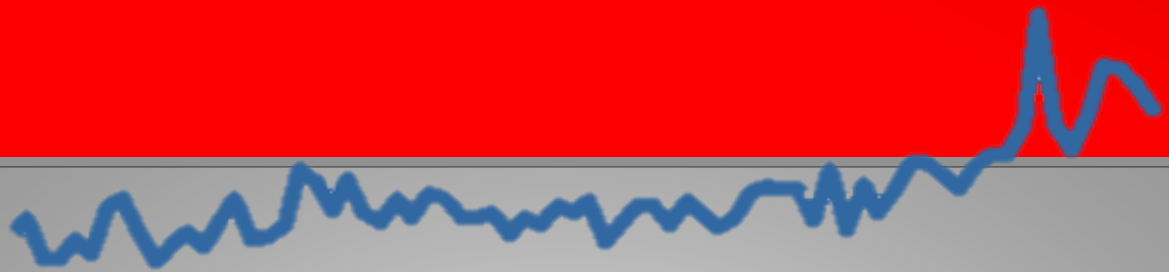


# PROJECT OPIOID TAMPA BAY



## THE EPIDEMIC WITHIN THE PANDEMIC: TAMPA BAY'S OPIOID CRISIS

Prepared for Project Opioid-Tampa Bay

A Demographic and Geographic Breakdown  
August 31, 2021

## ABOUT US

### FUNDED BY



**Florida Blue Foundation** enables healthy communities by making grants, building coalitions and embracing solutions that create a meaningful impact in our communities. More than 6.5 million Floridians have received services as a result of our community investments since our founding in 2001. The Florida Blue Foundation is focused on engagement with our communities around mental well-being, health equity, food security and generational poverty. It is a trade name of the Blue Cross and Blue Shield of Florida Foundation, Inc., an Independent Licensee of the Blue Cross and Blue Shield Association.

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**The Tampa Bay Partnership** is a coalition of regional business leaders, joined by a shared commitment to improving the personal and economic well-being of Tampa Bay residents. Formally incorporated in 1994, and re-established in 2016 as a regional research and public policy organization, the Partnership works with Tampa Bay's top employers, and a diverse group of government and nonprofit partners, to identify and address our region's greatest challenges, and create new opportunities for the future.



**Project Opioid** was founded in 2018 in response to the raging opioid epidemic that claimed the lives of nearly 450,000 people across America in one decade. Since then, the COVID-19 pandemic has driven the opioid crisis to unprecedented heights, creating the greatest mental health, substance abuse, and overdose crisis in U.S. history. The startling new data on opioid overdose and death calls for leaders to embrace a different approach to solving the opioid epidemic.

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## EXECUTIVE SUMMARY

**Opioid Overdose is the 9<sup>th</sup> leading cause of death** in US adults over 18 years old, if these deaths were reported separately, as opposed to being included within the “unintentional injury” category. More Americans die from opioid fatalities than die from traffic accidents, suicide, or even the flu/pneumonia (2019).

But how does this stark statistic translate to the Tampa Bay Region?

- **After 3 years of relative stability in opioid-related deaths across the region**, the past 2.5 years have yielded a dramatic increase in fatal opioid overdoses. The spread of deadly synthetic opioids, the persistence of poor mental health outcomes, and the impact of the global pandemic have been faulted for this rise by researchers and government agencies.
- **The Tampa Bay Region lost 30 people each and every week** to an opioid fatality in the first half of 2020 (n=779). That is a **61.62% increase** when compared to the first six months of 2019 and a much greater increase than across the state as a whole which had an increase of **51.3%**.
- **Fentanyl kills.** Fentanyl, a synthetic street opioid, killed more people in Tampa Bay than all other substances combined during the first half of 2020. Moreover, for the first time in 7 years, ethanol (alcohol) was not the most prevalent substance reported in decedents throughout Florida. The most frequently occurring substance found in decedents was fentanyl.
- **Black Non-Hispanics** in our region have a death rate that is increasing more steeply than all other demographic groups. The opioid fatality death rate for Black Non-Hispanic residents of the region grew by **129% in a single year**. This far surpasses the relatively stable rates for White Non-Hispanic and Hispanic populations in the Tampa Bay region.
- **More newborns are born addicted to opioids in the Tampa Bay region** than in the state and the nation. TB rate of infants with Neonatal Abstinence Syndrome (NAS) in Tampa Bay is **58.9 % higher** than the state’s rate and **46.3% higher** than that of the country (n=106.8 NAS neonates /10,000 live births).
- **Every 2 hours a child is abused by someone misusing substances** in the Tampa Bay region on average.
- Domestic violence is far more prevalent in Tampa Bay than the state as a whole. In our region, an average of **11 people report domestic violence each week**
- **Opioid deaths cost** the region an average of **\$25.8 billion in economic output**, and resulted in a **total estimated fatality cost of \$14.2 billion** to Tampa Bay region. This latter calculation consists of \$6.7 million of health care costs, \$1.7 billion of lost productivity costs, and \$12.4 billion in cost associated with the value of statistical life lost.

**Successful approaches to combatting this crisis** will be multivariate and nuanced. Because substance use disorder rates are high in our region, solutions must include expanding the recovery and treatment work currently being done. Also because of the increase risk to recreational drug users, it must include a strategy to reach out to all drug users through culturally- and age-appropriate public health campaigns, through harm reduction initiatives (including any necessary policy change), and through prevention.

**Project Opioid Tampa Bay’s** next phase of research will examine the state of our interventions, preventions, and harm reduction initiatives throughout our region. That research, combined with this report, will provide our business, faith, and philanthropic leaders in Tampa Bay with the data needed to put together regional strategies for saving lives and combatting the opioid epidemic.

## INTRODUCTION

The CDC currently recognizes three waves of the national opioid epidemic; beginning with the first wave of deaths involving prescription opioids between 1999-2006, then increases in heroin from 2006-2014, and then a rapid increase of synthetic opioids or fentanyl beginning in 2014 (Centers for Disease Control and Prevention (CDC, 2018; CDC, 2019). Provisional data indicates a potential amplification of the third wave of the epidemic as evidence points to yet another exponential increase in 2020, which coincides with the COVID-19 pandemic. Drug overdose deaths in the United States rose to an estimated 95,230 in 2020, of which 74.9% of those deaths involved opioids according to the CDC (n=71,318). This marks an increase from 2019.

This deadly trend is evidenced in the Tampa Bay area as well. We began to see annual death rates growing yet again in 2019 and 2020, after three years of relative stability in overdose deaths. Unofficial accounts by the Medical Examiner's office report a more significant increase in opioid fatalities for the first half of 2021 on average than 2020 for many of the 8 counties included in the Tampa Bay Region.

### Tampa Bay Overdose Fatalities

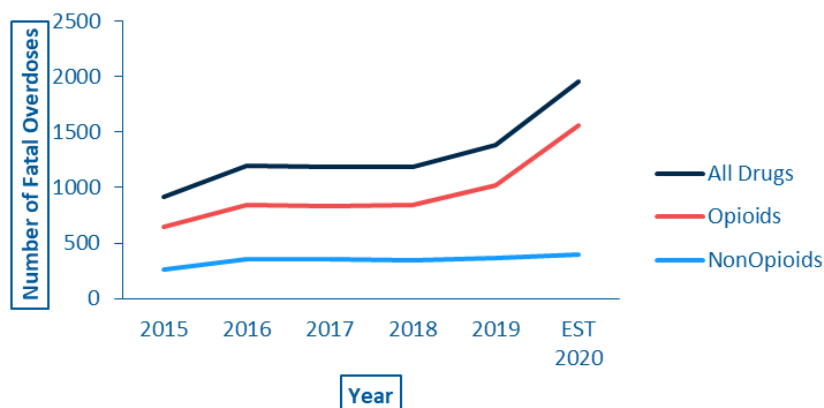


Exhibit 1 Tampa Bay Overdose Fatalities, FL Department of Health (FDOH), Opioid Use Dashboard.

