12
<i>Pain Reliever Misuse among Youth</i>	12
<i>Heroin Use among Adults</i>	14
<i>Heroin Use among Youth</i>	15
PSYCHOSTIMULANT USE	16
<i>Cocaine Use among Adults</i>	16
<i>Cocaine Use among Youth</i>	17
<i>Methamphetamine Use among Adults</i>	18
<i>Methamphetamine Use among Youth</i>	19
MARIJUANA USE	20
<i>Marijuana Use among Adults</i>	20
<i>Marijuana Use among Youth</i>	21
VAPING NICOTINE AMONG YOUTH	22
VAPING MARIJUANA AMONG YOUTH	22
ALCOHOL USE	23
<i>Alcohol Use among Adults</i>	23
<i>Alcohol Use among Youth</i>	24
INHALANT USE	26
<i>Inhalant Use among Youth</i>	26
CLUB DRUG USE	27
<i>Club Drug Use among Youth</i>	28
SELECT CONSEQUENCES OF SUBSTANCE USE	28
ARRESTS AND CITATIONS	28
<i>Drug Arrests</i>	29

FLORIDA ALCOHOL- AND DRUG-RELATED MOTOR VEHICLE CRASHES, INJURIES, AND FATALITIES.....	35
<i>Motor Vehicle Crashes Confirmed to Involve Alcohol</i>	35
<i>Motor Vehicle Crashes Confirmed to Involve Both Drugs and Alcohol</i>	35
MORTALITY: FATAL POISONING	35
OPIOIDS	36
STIMULANTS	39
ALCOHOL	40
CANNABIS	41
KRATOM	42
POLY-SUBSTANCE	43
CONCLUSIONS.....	46
ADULT SUBSTANCE USE	46
YOUTH SUBSTANCE USE	47
ARRESTS	47
CITATIONS.....	47
MOTOR VEHICLE CRASHES	47
NON-FATAL POISONINGS	48
FATAL POISONINGS.....	48
DATA SOURCES	48
REFERENCES	50

Introduction

The behavioral health workforce in Florida is comprised of myriad professionals tasked with promoting the health and well-being of Floridians through not only prevention and early intervention strategies that reduce the impact of substance use and mental health disorders but also person-centered treatment to those Floridians managing mental health disorders, including substance use disorder. In order to effectively target limited resources to prevent, delay initiation of, and treat existing substance use disorders, the state, regional, and local behavioral health workforce must be aware of current patterns and trends in substance use and abuse across the state. Thus, this report provides an overview of current patterns and trends over time of substance use and select consequences among Floridians. For context, statewide data are presented alongside comparable national data.

Methods

This section details the way in which data are organized and presented in the report. In addition, each source from which data were obtained is described. Finally, the approach to calculating frequencies is detailed if the data were not available in the desired format from the source.

Injury Pyramid for Substance Use

The burden of disease associated with substance use can be visually represented with a pyramid, ranging from the rarest event, death, at the top of the pyramid to the most common event, an at-risk behavior, at the bottom of the pyramid (**Error! Reference source not found.**).

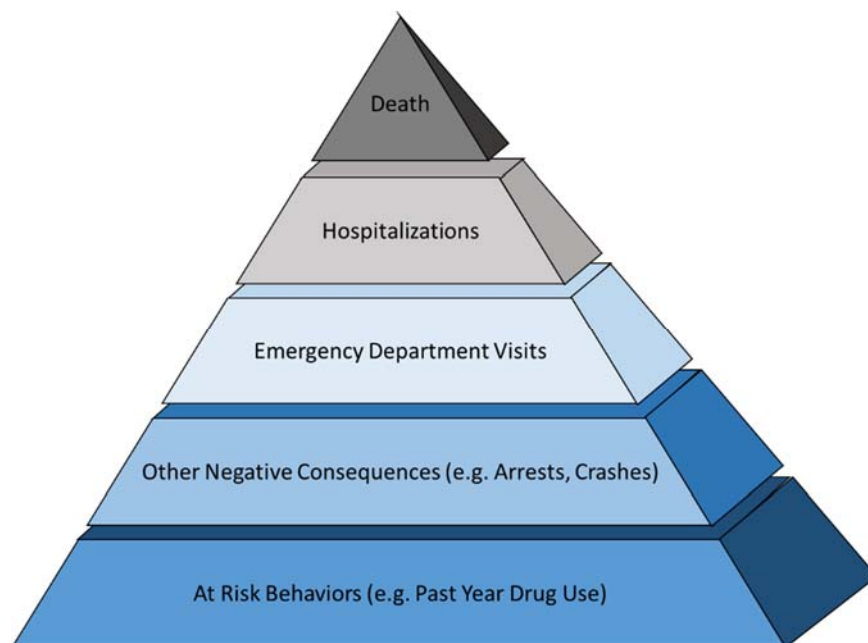


Figure 1. Injury pyramid adapted to represent the consequences of substance use.

Note that the incidence of events is inversely proportional to the severity of the category of the event with the least consequential events to health and well-being represented at the bottom of the pyramid and the most consequential events occurring at the top of the pyramid. In this report, the approach taken to present the epidemiologic data characterizing substance use in Florida is based on the way in which events are depicted in the pyramid, also ranging from the least rare and severe events to the most rare and severe events. In addition, the number of events depicted by the pyramid is inversely proportional to the robustness of the surveillance system from which epidemiologic data can be obtained about substance use. The vital statistics system through which fatal poisonings are tracked is the most extensive system, especially in the wake of the ongoing opioid epidemic, as many resources have been devoted to enhancing surveillance of drug-related deaths, in particular. Conversely, prevalence data for substance use is more difficult to obtain, often reliant on self-reported behavioral data collected through surveys administered to only a sample of the population of interest. Such surveys are expensive to conduct and are consequently done so at less frequent intervals and/or with limited geographic granularity.

This type of figure is often described like an iceberg, only the tip of which is apparent above the surface of the water, representing that the most severe events associated with substance use are the easiest to identify and characterize. For example, in 2015, for every one prescription or illicit opioid overdose death in the United States, there were 18 people with a substance use disorder involving heroin and another 62 people who had a substance use disorder involving prescription opioids (Figure 2).

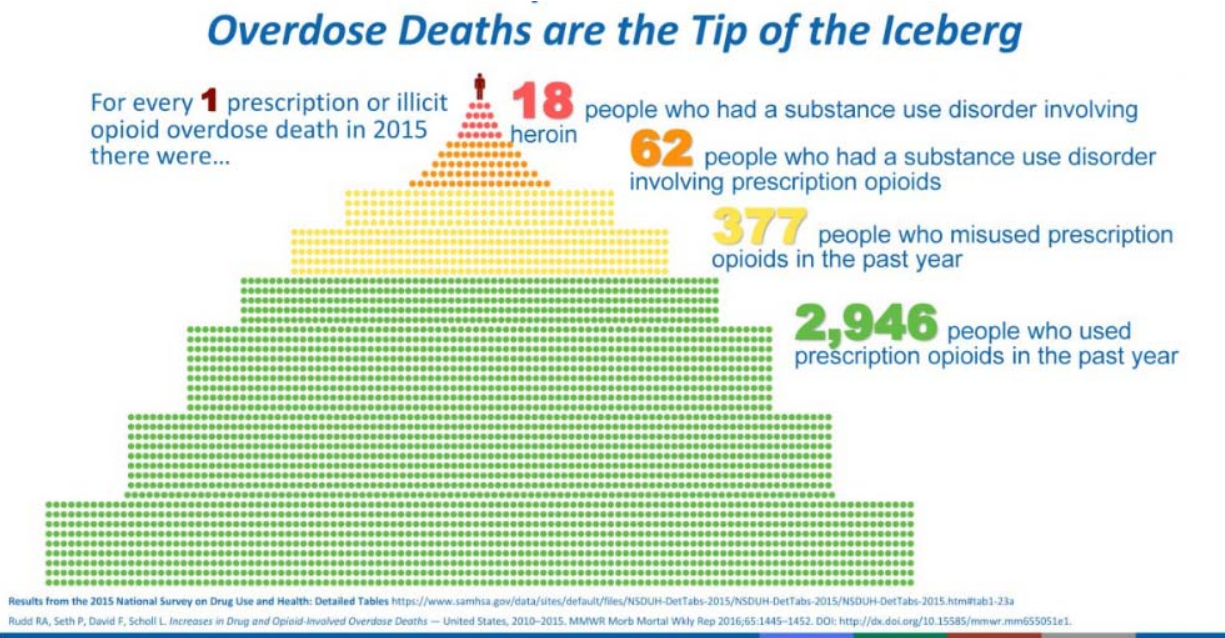


Figure 2. Iceberg representation of the opioid epidemic, US, 2015. Source: [CDC National Center for Injury Prevention and Control](#).

For every fatal overdose, there are more nonfatal overdoses that require treatment, even more people that misuse substances, and still a greater number that use substances.

Managing Entities

The Florida Department of Children and Families (DCF) contracts with seven regional systems of care known as Managing Entities to provide behavioral health services to citizens throughout the state. Because Florida is a large state with a diverse, geographically disparate population, this model allows each Managing Entity to respond to the specific behavioral health needs of its region within Florida. With the exception of one, each region is comprised of a group of geographically-contiguous counties (Figure 3). Note that when DCF was reorganized in 2007, Florida was divided into twenty circuits that align with the state's judicial circuits (Figure 3).

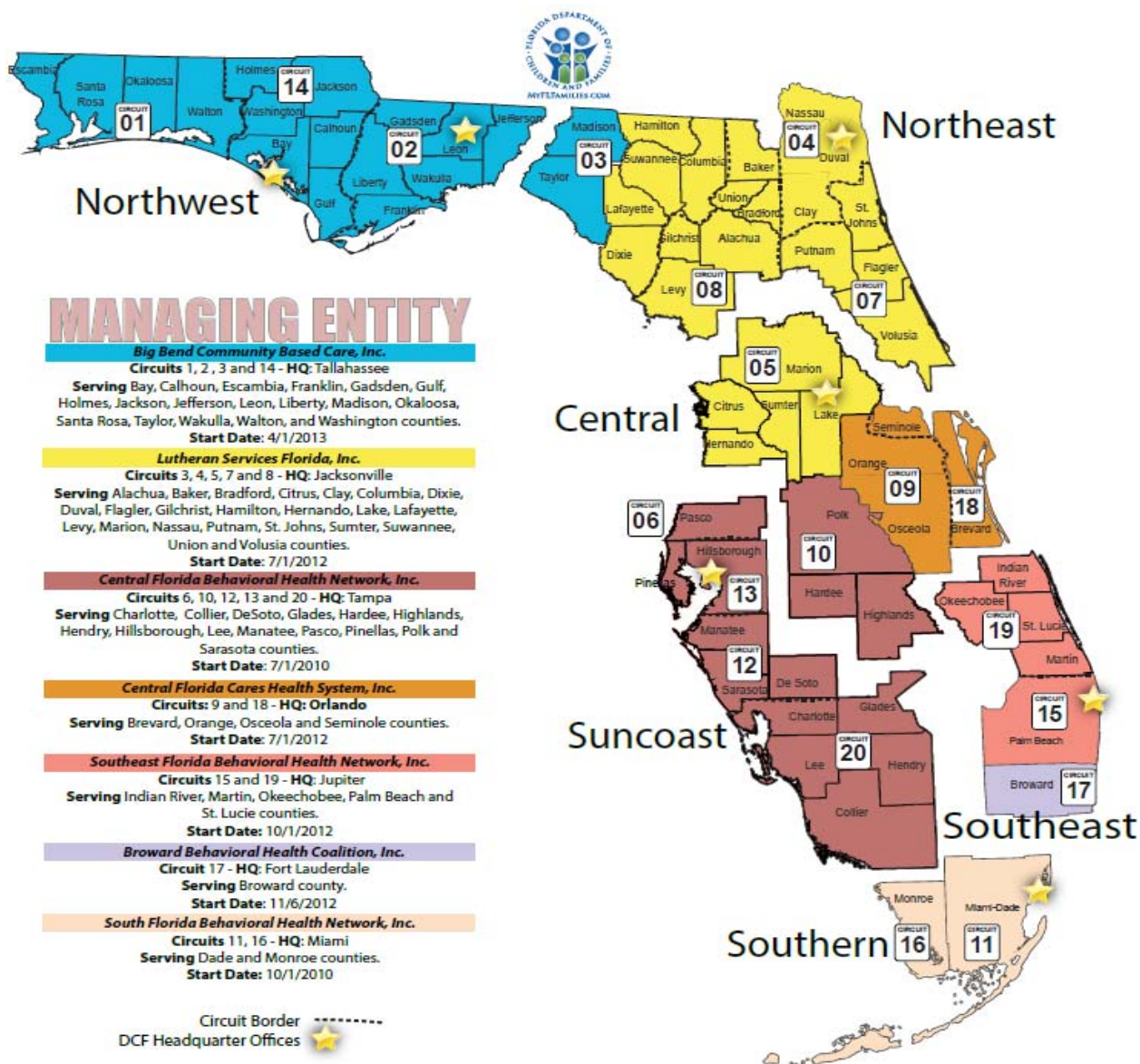


Figure 3. Florida by Department of Children and Families region, managing entity region, circuit, and county. Source: Florida Department of Children and Families.

Two counties located in the northeast and all of the counties located in the northwest region of Florida are served by Big Bend Community Based Care (BBCBC) dba Northwest Florida Health Network (NWF Health); the eighteen counties in the panhandle of Florida served by BBCBC dba NW Health include Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Madison, Okaloosa, Santa Rosa, Taylor, Wakulla, Walton, and Washington. As in Figure 3, the region served by BBCBC dba NW Health is represented in graphs throughout the report in the color turquoise.

Twenty-three counties in the northeast and north central regions of Florida are served by Lutheran Services Florida (LSF): Alachua, Baker, Bradford, Citrus, Clay, Columbia, Dixie, Duval, Flagler, Gilchrist, Hamilton, Hernando, Lake, Lafayette, Levy, Marion, Nassau, Putnam, St. Johns, Sumter, Suwannee, Union, and Volusia. The region served by LSF is represented in graphs throughout the report in the color yellow.

The eastern portion of the central region of Florida is served by Central Florida Cares Health System, Inc. (CFCHS), including Brevard, Orange, Osceola, and Seminole Counties. The region served by CFCHS is represented in graphs throughout the report in the color orange.

The sun coast region and the southwestern portion of the central region of Florida is served by Central Florida Behavioral Health Network, Inc. (CFBHN). The counties served include Charlotte, Collier, DeSoto, Glades, Hardee, Highlands, Hendry, Hillsborough, Lee Manatee, Pasco, Pinellas, Polk, and Sarasota. The region served by CFBHN is represented in graphs throughout the report in the color rust.

Most of the southeast region of Florida is served by Southeast Florida Behavioral Health Network (SEFBHN). The counties served include Indian River, Martin, Okeechobee, Palm Beach, and St. Lucie counties. The region served by SEFBHN is represented in graphs throughout the report in the color salmon.

The remaining county in the southeast region of Florida, Broward, is the only one-county region, served by Broward Behavioral Health Coalition, Inc. (BBHC). Broward County is represented in graphs throughout the report in the color lavender.

The southern region of Florida, comprised of Monroe and Dade counties, is served by South Florida Behavioral Health Network, Inc. (SFBHN) dba Thriving Mind South Florida. The region served by SFBHN dba Thriving Mind is represented in graphs throughout the report by the color peach.

Because behavioral health services are administered by a different entity in each of these regions, current patterns and trends in substance abuse are reported for regions served by Managing Entities when possible, i.e. when county-specific data are available to aggregate by region.

Age

Approaches to prevention and treatment as well as funding streams differ for youth and adults. Thus, much of the data presented in this report is presented separately for youth and adults when possible, based on the data source. Because some of the data presented in this report are collected in school-based surveys conducted at middle and high schools, youth are classified as 12-17 years of age, the

typical age range for school-aged children enrolled at these institutions. Adults are classified as those aged 18 years and older.

Data Sources

Data presented in this report were obtained from a diverse number of sources. The latest data available through May 2020 from each source is included in the report. Data were obtained in two different ways: directly from the agency that collects and maintains the data or through public-facing dashboards maintained by the source agency itself or a partner agency. To present some frequencies, such as rates, data were aggregated, and the measure of occurrence calculated.

Florida county population data and estimates from 2000 to 2019 were obtained from the [Florida Estimates of Population, Population Studies Program](#), sponsored by the Bureau of Economic and Business Research (BEBR), through the public facing dashboard [FL Health Community Health Assessment Resource Tool Set](#) (CHARTS).

Data on substance use among adults in the United States and Florida were obtained from the [National Survey On Drug Use and Health](#) (NSDUH), sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA), and the Center for Disease Control and Prevention's [Behavioral Risk Factor Surveillance System](#) (BRFSS). Both sources provide the prevalence of substance use based on responses to their respective surveys. Prevalence rates were also obtained for sub-state regions, which were weighted by population and summed to calculate a prevalence rate for each Managing Entity Region from the [National Survey on Drug Use and Health](#) (NSDUH). Unfortunately, due to the way in which data were aggregated by NSDUH for sub-state regions, prevalence rates for Madison and Taylor County are included in the region served by Lutheran Services Florida instead of the region served by Big Bend Community Based Care for the following reporting periods: 2004-2006, 2006-2008, 2008-2010, and 2010-2012.

Prevalence rates estimated using data from the National Survey on Drug Use and Health for the United States and Florida are two-year running averages, while prevalence rates for Managing Entity Regions are three-year running averages. Throughout the report, two- and three-year running average rates are plotted at the midpoint of the period. For example, the 2017-2018 average prevalence is plot at 2017.5, and the 2014-2106 average prevalence for a single Managing Entity Region is plot at 2015.

In 2015, changes were made to NSDUH questionnaires and the data collection process. For prevalence rates affected by these changes, there are gaps in the figures between 2014-2015 and 2015-2016; for some substances, data are available starting in 2015.

Data for substance use among youth in the United States were obtained from [Monitoring the Future](#) (MTF), sponsored by the National Institute on Drug Abuse (NIDA), and the [National Survey on Drug Use and Health](#) (NSDUH). Data for substance use among youth in Florida were obtained from the [Florida Youth Substance Abuse Survey](#) (FYSAS), sponsored by the Department of Children and Families, and the [National Survey on Drug Use and Health](#) (NSDUH). The FYSAS is based on the methodology and survey items used in the Monitoring the Future survey. Prevalence rates were calculated from data obtained from NSDUH in the same way for youth as described for adults earlier in this section. Prevalence rates

from MTF and FYSAS were obtained directly from the respective sources and did not have to be calculated.

FYSAS data were obtained from data tables on the Department of Children and Families website. The survey is administered to a statewide sample of students; odd years include state level data only, while even years include state and regional level data. The regional data represent only one year, not a combination of years.

Additional data related to the consequences of substance use were obtained. Sources include motor vehicle crash data from the [Florida Department of Highway Safety and Motor Vehicles](#) (FLHSMV) and arrest data from [Annual Uniform Crime Reports](#), maintained by the Florida Department of Law Enforcement (FDLE). Both of these sources contain unadjusted rates that were calculated using counts from their respective source and population estimates from the [Florida Estimates of Population, Population Studies Program](#).

