

# The Impact of COVID-19 on the Opioid Crisis

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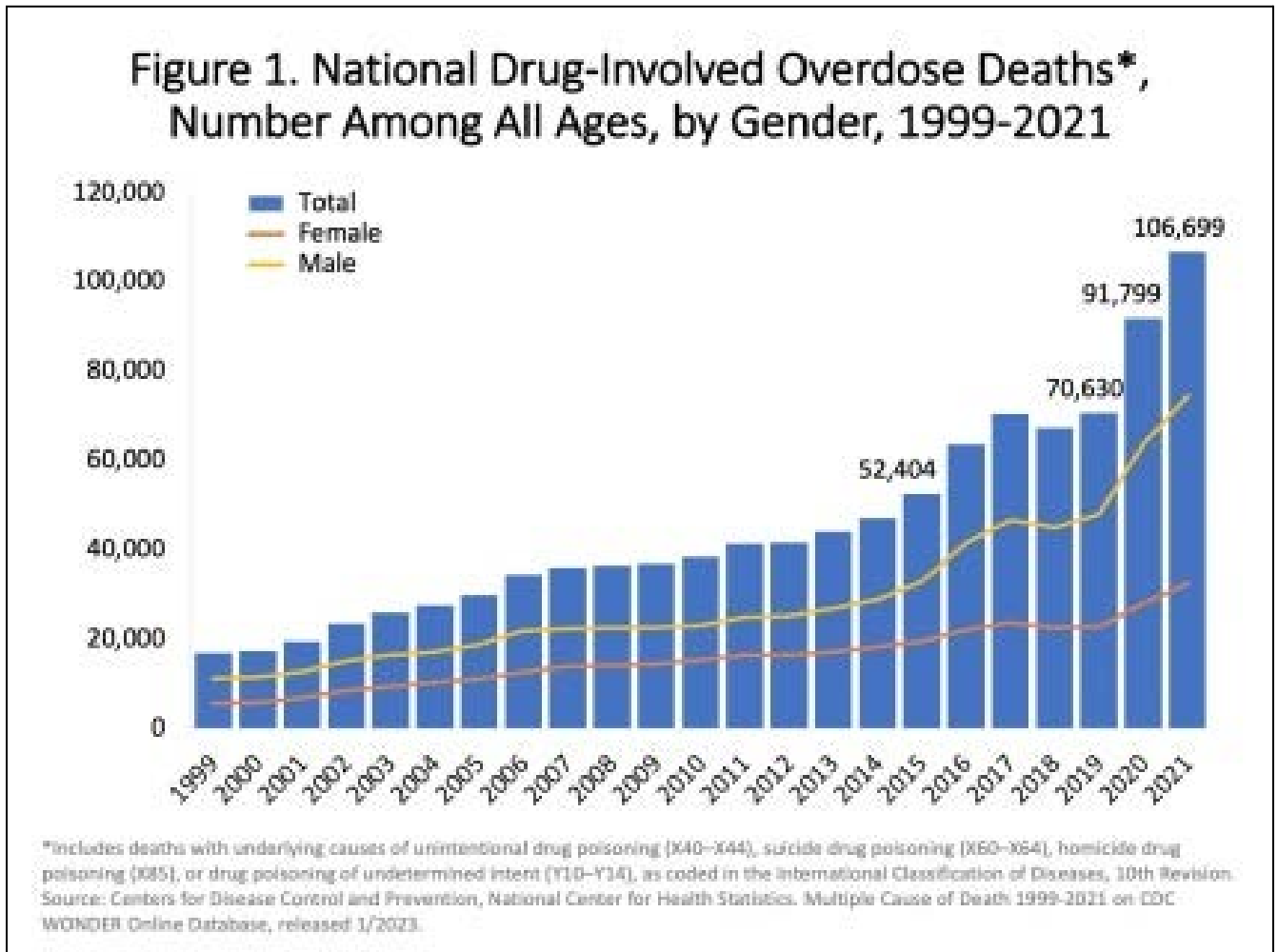
## **Chapter 1: Introduction**

Today, in 2023, cases of opioid addiction are seen in staggering numbers, more so than ever before. There are numerous factors that contribute to the problem, but the focus of this research is on how the COVID-19 pandemic has affected this opioid crisis. In this thesis the opioid crisis will be defined, providing information on how it began, when it began, and who it impacts. Additionally, it will address the hard science behind opioid addiction, including biochemical and medicinal aspects.

This will all lay the groundwork for a discussion on how the COVID-19 pandemic affected the opioid epidemic, a horrible byproduct beyond the obvious devastation caused by the virus itself. This includes detrimental effects on physical and mental health as the virus brought newfound periods of isolation, anxiety, and trauma for many individuals. Moreover, those who suffered from mental illness prior to the pandemic were cut off from in-person treatment options, such as support groups and counseling sessions. This lack of social interaction potentially fostered circumstances for increased opioid intake.

Furthermore, in light of COVID-19 there were many changes instituted to the healthcare system, and this paper will therefore explore how these changes may have affected the opioid crisis as well. This can encompass healthcare policy changes, halt of elective surgeries, and modifications to insurance coverage.

## Chapter 2: Defining the Opioid Crisis



<https://nida.nih.gov/research-topics/trends-statistics/overdose-death-rates>

**106,699.**

This is the number of individuals who have died from a drug overdose in 2021 according to the National Institutes of Health, which is a 15% increase from 2020. Unfortunately, society has been plagued by opioid addiction for decades, and far too many have been victims to this

terrible predicament. But, the question begs to be asked; from where did this devastation all begin from?

The impetus for the opioid crisis was the promotion of OxyContin (commonly called Oxy or OxyCodone) by Purdue Pharma in the mid 1900's, which was subsequently approved by the FDA, Harvard News, 2022. OxyContin is a narcotic often used as a painkiller, and patients who are prescribed such a drug can potentially become addicted to the numbing effects. This event triggered the first wave of opioid related deaths. There were an additional two historic waves, one being the expansion of the heroin market, and the other being the use of synthetic narcotics such as fentanyl.

