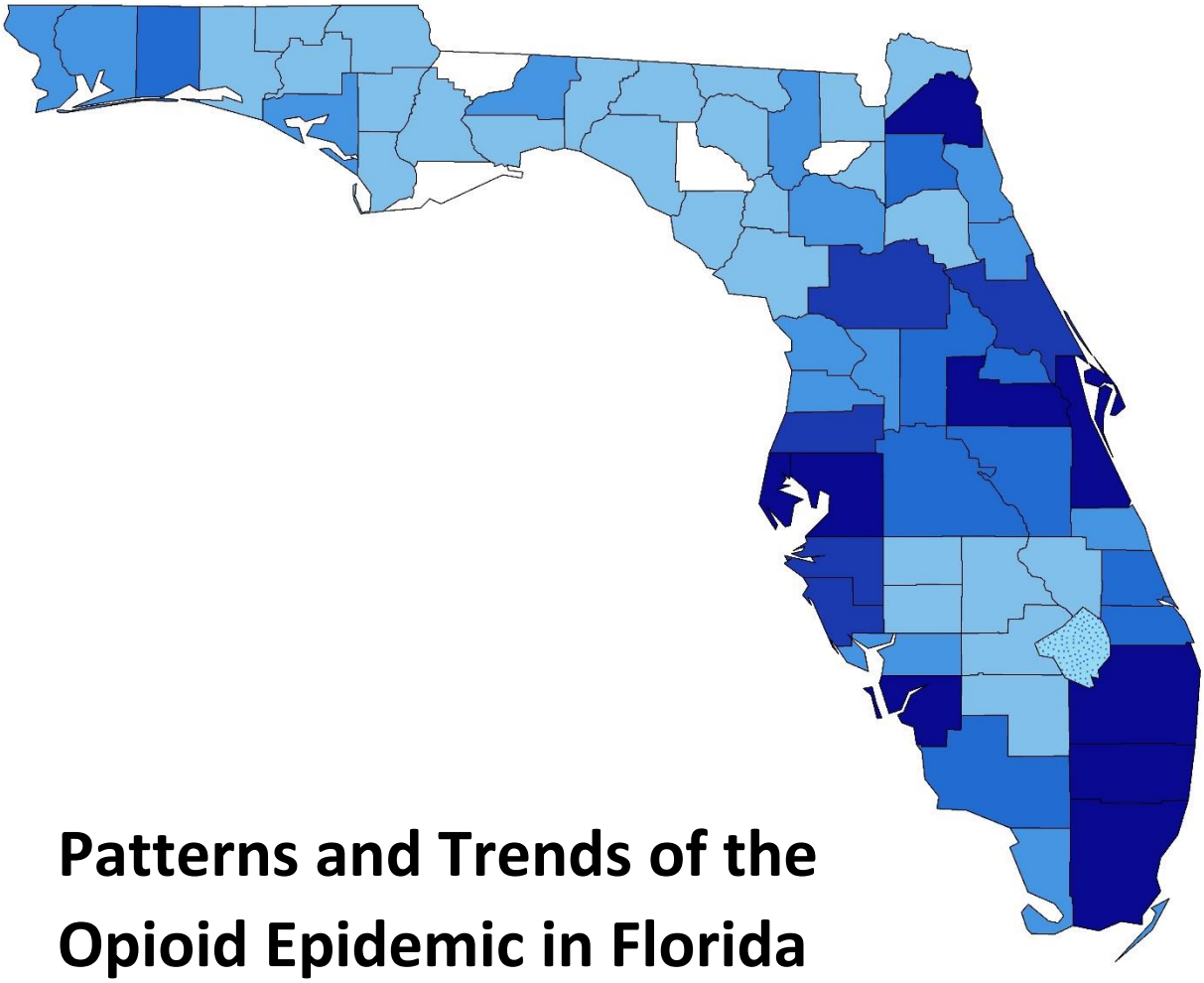

Patterns and Trends of the Opioid Epidemic in Florida

2018

Covering Data from Calendar Years 2017-2018

FLORIDA DEPARTMENT OF CHILDREN AND FAMILIES

MYFLFAMILIES.COM

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Data Source Acknowledgements

This report was prepared with assistance from the following agencies, partners, and organizations who provided the necessary data:

- Florida Department of Law Enforcement, Florida Medical Examiners Commission
- Florida Department of Health, E-FORCSE®, Florida Prescription Drug Monitoring Program
- Florida Department of Health, Enhanced State Opioid Overdose Surveillance Program
- Florida Department of Health Outcomes and Policy at the University of Florida College of Medicine
- Florida Agency for Health Care Administration
- Local County Drug Epidemiology Networks (DENs)

Introduction

Throughout 2017, Florida saw the national opioid epidemic continue to impact the state as it has the rest of the country, driven by illicit fentanyl and fentanyl analogues.

The Office of Substance Abuse and Mental Health within the Florida Department of Children and Families (Department) is the single state agency responsible for a statewide system of prevention, treatment, and recovery support services for individuals with or at risk of developing substance use disorders. In 2016, the Department was awarded a 5-year $1.2 million dollar Partnerships for Success (PFS) grant from the Substance Abuse and Mental Health Services Administration (SAMHSA). The PFS grant is designed to reduce prescription drug misuse among Floridians ages 12-25, strengthen prevention capacity and infrastructure at the state and community levels, and increase awareness of opioid overdose prevention.

In 2017, the Department was awarded the State Opioid Targeted Response (STR) grant. The STR grant, funded at $27 million per year for up to 2 years, is designed to address the opioid crisis by providing evidence-based prevention, medication-assisted treatment, and recovery support services. The Department was awarded the State Opioid Response (SOR) grant in 2018, funded initially at $50 million per year for up to 2 years, with a $26 million supplement awarded in 2019. The SOR grant is designed to continue the work of the STR grant by addressing the opioid crisis and providing evidence-based prevention, medication-assisted treatment, and recovery support services. These three federal grants fund differing prevention aspects to decrease the impact of the opioid epidemic through the following projects: overdose prevention training, purchase and distribution of naloxone, school-based prevention programs, hospital bridge programs, opioid overdose prevention awareness campaign, local Drug Epidemiology Networks (DENs), and increase in access to medication-assisted treatment (MAT).

This report provides a statewide overview of opioid-related morbidity and mortality as well as other consequences of opioid misuse across the state. The report also summarizes initiatives from the federal grants and other non-state funded community projects.

Report Highlights for 2017

- 2017 represented the 4th year of continued increase in opioid-caused deaths:
- 3,922 opioid-caused deaths in 2016 increased to 4,279 deaths in 2017 (↑9%)
- 1,734 deaths caused by multiple opioids in 2016 increased to 1,878 in 2017 (↑8%)
- 10 of the 13 opioids had a decrease in causal occurrences
- The first decrease in heroin and morphine causal occurrences since 2009-2010
- The first decrease in oxycodone causal occurrences since 2013-2014
- Fentanyl caused deaths increased from 1,390 to 1,742 (↑25%)
- White and male decedents continued to make up a majority of opioid-caused deaths
- The 25-34-year-old age group has the:
    - Highest total number of opioid-caused deaths
    - Highest number of opioid-related emergency department and in-patient hospital visits
- Non-fatal opioid-involved overdoses accounted for 15,600 EMS transports and are estimated to occur at a rate of 84.8 per 100,000 persons (22.4% increase from 2016).
- Between 2016 and 2017, Florida emergency departments saw an 18% increase in overall opioid ED visits and 22% increase in heroin ED visits.
- In 2017, 53% of all opioid-related ED visits involved patients without insurance (self-pay).

Patterns and Trends

Drug Consumption and Distribution

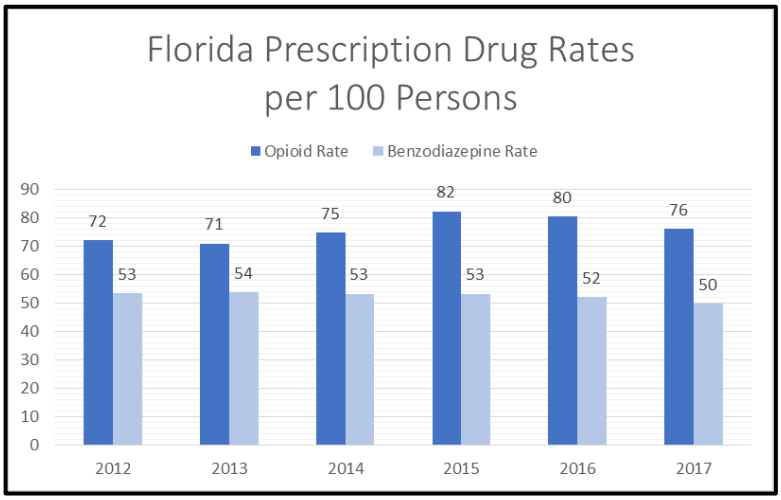
Florida E-FORCSE

In the early 2000s, pain clinics in Florida were prescribing large quantities of prescription medications with little medical justification, some of which included: opioid analgesics, benzodiazepines, and muscle relaxants.

The Florida Prescription Drug Monitoring Program (PDMP), known as E-FORCSE® (Electronic-Florida Online Reporting of Controlled Substance Evaluation Program), was created in 2009 by the Florida Legislature through an initiative to encourage safer prescribing of controlled substances and to reduce drug abuse and diversion within the state of Florida[1]. E-FORCSE was implemented in 2011. In 2017, prescription drug dispenser reporting to E-FORSCE was mandated no later than the close of the next business day by House Bill 557[2]. In 2018, House Bill 21 was passed by the Florida Legislature expanding required use of the PDMP[1]. Florida law requires each prescriber or dispenser to consult the PDMP system to review the controlled substance dispensing history each time a controlled substance is prescribed or dispensed to a patient. In addition, PDMP access has been expanded to Medical Examiners and employees of the United States Department of Defense and Indian Health Service who provide health care services[1,2]. Under the new law, prescriptions for an opioid listed as a Schedule II controlled substance to treat acute pain, are limited to a 3-day supply, and under certain circumstances up to a 7-day supply.

This database collects prescribing and dispensing data for controlled substances in Schedules II, III, and IV. The PDMP was created to provide information to health care practitioners and guide their decisions in prescribing and dispensing these scheduled prescription drugs[2].

The following data was provided by the Florida Department of Health, E-FORCSE®, and the Department of Health Outcomes and Policy at the University of Florida, College of Medicine. This database does not contain numbers on the broader opioid epidemic, such as heroin and fentanyl-analogues.



Dispensed Drugs in Florida

In 2017, the opioid prescription rate was 76.19 per 100 persons in Florida with 15,987,869 prescriptions for a population of just under 21

[1] Florida Department of Health E-FORCSE (2018). 2017-2018 Prescription Drug Monitoring Program Annual Report. http://www.floridahealth.gov/statistics-and-data/e-forcse/health_care_practitioners/_documents/2018-pdmp-annual-report.pdf

[2] E-FORCSE®, the Florida Prescription Drug Monitoring Program. http://www.floridahealth.gov/statistics-and-data/e-forcse/index.html

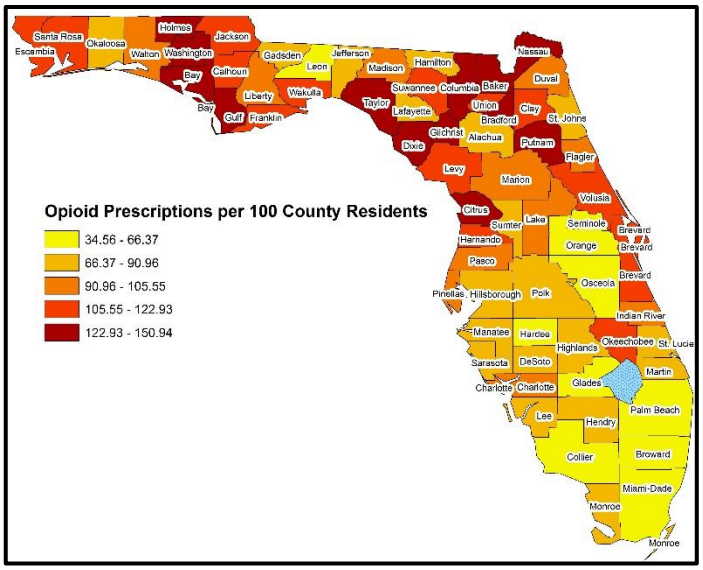


Figure 2

million. This rate was down from a recent high in 2016 of 82.38 per 100 persons in Florida. Statewide rates from 2012-2015 had a slight increase of 72.21, 71.03, 74.96, 82.38, 80.40, respectfully (Figure 1)[1,2].

Upon examining the opioid prescription rate by county, we see 32 of the 67 counties (43%) in Florida with a rate above 100 per 100 persons (Figure 2). Of those 32 counties, 18 counties (56%) are classified as rural counties (populations less than 100 persons per square mile), and of the Top 10 counties, seven (70%) were rural.

During the E-FORCSE reporting period of July 2017-June 2018, similar to July 2016-June 2017, hydrocodone and oxycodone represented the two most commonly dispensed scheduled substances, a quarter of the total number of controlled drugs dispensed.

Benzodiazepines (Benzos) are known for sedative, hypnotic (sleep-inducing), anxiolytic (anti-anxiety), anticonvulsant, and muscle relaxant properties. There is an increased risk for respiratory depression when opioids are taken with benzodiazepines. CDC guidelines suggest clinicians should avoid prescribing opioid pain medication and benzodiazepines concurrently whenever possible[3].

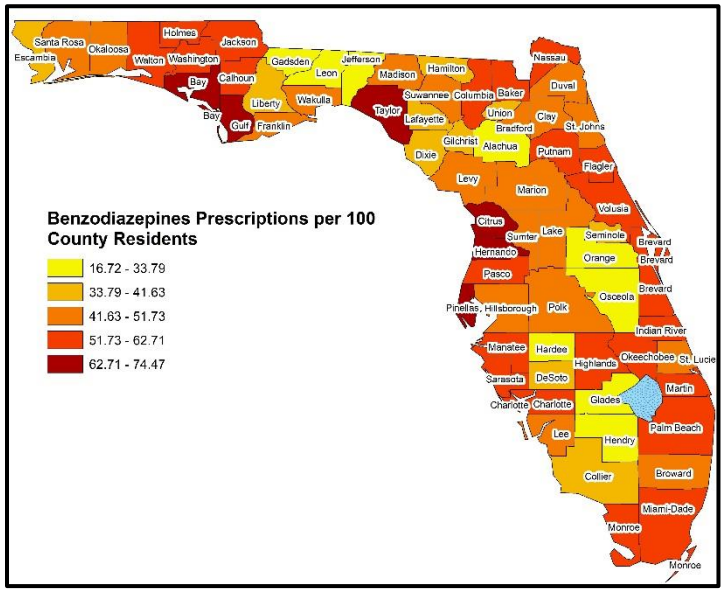


Figure 3

In 2017, benzodiazepine prescriptions had an average prescription rate of 49.91 per 100 persons in Florida with 10,472,273 prescriptions. Statewide rates from 2012-2016 have remained relatively stable with rates of 53.44, 53.73, 53.33, 53.39, 52.15, respectfully (Figure 1)[1,2].

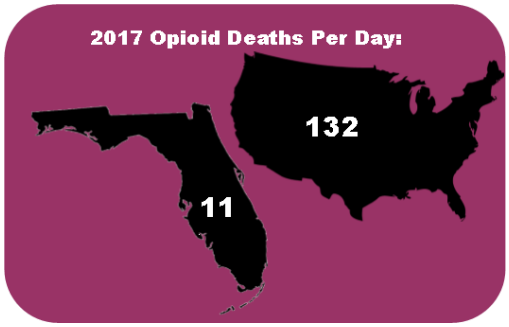
The statewide rate for benzodiazepine prescriptions was 34% lower than opioids in 2016 and from 2012-2016 the rates have been consistently lower and held a more stable trend. When examining the county level rates compared to opioids, a different picture emerges. No county is above the rate of 100 per 100 persons, compared to 29 counties for opioids[1,2]. Of the top 10 counties, four counties (40%) are rural, compared to seven counties for opioids. Benzodiazepines rates are lower overall statewide and at a county level. Benzodiazepines also appear to be less prominent in rural counties than opioids (Figure 3).

[3]CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm

Drug Consumption Consequences

Opioid Associated Deaths

The average life expectancy in the U.S. dropped in 2017: from 78.7 in 2016 to 78.6 in 2017. This marks the first three-year decline in life expectancy since the 1910s. While the 1910s decline was accredited to World War I and the 1918 Flu pandemic, this recent drop has been attributed to drug overdose and suicide.



According to preliminary data from the Centers for Disease Control and Prevention (CDC), nationally over 70,900 people died from drug overdose in 2017 – an 11 % increase from 2016[4]. Approximately two-thirds of these overdoses were linked to opioids.

In 2017, 4,279 deaths were reported in Florida where at least one opioid was identified as a cause of death. This is a 9% increase from 2016, when 3,922 opioid-caused deaths were reported in Florida (Figure 4 and 5)[5]. Over 1,878 (40%) of the opioid caused deaths in 2017 had multiple opioids attributed to their cause of death[5].

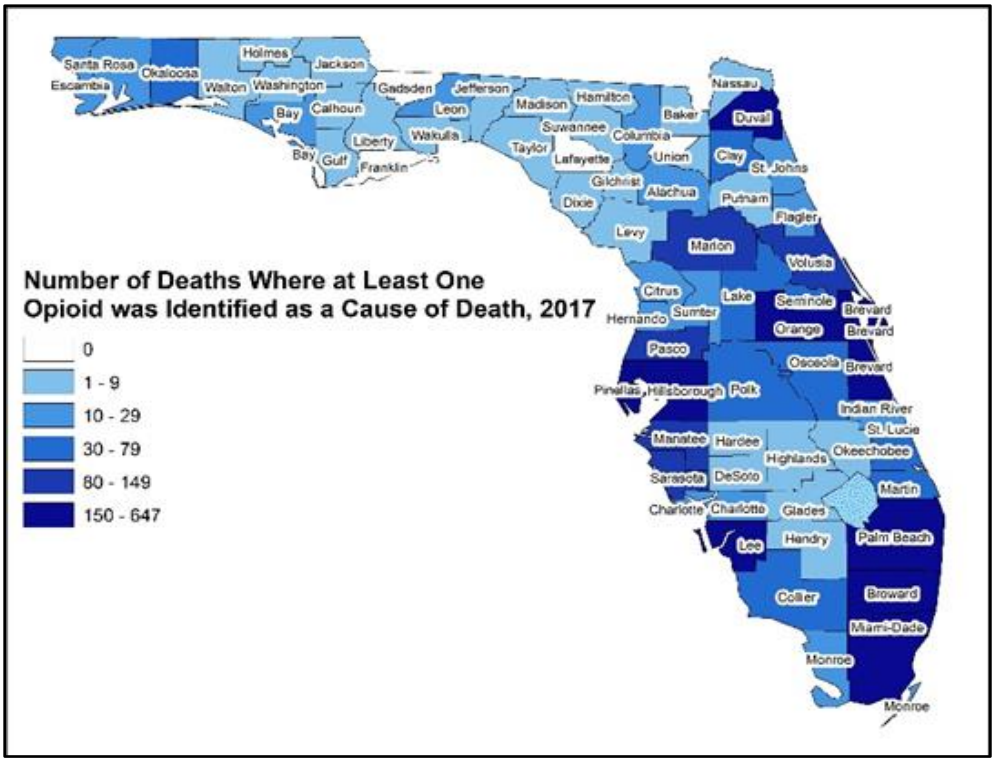


Figure 4

[4] Provisional Drug Overdose Death Counts. https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm

[5] Florida Medical Examiners Commission (2018).*Drugs Identified in Deceased Persons by Florida Medical Examiners.* http://www.fdle.state.fl.us/MEC/Publications-and-Forms/Documents/Drugs-in-Deceased-Persons/2017-Annual-Drug-Report.aspx

This data was provided by the Florida Medical Examiners Commission (FL MEC). FL MEC data distinguishes between the drugs determined to be the cause of death and those drugs that were present (non-causal) in the body at the time of death. In the following analysis of the FL MEC data, only drugs that played causal roles will be examined. Drugs that were merely present at the time of death are not included in this analysis (unless otherwise stated). It should be noted that deaths caused by drugs/opioids are not exclusively overdoses in this analysis. These figures also include deaths by motor vehicle crashes, drowning, etc., where the Medical Examiner determined that a drug/opioid played a causal role after considering the totality of the circumstances. Many decedents are found to have multiple drugs listed as causal or present. Therefore, drug occurrences are not equal to deaths. All homicide deaths were removed from this analysis (causal death, n=1).

The FL MEC collected data on 13 opioids and opioid categories in 2017 (previous years have varied):

- Buprenorphine
- Codeine
- Fentanyl
- Fentanyl Analogs
- Heroin
- Hydrocodone
- Hydromorphone
- Meperidine
- Methadone
- Morphine
- Oxycodone
- Oxymorphone
- Tramadol

Opioid Death Trends, 2005-2017

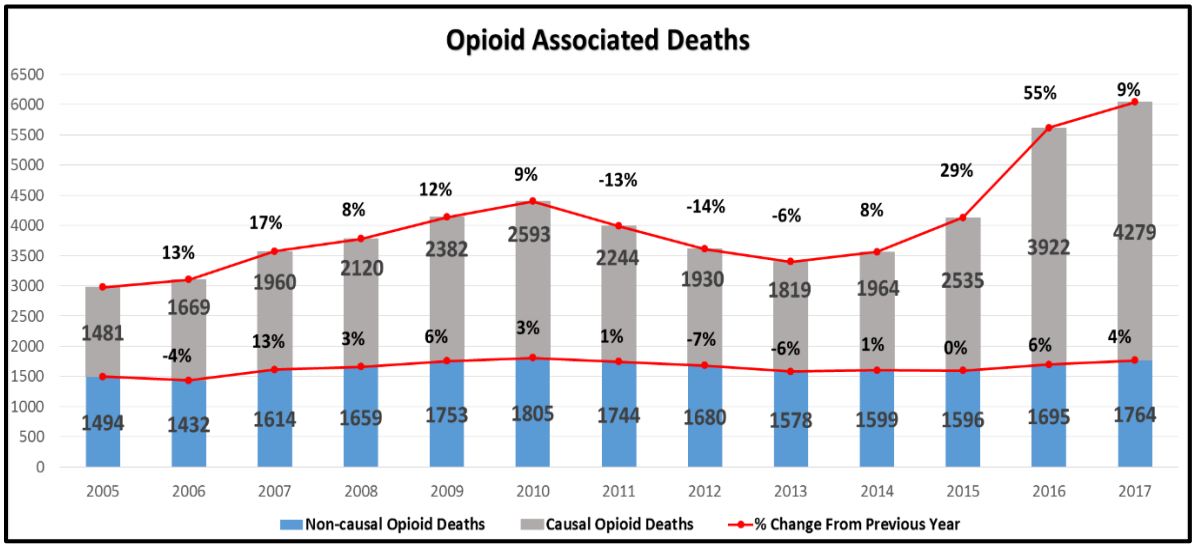


Figure 5

From 2005 to 2010 there was a dramatic increase in opioid deaths driven by illegally diverted and nonmedical misuse of pharmaceutical opioids, mainly Oxycodone (Oxycontin, etc.). Actions taken by the State of Florida in 2010 and 2011 included the enactment of laws and regulations to reduce the supply-side of the problem, including the closing of "pill mills", resulting in a decrease of oxycodone deaths from 2011 to 2014 (Figure 6). However, as the number of oxycodone-caused deaths decreased, starting in 2011 other opioid-caused deaths began to steadily increase. After three years of decreasing opioid-caused deaths, Florida began to see another increase in 2014 in deaths driven by heroin, morphine, fentanyl, and illicitly manufactured fentanyl analogs instead of Oxycodone. (Figure 6).