The causes for this turning tide are multivariate and complex; however, the data on one point is clear -- the spread of the deadly synthetic opioid, fentanyl and its analogs, is a large contributor to the spike in deaths. Fentanyl, a synthetic opioid originally developed for pain management for cancer patients, is up to 100 times stronger than morphine and 50 times stronger than heroin and can be lethal with very small doses. Because it is such a powerful opioid, it has been diverted for misuse and abuse by people with opioid use disorders (OUD) and also used to adulterate illicit drugs. Understanding the emerging prevalence of fentanyl helps to convey part of the problem for the perpetuation and amplification of the opioid epidemic in recent years. In

order to mitigate this issue, we must first answer a few important questions: Who is dying from opioid overdoses? Has fentanyl changed or expanded this population? If so, how?

These questions will help us fully understand just how large the opioid epidemic has become since fentanyl entered the equation and just how vulnerable residents of our region are to fatally overdosing.

The coronavirus pandemic has fueled the opioid epidemic in devastating ways that are more difficult to measure. At the same time they are important to examine. Based on a review of the literature, they can be distilled down to some of the same factors that have been driving the latest phase of the opioid epidemic but made more deadly during this global pandemic:

- Stress, isolation, and economic upheaval — all known triggers for addiction and relapse — have increased for most during the pandemic but have robbed many of treatment options and support systems.<sup>i</sup>
- After finally topping other competing priorities, the pandemic severely undercut efforts to control the opioid epidemic with public health and health care officials focused so heavily on the coronavirus. Similarly, in preparation for budget shortfalls, Florida and other states cut millions for future substance use disorder programs.<sup>ii</sup>
- Buying illicit drugs is dangerous and since the pandemic it has become more deadly. Like other supply chains, the supply chains for drugs have been unsettled during the pandemic. Drugs in the supply chains of unknown dealers or dealers with new suppliers may be cut with deadly synthetic opioids (which is currently common for methamphetamine and cocaine) or may be completely counterfeit. Counterfeit drugs may masquerade as prescription pills but contain deadly synthetic opioids.<sup>iii</sup>

**The purpose** of this supplement to the white paper published on April 21, 2021 is to examine the data to better understand this recent deadly trend. To this end, we will explore the following questions:

1. What can we learn from diving deeper into the demographic and geographic data of the opioid epidemic?
2. Who is dying from opioid overdoses? And (how) has this changed?
3. What are the consequences of opioid overdoses and who are at risk?
4. How does our region fare in comparison to other regions in the state and across the nation when it comes to lives lost and dollars spent?

We've undertaken this research as part of Project Opioid, which consists of a large coalition of influential leaders in communities across Florida who can no longer tolerate the thousands of lives being lost every year to preventable opioid overdoses. Project Opioid Tampa Bay is the regional group for this statewide coalition, brought to Tampa Bay by the Tampa Bay Partnership and funded by Florida Blue Foundation. Project Opioid Tampa Bay mobilizes leaders from Citrus, Hernando, Hillsborough, Manatee, Pasco, Pinellas, Polk and Sarasota counties with the ultimate goal of reducing addiction to save lives and to help solve the opioid crisis.

## METHODOLOGY

To answer the questions posed above we explored databases, read reports, scanned newspaper articles, spoke with industry experts, and reviewed scholarly research related to fentanyl and opioid fatalities, substance use disorder, mental health contributing factors, and consequences of heavy population substance use and overdose. For this paper, we will limit our discussion to key findings from reports, databases, and peer-reviewed research.

To help describe the opioid epidemic and to understand its severity within Florida, across the US, and here in Tampa Bay, we relied on datasets supplied by the Florida Medical Examiner's office and public databases, as well as state and national reports. Data supplied by a Medical Examiner Analyst at Florida Department of Law Enforcement (FDLE), along with the Florida Department of Health's Opioid Use Dashboard for county-level and statewide data from 2015-2019, helped us form the core of our understanding. We supplemented the data found there with the publicly available data dashboard maintained by the Florida Department of Children and Family Services and ACHA.<sup>iv</sup> Finally, we reviewed the County Health Assessment and County Health Implementation Plan for each county to ascertain whether the opioid epidemic was considered by health experts and stakeholders within each county's borders as a prevalent health issue considered within such assessments.

Our examination of the consequences of the opioid epidemic was formed by publicly available reports and peer-reviewed articles. After reviewing the literature, we pulled the appropriate variables from publicly available datasets to ascertain the consequences of the opioid crisis within the Tampa Bay region. Much of the data presented in this section and throughout this report is standardized using age adjusted rates (AAR).

Age-adjusting the rates ensures that the differences in incidence or deaths from one year to another or from one geographic area to another are not due to differences in the age distribution to the populations being compared.<sup>v</sup> This is not the only approach to standardizing data however it is the most common when examining public health data. Age adjusted rates are rates for a certain percentage of the population, generally it is a rate "per 100,000". If the AARs for data in a particular chart differ from the expected 100,000 population, it is indicated in the chart.



## BEYOND PRESCRIPTION PILLS: TODAY'S OPIOID EPIDEMIC IS DRIVEN BY FENTANYL FATALITIES

The rise of the very deadly synthetic opioid, fentanyl, has, to a large extent, been a silent killer eclipsed by outdated information, new lawsuits, big dollar settlements, stigma for people with OUD, and elusive “bad guys.” Although this synthetic opioid has a timeline all its own, it is rightly placed as the third wave of the opioid crisis.<sup>vi</sup>

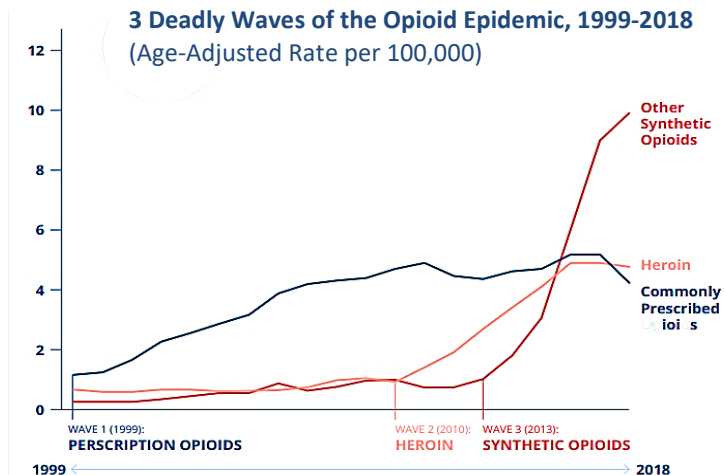


Exhibit 2 Three Deadly Waves of the Opioid Epidemic, Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. “Three Waves of Opioid Overdose Deaths,” 2021.

The third wave looks quite different from the previous two.

