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Opioids: The Silent Painkillers of the 21st Century

Alfonso R. Ibanez III
aibanez1@poets.whittier.edu

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OPIOIDS: The Silent (Pain) Killers of the 21st Century
An Exploration of American Addiction & The Opioid Epidemic within the US

Alfonso R. Ibanez III

Whittier Scholars Program, Whittier College

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To **Jasmine Gonzales**... a dear friend I tragically lost due to substance abuse in 2021.

ALFONSO R. IBANEZ III

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PREFACE

Who is this research paper for?

This research paper is not solely meant for college academics to add to the tedious job of reading and grading another senior symposium. Instead, I hope this reading finds numerous individuals inside and outside the college institution. It's important to spread awareness to the general public about opioid addiction, pharmaceutical corruption, and the overall health (well-being) of individuals who live in present day American society.

How is this paper organized ? How should I read it?

This paper is organized into numerous sections detailing the history and mass production of pharmaceutical opioids within the United States. The author then focuses on the drug OxyContin for its role within the opioid epidemic and gives the reader a close description of its manufacturer's corrupted tactics. Some sections are broken down into more subdivision portions to help the reader understand the information in further depth. The full contents can be seen on page four. The content page also acts as a mini summary of the entire paper. **Key topics include:**

The US Timeline of Opioid Abuse, Purdue Pharma, The Brief History of OxyContin, The Involvement of the multi-billion dollar family-the Sacklers, Pharmaceutical Corruption, Looking at the individual level of the addiction problem, How we can help others who are substance abusing, reaching a holistic approach, Programs within the US that can help alleviate the problem & What the US Nation can do to halt this epidemic before it gets worse.

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1. Introduction:

When viewing American culture in the present-day context, we can see that the epidemic of opioid addiction and fatal overdose has risen dramatically over the past two decades. In further research on the rapid incline of this nationwide trend, this paper will kindly discuss the numerous contributors to why these factors have taken arise. Unfortunately, more than ever in American history millions of US citizens are becoming addicted to numbing-like substances we often refer to as prescribed painkillers. As an effect of the high rise of opioid usage in the US, there often comes mass addiction and a higher chance of accidentally overdosing. The Centers for Disease Control and Prevention reports that “Provisional data from CDC’s National Center for Health Statistics indicate that there were an estimated 100,306 drug overdose deaths in the United States during the 12-month period ending in April 2021, an increase of 28.5% from the 78,056 deaths during the same period the year before” (CDC, 2021). This horrific statistic means that for the first time in US records, the death toll due to overdoses has topped 100,000 annually. Given this devastating statistic to reflect, questions of concern come to mind. For starters, how did American addiction reach an all-time high? Has consumerism within the pharmaceutical industry helped lead to this epidemic? Or perhaps millions of Americans suffering from some sort of physical or emotional pain that they look to substance abuse to help alleviate their suffering? All these questions illuminate the surface of American minds, yet not too many people discuss the reality of why US societal norms have made this opioid epidemic seem rather common. The staggering number of deaths that have taken place due to substance abuse should be nothing close to normalcy. Although, it is important to acknowledge that prescribed opioids can be diversely beneficial in the medical field for helping patients treat severe pain such as terminally-ill cancer, gunshot wounds, or any other severe injuries that may lead an individual to the verge of their deathbeds. Unfortunately, these same highly recommended painkillers we

commonly use in acts of agony treatment, are in addition the same drugs that are highly addictive to people who are in pain or not. Unless we want our nation to continue this path of self-destruction at the hands of prescribed painkillers, we need to address the ugly monster that resides within our medicine cabinet. The importance of this paper is to allow the readers a close description of why America has such an addictive grip on opioid painkillers. In reading this research paper, the reader will learn that there are a multitude of factors that have helped contribute to the overall storm of the opioid epidemic. The author addresses and investigates the main thesis question: *What are the major key contributors that have led to this opioid epidemic at the tide of the 21st century?*

1.1 Addiction Has Struck the Land of the Free: National Trends

To truly understand how the opioid epidemic has progressed within the first two decades of the 21st century we must look at the growing trend spanning from 1999 to the most recent years with substantial data. When surveying this trend, the CDC states that “More than 932,000 people have died since 1999 from a drug overdose. Overdose deaths involving opioids, including prescription opioids, heroin, and synthetic opioids (like fentanyl), have increased by more than eight times since 1999”. According to the CDC’s data figure titled National Drug-Involved Overdose Deaths (numbering among all ages, by gender, 1999-2020) the data chart shows that “roughly 15,000 people died from a drug-involved overdose in the year 1999 and nearly 92,000 people died in 2020” (CDC, 2021). When closely viewing the steady incline of opioid-related overdose during the past two decades the National Institutes of Health explains that “Opioid-involved overdose deaths rose from 21,088 in 2010 to 47,600 in 2017 and remained steady in 2018 with 46,802 deaths. This was followed by a significant increase through 2020 to 68,630 overdose” (NIH, 2022). As previously mentioned in the grim year of 2020, a total of

“91,799 drug overdose deaths occurred in the United States, and nearly 75% of drug overdose deaths in 2020 involved an opioid. That 75% percent means overdoses including opioids killed nearly 69,000 people in 2020 and over 82% of those deaths involved synthetic opioids” as reported by the CDC (CDC, 2021).

However, in November of 2021, CNN Health reported that for the first time in American history, drug overdose deaths topped 100,000 annually, the high death toll was mostly attributed “to the Covid-19 pandemic and the high rise of fentanyl” (McPhillips, 2021). One might wonder how the Covid-19 pandemic can cause an increase in opioid overdoses. There are two significant hypotheses that make sense when examining the data. The first explanation is that while in self-isolation through the covid outbreak, thousands of addicted Americans wouldn't be able to attend in-person support when trying to recover from their addiction. Secondly, more people were using and abusing substances to cope with the daily isolation, boredom, and emotional pain they felt during the Covid lockdown. The combination of both factors makes sense as to why the total death toll of drug overdose would increase from 91,799 in 2020 to reach 100,306 in the following year 2021. That provisional data on drug overdose deaths captures those occurring between May 2020 through April 2021. In that year, more than 100,306 people died from a drug overdose. In comparison to the overdose death toll, Covid-19 killed about 509,000 people in that same timeframe according to data from Johns Hopkins University (McPhillips, 2021). That means nearly one-fifth as many people who tragically died from Covid-19 from the span of May 2020 to April 2021, were tragically killed due to drug overdose. That's an astonishing statistic to bear with when one truly sits down to try to comprehend.

While the beginning portion of this paper seems rather lengthy in nation statistics, it's important to lay down the framework of American opioid trends and annual fatality rates to

further educate fellow Americans. The data is useful evidence that reflects the past two decades, and it also helps health educators better understand where the US opioid epidemic still stands today. The most recent data from the National Center for Drug Abuse Statistics states that “the opioid epidemic is now considered a public health emergency, with 136 American deaths per day and climbing” (NCDAS, 2021). The statistics also indicate that “opioids are a factor in 7 out of every 10 overdose deaths (72% to be exact)”. The additional remaining 28% consisted of cocaine, methadone & psychostimulants as a result of an overdose. In conjunction with the opioid crisis, the NCDAS organization further claims “that drug overdoses have killed almost a million people since 1999 and drug overdose deaths are up 30% year-over-year” (NCDAS, 2021). To think that within the past two decades, nearly a million Americans have died mostly due to opioid-related drug overdose is a terrifying defeat to our nation's young identity. The citizens who roam the land of the free are sadly being enslaved by gripping addiction and or worse are being slaughtered at the hands of a drug overdose. Thus, “Current national trends indicate that each year more people die of overdoses—the majority of which involve opioid drugs—than died in the entirety of the Vietnam War, the Korean War, or any armed conflict since the end of World War II” (Rudd et al., 2016). This epidemic should not only be considered a public health emergency but instead, it should be viewed as an act of civil war. Contrary to popular belief, the war on drugs hadn't taken full effect at the hands of drug trafficking or smugglers from nearby-foreign countries. Instead, the war on drugs has taken root within the US borders at the hands of domestic pharmaceutical companies.

2. *First off: What are opioids?*

To understand the overall topic of this essay more confidently, we must first discuss the basic question many Americans don't truly know the answer to. What is an opioid? And what makes it different in comparison to any other deadly drug? Opioids are substances that are derived from the plant named opium. The plant's sap, which is commonly referred to as *poppy*, has been very beneficial when used as a treatment for pain for over a millennium (Harvard Online, 2018). The opium poppy has also been used for spiritual purposes and recreational purposes due to its effective pain relief. Around two centuries ago chemists figured out how to isolate the plant sap from the opium poppy to get what is commonly known as morphine. "It wasn't until the 19th century that one of its chemical compounds, morphine, was identified and isolated for medical use" (Davis, 2020). Substances that are made directly from the poppy are referred to as *opiates*. Whether synthetic or derived from the opium poppy, these compounds are collectively known as opioids. There are two classes of opioids that are commonly labeled as strong and weak. Strong opioids include- fentanyl, methadone, morphine, and oxycodone. While weak opioids include codeine, dihydrocodeine, and tramadol (Demystifying Medicine, 2016). Despite these groups of opioids being classified as *weak*, these drugs are still clearly effective for pain management and pack a potent punch. Perhaps, you have heard of some of these substances before, but what you probably didn't know was the difference in overall strength these drugs hold compared to their opium counterparts. Strong opioids such as fentanyl and morphine can be up to ten times stronger than the weakest opioid and thus more effective for severe pain (Demystifying Medicine, 2016). We use the assistance of opioids to serve two types of pain; the first is neuropathic pain which is a pain to the body that is caused by nerve injuries such as trauma, cancer, or neurological diseases such as Parkinson's or Alzheimer's disease. The second type of

pain is labeled as nociceptive pain which is caused by tissue damage and inflammation such as toothaches, and rheumatoid arthritis (Demystifying Medicine, 2016). Nociceptive pain is less severe and painful in correlation to neuropathic pain and when dealt with, many individuals often take Ibuprofen or Advil to alleviate such temporary pain. Opioids were designed to treat neuropathic pain (the worst severe pain) patients because of their strong potency and effectiveness in numbing their troubling pain. When opioids are taken to relieve pain the length of the effect varies depending on the type of opioid taken and the history of opioid use (Davis, 2020). Typically a single dose can provide pain relief for about 4-5 hours. A single dose for chronic pain relief is an average of 200 mg per day. Some adverse events & side effects can occur with an increasing dosage or with daily doses of 300 mg per day or more. These side effects include constipation, decreased breathing, difficulty concentrating, vomiting, sweating, and loss of appetite just to name a few (Davis, 2020). Additionally, opioid users can create a tolerance to their medications and in doing so they often need to up their dosage to get the same pain relief and sensation they once received previously.