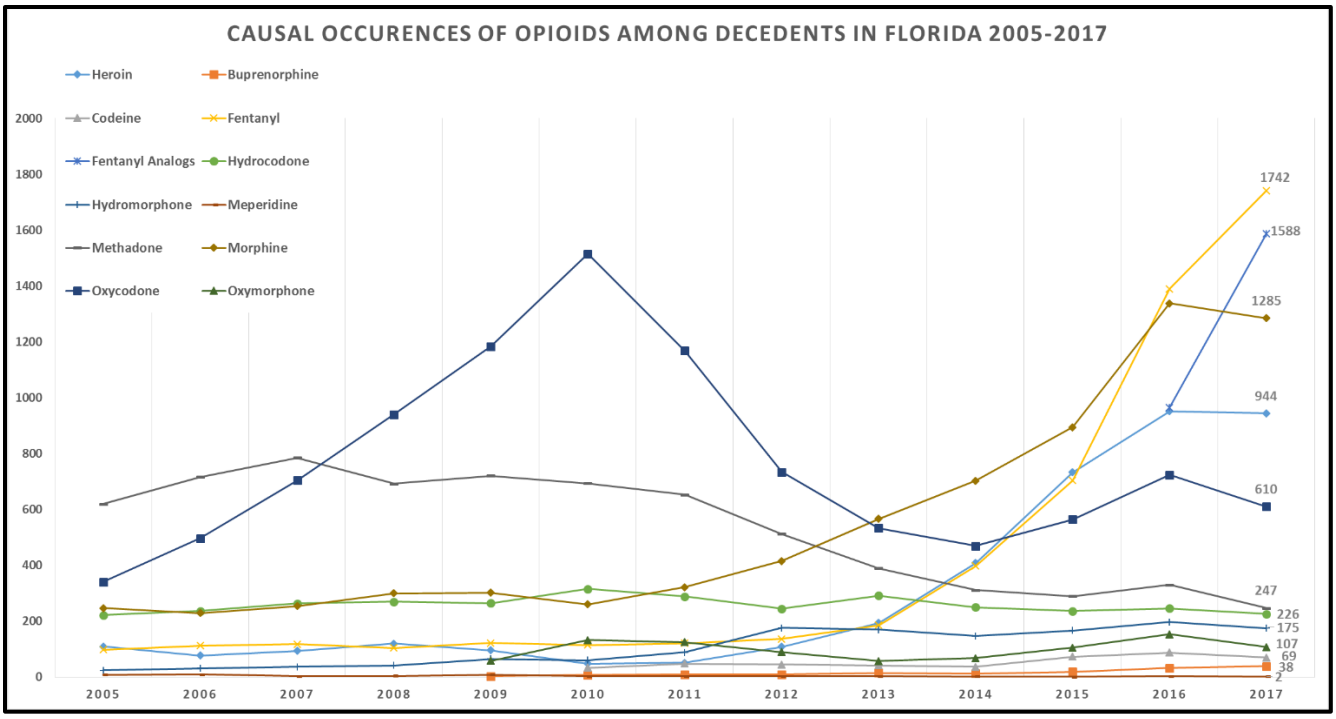


Figure 6

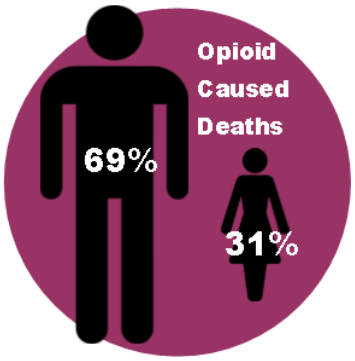
2017 Opioid Deaths

From 2016-2017 there was a 9% increase in opioid-caused deaths in Florida. However, this represents a slower increase when compared to the 55% increase seen between 2015-2016.

Comparing 2016 to 2017:

- 3,922 opioid cause deaths increased to 4,279 (↑9%)
- 1,734 deaths caused by multiple opioids increased to 1,878 (↑8%)
- 10 of the 13 opioids tracked by the FL MEC saw a decrease in causal deaths from 2016 to 2017
    - Increases included Buprenorphine (32, 38; 19%), Fentanyl (1390, 1742; 25%), and Fentanyl Analogs (965, 1588; 65%)

Demographics



In 2017, opioid-caused deaths in Florida were overwhelmingly white and male. Decedents that were identified as white accounted for 91% (3,895) of the deaths and males accounted for 69% (2,938) of the deaths (Figure 7). While this was an increase from 2016 for males (68%), 2017 represented a slight decrease in deaths for whites as *compared to 2016 (93%).*

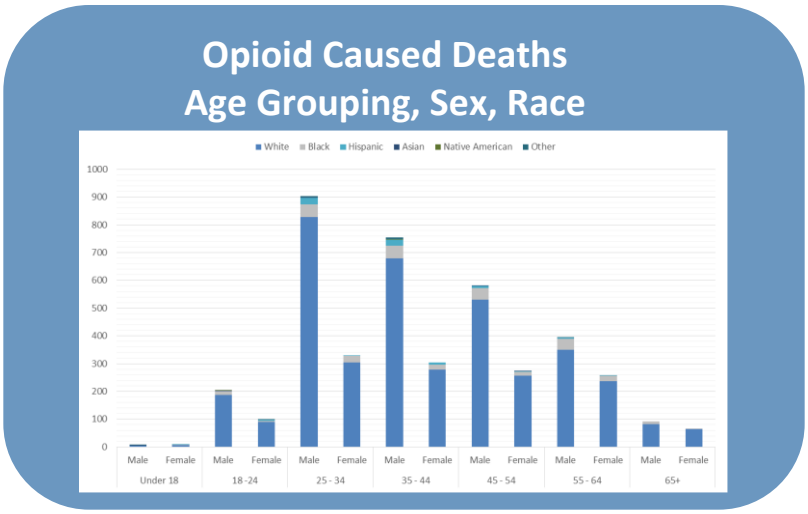
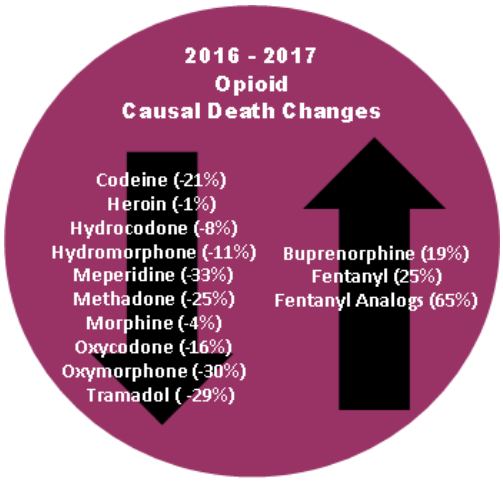


Figure 7

When observing opioid-caused deaths by age group, the 25-34-year-old age group has the highest total number of deaths, representing over a fourth (29%) of the total deaths. This slowly tapers off in the subsequent age groups (Figure 7). In 2016, the 25-34 age group also represented approximately a fourth of the total deaths and the other age groups followed the same pattern.



Summary of Drug Occurrences

In 2017, opioids, as a category, were the largest contributor to causal drug deaths. When examining all 46 drugs individually, 5 of the 10 drugs with the highest causal occurrences are opioids (Figure 8): cocaine (2,010), fentanyl (1,742), fentanyl analogs (1,588), morphine (1,285), ethanol (972), heroin (944), alprazolam (791), oxycodone (610), methamphetamine (463), amphetamine (256).

While opioids account for half of the drugs with the highest causal occurrences, 10 of the 13 opioids had a decrease in causal occurrences. For the first time since 2009-2010, there was a decrease in heroin and morphine causal occurrences and the first decrease in oxycodone since 2013-2014.

Of the 11,598 deaths in this analysis, 3,952 (34%) died from causal poly-drug combinations. Of the 4,279 opioid-caused deaths, 70% (3,015) died from causal poly-drug combinations. Of those, 44% (1,878) died from multiple opioids listed as casual.

Cocaine and Top 6 Causal Occurrence Opioids

Rank	Cocaine	Fentanyl	Fentanyl Analogs	Morphine	Heroin	Oxycodone
1	Palm Beach 279	Duval 267	Palm Beach 336	Palm Beach 191	Palm Beach 177	Brevard 55
2	Miami-Dade 256	Palm Beach 244	Broward 235	Miami-Dade 133	Broward 163	Broward 54
3	Broward 245	Broward 223	Miami-Dade 185	Duval 122	Miami-Dade 95	Palm Beach 53
4	Duval 220	Miami-Dade 169	Duval 146	Broward 117	Duval 82	Miami-Dade 49
5	Orange 161	Orange 127	Manatee 83	Hillsborough 92	Hillsborough 68	Duval 44

Figure 8

Note that these are not individual deaths but the number of times a drug was detected and determined to be causal in the death of a decedent. It should also be noted that since heroin is rapidly metabolized to morphine, this may lead to an over-reporting of morphine-related deaths as well as an under-reporting of heroin-related deaths.

Fentanyl and Fentanyl Analogs

Fentanyl is a Schedule II synthetic opioid approved for treating severe chronic pain, such as advanced cancer pain, and is 50 to 100 times more potent than morphine[6]. Illicitly manufactured fentanyl and fentanyl analogs were the primary drivers of the increase in opioid deaths in Florida in 2016 and 2017. Prior to 2016, fentanyl analogs were not officially tracked by the FL MEC. In 2017, there were 1,742 fentanyl-caused deaths and 1,588 analog caused deaths reported. The FL MEC now tracks over 1,000 fentanyl analogs. Many of the fentanyl and fentanyl analog deaths reported represent some overlap (Figure 9).

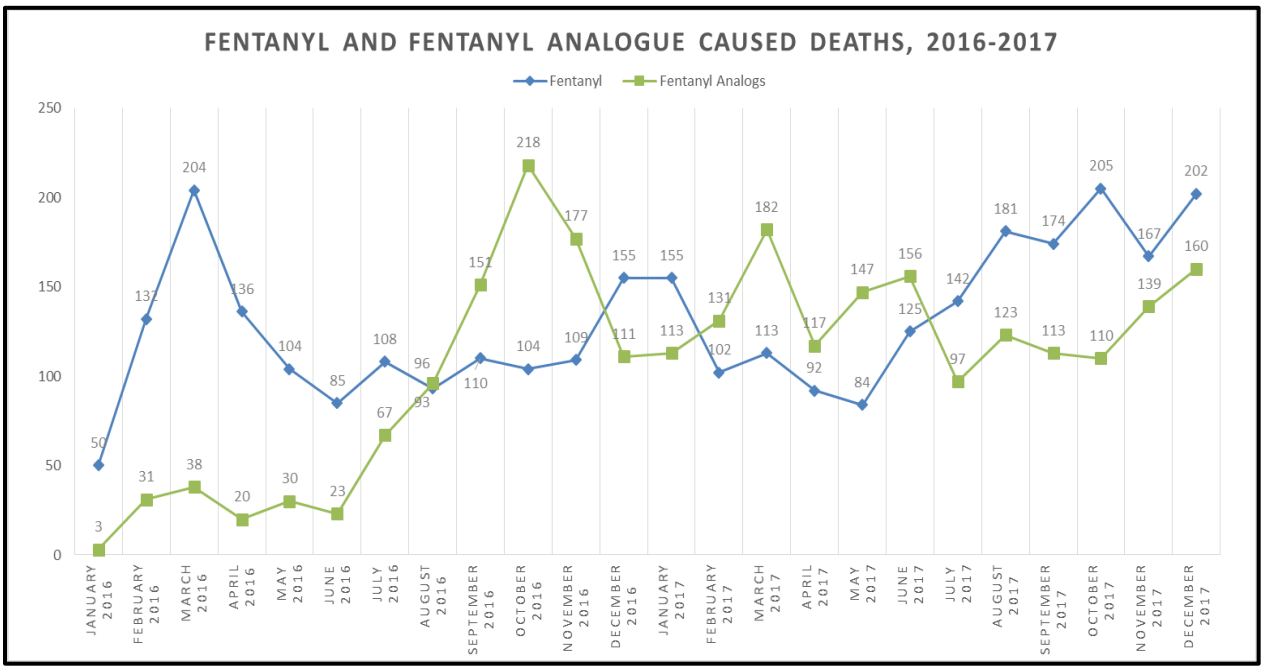


Figure 9

The continued trend of high fatalities attributed to fentanyl and fentanyl analogs from 2016 into 2017 is the main driver for the increase in opioid-caused deaths in Florida. In 2017, 2,821 opioid-caused deaths listed fentanyl or fentanyl analog as a cause of death, representing 66% of all opioid-caused deaths. The counties with the most significant mortality burden were focused in the central and southern portion of the state (Figure 10).

[6] CDC. https://www.cdc.gov/drugoverdose/opioids/fentanyl.html

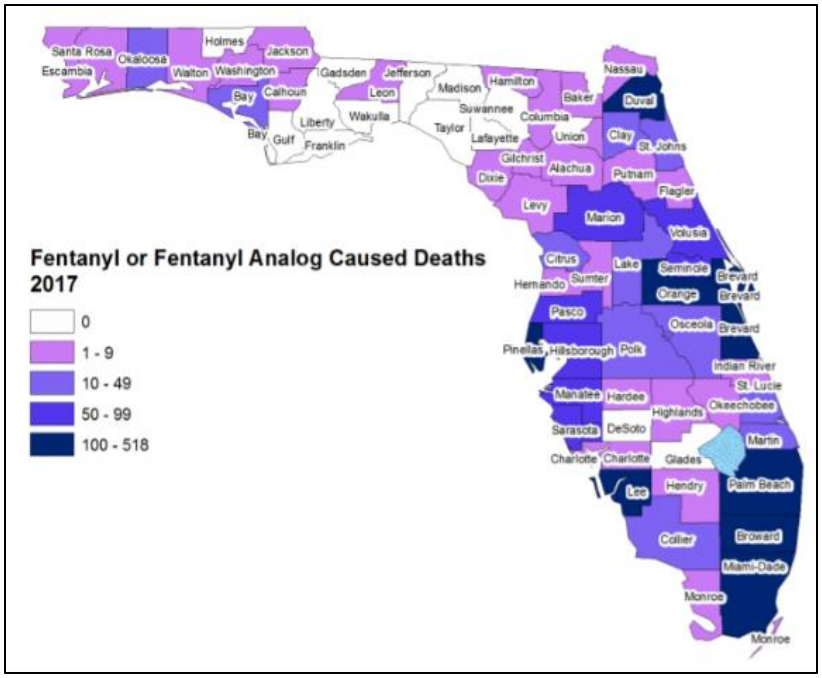


Figure 10

Heroin and Cocaine

After the closure of the "pill mills" and the reduction of illegitimate opioid prescriptions, the street price of opioid painkillers increased. Heroin became the cheaper alternative. Though, cocaine has made a comeback in recent years, especially in South Florida.

As the number of deaths attributed to prescription opioids began to decline, deaths caused by heroin and morphine began to rise. However, 2017 represented the first decrease in both heroin and morphine caused deaths since 2010 (Figure 11). Since heroin is rapidly metabolized to morphine in the body, there is an unknown over-reporting of morphine-related deaths and under-reporting of heroin-related deaths. By examining the data together as heroin or morphine, a more complete picture is created. Between 2005 and 2010, deaths caused by morphine or heroin were relatively steady, but Florida began to see an increase in 2011 that continued through 2016 (Figure 11).

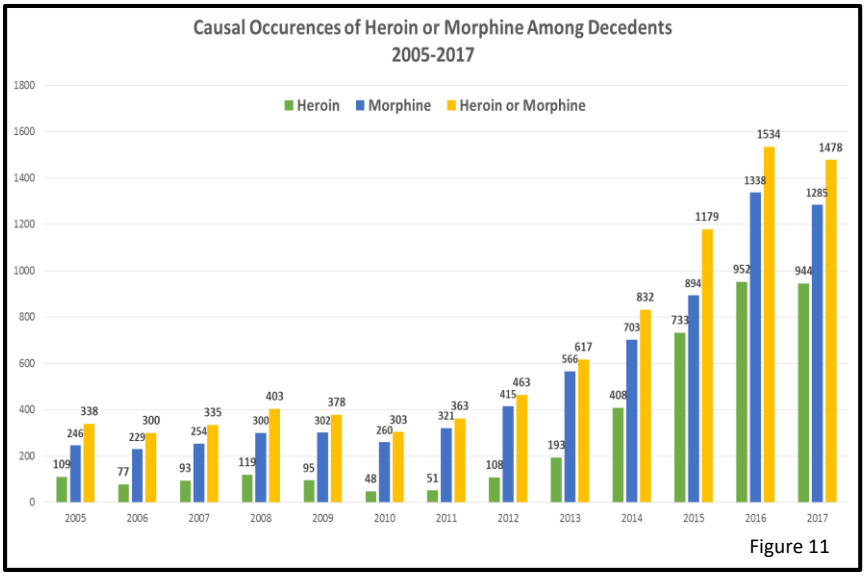


Figure 11

In 2017, 1, 478 decedents had either heroin or morphine listed as a cause of death by the medical examiner, representing 35% of all opioid caused deaths. This is a 4% decrease from 2016. Fentanyl and fentanyl analogs contributed to 54% (791) of heroin or morphine caused deaths, a 20% increase from 2016. While the overall number of heroin or morphine deaths decreased from 2016 to 2017, the number and percentage of those deaths that also were caused by fentanyl or fentanyl analogs increased.

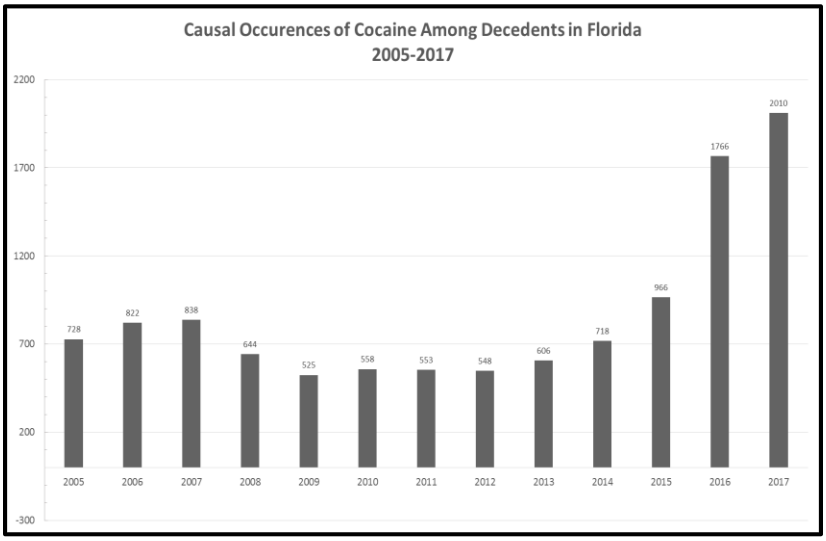


Figure 12

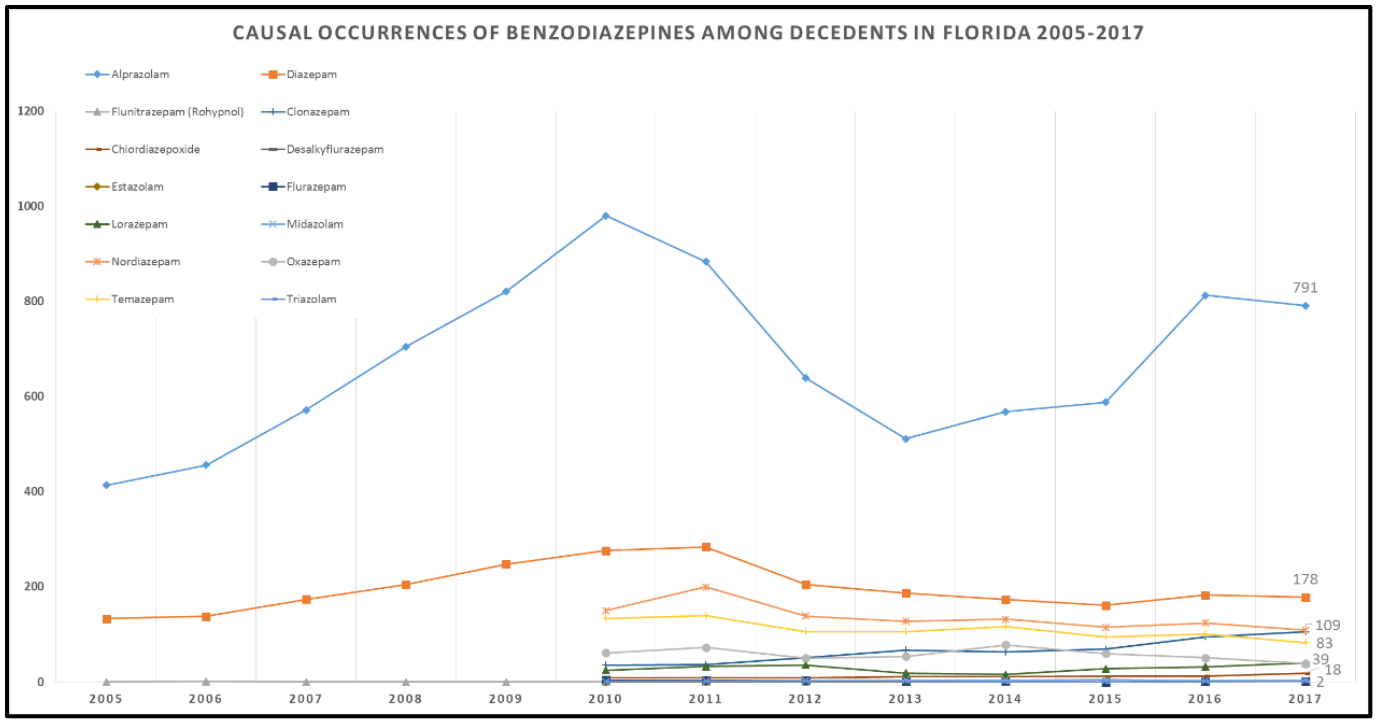
Cocaine, while not an opioid, is seeing a resurgence and a dramatic increase in causal deaths after a decline from 2007-2009 and stabilization through 2013 (Figure 12). According to the International Narcotics Control Strategy Report, this rise might be linked to increased production of the drug in Colombia and poly-drug use particularly with opioids (fentanyl and fentanyl analogs[7]).

In 2017, 2,010 cocaine-caused deaths occurred, a 14% increase from 2016. Of those deaths, 68% (1,359) were poly-drug involving at least one opioid as a causal occurrence, a 14% increase over 2016. Fentanyl and fentanyl analogs were listed as causal in 51% (1,026) of the cocaine-caused deaths. This is likely a combination of adulteration (of cocaine or other drugs used) and intentional poly-drug use. The southern half of the state has the highest burden of cocaine-caused deaths with the exception of Duval County.

Benzodiazepines and Opioids

In 2017, 1,104 deaths were reported in Florida where at least one benzodiazepine was identified as a cause of death. This is a 2% decrease from 2016 (Figure 13). Benzodiazepines peaked in causal deaths in 2010 and then declined, like opioids, as the State made efforts to reduce diversion of prescription medications. After several years of decline, deaths caused by benzodiazepines began to see a rise once again in 2014. However, 2017 may indicate the beginning of another decrease trend.

[7] Bureau for International Narcotics and Law Enforcement Affairs. *International Narcotics Control Strategy Report.* March 2017. https://www.state.gov/documents/organization/268025.pdf



*Data collection for multiple benzodiazepines did not begin until 2010

Figure 13

In 2017, 85% (943) of benzodiazepine deaths were poly-drug combination of causal benzodiazepines and opioids. Of those benzodiazepine and opioid poly-drug combination causal deaths, 40% (444) also listed fentanyl or fentanyl analog as a cause. Alprazolam (Brand name: Xanax®) continues to be the main contributor to benzodiazepine-caused deaths (72%) especially when used in combination with opioids (63%).