Morbidity (hospitalizations and emergency department visits) rates for the United States are age-adjusted and obtained from the Center for Disease Control and Prevention's [Web-based Injury Statistics Query and Reporting System](#) (WISQARS). Data for Florida-specific morbidity were obtained from the [Florida Agency for Health Care Administration](#) (AHCA) through the public-facing dashboard [FL Health CHARTS](#), maintained by the Florida Bureau of Community Health Assessment and Vital Statistics. Morbidity rates for Florida overall are age-adjusted and obtained directly from [FLHealth CHARTS](#). Morbidity rates for sub-Florida regions are unadjusted and were calculated using counts of hospitalizations and emergency department visits from [FLHealth CHARTS](#) and population estimates from the [Florida Estimates of Population, Population Studies Program](#). County morbidity data are considered suppressed if the count is 4 or less. In this case, a random value between 0 and 4 was used for that county's morbidity count, which was then summed with other county-specific counts to calculate region-specific rates.

Mortality rates for Florida and the United States from 1999 to 2018 are age-adjusted and were obtained from the [Wide Ranging Online Data for Epidemiologic Research](#) (WONDER) tool, maintained by the Centers for Disease Control and Prevention. Regional mortality rates reported for the State of Florida are unadjusted. These rates were calculated using death counts from the [Drugs Identified in Deceased Persons Report](#), produced by the Florida Department of Law Enforcement (FDLE), and population estimates from the [Florida Estimates of Population, Population Studies Program](#). Polysubstance deaths cannot be determined from the report itself, and were instead obtained using raw, individual-level death data obtained directly from the Medical Examiners Commission. These data were obtained through a public records request through the Florida Department of Law Enforcement.

Population

The estimated total population in Florida by April 2020 was 21,596,068 (Figure 4).

The estimated total youth population in Florida during 2019 was 4,308,493, about 20.3% of the total Florida population. The estimated total adult population in Florida during 2019 was 16,960,060, about 79.7% of the total Florida population.

Of the seven regions, the Central Florida Behavioral Health Network, Inc., serves the largest population with over 6.1 million people, 28% of Florida’s population. Big Bend Community Based Care dba NWF Health serves the smallest population, 1.5 million people, 7% of the state’s population, dispersed throughout a larger geographic area.

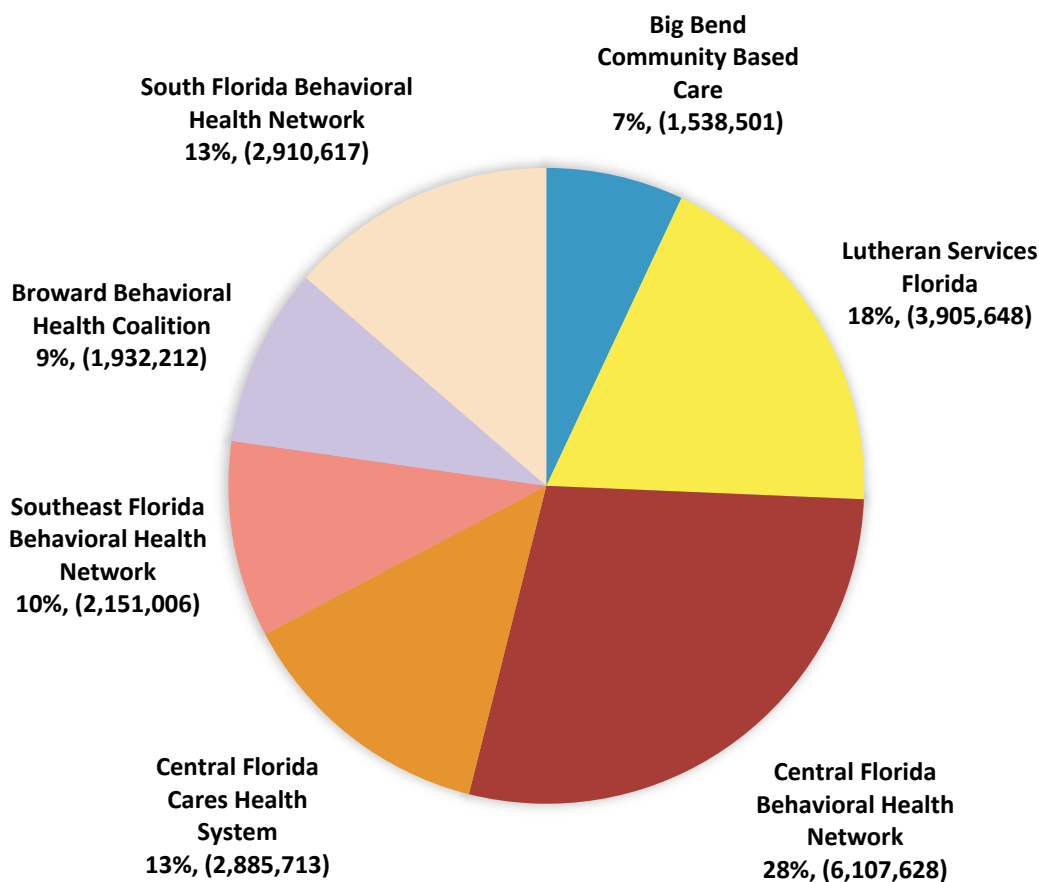


Figure 4. Estimated population by Managing Entity Region, Florida, 2020. Total Population = 21,596,068. Source: [FL BEBR](#).

Substance Use

Substance use is common, though it can lead to negative health consequences. In this section, the prevalence of recent, past-year, and lifetime use is presented for drugs that are commonly abused and/or can result in substance use disorder. The patterns and trends in use for various substances are shown for Florida, alongside the prevalence in the United States as a whole, for comparison. Patterns

and trends of substance use are shown for youth, aged 12 – 17 years, and adults, aged 18 years and older. When sub-state data are available, patterns of and trends in substance use are presented by Managing Entity Region.

Opioids

Opioids are a class of drugs that includes pain relievers available legally by prescription, such as oxycodone (OxyContin®), hydrocodone (Vicodin®), codeine, and morphine. Like their illicit counterparts, prescription opioids can be misused, increasing the risk of adverse consequences such as overdose and death. Opioids that are produced and sold illicitly include heroin and synthetic fentanyl.

Pain Reliever Misuse among Adults

Based on data collected through the National Survey on Drug Use and Health (NSDUH), pain reliever misuse among adults in Florida in the past year has decreased in recent years to 3.8% (Figure 5). During the same period in the US overall, rates have made a similar decrease. It should be noted that the way in which data related to pain reliever misuse has been described and collected during NSDUH has changed over time; thus, starting the series for the 2015-2016 prevalence.

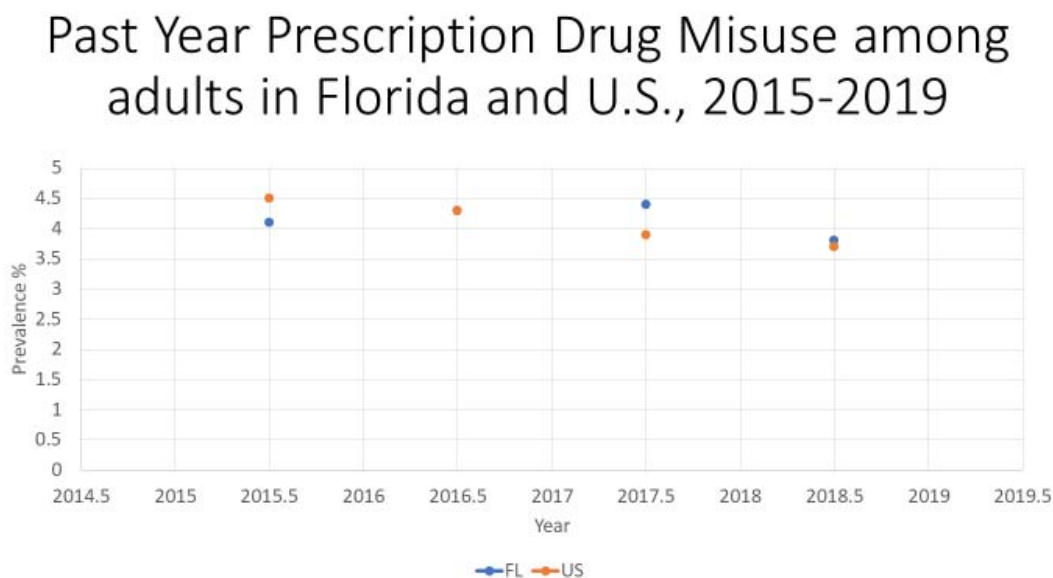


Figure 5. Two-Year Average Past-Year Pain Reliever Misuse among Adults, United States and Florida, 2015 – 2019. Source: [NSDUH](#).

Pain Reliever Misuse among Youth

The pattern of misuse of opioid pain relievers among youth differs from that of adults (Figure 6). Following a steady decline, the rate is now below the prevalence of misuse among adults, at 3.0% and 2.9%, respectively. The same change in the way in which these data are collected during NSDUH

impacted youth as well, resulting in starting the series for the 2015-2016 estimate. As among adults, these numbers should be interpreted with caution.

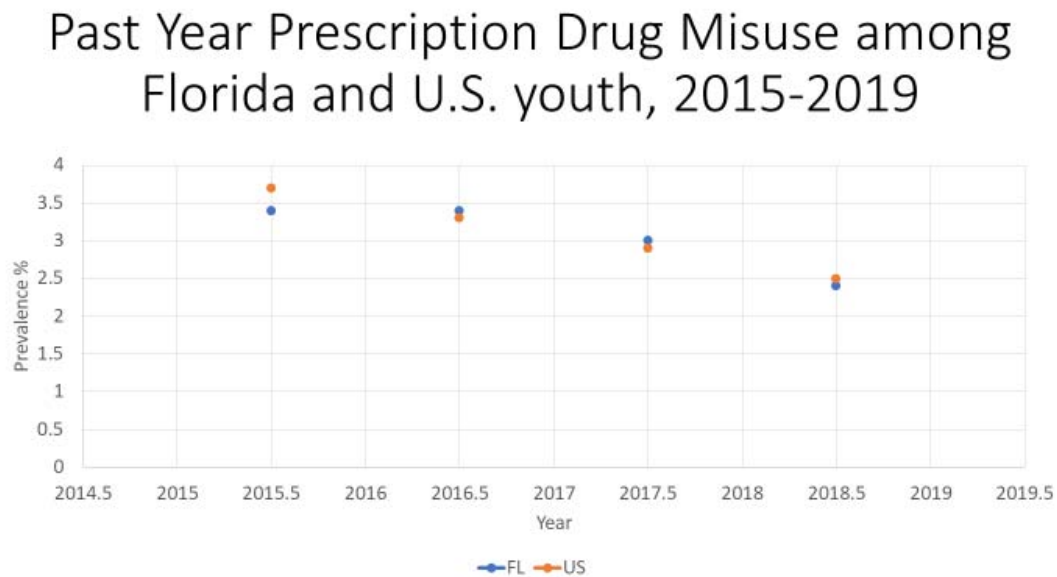


Figure 6. Two-Year Average Past-Year Pain Reliever Misuse among Youth, United States and Florida, 2015 – 2019. Source: [NSDUH](#).

Both lifetime and past 30-day misuse of pain reliever among youth in Florida has decreased for a decade. Past 30-day misuse is at 1.1% and lifetime misuse is above 3% at 3.1% (Figure 7).

Lifetime and Past 30-day Use of Prescription Drugs among Florida Youth, 2010-2020

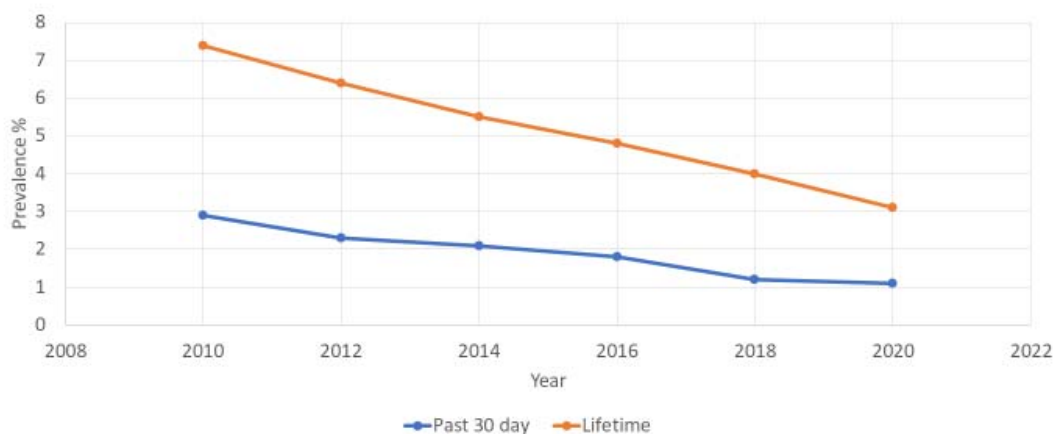


Figure 7. Lifetime and Past 30-day Pain Reliever Misuse among Youth in Florida, 2010 – 2020.¶
Source: [FYSAS](#).

Heroin Use among Adults

Not surprisingly, the prevalence of past-year use of heroin among adults is a fraction of the prevalence of misuse of prescription opioid pain relievers, with less than half of a percentage of Floridians endorsing past-year heroin use (Figure 8). The prevalence among Florida’s adults increased in 2016-2017 but declined slightly for a couple of years. The prevalence of heroin use among adults in Florida has been consistently lower than that of the nation.

Past Year Heroin Use among Adults in Florida and U.S., 2015-2019

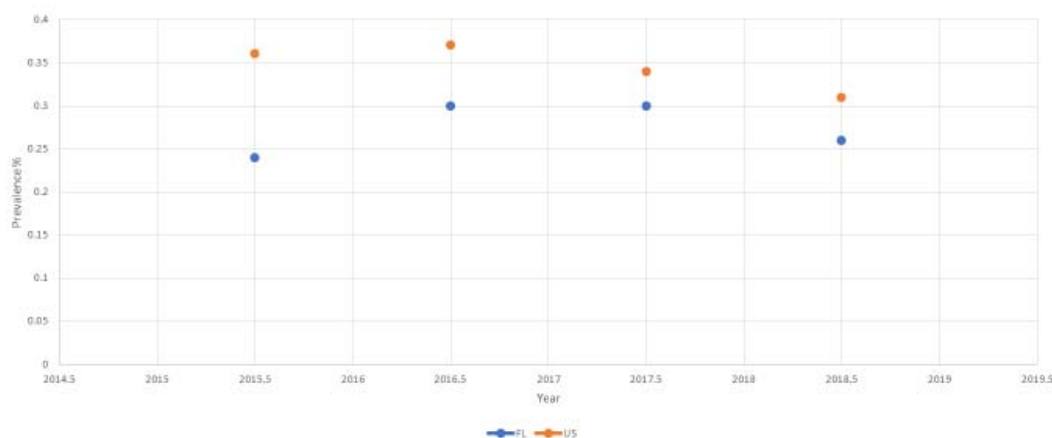


Figure 8. Two-Year Average Past-year Heroin Use among Adults, United States and Florida, 2015 – 2019. Source: [NSDUH](#).

Heroin Use among Youth

Compared to prescription opioid pain reliever misuse, heroin use among youth in Florida and the US is rarer but has decreased at a slower rate (Figure 6 and Figure 7). After a marked increase in use from 2014-2015 to 2015-2016 among Florida youth (but not the US overall), there has been a steady decline to 0.06% of Florida youth aged 12 – 17 years endorsing use of heroin in the past year, which is similar to the prevalence of past-year heroin use among the nation's youth.

Past year heroin use among 12–17-year-olds, Florida and U.S.

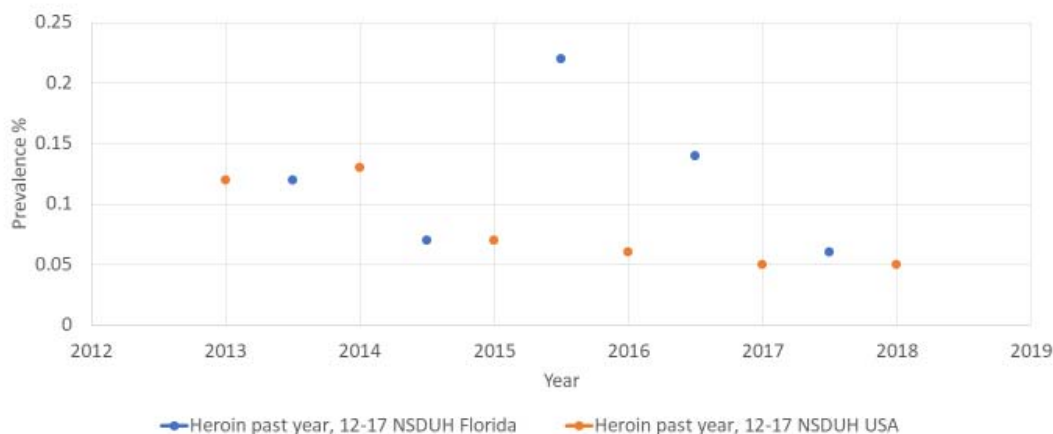


Figure 7. Two-Year Average Past-year Heroin Use among Youth, United States and Florida, 2013 – 2018. Source: [NSDUH](#).

Psychostimulant Use

Like opioids, stimulants are medications available by prescription for the treatment of certain conditions such as narcolepsy. In spite of their medicinal use, however, stimulants can also be misused. In addition to prescription stimulants, several illicit stimulants are also drugs of abuse. Cocaine is a highly-addictive stimulant that is associated with adverse health effects such as overdose and death (National Institute on Drug Abuse, 2018a).

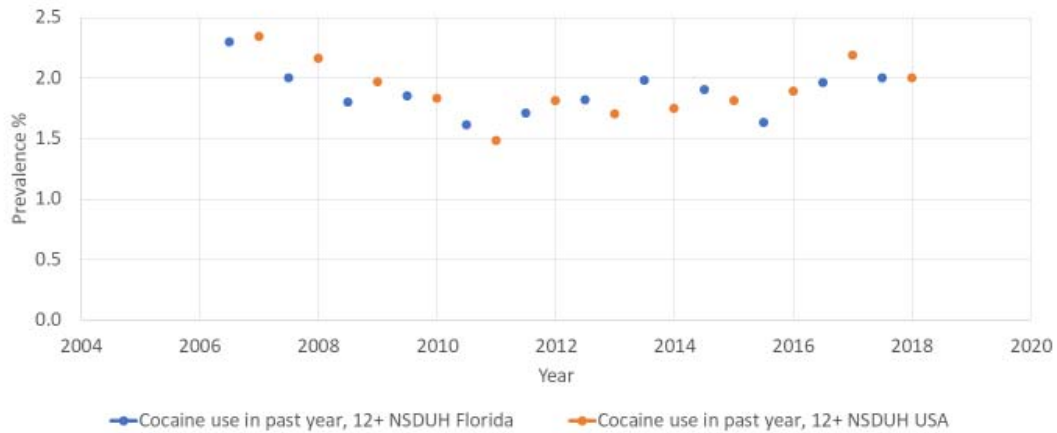
Methamphetamine is another stimulant, which is chemically similar to amphetamines. An overdose of methamphetamine can result in stroke, heart attack, organ problems such as kidney failure, and death.