2.1 How do Painkillers Affect the Brain?

As I mentioned, the usage of opioid substances produces pain-relieving effects. This includes pain suppression, relaxation, drowsiness, and symptoms of euphoria. When used these drugs stimulate reward centers in the brain which release dopamine neurons to the body and create feelings of pleasure. The intensity and speed of the effects depend on how these drugs are taken. When taken orally the drugs gradually creep on an individual and are felt in about 10-20 minutes. However, if crushed into powder form and snorted or if injected into one's vein the effects are more intense and rapidly felt within under a minute. Both strong and weak opioid-based painkillers affect the brain similarly. The brain is full of receptors that receive

signals from the entirety of one's body. Opioids function as painkillers because they are able to block pain messages from being sent to the brain by attaching themselves to the brain receptors. Opioid drugs bind much more strongly with our pain receptors and for much longer than endorphins can. So opioid drugs can manage much more severe pain than endorphins can (Davis, 2020). In simpler terms, opioids turn off the pain signals to the brain so individuals can go on with their day without feelings of discomfort. In addition to turning off pain signals, opioids also disburse large amounts of dopamine to be released into the pleasure centers of one's brain.

2.2 Is There a Strong Link Between Opioids & Addiction?

Yes, there is a significant link between opioids and addiction. Despite the fact that “opioids are very effective painkillers, they are also highly addictive.” as noted by Mike Davis (Davis, 2020). Opioids are highly addictive, due to the large factor in which I have mentioned above that these drugs activate powerful reward centers in the brain. Opioids trigger the release of endorphins (our brain's feel-good neurotransmitters). The release of endorphins muddles people's perception of pain and boosts feelings of pleasure, creating a temporary but powerful sense of euphoria (McGhee, 2021). The strong link between opioids and addiction is made possible due to individuals' mixed interpretations of good and unpleasant feelings being fluctuated by the opioid receptors in the brain's reward center. Narrator Mike Davis of *What Causes Opioid Addiction, and Why is it So Tough to Combat?* claims “Opioid receptors also influence everything from mood to normal bodily functions. With these functions as well, opioids' binding strength and durability mean their effects are more pronounced and widespread than those of the body's natural signaling molecules” (Davis, 2020). The opioid receptors influence our everyday bodily functions such as breathing, heart rate, digestion, fatigue, blood pressure, and mood. When binding to the receptors the drugs also release dopamine- which gives

people a sense of euphoria or an overall opioid high. The Ted-Ed informational video expresses that “at high doses opioids can decrease heart and breathing rates to dangerous levels, causing loss of consciousness and even death” (Davis, 2020). As time goes on, the body can start to build up tolerance towards opioids. In this case, the receptors may become less responsive to the opioids. So for the individual to experience the same release of dopamine and resulting mood effects as before they must take larger doses. This cycle of upping the dosage to suppress the tolerance threshold to hopefully receive feelings of pleasure can lead to physical dependence, addiction, and the increase the risk for overdose.

3. US Timeline with Opioids

Opioids have a long and complex history in the United States. In the mid-1800s the United States would begin to experience its first opioid crisis due to easy accessibility. Soldiers fighting in the American civil war were beginning to get addicted to the morphine they were being prescribed (Harvard Online, 2018). During the mid-19th century, opium was widely available in the US and was used for a variety of medical purposes, including pain relief and treating diseases like tuberculosis. At the same time, there were plenty of middle-class, middle-aged housewives who were also becoming addicted to Morphine (Harvard Online, 2018). In the late 19th and early 20th centuries, morphine was widely used by doctors to treat a variety of medical conditions, particularly pain. Morphine was often used as a main component of medical practice and was frequently administered to patients through injections. Morphine was considered a safe and effective pain reliever, and doctors often prescribed it extensively for a wide range of conditions, including chronic pain, post-surgical pain, and pain associated with cancer or other serious illnesses. In addition, morphine was used as a treatment for a variety of other medical conditions, including diarrhea, cough, and insomnia (Harvard Online, 2018). However, as the use of morphine became more widespread, concerns began to emerge about the

risks of addiction, overdose, and other negative health outcomes. These concerns were particularly fierce during the period of the civil war when many soldiers became addicted to morphine after being given the drugs as a treatment for injuries sustained on the battlefield. Numerous American health officials were becoming aware of the risks and dangers of products containing morphine.

Amid the Morphine epidemic, health officials vowed to find a healthier alternative for their patients who were in *severe* pain. Around the same time period, the Bayer Corporation (one of the largest pharmaceutical companies in the world: Est. 1863) introduced a new opioid called *Heroin* to the market. The Bayer Corporation propagandized Heroin as being a safer alternative than Morphine. According to Harvard's Online informational video titled "The History of Opioid Use in America," the well-known institution states that "Heroin was promoted to having a lower risk of overdose deaths" which the Bayer company had concluded within their studies of 'classified research. To this day no one knows if the Bayer company used this gimmick as a part of a marketing strategy, however, health officials do know that this statement is false. Heroin is not safer than morphine. Shortly after heroin was released onto the market, the US began seeing a new type of opioid addiction problem. Young Americans, particularly in urban areas, begin using heroin non-medically. They were children of white immigrants (Italian, Irish & Jewish) who were "purchasing pharmaceutical-grade heroin tablets, crushing them and snorting them" (Harvard Online, 2018). White European immigrants weren't the only immigrants abusing morphine at their exposal, during this time period in the US there was a large array of Chinese immigrants who favored smoking opium. By the late 19th century, opium had become a popular recreational drug, especially among immigrants in the western United States. This led to the passage of the first federal law regulating the importation and use of opium in 1909. The Opium Exclusion Act of 1909 only prohibited smoking opium, so ironically Americans could still easily get their hands on medical opium to stock their medicine cabinets (Gieringer, 2009).

In the early 20th century, the pharmaceutical industry began developing a stew of synthetic opioids like morphine, oxycodone, hydrocodone, and fentanyl. These drugs were

marketed as safe and effective pain relievers and became widely prescribed by American doctors (Davis, 2020). By the 1980s a new movement in the medical profession would take place.

Scholars often refer to this period as 'hospice' in relation to the fact the hospice sector would take care of terminally ill and end-of-life patients. Around this time the pharmaceutical company named Purdue Pharma would release a morphine-based pill called MS Contin, which was solely produced to help cancer patients sleep during their hospice care (Altraide, 2019). During this time, there wasn't yet an addiction issue because patients would soon pass away after taking their pain medications. However, the Purdue company would then take this hospice prescription one step further by releasing MS Contin for general use. The substance MS Contin would sadly become the precursor drug that helped kick-start an epidemic. At this time in the United States MS Contin would soon become the standardized pain medication amongst cancer patients. The 1980s would find itself as a pivotal period between the perception of opioids and addiction due to its so-called link being labeled as *minimal* and *previously overstated* (Altraide, 2019).

Numerous articles would be written with this false narrative about the "low-risk" link between opioids and addiction. This incorrect information spread like wildfire. The New England Journal of Medicine published a letter stating that the "*risk of addiction was less than 1%*." (Stanbrook, 2017). Later on, the author would retract this initial letter but the false statistic would remain. Over 600 medical journals would cite & adopt this misinformation as being true evidence that there was minimal linkage between opioids and addiction. In the TED-Ed video titled "What Causes Opioid Addiction, and Why is it so Tough to Combat?" The narrator claims that "In the 1980s and 90s, pharmaceutical companies began to market opioid painkillers aggressively, actively downplaying their addictive potential to both the medical community and the public" (Davis, 2020).