- The first wave of the opioid crisis was characterized by pill mills and overprescribing, we now see a change in the percentage of **prescription opioids** making up all fatal opioid overdoses — it has **decreased by 22% since 2015**.<sup>vii</sup>
- The second wave of the opioid crisis was caused by opioid-dependent individuals looking for a similar high after the closure of the pills mills and decreased access to prescription opioids. We saw a rise in the percentage of **heroin**-caused fatal opioid overdoses, which has **stayed constant** since 2018.
- The third wave of the opioid crisis is characterized by the high prevalence of deaths caused by synthetic opioid analogs. The percentage of **fentanyl overdoses** making up all fentanyl fatalities has increased from **20% in 2015 to 54% in 2019**.
- The percentage of fentanyl overdoses in polysubstance overdoses has continued to increase. In 2020, the more substances found to cause the decedents death, the more likely fentanyl is one of those substances. So, while fentanyl makes **up 52% of overdoses by a single substance**, it makes up **73% of 2 substances** and **75% of 3 or 4 substances** that cause fatal overdoses.

But what is fentanyl? How did it make its way onto the streets? And why are so many people overdosing?

## WHAT IS FENTANYL?

Illicit fentanyl and fentanyl analogs are synthetic opioids which are made illegally and distributed on the streets.<sup>viii</sup> They are more potent, more prevalent (being laced into other drugs such as Xanax and cocaine), more profitable for drug dealers, and more deadly than their predecessors (Exhibit 2). One milligram of Carfentanil has a street value of \$250, yet only 10-20 micrograms are potent enough to kill someone<sup>ix</sup>. (There are 1000 micrograms in a milligram).

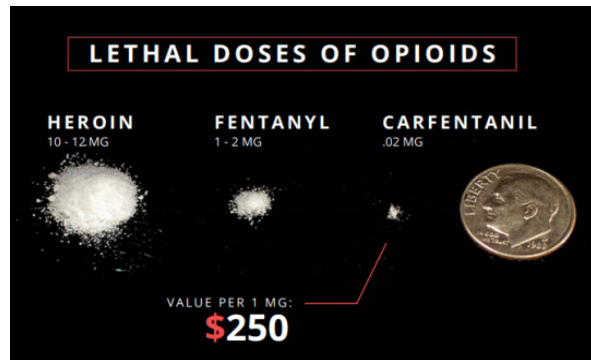


Exhibit 3 Lethal Doses of Opioids, Information based on data from DEA. Everyone reacts differently. Concept of image: Missouri River Drug Task Force

Fentanyl was first synthesized for patients for whom other opioids no longer provide relief and for breakthrough pain for cancer patients who are on around-the-clock-opioids.

While off-label prescribing began making up an increasing percentage of prescriptions in the early 2000s, it wasn't until 2013 that the street use of fentanyl began to climb, particularly in north-eastern states such as New Hampshire and Massachusetts. From there, it spread to Ohio and Florida and into other parts of the US and Canada. It was often sold as heroin, despite being far more potent and often unbeknownst to the consumer, which resulted in a spike in fatal overdoses.<sup>x</sup>

## WHY ARE DRUGS LACED WITH FENTANYL? WHY IS THIS ON THE RISE?

Most recently in the Tampa Bay region, drug dealers are mixing fentanyl with other drugs, such as heroin, cocaine, and methamphetamine, and pressing fentanyl into pills which are being mislabeled as Xanax. This adulteration of other drugs is motivated by the fact that it takes very little to produce a high with fentanyl, making it a cheaper option for illicit drug manufacturers and distributors. Overdose is especially likely when people taking drugs don't realize they might contain fentanyl as a cheap but dangerous additive.<sup>xi</sup>

Nationwide, synthetic opioids, including fentanyl, are now the most common drugs involved in drug overdose deaths in the United States. In 2017, 59.8 percent of opioid-related deaths involved fentanyl compared to 14.3 percent in 2010. Last year, in a single drug bust in Tampa Bay, enough Carfentanil and Fentanyl was seized to kill at least 40,000 people<sup>xii</sup>. Experts have noted that the stark increase in fentanyl fatalities in Florida since the coronavirus pandemic could be linked to a disruption in traditional drug supply chains, which has lead drug dealers to increasingly lace fentanyl into many different types of drugs in an attempt to sustain their consumer base without regard for the deadly risks.

## FENTANYL FATALITIES

### Fentanyl Caused Deaths

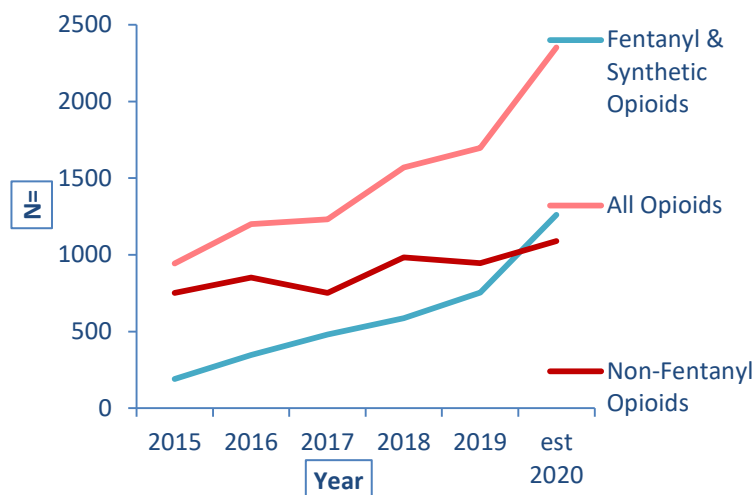


Exhibit 4 Fentanyl Caused Deaths, FDLE-ME's Drug Data Set

evidence, the autopsy, and toxicology results, the medical examiner determines the drug played a causal role in the death. It is not uncommon for a decedent to have multiple drugs listed as a cause of death.

Deaths caused by synthetic opioids, like fentanyl and fentanyl analogs, have been on a steady rise since 2015. Comparatively, deaths caused by non-fentanyl opioids in the Tampa Bay region have been somewhat stable for the past 6 years. This means that fentanyl and fentanyl analogs comprise a larger percentage of the total deaths caused by opioids in 2020 than in 2015. Moreover, for the first time in the Tampa Bay region, fentanyl and synthetic opioid deaths are estimated to have exceeded non-fentanyl, opioid-caused deaths.

# of Types of Substances	Fentanyl n=	Non-Fentanyl n=	Total
1	239	225	464
2	275	100	375
3&4	110	27	147

5 Types of Substances: Opioids, Alcohol, Benzos, Uppers, All Other Types Combined

Exhibit 5 Fentanyl v. Non-Fentanyl Causes of Death, FDLE Drug Data

Drugs that cause death and are present within a decedent at the time of death are determined by the Medical Examiner of each district.<sup>xiii</sup> It is important to note that each death is a single case, while each time a drug is detected represents an occurrence of a drug being present. The majority of the 779 deaths in the first half of 2020 had more than one drug present and /or more than one drug listed as the cause of death. A drug is indicated as the cause of death

only when after examining all

The percentage of fentanyl overdoses in polysubstance overdoses has continued to increase. In 2020, fentanyl makes up 52% of overdoses by a single substance, yet it comprises 73% of 2 substances and 75% of 3 or 4 substances that cause fatal overdoses. When identifying the risk of fentanyl-caused fatal overdose, it is important to know what other drugs it is most likely to be adulterating or paired with.<sup>xiv</sup>

Based on death data from the ME reports, a comparison of single drug cases and those in which fentanyl was listed with another drug as the cause of death, revealed that Fentanyl is most likely to be found with drugs categorized as “Stimulants”. This category includes cocaine, methamphetamines, and amphetamines, which all produce a stimulating and euphoric high despite their different chemical compositions.