As both cocaine and methamphetamine are illicit substances, their use has not only the potential for negative health consequences but also criminal justice consequences.

Cocaine Use among Adults

Less common than misuse of prescription opioid pain relievers but more common than use of heroin among adults, 2.1% of adults in Florida endorsed the use of cocaine in the past year, a number similar to that for the nation (2.3%) (**Error! Reference source not found.**). Though the overall trend for the period of observation is down, there has been an increase in the prevalence of past-year use of cocaine among adults in both Florida (from 1.7% in 2014-2015) and the US (from 1.8% in 2013-2014) in the most recent years of reporting.

Cocaine use among adults (12+), Florida and U.S.



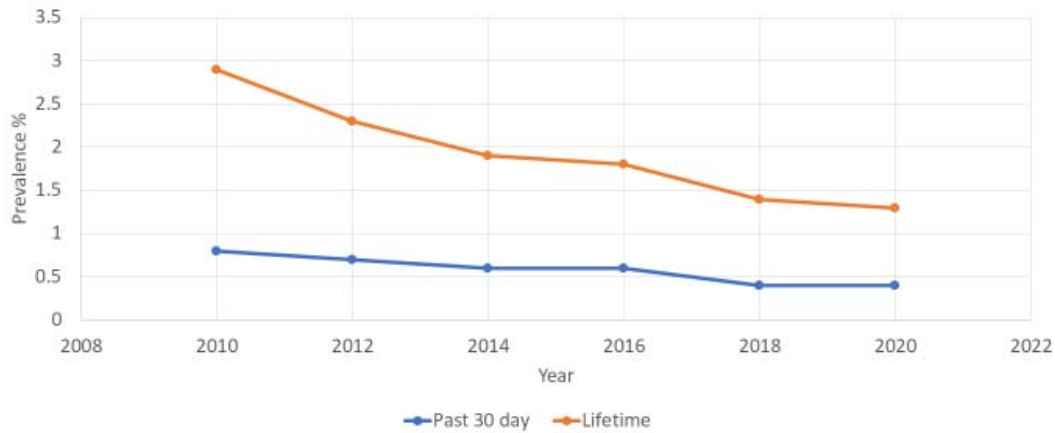
Source: NSDUH

Figure 10. Two-Year Average Past-year Cocaine Use among adults (12+), United States and Florida, 2006 – 2018. Source: [NSDUH](#).

Cocaine Use among Youth

The prevalence of past-year cocaine use among Florida's youth was lower than among adults in 2002-2003 (1.9% versus 2.6%, respectively) and declined more steadily to 0.5% in 2017-2018 (**Error! Reference source not found.** and Figure). The decline in past-year cocaine use among youth in Florida has mirrored the same decline in the country overall, though the prevalence in Florida increased just slightly in 2017-2018 compared to 2016-2017 (0.48% versus 0.45%) (Figure).

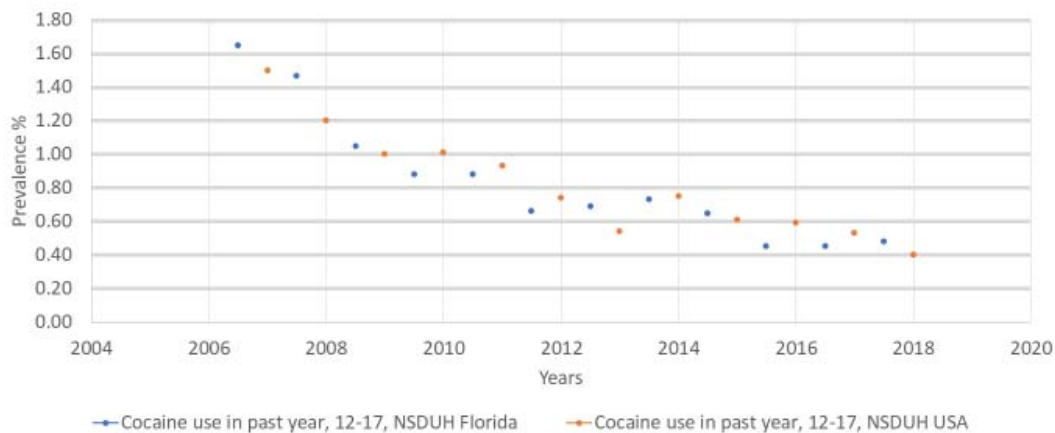
Lifetime and Past 30-day Use of Cocaine among Florida Youth, 2010-2020



Source: FYSAS

Figure 11. Lifetime and Past-year Cocaine Use among Youth in Florida, 2010 – 2020. Source: [FYSAS](#).

Past Year Cocaine Use among 12–17-year-olds



Source: NSDUH

Figure 12. Two-Year Average Past-year Cocaine Use among Youth, United States and Florida, 2006 – 2018. Source: [NSDUH](#).

Methamphetamine Use among Adults

Though there was a slight decline (1 per 1,000 adults) in the prevalence of methamphetamine use in the past year among adults in Florida from 2016-2017 to 2017-2018, the prevalence of methamphetamine has been increasing over the course of the current decade (Figure 13). Note that the way in which the National Survey on Drug Use and Health surveyed respondents about methamphetamine use was revamped in 2014; thus, the break in data for 2013-2014 and 2014-2015. Thus, these data need to be interpreted with caution due to the change in methodology. However, all of the available data are presented for historical context.

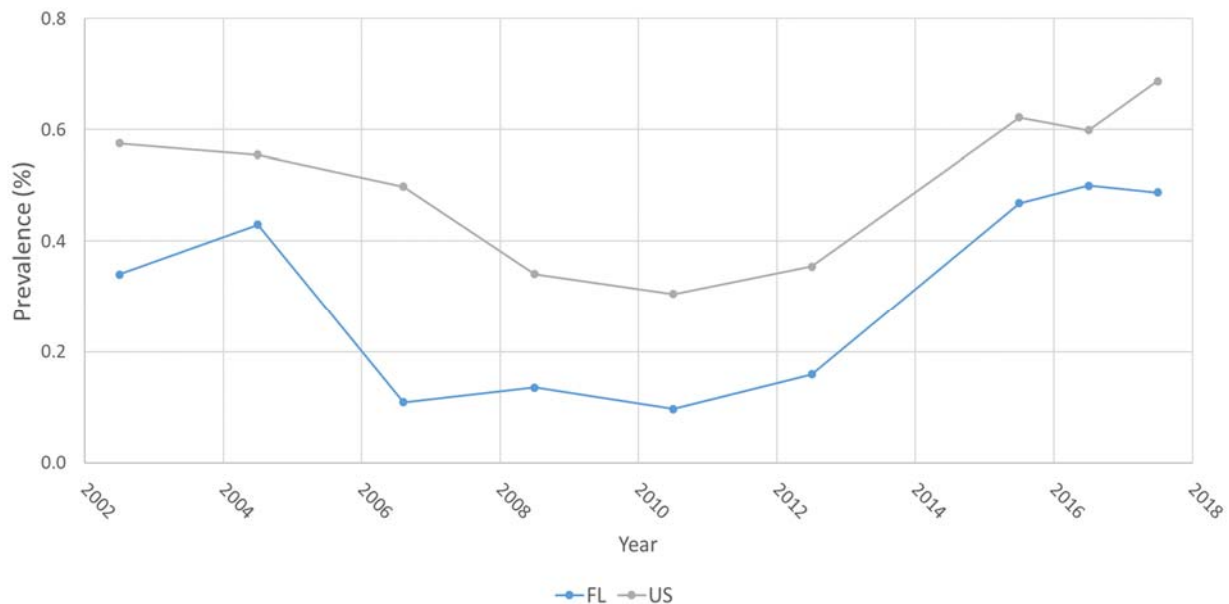


Figure 13. Two-Year Average Past-year Methamphetamine Use among Adults, United States and Florida, 2002 – 2018. Source: [NSDUH](#).

Methamphetamine Use among Youth

Among youth, a different trend has been observed for use of methamphetamine (Figure 14). There was a decline in the prevalence of lifetime methamphetamine use among youth in Florida. A slight increase occurred in 2020 from the previous survey year. From 2010 to 2014, past month use among youth stayed the same at 0.5% prevalence. A decrease in 2016 brought the prevalence rate to 0.4% and has continued to stay at the same rate from 2016 to 2020.

Lifetime and Past 30-day Use of Methamphetamine among Florida Youth, 2010-2020

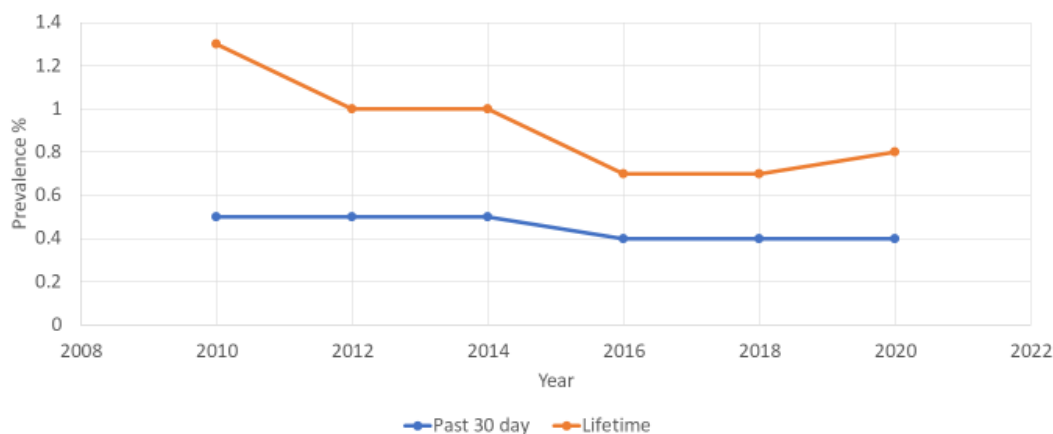


Figure 14. Lifetime and Past-year Methamphetamine Use among Youth in Florida, 2010 – 2020.¶
Source: [FYSAS](#).

Marijuana Use

Though a Schedule 1 drug under federal law, a majority of states have legalized recreational and/or medical use and/or decriminalized use of marijuana. However, use of marijuana is not without consequence. Not only can use of marijuana lead to marijuana use disorder, but there are also short- and long-term effects of marijuana use on the developing brain (NIDA, 2019).

Marijuana Use among Adults

Second to only alcohol among substances covered in this report, just under 10% of adults in Florida endorsed using marijuana in the past month, about two-thirds of the prevalence of marijuana use in the past year (14.5%) (Figure). This is an increase over 2016-2017, and part of a slow, but steady increase observed for the period of observation (6.0% and 10.9% in 2002-2003, respectively). The prevalence of marijuana use – in both the past month and year – in the US and Florida is very similar, with rates in the US remaining just above those for Florida since 2003-2004 and 2004-2005, respectively.

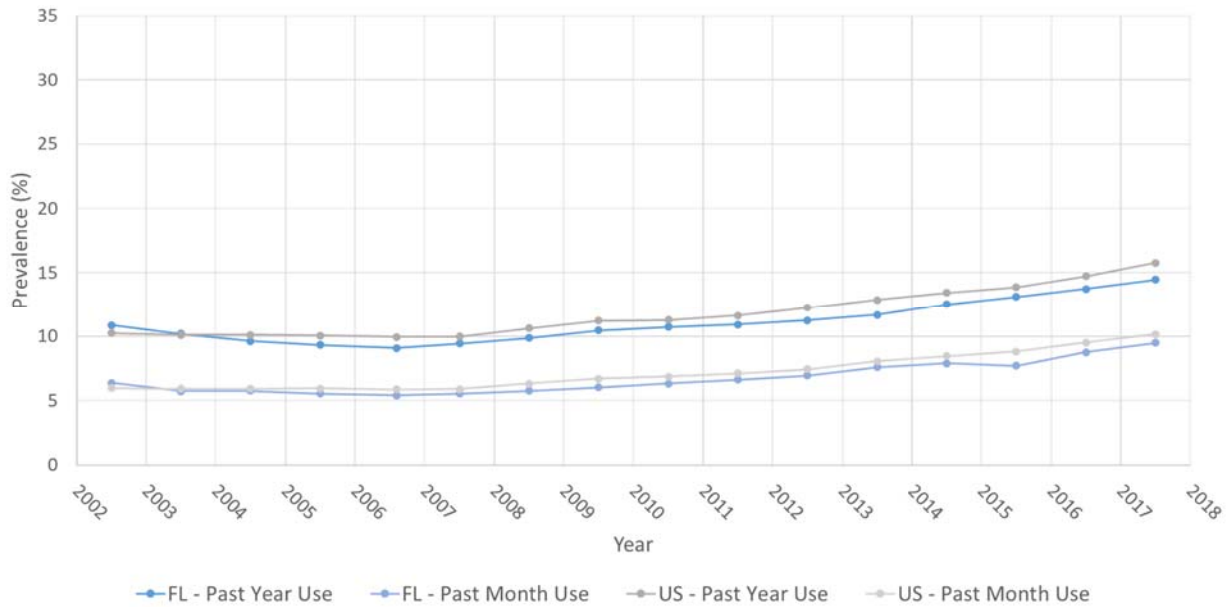


Figure 15. Two-Year Average Marijuana Use Among Adults, Past Year and Past Month, United States and Florida, 2002 – 2018. Source: [NSDUH](#).

Marijuana Use among Youth

Based on data from the *Florida Youth Substance Abuse Survey*, (Figure 16) the prevalence of both lifetime and past 30-day use among Florida youth has decreased slightly from 2010 to 2020.

Past 30-day and Lifetime Marijuana Use among Florida Youth, 2008-2020

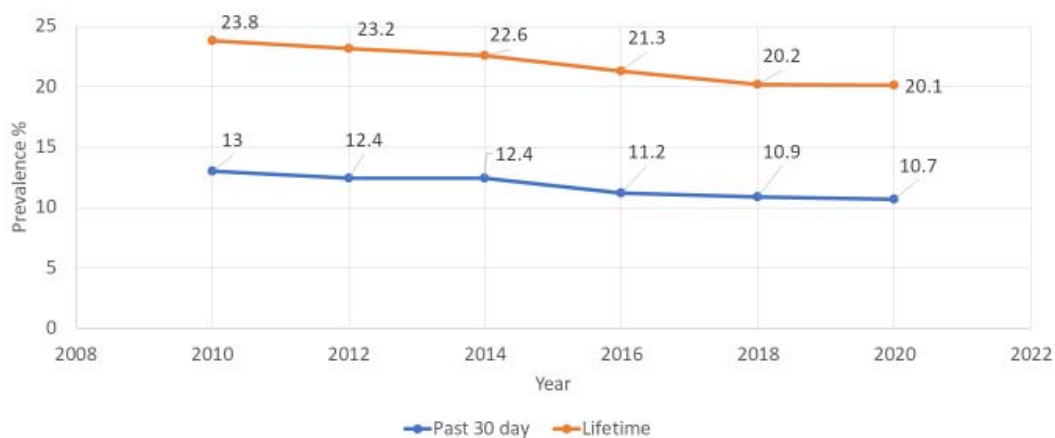
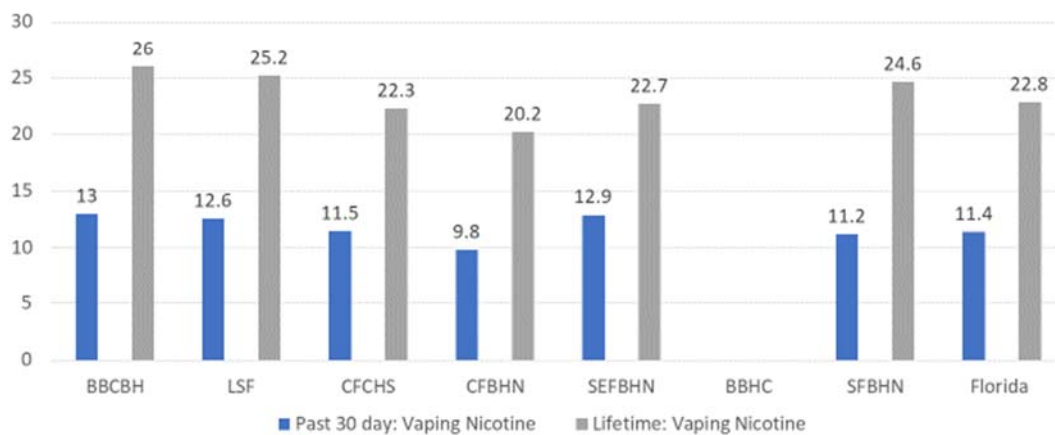


Figure 16. Marijuana Use among Youth, Lifetime and Past Month, Florida, 2010 – 2020. Source: [FYSAS](#).

Vaping Nicotine among Youth

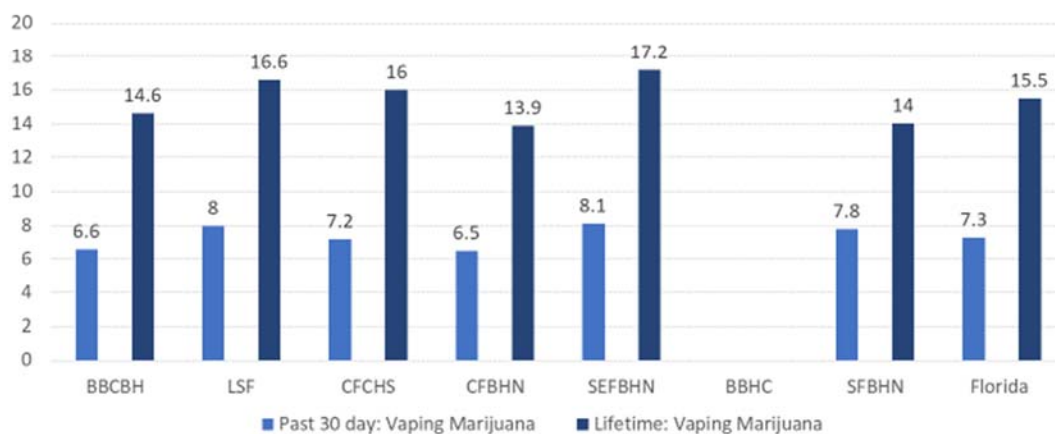
Lifetime and Past 30-day Vaping Nicotine Use by ME, 2020



Source: FYSAS

Vaping Marijuana among Youth

Lifetime and Past 30-day Vaping Marijuana Use by ME, 2020



Source: FYSAS

Alcohol Use

Alcohol use is common in the United States. Consuming too much alcohol can result in a range of negative health consequences including alcohol use disorder and death as well as increased risk of other negative health impacts such as increased engagement in risky and/or violent behaviors.

Alcohol Use among Adults

Though the overall trend for the time period of observation is upward, the prevalence of past-month alcohol use among adults in Florida has declined recently to 50.8% in 2018-2019 (Figure 17). The prevalence of alcohol use among adults is similar in Florida to that of the U.S. A similar trend has been observed for binge drinking among adults as well: the overall trend is slightly upward, but the prevalence has declined for both with the most recent time points (2018-2019) to 22.3% according to the National Survey on Drug Use and Health (Figure 18).

Past 30-day Alcohol Use among adults in Florida and U.S.