Throughout the 1990s, there was a significant increase in the prescribing of opioids for chronic pain, leading to a widespread opioid epidemic. This was largely due to the aggressive marketing and promotion of opioid painkillers by pharmaceutical companies. By the late 1990s, it became clear that drug companies were influencing what was being written in medical journals

(Abramson, 2021). Bribery was used on all fronts to help influence what drugs were being put out into the marketplace, and which pharmaceutical companies were going to be financially well off due to crafty propaganda. By the early 2000s, it became clear that the overuse of prescription opioids was leading to addiction, overdose, and other serious health problems. In response, federal and state governments began taking action to curb the opioid epidemic, including restricting access to prescription opioids and expanding access to addiction treatments. There was good reasoning as to why the federal government needed to intervene with the opioid issue was because laws vary from state to state. US states like Florida had no collective databases on how many individuals were being prescribed opioid medications and how much each individual was given. So that meant people were able to go doctor shopping from pill-mill to pill-mill (an abbreviation for pain clinics that offer prescription medications to patients in exchange for bribery) to abundantly collect painkillers for personal consumption or to opt into reselling them for 20 times the profit in different states (Van Zeller, 2023). If you're interested in how the process would take place I recommend watching the documentary titled 'OxyContin Express' by the Vanguard network. The documentary does a good job of capturing how easily accessible it was to obtain opioid painkillers in the state of Florida during the early 2000s due to there being no regulatory database. Small clinics in the sunshine state of Florida were making millions of dollars in profit due to the easy accessibility of providing pills and exporting them out of the state. Whatever the case may be, opioid accessibility and addiction would soon spread into the fabric of American ideology. Without a doubt, this system of not having significant databases in certain US states would just be another tactic pharmaceutical companies would sneakily use to continue pumping pills to US citizens.

In the 2010s the opioid epidemic in the United States reached a crisis point as the number of deaths related to opioid painkillers skyrocketed. As the crisis continued to unfold several different factors contributed to the problem and made it more difficult to address. One major issue was the over-prescription of opioid painkillers by doctors, which led to a significant increase in the number of people who became addicted to these drugs. In many cases, patients

who are prescribed opioids for legitimate medical reasons became dependent on the drugs and were unable to stop using them. At the same time, the rise of illicit opioids, such as heroin and fentanyl, made the epidemic even more deadly (NIDA, 2021). Many people who became addicted to prescription painkillers turned to these more dangerous drugs as their tolerance increased and they were no longer able to obtain the prescription drugs they needed. According to the New York Times article “The Numbers Behind America’s Heroin Epidemic” written back in October 2015, it states “75% of heroin addicts used prescription opioids before turning to Heroin” (NYT, 2015). The opioid epidemic also highlighted many systematic issues within the healthcare system and broader society, including disparities in access to healthcare, the influence of the pharmaceutical industry on medical practice, and the stigmatization of addiction and mental health issues (NIDA, 2021). In response to the opioid epidemic, several different strategies were employed, including the increase in education, awareness campaigns, changes to prescription guidelines and regulations, and the expansion of access to addiction treatment and harm reduction services. While progress has been made in addressing the crisis, it remains an ongoing public health issue and a major challenge for communities across the United States.

While the opioid crisis in the US is not a new issue, the current epidemic is distinguished by the sheer scale and severity of the problem. The availability of data and statistics has allowed us to better understand the impact of the crisis, and the extent of its reach has helped to raise awareness and motivate action. The medical community's historical reliance on opioids as a primary treatment for pain has contributed to this problem, but efforts to address the issue have led to increased caution and awareness of the potential risk associated with opioids. Despite ongoing efforts to address the opioid epidemic, it remains a significant public health issue in the US and the long-term impacts of the crisis are still being felt today. The increased attention and focus on the issue has helped lead to important changes in the medical practice, and increased awareness of the need for prevention and treatment in harm reduction strategies (CDC, 2022). In conclusion to this paragraph, it’s poignant to say that the United States of America has always suffered from some sort of opioid crisis within its short span of existence. What happens next to

alleviate this ongoing epidemic issue is very crucial to the story of American addiction and how the US nation combats devastating trends. With that being said, another major component of the story of the opioid epidemic is the rise of OxyContin usage in the first decades of the twenty-first century.

3.1 What Makes OxyContin Different Than Other Opioid Prescriptions

During the 1990s Purdue Pharma realized they needed to do something about their most profitable medication MS Contin, due to its patent expiring by the end of the decade. The company decided to move into making a new drug called OxyContin, which had the active ingredient Oxycodone. Oxycodone would be replacing the morphine component in MS Contin due to its bad stigmatization of morphine being labeled as an end-of-life medication. (Altraide, 2019). In the 1990s doctors falsely believed Oxycodone was weaker than morphine. However, the truth is the active ingredient in OxyContin (Oxycodone) happens to be 50 times more potent than morphine (Altraide, 2019). In an unpublished study by Purdue in 1999 the company found that the addiction rate was at *13% and not 1%* as previously mentioned by The New England Journal of Medicine. In addition, “the FDA then approved Purdue's claim that OxyContin’s delayed absorption would reduce the probability of abuse. Ironically, the FDA examiner who was involved with the approval of this claim left the FDA shortly and within two years had accepted a role at Purdue.” baffled by narrator Altraide (Altraide, 2019). Quite an odd job replacement screams corruption in the face of the American public eye.

The painkiller OxyContin was released in 1996 by Purdue Pharma, a now multi-billion dollar company that is solely owned by one individual family. Since then the drug has generated roughly \$35 billion dollars in income (Altraide, 2019). Almost immediately after the release of OxyContin, the cases of addiction became apparent but rather than admitting that their drug was

addictive, Purdue simply blamed the American people for not taking the drug as directed. However, the Purdue company knew exactly what they were doing by slowly dispersing their painkillers to American communities. The marketing of OxyContin started in 1995, the company focused on the same demographic of patients that once used MS Contin... cancer patients. Purdue Pharma began their targeted advertisements on health professionals, at the same time sales representatives were encouraged to lie about the addictive properties of OxyContin in comparison to other opioid substances. Occasionally throughout the late 1990s, health professionals would advertise on television, in magazines, and in other news outlets, that this was the safest painkiller on the market. They continued to claim the false narrative that OxyContin was only *1% addictive*. OxyContin quickly became a popular drug among doctors and patients, and its sales grew rapidly in the years following its release. OxyContin differs from other opioids in a few ways. For starters, it's a controlled-release medication, which means that it is designed to release Oxycodone slowly over a period of 12 hours. This makes it different from other opioids, such as immediate-release oxycodone, which are designed to provide more immediate pain relief (Davis, 2020). Another component of what makes OxyContin increasingly uncommon is its high potency. OxyContin is a highly potent opioid, which means that a relatively small amount of the drug can be effective at relieving pain. In addition, OxyContin has a high potential for abuse due to its strong potency and controlled-release formulation. In the past, some people have abused the drug by crushing or breaking the tablets to release the entire dose at once, which can cause a potentially fatal overdose. It's worth noting that some individuals tend to crush the pills and snort or inject the drug to achieve a more powerful high (NIDA, 2014). Finally, OxyContin has a history of controversy due to concerns about its potential for abuse and the role that it has played in the opioid epidemic in the United States. In recent years,

there have been efforts to reduce the prescribing of OxyContin and other opioids and to promote the use of alternative pain management strategies (FDA, 2021).

When Purdue Pharma introduced OxyContin in 1996, it was aggressively marketed and highly promoted. Sales grew from \$48 million in 1996 to almost \$1.1 billion in 2000. The business began to boom, in the five years between 1996 and 2001 in the United States, OxyContin grew from 300,000 prescriptions to almost 6 million prescriptions (Altraide, 2019). The high availability of OxyContin correlated with increased abuse, diversion, and addiction, and by 2004 OxyContin had become a leading drug of abuse in the United States (Van Zee, 2009). This data comes from The Journal of Pain's original report titled "Trends in Abuse of OxyContin and Other Opioid Analgesics in the United States: 2002-2004" (Cicero, Inciardi, & Muñoz, 2005). However, it has since become clear that the aggressive marketing and promotion of OxyContin by its manufacturer Purdue Pharma has helped to fuel a wave of overprescribing and misuse of the drug. NIDA explains "OxyContin is highly addictive and can cause physical dependence, tolerance, and withdrawal symptoms when used for extended periods of time" (NIDA, 2019). By the 2010s, Purdue Pharma realized that they needed to address the problem at hand so they created a new formula of OxyContin capsules which became much harder for individuals to snort or inject. However, after the new reformulation of the pill "a study was conducted that found one-third of users switched to other drugs and of those a further 70% began using heroin" as explained by Altraide (Altraide, 2019). The reformulation of OxyContin had simply increased the rate at which people would turn towards cheaper and harder opioids. In many cases, it's clear that the majority of opioid users once started with pain medications. However, as more restrictions came along and money became tight a lot of users switched to illicit opioids to feel something close similar to those prior sensations.

4. Who Are The Sacklers & What is Their Involvement?

The multi-billionaire dollar family *The Sacklers*, solely owns *Purdue Pharma* and has made their wealth marketing and producing the highly addictive painkillers MS Contin and OxyContin. The Sackler family has undoubtedly contributed to fueling the opioid and drug epidemic which has roughly killed over 932,000 people in the US alone since the year 1999 (CDC, 2020). American author Patrick Radden Keefe states in his book titled “Empire of Pain- The Secret History of the Sackler Dynasty” that, “Prior to the introduction of OxyContin, America did not have an opioid crisis. After the introduction of OxyContin it did” (Keefe, 2021, p.125). The story of the Sacklers is a story of an American crime family who turned a blind eye to individual suffering because they were making billions of dollars in profit. The Sackler family is not only *partly* responsible for the opioid epidemic, but the family's involvement has made them one of the wealthiest American families as a result of opioid addiction. It's clear to state that the present-day opioid epidemic wouldn't be here if it wasn't for the Sacklers' involvement in corrupt American advertising and false propaganda on how addictive their painkiller OxyContin truly is. Purdue Pharma has long told the narrative that the Sackler family (which solely owns the company) has had a real arms-length distant relationship with one another. Even certain family members have additionally downplayed their involvement with Purdue cooperation, however, it's now clear that US officials know this claim to be false.