The increase in availability of opioids led to liberal prescription of Oxy to patients. Take the following scenario. A 19 year old dental patient needs his wisdom teeth removed. Following the procedure, the patient is in intense pain and so the oral surgeon prescribes him a week's dose worth of OxyCodone to take the edge off. After two days, the pain is technically bearable and he can now use over-the-counter pain management, such as Advil. There are a few ways this scenario can now play out. Option number 1 would be for the patient to dispose of the remaining OxyCodone pills and begin taking Advil until the pain is gone. Option number 2 would be the patient ceases consumption of the opioid, but his family is tight on cash so he figures he could make a few bucks on the street with the remaining pills, getting sucked right into a very dangerous game while perpetuating the consumption of opioids for others. Option number 3 is that the patient is enjoying the numbing effects of the OxyCodone. However, the oxy is no longer fully satisfying his needs and now he must seek out a stronger opioid, such as fentanyl, beginning the addiction cycle.

Of course, each case is unique, but after painting the above picture, it is easy to see how the rising availability of opioids gave way to the opioid epidemic we are currently experiencing.

## Chapter 3: Science behind the Addiction

### Neurobiology 101:

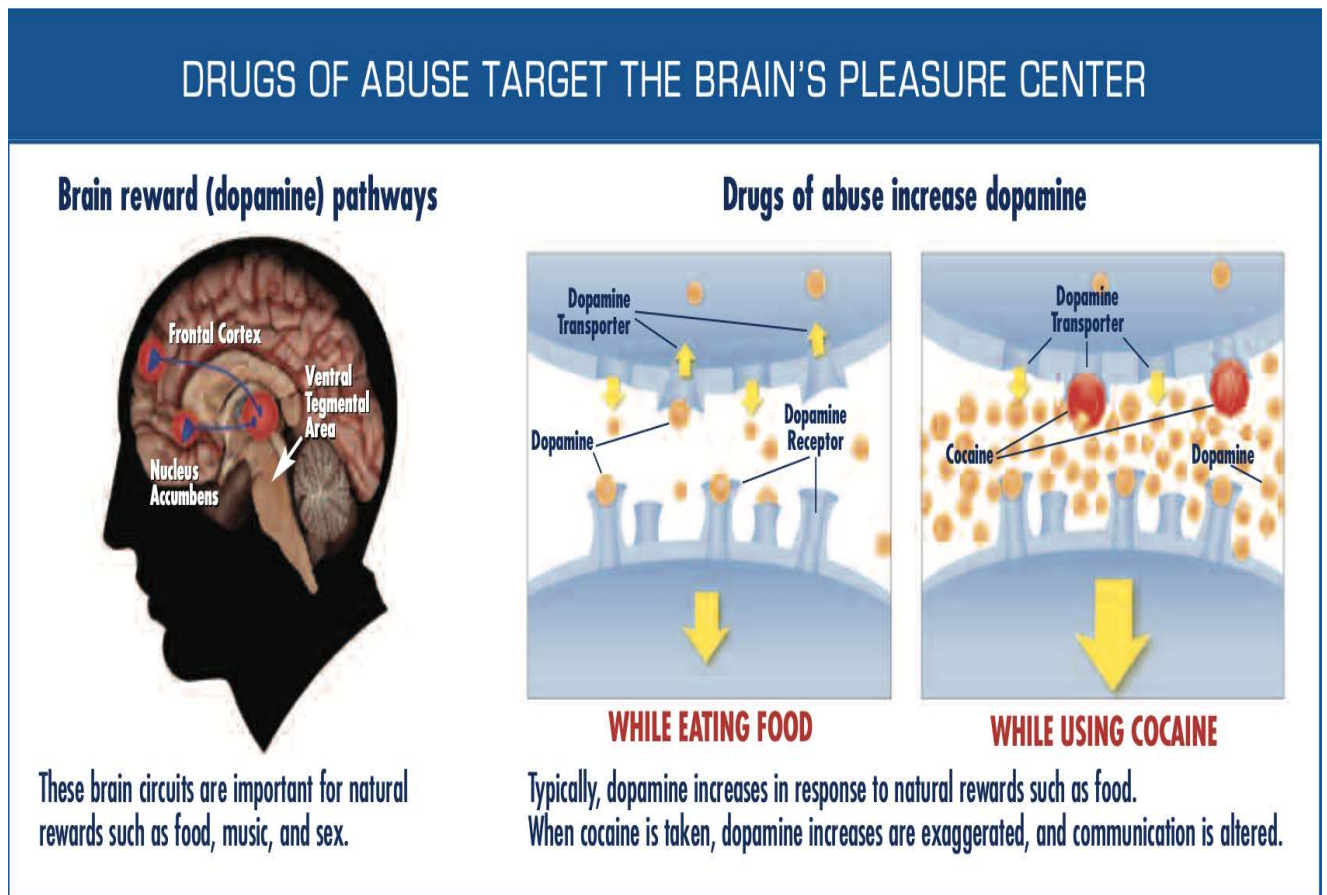
The scientific definition of drug addiction is known “as a chronic relapsing disorder that is comprised of three stages: occupation/anticipation, binge/intoxication, withdrawal/negative effect”, according to neuro addiction specialists Melissa A. Herman, and Marisa Roberto from *Frontiers in Integrative Neuroscience*. These three categories often present themselves as cyclic, repetitive behaviors that result in pathological addiction. In fact, studies show that different physiological areas of the brain are associated with the three distinct stages of addiction. Occupation and anticipation is linked with the prefrontal cortex and hippocampus. Binge and intoxication is linked with the dorsal striatum, ventral tegmental area and cerebellum. Lastly, withdrawal and negative effect is linked with the basolateral amygdala and the central amygdala.

The consumption of drugs activates the brain in one of two ways according to the NIH’s report, “*Drugs, Brains, and Behavior: The Science of Addiction*”. Either, the drug will mimic the chemical structure of a neurotransmitter, tricking the brain to allow the drug to attach to receptors and subsequently activate neurons. Examples of such drugs would be heroin or marijuana. The other possibility is that the drugs will inhibit the regular neurological pathways or result in unusual amounts of neurotransmitters to be released, which would be caused by substances like amphetamine or cocaine.