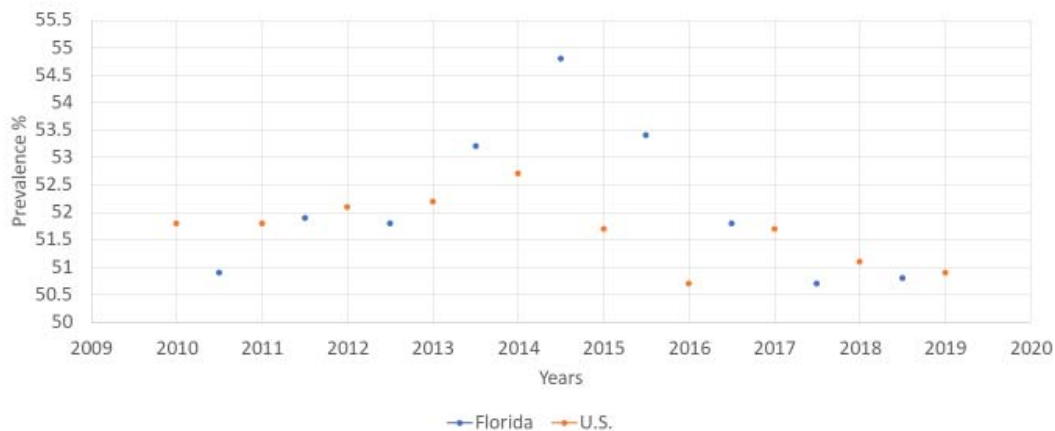


Figure 17. Two-Year Average Past Month Alcohol Use among Adults, United States and Florida, 2010 – 2019. Source: [NSDUH](#).

Binge Drinking among adults in Florida and U.S.

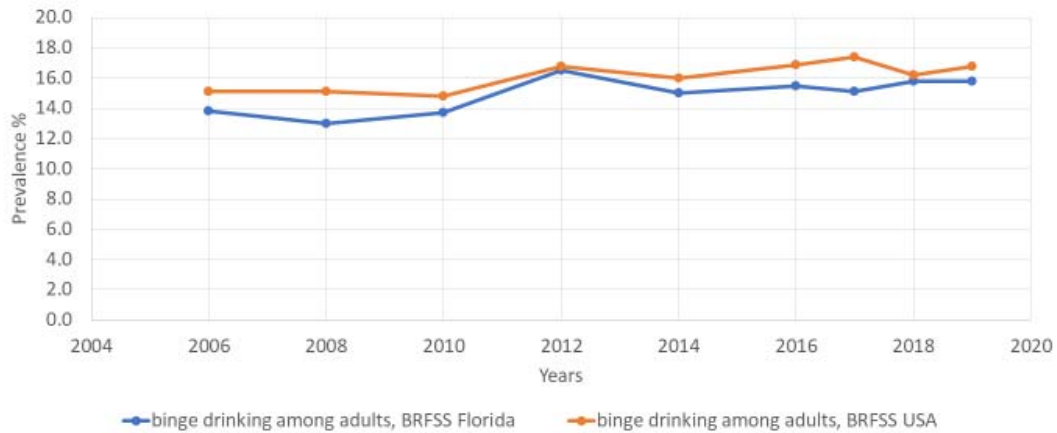


Figure 18. Past Year Binge Drinking Use among Adults, United States and Florida, 2010 – 2019.¶
Source: [BRFSS](#).

Alcohol Use among Youth

Past month alcohol use among youth in Florida and the U.S. has decreased since 2006 (Figure 19). Lifetime use among Florida youth has also decreased since 2008 (Figure 20). Binge drinking has had similar patterns with declining prevalence among Florida youth (Figure 21). Note the same break in the data series due to changes in the [National Survey on Drug Use and Health](#).

Past 30-day Alcohol Use among U.S. and Florida Youth 12-17, 2006-2019

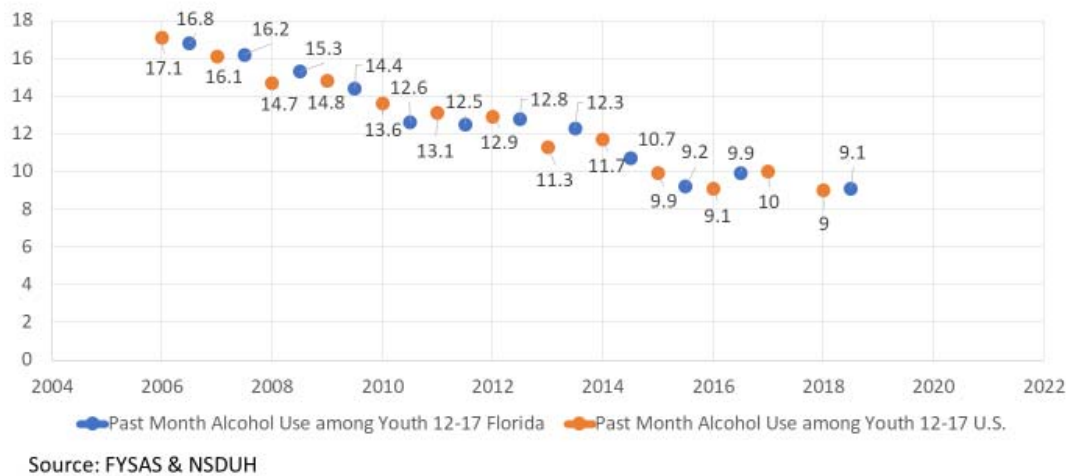


Figure 19. Alcohol Use among Youth, Past Month, United States and Florida, 2006 – 2019. Source: NSDUH and [FYSAS](#).

Lifetime and 30-day Alcohol Use among Florida Youth

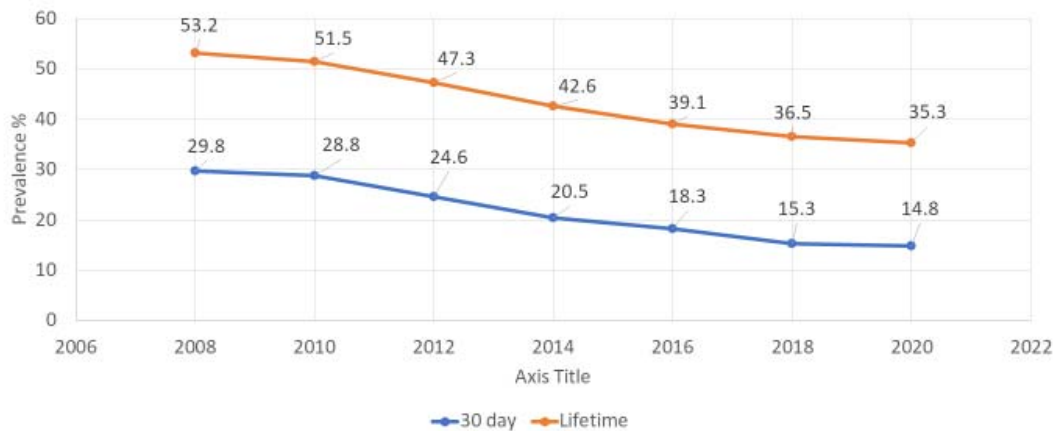
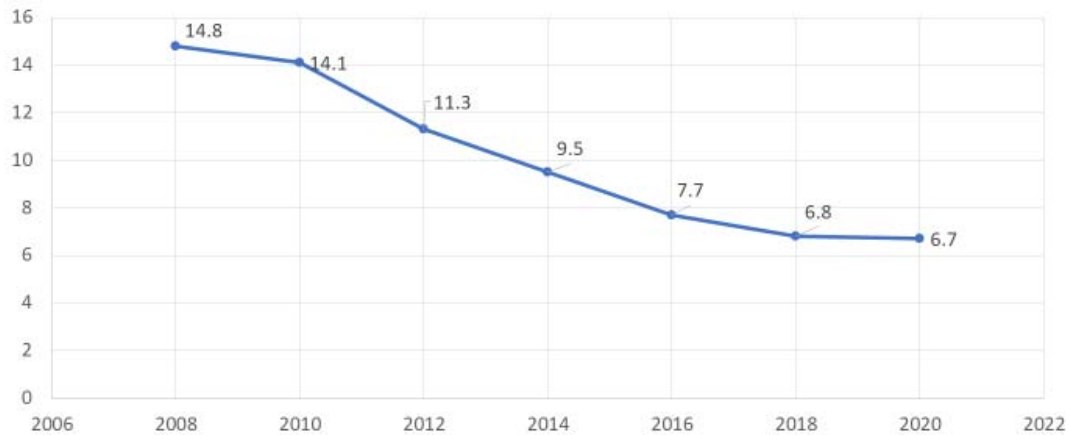


Figure 20. Alcohol Use among Youth, Lifetime and Past Month, Florida, 2008 – 2020. Source: [FYSAS](#).

Binge Drinking among Florida Youth, 2008-2020



Source: FYSAS

Figure 8. Binge Alcohol Use among Youth, Florida, 2008 – 2020. Source: FYSAS.

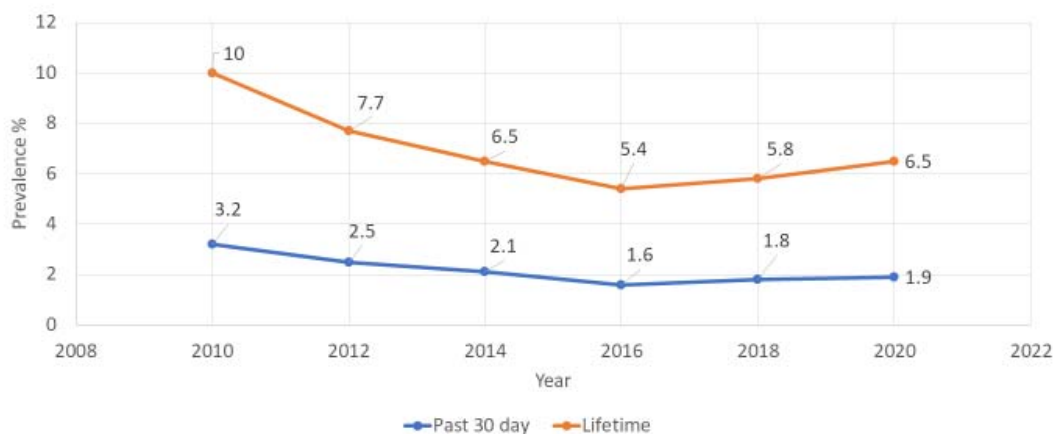
Inhalant Use

Inhalants refer to various household products such as solvents and aerosol sprays that are only used through inhalation. Used principally by children and youth, inhalants are the only substance used more often by children than adults. Thus, only inhalant use data among youth are reported here.

Inhalant Use among Youth

Following a decline in lifetime use of inhalants among youth in Florida, the prevalence of lifetime inhalant use has crept back up during the last two years from 5.8% in 2018 to 6.5% in 2020 (Figure 22). A similar trend in past-month use of inhalants among Florida youth was also observed with the lowest prevalence of past-month use in a decade in 2016 with 1.6% and then increased up to 1.9% in 2020.

Lifetime and Past 30-day Use of Inhalants among Florida youth, 2010- 2020



Source: FYSAS

Figure 22. Inhalant Use among Youth, Lifetime and Past Month Florida, 2010 – 2020. Source: [FYSAS](#).

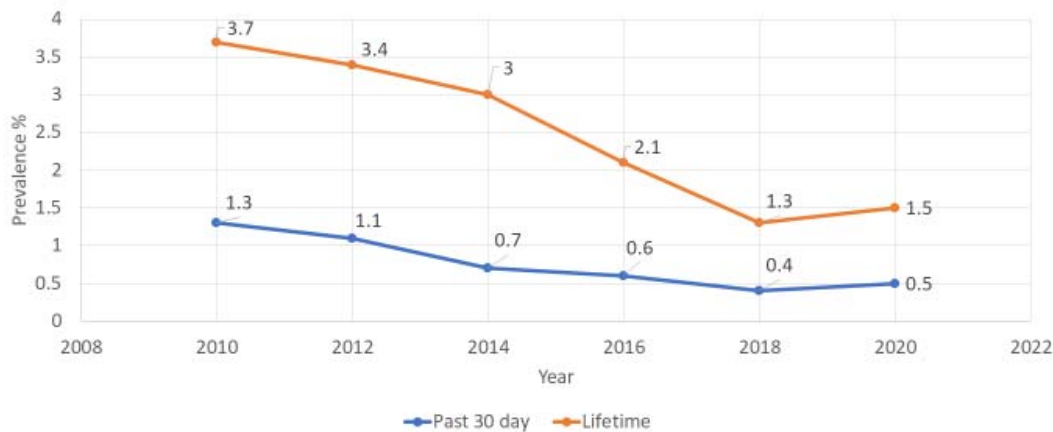
Club Drug Use

Club drugs earned their moniker for being a group of substances commonly used by youth and young adults at parties and in entertainment venues, such as nightclubs and concert venues. Club drugs are a mix of drugs from various classes, including gamma-hydroxybutyrate (GHB), ketamine, LSD (also known as acid), MDMA (also known as ecstasy), methamphetamine, and Rohypnol®.

Club drug use among Florida youth is seeing a decreasing trend since 2010 for lifetime and past month use (Figure 23). However, for both lifetime and past month use club drug use among youth increased in 2020 from 2018. In 2014, past month use fell below 1% for the first time and has continued to stay under 1%.

Club Drug Use among Youth

Lifetime and Past 30-day Use of Club Drugs among Florida Youth, 2010-2020



Source: FYSAS

Figure 23. Lifetime and Past 30-day Club Drug Use among Youth, Florida 2010 – 2020. Source: [FYSAS](#).

Select Consequences of Substance Use

Though substance use, particularly prescription medications, may result in positive outcomes, there are myriad negative consequences that can result from substance use. Some of those consequences include drug-related arrests and citations, a portion of which co-occur with poor health outcomes. As represented in the *Injury Pyramid for Substance Use* (Figure 1), only a portion of those who use substances will experience these negative consequences, which can both directly and in-directly contribute to poor health outcomes, potentially resulting in long-term health disparities.

Data for arrests and citations have not been updated from data source cite. Therefore, data from the previous Annual Report has been cited. Suggested citation: Gurka KK, DeCanio GD. Patterns of and Trends in Substance Use in Florida, Overall and by Managing Entity Region: Annual Report, 2020.

Arrests and Citations

Based on annual uniform crime reports for Florida, arrests in general have been steadily declining since 2008, with a fair amount of variability between regions (Figure 24).

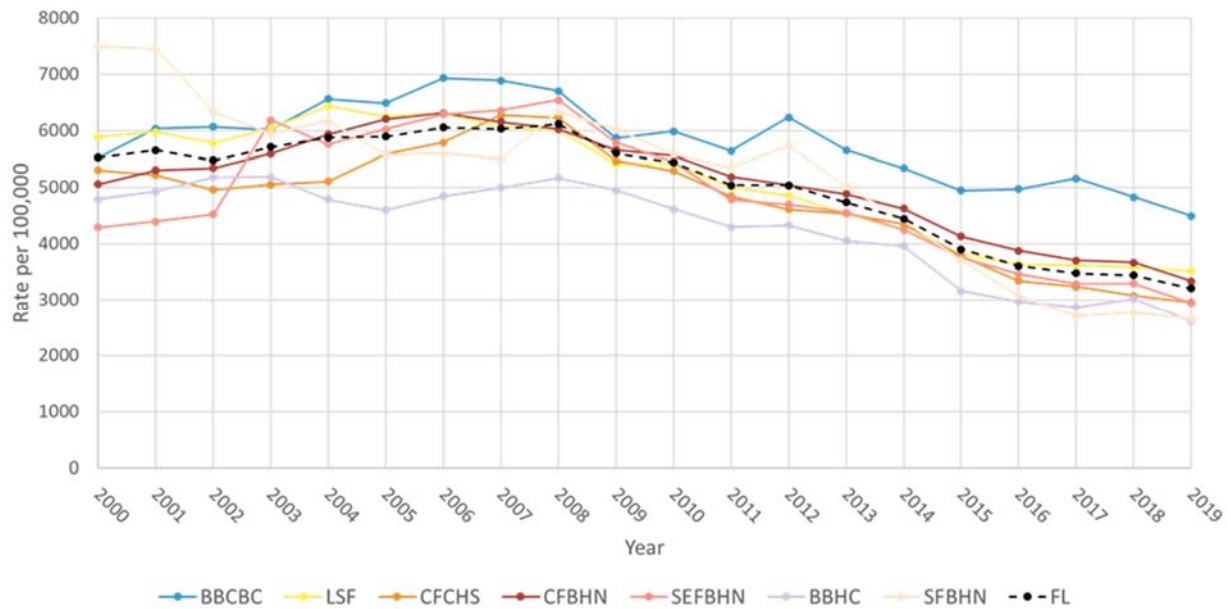


Figure 24. Total Arrests, Florida and Managing Entity Regions, 2000 – 2019. Source: [FDLE Annual UCR](#).

Drug arrests have comprised anywhere from 13.3% (in 2012) to 18.8% (in 2018) of all arrests, during the twenty-year time period covered in this report.

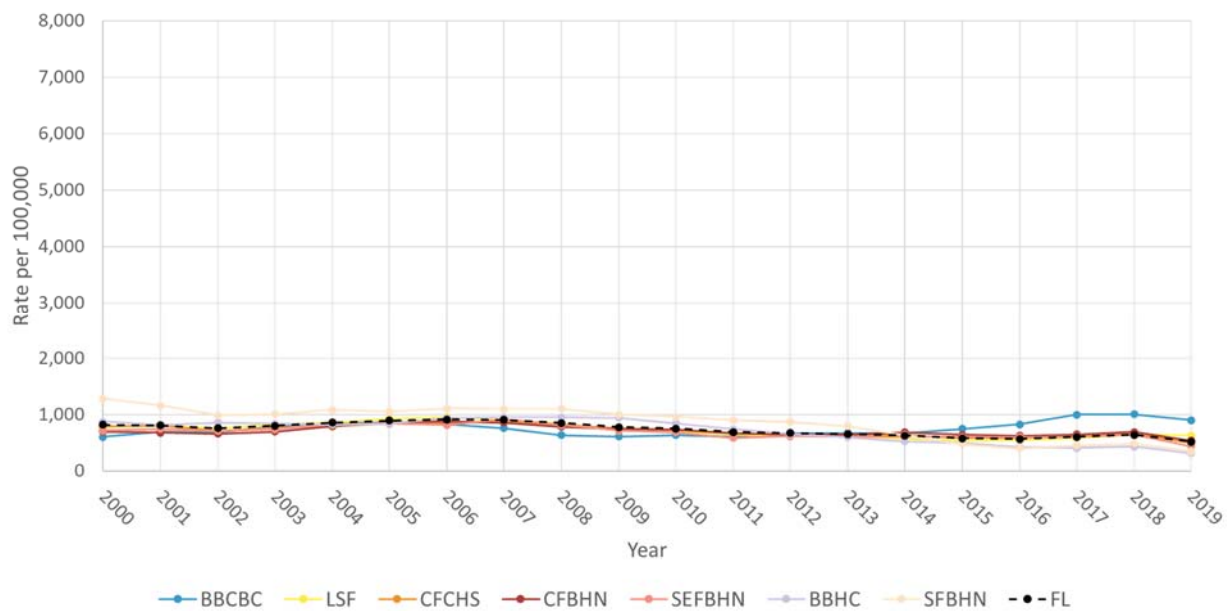


Figure 25. Drug Arrests, Florida and Managing Entity Regions, 2000 – 2019. Source: [FDLE Annual UCR](#).