Separately, fentanyl and fentanyl analogs have been found sold as counterfeit street medications not only as oxycodone but also as counterfeit "Xanax®" pills.

Opioid-Associated Emergency Medical Services Response

Emergency medical services (EMS) pre-hospital interactions with individuals experiencing a non-fatal opioid overdose resulted in 15,600 EMS transports in Florida and are estimated to occur at a rate of 84.8 per 100,000 persons (22.4% increase from 2016)[8]. This data was provided by the Florida Department of Health's Bureau of Emergency Medical Oversight. This bureau includes the EMS section and the Emergency Medical Services Tracking and Reporting System (EMSTARS), the database where incident-level, pre-hospital EMS data is reported. Florida's EMSTARS database receives information from EMS agencies that represent roughly 90% of the total number of prehospital EMS runs in Florida. Utilizing data from EMSTARS, non-fatal overdose data were analyzed by the Florida Department of Health's Enhanced State Opioid Overdose Surveillance Program (ESOOS) summarized in surveillance reports and online dashboards and presented in this report.

[8] Florida Department of Health –Enhanced State Opioid Overdose Surveillance http://www.floridahealth.gov/statistics-and-data/fl-esoos/_documents/nonfatal-od 2017.pdf#new%20window%20pdf%20400kb

The case definition for an opioid-involved overdose includes the following: the medication administered is Naloxone and patient exhibits positive response, no matter the primary or secondary impression listed or the primary or secondary impression of any of the following ICD-10 CM "T40.1 - T40.4, T40.60, T40.69, F11" codes.

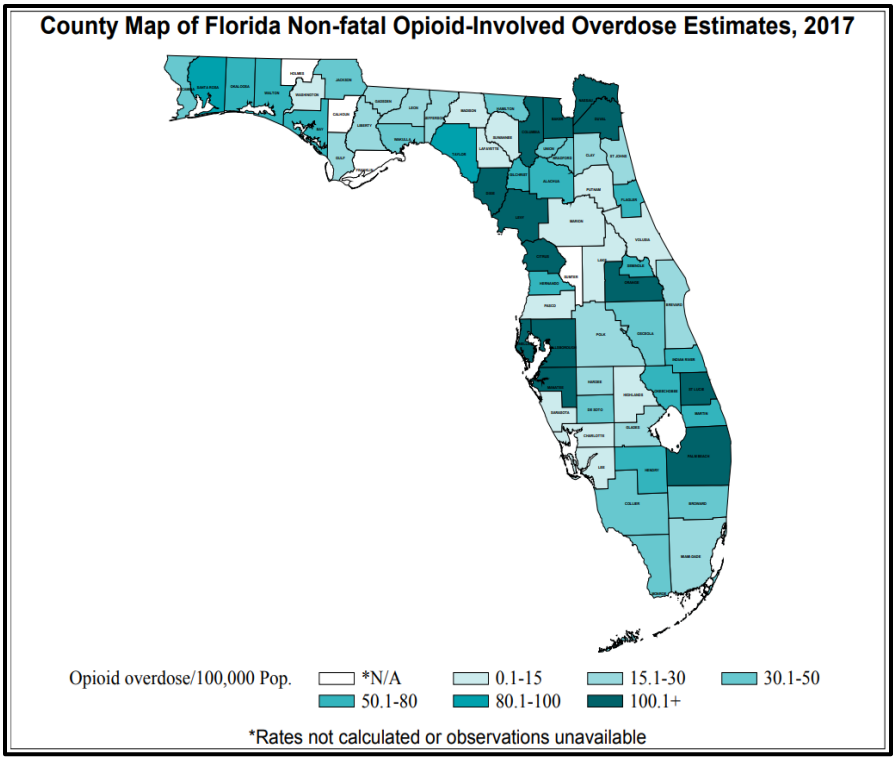


Figure 14

The ESOOS program found that in Florida during 2017, persons aged 25-34 years were more likely than any other age group to experience non-fatal drug-involved or opioid-involved overdose[8]. This statistic is keeping with the other drug consumption consequences showing 25-34 year-olds to be the most affected age group of the opioid crisis. Also, as with the other consequence measures, non-Hispanic whites had the highest numbers of opioid involved non-fatal overdoses. When comparing non-Hispanics to Hispanics, non-Hispanics were at 1.55 times higher risk than Hispanics for non-fatal opioid-involved overdose. Overall between 2016—2017, there were statistically significant rate increases in opioid-involved drug overdose for men (79.5 to 108.8) and women (52.8 to 62.1), with men constituting the majority of EMS involved non-fatal opioid overdoses.

Opioid-Associated Emergency Department Visits

Hospital emergency departments (EDs) play an important role in the treatment of drug poisoning events. In 2017, Florida EDs saw 14,836 opioid-related ED visits, a 19% increase from 2016 ED opioid-related visits (Figure 15). This data was provided by the Florida Agency for Health Care Administration (AHCA). Data on outpatient emergency department visits represent only those who were admitted to the ED, and not subsequently admitted as an inpatient stay. Patients discharged from the health facilities with Principal ICD-CM Diagnosis Code or Other ICD-CM Diagnosis Code (ninth and tenth revisions of Classification of Diseases Clinical Modification and Related Health Problems [ICD-9-CM or ICD-10-CM]) for Opioid and Benzodiazepine drug poisoning were included in this analysis (Figure 16).

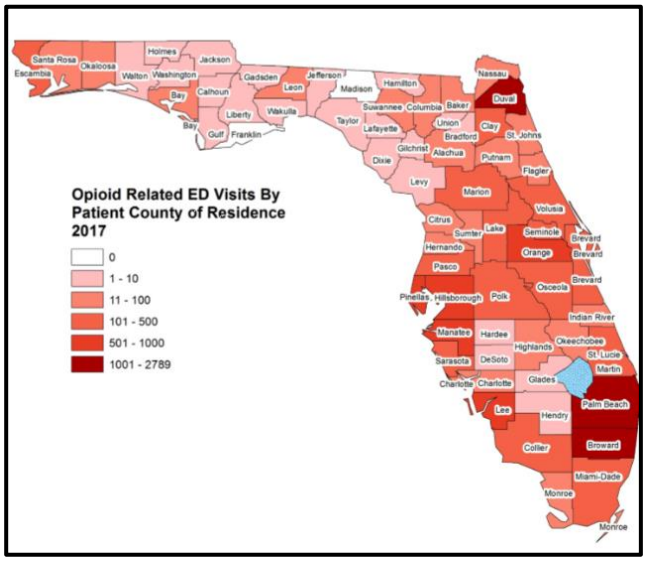


Figure 15

AHCA data is collected from healthcare facilities who are responsible for coding patients with appropriate ICD codes. Some limitations to this data include: ICD-9-CM and ICD-10-CM codes for drug use are subject to coding errors and misclassification (e.g., historical use versus current use); ICD codes changed from ICD-9 to ICD-10 in the 4th Quarter of 2015. These changes may attribute to an unknown difference in data coding and reporting before and after that time. This data does not solely reflect overdoses and does not represent individual patients but individual ED visits.

POISONING DIAGNOSIS	ICD-9 CM CODE	ICD-10 CM CODE
OPIUM	965.00	T40.0X
HEROIN	965.01	T40.1X
OTHER OPIOIDS		T40.2X
METHADONE	965.02	T40.3X
SYNTHETIC NARCOTICS		T40.4X
UNSPECIFIED NARCOTICS		T40.60X
OTHER NARCOTICS		T40.69X
OTHER OPIATES AND RELATED NARCOTICS	965.09	
BENZODIAZEPINES	969.4	T42.4X1A

Figure 16

Opioid-Related Emergency Department Visitations, 2005-2017

In 2017, there were 14,836 overall opioid-related ED visits (including at least one opioid-related ICD code as a principal or other diagnosis). From 2005 to 2012, overall opioid ED visits peaked during the "pill mill" crisis in 2010 and was subsequently followed by a decrease (Figure 16). This mirrors the trends of opioid-associated deaths in the state but with a less dramatic rise and decline. An increase in overall opioid visits started again in 2013. In 2017, opioid-related ED visits had grown to almost 6 times that of 2012 (2,534 to 14,836). This increase can almost solely be attributed to the increase in ED visits coded as heroin. Heroin saw a decrease in ED visits during the peak of the "pill mills" in 2010, but from 2013 - 2017, heroin not only saw a dramatic increase in ED visits but also comprised a larger percentage of overall opioid visits, 4% in 2010 to 78% in 2017.

The most dramatic increase in ED visits was seen between 2015 and 2016, with a doubling of overall opioid visits and a near tripling of heroin visits. While there was again an increase in opioid and heroin ED related visits between 2016 and 2017, the increase was not nearly to the scale seen between 2015 and 2016. In 2017, there was an 18% increase in overall opioid ED visits and a 22% increase in heroin ED visits from 2016.

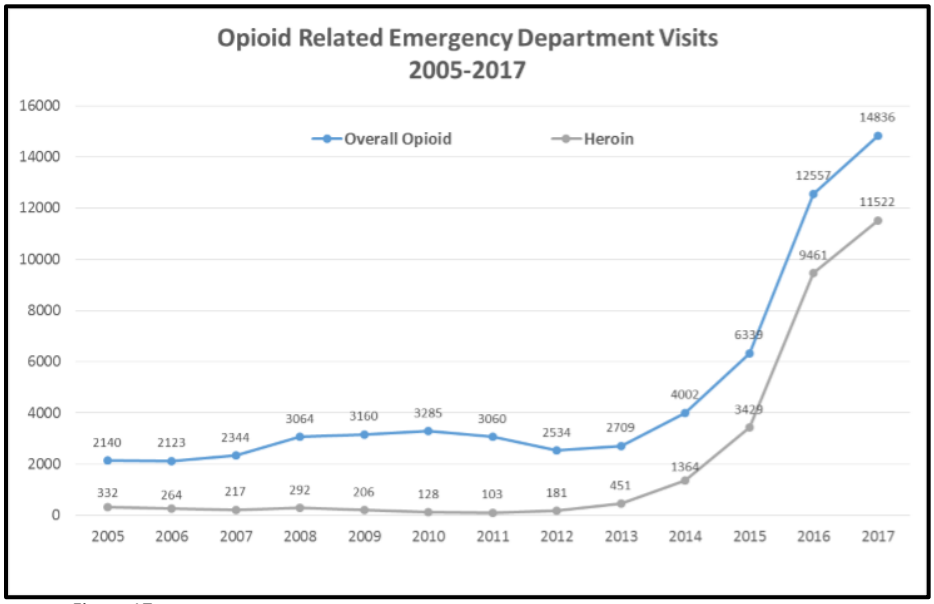


Figure 17

While Florida is in the midst of an opioid epidemic, the change from ICD-9 to ICD-10 in the 4th Quarter of 2015 may have an unknown impact on reporting and accounted for some of the increase. This may include possible misclassification or coding error for fentanyl and fentanyl analogs or heroin intentionally or unintentionally cut with fentanyl and fentanyl analogs.

Demographics

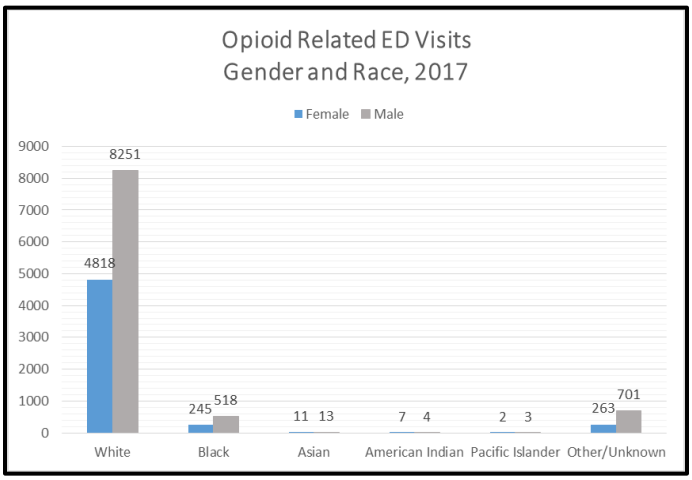


Figure 18

In 2017, overall opioid-related ED visits in Florida were overwhelmingly white and male. Patients that identified as white accounted for 88% (13,069) of the visits and males accounted for 64% (9,490) of the visits (Figure 18).

Between 2016 and 2017, patients that identified as white had ED visits related to opioids increase by 18% and patients that identified as black had ED visits increase by 19%.

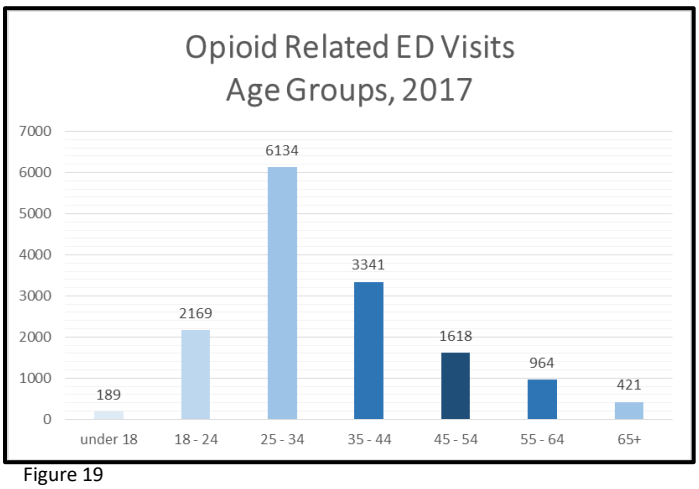


Figure 19

When analyzing opioid-related ED visits by age group, the 25-34-year-old age group has continued to have the highest total number of opioid-related ED visits, representing almost half (41%) of the total visits. In 2016, the distribution of ED visits for opioids represented the same pattern as they do in 2017 (Figure 19).

A large burden of the cost associated with opioid-related ED visits is either being paid out-of-pocket by patients or being absorbed by hospital safety nets. In 2017, 53% of all opioid-related ED visits involved patients without insurance (self-pay) (Figure 20). This is an increase from 2016 where 49% of all opioid-related ED visits involved patients without insurance (self-pay).

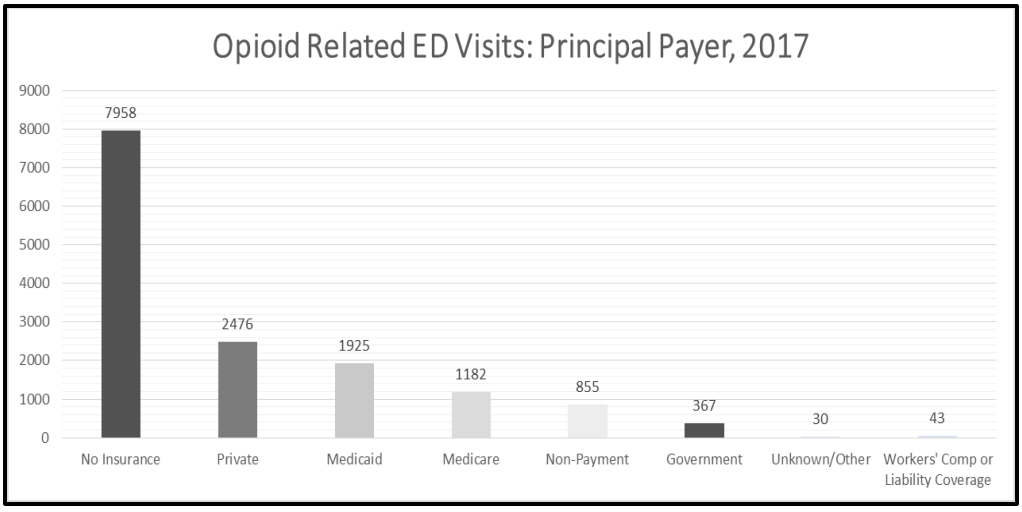


Figure 20

Discharge and Hospital-Bridge Programs

In 2016, of the overall opioid ED visits, 49 individuals (38 with a heroin code) died while in the ED (Figure 21). Looking at the number of opioid-caused deaths in 2017 (4,279) as well as the opioid-related emergency department discharge data, it appears that a vast majority of opioid caused deaths take place outside of a hospital (Figure 21). This indicates that if an individual experiencing an overdose can obtain medical attention in an ED their chances of survival are high.

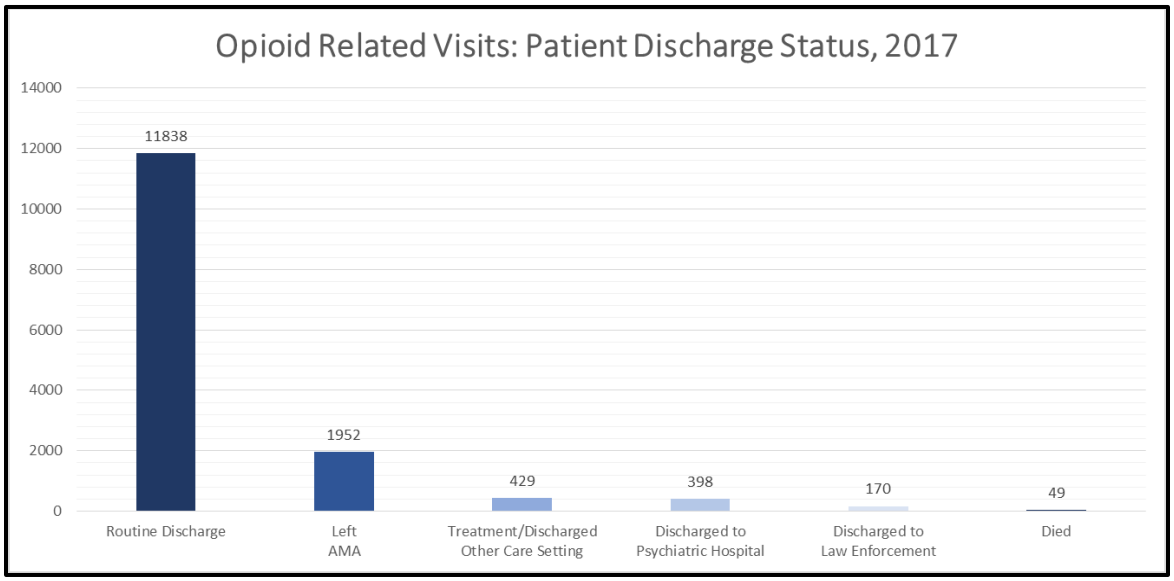


Figure 21

Also, in 2017, 80% of all opioid-related ED visits were released under routine discharge (self-care). Of those nearly 12,000 visits, it is unknown how many included naloxone in a discharge package, linkage to treatment, a coordinated care program, or other services. The ED is a vital location to reach out to those with opioid or other substance use disorders.

Through the PFS, STR and SOR grant projects, Florida has implemented several hospital-based bridge programs that aim to initiate buprenorphine treatment for individuals with opioid use disorders brought to the emergency department due to an overdose or other medical emergency. The goal is to utilize the time spent in the emergency room to engage the individual in treatment and begin buprenorphine induction. The individual is provided a prescription for buprenorphine upon discharge and linked to a maintenance provider in the community. This will keep the individual from experiencing withdrawal symptoms and opioid cravings upon discharge from the hospital. The pilot programs utilize peer specialists who assist in engagement and recovery support services with the individual.

Opioid-Related Inpatient Visitations

All previous caveats and limitations listed for ED visits also apply to inpatient data. An important note regarding ED vs. Inpatient visits, as reported in the AHCA data: if a patient is first seen in an ED and then is admitted to the hospital (now inpatient), that visit is only reported as an inpatient.

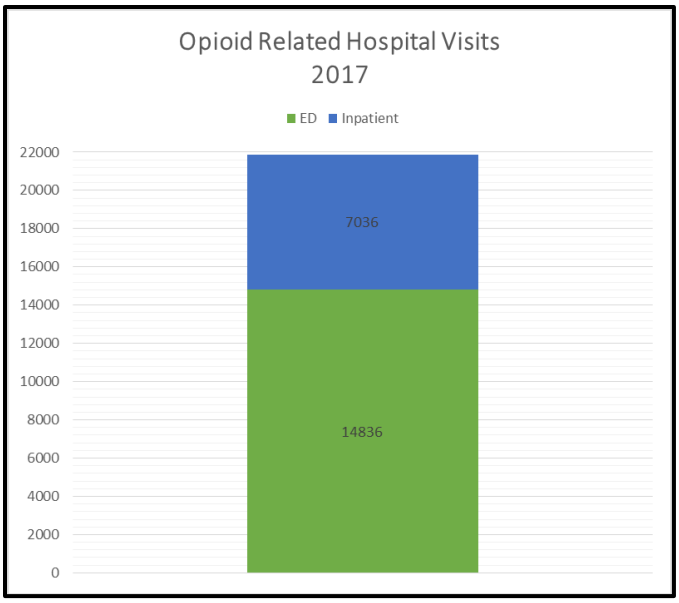


Figure 22

Of the 21,872 opioid-related hospital visits, 68% were ED only and 32% were inpatient (either ED then admitted or admitted w/o ED) (Figure 22). With ED visitations, heroin comprises 78% of the opioid-related visits in 2017. This is far more than inpatient visits (33%) due to heroin (Figure 17 and 23). In 2013, as heroin-coded inpatient visits began to rise, such visits contributed to the overall rise in opioid-related inpatient hospital visits (Figure 23).

The demographics of overall opioid visits were like those of the ED patients for race, with whites representing the majority of visits. 83% of Inpatients identified as white vs. 88% for ED patients. However, sex was more evenly split with males comprising of 50% of inpatient visits vs. 64% in ED visits. In addition, while the 25-34-year-old age group is the highest total number of opioid-related inpatient visits (over 20%), the older age groups do not trail off as with the ED visits, but instead plateau with each representing around 15-19% of the total visits. When it comes to the cost burden, around a third of visits for opioid-related inpatient stay were coded with Medicare as the payer, while around a quarter were coded as *No Insurance*.

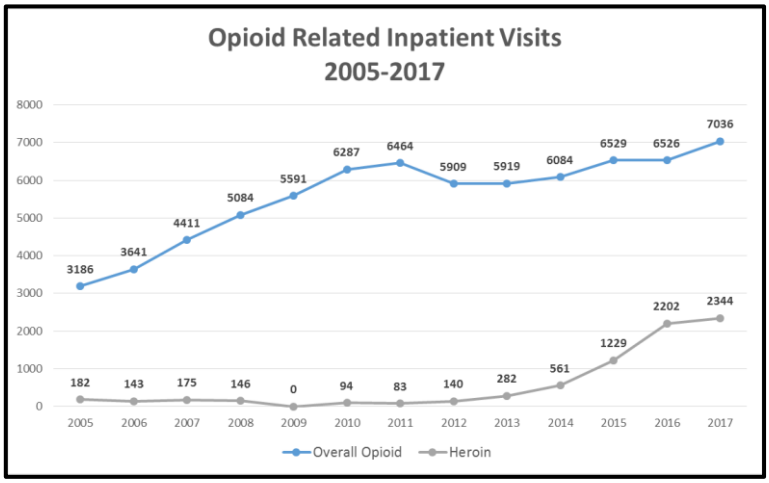


Figure 23

Costs Associated with Opioid-Related Hospital Visitation

Depending on a variety of factors, an individual who has overdosed may be revived quickly via naloxone pre-hospital or in the ED. However, others may require intensive care inpatient stays, including respiratory assistance with a ventilator. According to a 2017 study analyzing 162 hospitals in 44 states, the average cost per ICU overdose admission increased from $58,517 in 2009 to $92,408 in 2015, an increase of 58%[9]. Of the 6,526 overall opioid inpatient visits in 2016, 50% of the visits had Medicaid or Medicare as the principal payer and 24% of the visits involved patients without insurance.