The story of the Sackler family begins in the year 1952 when three psychiatrist brothers named Raymond, Arthur, and Mortimer Sackler had then purchased a pharmaceutical company named Purdue Pharma (Altraide, 2019). Together the Sackler brothers co-authored over one hundred research papers on the biochemistry of mental illness. Advertising genius and Co-founder Arthur M. Sackler (1913-1987) was an American physician, medical publisher, and

philanthropist who is perhaps best known for his role in the development of the modern pharmaceutical industry through his work in medical advertising and publishing. In the 1950s and 1960s, Arthur Sackler worked as a medical publisher, helping to revolutionize the way drugs were marketed to doctors and the general public. Arthur also created the drug *Valium*, which happened to be the first drug ever to pass 100 million in sales. He was able to do this because he advertised and marketed the drug to cover all kinds of conditions. By putting people into the category of his made-up term *psychic tension*, he was now able to prescribe to a larger market than just people who suffered from anxiety (Altraide, 2019).

Arthur's nephew Richard Sackler started his career as a research scientist for the family company, he later became the president of Purdue in 1999 and co-chair in 2003. Richard's father and uncle were the co-CEOs of Purdue Pharma. Richard was known for constantly brainstorming ideas and trying to find new uses for MS Contin... much like his uncle Arthur he was heavily interested in the commercial and marketing side of the business. The former Purdue Executive Director of Product Management recalled: "that Richard didn't always work for the research results" (Altraide, 2019). Richard Sackler is now referred to as one of the most active of the Sackler family members to push OxyContin to the market despite knowing its negative impact. Richard Sackler regularly asked for sales reports, he would often coach employees on how they should go out and push OxyContin to doctors. When Americans began to die due to opioid overdoses, Richard's emails detailed how the company was going to spin the story to be about drug addicts and criminals who were misusing their effective drugs (Keefe, 2019). Richard blamed the victims in numerous cases, and from the word of ex-employees, he completely became obsessed with the sales of OxyContin. As sales began leveling off due to doctors finally realizing that these drugs were killing American citizens at an alarming rate. Richard Sackler

was still adamant about pushing OxyContin, this time he wanted bigger doses of the drug and for longer periods of time. The combination of upping the dosages and expanding the duration of the drug is a recipe for addiction and a dangerous state of affairs (Keefe, 2019). Another interesting example of a way Richard tried exploiting the American people was when he tried to turn OxyContin into a non-controlled substance (much like aspirin that you buy over the counter). In documents later revealed to the public, we can see the exchange between Richard Sackler and the actual inventor of OxyContin, who raises awareness of how dangerous that would be to Richard Sackler. However, Richard's comments regarding the growing concerns from the inventor were shrugged off as he allegedly stated “but what would it do to our bottom line, what would it do to the number of sales we could get?” as explained by author Patrick Keefe (Keefe, 2019, p. 225). If that wasn't already crooked enough, things suddenly became unmistakably corrupt in the ways the Sacklers began bribing health officials.

According to narrator Dagogo Altraide, of the documentary titled “The Sackler Family- A Secretive Billion Dollar Opioid Empire” Altraide explains, “Purdue began paying off all the links in the supply chain. Distributors were guaranteed rebates, pharmacists were given refunds and patients were given coupons for starter supplies' ' The narrator then continues by saying "Academia also got their share in grants, medical journals were even making money from advertising the drug. Politicians were given campaign donations from both Purdue and the Sackler family” (Altraide, 2019). However, the most important link in the whole chain was the doctors since they are ultimately the ones who can prescribe OxyContin (or any medications) to general patients. Purdue would hold speaking events (or so-called “seminars”) in which the company would have doctors flown into what would essentially end up being a luxurious golfing trip. Thousands of clinicians were paid to speak at these conferences on the behalf of the Purdue

company, prominent doctors that happened to be on the Purdue payroll played down the effects of opioids and even praised them as “*a gift from nature.*” The paid clinicians even stated that the notion that opioids cause addiction was a “*medical myth*”(Altraide, 2019). Early on Purdue Pharma realized that doctors were more likely to prescribe a new drug if it was recommended by another doctor. The company saw the likelihood of their drug being more prescribed as a result of doctors listening to their (*paid*) peers (Keefe, 2019). Between the nine years 2006 to 2015, Purdue and other major drug manufacturers in the industry spent nearly \$900 million in political payments and lobbying (Altraide, 2019). Despite the family’s already tainted reputation, the Sacklers company Purdue was now attempting to make OxyContin a viable treatment for non-cancer patients as a way to grow the patient demographic. According to an excerpt by Christopher Glazek who did a piece on the Sacklers’ motivation to rebrand OxyContin he wrote: “The company rebranded pain relief as a sacred right: a universal narcotic entitlement available not only to the terminally ill but to every American” (Glazek, 2020). The Sackler’s company, Purdue even targeted poor areas with high labor work, because higher instances of workplace injuries led to higher uses of OxyContin. Worse than that in 2015, Purdue was even granted FDA approval to market the drug to children as young as the age of eleven (Altraide, 2019). The Sackler’s targeted demographic was an ever-evolving chain of newer groups of Americans, sadly not even children were safe from the reach of OxyContin.

Despite OxyContin only being one of the many opioids on the painkiller market, it is the specific one that has truly sparked the present-day opioid epidemic. If it wasn't for the Sacklers’ involvement in continually pushing their highly addictive opioid to the American public then perhaps, the US nation wouldn't be in such misery at the hands of pharmaceutical and illicit opioids. It’s now evident that US citizens who once were being highly prescribed strong opioids

are now having a difficult time adjusting to not having their typical stew of meds. In many cases, individuals who aren't able to get their hands on the pills they were once prescribed are now looking to buy those meds off the black market or even worse pay for cheaper illicit opioids to fulfill their dependence.

5. Cope With the pain! Who's in Pain & Who Wants to Get High

The dependence on opioid painkillers became a national trend in part due to doctors overprescribing medications to patients every need or complaint. This has to be due in part to a societal trend where doctors are not getting good reliable information when they believe they are. Our doctors are supposed to be applying medical science to the service of American patients but they cannot do it under false propositions. In researching the opioid epidemic, the CDC website found that “More than 191 million opioid prescriptions were dispensed to American patients in 2017” (CDC, 2019). Just to reflect how insane that statistic truly is, in the same year of 2017, the US population reached roughly 326 million according to the US Census Bureau. When self-accounting to this numerical data that means roughly 59% of all Americans were being prescribed some type of opioid medication. However, this data can be skewed due to a larger number of individuals being overly prescribed compared to those who never used such drugs. However, on the contrary, this CDC statistic does not account for drugs being possessed by individuals who received them via foreign countries or in addition such illicit opioids that were synthetically made from home labs. In this case scenario, the author predicts that this data percentage of 59% of all Americans who used such strong substances would be increased over the initial data. Worse than that, people are looking to get their hands on these over-the-counter prescriptions to either get high, make a profit, or sadly kill themselves or others. The sad truth is that these same drugs that are used to heal people when in crucial pain are also causing people to

numb themselves to ease their daily struggles. The National Library of Medicine notes that “Opioid prescriptions have increased dramatically over the past 20 years and some opioids have become very popular. This is likely to be due to solid marketing from the pharmaceutical industry rather than due to scientific knowledge. Hence, reported data have often been of poor quality and may have been biased for marketing purposes. It is, therefore, the responsibility of the scientific community to question these data and move towards more evidence-based practice, e.g. reporting of data spanning from basic research to clinical trials that look into differences between opioids and the inter-individual response to treatment with these drugs” (National Library of Medicine, 2013).

6. Which Demographic of the US is Most Impacted

Opioid deaths have impacted various parts of the United States, but some regions have been hit harder than others. According to data from the National Institute on Drug Abuse, the US states that have been most affected by opioid-related overdose deaths in recent years are located “primarily in the eastern half of the country” (NIDA, 2020). The states with the highest rates of opioid overdose deaths per 100,000 people in 2019 were West Virginia (49.6), followed by Delaware (43.8), Maryland (43.2), Ohio (42.8), and Pennsylvania (40.3). Other states with high rates of opioid-related overdose deaths include New Hampshire, Kentucky, Rhode Island, and Massachusetts (NIDA, 2020). People who live in rural areas of America such as West Virginia, Delaware, and Maryland have a huge pill problem due to poor social circumstances. This demographic of Americans traditionally don’t have anything promising to look forward to, so many look to substance abuse to help alleviate their feelings of misery. Altraide emphasizes that “It is now possible to find regions in the country where the amount of prescriptions is more than the actual population of that region” (Altraide, 2019)

In addition to state-to-state opioid fatalities, we can also look at the relation of opioids to age gaps. The opioid epidemic has impacted people of all ages in the United States, but some age groups have been affected more than others. According to data from the Centers for Disease Control and Prevention (CDC), the age group with the highest rate of opioid-related overdose deaths in 2019 was adults aged 25-34, with a rate of 34.7 deaths per 100,000 people. However, other age groups have also been significantly affected. The age group with the second-highest rate of opioid-related overdose deaths in 2019 was adults aged 35-44, with a rate of 34.4 deaths per 100,000 people. The third-highest rate was among adults aged 45-54, with a rate of 30.9 deaths per 100,000 people. It's also worth noting that the opioid epidemic has impacted younger age groups as well. In 2019, there were 3,191 opioid-related overdose deaths among people aged 15-24, and 739 deaths among those aged 5-14 (CDC, 2020). While these numbers are lower than the rates among older age groups, they still represent a significant loss of life and highlight the need for effective prevention and treatment efforts aimed at all age groups. According to Brown University professor of epidemiology Brandon Marshall he states “drug overdose is the leading cause of death among adults ages 18 to 45 with fentanyl playing a contributing role in most of them. Marshall cautioned, however, that many of these deaths are attributed to multiple substances, not solely fentanyl.” (Marshall, 2021).