Such disruptions to the brain mechanisms result in abnormally high levels of dopamine to be released, thus inducing the pleasurable feeling of euphoria. This will reinforce the addictive behavior and increase the user’s intake of the drugs. “Our brains are wired to ensure that we will

repeat life-sustaining activities by associating those activities with pleasure or reward. Whenever this reward circuit is activated, the brain notes that something important is happening that needs to be remembered, and teaches us to do it again and again without thinking about it. Because drugs of abuse stimulate the same circuit, we learn to abuse drugs in the same way”, as quoted by the NIH’s report.

The following diagram visually depicts the copious amounts of dopamine that gets released in the brain upon consumption of a drug like cocaine.

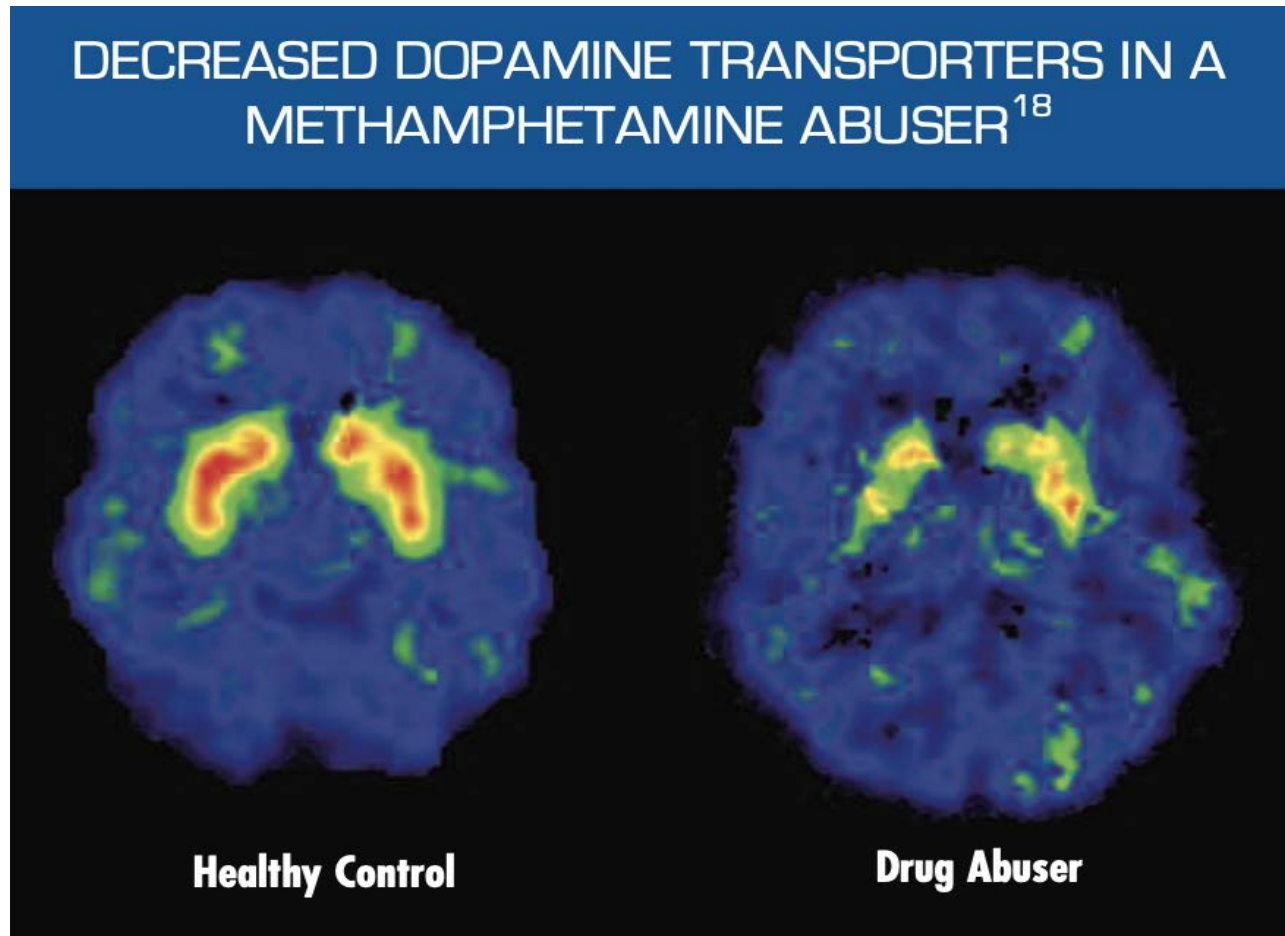


[https://nida.nih.gov/sites/default/files/soa\\_2014.pdf](https://nida.nih.gov/sites/default/files/soa_2014.pdf)



## Effects of drug use on the brain

Drugs have the potential to be detrimental to the health of the brain, specifically when abused. When one takes high doses of drugs, the brain tries to compensate for when there is a lack of drugs in a person's system and that can impair cognitive functioning of the brain (refer to the figure below).



[https://nida.nih.gov/sites/default/files/soa\\_2014.pdf](https://nida.nih.gov/sites/default/files/soa_2014.pdf)

According to Tabitha Powledge, published in the journal named *BioScience*:

*“Opioids also stimulate release of abnormally large amounts of dopamine, employing one of nature's intricate jury-rigged contraptions. Dopaminergic neurons in the ventral*

*tegmentum are regulated by other neurons that keep them from releasing too much dopamine. Those regulatory neurons are studded with opioid receptors; when drugs such as morphine lock on to those receptors, they inhibit the inhibitory neurons. That is, they prevent the neurons from doing their normal job of holding down dopamine production, resulting in the release of large amounts of dopamine”.*

Dopamine is known as the “feel good” hormone, and is activated naturally following activities such as exercise, providing an individual with pleasurable feelings. The consumption of opioids artificially releases excessive amounts of dopamine, providing euphoric feelings to that individual and leaving them with cravings for that feeling once again, and thus the cycle of addiction begins. These dopamine stimulations are unhealthy and unnatural for the human brain, and so neural pathways will be damaged.