[9] Stevens, J., Et al. *The critical care crisis of opioid overdoses in the United States*

Prevention and Interventions

Naloxone Access

In August of 2016, the Department introduced a statewide opioid overdose prevention program. The Overdose Prevention Coordinator at the Department conducts overdose recognition and response trainings to providers interested in participating in the program. Non-profit organizations in Florida willing to distribute free naloxone kits to people at risk of overdose and their loved ones are eligible to participate. The Department purchases Narcan Nasal Spray for approximately $75 a kit (2 doses per kit). As of December 2018, 97 trainings have been completed with an estimated 3,100 individuals trained on overdose recognition and naloxone use statewide. Additionally, over 40,000 Narcan kits have been distributed to 76 providers currently enrolled in the program, including substance use and mental health treatment providers, homeless service organizations, harm reduction providers, HIV service organizations, emergency departments, Federally Qualified Health Centers (FQHCs), and other community-based organizations. The Department is aware of at least 1,800 overdose reversals through the program to date.

Because of the Governor's Executive Order 17-146 declaring the opioid crisis in Florida a Public Health Emergency, the State Surgeon General issued a statewide non-patient specific naloxone standing order in May 2017. This standing order has been continually renewed with the subsequent reauthorizations of the Executive Order. The standing order allows for emergency responders, such as law enforcement, paramedics, and EMS, to purchase a naloxone kit without a prescription from any pharmacy in the state. Separate from the Surgeon General's standing order, laypeople in the community (not just emergency responders) can purchase naloxone without a prescription from CVS and Walgreens pharmacies in Florida.

Prescription Drug Monitoring Program

According to the CDC, prescription drug monitoring programs (PDMPs) are among the most promising state-level interventions to improve opioid prescribing, inform clinical practice, and protect patients at risk. As discussed in previous sections, the Florida Prescription Drug Monitoring Program, known as E-FORCSE®, was created in 2009 by the Florida Legislature in an initiative to encourage safer prescribing of controlled substances and to reduce drug abuse and diversion within the state of Florida.

This database collects prescribing and dispensing data for controlled substances in Schedules II, III, and IV. The PDMP was created to provide information to health care practitioners to guide their decisions in prescribing and dispensing these scheduled prescription drugs[2]. Below are highlights on the effectiveness of the Florida PDMP as an intervention tool from the 2017-2018 Annual Report:

- According to the 2017-2018 annual report, there has been an increase in prescriber enrollment and utilization. E-FORCSE staff have provided outreach and education to 64,029 health care practitioners in addition to another 667 individuals authorized to conduct investigations which

resulted in a 43.1% increase in registration and a 26.6% increase in the number of query requests, when compared to 2016-2017[2].

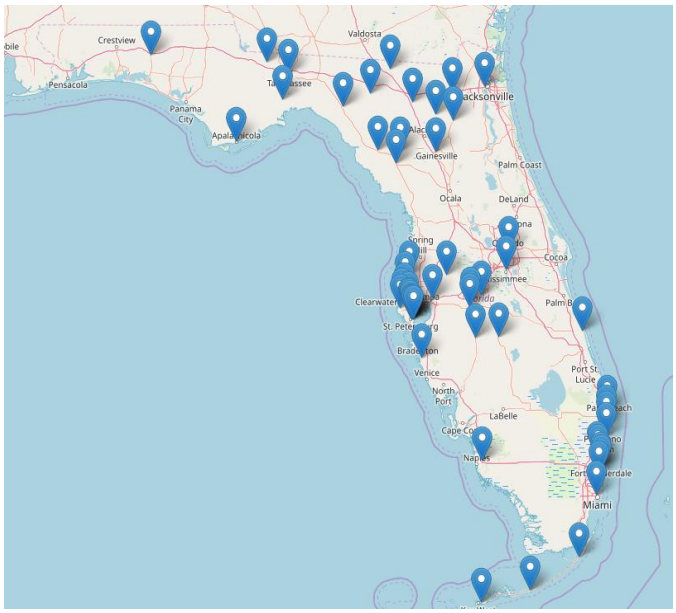
- There has been a 4% decrease in the number of days' supply of controlled substances dispensed to patients and a 1.76% decrease in the Morphine Milligram Equivalents (MME) per prescription when compared to 2017[2].
- The impact on patient behavior because of increased utilization and prescriber behavior change from the PDMP can be seen in a 76.1% reduction in individuals having multiple prescriber episodes ("Doctor Shopping")[2].

As of June 30, 2018, 62,475 health care practitioners/designees had registered for access to the PDMP system and had queried patient-specific information over 45.4 million times. The PDMP has facilitated agreements to ease integration of PDMP information into electronic health records as well as interoperability between states.

Florida Department of Children and Families' Opioid Overdose Prevention Awareness Campaign

In November 2018, the Department launched the Opioid Overdose Prevention Awareness Campaign. The *Save A Life* campaign aims to increase awareness of and access to naloxone among people at risk of overdose and their loved ones. Community members can utilize the naloxone locator through *www.isaveFL.com* to find a naloxone distribution provider closest to them. Digital and print media materials were dispersed throughout Florida in select media markets including Tallahassee, West Palm Beach, Tampa, Orlando, Jacksonville, Sarasota, Pensacola, and Miami. Social media and radio (both streaming and broadcast) advertisements were also created. Printed materials have been placed in 132 locations as of December 2018 in restaurants, gas stations, and other out-of-home placements including bathrooms, stalls and as gas toppers. Examples of printed materials are provided below.

DCF Naloxone Distribution Provider Map



RECOGNIZE & STOP AN OPIOID OVERDOSE

Unresponsive to sternal rub
Unresponsive to shouting their name
Slow or shallow breathing, or not breathing at all
Choking sounds or snore-like gurgling noise
Blue or gray skin and lips

CALL 911. DISPENSE NALOXONE. STAY UNTIL HELP ARRIVES.

Naloxone is an emergency medicine that prevents overdose death from prescription painkillers, heroin, and fentanyl. It is available in some pharmacies without a prescription. Find help and treatment for opioid use disorder: **isaveFL.com**

Opioid Treatment in Florida

Medication Assisted Treatment (MAT) is the use of FDA-approved medications, in combination with counseling and behavioral therapies, to provide a whole-patient approach to the treatment of substance use disorders. MAT is clinically driven with a focus on individualized patient care. FDA-approved medications for opioid use disorder include methadone, buprenorphine, and naltrexone.

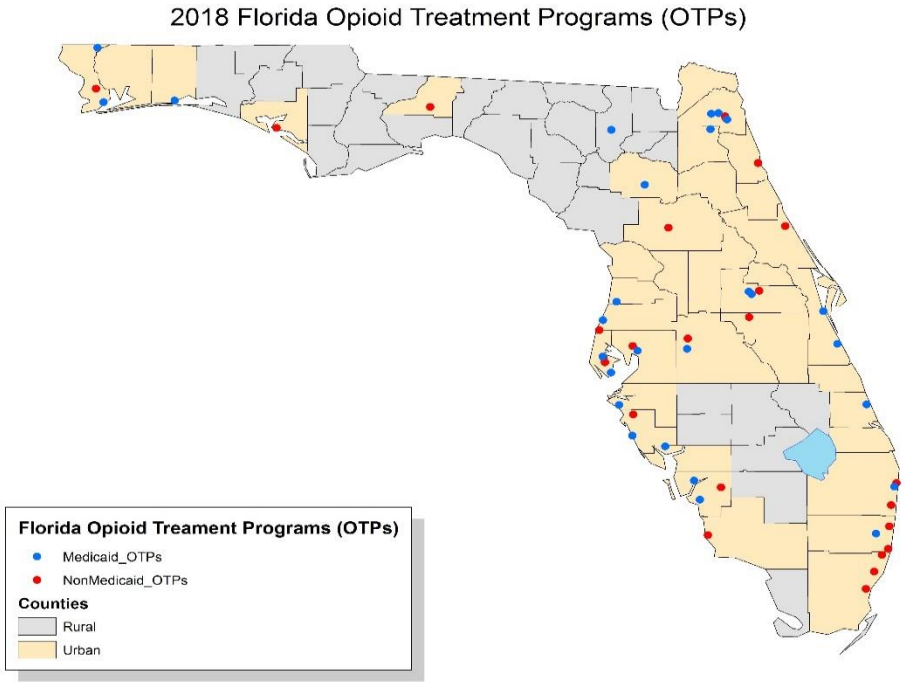


Figure 24

In 2018, 52 methadone Opioid Treatment Programs (OTPs) in Florida were licensed and operating with a varying degree of services (Figure 24)[10]. Some clinics also provide access to buprenorphine and/or naltrexone while others provide only methadone. Some clinics may accept Medicaid while others do not, and some offer a comprehensive array of recovery supports while others only provide the mandated counseling.

The 52 OTPs are unevenly spread amongst Florida's 67 counties with only 25 (37%) counties having at least one full-service clinic (one additional county with a satellite clinic). Only one OTP is located in a rural county. In the 10 counties with the highest opioid-caused deaths in 2017, there are 30 OTPs, representing 58% of all OTPs[11]. In the 10 counties with highest opioid prescription rates in 2017, only 2 OTPs exist[12]. OTPs in Florida are concentrated mainly in the central and southern part of the state and

[10] Florida Department of Children and Families. http://www.myflfamilies.com/service-programs/substance-abuse/treatment-and-detoxification

[11] Florida Medical Examiners Commission (2018).*Drugs Identified in Deceased Persons by Florida Medical Examiners.* http://www.fdle.state.fl.us/MEC/Publications-and-Forms/Documents/Drugs-in-Deceased-Persons/2017-Annual-Drug-Report.aspx

[12] E-FORCSE®, the Florida Prescription Drug Monitoring Program. http://www.floridahealth.gov/statistics-and-data/e-forcse/index.html

along the coastal regions leaving a large portion of the state without access to an OTP. Over half of the currently licensed OTPs (52%) do not accept Medicaid.

Unlike methadone treatment, which must be performed in a highly structured clinic, buprenorphine is the first medication to treat opioid dependency that is permitted to be prescribed or dispensed in physician offices, significantly increasing treatment access. In order to prescribe or dispense buprenorphine, physicians must qualify for a physician waiver, which includes completing eight hours of required training, and applying for a physician waiver. These waiver applications are forwarded to the Drug Enforcement Agency (DEA), which assigns the physician a special identification number. DEA regulations require this number to be included on all buprenorphine prescriptions for opioid dependency treatment, along with the physician's regular DEA registration number. Buprenorphine products are safe and effective when taken as prescribed. SAMHSA surveyed patients and physicians about the effectiveness of buprenorphine, who reported an average of an 80% reduction in illicit opioid use, along with significant increases in employment, and other indices of recovery. Since 2017, the Department has increased provider capacity of waivered physicians by 150% (Figure 25).

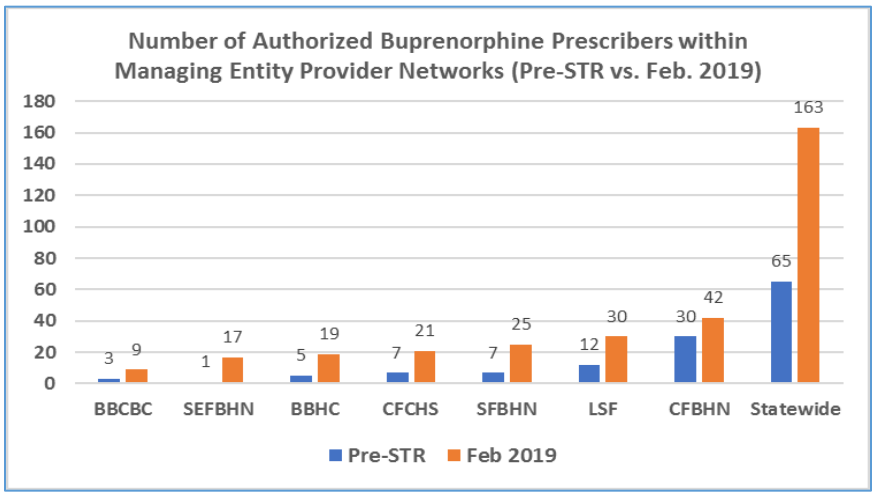


Figure 25

On May 3, 2017, the Governor of the State of Florida signed Executive Order Number 17-146 declaring a public health emergency due to the state's opioid epidemic. In response to the state of emergency, the SAMH office has been working to increase access to methadone treatment throughout the state. A majority of the funding in the STR grant is being utilized for methadone and buprenorphine maintenance treatment for individuals with opioid use disorder that are uninsured, underinsured, or indigent, as controlled trials demonstrate that these services are most effective at retaining individuals in care, reducing illicit opioid use, and reducing opioid-related mortality. As of November 2018, 1.5 years into the STR grant, over 10,000 individuals have received MAT (including use of Subutex, Suboxone, Sublocade, Vivitrol, Oral Naltrexone, and Methadone) services from 65 STR-funded providers.

Florida's State Epidemiological Outcomes Workgroup (SEOW)

The SEOW is a Partnerships for Success (PFS) grant-funded workgroup. Florida's SEOW plays several roles in state, regional, and community opioid morbidity and mortality surveillance. Membership consists of epidemiologists and individuals who are knowledgeable about substance use issues including prevention, intervention, and treatment. Representation of state agencies includes the Department of Children and Families (DCF), the Florida Department of Law Enforcement (FDLE) – Medical Examiners Commission, the Department of Health (DOH), the Agency for Health Care Administration (AHCA), and the Department of Education (DOE).

In addition, the SEOW's composition includes a representative from each of the Drug Epidemiology Networks (DENs) that operate across the State of Florida. Through the PFS grant, eight counties were selected for DEN development and implementation including Broward, Duval, Franklin, Hillsborough, Manatee, Palm Beach, Washington, and Walton. The PFS grant runs from October 1, 2016, through September 30, 2021.

The following are highlights of each DEN's opioid surveillance annual report submitted to the Department in July 2018 (some data may have changed since submission).

Broward

- The 2017 opioid use disorder treatment and death data as well as crime lab reports suggest that Broward County's opioid epidemic may be transitioning from its Expansion Phase to a Plateau Phase while still at the highest level of consequences but prior to an eventual Period of Decline.
- The Broward County Medical Examiner also reports a significant increase in fentanyl and fentanyl analogues detected in decedents.
- Of the 25 health facilities identified in Broward by the DEN, a majority of facilities administer naloxone in the ED and then refer overdose patients to a psychiatric hospital. One facility reports stabilizing in the ED and then providing mental health, detox, and/or medication-assisted treatment services for opioid overdose patients.
- As of the summer 2018 report, of the 15 law enforcement agencies in Broward, 3 identified as having officers trained in overdose prevention while also carrying naloxone.
- There are approximately 435 pharmacies in Broward County.
    - 2 chains were identified as operating under the standing order.
    - Not all stores in the two identified chains carried naloxone.
- According to public records, there were 564 admissions for opioids other than heroin reported as primary treatment admissions in Broward County during 2017, accounting for 10% of all treatment admissions (including alcohol).
- Law enforcement drug seizure data shows the top 3 drugs seized as cocaine, cannabis, and heroin.

Duval

- Deaths caused by opioids increased from 2016 to 2017 in Duval County.
- Jacksonville Fire & Rescue (JFRD) has seen a large increase in Narcan administrations from 2015 to 2017: 2,114 (2015), 3,411 (2016), 3,686 (2017), with over half the patients being 25-39 years of age and 60% being male.

- Based on JFRD data showing the highest impacted zip codes for overdoses (32210), 4 pharmacies were surveyed for Narcan availability.
    - All pharmacies said they carried naloxone, but none had it in stock.
    - Price varied from $71 to $200
- In the first half of 2018, 278 drug arrests were made for fentanyl, heroin, methadone, prescription, morphine, methamphetamine, and cocaine possession.
- The number of individuals receiving treatment for an opioid use disorder with providers subcontracted under Lutheran Services Florida (LSF) slightly decreased from Fiscal Year 15-16 (3725) to Fiscal Year 16-17 (3467).

Franklin

- Franklin County has not seen an increase in the use and/or abuse of opioids as present in many Florida counties. Drug issues have primarily involved the use and manufacture of methamphetamines.
- According to the Franklin County Sherriff's Office, all drug arrests since 2013 have been for methamphetamine except one for Adderall.
- Of the 2 hospitals in Franklin, Weems Medical Center in Apalachicola is currently the only medical center providing referrals to DISC Village for individuals with drug or alcohol dependence.
- Of the 3 law enforcement agencies, Franklin County Sheriff's Office is the only agency that has trained officers equipped with Narcan (naloxone HCl 4 mg).
- County Emergency Medical Services carries naloxone.
- The 2 pharmacies in Franklin do not operate under the naloxone standing order and neither keep naloxone in stock.

Hillsborough

- In 2017 there were 179 opioid-caused deaths in Hillsborough. This is a 13% increase from 2016.
    - Most opioid deaths are poly substance.
- Of the 17 health facilities in Hillsborough, 3 provided information of services for opioid overdose patients.
- All 4 law enforcement agencies in the county (as of July 2018) had officers trained in overdose prevention. Tampa PD and Hillsborough Sheriff's patrol, narcotics, and special projects (homeless initiative) carry naloxone.
- In 2016, Hillsborough County Fire Rescue EMS responded to 2,113 overdose calls.
    - In 2017, EMS reported most cases needed more than one dose of naloxone, some up to six doses.
- Of the 193 pharmacies in Hillsborough County, 110 were contacted. 62 pharmacies carry naloxone and 80 operated under the standing order. Though, only 58 were operating in accordance to the order.
    - Price ranged from $54 to $200 for Narcan Nasal Spray and $25 To $254 for or injectable naloxone.

Manatee

- While opioid-related overdose deaths continue to impact Manatee County, there has been a significant reduction from 2016 to 2018 in the total number of opioid overdoses, deaths, naloxone administrations and babies born diagnosed as NAS or substance exposed.
- The overwhelming majority of overdose deaths reported in 2017 were caused by fentanyl analogs and cocaine, suggesting that focused information/education should be directed toward this drug of choice in Manatee County.
- 570 Manatee County children were sheltered out of their homes in 2017, a very slight decrease from 2016 (581).
- Narcan administrations significantly decreased from July 2017 to Dec 2017, and data indicates that this trend continues through 2018.
- Continuing a trend from 2016, over 65% of Naloxone reversal patients in 2017 were male, almost 90% were white and 58.2% resided in three specific Manatee zip codes (34205, 34207, 34208).
- Of the 5 law enforcement agencies, only one Manatee law enforcement department is equipped with Naloxone, the Bradenton Police Department. Since fall 2017, State funding was secured for the purchase of 400 doses of Narcan (as of May 2017) in addition to training and dispensing protocols for patrol officers.

Palm Beach

- Overdoses continue to increase in Palm Beach County. Overdoses involving fentanyl continue to increase, as well as an increase in cocaine use mixed with opioids**.**
- Of the 20 hospitals in Palm Beach, 19 provide emergency services for patients experiencing an overdose. One hospital provides a range of intensive outpatient services for those who have experienced an opioid overdose.
- As of the summer 2017 report, of the 24 law enforcement agencies in the county only 2 agencies equip officers with naloxone and provide overdose prevention training.
- County Emergency Medical Services reported responding to approximately 4,945 opiate overdoses in 2017.
    - Accurate data for doses of naloxone used on an individual is unknown; however, the average is 4-5 doses per person.
- There are approximately 520 pharmacies in Palm Beach County.
    - Only 1 of the contacted pharmacies was willing to share information:
        - They operate under the standing order for naloxone.
        - They carry Narcan Nasal Spray in stock with an average cost of $135.
- Law enforcement drug seizure data shows top 3 drugs seized as cocaine, heroin, and cannabis.

Washington

- Washington County has the 8th highest prescription rate for opioids in the state at 130.7 per 100 residents.
- The 1 community hospital in the county does not provide overdose prevention services upon discharge.

    - A hospital in the neighboring Holmes County offers withdrawal medical stabilization with in-hospital Suboxone treatment and discharge to a treatment program.
- As of July 2018, 1 of the 2 law enforcement agencies in the county had officers trained in overdose prevention and carry naloxone.
- In 2017, County Emergency Medical Services administered naloxone 26 times resulting in 19 reversals.
- Of the 3 pharmacies in the county, none carry naloxone or operate under the standing order.
- Washington County has a treatment provider who reported 64 Suboxone patients for 2018 as of June 2018.
- Law enforcement drug seizure data listed the top 3 drugs seized as methamphetamine (50%), cannabis (16%), and cocaine (10%).

Walton

- In March 2017, data indicated a 67% increase in the number of children placed in out-of-home care (child removal).
    - Through June 2014 to June 2016, 25% of child removal cases were verified for substance use.
- Of the 2 law enforcement agencies that serve Walton County, both have naloxone training and carry naloxone.
- Of the 10 pharmacies in Walton County, half had naloxone nasal spray in stock when surveyed.
    - No pharmacy listed naloxone for under $100.
- Chautauqua Healthcare Services provides medication assisted treatment (Vivitrol).
    - Additionally, the Walton County Jail is collaborating with Chautauqua Healthcare Services to provide medication assisted treatment prior to an inmate's release from jail.