7. Signs of Addiction & Withdrawal

Perhaps, you have never known anyone who has been addicted to OxyContin or any opioid painkillers for that matter. So perhaps it's difficult to understand the numbing grip these substances have on individuals' lives. According to the “Painkiller Addiction, Abuse, and Symptoms” article, the Help.org website states “Some of the major symptoms we frequently see in individuals who are currently substance abusing are downisness, nausea, vomiting, pupil

constriction, and flushed face or neck. Others may experience dizziness, slow or shallow breathing, itching, confusion, hallucinations, or trouble urinating” (McGhee, 2022). Such observable cues from fellow friends or colleagues can be easily seen when they are openly using. Sadly this isn’t always the case, many individuals hide or cover up their prescription usage to get high alone and without judgment. Author Moira McGhee further states “a hallmark sign of addiction to any opioid medication is experiencing withdrawal symptoms when not taking the drug. These symptoms include muscle or bone ache, problems sleeping, cold flashes or chills, diarrhea, and vomiting” (McGhee, 2022). Another sign of OxyContin addiction is obsessing over or craving the drug, McGhee explains. As with addiction to any drug, a person addicted to OxyContin may also experience changes in their mental state or behavior, including paranoia, mood swings, losing interest in activities they once enjoyed, and avoiding social interaction” (McGhee, 2022).

8. Big Pharma Money & Propaganda

Sadly not only have these drugs led people into sickening addiction, but it has also developed big pharmaceutical companies into multi-billion dollar enterprises that will do anything to keep their pockets full of wealth. Former pharmaceutical sales rep Brigham Buhler details on the number one streaming podcast “The Joe Rogan Podcast” how OxyContin took over the pharmaceutical marketplace. Buhler states that the Purdue Company had told their sales reps to go out and began recommending OxyContin to the general public with minor health issues. Once again the corrupt Purdue company was attempting to expand its target range in hopes of growing its capital. Purdue aggressively promoted and marketed OxyContin at the start of the 21st century. In 2001 alone, the company spent \$200 million on multiple approaches to market & promote OxyContin (NIH, 2021). Buhler also explains that Purdue’s sales rep's main

focus was to grow the market and to grow the number of individuals who ‘*desperately*’ needed OxyContin. The company grew the patient demographic by encouraging doctors to write more prescriptions for the usage of their drug to patients with non-cancer-related pain such as migraines, back soreness, and nose jobs. Just to name a few examples.

One of the biggest components of how pharmaceutical company sales reps were able to get numerous doctors to overly prescribe their medications is direct bribery such as fancy corporate dinners, luxury trips, and monetary incentives for prescribing their medications (Buhler, 2022). In listening to numerous accounts of people who previously worked for pharmaceutical companies, it’s clear that pharmaceutical sales reps’ main objectives are to sell as much product to the biggest demographic available, make close-knit relationship deals with the most important physicians within specific regions, and lastly to capitalize on the current market opportunities. In listening to numerous detailed stories it's clear that it's never about humanity-ethics nor helping individuals live an overall better life. It's always about the consumerism aspect of how well the pharmaceutical medications are doing in the marketplace, it's simply a numbers game of who has the best product out right now.

Another interesting example of ways *big pharma* uses corruption to its advantage is the Vioxx case, which showcases how pharmaceutical companies collect their studies before publishing them to mainstream journals. Vioxx was an anti-inflammatory drug that was meant to be safe for the GI tract system, it was supposed to be better for you than non-steroidal anti-inflammatories because it didn't upset one's stomach (Abramson, 2021). However, the drug was far more complicated than helping an upset stomach, instead, it made the blood more likely to form clots, and have other cardiovascular issues. The company *Merck* used fraudulent data (subject to statistical variation) to showcase that their product was safe for digestion, meaning

the company only used a very small portion of trial subjects to gather their data. Fifty-three studies to be exact. The company was then blamed by the FDA afterward for not mentioning portions of troubling statistical data such as people suffering heart attacks and having strokes. The company ended up being a \$2 billion-a-year corporation running from the years between 1999 to 2004 before being pulled from the market. Sadly however between “20-25 million Americans had taken the medication Vioxx and between 40-60,000 Americans had died from cardiovascular consequences” (Abramson, 2021). The company knew before releasing this drug to the public that it had multiple magnitudes of problems, yet they released the drug anyway because they saw a huge financial gain in doing so. The company ended up making \$12 billion in that short span of five years but ultimately was only fined \$4.7 billion when facing legal problems. No employee from the *Merck* company faced any jail time. How could a company be pleased with itself knowing they’re making a profit margin off killing nearly 50,000 people? That is unethical, cruel & disturbing to think that these are the same pharmaceutical companies we’re supposed to trust in terms of safe regulation.

American physician John Abramson explains in his book titled “Overdosed America: The Broken Promise of American Medicine” how pharmaceutical companies like to distort data on the addictive properties of opioids to generate revenue. Abramson went on to explain in a 2021 interview that “The primary function of the drug companies is to make money for their investors. We have to get over the illusion that their first purpose is to serve our health. Their purpose is to make money.” (Abramson, 2021). Another way in which *big pharma* can get away with corruption is the fact that “Pharmaceutical companies own the rights to their clinical trial data so they can manipulate the success rates and side effects” according to Abramson. Pharmaceutical data is private and only the analysis of the data goes public. That means there are incentives to

distort medical knowledge from the American public in hopes to profit off the misconstrued data. It's a compelling factor for pharmaceutical companies to ease into when they know they have the upper hand in finalizing what information goes out to the public. John Abramson states it perfectly when he said "They are paid to win and they are calling their own fouls" (Abramson, 2021). One man's addiction is another man's capital gain. That's the troubling exchange between fellow American pharmaceutical companies and American citizens.

A major contributor to the marketing of pharmaceutical drugs is television ads. Pharmaceutical companies are permitted to advertise their drugs on national broadcasting in the United States, and these advertisements often portray their drugs in a positive light. According to the Statista Research Department, it claims that "In 2020 TV ad spending of the pharma industry accounted for 75% of the total ad spend" (Statista, 2023). That accumulates to \$4.58 billion US dollars being spent on American television advertisements promoting pharmaceutical drugs (Statista, 2023). Another astonishing reality is that the United States is only one of two countries that allow pharmaceutical advertisements to be aired via television. The other country, New Zealand, has far more restrictions than what we are accustomed to here in the United States. We allow big pharmaceutical companies to promote their ever-evolving drugs on national broadcasting. Perhaps you know those commercials that have an older couple walking with their grandkids, and there's happy music playing in the background. The couple is smiling cheek to cheek because they found a '*cure*' to help with their pain or disorder. We see these commercials nonstop daily. Such commercials promote happiness, more energization, and a better life are the same pills being produced by companies that are feeding the pharma chain of addiction & consumerism. In a Scientific American article titled "How Drug Company Ads Downplay Risks" the coauthors make a bold statement that "The ability to market prescription drugs creates an

incentive for pharmaceutical companies to amplify the benefits of a drug without discussing its potential side effects” (Sivanathan & Kakkar, 2019). While these ads may offer hope to people suffering from medical conditions, it is important to recognize that they are also a form of marketing designed to sell products. One concern is that these advertisements may overstate the benefits of the drugs while downplaying their risks or side effects. This can create unrealistic expectations among consumers and potentially lead to the overuse or misuse of these medications. While not all prescription drugs are inherently addictive or harmful, there is a need for greater transparency and accountability when it comes to the marketing and sale of pharmaceutical products. Overall, it is important for consumers to be aware of the potential biases and limitations of pharmaceutical advertisements, and to consult with their healthcare providers before starting or stopping any medication. Additionally, efforts to address the opioid epidemic and other public health challenges will likely require a multifaceted approach that involves collaboration between healthcare providers, policymakers, and other stakeholders.

Not to be misconstrued, this informational essay is not against nor criticizing all pharmaceutical drugs. Everyday people do need the assistance of western-medicine prescriptions to help & manage their troubling conditions. Such conditions include: preventing seizures, lowering blood pressure, and helping increase vitamins we may lack back into the bloodstream. We can't deny that people do need certain medications to help in certain cases such as the examples I have given above. However, we must draw a line for individuals who need pharmaceutical pills to maintain natural homeostasis to those taking them to get out of their daily mind state.

8.1 Fighting Back Against Big Pharma

The increase in overdose deaths highlights the need for essential services to remain accessible to people most at risk of overdose and the need to expand prevention and response activities. The CDC has “issued a health advisory to medical and public health professionals, first responders, harm reduction organizations, and other community partners recommending the following actions as appropriate based on local needs and characteristics; expand distribution and use of *naloxone* and overdose prevention *education*” (CDC, 2021). Naloxone is a medication that completely “reserves the effect of an opioid overdose by blocking opioids from binding receptors in the brain” (CDC, 2021). However, naloxone only works if administered promptly. Still, we must continue expanding awareness about and access to and availability of treatment for substance use disorders. According to the Journal of Primary Care & Community Health, it states “The effect of naloxone access laws (NALs), medication for opioid use disorder (MOUD) treatment capacity, and Good Samaritan laws all significantly influenced the synthetic opioid overdose death rate. The use of naloxone should be a central part of any state strategy to reduce overdose death rates” (Tabatabai, M., et al, 2023).