Adolescents are at a particularly significant risk to addiction habits as well as neural or cognitive alteration, due to the development of their brain. Between the ages of 10-19 years old, is a critical period for brain development, specifically within the prefrontal cortex, which is associated with the ability to make decisions. Since the prefrontal cortex is still in development at that stage, they are more susceptible to poor decision making and increased risk of opioid consumption. It has been found that those between the ages of 18 to 25 are most susceptible to addiction, as stated by the Midwest Detox Center. This aligns with the time period that the prefrontal cortex is just beginning to solidify, but not quite fully there.

## Chapter 4: Initial Driving Forces

*“McKinsey Settles for Nearly \$600 Million Over Role in Opioid Crisis”*. This was the headline seen on the cover of the New York Times on February 3, 2021. This article, written by Michael Forsythe and Walt Bogdanich, brings to light the corporate corruption and governmental red tape that were the driving forces behind the ever-increasing opioid usage in the United States. McKinsey was being held publicly accountable for accelerating sales growth of Purdue Pharma’s OxyContin painkiller. According to the records, the consulting firm continued to provide its services to Purdue even after the pharmaceutical company was indicted. In addition to Purdue, McKinsey’s clients in the opioid industry include Johnson & Johnson, Endo International and Mallinckrodt Pharmaceuticals. Against the backdrop of the growing opioid epidemic, the actions of the firm did not align with corporate social or ethical responsibility.

The role that McKinsey, an elite global consulting firm, played in perpetuating the opioid crisis, exposed the faults in America’s health system. It is unfortunate that the desire for profitability outweighed the concerns for a public health crisis. The mighty corporate influence over the healthcare system is a pattern that plagues the US.

Moreover, the lack of affordable healthcare and reign of insurance companies over allocation of health services has been a significant feeder to the opioid crisis, which will be expanded upon in Chapter 9 of this paper.

## **Chapter 5: Current treatment methods**

Due to the heavy threat that society faces on the opioid front, there are multiple treatment options for those experiencing addiction. The treatments vary depending on what is most beneficial for the patient, whether it be determined by the severity of the addiction, financial circumstances, or willingness to be treated. Some of these treatments even have the ability to be used in tandem with each other. One should consult with physicians and addiction specialists to determine the best course of action.

### Fentanyl Vaccine:

A research group at the University of Houston has developed a vaccine that has the ability to block fentanyl from entering the brain, thus annihilating the “high” that users experience. The mechanism utilized in this vaccine works via anti-fentanyl antibodies that bind to the fentanyl in the user’s system, blocking it from entering the brain and instead leaves the body through the kidneys, according to Laurie Fickman. Of all existing drugs, fentanyl is found to be most lethal, as many common street drugs or medications such as Xanax are often laced with fentanyl. Therefore, many who don’t typically consume opioids are now being introduced to fentanyl, and are without intent, becoming addicted. This vaccine has the potential to play a vital role against relapse. Currently, the vaccine has only been tested on rats, with no outstanding side-effects. However, human clinical trials are still awaited.

### Safer Supply:

A recent podcast put out by the New York Times in September of 2022 highlighted an unusual, and some may even say radical, approach to addiction treatment being utilized in Vancouver. It is called Safer Supply, a method whereby black market drugs are replaced with pharmaceutical grade drugs and provided to addicts in specialized clinics. This method helps overcome multiple aspects of addiction. Fentanyl is known to be one hundred times stronger than morphine which makes it an easy substance to overdose on. Many black market drugs are laced or contaminated with fentanyl. So, for example, adderall that high schoolers may be buying off the streets, is not necessarily pure, it may have traces of fentanyl. Safer Supply eliminates the risk of more deadly substances being consumed by opioid addicts.

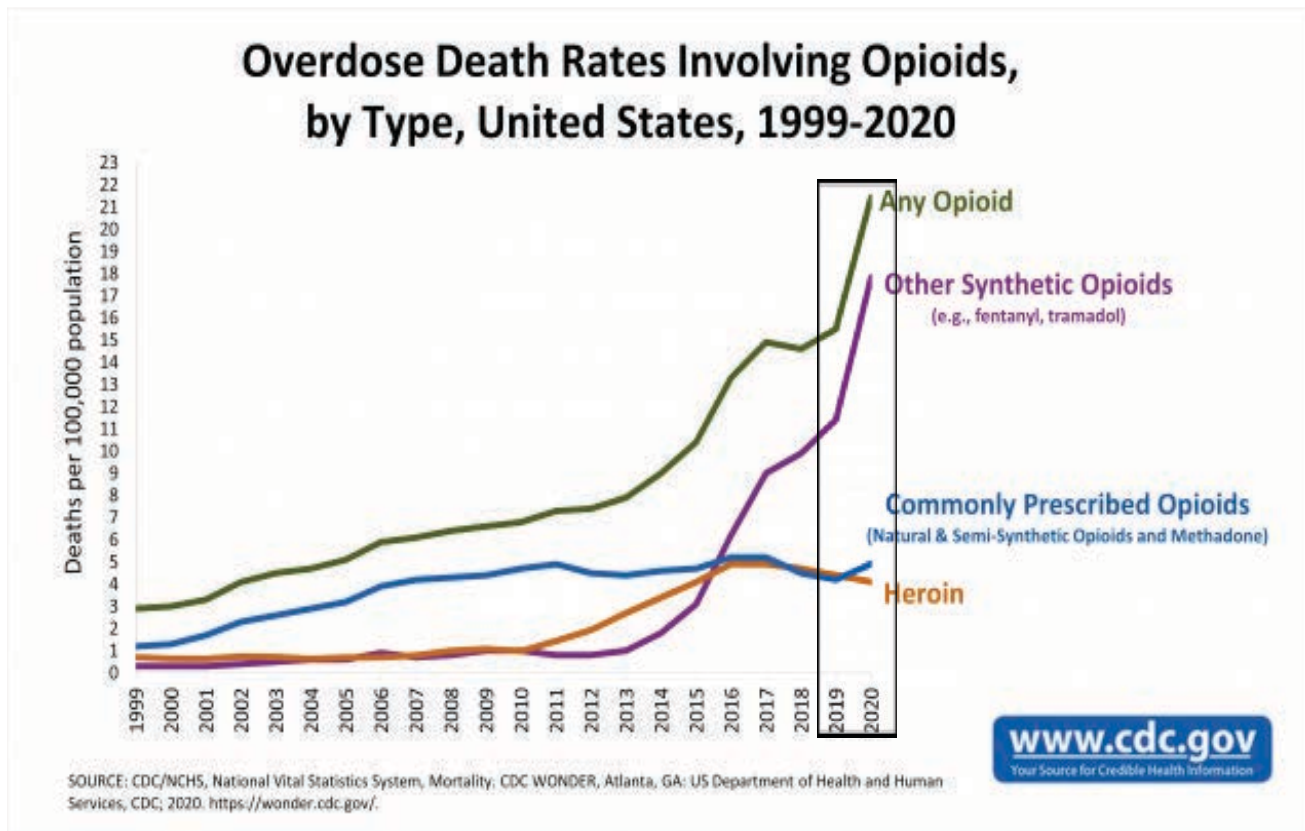
Additionally, Safer Supply ensures that users do not get dope-sick or experience intense cravings, according to Natalie Kitroeff from the New York Times. The hope is that these clinics can help stabilize patients and over time limit the amount of opioids consumed. Although this method may require patience, it provides a sustainable treatment path and can potentially gain high traction levels. Addicts truly suffer from a lack of stability in their lives, and by providing a treatment method which allows them to regain that control, it brings order to what is typically a very chaotic predicament, which is the first step towards recovery. However, there are multiple risks associated with Safer Supply. This includes the risk of these drugs ending up back on the street, normalization of opioid consumption, and disapproval by physicians.