Appendix A

Figure 1

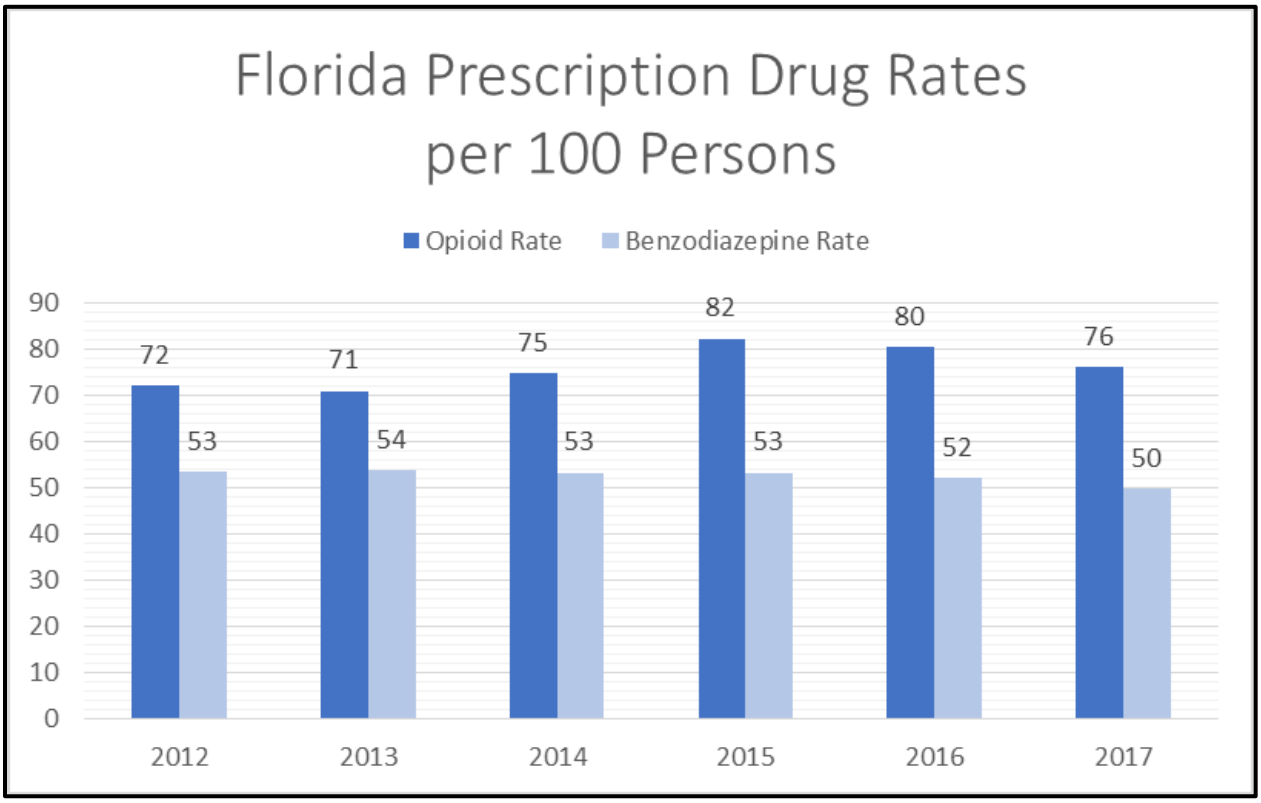


Figure 2

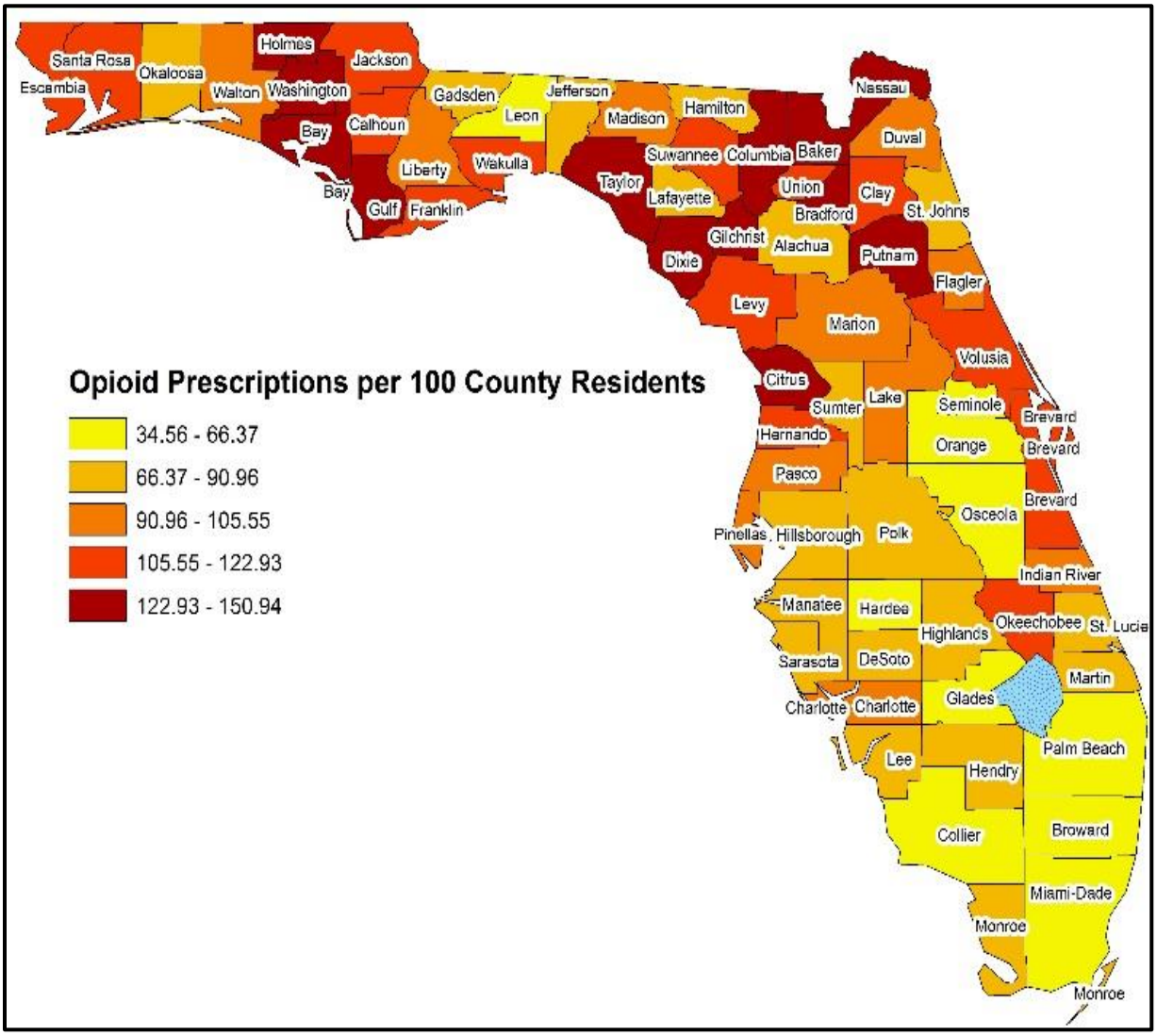

Opioid Prescriptions per 100 County Residents
34.56 - 66.37
66.37 - 90.96
90.96 - 105.55
105.55 - 122.93
122.93 - 150.94
Escambia
Santa Rosa
Okaloosa
Walton
Holmes
Washington
Jackson
Bay
Calhoun
Gulf
Liberty
Franklin
Gadsden
Wakulla
Leon
Jefferson
Taylor
Madison
Hamilton
Suwannee
Lafayette
Columbia
Nassau
Duval
Baker
Union
Bradford
Clay
St. Johns
Gilchrist
Alachua
Dixie
Putnam
Flagler
Levy
Marion
Volusia
Citrus
Sumter
Lake
Seminole
Brevard
Hernando
Orange
Brevard
Pasco
Brevard
Osceola
Pinellas
Hillsborough
Polk
Indian River
Manatee
Hardee
Okeechobee
St. Lucie
Highlands
Sarasota
DeSoto
Martin
Glades
Charlotte
Charlotte
Palm Beach
Lee
Hendry
Collier
Broward
Miami-Dade
Monroe
Monroe

Figure 3

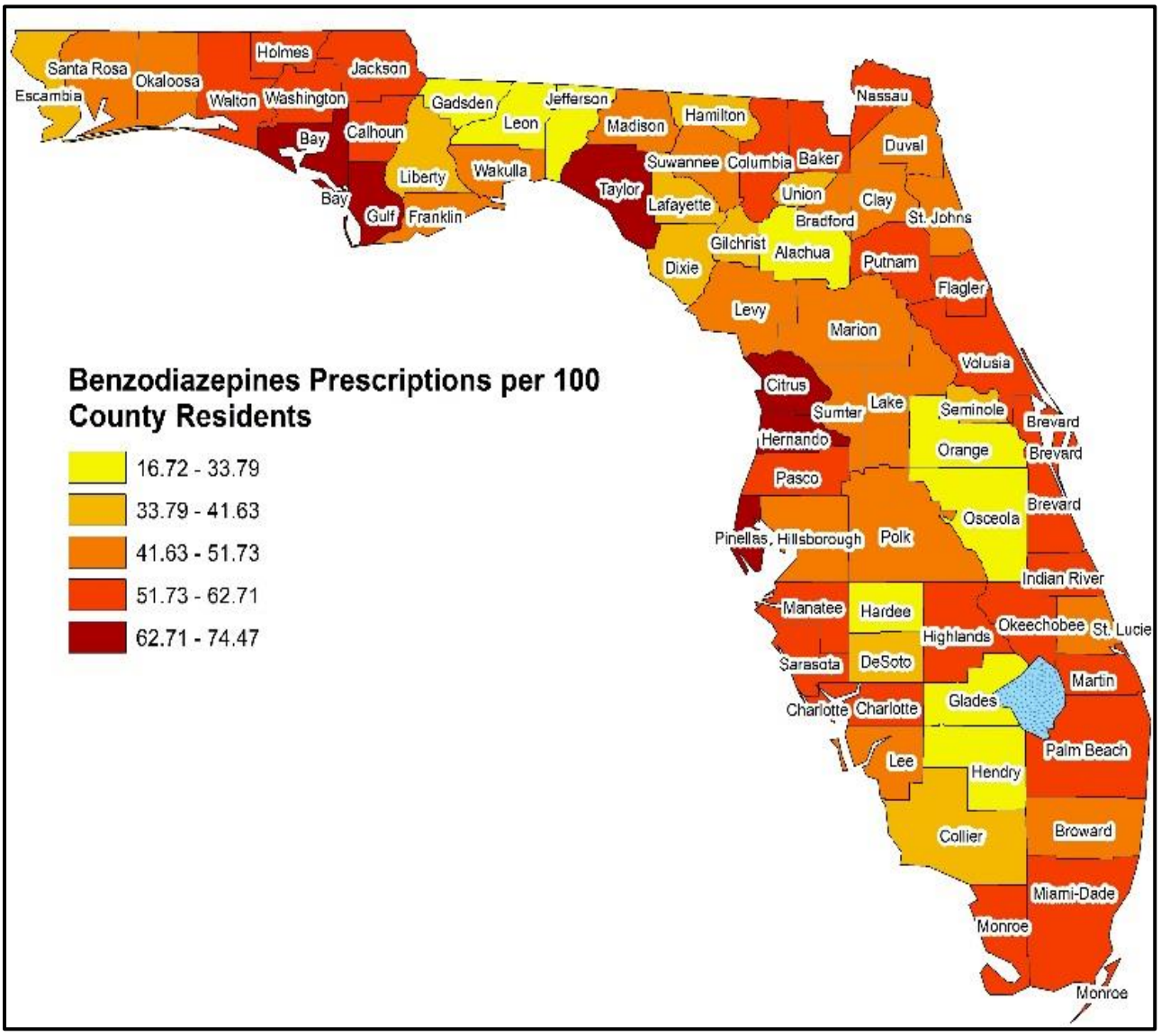

Benzodiazepines Prescriptions per 100 County Residents
16.72 - 33.79
33.79 - 41.63
41.63 - 51.73
51.73 - 62.71
62.71 - 74.47
Escambia
Santa Rosa
Okaloosa
Walton
Holmes
Washington
Jackson
Bay
Calhoun
Gulf
Bay
Liberty
Franklin
Gadsden
Wakulla
Leon
Jefferson
Taylor
Madison
Hamilton
Suwannee
Columbia
Lafayette
Dixie
Gilchrist
Levy
Alachua
Baker
Union
Bradford
Nassau
Duval
Clay
St. Johns
Putnam
Flagler
Marion
Volusia
Citrus
Sumter
Lake
Seminole
Brevard
Hernando
Orange
Brevard
Pasco
Osceola
Brevard
Pinellas
Hillsborough
Polk
Indian River
Manatee
Hardee
Okeechobee
St. Lucie
Highlands
Sarasota
DeSoto
Martin
Charlotte
Charlotte
Glades
Palm Beach
Lee
Hendry
Collier
Broward
Miami-Dade
Monroe
Monroe

Figure 4

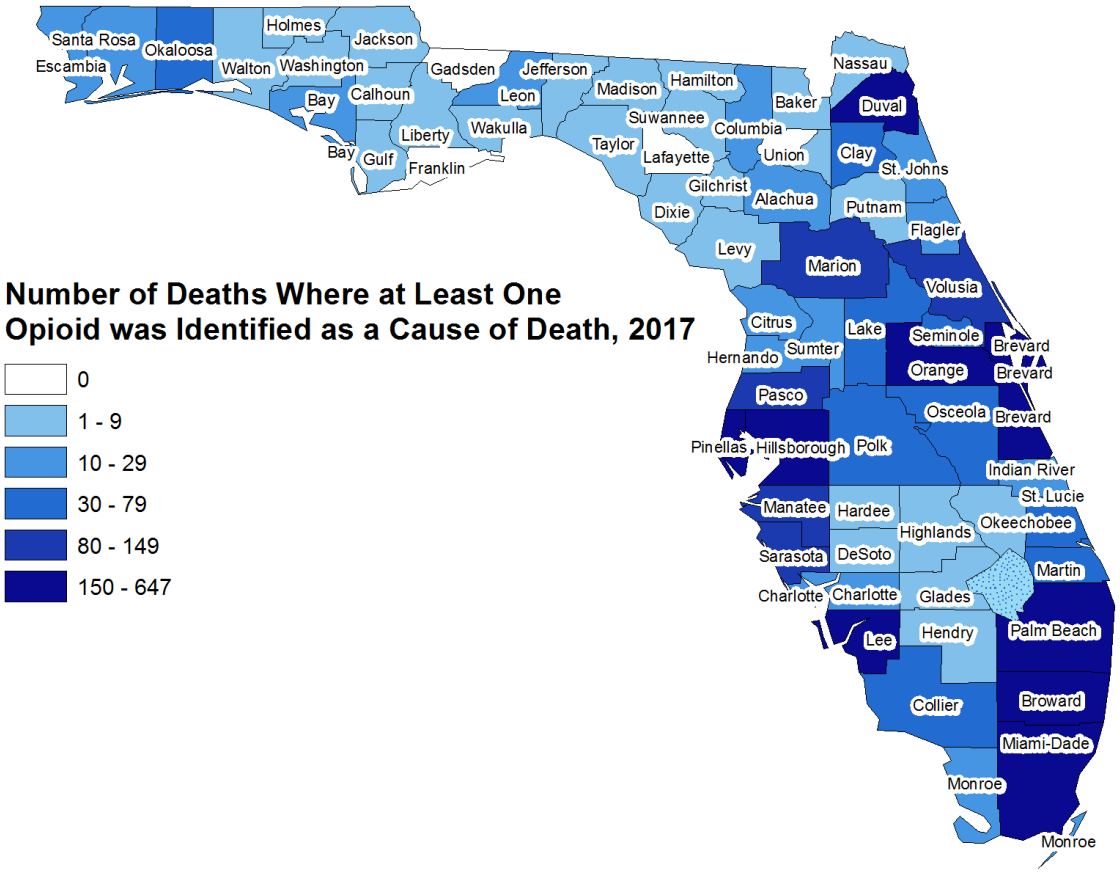

Number of Deaths Where at Least One Opioid was Identified as a Cause of Death, 2017
0
1 - 9
10 - 29
30 - 79
80 - 149
150 - 647
Santa Rosa
Escambia
Okaloosa
Holmes
Walton
Washington
Jackson
Bay
Calhoun
Gadsden
Liberty
Gulf
Franklin
Wakulla
Leon
Jefferson
Madison
Taylor
Hamilton
Suwannee
Lafayette
Columbia
Baker
Union
Dixie
Gilchrist
Alachua
Levy
Nassau
Duval
Clay
St. Johns
Putnam
Flagler
Marion
Volusia
Citrus
Hernando
Sumter
Lake
Seminole
Brevard
Orange
Brevard
Pasco
Osceola
Brevard
Pinellas
Hillsborough
Polk
Indian River
St. Lucie
Manatee
Hardee
Okeechobee
Highlands
Sarasota
DeSoto
Martin
Charlotte
Charlotte
Glades
Lee
Hendry
Palm Beach
Collier
Broward
Miami-Dade
Monroe
Monroe

Figure 5

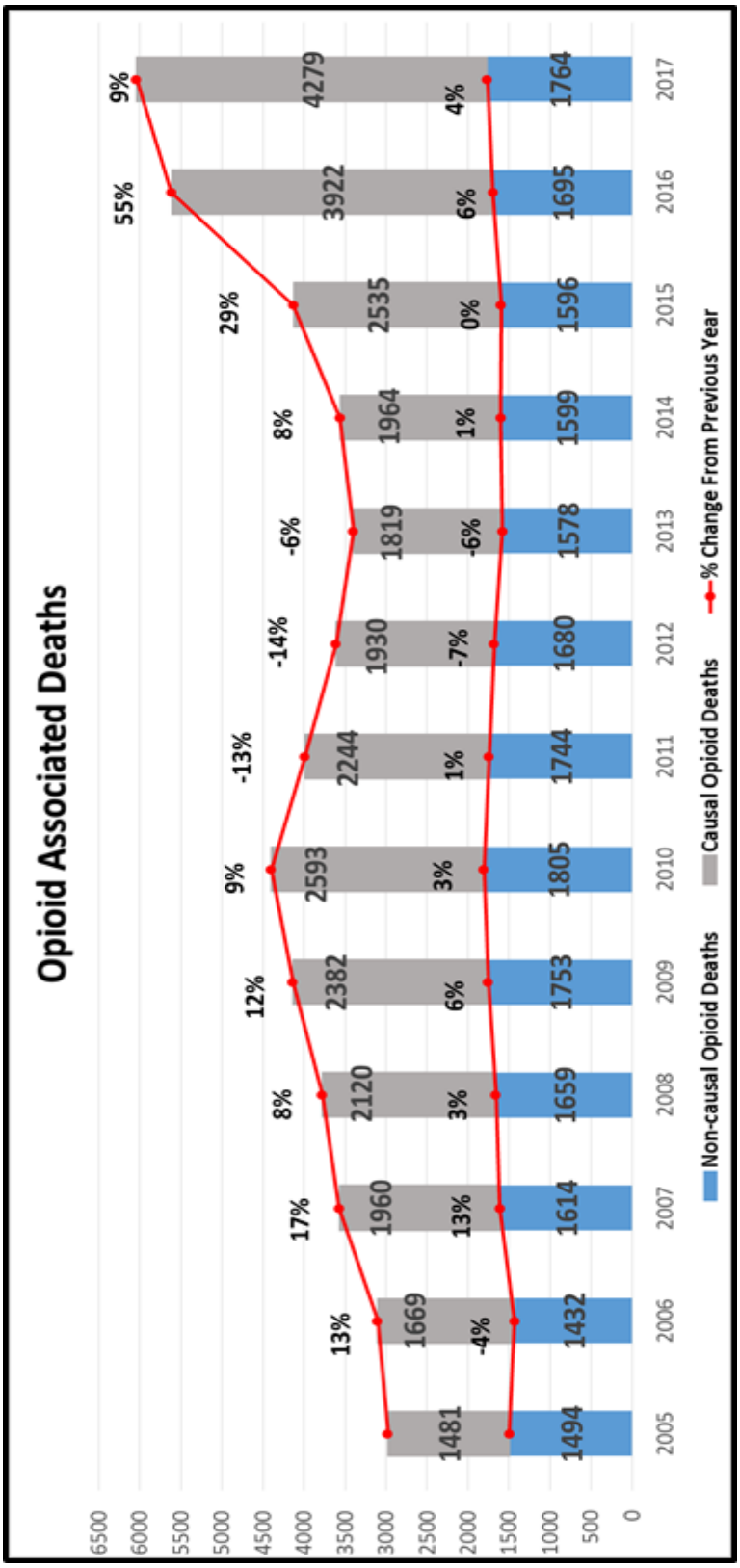

Opioid Associated Deaths
Non-causal Opioid Deaths
Causal Opioid Deaths
% Change From Previous Year
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
1494
1481
1432
1669
1614
1960
1659
2120
1753
2382
1805
2593
1744
2244
1680
1930
1578
1819
1599
1964
1596
2535
1695
3922
1764
4279
9%
55%
29%
8%
-6%
-14%
-13%
9%
12%
8%
17%
13%
-4%
13%
3%
6%
3%
1%
-7%
-6%
1%
0%
6%
4%
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500

Figure 6

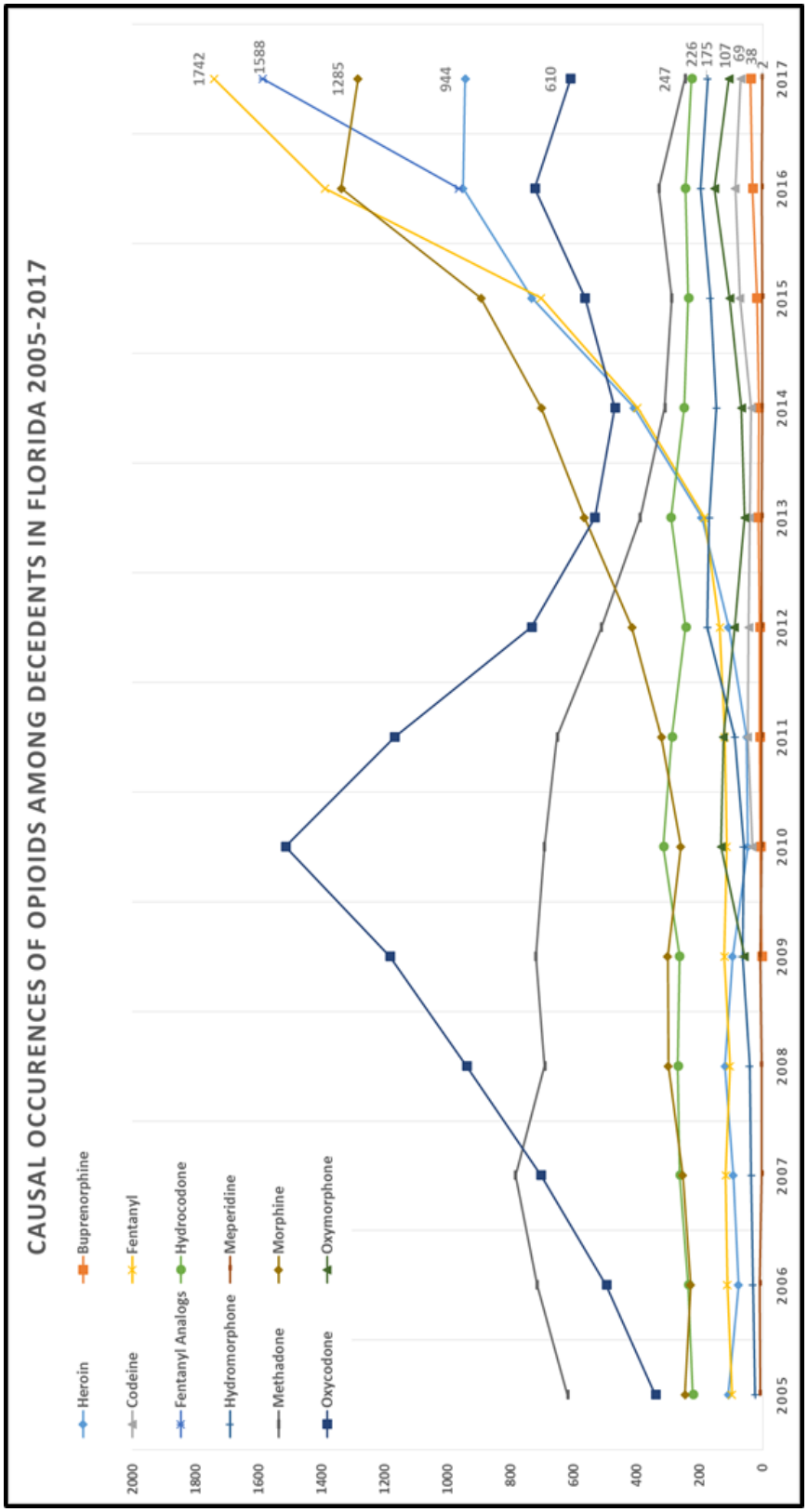

CAUSAL OCCURENCES OF OPIOIDS AMONG DECEDENTS IN FLORIDA 2005-2017
Buprenorphine
Fentanyl
Hydrocodone
Meperidine
Morphine
Oxymorphone
Heroin
Codeine
Fentanyl Analogs
Hydromorphone
Methadone
Oxycodone
1742
1588
1285
944
610
247
226
175
107
69
38
2
2000
1800
1600
1400
1200
1000
800
600
400
200
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