Another way American citizens can help fight back against big pharmaceuticals' deadly grip is to intervene early with individuals who are at the highest risk for overdose. For example, if you know someone who is having a difficult time cutting off substance abuse or perhaps is planning to come off their pain medication, it tends to be beneficial to know your peers' situation so you can try to lend a hand to their current substance issues. Better societal relationships are key to helping people who suffer from self-isolation, depression, or substance dependence. In addition to early intervention, the US must improve the detection of overdose outbreaks to facilitate a more effective response. In some cases, such as the Los Angeles Unified School

District, various institutions are beginning to bring forth health educators to provide informational strategies to help prevent children and teens from suffering an accidental overdose. Many K-12 grade schools in the LA school district will soon be equipped with doses of Naloxone in hopes to reverse the effects of opioid overdose from occurring on So-Cal campuses (Romine & Wolfe, 2022). It's important to continue spreading awareness, concerns, and any useful knowledge to young Americans through our education system in hopes of combating opioid overdoses. It's also important to promote healthy and respectful relationships within US families. Some of our fellow American friends and family members need emotional support in times of suffering from substance abuse. The United States should aim for friendliness and open-minded relationships within our household, local communities, and social circles. Having open communication with our peers about the side effects of substance abuse is worth the awkward conversations or interventions. Thus having a cohesive family unit is one of the strongest bonds an individual can receive in times of such hardship.

The public of the United States knows it has a huge risk of substance abuse and sudden fatalities at the hands of opioid narcotics, so it's crucial that American citizens, public health educators, and lawmakers closely monitor trends. At the macro level, the US government needs prosecutors and law enforcement to hold big pharmaceutical companies accountable. One of the biggest outrages of the opioid crisis is that to this day no pharmaceutical company executives have gone to prison for their involvement in pushing false narratives of opioids and addiction having no significant linkage. Not only did these companies' executives lie about the rate of addiction concerning their painkillers, but they also lied about misleading data to medical professionals and the American public. Due to their corrupt practices, the US has now been left

with hundreds of thousands of overdose deaths and whole communities have been devastated by the impact of opioid abuse.

9. Lawsuits & Settlement Deals

In 2004 Purdue was sued for deceptive marketing due to OxyContin being labeled to last for up to 12 hours but lasted much less. The company settled the case for \$10 million dollars under confidentiality and admitted to no wrongdoing or changing any practices. Purdue avoided any Sacklers from testifying under oath, the company (*family*) always reached a settlement just as they were going to be called upon in court. In 2007, Purdue faced a second lawsuit from the federal government in which Purdue would be charged with a criminal felony for purposely pushing misconceptions about OxyContin. The company would plead guilty to misbranding and *acknowledge* that they knew about the misconceptions doctors had about their drug and actively exploited it for profits. Ironically, the Sacklers' company Purdue was doing the exact same thing in using misleading information about their drugs to make a financial profit. This time the settlement cost the company \$600 million dollars. Despite the Sacklers having numerous family members on the board during this '07 lawsuit, all of which had direct hands in the current operation, none of the Sacklers' names appeared anywhere on the 89-page guilty plea at the time (Altraide, 2019). In 2019, the company would face yet again another lawsuit case when "the State of Massachusetts went against Purdue Pharma, alleging the company and its executives misled prescriptions and patients about OxyContin's dangers" (Keefe, 2019). What's fascinating about the Massachusetts lawsuit, is that for the first time, the American public was able to "see hundreds of pages of crucial documentation from inside the company". The documents showed very active involvement for multiple members of the Sackler family still continuing to push OxyContin onto the US market, despite the drug already being labeled as a major component of

an epic public health crisis (Keefe, 2019). The Massachusetts case is important because it would be a beginning lawsuit that would help push other US states to then push legal suits against the Sacklers' Purdue company. This case was additionally important because, for the first time, the interrelationship between Purdue Pharma and specific Sackler family members were finally both being investigated for liability. In the end, the state of Massachusetts was expected to receive an estimated amount of \$90 million from Purdue Pharma for its involvement with the opioid crisis in the state (Mass Gov., 2019).

In the year 2020, the Purdue company pleaded guilty to federal criminal charges for their involvement in misleading the public about the risks of addiction and overdose for patients who used OxyContin. The settlement required that the Sackler family must pay \$6 billion dollars in cash for the role they played in America's opioid epidemic. The Sackler family finally faced some pushback when the federal judge of the case denied their earlier settlement deal of \$4.5 billion dollars. Under the new deal with fifteen US states and the District of Columbia, the Sackler family had to give up control of their Stamford Connecticut-based company (Purdue Pharma) and had to apologize in exchange for protection from any further civil lawsuits (Hoffman, 2021). The Sacklers continually voiced *regret* for their involvement in the opioid epidemic but still deny any wrongdoing. In addition to the \$6 billion dollar payout, members of the Sackler family had to also pay out of pocket another \$50 million in exchange for released documents and access to file for bankruptcy. The documents that were released included depositions, emails, and letters from the Purdue Company following the past two decades. Despite the Sackler family's net worth being roughly \$14 billion dollars, the family was given nine years to pay off their large lawsuit debts. According to journalist Jan Hoffman of the New York Times, explains "The Sacklers are now barred from participating in the opioid business,

forbidden to seek naming rights to places like hospitals and museums until they have paid all their debts and have exited their worldwide opioid-related businesses” (Hoffman, 2021).

In response to these criminal charges, huge cultural institutions like the Museum of Guggenheim, the Museum of Louvre, The MET, The National Gallery of London, and the University of Yale finally parted ways from the Sacklers’ prior donations and removed the Sackler name from their walls, galleries, and buildings wings. Conversely, these settlement deals “seem like pennies on the dollar for a company that reportedly earned \$35 billion dollars in revenue from OxyContin and further fueled an epidemic that has killed hundreds of thousands of Americans since 1997” (Altraide, 2019). Many senators, congressmen, and city activists continue to publicize backlash against the settlements for being “an expensive license for criminal misconduct” as Altraide explains it. Besides the Sacklers settlement, it's worth noting that over two decades, there were hundreds of doctors who were arrested in connection to running clinics (pill mills) that prescribed pills to patients without a legitimate reason.

10. The Economic Burden of Opioid Use Disorder and Fatal Opioid Overdose in the US

According to the CDC, “Fatal opioid overdoses and opioid use disorder cost the United States \$1.02 trillion in 2017”(CDC, 2020) The majority of the economic burden is due to reduced quality of life from opioid use disorder, and the value of life lost due to fatal opioid overdose (Florence, Luo, & Rice, 2017). The 2017 data is the most complete accounting to date of the American opioid epidemic cost. Likewise, the opioid crisis also decimated the American workforce, and many US workers lost their jobs due to being addicted to opiates. Random drug tests are now at the forefront when it comes to possible employment, in certain regions of America that's the first question they ask. Are you currently using or are you on drugs? Before employers even bother to require you to take a mandatory drug test. In many cases, scoring drugs

becomes people's main line of work, they go day-to-day just finding a way to get their hands on drugs. These people who aren't active in the workforce, tend to hone their skills in shoplifting or stealing from loved ones to make a buck out of it. Hopefully, these drastic estimates and stories can help decision-makers understand the magnitude of opioid use disorder and fatal overdose. Knowing the magnitude and distribution of the economic burden can inform public policy, clinical practice, research, and prevention and response activities.

11. The Impact of the Individual & the Family Dynamic

Not only do opioids affect the individual at a personal level, the over usage of pain meds further extends to affecting everyone who is involved within the family dynamic. At the individual level, it mostly comes down to a lack of accountability. You must want to change for yourself before you can change for others. You can have the best support network around you, yet if you don't want to make that ultimate step to a clean-sober life then that's always gonna come back to bite you. At the family level, many children have to be put into foster care after case workers are involved in investigating allegations of child abuse or neglect as a result of opioids. Typically if the family is making progress in recovery then the case workers will work with the family for 22 months. At the end of the 22-month period they have to decide whether the child goes back home or is filed for permanent custody. Drug screens are typically used when caseworkers come to investigate homes, and to the parents who are known as past users. The overpowering drugs take over people's lives, to the point that's all they think about. Kassy, a recovering heroin addict told Vice "Yea I'd still take care of my children but I wasn't thinking about my children, I was thinking about how am I gonna get high again" (VICE, 2018)

12. Looking at a Holistic Approach to Fighting Against Addiction

A holistic approach to fighting addiction is an approach that takes into account the whole person, including their physical, mental, emotional, and social well-being. It recognizes that addiction is a complex and multifaceted issue that requires a comprehensive and personalized approach to treatment and recovery (Holistic Recovery Center, 2020). Here are some components of a holistic approach to fighting addiction: *Medical & clinical treatment, nutrition & exercise, mindfulness & stress reduction, social support, and spiritual or existential exploration*. In the description of the medical and clinical treatments with a holistic approach. This can involve a range of interventions, including medication-assisted treatment, behavioral therapy, and counseling. The main goal is to address the physical and psychological aspects of addiction and to provide support for detoxification, withdrawal, and long-term recovery (HRC, 2020). In an attempt to reach a more holistic approach to addiction, one's nutrition and daily exercise are very beneficial to a fresh-clean start into the next chapter of someone's story. A healthy diet and regular exercise can help support physical and mental health and promote overall well-being. This can help individuals in recovery to feel better physically and mentally, which may help reduce cravings and improve overall mood and energy levels (Holistic, 2020). Another holistic component to successful recovery is including practices of mindfulness and stress reduction. Mindfulness practices such as meditation and yoga can help individuals in recovery to manage stress and anxiety, improve emotional regulation, and cultivate a greater sense of self-awareness and inner peace (HRC, 2020). Furthermore, having solid social support is very key in an individual's life when they are beginning to tackle their addiction issues. Building a strong network of social support can be crucial for recovery. This may involve participating in support groups, connecting with family and friends, and engaging in activities that promote community involvement and social connection (HRC, 2020). Lastly, having a sense

of spiritual or existential exploration through this process can be truly eye-opening to folks wanting a new sense of purpose. For some individuals, exploring their sense of purpose or meaning in life can be an important part of their recovery journey. This may involve engaging in spiritual practices, exploring personal values and beliefs, or seeking out opportunities for personal growth and development. There are a vast number of personal-growth books out there that people can lean towards too if they want to read more about others' struggles, and how some learn to heal and overcome addiction.