Rehabilitation centers, inpatient and outpatient:

Rehabilitation centers are a popular choice by those experiencing opioid addiction, although they are on the more costly end of treatment options. Rehab can be done through inpatient experiences, with a typical program lasting about 30 days, or outpatient sessions with ongoing and consistent therapy. However, unfortunately, relapse rates are shown to be between 40% - 60%, a staggering statistic shown by the American Addiction Center. Evidently, the system needs fixing, but the most effective path to success is analysis of the root causes, one of which this essay focuses on.

## Chapter 6: Outbreak of COVID-19 Pandemic

Between the months of mid-March of 2020 to May 2020, there has been a 32 percent increase in fentanyl that was not physician prescribed, 20 percent increase in methamphetamine, and a 10 percent increase in cocaine usage according to data from the White House. To further the severity of these statistics, there has been a recorded 30 percent increase in drug related deaths between 2019 and 2020 as said by the NIH.



<https://www.cdc.gov/opioids/data/analysis-resources.html>

According to the graph above produced by the CDC, there has been a steady increase in opioid related deaths over the years. However, specifically between 2019 to 2020 there is a steep uptick in opioid related deaths, more so than any other year. This large jump in numbers is highlighted by the black box on the graph image. So what happened at the start of 2020 to disrupt this pattern? The outbreak of COVID-19.

The onset of COVID-19 saw major lifestyle changes due to the induced lockdown, shelter-in-place demands, and health concerns. The pandemic did not discriminate, it affected all people of all statuses. It did not matter if one was bi-racial, poor, wealthy, married, or single. COVID-19 was an equal opportunity destroyer, one may say.

However, the forced isolation did impact individuals differently on a personal level, some more severe than others, when it came to feelings of loneliness. Imagine a recent law school graduate working at a top law firm in January 2020. He grew up down south but relocated for college and has since been living in the heart of New York City. Since his teenage years he suffered from depression and anxiety, but it was under control and he would visit a local therapist bi-weekly. March 2020 arrives and he is forced out of the office and into his studio apartment where he is obligated to work his 15 hour days until further notice. With the snap of a finger, his social interactions have spiraled down to nothing, and he no longer has the ability to be seen by his therapist. All daily activities are restricted to a single room; work, sleep, eat, and the occasional FaceTime call to a friend. After a few weeks it became suffocating, and his anxiety was flaring up with no one to turn to. At dinner time he began drinking in order to take him through the remainder of the night. Soon, the drinking became excess, and reached a point where it was not doing the job, and so he turned to more potent substances, such as opioids.



This specific story may be fictional, but in reality, this occurred every single day, in an abundance of variations. There are two stages of the addiction development; *beginning* to take opioids, and *continuing* to take opioids. Each of these stages are linked to different challenges faced in the pandemic. One may have *started* to take opioids due to the high levels of isolation and depression, and one may have *continued* taking those opioids due to the lack of accountability. When a patient sees his therapist once a week, the therapist can see a lot more than the words being spoken to them. There is body language and physical appearance that gets taken into account. By a therapist not being able to sense these nuances, the patient no longer has someone who is directly accountable for their well-being, opening a window for them to think to themselves ‘well, no one will notice’.

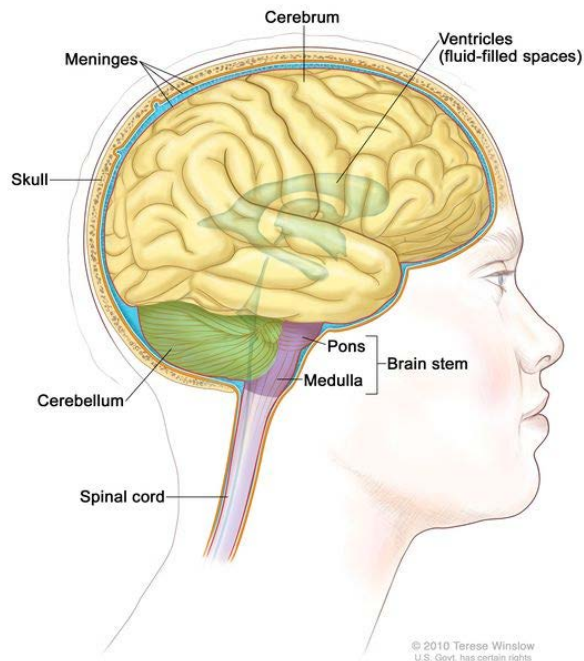
Aside for the obvious tragedies that the COVID-19 era inflicted onto humanity, the overwhelming feelings of loneliness and exploitation of vulnerability that many experienced, cannot be ignored. It was a specifically challenging period of time for those who previously struggled with opioid addiction, as the anxiety that came along with the pandemic increased triggers for relapse. A crucial component in the recovery process is the consistency in a person’s life. Opioid addiction wreaks havoc on someone’s life. Their personal relationships become strained at best, and destroyed at worst. Mental acuity is compromised, hindering work performance, and thus disrupting career growth. Many individuals who suffer from severe addiction will be financially compromised as well, sometimes to the extreme that a bank will foreclose their home. Therefore, a prime element of recovery will be to stabilize the uncertainty in that individual’s life. However, COVID-19 brought back to surface many of those uncertain