Figure 7

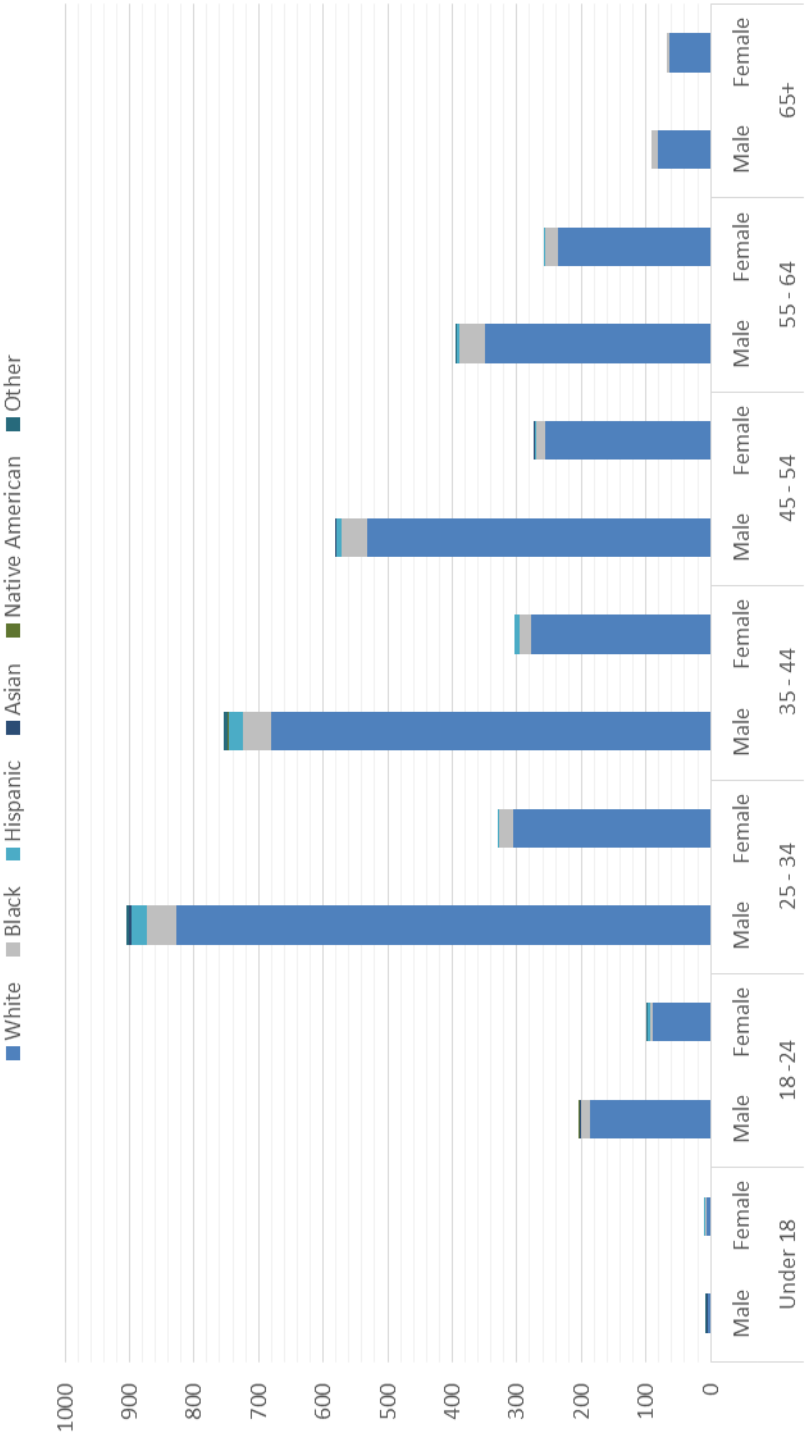
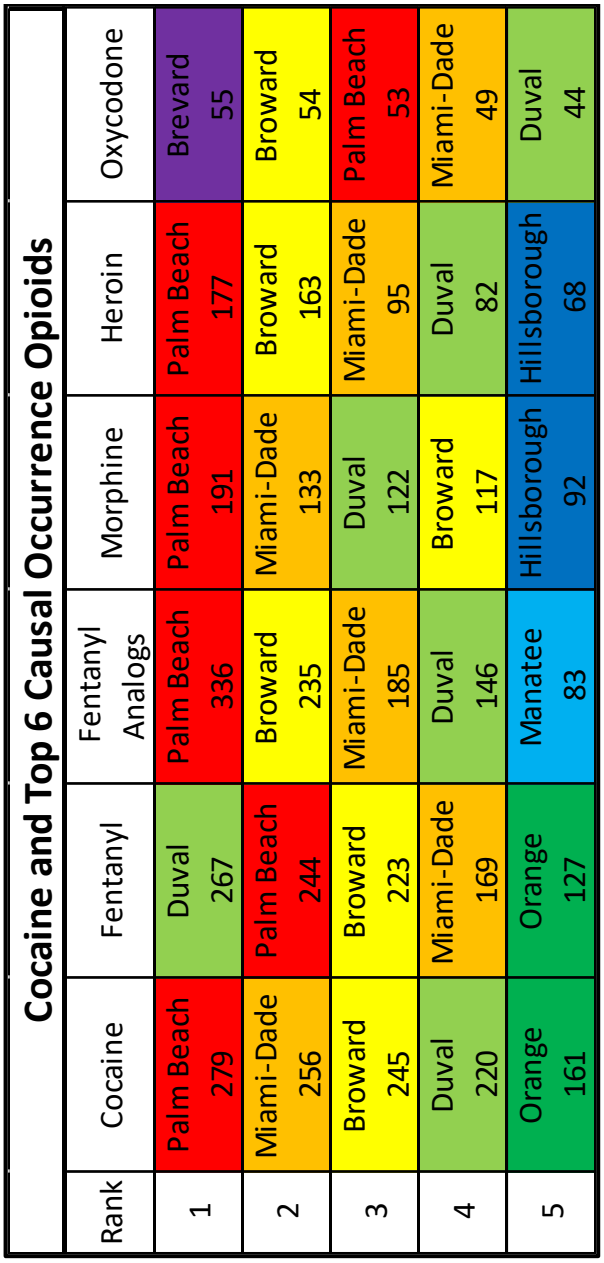

White
Black
Hispanic
Asian
Native American
Other
1000
900
800
700
600
500
400
300
200
100
0
Male
Female
Under 18
Male
Female
18 - 24
Male
Female
25 - 34
Male
Female
35 - 44
Male
Female
45 - 54
Male
Female
55 - 64
Male
Female
65+

Figure 8



Cocaine and Top 6 Causal Occurrence Opioids						
Rank	Cocaine	Fentanyl	Fentanyl Analogs	Morphine	Heroin	Oxycodone
1	Palm Beach 279	Duval 267	Palm Beach 336	Palm Beach 191	Palm Beach 177	Brevard 55
2	Miami-Dade 256	Palm Beach 244	Broward 235	Miami-Dade 133	Broward 163	Broward 54
3	Broward 245	Broward 223	Miami-Dade 185	Duval 122	Miami-Dade 95	Palm Beach 53
4	Duval 220	Miami-Dade 169	Duval 146	Broward 117	Duval 82	Miami-Dade 49
5	Orange 161	Orange 127	Manatee 83	Hillsborough 92	Hillsborough 68	Duval 44

Figure 9

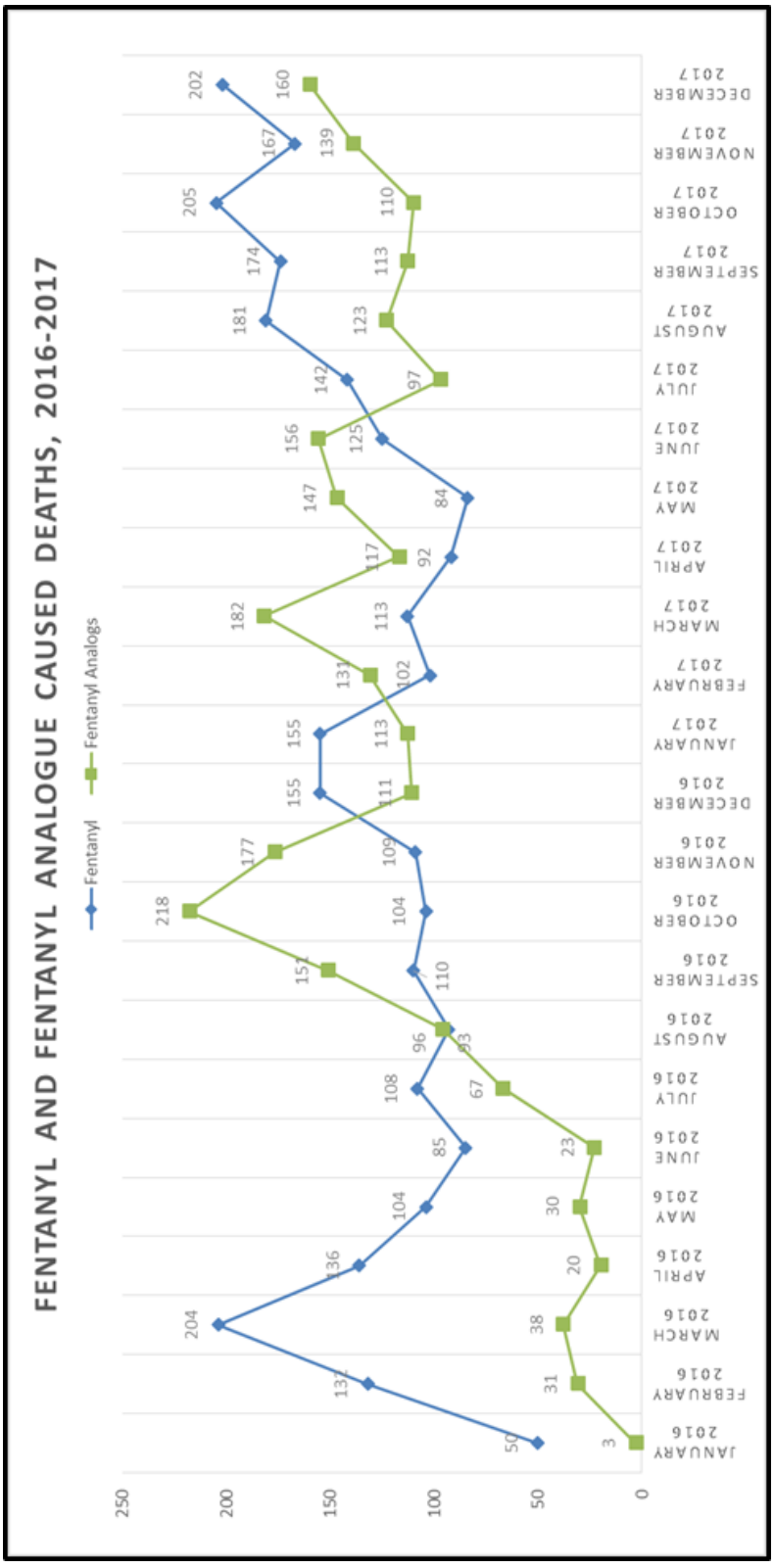

FENTANYL AND FENTANYL ANALOGUE CAUSED DEATHS, 2016-2017
Fentanyl
Fentanyl Analogs
250
200
150
100
50
0
JANUARY 2016
FEBRUARY 2016
MARCH 2016
APRIL 2016
MAY 2016
JUNE 2016
JULY 2016
AUGUST 2016
SEPTEMBER 2016
OCTOBER 2016
NOVEMBER 2016
DECEMBER 2016
JANUARY 2017
FEBRUARY 2017
MARCH 2017
APRIL 2017
MAY 2017
JUNE 2017
JULY 2017
AUGUST 2017
SEPTEMBER 2017
OCTOBER 2017
NOVEMBER 2017
DECEMBER 2017
50
137
204
136
104
85
108
96
157
218
177
109
104
110
93
67
23
30
20
38
31
3
155
155
111
113
131
102
182
113
117
92
147
84
156
125
142
97
181
123
174
113
205
110
167
139
202
160

Figure 10

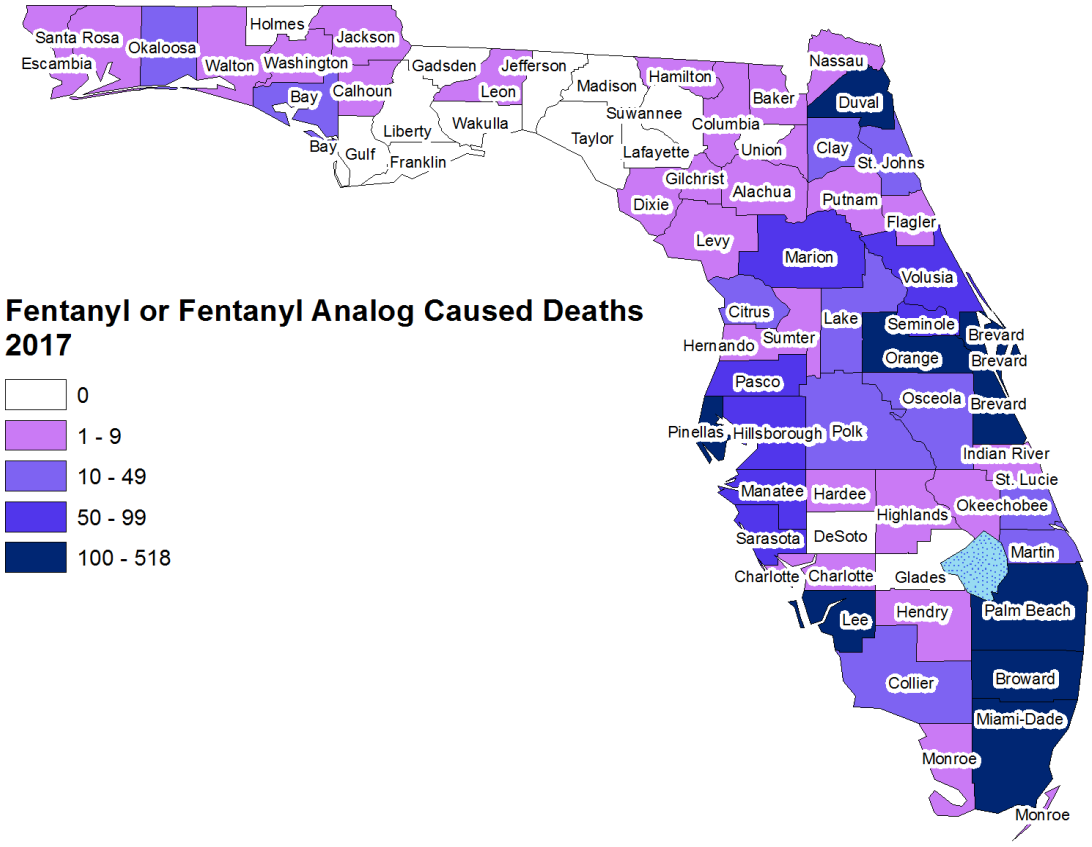

Fentanyl or Fentanyl Analog Caused Deaths
2017
0
1 - 9
10 - 49
50 - 99
100 - 518
Santa Rosa
Escambia
Okaloosa
Holmes
Walton
Washington
Jackson
Bay
Calhoun
Gadsden
Liberty
Gulf
Franklin
Wakulla
Leon
Jefferson
Madison
Taylor
Hamilton
Suwannee
Lafayette
Columbia
Baker
Nassau
Duval
Union
Clay
St. Johns
Gilchrist
Alachua
Putnam
Dixie
Flagler
Levy
Marion
Volusia
Citrus
Lake
Seminole
Brevard
Hernando
Sumter
Orange
Brevard
Pasco
Osceola
Brevard
Pinellas
Hillsborough
Polk
Indian River
St. Lucie
Manatee
Hardee
Okeechobee
Highlands
Sarasota
DeSoto
Martin
Charlotte
Charlotte
Glades
Hendry
Palm Beach
Lee
Collier
Broward
Miami-Dade
Monroe
Monroe

Figure 11

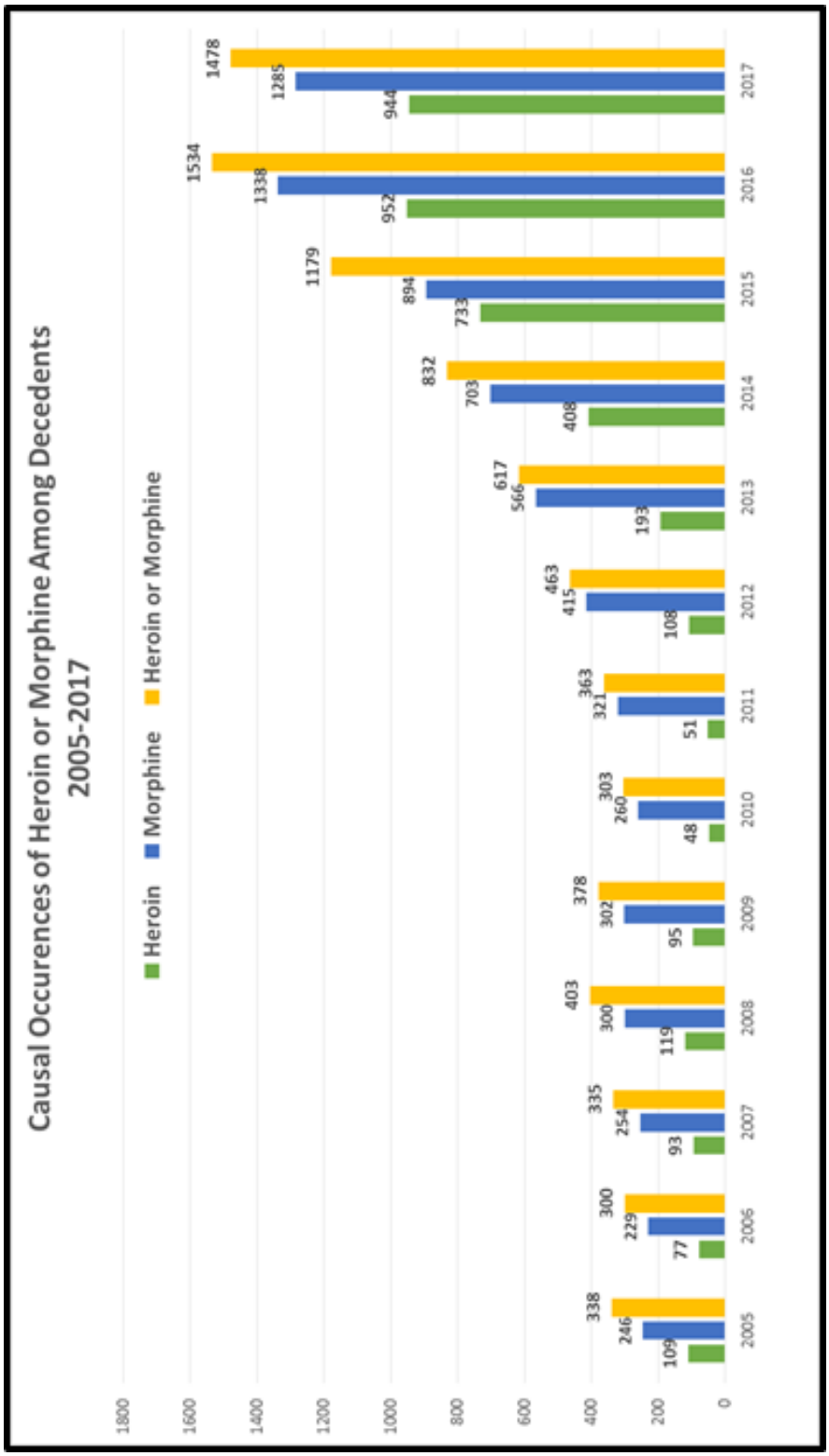

Causal Occurences of Heroin or Morphine Among Decedents
2005-2017
Heroin
Morphine
Heroin or Morphine
2005 109 246 338
2006 77 229 300
2007 93 254 335
2008 119 300 403
2009 95 302 378
2010 48 260 303
2011 51 321 363
2012 108 415 463
2013 193 566 617
2014 408 703 832
2015 733 894 1179
2016 952 1338 1534
2017 944 1285 1478
0 200 400 600 800 1000 1200 1400 1600 1800

Figure 12

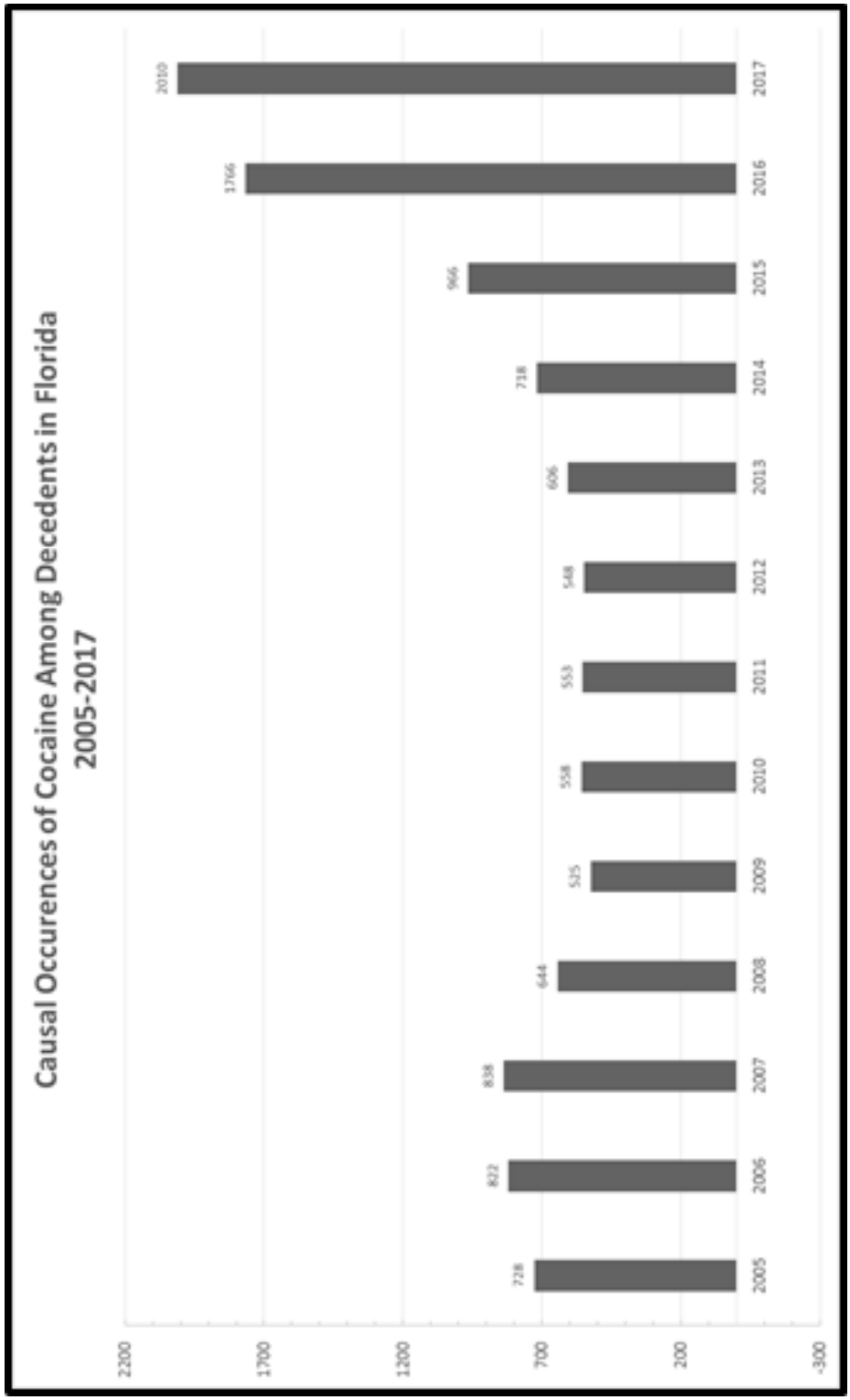

Causal Occurences of Cocaine Among Decedents in Florida
2005-2017
2017
2016
2015
2014
2013
2012
2011
2010
2009
2008
2007
2006
2005
2010
1766
966
718
606
548
553
558
525
644
838
822
728
2200
1700
1200
700
200
-300