By taking a holistic approach to fighting addiction, individuals can address the underlying factors that contribute to addiction and build a foundation for sustainable recovery and long-term well-being. Although the usage of hallucinogens may seem oddly taboo or perhaps another tainted gateway drug into more substance abuse, Multiple health technicians are finding that the usage of mushrooms and ayahuasca is very beneficial in treating people's addiction, anxiety, depression, and PTSD. Perhaps, it's beneficial for some folks to look into these newer clinical-potential avenues of using psychedelic substances as a way to treat a wide range of ailments such as addiction and mental illness. It seems that in recent affairs, a large number of American citizens are deciding to combat their inner struggles with the support of micro-dosing hallucinations. In doing this extended research on the downfall of opioid use, it became eye-opening that a lot of victims who suffered from past trauma, gripping addiction, and PTSD were all deciding to attend and try an ayahuasca ceremony. For those that do not know, ayahuasca is a sacred plant medicine that comes in the form of brewed tea, it's composed of hallucinogenic vines and shrubs which are typically found in the Amazon rainforest. Jillian Kubala explains, "Though Ayahuasca was traditionally used for religious and spiritual purposes by specific populations, it has become popular worldwide among those who seek a way to open

their minds, heal from past traumas, or simply experience an Ayahuasca journey” (Kubala, 2022). The spiritual experience is regarded by many as a way to clear your head, creating a fresh start, a sense of therapy, a life-changing sense of reality, and altered levels of consciousness with profound effects. Meanwhile, researchers in Canada are finding that 30% of medicinal cannabis patients use the drug as a substitute for their previous opioid addictions. In a 2014 study, deaths from opioids were 25% lower in states that had legalized cannabis.

13. US Health Care: Policies, Rehab & Recovery

The US healthcare system has implemented several policies, rehab, and recovery options to address the opioid addiction crisis. The policies include the Comprehensive Addiction and Recovery Act (CARA) which was signed into law on July 22, 2016, to expand access to addiction treatment, prevention, and recovery programs. The policy also provides test programs for heroin and opioid treatments, while also increasingly upping the money provided by federal grants to be available for local and state agencies. According to the National Academy of Sciences, they state “It authorizes more than \$181 million each year in new federal funding to overcome the opioid epidemic” (NCBI, 2021). The CARA policy provides funding for several initiatives, including prescription drug monitoring programs, medication-assisted treatment, and overdose reversal medications like naloxone (NCBI, 2021). Another policy established was the Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (aka SUPPORT) Act was signed into law in 2018 to further expand access to addiction treatment and recovery services. Policy SUPPORT provides funding for several initiatives, including expanding access to medication-assisted treatment, promoting the use of non-opioid pain

management alternatives, and increasing funding for research on addiction and pain management.

In looking at the rehab approach to US health care, inpatient rehabilitation programs provide intensive treatment for individuals with severe opioid addiction. These programs typically involve medical detoxification, counseling, and behavioral therapy to help individuals overcome addiction and develop coping skills to prevent relapse. Outpatient rehabilitation programs provide similar treatment to inpatient programs but allow individuals to live at home while receiving treatment. Outpatient programs may involve individual or group counseling, behavioral therapy, and medication-assisted treatment (CDC, 2019). Aspects of recovery include medication-assisted treatment (MAT) which involves the use of medications such as methadone, buprenorphine, and naltrexone to help individuals manage withdrawal symptoms and cravings. MAT is often combined with counseling and behavioral therapy to provide a comprehensive approach to addiction treatment. Peer support programs, such as Narcotics Anonymous (NA) or the nonprofit organization titled Self-Management and Recovery Training (SMART), provide individuals with a supportive community of peers who understand the challenges of addiction and can provide encouragement and accountability. Recovery coaching and case management services provide individuals with support and guidance as they navigate the recovery process. These services may include assistance with accessing healthcare, housing, and employment, as well as ongoing counseling and therapy (CDC, 2019). Overall, the US healthcare system has implemented several policies, rehab, and recovery options to address the current opioid addiction crisis. However, there is still much work to be done to improve access to addiction treatment and recovery services and address the underlying social and economic factors that contribute to addiction.

Indeed social workers also play a critical role in addressing the opioid crisis by providing prevention, treatment, and recovery services to individuals and families affected by opioid addiction. Treatment services provided by social workers may include individual and group counseling, medication-assisted treatment, and case management services that help individuals access needed resources such as housing, healthcare, and employment. Recovery services include peer support programs, job training and placement, and support groups such as Alcoholics Anonymous or Narcotics Anonymous. Social workers continue to advocate for policy changes at the local, state, and national levels in hopes to prevent opioid addiction and improve access to treatment and recovery services. This includes advocating for increased funding for addiction treatment and recovery services, improving access to mental health services, and addressing systemic issues that contribute to substance abuse, such as poverty and trauma.

Throughout the entirety of this saddening ordeal, the silver lining is that the US government has finally taken steps to address the issue on a national level, emergency response tools such as Narcan nasal spray have saved countless lives in emergency overdose situations. In total it's a complicated issue and it's going to be a long road ahead, but understanding addiction and creating medical reforms that make it harder for companies to lie about their drugs will be key to future change. Gratitude and thankfulness must be given to the countless people who are trying to help those affected by this horrible crisis. Hospital staff, charity workers, local police, fire departments, and social workers have all in their own way contributed to helping save American lives every day.

14. The Conclusion:

The Sacklers aren't solely responsible for the opioid epidemic, there was a range of other opioid drugs available that were both pharmaceutical and on the streets. Yes, there were other factors too, but their large role in the entire crisis is undeniable. With that in mind, the answer to this paper's main thesis question of *what collectively has contributed to the rise of the opioid epidemic?* Well, the answer is quite complex, the US opioid epidemic is a multifaceted issue that

not only takes into account pharmaceutical corruption. It must include the aspects of economic factors, societal depression, mental health issues, and the high rise of illicit drugs. These overwhelming factors have come together to cast the perfect storm for the rise of the opioid epidemic at the tide of the 21st century. Consequently, the major problem of American society is that the collective population does a poor job of preventing diseases. Opioid overdose is only a quarter of the excess deaths within the age group of 18-49, the other three quarters consist of *cardiovascular disease*, *diabetes*, and *cancer*. Sadly the United States has the highest rate of people with multiple chronic health conditions in comparison to other developed countries that are a part of the OECD (The Organization for Economic Co-operation and Development is an intergovernmental organization with 38 member countries, founded in 1961 to stimulate economic progress and world trade). Not only is the US ranked last place amongst developed countries with high incomes. Additionally, Americans spend nearly twice as much as the average OECD country on health care (Howard, 2021). In looking at the overall healthcare of the United States, it's clear we are not getting the best value for our healthcare dollars. "These are deaths in people with a preventable, treatable condition. The United States continues to fail on both fronts, both on preventing opioid addiction and treating addiction," as said by Dr. Andrew Kolodny, medical director of opioid policy research at the Brandeis University Heller School for Social Policy and Management (Kolondy, 2021). The US opioid epidemic not only shows that Americans are suffering at the hands of societal oppression, but it also tells the saddening truth that its citizens are using opioid substances to help ease their pain both physically and emotionally. International comparisons are important when the US is trying to figure out how to save and prevent its citizens from any more self-harm. Besides poor prevention of preventable diseases, American pharmaceutical corporations must be continually monitored and found accountable for their mass involvement in individual fatalities. The US nation cannot allow large income settlements to sweep big pharma corruption under the rug. The pursuit of happiness within all individual lives must always come first before any incentives or capitalist motives.

15. Annotated Bibliography (*References*)

Abramson, J. (2004). *Overdo\$ed America: The Broken Promise of American Medicine*. HarperCollins.

Author John Abramson does an amazing job writing about the crookedness that arises from American Pharmaceutical companies in an attempt to gain financial profits. The author writes in detail about certain cases where pharmaceutical companies distort data to showcase that their drugs are safe for digestion. The biggest two medications mentioned are Vioxx & OxyContin.

Altraide, D. (2019). *The Sackler Family- A Secretive Billion Dollar Opioid Empire*. YouTube. ColdFusion. Retrieved from https://www.youtube.com/watch?v=zGcKURD_osM

This mini documentary was a major contributor in helping me understand the overall impact that the US opioid epidemic has had in affecting millions of Americans by explaining the OxyContin mass production, the Sacklers' Purdue corruption, and detailing the stories of how Americans are dealing with opioid destruction within their communities.

Braude, J., & Keefe, P. R. (2021, May 13). *How the Sackler family profited off Lies & Addiction*. YouTube. Retrieved January 10, 2023, from <https://www.youtube.com/watch?v=3d6pkAhFxUY>

In an interview with The Greater Boston News outlet, author Patrick R. Keefe explains to the news anchor the crooked ways the Sacklers were able to plead guilty in federal charges yet the crime family was secretly pulling out billions of dollars from their accounts before deciding to file for bankruptcy.