feelings in addition to disrupting the order and control they had in their routine, and so for many, this was an instigator for relapse.

Moreover, many recovering addicts benefit from camaraderie and joint social interactions in which they can empathize with each other during the recovery process. Many will choose to take advantage of group therapy sessions for that reason, as it gives them a safe outlet to discuss their circumstances with other like-minded people. Due to the outbreak of COVID-19, group therapy sessions were barred, with no immediate 'reopening date' in sight. With the closure of these gatherings, many felt alone in their suffering, resulting in emotional distress and perpetuating cases of relapse. Cases of relapse were certainly on the rise during this time, according to an article by the New York Times written by Emily Goldberg.

## Chapter 7: COVID-19 and Opioids; a recipe for lung damage

The combination of opioid abuse and the COVID-19 virus is potent to the lungs. Before diving into the analysis of how this plays out in reality, it is important to lay the groundwork for the biological ramifications of opioid consumption. See the image below for a diagram of the human brain anatomy.



<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/pons>

According to the NIH, excessive use of opioids has direct negative effects on the central nervous system, subsequently resulting in respiratory depression. The respiratory regulation site within the human body is the Pons and Medulla components of the brain. These organs

coordinate among themselves and in tandem with the spinal and cranial nerves to properly react to external stimuli such as hypoxemia, which is when the body is experiencing a decreased supply of oxygen. For example, if someone is running, the brain will inform the lungs to increase breath intake in order to compensate.

The brain has receptors called opioid receptors, which are used to accept biologically made opioids within our body. Two such receptors are called Mu (m) and delta (d), and when these receptors are stimulated, respiratory drive within the body is decreased. Therefore, if one consumes “man-made” opioids, these receptors are being stimulated outside the context of normal biological functions and excessively reducing function of the respiratory system. According to respiratory specialists Travis Yamanaka and Sadikot Ruxana:

“Although morphine is an important component of treatment of cardiogenic pulmonary oedema, non-cardiogenic pulmonary oedema (NCPE) is a recognized complication of opiate overdose first described by Osler in a case of morphine overdose. Usage of a variety of opioids including morphine, heroin and codeine have been associated with development of pulmonary oedema. Features of opioid-induced NCPE include acute onset of hypoxic respiratory failure due to shunting usually 12–24 h after use with a restrictive physiology... These agents may either contribute directly to pulmonary pathology, or may cause worsening mental status making aspiration more likely... While heroin appears to be the most studied, legal opiates used in a more controlled setting have also been implicated in NCPE. One patient following laparotomy developed bilateral pulmonary oedema twice during the same admission to the ICU, both times resolving with switch from morphine to other analgesics. Besides morphine, oral opioids including methadone and codeine may also cause oedema. Flack et al. reported a patient developing symptoms when naloxone was administered to reverse the effects of morphine in the setting of heart failure post-mitral valve replacement and coronary artery bypass. It was thought to be related to a massive sympathetic response making cardiogenic oedema a confounding diagnosis. Raijmakers reported a case of acute pulmonary oedema in a patient after using cocaine and heroin... Another case was that of a woman with codeine abuse who presented with altered mental status and was found to be in hypercapnic respiratory failure...”

To summarize, excessive opioid intake has clear and harmful effects on the respiratory system. Each body reacts differently, but effects will range from mild distress to severe respiratory damage. If this were to be paired with being infected by the COVID-19 virus, it can be a recipe for disaster.

The COVID-19 virus has the potential to result in pneumonia, bronchitis, Acute Respiratory Distress Syndrome, and Sepsis, all of which are major respiratory related illnesses, as stated by Panagis Galiatsatos of Johns Hopkins Medicine. “When the alveoli sacs fill with fluid, oxygen can’t get to your blood. If the air sacs continue to fill with fluid, that can lead to pneumonia. And too much mucus can lead to a persistent cough and bronchitis. People who get COVID-19 can experience a persistent cough for months. If pneumonia progresses and the air sacs fill with fluid, a person can develop an extremely dangerous condition called Acute Respiratory Distress Syndrome (ARDS). Someone with ARDS has so much difficulty breathing they need an external source of oxygen, such as a ventilator. ARDS can be fatal.”, according to reports put out by the state government of Oregon.

For an individual with an opioid addiction, that person’s lungs are already significantly weakened. Therefore, based on the above evidence, it is clear that if such a person were to be infected by COVID-19, the likelihood of developing severe, or even fatal, respiratory failure is significantly higher.

The two way street in this case is blatant. Not only did the COVID-19 pandemic exacerbate opioid addiction throughout society, but the opioid epidemic increased the severity of the virus in individuals for which it is applicable.

## **Chapter 8: An expert's perspective**

Dr. Greg Swartzentruber is a physician based out of Harrisburg, Pennsylvania, who currently practices emergency medicine with a specialty in toxicology. In addition, he is the medical director of multiple drug and alcohol rehabilitation centers, with extensive experience in treating opioid addiction and overdose. In an interview conducted with Dr. Swartzentruber, he shed light on various pressing issues faced in the opioid epidemic today, providing first-hand accounts of how the predicament has shifted particularly due to COVID-19.