Drug Arrests

Similar to arrests overall, there has also been variability in drug arrests by Managing Entity Regions (Figure 26).

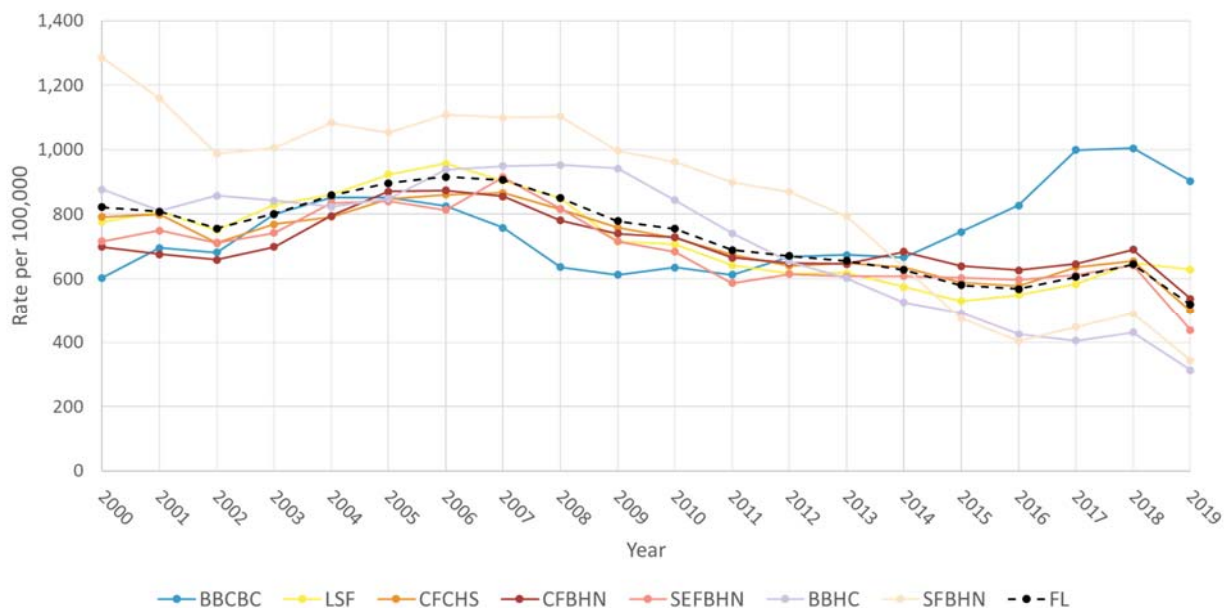


Figure 26. Drug Arrests, Florida and Managing Entity Regions, 2000 – 2019.¶
Source: FDLE [Annual UCR](#).

Though the rate of drug arrests in the region served by Big Bend Community Based Care dba NWF Health largely remained below statewide rates early in the period of observation, the rates saw a marked increase beginning in 2014, ending with a rate of 903 drug arrests per 100,00 population in 2019 compared to 519 drug arrests per 100,000 population in Florida overall that year (Figure 27).

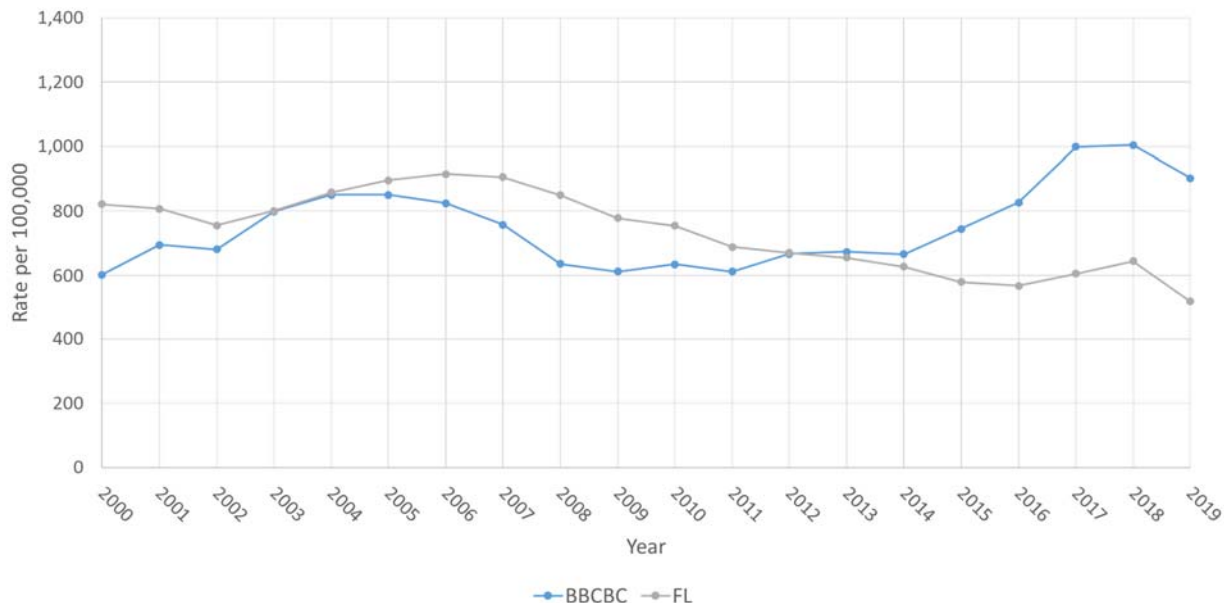


Figure 27. Drug Arrests, Florida and Big Bend Community Based Care dba NWF Health, 2000 – 2019.¶
Source: [FDLE Annual UCR](#).

Rates of drug arrest in northeast, north central, central, and as far south as the sun coast and southeast Florida regions, all tracked closely to those of the state overall. Rates of drug arrest in the region served by Lutheran Services Florida tracked closely with the state overall, but declined more slowly from 2018 to 2019, when the rate was 629 drug arrests per 100,000 population (Figure 28).

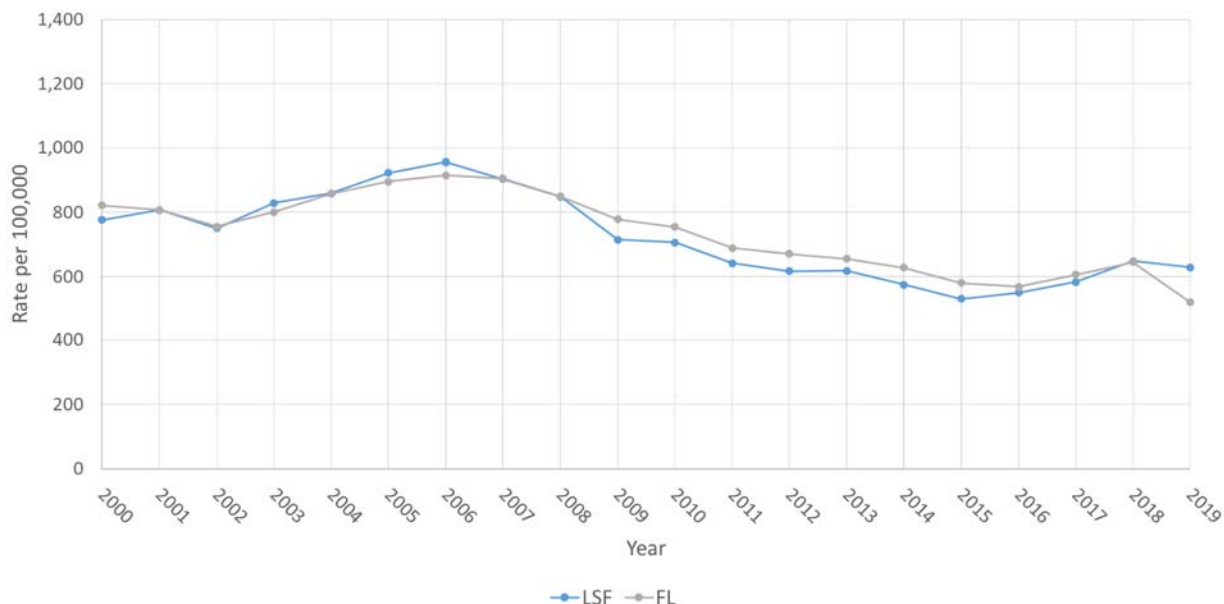


Figure 28. Drug Arrests, Florida and Lutheran Services Florida, 2000 – 2019.¶ Source: [FDLE Annual UCR](#).

Drug arrest rates in the region served by the Central Florida Cares Health System mimicked the statewide trend, ending with a rate just below the state in 2019 of 500 drug arrests per 100,000 population (Figure 29).

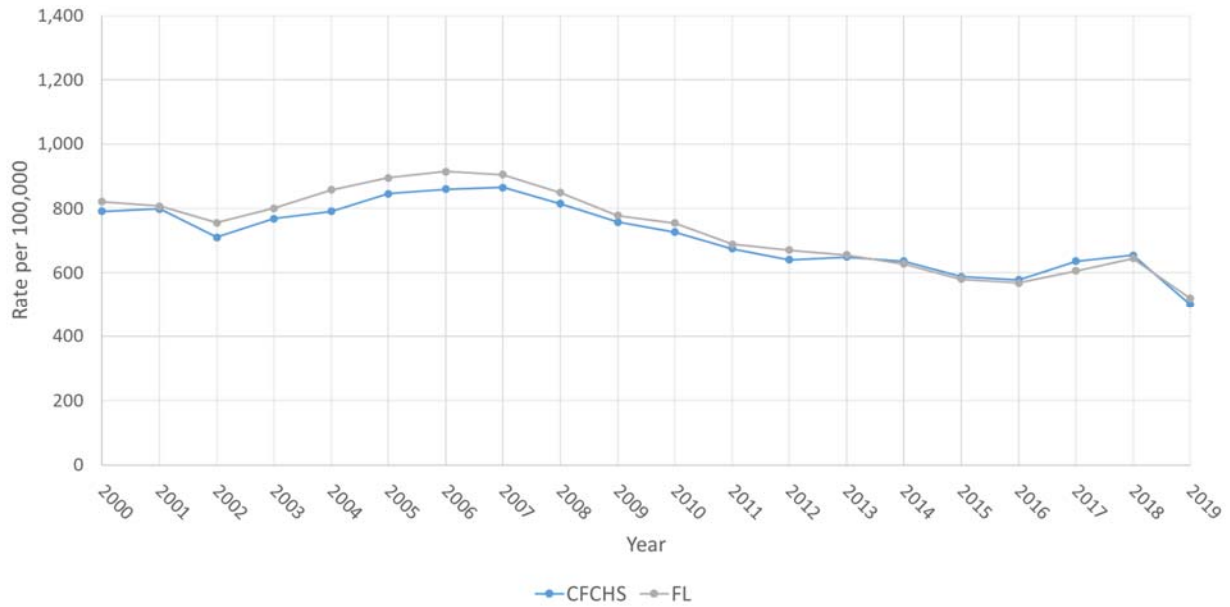


Figure 29. Drug Arrests, Florida and Central Florida Cares Health System, 2000 – 2019. Source: [FDLE Annual UCR](#).

Similarly, rates in the region served by Central Florida Behavioral Health Network, Inc. followed nearly the same trend as the state overall, ending with a rate of 538 per 100,000 population, just above that for Florida as a whole (Figure 30).

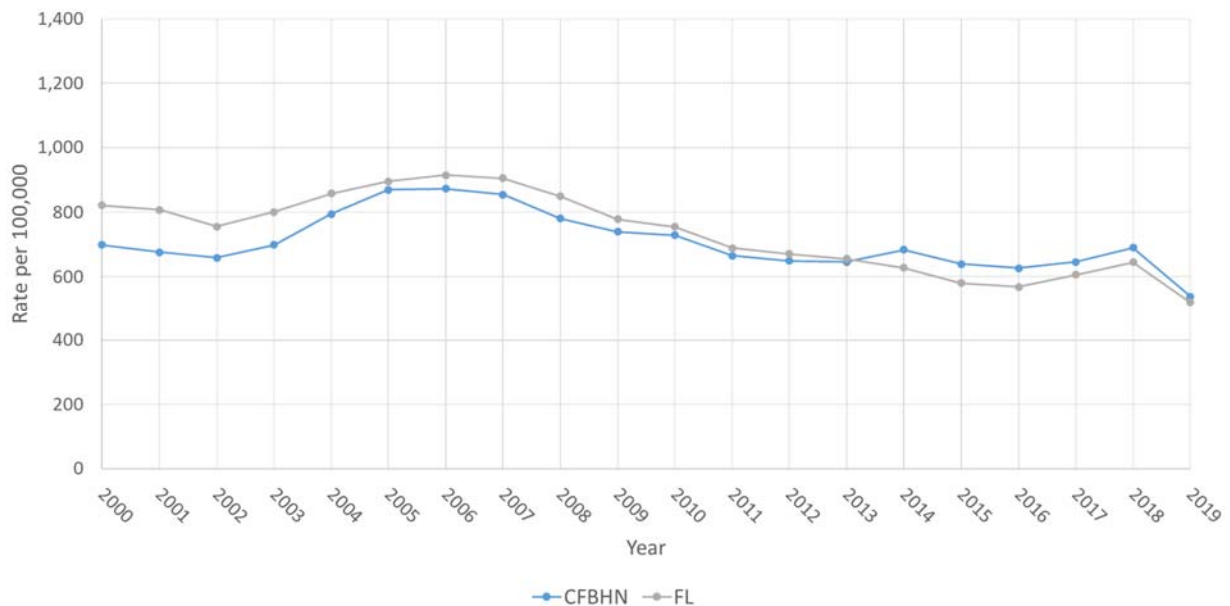


Figure 30. Drug Arrests, Florida and Central Florida Behavioral Health Network, Inc., 2000 – 2019. Source: [FDLE Annual UCR](#).

Likewise, the pattern observed in rates of drug arrest in the region served by Southeast Florida Behavioral Health Network have been similar to those for the state as a whole, though declining faster from 2018 to a rate of 439 drug arrests per 100,000 population in 2019 (Figure 31).

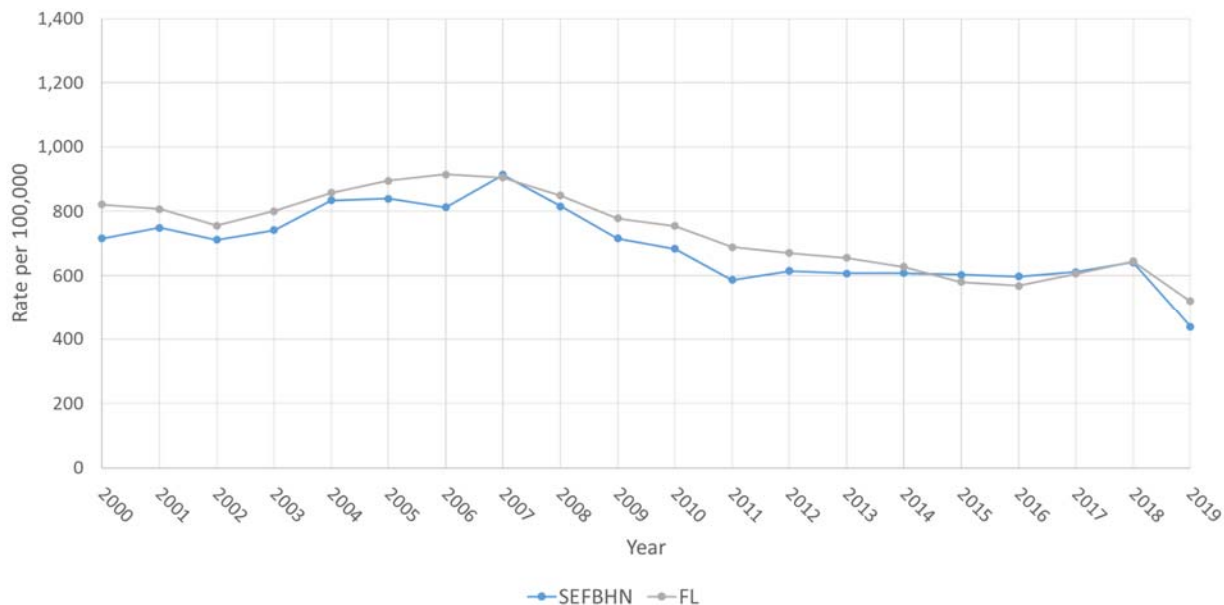


Figure 31. Drug Arrests, Florida and Southeast Florida Behavioral Health Network, 2000 – 2019.¶
Source: [FDLE Annual UCR](#).

In the southernmost part of the state, trends differed somewhat from the state as a whole. Rates declined for the regions served by BBHC and SFBHN and fell below the state overall for the past several years. In spite of rates of drug arrest above the state overall for most of the period of observation, rates declined in the region served by South Florida Behavioral Health Network, Inc. dba Thriving Mind in recent years, resulting in rates below that of the state overall. In 2019, the rate of drug arrest declined to 344 drug arrests per 100,000 population in this southernmost region (Figure 32).

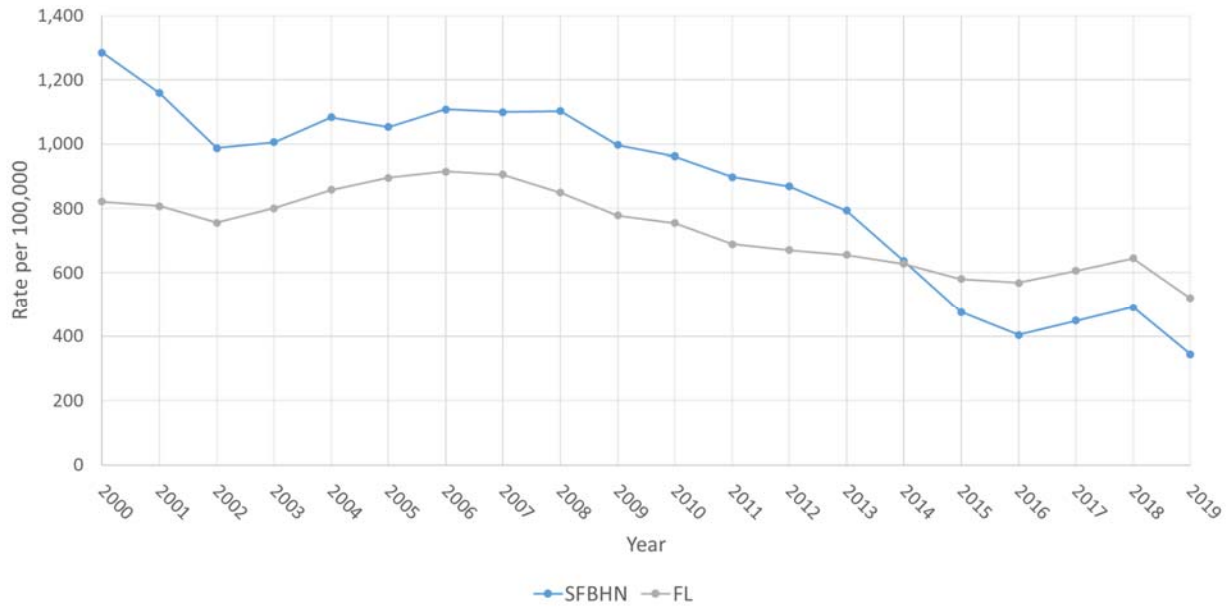


Figure 32. Drug Arrests, Florida and South Florida Behavioral Health Network, Inc. dba Thriving Mind, 2000 – 2019. Source: [FDLE Annual UCR](#).