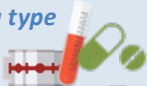


Cause of Death	 Fentanyl	 Stimulants	 Benzos	 Alcohol	 Other
<i>Single source</i>	239	113	12	33	16
<b>Polysubstance Deaths</b>	n=	%		n=	%
<b>2 drug type combos</b>					
 Stimulants + Fentanyl	196	71%		 Alcohol + Fentanyl	32
 Benzos + Fentanyl	41	15%		 Other + Fentanyl	7
<b>3 &amp; 4 drug type combos</b>					
 Stimulants + Benzos + Fentanyl	52	47%		 Alcohol + Other + Fentanyl	16
 Stimulants + Alcohol + Fentanyl	26	24%		<b>All Other Combos</b>	16

Exhibit 6 Source: Polysubstance Use Causing Death, FDLE-ME Drug Data

While these deaths drastically outpaced all other polysubstance deaths, benzodiazepines combined with fentanyl *and* uppers caused 47% of the polysubstance deaths where more than 2 drug type combinations caused the death.

Benzodiazepines have a calming effect on the nervous system and include drugs such as Xanax and Valium. Fentanyl and benzodiazepine comprised 15% of the total number of fentanyl involved polysubstance deaths with 2 drug types.

The data further show:

- **386** polysubstance deaths were caused by fentanyl.
- This means **only 99** polysubstance deaths were caused by opioids other than fentanyl.
- **Only 30** polysubstance deaths (remain that were not caused by any opioid.
- The vast majority of fatalities caused by non-fentanyl opioids are in combination with fentanyl

The increase in fentanyl fatalities plus the steady fatalities caused by other opioids beg the questions: Who is dying? Has this changed because of the increase of fentanyl in our region?

## WHO IS DYING IN THE TAMPA BAY REGION?

In the first half of 2020, 779 people died from opioid overdoses in the Tampa Bay region. This is equivalent to 30 people dying every week for six months. The percentage of opioid overdoses to overall drug deaths was an astounding 79.7%. When taking a closer look at the population of decedents from the past 3 years, some stark statistics jump out:

- The death rate for **Black Non-Hispanics** in Tampa Bay has **increased by 129%** in a single year.
- **Women are dying at a slightly higher percentage** than men from opioid overdoses (1.17%), despite only comprising 27.9% of opioid-caused fatalities.
- **30 to 44 year olds** make up the largest population of deaths caused by opioid overdose.

Opioid Overdose Deaths		AAR 2018	AAR 2019	AAR Δ (2018-19)
White, Non-Hispanic	US	35,363	25,977	-27%
	FL	2,558	2,938	15%
	TB	21	25	15%
Black, Non-Hispanic	US	6088	7464	23%
	FL	189	268	42%
	TB	1	2	129%
Hispanic	US	4370	5264	20%
	FL	405	527	30%
	TB	1	1	20%
Total	US	46,802	49,860	7%
	FL	3189	3771	18%
	TB	19	23.3	23%

Exhibit 7 Race-Ethnicity Change in Opioid Overdose Death Rate, CDC WONDER Database.

**Black Non-Hispanic residents from Tampa Bay are dying** at an exponentially higher rate than

other race/ethnic groups in the area, and at higher

rates than Black Non-Hispanics in other regions across the state and nation. The increase in the opioid-caused death rate for our local Black community is nearly 500% greater than the increase in overdose deaths for all Black Americans and three times higher than the death rate for Black Floridians. While the raw numbers are still low (28 deaths in 2018 to 60 deaths in 2019), should this trend continue over the next five years, the trajectory would be devastating to our Black communities. This explosion of overdose rates for Black people is happening while

Jan-Jun 2020 (provisional)	Black n=
Citrus	1
Hernando	2
Hillsborough	14
Manatee	8
Pasco	2
Pinellas	7
Polk	6
Sarasota	2

Exhibit 8 Raw Number of Black Non-Hispanic Opioid Fatalities, FDLE-ME Drug Data Set

the change in death rates for White Non-Hispanics has remained lower than the increase in all other ethno-racial groups at the state level, even decreasing at the national level.

The increased death rate of the Hispanic population in Tampa Bay mirrors that of the rest of the nation but is 10% lower than the change in the death rate for the Hispanic population throughout Florida. It is important to note that the rate of increase is less than the increase for the total population in the Tampa Bay region.

In the first six months of 2020, Black community members in our region outnumbered the number of Black residents dying for the same time period in 2019 (n=72). 58.3% of these deaths were caused

by opioids. Exhibit 8 shows the raw data for number of Black Non-Hispanic residents dying in each Tampa Bay county. This is second only to deaths caused by methamphetamine, amphetamine, and cocaine, which caused 10 more deaths (n= 82). Alcohol was the next highest cause of death in the black community in Tampa Bay.

In the first six months of 2020, 10 Hispanic residents of our region died from drug overdoses, approximately half the total number of deaths in the Hispanic community from opioid overdoses in 2019.

Opioids caused the most death in Hispanics overdosing on drugs at 70% of all deaths caused by drugs. Cocaine, Methamphetamines and Amphetamines were responsible

for 40% of deaths.

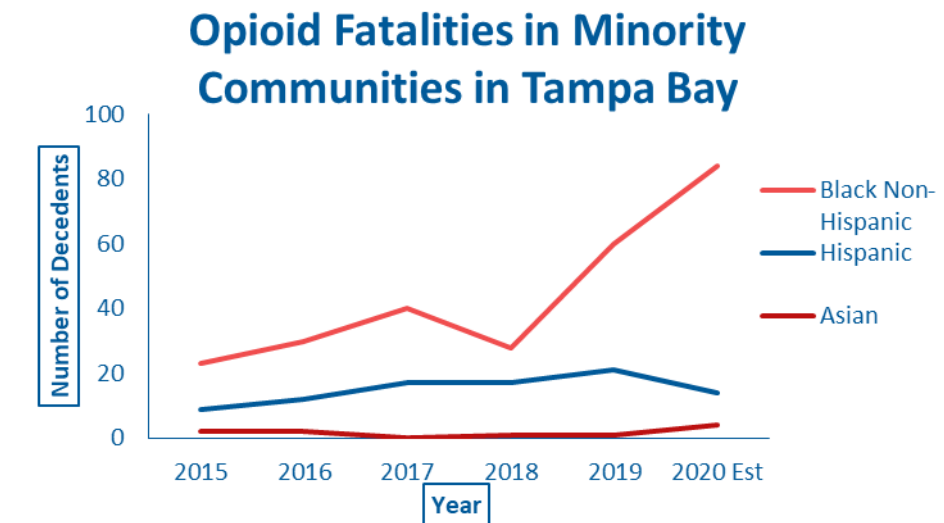


Exhibit 9 Opioid Fatalities in Minority Communities in Tampa Bay, FDLE-ME Drug Data Set

Although women only make up 27.9% of opioid-caused fatalities in the Tampa Bay region, a slightly higher percentage (1.17%) of female decedents dies from opioid overdoses than do men. This may be attributed to the fact that research shows that women increase their rates of substance use at a more rapid pace when compared to men once substance use has begun.<sup>xv</sup> With deadly synthetic opioids tainting the illicit drug supply this quickened increase rate of use could be deadly.