Figure 13

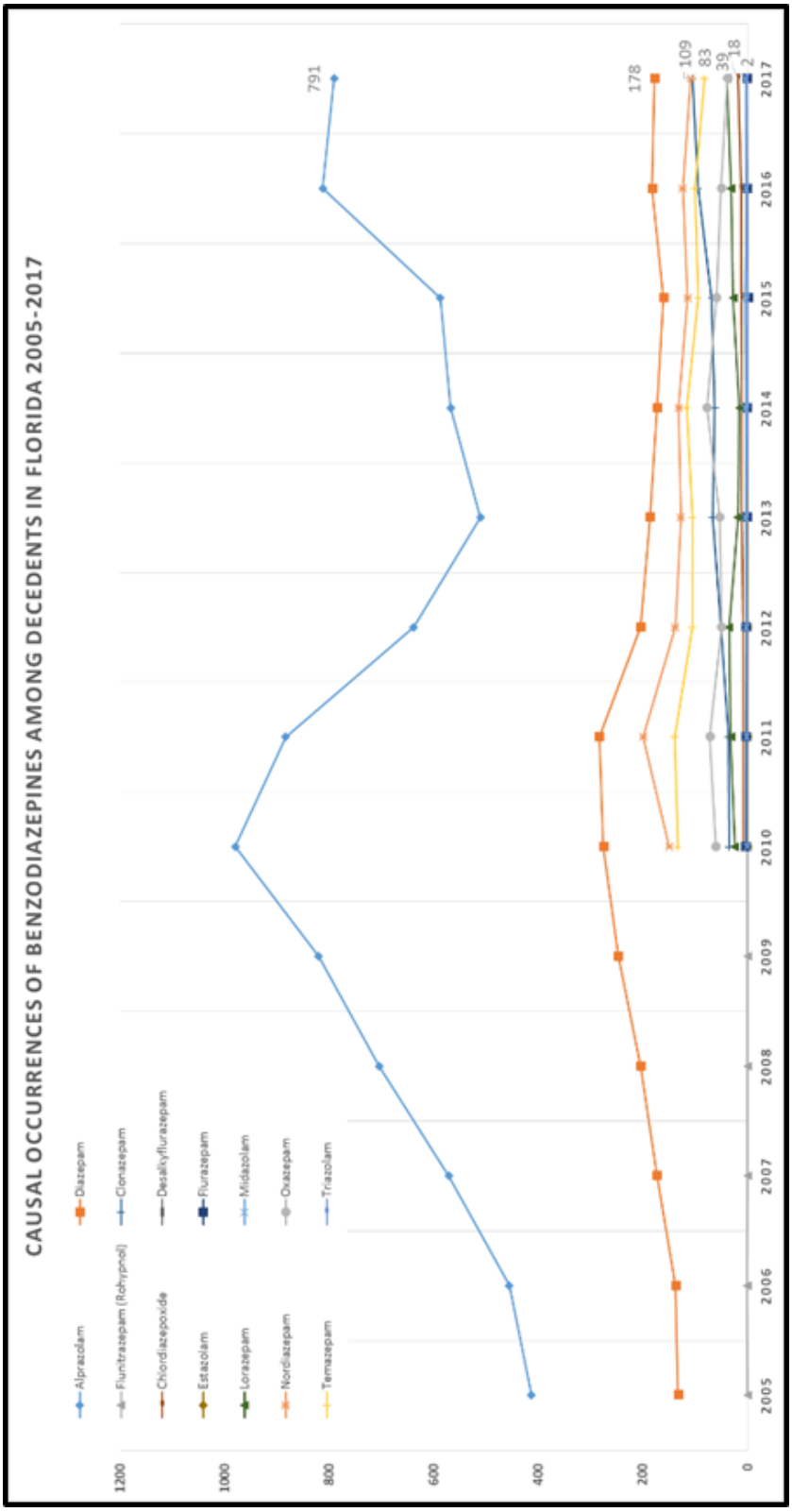

CAUSAL OCCURRENCES OF BENZODIAZEPINES AMONG DECEDENTS IN FLORIDA 2005-2017
Alprazolam
Diazepam
Flunitrazepam (Rohypnol)
Clonazepam
Chlordiazepoxide
Desalkylflurazepam
Estazolam
Flurazepam
Lorazepam
Midazolam
Nordiazepam
Oxazepam
Temazepam
Triazolam
1200
1000
800
600
400
200
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
791
178
109
83
39
18
2

Figure 14

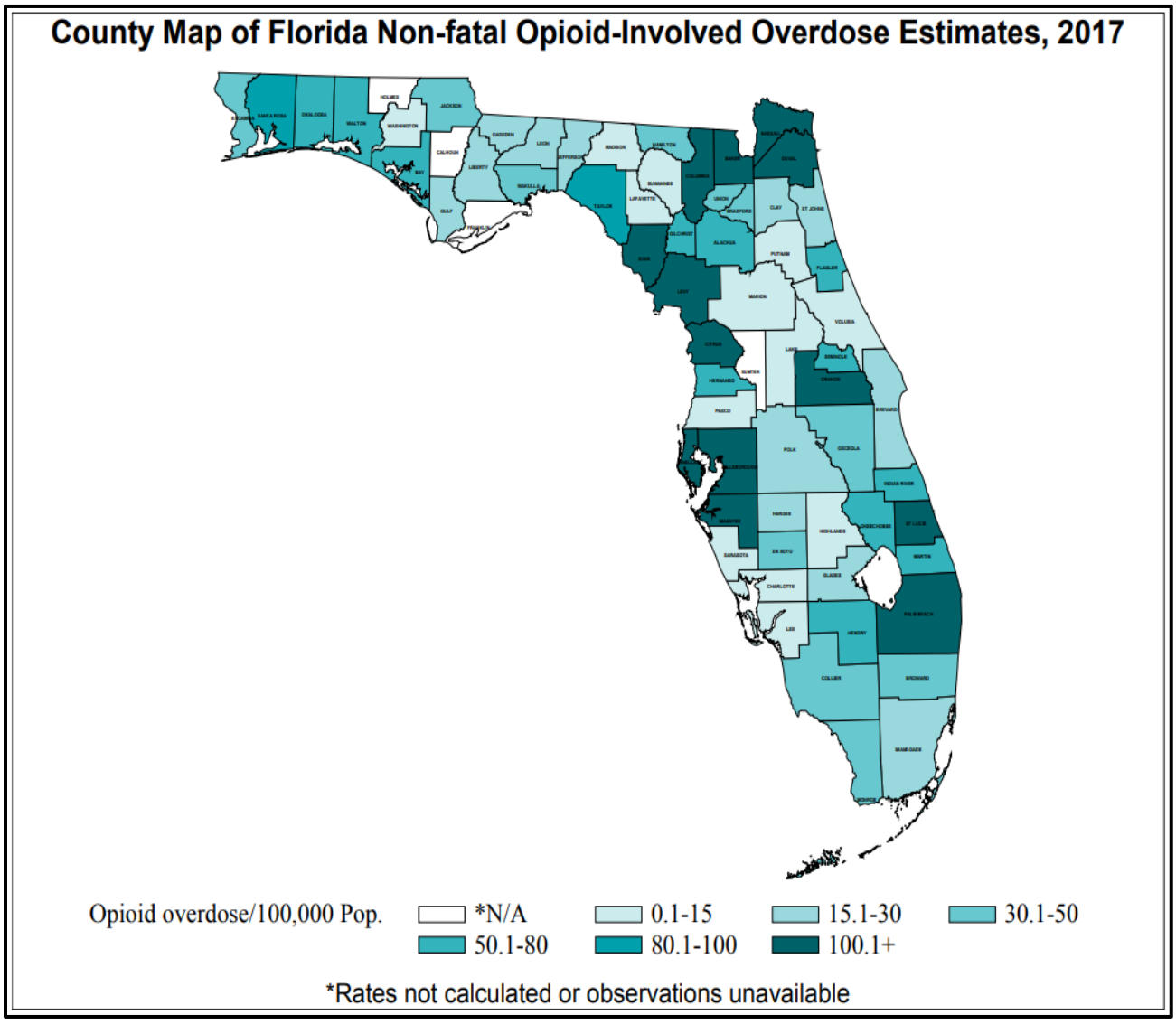

County Map of Florida Non-fatal Opioid-Involved Overdose Estimates, 2017
Opioid overdose/100,000 Pop.
*N/A
0.1-15
15.1-30
30.1-50
50.1-80
80.1-100
100.1+
*Rates not calculated or observations unavailable

Figure 15

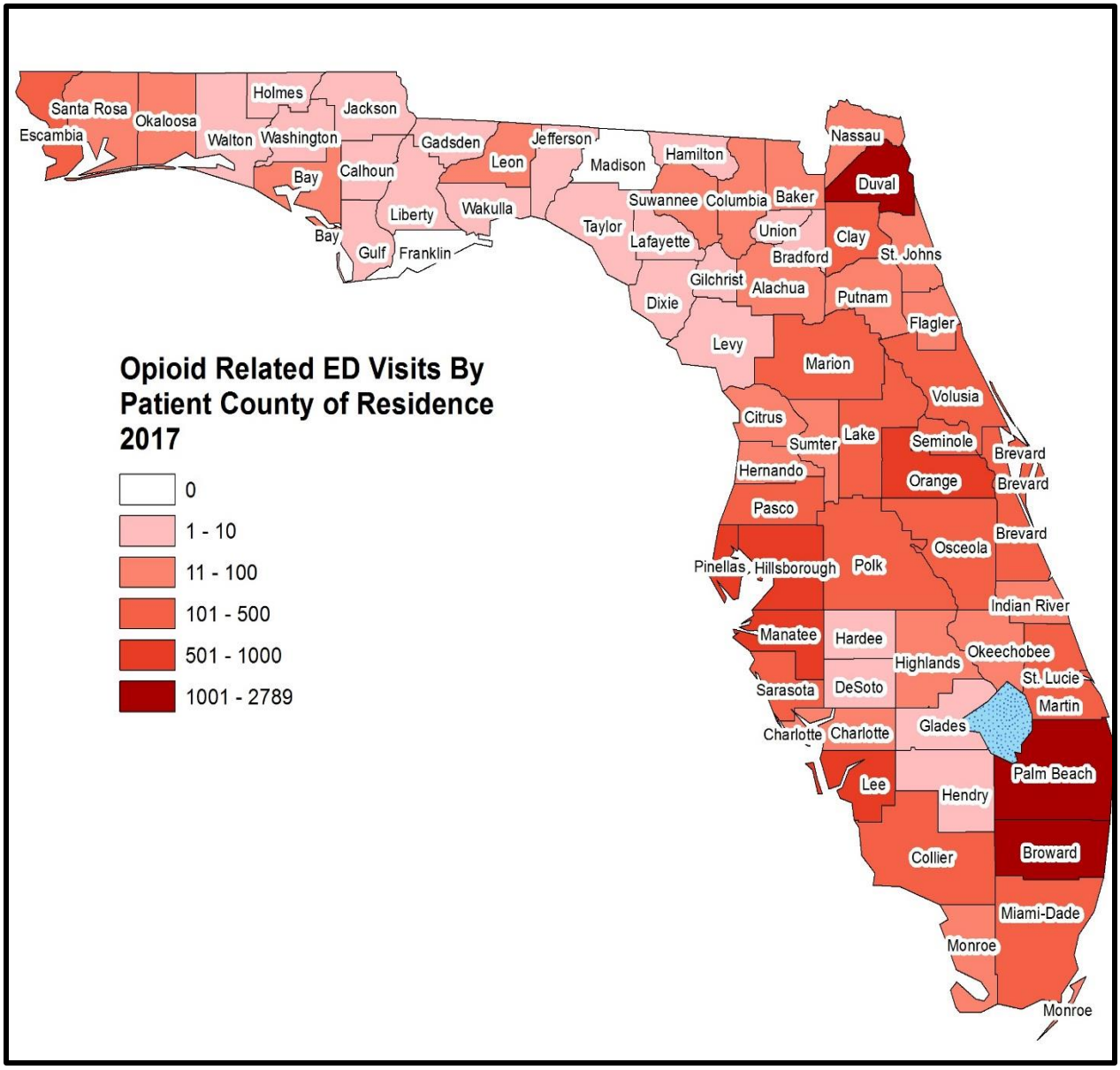

Opioid Related ED Visits By Patient County of Residence 2017
0
1 - 10
11 - 100
101 - 500
501 - 1000
1001 - 2789
Santa Rosa
Okaloosa
Escambia
Walton
Holmes
Washington
Jackson
Calhoun
Bay
Gadsden
Leon
Jefferson
Madison
Hamilton
Nassau
Duval
Liberty
Wakulla
Taylor
Suwannee
Columbia
Baker
Union
Clay
Bradford
St. Johns
Lafayette
Gilchrist
Alachua
Dixie
Putnam
Flagler
Levy
Marion
Volusia
Citrus
Sumter
Lake
Seminole
Brevard
Hernando
Orange
Pasco
Osceola
Pinellas
Hillsborough
Polk
Indian River
Manatee
Hardee
Okeechobee
Highlands
St. Lucie
Sarasota
DeSoto
Martin
Glades
Charlotte
Lee
Hendry
Palm Beach
Collier
Broward
Miami-Dade
Monroe

Figure 16

POISONING DIAGNOSIS	ICD-9 CM CODE	ICD-10 CM CODE
OPIUM	965.00	T40.0X
HEROIN	965.01	T40.1X
OTHER OPIOIDS		T40.2X
METHADONE	965.02	T40.3X
SYNTHETIC NARCOTICS		T40.4X
UNSPECIFIED NARCOTICS		T40.60X
OTHER NARCOTICS		T40.69X
OTHER OPIATES AND RELATED NARCOTICS	965.09	
BENZODIAZEPINES	969.4	T42.4X1A

Figure 17

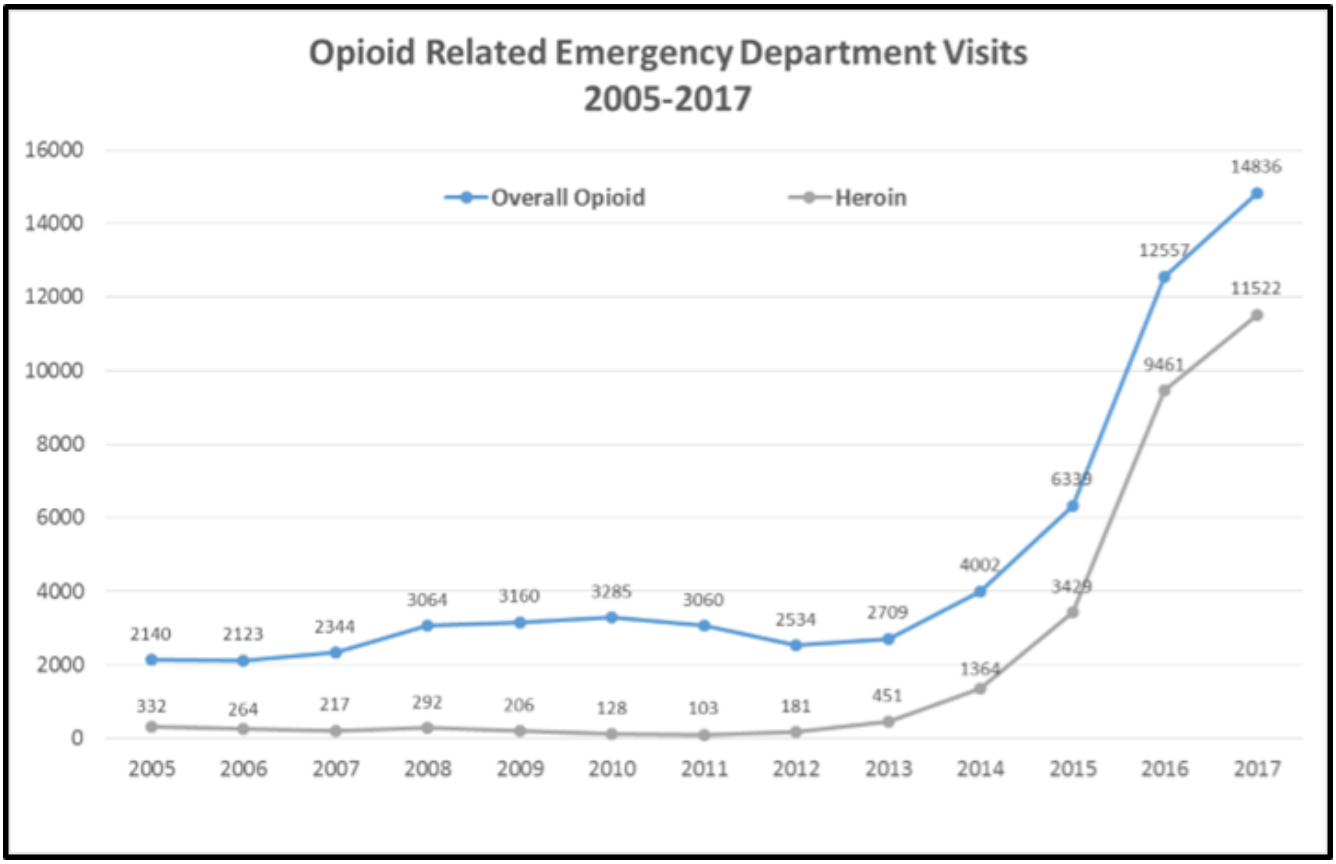


Figure 18

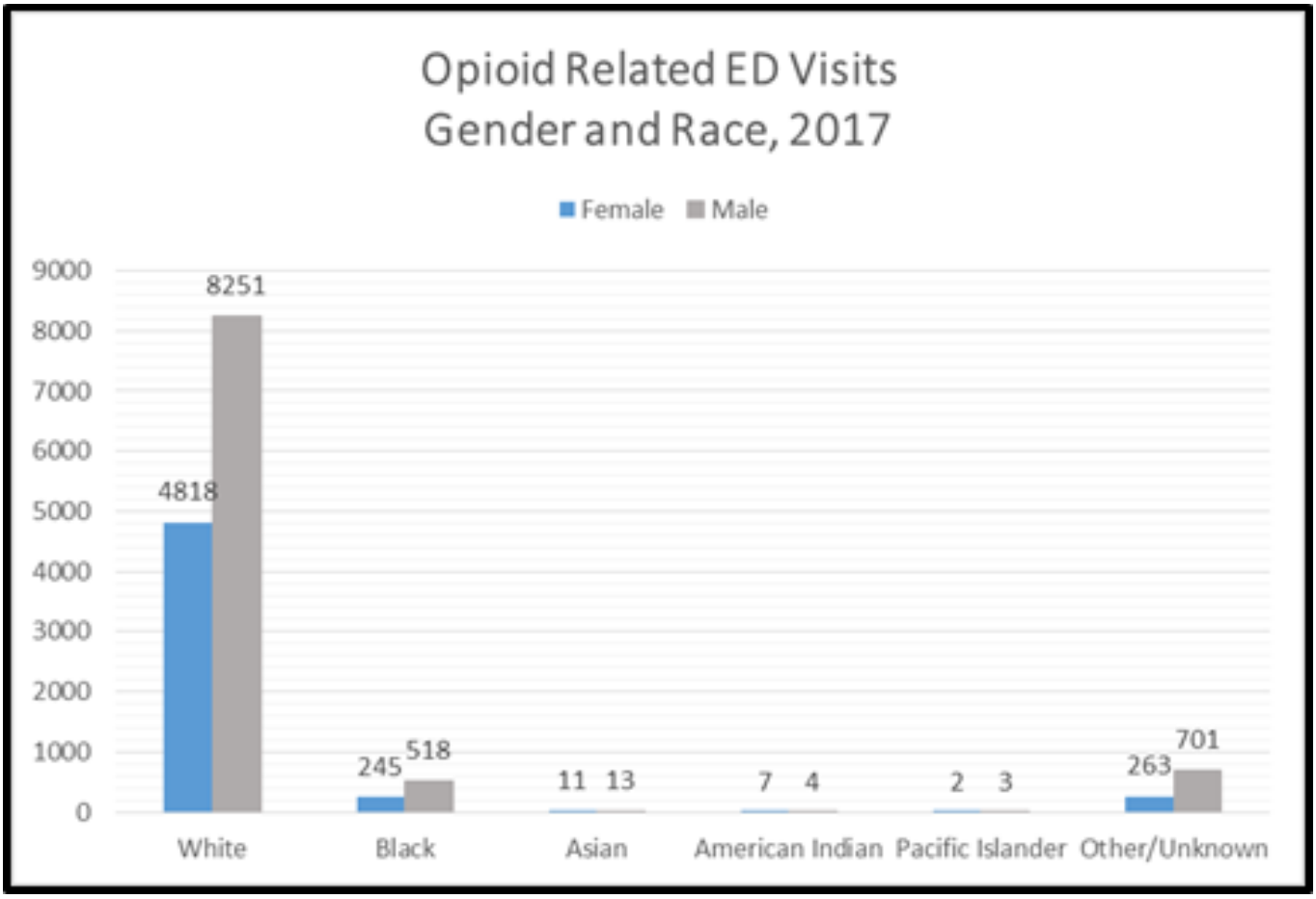

Opioid Related ED Visits
Gender and Race, 2017
Female
Male
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
8251
4818
518
245
13
11
7
4
3
2
701
263
White
Black
Asian
American Indian
Pacific Islander
Other/Unknown

Figure 19

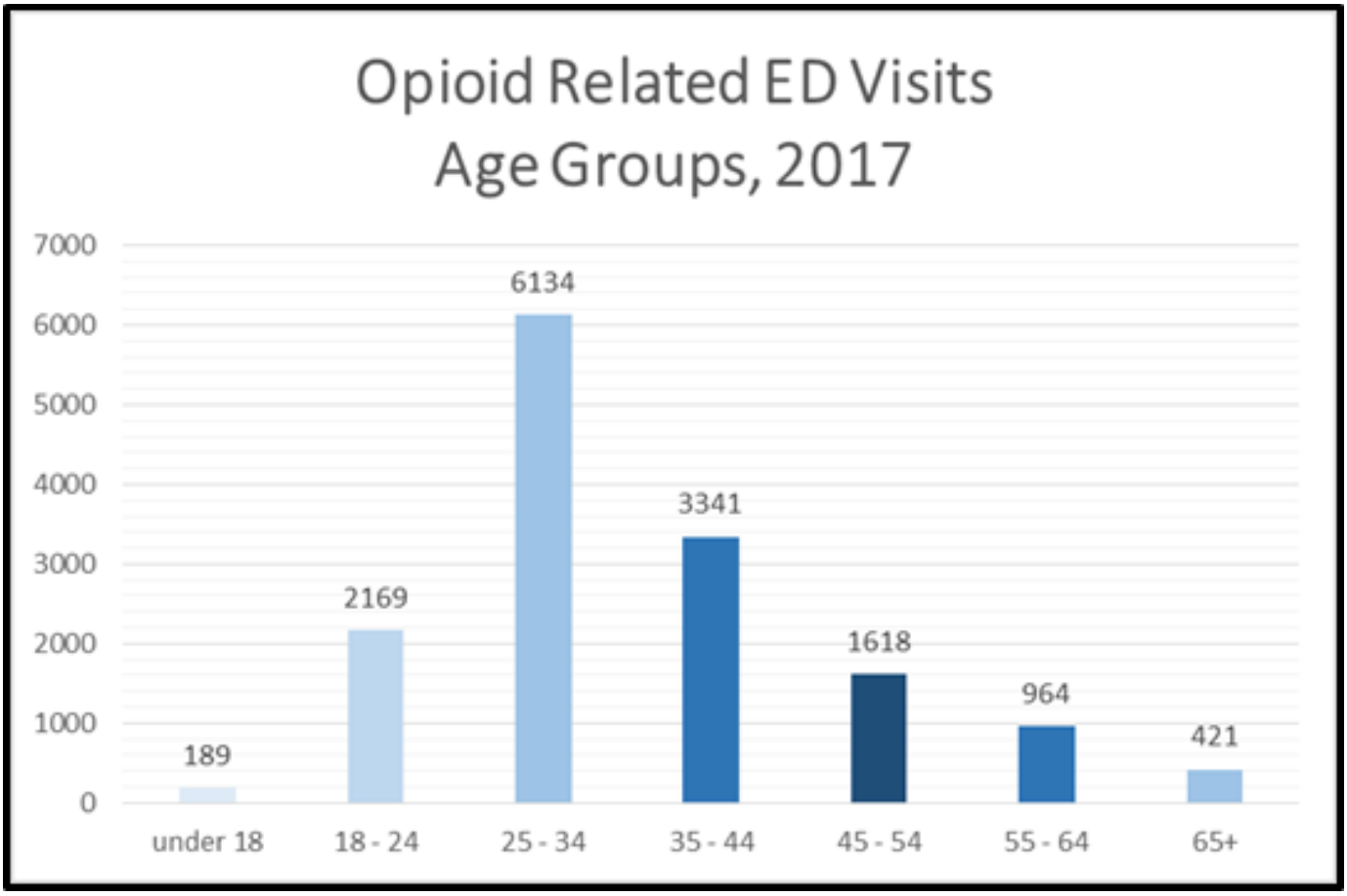

Opioid Related ED Visits
Age Groups, 2017
7000
6000
5000
4000
3000
2000
1000
0
189
2169
6134
3341
1618
964
421
under 18
18 - 24
25 - 34
35 - 44
45 - 54
55 - 64
65+