In Broward County, rates of drug arrest tracked more closely with those of the state overall than the region served by South Florida Behavioral Health Network, Inc. dba Thriving Mind and then began much earlier, resulting in the lowest rate of drug arrest in the state in 2019, 314 drug arrests per 100,000 (Figure 33).

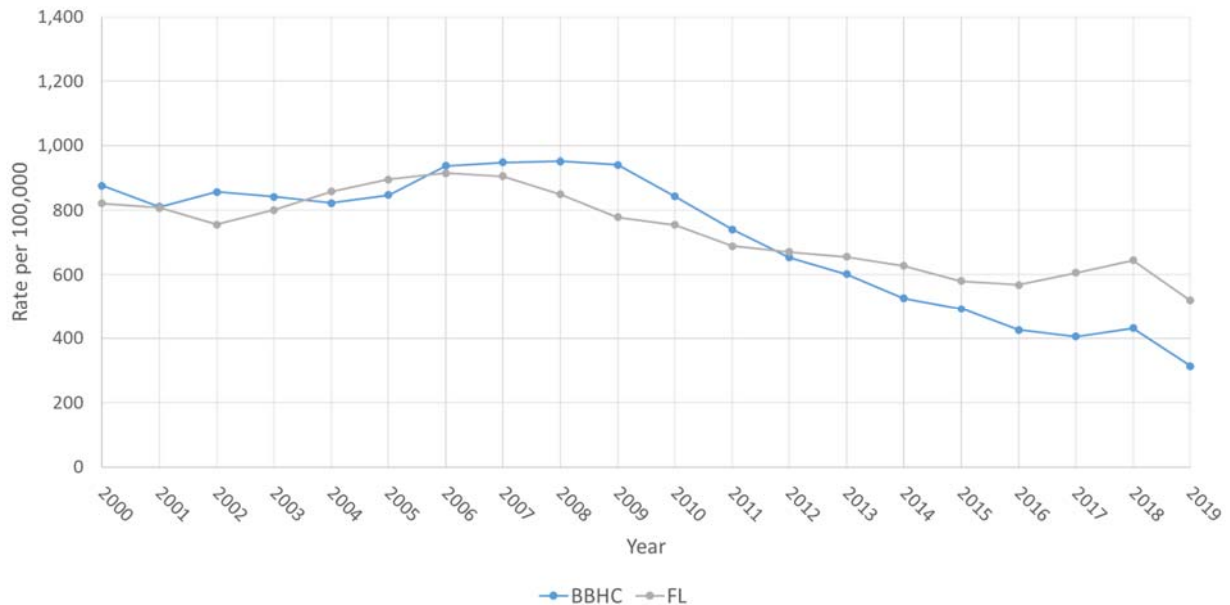


Figure 33. Drug Arrests, Florida and Broward Behavioral Health Coalition, 2000 – 2019. Source: [FDLE Annual UCR](#).

Florida Alcohol- and Drug-related Motor Vehicle Crashes, Injuries, and Fatalities

Driving under the influence of alcohol and other substances increases the risk of motor vehicle crash (MVC). Continuing up the *Injury Pyramid for Substance Use* (Figure 1), fewer crashes involving substances occur than citations for driving under the influence of alcohol, but a portion of these events result directly in traumatic injury that at times is fatal. Data for motor vehicle crashes involving alcohol alone, drugs alone, and alcohol and drugs are presented in the next three sections of the report.

Motor Vehicle Crashes Confirmed to Involve Alcohol

In 2020, there were 4,429 impaired driving crashes involving alcohol only. Of these 4,429 crashes, 297 were fatal crashes from alcohol only and resulting in 2,487 injuries from impaired driving crashes.

Source: [FLHSMV](#).

Motor Vehicle Crashes Confirmed to Involve Drugs Other than Alcohol

Impaired driving with drugs only resulted in 673 confirmed crashes. This resulted in 348 fatalities from impaired driving crashes with drugs only and leaving 559 injured from driving crashes with drugs only.

Source: [FLHSMV](#).

Motor Vehicle Crashes Confirmed to Involve Both Drugs and Alcohol

There were 386 Impaired driving crashes from alcohol and drugs resulting in 300 fatalities and injuring 324 out of the 386 total crashes that involved both drugs and alcohol.

Source: [FLHSMV](#).

Mortality: Fatal Poisoning

At the top of the injury pyramid (Figure 1), are those direct consequences of substance use with the most severe health outcome, fatal drug overdose. Following a four-year increase in the rate of drug poisoning death in Florida, the state, as well as the nation, saw a decline in drug poisoning mortality in 2018. However, the mortality rate for 2018 remains over three times the rate observed for 1999. Early in the current epidemic of fatal drug poisonings, the mortality in Florida exceeded that of the US overall. After a decline in the early 2010s, during which the mortality rate in Florida fell below that of the nation, the rate in Florida began trending up again (Figure 34). For the first time in nearly two decades, the rate of fatal drug poisonings in the nation declined; the same decline occurred in Florida. However, provisional estimates for 2019 suggest that these deaths rose again in 2019 (O'Donnell, et al, 2020).

Data for fatal poisonings have not been updated from data source cite. Therefore, data from the previous Annual Report has been cited. Suggested citation: Gurka KK, DeCanio GD. Patterns of and Trends in Substance Use in Florida, Overall and by Managing Entity Region: Annual Report, 2020.

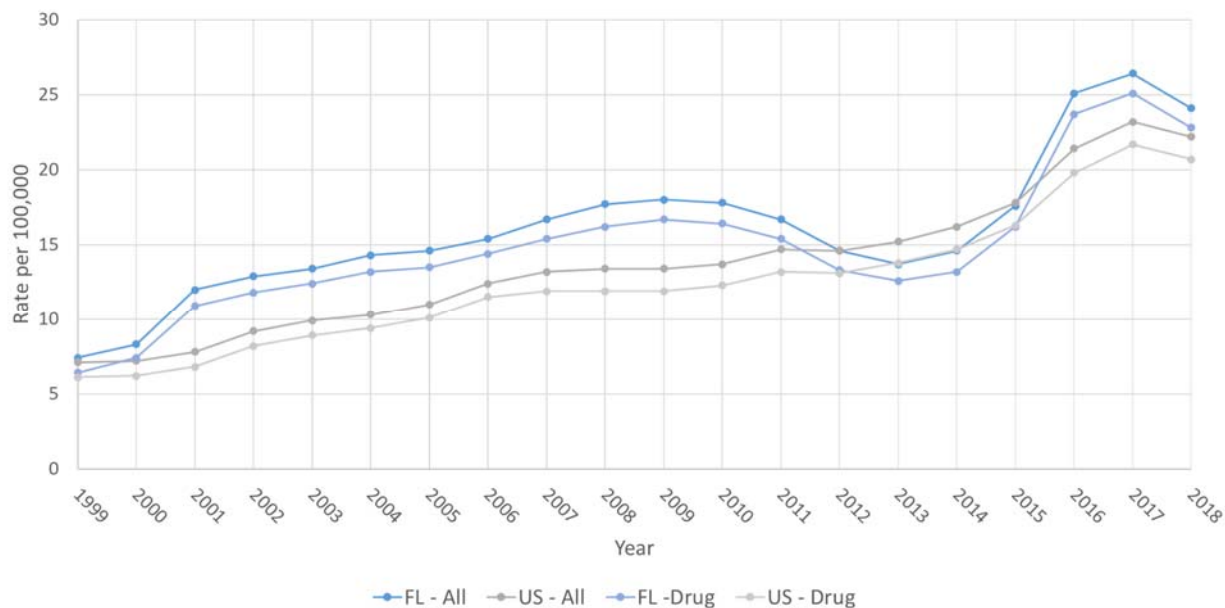


Figure 34. Age-Adjusted Mortality Rate, Overall and Drug Poisoning, United States and Florida, 1999 – 2018. Source: [CDC WONDER](#).

Opioids

Opioids remain the most common cause of death among fatal drug poisonings across the state and the nation, and the patterns and trends in overall drug poisoning rates are largely driven by opioids (Figure 35). However, the specific opioid(s) driving the trends has changed over time. The epidemic has been described as having three waves: prescription opioids, heroin, and synthetic opioids (primarily illicitly produced fentanyl) (Ciccarone, 2019).

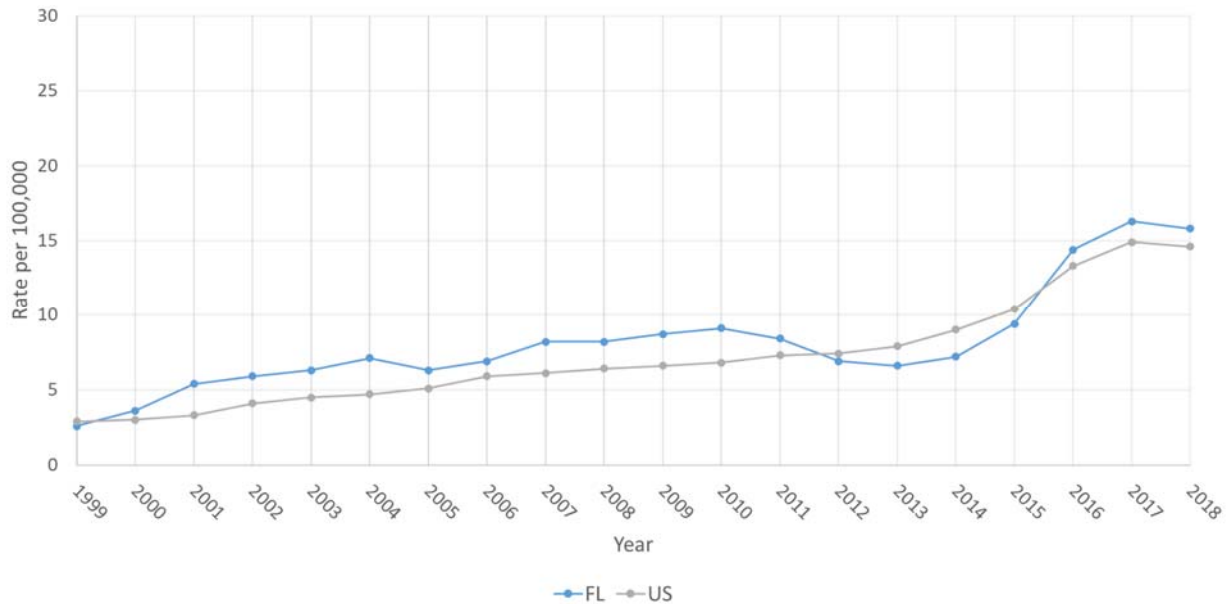


Figure 35. Age-Adjusted Mortality Rate, Any Opioid, United States and Florida, 1999 – 2018.¶

Source: [CDC WONDER](#).¶

Deaths due to natural or semi-synthetic opioids peaked in 2010 in Florida and steadily declined through 2014, after which these deaths again began to rise (Figure 36). Unlike the US that saw a decline in these deaths from 2017 to 2018, the age-adjusted rate of these deaths remained the same in Florida in 2018 and 2017 at 5.4 deaths per 100,000 population.

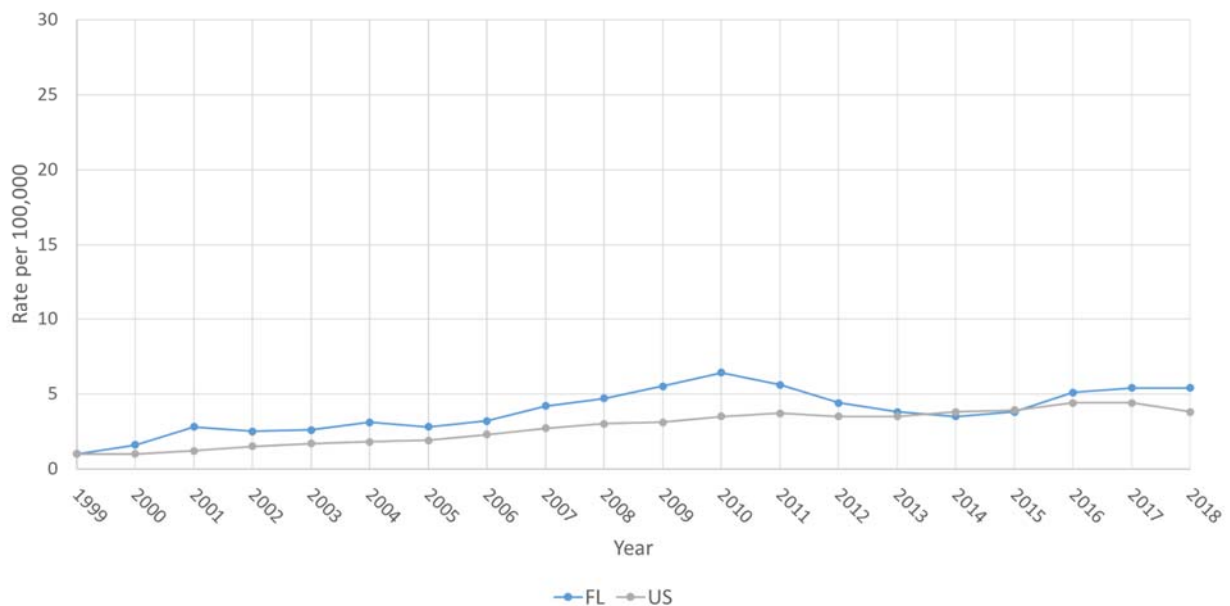


Figure 36. Age-Adjusted Mortality Rate, Natural or Semi-Synthetic Opioid, United States and Florida, 1999 – 2018.¶

Source: [CDC WONDER](#).¶

Peaking later, deaths caused by heroin rose at a similar rate in Florida and the US overall, reaching the highest rates in 2016 and 2017 for both the state and nation (Figure 37). The heroin-specific death rate declined in both Florida and the US in 2018 to 4.7 and 3.5 deaths per 100,000 population, respectively.

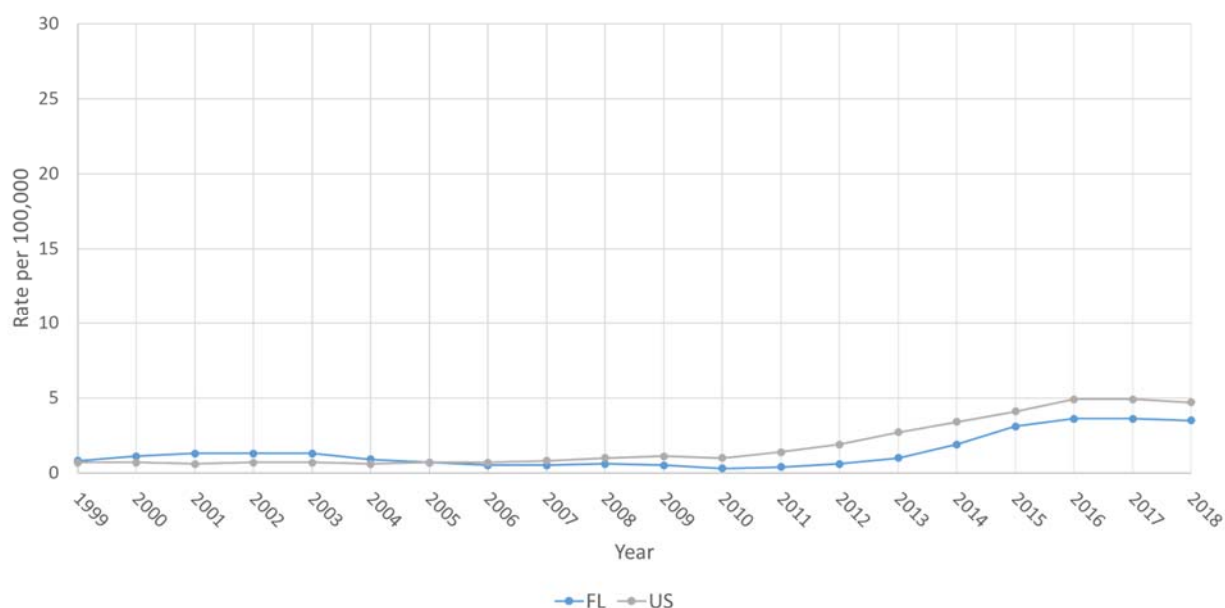


Figure 37. Age-Adjusted Mortality Rate, Heroin, United States and Florida, 1999 – 2018. Source: [CDC WONDER](#).

Increases in deaths due to synthetic opioids excluding methadone, which includes clandestine-made synthetic fentanyl, began still later (Figure 38). Though Florida did experience a decline in these deaths from 11 deaths per 100,000 population in 2017 to 10.7 deaths per 100,000 in 2018, the same decline did not occur in the nation as a whole, with rates increasing from 9.0 deaths per 100,000 in 2017 to 9.9 deaths per 100,000 population in 2018.

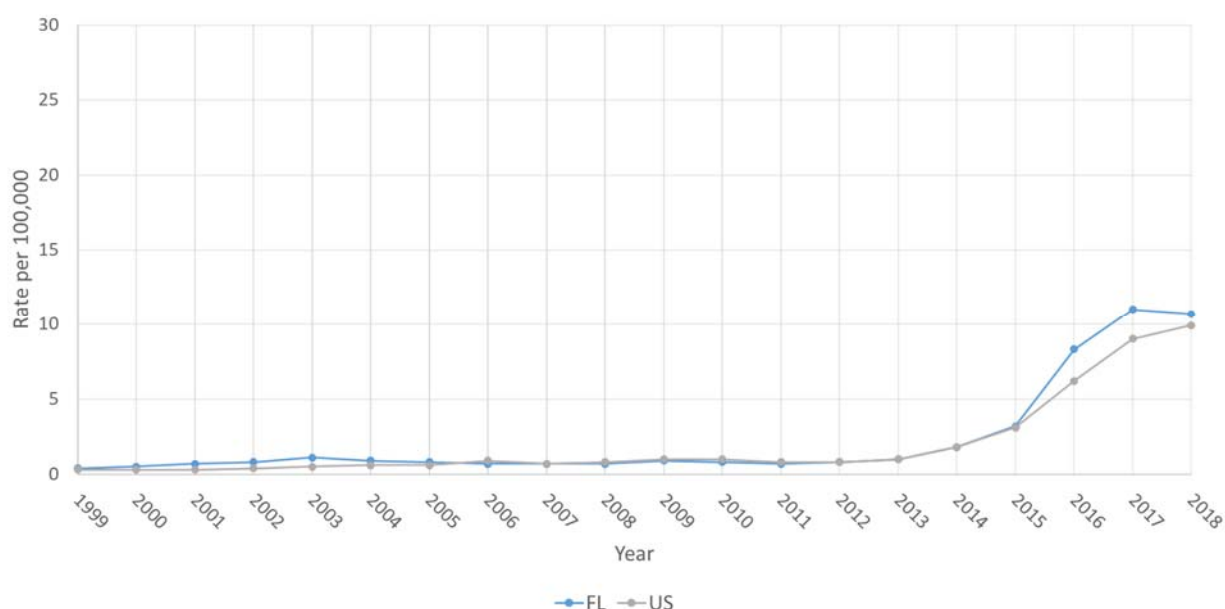


Figure 9. Age-Adjusted Mortality Rate, Synthetic Opioid*, United States and Florida, 1999 –2018.