The distant second leading cause of drug deaths in women is cocaine, methamphetamine, and amphetamines. This matches the percentage of men (48.09%) whose death is also caused by stimulants (a combination of cocaine, methamphetamines, and amphetamines).

Gender differences for fatal opioid overdoses have been **relatively stable** at the state and national levels over time. Since 1999, females have consistently made up approximately one-third of deaths from opioid overdose. State trends fluctuate between 31% and 39%. Over the past five years, 36% of all opioid fatalities were women. However, when reviewing the data for the first six months of 2020, the percent all opioid fatalities that were women was well under this state average at 28%.

**Tampa Bay's Prime Workforce** makes up 71.38% of the total populations of decedents from 2015 – 2020 (25-54 year olds). In 2020, 74% of those whose deaths were caused by opioids were within this prime work age population. Approximately two-thirds of the American workforce is between 25 and 54 years old<sup>xvi</sup>. In looking at the opioid overdose data for Florida, 75% of all fatal overdoses were within this prime work age population in 2018 (Exhibit 6). The rate of overdose within the workforce age population at the state level is slightly higher than both the regional and national opioid overdose rate for this segment of the population, and is being driven by millennial overdose deaths (35-39 year-olds).

### 2020 Tampa Bay Opioid Fatalities by Age Cohort (AAR, January - June 2020)

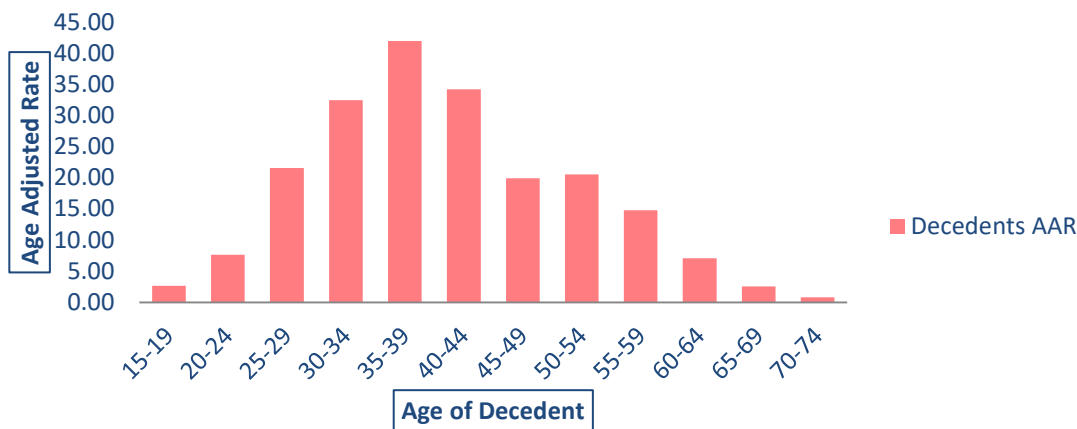


Exhibit 10 2020 Tampa Bay Opioid Fatalities by Age Cohort, FDLE-ME Drug Data Set

2,365 individuals fatally overdosed between Jan 2015-Jun 2020 that were in the younger half of the workforce (aged 25-39). This is nearly identical to the 2,322 older work-force aged individuals (aged 40-54) who died during the same time period. This remains true after 2018, despite the shift away from the role older regional residents played in who was dying prior from 2015-2017.

Since the increase in deaths in 2018, the age cohorts that make up the majority of the decedent population has been 35 to 39 year olds. This is a shift from previous years. Between 2015 and 2017, 55 to 59 year olds made up a much larger percent of the opioid decedent population, comprising the biggest percent of the total population of those dying.



## THE CONSEQUENCES OF THE OPIOID EPIDEMIC

The consequences of high rates of substance use disorder have real impacts on families and communities. Too often the consequences of substance use disorders (SUD) then feedback into the pernicious cycle of addiction to serve as a risk factor for another. In this section we will see this heartbreaking cycle again and again. The consequence of a pregnant mother's SUD becomes a newborn's first risk factor for later SUD. The abuse perpetrated by someone with a substance use disorder later becomes the risk factor for the beaten spouse or child. In the Tampa Bay region, right now:

- Of the 47,148 births in 2017 in the Tampa Bay region, **423 infants were born with Neonatal Abstinence Syndrome**. That is nearly 1% of all births (.8972%). In other words, 38 babies are born addicted to Opioids each month.
- **Every 2 hours a child is abused by someone misusing substances** in the Tampa Bay region on average.
- Domestic violence is far more prevalent in Tampa Bay than the state as a whole. In our region, an average of **11 people report domestic violence each week**.

### NEONATAL ABSTINENCE SYNDROME (NAS)

Although the rate of neonatal abstinence syndrome (NAS) in Tampa Bay has remained relatively stable (only slightly increasing year over year), it continues to be a persistent problem in the region. Hundreds of babies are affected each year by the condition, caused by exposure to drugs while in the womb.

Nationwide in 2017, one baby was diagnosed with NAS every 18 minutes. That's nearly 80 newborns per day or a NAS rate of 73 — and the rate was much higher in Tampa Bay.

**What is NAS?** Neonatal abstinence syndrome (NAS) is a withdrawal syndrome that can occur in newborns exposed to certain drugs passed to them by the mother while in the womb. The multisystem disorder affects various parts of the body, resulting in intense distress for the affected baby.

Infants with NAS feel pain more strongly, according to a Penn State University study. They often cry uncontrollably and feel stiffness in their limbs, making it difficult for them to unfold their arms and legs. Some experience seizures and uncontrollable tremors.<sup>xvii</sup>



“It’s not a normal cry. It’s very high-pitched; at times it’s a scream. You hear it down the hall and it’s a distinct cry,” Tennessee neonatal intensive-care nurse Nickie Walters told the *Bristol Herald Courier* in 2019. “You imagine their skin is crawling; they’re in pain just as an adult would go through. I can’t imagine my body needing something like that and not being able to express it. The babies, that’s all they have is to cry.”

Substance abuse during pregnancy is on the rise, particularly with opioids, both prescribed and illicit. The increase has created a heartbreaking surge in the number of babies born with

NAS Rates: Tampa Bay, Florida, US Comparison			
County	Resident Births (count)	Resident NAS Births (count)	NAS Rates (per 10,000 live births)
Citrus	1,108	11	99.3
Hernando	1,552	16	103.1
Hillsborough	17,415	91	52.3
Manatee	3,476	54	155.4
Pasco	5,134	67	130.5
Pinellas	8,228	137	166.5
Polk	7,846	22	28
Sarasota	2,819	60	212.8
Tampa Bay	47,578	458	106.8
Florida	223,579	1,503	67.2
United States	3,853,472	27,085	73

Source of US Resident Births (count): Center for Disease Control, <https://www.cdc.gov/nchs/data/vsrr/report004.pdf>- down 2% from 2016.  
 Source of US Resident NAS Birth data: citation: Strahan AE, Guy GP, Bohm M, Frey M, Ko JY. Neonatal Abstinence Syndrome Incidence and Health Care Costs in the United States, 2016. *JAMA Pediatr.* 2020;174(2):200–202.