Figure 20

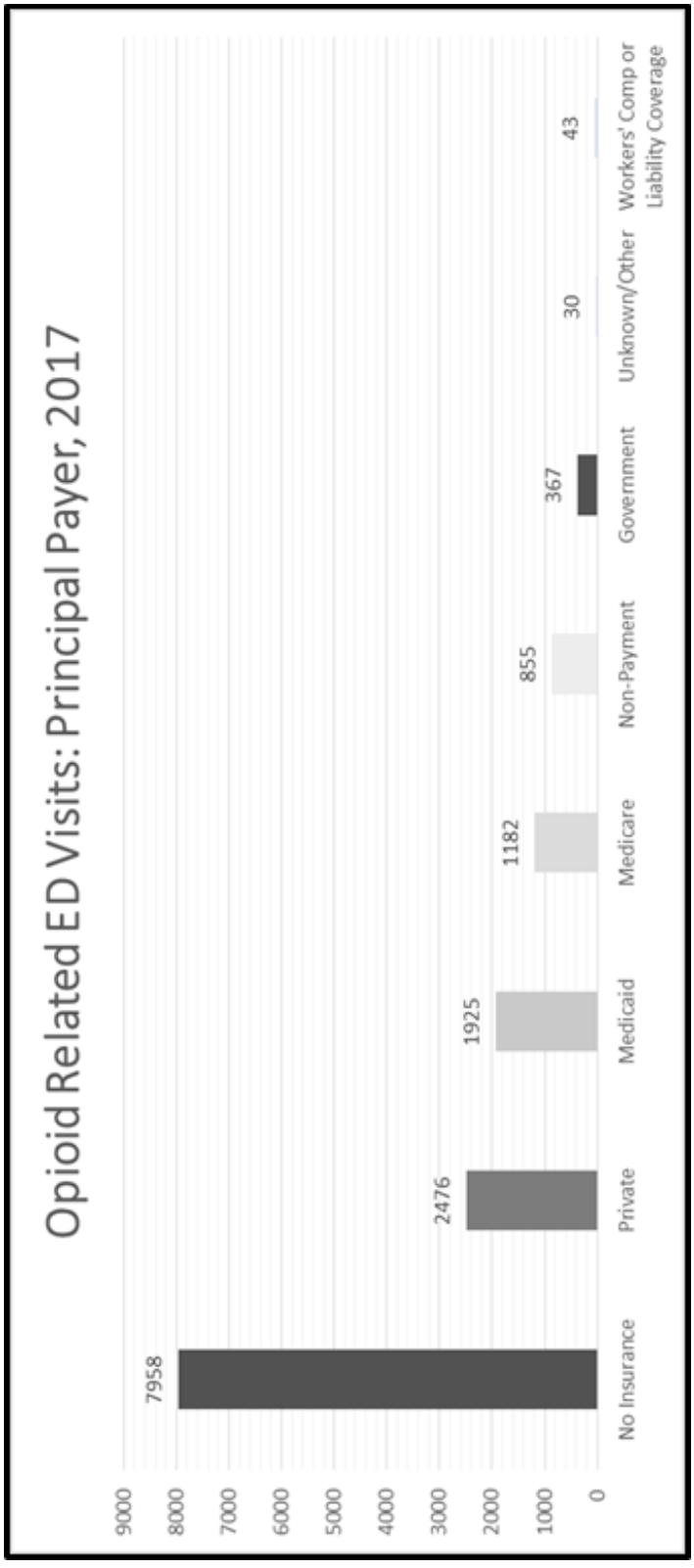

Opioid Related ED Visits: Principal Payer, 2017
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
7958
2476
1925
1182
855
367
30
43
No Insurance
Private
Medicaid
Medicare
Non-Payment
Government
Unknown/Other
Workers' Comp or Liability Coverage

Figure 21

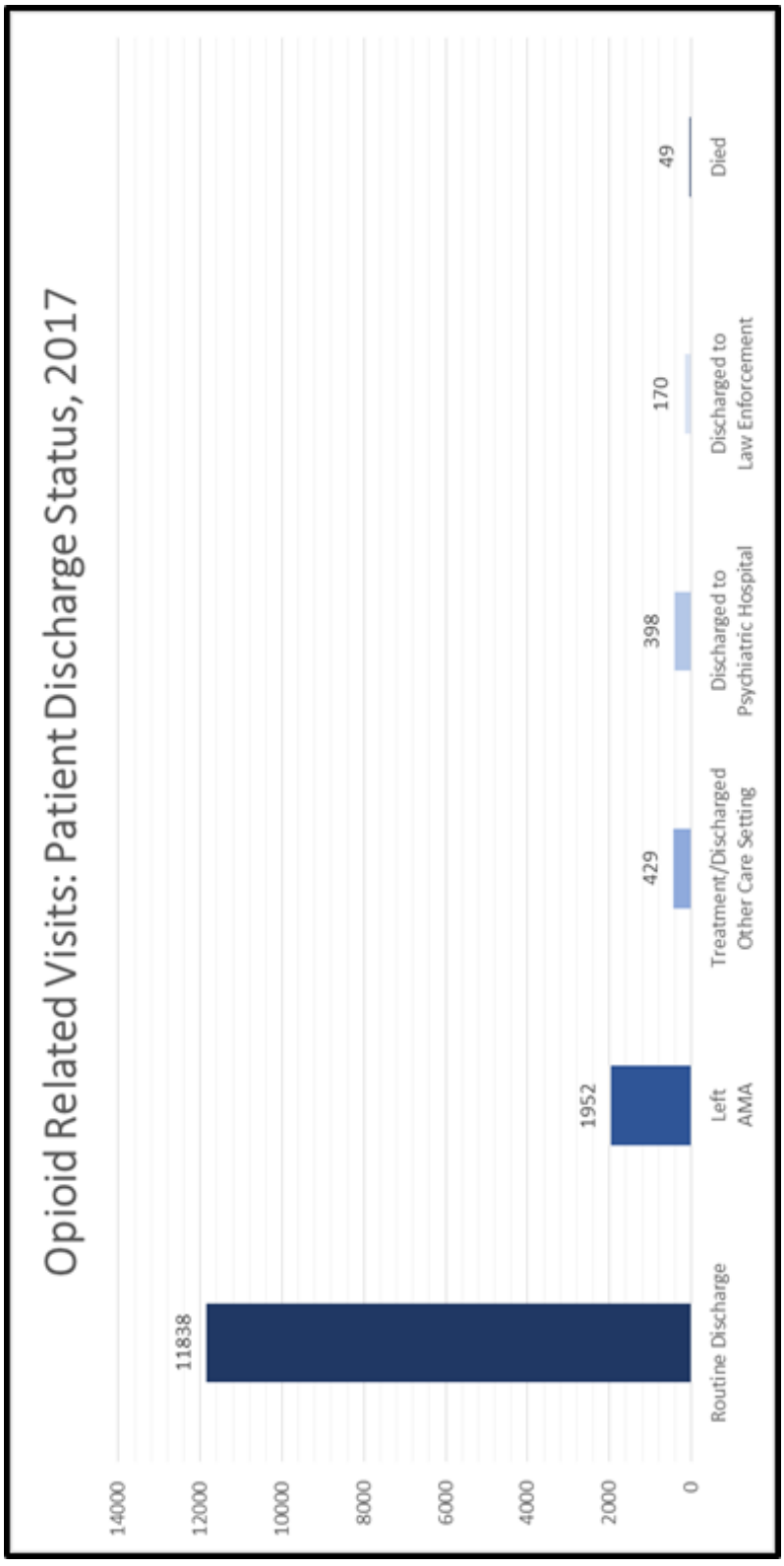

Opioid Related Visits: Patient Discharge Status, 2017
14000
12000
10000
8000
6000
4000
2000
0
11838
1952
429
398
170
49
Routine Discharge
Left AMA
Treatment/Discharged Other Care Setting
Discharged to Psychiatric Hospital
Discharged to Law Enforcement
Died

Figure 22

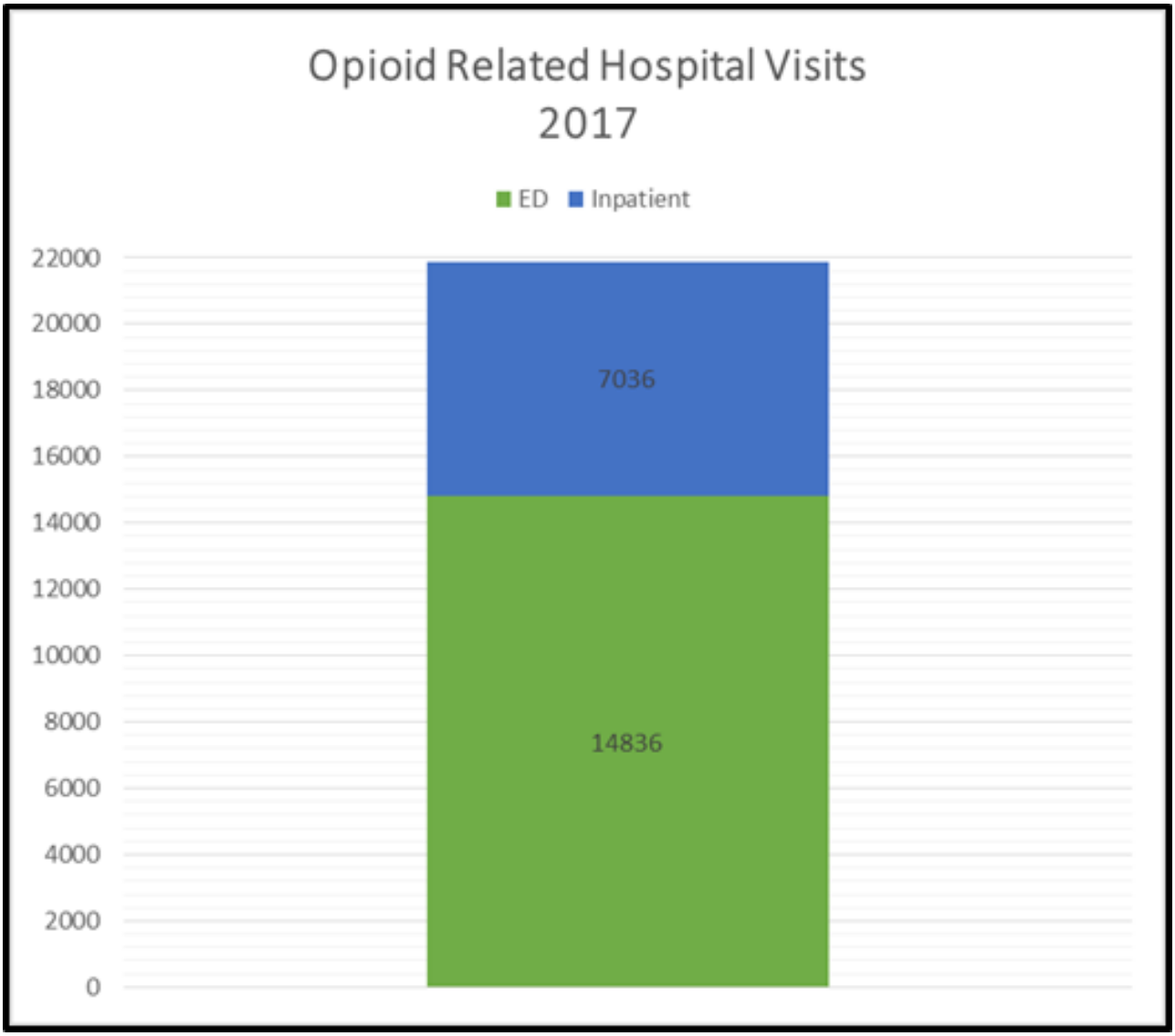

Opioid Related Hospital Visits
2017
ED
Inpatient
22000
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
7036
14836

Figure 23

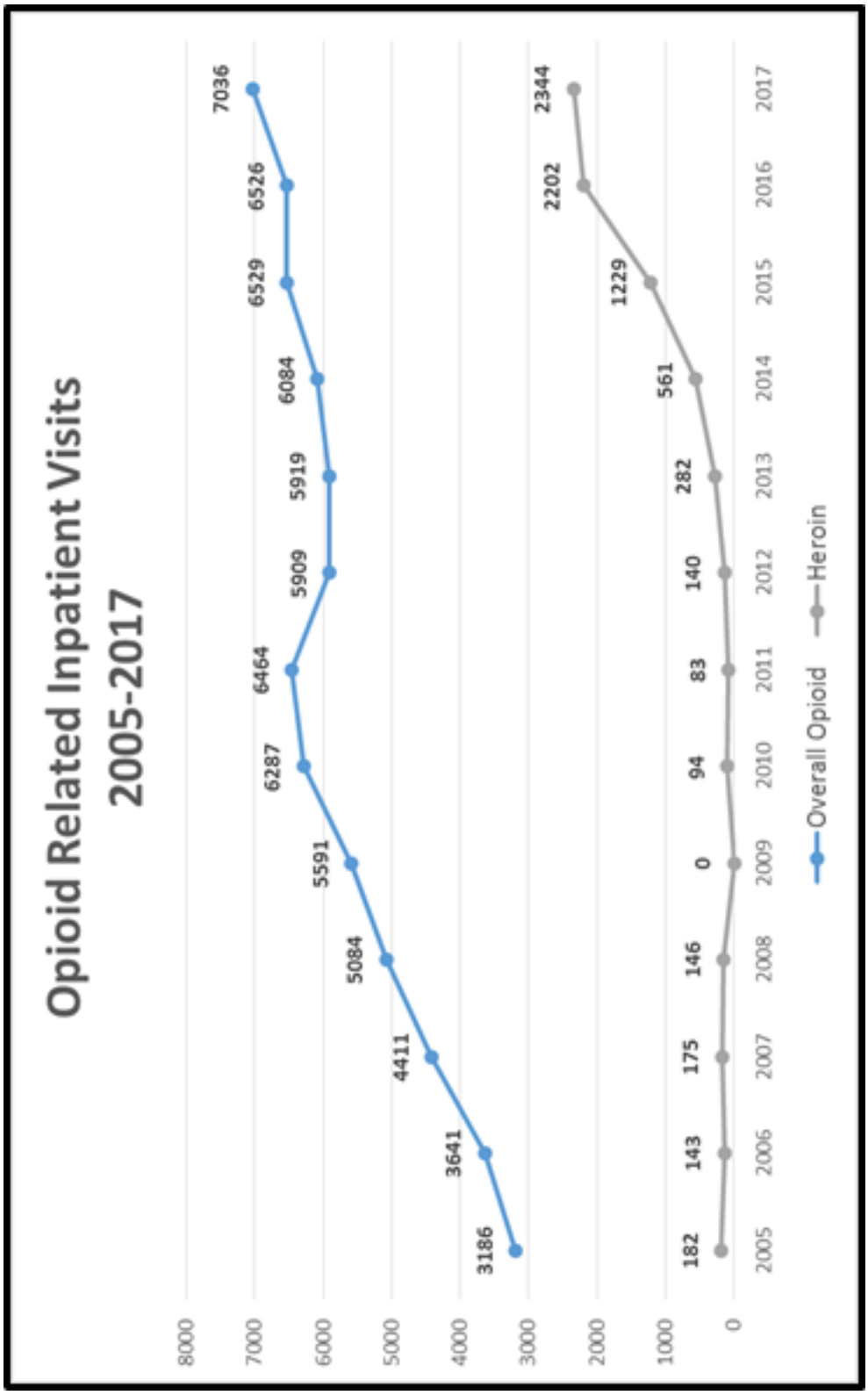

Opioid Related Inpatient Visits
2005-2017
Overall Opioid
Heroin
7036
6526
6529
6084
5919
5909
6464
6287
5591
5084
4411
3641
3186
2344
2202
1229
561
282
140
83
94
0
146
175
143
182
8000
7000
6000
5000
4000
3000
2000
1000
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017

Figure 24

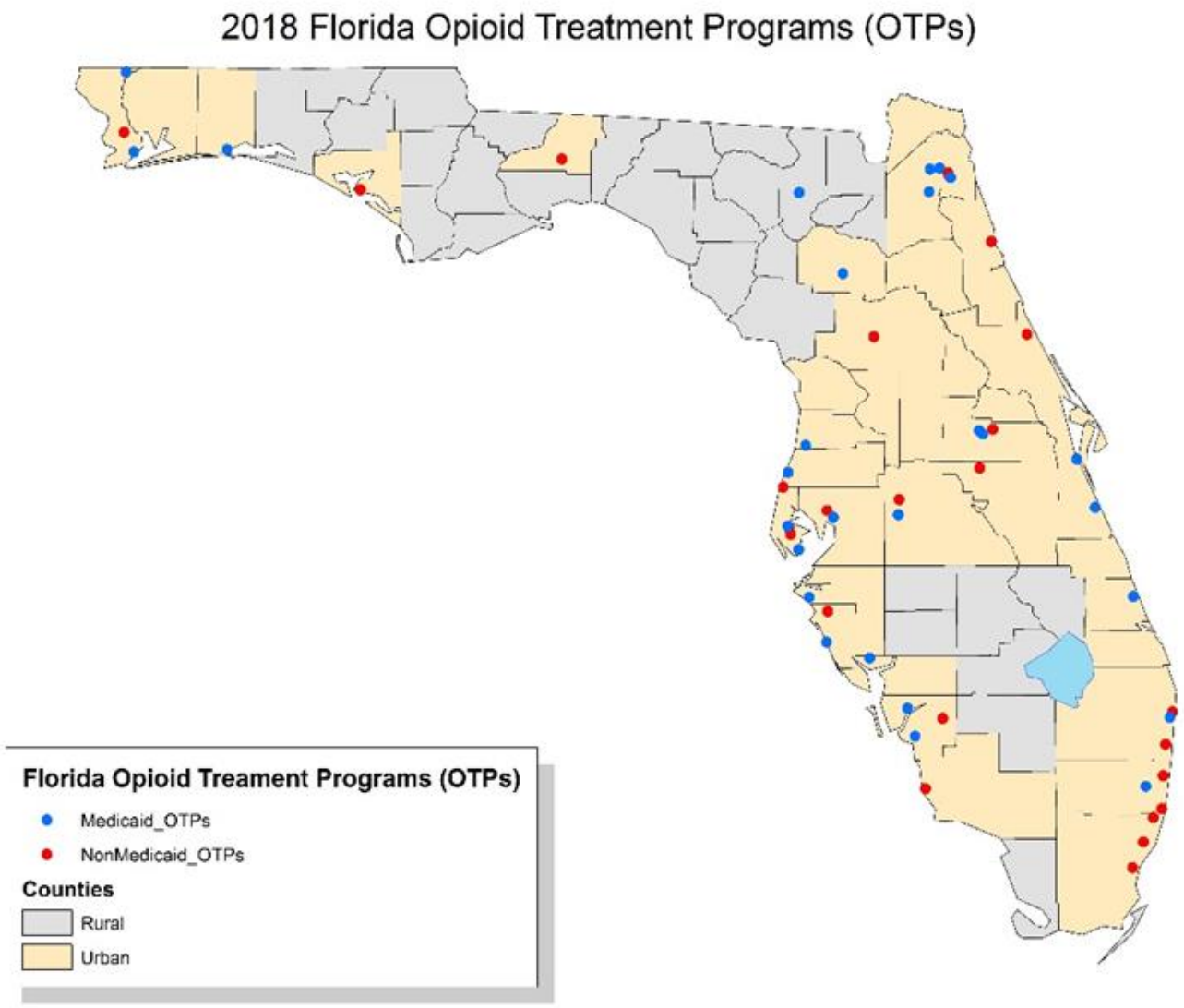
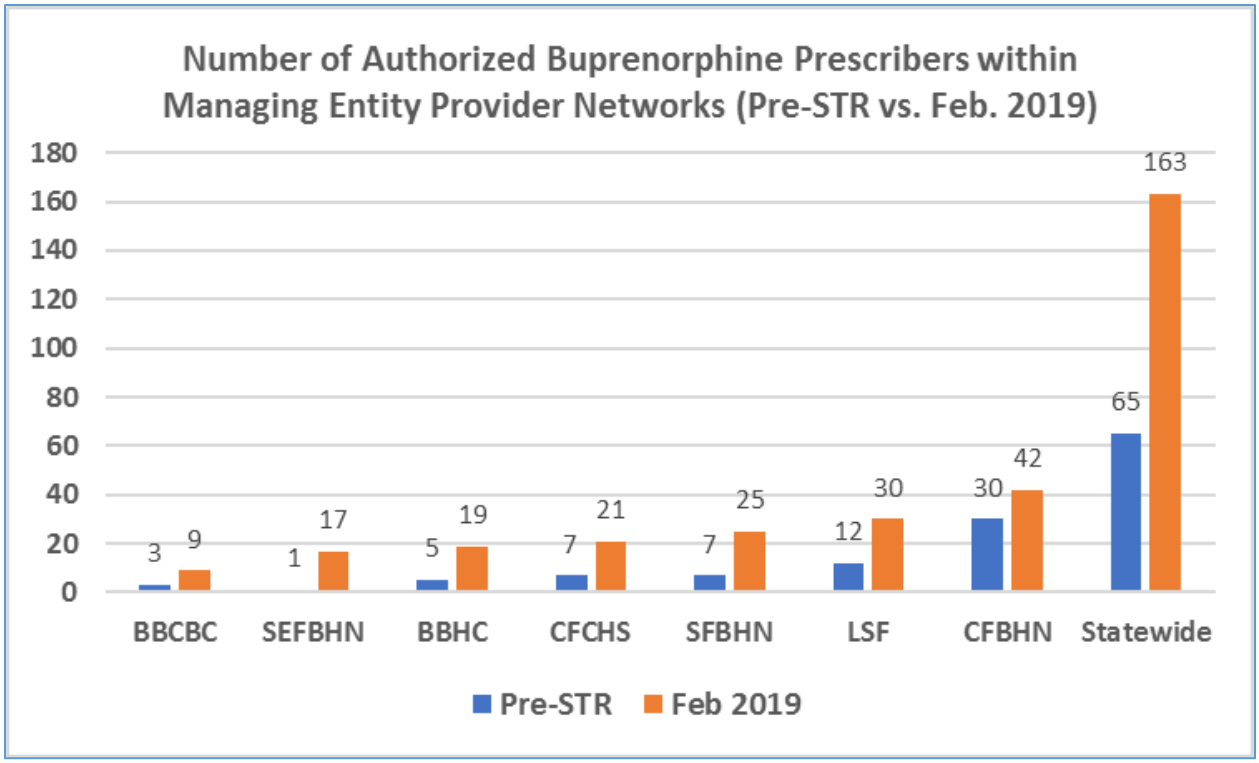

2018 Florida Opioid Treatment Programs (OTPs)
Florida Opioid Treament Programs (OTPs)
Medicaid_OTPs
NonMedicaid_OTPs
Counties
Rural
Urban

Figure 25


Number of Authorized Buprenorphine Prescribers within Managing Entity Provider Networks (Pre-STR vs. Feb. 2019)
180
160
140
120
100
80
60
40
20
0
3
9
1
17
5
19
7
21
7
25
12
30
30
42
65
163
BBCBC
SEFBHN
BBHC
CFCHS
SFBHN
LSF
CFBHN
Statewide
Pre-STR
Feb 2019