*Excludes Methadone. Source: [CDC WONDER](#).

Stimulants

Fatal drug poisonings due to stimulants have been increasing recently across the nation as well. Florida has experienced a nearly parallel rise with the US, experiencing rates similar to that of the nation as a whole for both cocaine and psychostimulants (Figure 39 and Figure 40). Cocaine-caused deaths rose for much of the first decade of the 21st century, ending the decade with a return to lower rates for a few years. However, rates began to rise again beginning in 2013. Rates of cocaine-caused death in Florida have been consistently higher than in the US, although Florida did see a decline in these deaths from 2017 to 2018 that did not occur nationally. The rate of cocaine-caused death in Florida was 6.0 per 100,000 population in 2018 compared to only 4.5 deaths per 100,000 nationwide.

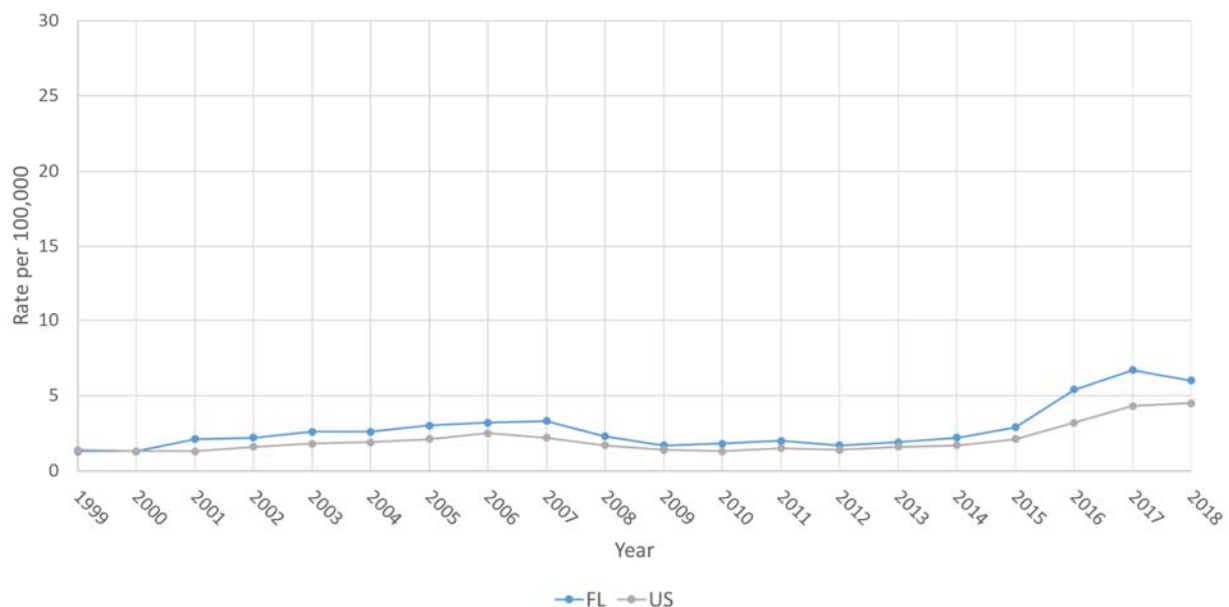


Figure 10. Age-Adjusted Mortality Rate, Cocaine, United States and Florida, 1999 – 2018. Source: [CDC WONDER](#).

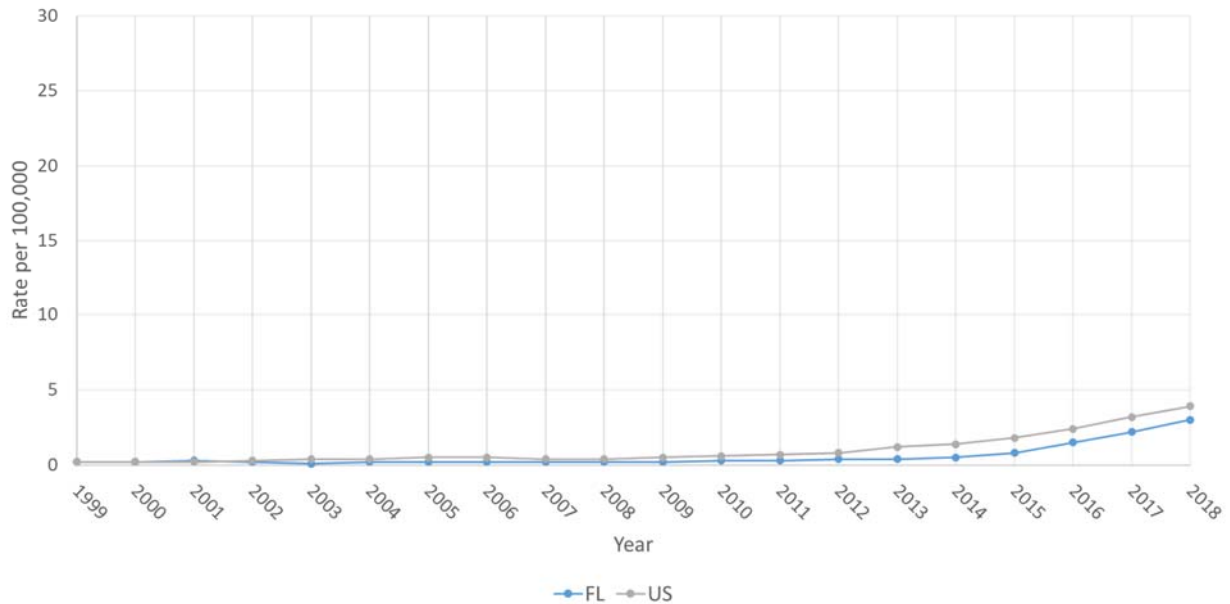


Figure 11. Age-Adjusted Mortality Rate, Psychostimulants, United States and Florida, 1999 – 2018.

*Excludes Cocaine. Source: [CDC WONDER](#).

In addition to cocaine deaths being on the rise, death due to other stimulants have also risen in recent years. Though the rates of death due to psychostimulants in the US and Florida were nearly identical early in the period, national rates rose faster than Florida rates. Both the US and Florida experienced a plateau in the mortality rate due to psychostimulants from about 2003 through 2009, followed by steady increases that have accelerated in recent years. In Florida, the mortality rate for psychostimulants in 2018 (3.0 deaths per 100,000 population) is fifteen times the mortality in 2009 of 0.2 deaths per 100,000 population.

Alcohol

Fatal drug poisonings due to alcohol comprise a minority of poisoning deaths, and the incidence of these deaths has remained largely unchanged over the last decade (Figure 41). Poisonings are a fraction of the deaths that can be directly or indirectly attributable to alcohol use. For example, the rate of death due to motor vehicle crash that involved alcohol was 1.78 deaths per 100,000 population, compared to mortality rate for alcohol poisoning of only 0.5 deaths per 100,000 population in the same year.

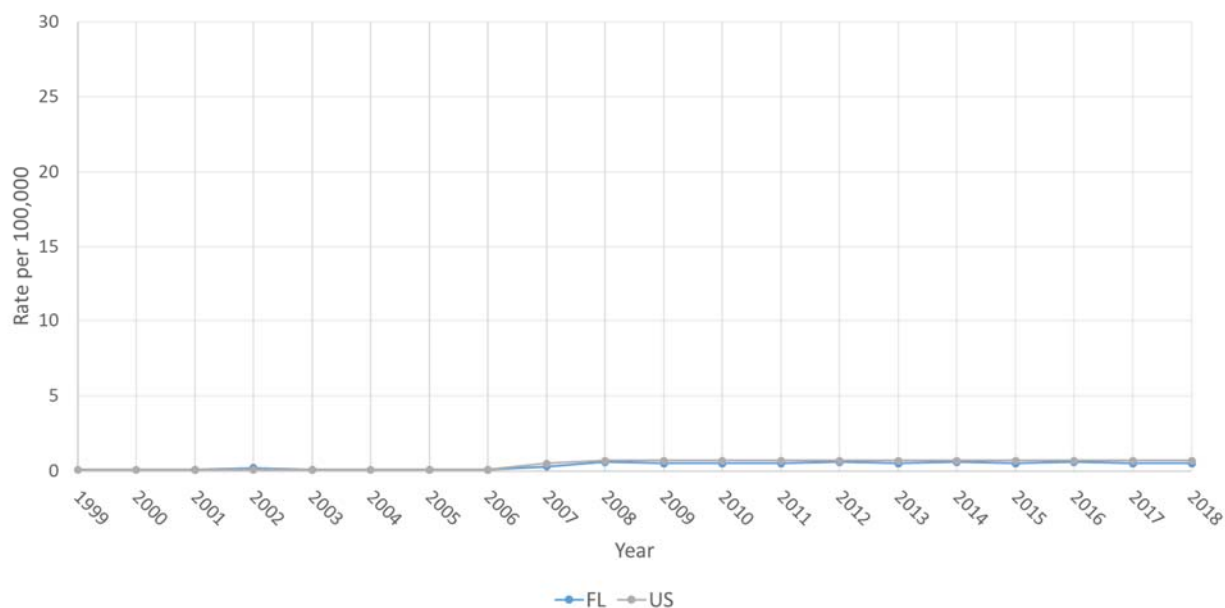


Figure 41. Age-Adjusted Mortality Rate, Alcohol Poisoning, United States and Florida, 1999 – 2018.¶
Source: [CDC WONDER](#).

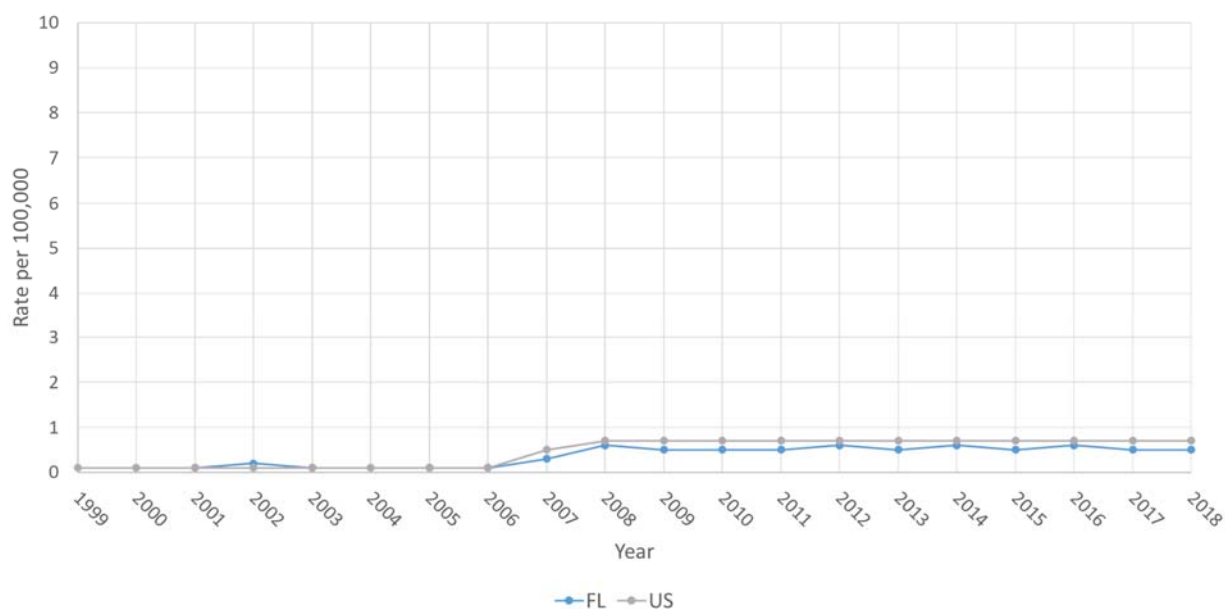


Figure 42. Age-Adjusted Mortality Rate, Alcohol Poisoning, United States and Florida, 1999 – 2018.¶
Source: [CDC WONDER](#).

Cannabis

Fatal drug poisonings due to cannabis are even rarer in both the US and Florida.

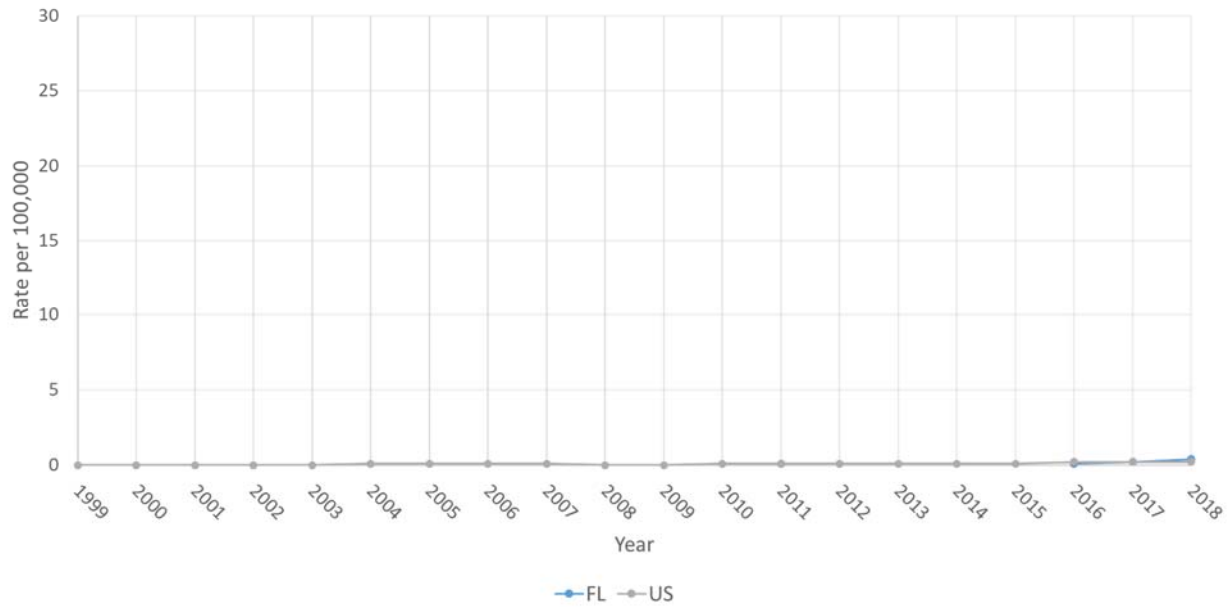


Figure 43. Age-Adjusted Mortality Rate, Cannabis, United States and Florida, 1999 – 2018. *Missing points indicate suppressed data. Source: [CDC WONDER](#).

Florida rates similarly doubled from 2016 to 2017 and again from 2017 to 2018, ending the period with a mortality rate of 0.4 deaths per 100,000 population (Figure 44).

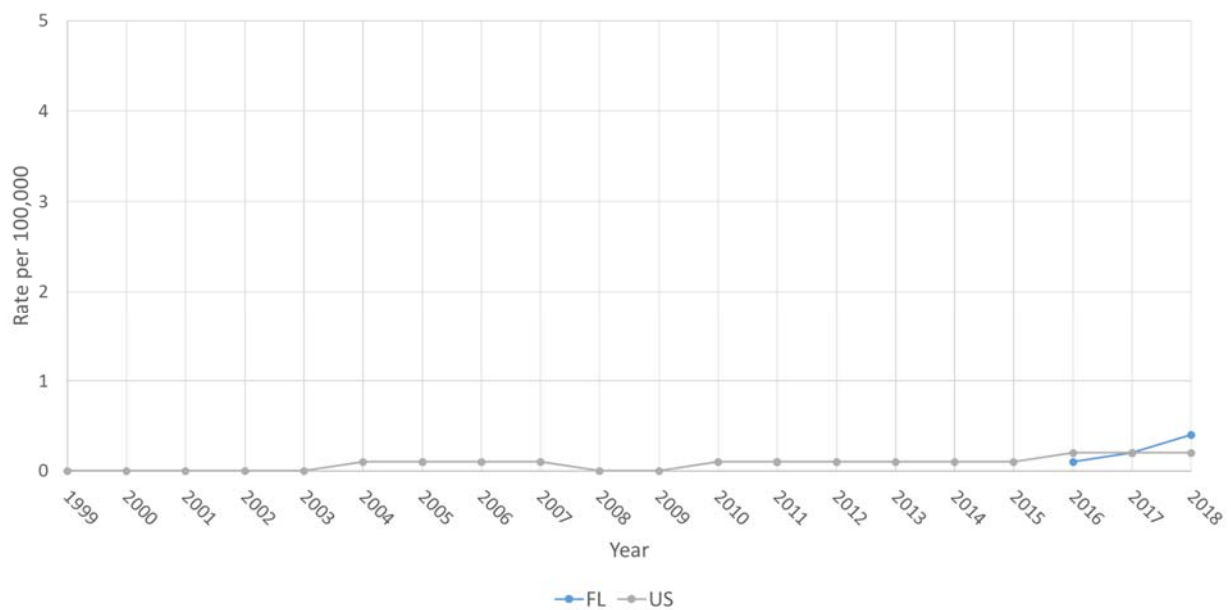
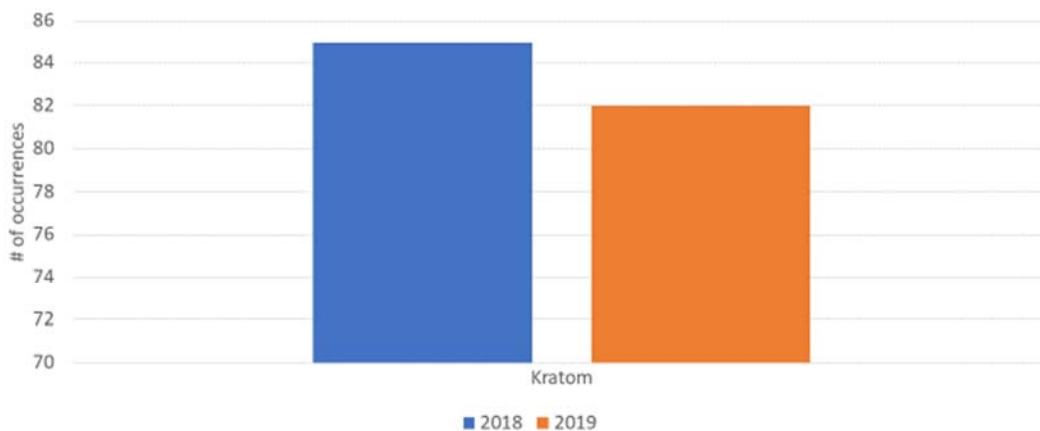


Figure 44. Age-Adjusted Mortality Rate, Cannabis, United States and Florida, 1999 – 2018. *Missing points indicate suppressed data. Source: [CDC WONDER](#).

Kratom

Deaths in which kratom was detected have been steadily rising in Florida since this substance began being tracked by the Medical Examiners Commission (Figure 45) rising from fewer than ten occurrences among decedents to nearly a hundred occurrences statewide in 2019.