Exhibit 11 Comparison of NAS Rates, sources listed in caption.

NAS. In 2017, **eight out of every 1,000** American women hospitalized during delivery were diagnosed with an opioid-related problem themselves, according to the Healthcare Cost and Utilization Project (HCUP), which is managed by the U.S. Agency for Healthcare Research and Quality. That’s a **131 percent** increase from 2010.

The rate of infants with NAS in Tampa Bay in 2017 was **58.9 % higher** than the state’s rate and **46.3% higher** than the national rate. Indeed, while only **~23 percent** of Floridians live in Tampa Bay, nearly **31 percent** of all Florida babies with NAS have been born to mothers in the region.

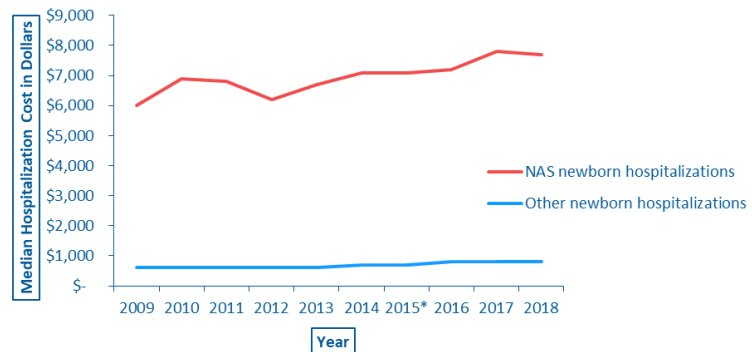
**Caring for babies with NAS** often requires treatment in the newborn intensive care unit, also called the NICU, after birth. It’s a nursery where sick newborns get special medical care.

Our region is fortunate to have a wing in the NICU at Johns Hopkins All Children’s dedicated specifically to caring for neonates with NAS. More than 100 newborns diagnosed with NAS are treated each year at the Johns Hopkins All Children’s Hospital NAS Follow-Up Clinic in St. Petersburg alone. The clinic provides the optimal environment for the babies — a dark, quiet place in the NICU where they are held and comforted constantly to ease their symptoms.

Yet, care is costly. According to the HCUP, the average cost of a hospital stay for a baby with NAS was \$8,200 in 2017, compared to about \$1,000 for other newborns. In Florida, the difference is even greater.

Applying the state’s standard of \$7,800 per infant born with NAS to our region’s NAS infants, hospital visits for these neonates in our region would cost \$3.6 million in 2017. By comparison, the total cost of hospitalizations for all other babies born in Tampa Bay that same year (47,120) would have been a mere 10 times more.

**Florida: NAS among Newborn Hospitalizations (Cost per Stay)**



\*2015 values are based on the first three quarters of data using ICD-9-CM coding.

**Exhibit 12 NAS among Newborn Hospitalizations (Cost per Stay), HCUP.**

## CHILD ABUSE

Researchers have found child maltreatment, or child abuse, to be closely linked to substance abusing parent as well as to substance abuse by the child later in life. A 2012 study published in The Canadian Journal of Psychiatry said that children who experienced all five types of child maltreatment were more likely to develop a substance abuse disorder.

There are five types of child maltreatment: physical abuse, sexual abuse, emotional abuse, physical neglect and emotional neglect. All have been tied to substance abuse in one way or another, according to the U.S. Center for Disease Control and Prevention.

Nationally, more than one-third of child maltreatment cases involve parental substance abuse to some degree. Florida received more than 31,000 reports of alleged child maltreatment in 2020, according to DCF child welfare data. Nearly half (13,628) were tied to substance abuse. Even these numbers are larger than the national numbers. The statewide number of **verified** substance-involved child abuse is down by 42% since 2015.

Annual Number of Verified Maltreatments due to Substance Misuse						
	2015	2016	2017	2018	2019	2020
Florida	19,327	19,953	19,206	17,287	14,972	13,628
Tampa Bay	5,387	6,036	5,836	5,164	4,883	4,479
Citrus	320	195	176	190	174	96
Hernando	223	262	235	267	122	49
Hillsborough	1,109	1,479	1,346	1,317	1,202	1,073
Manatee	657	571	558	456	492	368
Pasco	729	932	1,085	964	747	940
Pinellas	1,381	1,379	1,209	972	1,114	1,002
Polk	534	797	749	700	735	669
Sarasota	434	421	478	298	297	282

Data represents raw numbers of verified substance use maltreatments of children. "Maltreatments" include Substance Exposed Newborn, Substance Misuse, Substance Misuse - Alcohol, Substance Misuse - Illicit Drugs, or Substance Misuse (more specific categories) - Prescription Drugs.

**Exhibit 13 Annual Number of Verified Maltreatments due to Substance Abuse, FDCF Data Dashboard.**

Tampa Bay's verified substance-involved child abuse cases are down by 20% since 2015. Polk County stands alone in its increase from 2015 to 2019 — 20% more verified instances of child abuse due to substance use occurred in 2020 than in 2015. The decrease between 2019 and 2020 cannot be fully trusted because number of child abuse reports was impacted by the effects of the pandemic, which forced more kids into homeschooling, out of daycare and into social isolation at home. While the downward trend should be acknowledged, the overall numbers are still high. Tampa Bay comprised just **23%** percent of the state population in 2019, according to U.S. Census data. But the region accounts for **33%** of the total number of verified child maltreatments due to substance misuse. This equates to a child in our region being abused by someone misusing substances **every two hours** on average.

Neglect is the leading reason kids enter the foster care system, according to the Children's Bureau under the Office of Administration of Children and Families. One-third of those who did in 2015 did so at least in part because of parental drug abuse — nearly doubles the amount as in 2005.

Children whose parents have substance abuse disorders are more likely to develop SUD themselves, according to the CDC. Data shows that more than one-third of children whose abuse or neglect has been reported will develop a substance abuse disorder before their 18th birthday, according to the American Society for the Positive Care of Children.

Child maltreatment has created substantial and ever-growing economic burdens for both the United States and Florida, according to a study by the National Center for Injury Prevention and Control, which is part of the CDC. The lifetime cost for each victim of child maltreatment who survived was about \$210,000, according to DCF. That's comparable to costly health conditions such as strokes (\$160,000) or type 2 diabetes (between \$181,000 and \$253,000).

## **INTIMATE PARTNER VIOLENCE**

Domestic violence (or, intimate partner violence) is linked to substance use in two critical ways. First, substance abuse has been found to co-occur in 40-60% of IPV incidents according to multiple studies.<sup>xviii</sup> Several researchers have even demonstrated that substance use/abuse plays a facilitative role in IPV by precipitating or exacerbating violence. Second, spousal abuse has been identified as a predictor of developing a substance abuse disorder. As such, domestic violence is both a consequence of substance use and a risk factor for substance use disorder.

Florida legally defines “domestic violence offenses” any assault, aggravated assault, battery, aggravated battery, sexual assault, sexual battery, stalking, aggravated stalking, kidnapping, false imprisonment, or any criminal offense resulting in physical injury or death of one family or household member by another family or household member.