According to Dr. Swartzentruber, due to COVID, individuals had decreased access to in-person treatment. Although many clinics shifted to telehealth, or virtual sessions, the loss of accountability significantly hindered the recovery process for many patients. Patients now had the ability to hide telling signs of relapse, reinforcing the idea that telehealth was less than ideal when it came to mental health care. Furthermore, Dr. Swartzentruber emphasized that forced social isolation played a role in exacerbating the opioid crisis. Interestingly, he says that unlike physical ailments, those who suffer from addiction are not likely to seek treatment on their own, and typically it is a friend or family member who notices the problem, and then recommends that the individual seek help. During COVID, when many were in isolation, the lack of social interaction and support led to an increase in addicts who were not going for help.

Dr. Swartzentruber recounts a story of a patient that he helped through addiction recovery. Although this is an account from one individual, it is a story that is widespread and applicable to many across the country. During a treatment session with a patient, Dr. Swartzentruber asked him how his addiction began. The patient responded that prior to COVID,

he had a typical “picture-perfect” life- he had a happy marriage, regular work routine, etc. However, once the pandemic began, he was stuck at home and spending an extraordinary amount of time with his wife; they got bored, and began drinking. Gradually, that drinking would take place earlier and earlier in the day. Eventually, it got to the point where he was drinking first thing in the morning. This is a prime example of a COVID isolation induced addiction; a devastating reality. While this particular case was referring to an alcohol addiction, the phenomenon applies to opioid addiction as well.

## **Chapter 9: Healthcare Coverage - Then and Now**

A large driving factor to the overall mental health crisis, and by extension, the opioid crisis is the lack of affordable health care in the United States. The onset of COVID-19 exposed the severity of this pressing issue and the gaps that exist in the system. Fortunately, many medicaid and medicare packages increased coverage for telehealth services during the COVID-19 pandemic, according to Heather Saunders. Contrary to other factors mentioned in this thesis, this aspect of the pandemic resulted in a positive outcome for those seeking mental health services.

Prior to the onset of the pandemic, many individuals throughout the US did not receive adequate insurance coverage, especially those seeking mental health services. Even government subsidized programs such as medicaid and medicare did not cover such services, and those enrolled in these programs typically cannot afford to pay out-of-pocket to see a therapist or check into a rehabilitation center. This serves as a major contributing factor to why addiction has a higher prevalence among lower income communities, and especially the homeless community, as said by experts at Harvard. Income level is a component of the Social Determinants of Health, which is defined as “the conditions in which people are born, grow, live, work, and age. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels”, according to the World Health Organization. The lack of health services that affect people in this bracket is a barrier for addiction recovery, or even any preventative services.

Moreover, many commercial health insurance plans do not cover treatments for, let’s say, those who are attempting to quit smoking marijuana, a gateway drug to more lethal opioids. If



the system does not provide options for nipping addiction in the bud, it is no surprise that opioid addiction would explode. The infrastructure to reign in the opioid epidemic was simply not in place. That is, before telehealth came into the picture, with the outbreak of COVID-19.

Commercial payers such as Blue Cross Blue Shield and CVS's Aetna have decided to take advantage of the growing telehealth trends across the country and have expanded their telehealth coverage. Not only does this include direct-to-consumer packages, but B2B (business-to-business) as well, as they provide offerings to employers which are seeing radical growth in the work-from-home model since COVID. With the increasing need to account for employees who are spending copious amounts of time at home, companies seek to insure the health of these employees, and thus are investing in on-demand virtual telehealth services. According to mHealth Intelligence, there has been a 7,500 percent increase in claims related to telehealth in the year of 2022. Specifically, in tandem with primary care, behavioral health services account for over 92 percent of these telehealth claims, according to Anuja Vaidya. With behavioral health placing in the top two most utilized telehealth services, it is evident that such services have seen a staggering increase since the outbreak of COVID-19. According to the 2020 National Survey on Drug Use and Health, in the span of two months, from February 2020 to April 2020, telehealth visits for drug abuse treatment increased from .3% to 7.7%, an astonishing 2,000% increase. The time between February and April are crucial months on the calendar, as they mark the onset of COVID-19.

## **Chapter 10: Case Study - New York City**

New York City, the city that never sleeps, is a densely populated area, and considered the ultimate melting pot of diversity. It is home to prestigious universities, is the global financial hub, has one of the highest valued real-estate markets in the country, and is a community of flourishing creativity and entrepreneurial spirit. However, as is the case in many large cities, there are high levels of crime, homelessness, and unfortunately, addiction.

According to the NYC.gov, someone dies from a drug overdose every three hours in New York City, and more people in the state die from overdose than car accidents, homicides and suicides combined. 88% of these drug overdoses involve opioids.

One of the worst areas in Manhattan to witness the excess drug intake is near Penn Station, the travel hub for many New Yorkers. The streets surrounding the area, such as 34th Street between the blocks of 7th and 8th Avenues are said to be saturated with people sitting on the sidewalks and, in broad daylight, shooting up, with no regard for police presence or the bustle of normal life around them. Two New York citizens, Kerry J. Byrne and Dean Balsamini, wrote an article in the New York Post describing the horrific reality that exists on the streets.



<https://nypost.com/2021/09/25/nyc-drug-users-shoot-up-in-broad-daylight-in-midtown/>