Kratom occurrences among decedents, 2018 vs. 2019



Source: FDLE MEC, Drugs in Deceased Persons Report

Figure 45. Kratom occurrences among decedents in Florida, 2018 & 2019. Source: [FDLE](#).

Poly-Substance

The combination of opioids and stimulants is common. For deaths caused by fentanyl or fentanyl analogs, the most commonly co-occurring substance (aside from opioid metabolites or other opioids) was cocaine (Figure 46).

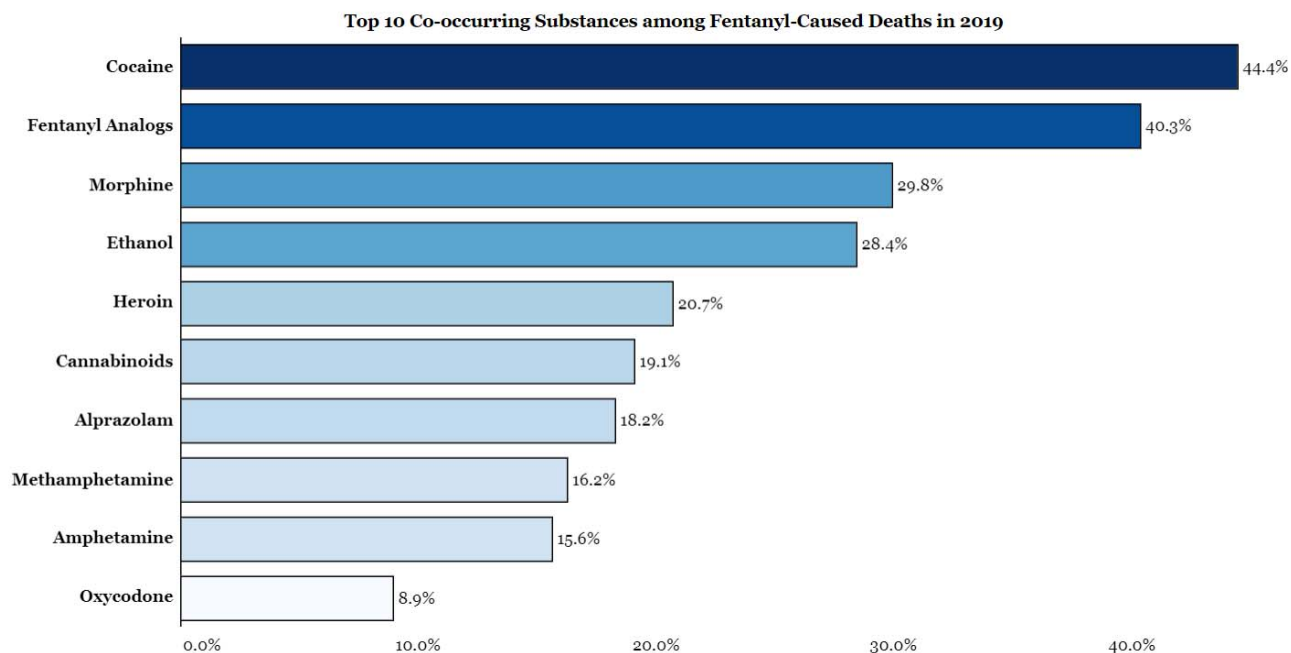


Figure 46. Top 10 Co-occurring Substances among Fentanyl-Caused Deaths in Florida, 2019. Source: [Florida Drug-Related Outcomes Surveillance and Tracking](#).

The proportion of fentanyl analog-caused deaths occurring in Florida that involved cocaine was at 46.7% in 2019. Other stimulants present included amphetamine and methamphetamine. The use of alcohol, benzodiazepines, and cannabis prior to death was also not uncommon (Figure 47).

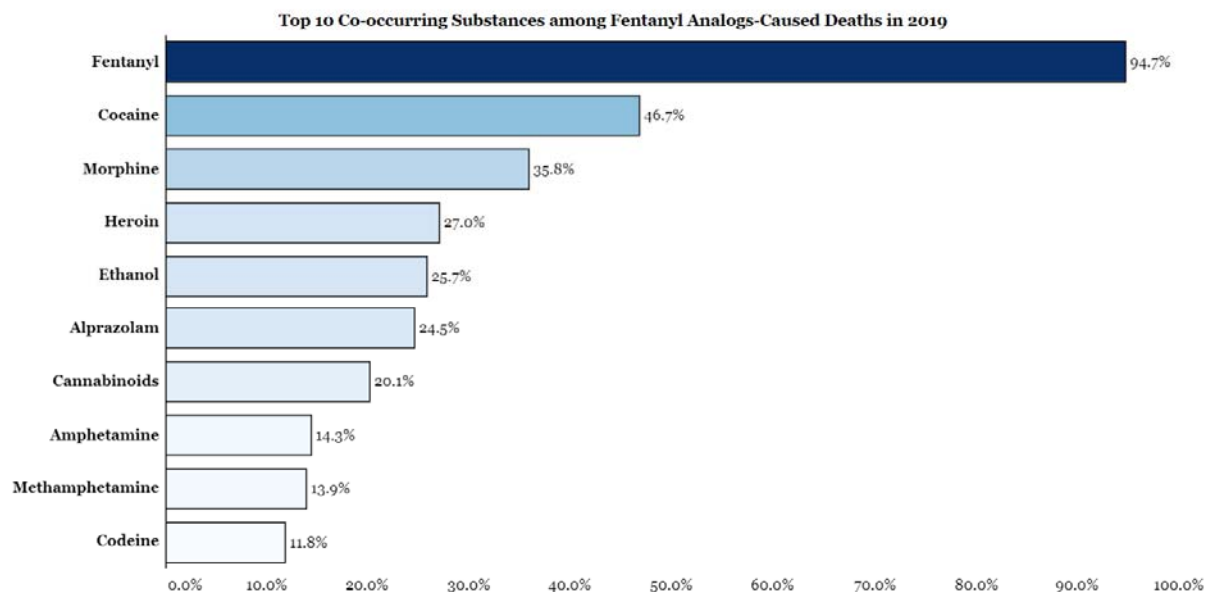


Figure 47. Top 10 Co-occurring Substances among Fentanyl Analogues-Caused Deaths in Florida, 2019. Source: [Florida Drug-Related Outcomes Surveillance and Tracking](#).

A similar pattern is observed for heroin-caused deaths; aside from other opioids, cocaine was the most commonly co-occurring substance (42.9%). The use of alcohol, benzodiazepines, cannabis, and/or methamphetamine was also indicated in a significant number of heroin-caused deaths (Figure 48).

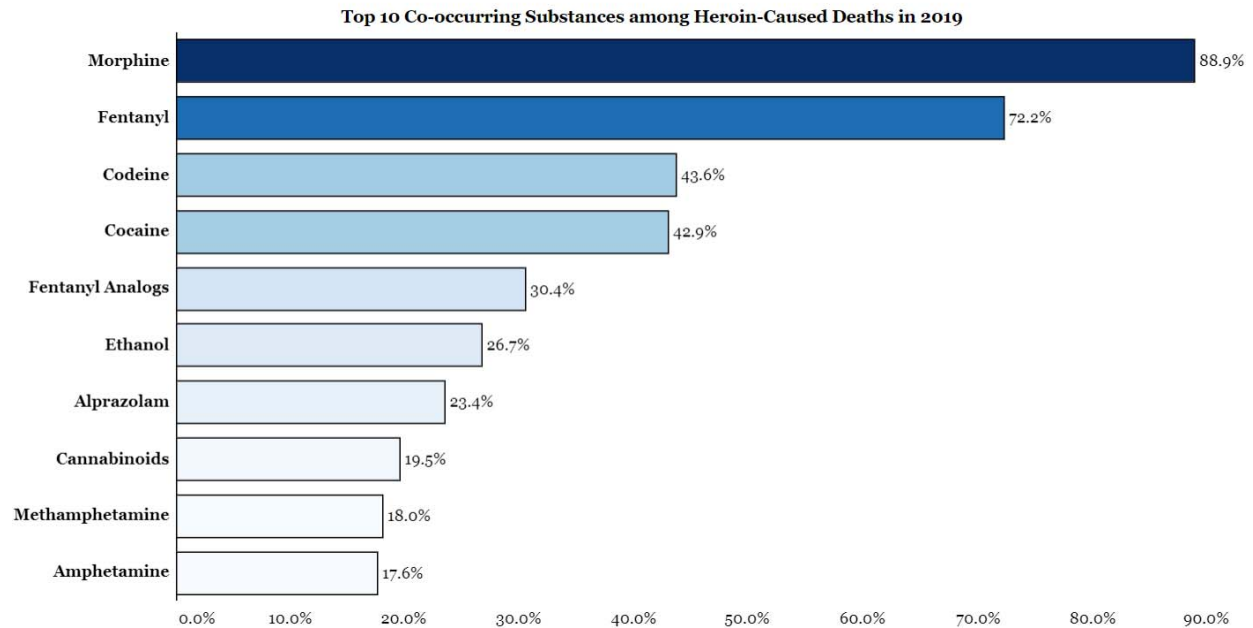


Figure 48. Top 10 Co-occurring Substances among Heroin-Caused Deaths in Florida, 2019. Source: [Florida Drug-Related Outcomes Surveillance and Tracking](#).

Among stimulant-caused deaths, opioids were commonly co-occurring. In fact, 63.3% of cocaine-caused deaths occurring in Florida in 2019 also involved fentanyl. Other opioids present in decedents whose death was caused by cocaine included morphine (a metabolite of heroin), fentanyl analogs, heroin, and codeine (Figure 49).

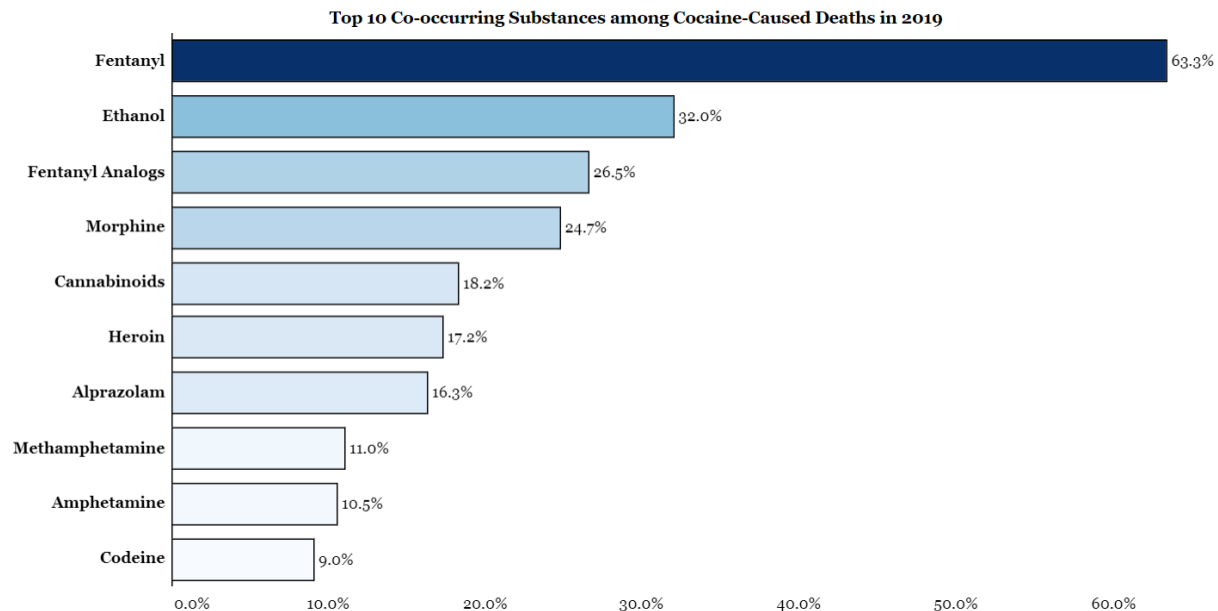


Figure 49. Top 10 Co-Occurring Substances among Cocaine-Caused Deaths in Florida, 2019. Source: [Florida Drug-Related Outcomes Surveillance and Tracking](#).

Half (50.8%) of the methamphetamine-caused deaths in Florida involved co-occurring fentanyl. Other opioids that were co-occurring in methamphetamine-caused deaths included morphine, fentanyl analogs, and heroin. A significant proportion of deaths also involved cannabis, ethanol, and benzodiazepines (Figure 50).

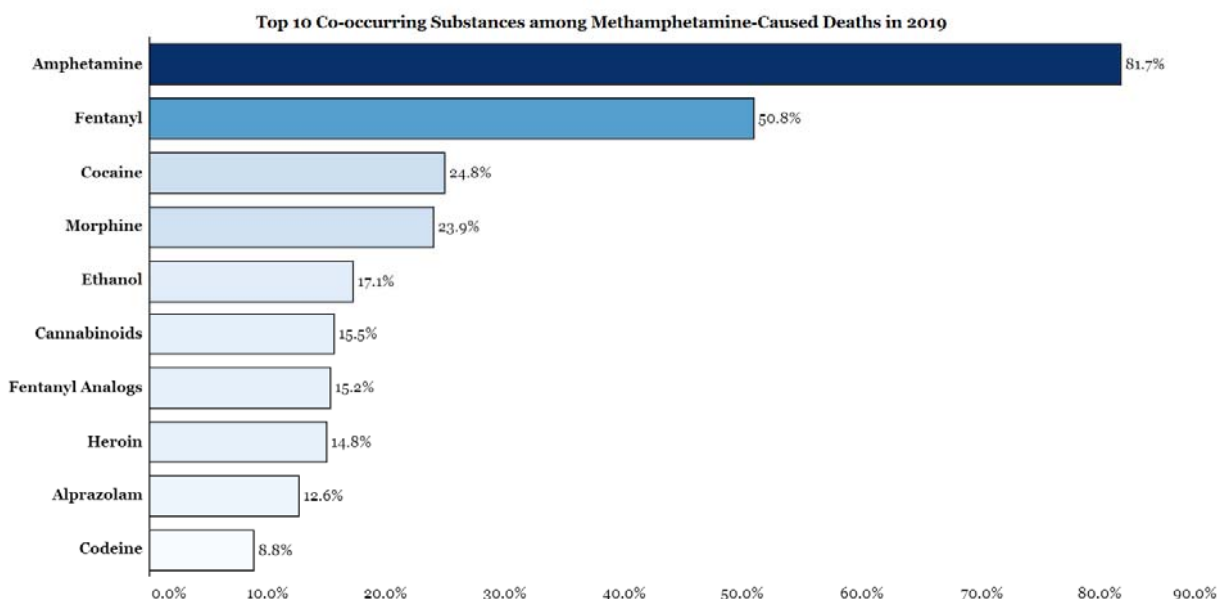


Figure 50. Top 10 Co-Occurring Substances among Methamphetamine-Caused Deaths in Florida, 2019. Source: [Florida Drug-Related Outcomes Surveillance and Tracking](#).

Conclusions

Adult Substance Use

Generally, the trends for substance use among adult Floridians have been fairly flat over the entire period of observation (ranging from 2002 to 2019, depending on the data source). However, misuse of prescription opioids and use of heroin had been on a slow, but steady decline for most of the period, but small increases in use have occurred in the latest years for which data are available. Similar patterns in the use of psychostimulants have also been observed. Though rates of cocaine use were also on the decline, increases have been observed in the latest years (beginning in about 2014). Use of methamphetamine has also seen fairly marked increases, following marked declines, though the prevalence of methamphetamine use remains low at less than one per 100,000 population. The rate of past-year use of methamphetamine did decline in the latest period, 2017-2018. Marijuana is the one substance used by adults for which the pattern has been consistent over time: both past-month and -year use among adults has been steadily increasing over time throughout the period of observation; these increases have paralleled those observed for the nation as a whole. Rates of alcohol use have remained largely unchanged in Florida over the period, with the prevalence of alcohol use among adults

remaining between 50 and 60%, and rates of binge drinking hovering just below 25%. These rates are similar to those for the US.

Youth Substance Use

Generally, the prevalence of current substance use among Florida youth has been stable over time. However, lifetime use is declining over time for most substances reported here, with a few notable exceptions in the last year for which data are available. Differences in prevalence rates by data source are consistent across substances. Past-year misuse of pain relievers has been steadily declining among Florida youth, though the prevalence in Florida exceeds that for the US. The trend for use of heroin – regardless of time period of use – has been downward for Florida youth overall. However, increases in lifetime and past-month use were observed from 2018 – 2019. Use of psychostimulants by Florida youth has been generally on a decline. Lifetime, past-year, and past-month use of cocaine has steadily declined among youth in Florida throughout the period of observation. The trend for use of methamphetamine has also been downward, with some increases observed in more recent years. Rates of lifetime, past-year, and past-month use of marijuana among Florida youth have been fairly stable over time, with a slight downward trend. Lifetime, past-year, and past-month rates of alcohol use in the same period have been declining more quickly among Florida youth. Use of inhalants and hallucinogens in this group also declined over most of the period of observation, but the prevalence of both lifetime and past-month use began increasing in 2017 and 2018, respectively. Lifetime use of club drugs among Florida youth, however, declined throughout the entire period.

Arrests

Overall arrests have declined steadily over the period of observation, with a general pattern of the highest rates occurring in the panhandle of the state (in the region served by Big Bend Community Based Care dba NWF Health), declining as you move south through the state, with the lowest rates in the southernmost part of the state (regions served by Broward Behavioral Health Coalition and Southeast Florida Behavioral Health Network). The same trend over time and pattern among the regions is observed specifically for drug arrests as well.

Citations

Citations for driving under the influence of alcohol (DUI) have steadily declined by more than 25% in Florida as a whole over the period of observation. The same pattern of geographic variability observed for drug arrests is not observed for DUI citation. Most Florida regions have experienced a similar steady decline in rates of citation over the period of observation; Broward County is the exception with a marked increase in 2017.

Motor Vehicle Crashes

Motor vehicle crashes involving alcohol and/or drugs have decreased from 2015 to 2017. Fatalities among all alcohol confirmed drivers were highest for the age group of 25-29 year-olds. Fatal crashes among drug confirmed drivers were also among the 25-29 year-old group. The highest drug confirmed crashes were found in the region served by Lutheran Services. Alcohol confirmed crashes were also highest in the region served by Lutheran Services.

NON-FATAL Poisonings

Following a four-year increase in non-fatal poisonings treated in the emergency department (ED), the rate of emergency department visits for non-fatal poisoning declined from 2017 to 2018 in both Florida and the nation as a whole. Increases over the period of observation were much slower in Florida compared to the US, resulting in a rate of ED visit for non-fatal poisoning in the nation about three times the rate in Florida. The majority of these poisonings are drug poisonings. However, non-fatal poisonings in Florida progressively increased throughout 2019 resulting in more non-fatal poisonings treated in the emergency department (ED) in 2019 than in 2018.

Fatal Poisonings

While fatal drug poisonings declined in 2018 for the first time since 2013 in Florida (and at least 1999 nationally), an increase in fatal drug deaths in 2019 was observed. In addition, death due to fentanyl and fentanyl analogues increased in 2019 from the previous year. Polysubstance continues to be involved in an increasing number of drug poisoning deaths, particularly related to opioids and stimulants.

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