Domestic violence rates for the Tampa Bay Region have been significantly and consistently higher than Florida’s reported rates. The consistently high rates of domestic violence offenses for the region occur despite the influence that Sarasota’s low total domestic violence offences has on the region’s rate. Indeed, in 2019, only Citrus and Sarasota had lower total domestic

Total Domestic Violence Offences (AAR per 100,000 2016-2019)				
	2016	2017	2018	2019
Citrus	606.4	630.7	584.2	559.8
Hernando	558.8	515.1	492.8	576.3
Hillsborough	470.6	513.0	477.4	465.7
Manatee	731.0	662.4	591.0	584.5
Pasco	737.2	826.1	874.8	856.6
Pinellas	714.1	647.9	648.8	616.8
Polk	672.6	703.1	726.2	685.1
Sarasota	329.4	348.7	291.4	289.5
Tampa Bay	595.2	604.0	589.4	574.7
Florida	522.2	520.4	500.6	495.1

Exhibit 14 Total Domestic Violence Offences (AAR), FDOH Opioid Overdose Data Dashboard.

violence offences than the region as a whole. In 2016-2018, a similar pattern exists as well. Yet the rate for the individual counties and the region as a whole from 2016 to 2019 has been relatively stable with the largest positive change occurring in Manatee and Pinellas counties where total domestic violence offences dropped by more than 100 points from 2016 to 2019 and the most egregious increase occurring in Pasco where domestic violence offenses increased by more than 100 points.

The personal consequences of IPV are devastating, but also there are many costs to society. The CDC calculated the costs. The lifetime economic cost associated with medical services for IPV-related injuries, lost productivity from paid work, criminal justice and other costs, was \$3.6 trillion nationally.<sup>xix</sup> The cost of IPV over a victim’s lifetime is estimated at \$103,767 for women and \$23,414 for men.

# WHAT IS THE COST OF OPIOID ADDICTION?

The consequences of opioid and substance use disorders takes its toll on families and social networks. It's not uncommon to hear parents refer to themselves as "emotionally spent" when dealing with a child who has substance use disorder. Likewise, the intergenerational costs to the health and wellness are great. Yet, the financial burden to families, social networks, and our region is also great.

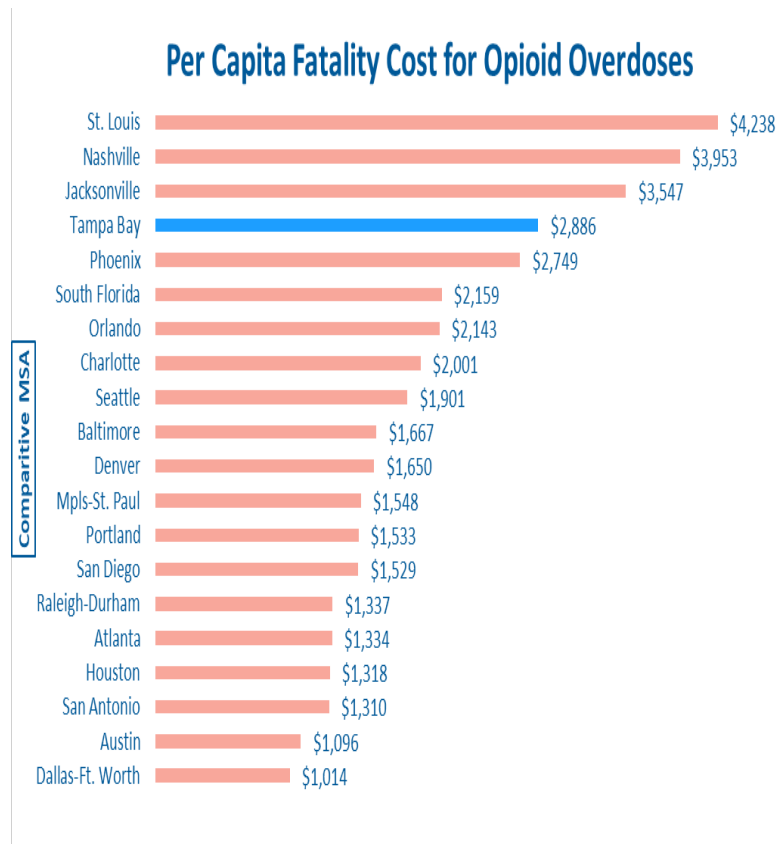


Exhibit 15 Per Capita Family Cost for Opioid Overdoses, see methods note in endnotes for data sources.

In the Tampa Bay region, the per capita fatality cost of \$2,886 registers as the fourth-highest among comparison markets.<sup>xx</sup> In comparison to the other four large Florida markets, only Jacksonville fairs worse with a \$3,547 per capita fatality cost.

Tampa Bay's total estimated fatality cost of \$14.2 billion consists of \$6.7 million of health care costs, \$1.7 billion of lost productivity costs, and \$12.4 billion in cost associated with the value of statistical life lost.

In the context of other economic and prosperity metrics measured in the Regional Competitiveness Report, the costs associated with the impact of fatal opioid overdoses exert a deleterious effect on the Tampa Bay economy writ large such as growth of gross regional product, as well as the ability of affected families to generate and sustain financial stability.

## CONCLUSION

The number of lives lost to fentanyl fatalities and other opioid overdoses is staggering. This epidemic is especially pernicious because its consequences feed back into the problem, compounding risks. Thus, the percentage of the population that will have a greater risk for substance use disorder down the line increases. Thus, the impact of today's opioid epidemic not only erodes our health (and economic) outcomes today, but also serves to undermine our region's ability to collectively overcome this behavioral health crisis in the future.

Similarly, the recent explosion of fentanyl deaths in minority populations will further tax communities which already score low when it comes to positive health outcomes. These more vulnerable populations already have a historically steeped distrust of the medical community, and also struggle to gain access to (behavioral) health services. The silver lining to this aspect of the opioid epidemic is that while death rate increases are high, the actual numbers are still low enough that concerted effort to right this problem could actually have a significant impact.

The findings of this report strongly suggest that any successful approach to combatting this crisis will involve a multivariate approach. Because substance use disorder rates are high in our region, solutions must include expanding the recovery and treatment work currently being done. Also because of the increase risk to recreational drug users, it must include a strategy to reach out to all drug users through culturally- and age-appropriate public health campaigns, through harm reduction initiatives (and any necessary policy change), and through prevention.

The next phase of research performed by Project Opioid-Tampa Bay will be to examine the state of our interventions, preventions, and harm reduction initiatives throughout our region. That research, combined with this report, will provide our business, faith, and philanthropic leaders in Tampa Bay with the data needed to put together regional strategies for saving lives and combatting the opioid epidemic.

## ENDNOTES

<sup>i</sup> McFarling, Usha Lee. “As the Pandemic Ushered in Isolation and Financial Hardship, Overdose Deaths Reached New Heights.” *Stat News* (2021). [During COVID-19 pandemic, overdose deaths reached new heights - STAT \(statnews.com\)](#).

<sup>ii</sup> Sokolow, Amy. “Opioid Overdoses Have Skyrocketed amid the Coronavirus, but States are Nevertheless Slashing Addiction Treatment Program Budgets.” *Stat News* (2020). [States slash addiction treatment budgets, even as overdoses spike \(statnews.com\)](#).

<sup>iii</sup> “COVID-19 and the Drug Supply Chain: From Production and Trafficking to Use.” Research Brief: United Nations Office on Drugs and Crime (2021). <https://www.unodc.org/documents/data-and-analysis/covid/Covid-19-and-drug-supply-chain-Mai2020.pdf>.