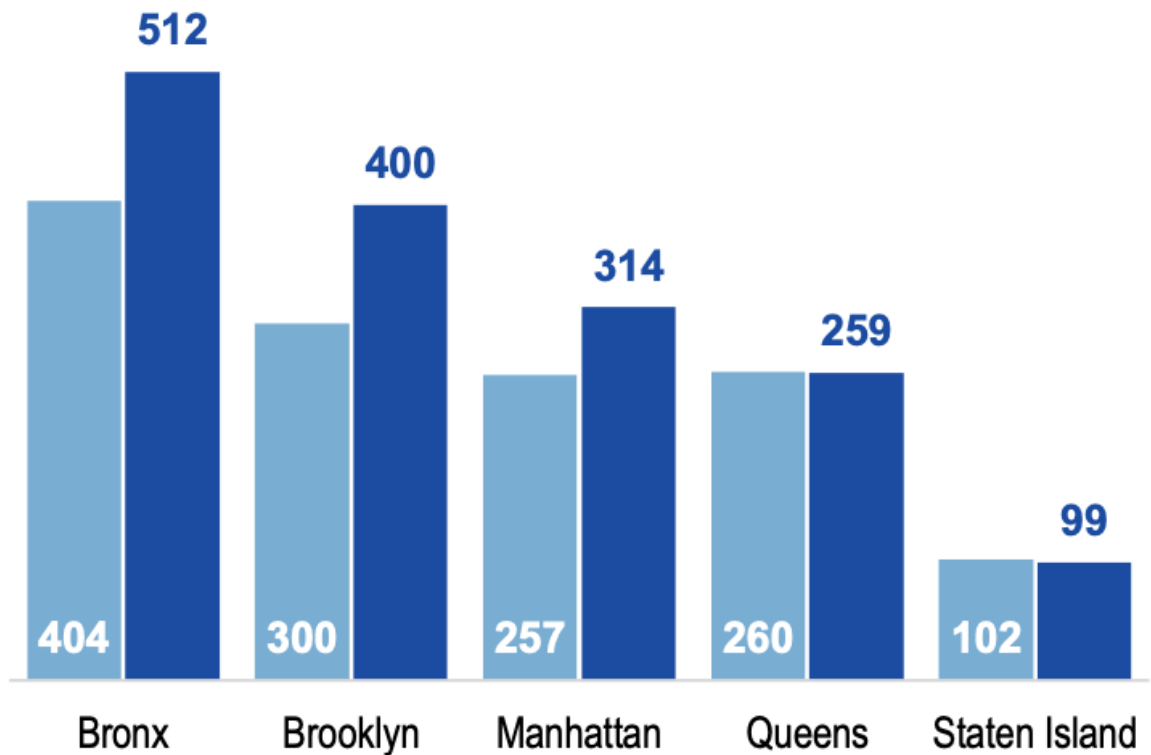
The photo above from the New York Post article provides a visual image of the activities that take place daily in the midtown area. While the increase of opioid use has skyrocketed due to the mental health crises and other contributors outlined in this thesis, the lack of attempt to remove addicts from the street stems from political circumstances. The following was stated by the New York Post.

*“Under state law, possessing needles or small amounts of heroin, or injecting drugs, are non-bail offenses. So even if arrested, addicts are usually right back on the street and unlikely to face prosecution. Gomez says cops face needless personal risks, too, without the support of political leaders. These risks include the threat of being stabbed by emotionally disturbed, needle-wielding junkies, possibly infected with HIV, and the fact that NYC this year became the first municipality in the nation to end qualified immunity*

*for cops. If an arrest with a violent drug-addled person turns bad, Gomez said, the cop “could lose their pension, their job, their home or even their freedom. It’s just not worth it.” As a result, “New York City has become the city of The Walking Dead,” said Michael Alcazar, an adjunct professor at John Jay College of Criminal Justice and former NYPD detective.”*

Additionally, according to the data graph below put out by the NYC Government, there has been a significant increase in overdose deaths between 2020 and 2021. This is reason for serious concern, as the growing numbers point to a systemic and consistent issue in New York City. The numbers here are broken down for each of the five boroughs in New York City; Bronx, Brooklyn, Manhattan, Queens, and Staten Island. The Bronx comes in first place, with a leading number of deaths due to overdose, with a whopping 512 individuals dying in 2021. Moreover, the neighborhood of Harlem, which sits at the top end of Manhattan, is known to have tremendous overdose rates. Both Harlem and the Bronx are locations known for high levels of crime, congested housing, and poverty. These social determinants of health hugely impact the severity of opioid addiction in these areas. Lack of access to resources such as affordable healthcare and mental health counseling are big contributing factors. Many of those who live in lower income areas tend to get caught up with dealing drugs on the street in order to score some extra cash.

## Number of confirmed overdose deaths from January to September in 2020 and 2021, by borough of residence



<https://www.nyc.gov/assets/doh/downloads/pdf/basas/provisional-overdose-report-third-quarter-2021.pdf>

### NYC preventative programs:

As a city filled with immense resources, there are some governmental programs and organizations that were set in place in order to assist in reducing the high levels of opioid abuse in New York City. One such program is named *HealingNYC*, whose goal is to provide support in connecting addicts to the proper treatments, raise awareness, and gain a community wide push towards a cleaner society. In addition, they provide Narcan, an emergency overdose treatment,

across the city, in order to increase access, and prevent so many unnecessary and tragic deaths. In 2018, the New York City government announced a \$22 Billion additional investment to combat opioid addiction in the city, and with the combined resources of the *HealingNYC*, has the potential to thwart 400 deaths.

## Chapter 11: Summary and Conclusion

The story of the opioid epidemic is a long and tragic one. On a macro-scale, it has been a devastation to society as a whole, plaguing the streets of major cities, and resulting in a major public health crisis. On a micro-scale, the opioid crisis has ripped apart families, destroyed careers, shattered goals and aspirations, and even killed.

The growth of opioid addiction sky-rocketed with the introduction of Oxycontin by Purdue Pharma. It was then further perpetuated by McKinsey's drive to increase the drug's sales. After that, the rest is history, with multiple strings controlling the puppet which is the opioid crisis. These additional facets include social determinants of health, such as income level, socioeconomic status, race, etc. The rise in mental health concerns and access to healthcare coverage also contribute to the increase in opioid addiction.

However, there recently has been a major event which had the capacity to significantly move the needle in opioid use. This was the outbreak of COVID-19. The pandemic introduced new stimulants to fuel the opioid crisis in addition to exacerbating the triggers that have already been in place. The 30 percent increase in drug-related deaths between 2019 and 2020 is blatant proof of the severity of the impact of the COVID pandemic on opioid abuse.

The goal of this paper was to shed light on the growth of the opioid epidemic within the framework of COVID-19, as well as connect the dots to other social, economic, and health related factors. It is the hope that, together with existing organizations and treatment measures, the trends seen recently in opioid abuse have hit the ceiling and begin to decrease, resulting in a cleaner and healthier country for the future.

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