<sup>iv</sup> Center for Disease Control’s Wide-ranging Online Data for Epidemiologic Research (CDC WONDER) and the CDC’s Web-based Injury Statistics Query and Reporting System (WISQARS database). These databases provided statewide and national demographic data and vital statistics, such as leading causes of deaths, and numbers of non-fatal and fatal overdoses for the state and nation. We also utilized US Customs and Border Protection’s Drug Seizure Statistics to generate national numbers to describe the opioid epidemic. Finally, we turned to various state and national reports generated by federal agencies, state agencies, and private foundations and nonprofits for emerging trends and hard-to-find data

<sup>v</sup> Division of Cancer Prevention and Control, Centers for Disease Control and Prevention (2021).

<https://www.cdc.gov/cancer/uscs/about/hints.htm#:~:text=Age%2DAdjusted%20Rate&text=Age%2Dadjusting%20the%20rates%20ensures,to%20the%20populations%20being%20compared>.

<sup>vi</sup> Laroche, Marc, et.al. “Rates of Opioid Dispensing and Overdose After Introduction of Abuse-Deterrent Extended-Release Oxycodone and Withdrawal of Propoxyphene.” *JAMA Internal Medicine* (2015). Download available from javanetwork.com.

In the 90s a metric used by military and VA doctors made its way into mainstream medical treatment. According to historical account, the American Pain Management Association pressured a Joint Committee to add pain as the fifth vital sign. The importance of including pain cannot be overstated. The five vital signs are: pulse rate, body temperature, respiratory rate, blood pressure, and pain. Pain really is the odd man out in this index. With the addition of pain as a vital sign, the number of pain medications increased, and the number of patients receiving pain medication rose.

2000’s Wave: From Prescription Opioids to Heroin

It is true that approximately 60% of prescription opioid users became heroin addicts when the medical community began to comprehend the highly addictive nature of prescription opioids and states started cracking down on pill mills and predatory prescribing practices. “This is the first time in the last two decades that narcotic prescribing had dropped, rather than continued to increase,” said lead researcher Dr. Marc Laroche of Boston University School of Medicine. “Some were skeptical that simply decreasing supply would lead to a decrease in overdoses, but we did find that reducing supply may have led some people who are abusing these drugs to substitute an illicit narcotic like heroin, and it may partially explain why we have seen an explosion in heroin use across the country,” Laroche said.

<sup>vii</sup> This decline is likely larger given the fact that fentanyl and other synthetic opioids quickly metabolize into morphine.



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<sup>viii</sup> “Opioid Basics.” Center for Disease Control and Prevention (2021).

<https://www.cdc.gov/drugoverdose/opioids/index.html>.

<sup>ix</sup> “Street Value and Prices of Opioids.” ARK Behavioral Health (2020).

<https://www.arkbh.com/opioids/street-value/>.

<sup>x</sup> For a complete history of fentanyl click [here](#).

<sup>xi</sup> “Fentanyl Drug Facts.” National Institute on Drug Abuse (2021).

<https://www.drugabuse.gov/publications/drugfacts/fentanyl>.

<sup>xii</sup> “Eleven Individuals Plead Guilty to Conspiring to Manufacture and Distribute Heroin, Fentanyl, Carfentanil, and Other Controlled Substances in Manatee and Pasco Counties, Resulting in Death.” United States Department of Justice: Office of the Middle District of Florida (2019).

<https://www.justice.gov/usao-mdfl/pr/eleven-individuals-plead-guilty-conspiring-manufacture-and-distribute-heroin-fentanyl>.

<sup>xiii</sup> The Medical Examiner districts in which our Tampa Bay counties are located:

5: incl. Citrus, Hernando

6: Pasco, Pinellas

10: incl. Polk,

12: incl. Manatee, Sarasota

13: Hillsborough

<sup>xiv</sup> For the sake of clarity I examined opioids together as a category (ME organized category) and compared it to the categories of Benzodiazepine, abbreviated Benzos (an ME category), Uppers (the ME category of Amphetamines, plus Cocaine from the Other Drugs Category), Alcohol (ME category), and Other (this is all of the other categories combined into one category and not the same as the ME category “Other.”).

<sup>xv</sup> Meyer, Jaime, et al. “Research on Women With Substance Use Disorders: Reviewing Progress and Developing a Research and Implementation Roadmap.” *Drug and Alcohol Dependence* (2019).

<https://pubmed.ncbi.nlm.nih.gov/30826625/>.

<sup>xvi</sup> “Labor Work Share, by Age Group, 1999, 2009, 2019, and Projected 2029.” U.S. Bureau of Labor Statistics (2021). <https://www.bls.gov/emp/graphics/2019/labor-force-share-by-age-group.htm>.

<sup>xvii</sup> Signs of NAS include:

- Body tremors and seizures/convulsions
- Overactive reflexes and overly tight muscle tone
- Inconsolable, excessive and high-pitched crying
- Low weight and feeding issues
- Breathing and skin problems
- Fevers, diarrhea and throwing up
- Extreme fatigue and trouble sleeping

One of the most serious risks for babies with NAS is Sudden Infant Death Syndrome (SIDS). SIDS is the unexplained death of a baby younger than 1 year old, usually during sleep. The NAS symptoms a newborn experiences depends on the type of drug(s) the mother used during pregnancy, how much she used and for how long. It also depends on how the mother’s own body breaks down the drug(s), and the number of weeks she is pregnant.

“Neonatal Syndrome” Stanford Children’s Health (2021).

<https://www.stanfordchildrens.org/en/topic/default?id=neonatal-abstinence-syndrome-90-P02387>.



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<sup>xviii</sup> “Intimate Partner Violence and Co-Occurring Substance Abuse/Addiction.” *Quality & Science*. American Society of Addiction Medicine (2014). <https://www.asam.org/Quality-Science/publications/magazine/read/article/2014/10/06/intimate-partner-violence-and-co-occurring-substance-abuse-addiction>.

<sup>xix</sup> Preventing Intimate Partner Violence.” Centers for Disease Control and Prevention (2021). <https://www.cdc.gov/violenceprevention/intimatepartnerviolence/fastfact.html>.

<sup>xx</sup> Methods: The research of Florence, et al (2021) serves as the foundation for this analysis. The authors created state-level estimates of opioid-related deaths and cost components of fatal overdoses of opioids, including health care, lost productivity, and the statistical value of life lost.(1) These three components, in sum, equal the total cost of fatal opioid overdose. Using the Florence estimates, component costs were normalized by state-level fatalities. Next, the CDC WONDER database was queried to provide county-level counts of 2019 fatalities (the latest year available) caused by unintentional drug poisonings (overdoses). Fatality counts for each component county of a Regional Competitiveness Report community were summed to create a regional fatality count, and those sums multiplied by the per-fatality cost estimates developed by Florence. Finally, total fatality costs for each region were divided by the relevant population of each region to develop a per capita cost of fatal overdoses of opioids in each community.(2)

Footnote: (1) Florence C, Luo F, Rice K. The economic burden of opioid use disorder and fatal opioid overdose in the United States, 2017. *Drug and Alcohol Dependence* 2021;218:108350.  
(2)For some smaller counties, fatality counts are suppressed in the WONDER database. Per capita calculations in this analysis do not include population values for those counties. Of the 175 counties in the 20 regions, 59 smaller rural or exurban counties were excluded from this analysis. These 59 counties account for 4.1% of total population across the 20 regions.