Center for Drug Evaluation and Research. (n.d.). *Opioid medications*. U.S. Food and Drug Administration. Retrieved February 19, 2023, from <https://www.fda.gov/drugs/information-drug-class/opioid-medications>

The CDC's webpage on opioid drugs acted as my main source of information when it came to any key national statistics. I tried to continually refer to the data I had found from occurring CDC statistics to frame my main points and thesis for my paper.

Cicero, T. J., Inciardi, J. A., & Muñoz, A. (2005). Trends in abuse of OxyContin® and other opioid analgesics in the United States: 2002-2004. *The Journal of Pain*, 6(10), 662–672. <https://doi.org/10.1016/j.jpain.2005.05.004>

This case study does an amazing job providing US national statistics upon the abuse of OxyContin during the years that range from 2002-2004. It proved extremely useful when I used the early data from the 21st century to showcase that this trend of opioid abuse has only been steadily growing since OxyContin's release date.

Florence, C., Luo, F., & Rice, K. (2021, January 1). *The Economic Burden of Opioid Use Disorder and Fatal Opioid Overdose in the United States, 2017*. Drug and Alcohol Dependence. Retrieved February 3, 2023, from <https://pubmed.ncbi.nlm.nih.gov/33121867/>

The United States is experiencing an ongoing opioid crisis. Economic burden estimates that describe the impact of the crisis are needed when considering federal and state resources devoted to addressing overdoses. In this study, we estimate the societal costs for opioid use disorder and fatal overdose from all opioids in 2017.

Gieringer, D. (2009, February 6). *The Opium Exclusion Act of 1909*. CounterPunch.org. Retrieved February 19, 2023, from <https://www.counterpunch.org/2009/02/06/the-opium-exclusion-act-of-1909/>

The CounterPunch website helped to better inform me about the Opium Exclusion Act of 1909. Prior to the act, the time in the US was full of immigrants who were hooked on openly using opium. The 1909 act was a racist policy decision that tried to discourage Chinese immigrants from smoking opium on US streets.

Glazek, C. (2020, December 18). *The Secretive Family Making Billions From the Opioid Crisis*. Esquire Magazine. Retrieved February 21, 2023, from <https://www.esquire.com/news-politics/a12775932/sackler-family-oxycontin/>

Good Bad Habits., Davis, M. (2020). *What causes opioid addiction, and why is it so tough to combat?*. YouTube. TED-Ed. Retrieved February 12, 2023, from <https://www.youtube.com/watch?v=V0CdS128-q4>.

In this informational TED-Ed video, narrator Mike Davis provides a brief history of opium usage within western medical remedies. We then learn that the isolation of morphine comes directly from the opium poppy and those certain drugs are classified as opiates. Further, the video details how opioids attach to pain receptors strongly, creating the push for addiction, reliance, and higher dosages to receive feelings of pleasure.

Harvard University. (2017). *History of opioid use in America*. YouTube. Retrieved September 7, 2022, from <https://www.youtube.com/watch?v=IIQRgceBcSc>.

The significance of this historical account between Americans and opioids showcases that the US has always suffered from mass opioid addiction and fatalities. The video explains that soldiers fighting in the American Civil War were beginning to get hooked on Morphine that they were being prescribed. We also learn that American doctors' medical-practice during this time period mostly consisted of highly prescribing opioids to its patients for all types of conditions.

Hedegaard H, Miniño AM, Spencer MR, Warner M. Drug Overdose Deaths in the United States, 1999–2020. National Center for Health Statistics [PDF], December 2021.

The NCHS data helps showcase the national overdose deaths statistics, that range from 1999 to 2020 within the US. The data gives the viewer a two-decade span of steadily growing numbers of Americans who are dying at the hands of opioid overdose. The data also separates into minority groups that include: age, sex, ethnicity, and types of synthetic or non synthetic opioids that have led to deaths. In the end, the study showcases that all citizens of the US, regardless of their age or race, are impacted by the opioid epidemic.

Howard, J. (2023, January 31). *The US spends most on health care but has the worst health outcomes among high-income countries, a new report finds*. CNN. Retrieved February 26, 2023, from <https://www.cnn.com/2023/01/31/health/us-health-care-spending-global-perspective/index.html>

The CNN Health article highlights the fact that the US population spends the most money out of pocket on healthcare in comparison to all other developed countries that are a part of the OECD (an International economic organization). Unfortunately, despite the price tag Americans have the worst outcomes when it comes to diabetes, cardiovascular disease, obesity, and opioid fatalities. We pay the most, yet we receive the worst preventable outcomes.

Keffe, P. R., & Sreenivasan, H. (2019, January 20). *Behind Purdue Pharma's marketing of Oxycontin*. PBS. Retrieved January 18, 2023, from <https://www.pbs.org/newshour/show/behind-purdue-pharmas-marketing-of-oxycontin>

In this 2019 PBS Newshour, author Patrick Radden Keefe sits down with Hari Sreenivasan to discuss how the Sackler family misled patients about the dangers of their opioid medication- OxyContin. They discuss details on how Purdue Pharma marketed OxyContin to increase sales despite their drug being labeled as a major portion of this nationwide health crisis. The conversation sheds light on the impact the Sackler family had with Purdue Pharma company and brings lawsuits into justice.

Kubala, J. (2022, December 16). *What is Ayahuasca? Experience, Benefits, and Side Effects*. Healthline. Retrieved February 23, 2023, from <https://www.healthline.com/nutrition/ayahuasca#uses>

The article discusses the psychoactive effects of taking Ayahuasca tea, it provides the average citizen a description of what an individual might endure while taking this 'spiritual awakening' psychedelic substance. The Ayahuasca tea has been growing in popularity within the medical field for its benefits in helping individuals tackle their addiction issues, PTSD, and past trauma.

Mass Gov. (n.d.). *Attorney General's Office lawsuit against Purdue Pharma and its executives and directors*. Mass.gov. Retrieved February 23, 2023, from <https://www.mass.gov/lists/attorney-generals-office-lawsuit-against-purdue-pharma-and-its-executives-and-directors>

The Massachusetts lawsuit against Purdue Pharma was the first big US state-to-cooperation lawsuit to take place before other states decided to join the legal process in taking down the Sacklers company Purdue Pharma for its role in the fueling of the opioid epidemic.

McGhee, M. K. (2022, November 12). *Painkiller addiction, abuse and symptoms*. Help.org. Retrieved January 22, 2023, from <https://www.help.org/painkiller-addiction/>

The Help organization provided me with further information on opioid-substance abuse, signs of withdrawal, and symptoms to look for when you have someone in your inner circle who is battling with opioid usage.

McPhillips, D. (2021, November 17). *Drug overdose deaths top 100,000 annually for the first time, driven by Fentanyl, CDC Data show*. CNN. Retrieved January 31, 2023, from <https://www.cnn.com/2021/11/17/health/drug-overdose-deaths-record-high/index.html>

Further CNN health data claims more than 100,000 people have died from a drug overdose between April 2020 and April 202, the article states the increase was “up from 78,000 the year before and nearly double the deaths five years ago.”

National Center for Biotechnology Information . (n.d.). *Pain Management and the Opioid Epidemic: Balancing Societal and Individual Benefits and Risks of Prescription Opioid Use -NCBI bookshelf*. National Library of Medicine: 4 Trends in Opioid Use, Harms, and Treatment. Retrieved January 31, 2023, from <https://www.ncbi.nlm.nih.gov/books/NBK458661/>

National Center for Drug Abuse Statistics. (2023, January 1). *Substance abuse and addiction statistics [2023]*. NCDAS. Retrieved October 5, 2022, from <https://drugabusestatistics.org/>

Oliver, J. (2016, October 23). *Opioids: Last Week Tonight with John Oliver (HBO)*. YouTube. Retrieved November 7, 2023, from <https://www.youtube.com/watch?v=5pdPrQFjo2o>

News anchor John Oliver does an incredible job bringing comedic satire to an already devastating drug crisis story, although he makes rather light hearted jokes in the beginning of the segment. The news anchor then doubles down on his comedic jokes to explain how devastating the opioid epidemic truly is.

Phillips, J. K., Ford, M. A., & Bonnie, R. J. (2017, July 13). *Trends in Opioid Use, Harms, and Treatment*. Nih.gov; National Academies Press (US) <https://www.ncbi.nlm.nih.gov/books/NBK458661/>

The National Library of Medicine article explains that “opioids are now the leading cause of unintentional injury death in the United States.” Thus the opioid epidemic causes two major public health issues: one being the reducing the suffering of individual pain, and secondly having the FDA restructure their efforts, plans, and campaigns to safer pain alternatives.

Prescription Opioids | *Opioids* | CDC. (n.d.). Retrieved October 5, 2022, from <https://www.cdc.gov/opioids/basics/prescribed.html>

Rogan, J., & Abramson, J. (Hosts). (2021, December 30). #1756- John Abramson (No. 1756) [Audio Podcast Episode] In *The Joe Rogan Experience*. Spotify. URL

Author John Abramson details on the JRE Podcast, how big pharmaceutical companies use corrupt strategies to make a profit within the current market place. Such examples include medications such as OxyContin and Vioxx, which both tampered with their case studies to promote their drugs to the general public despite warning signs.

Rogan, J., & Buehler, B. (Hosts). (2022, September 23). #1873- Brigham Buehler (No. 1873) [Audio podcast episode] In *The Joe Rogan Experience*. Spotify. URL

Brigham Buehler, a former pharmaceutical sales rep explains how when he used to work for Purdue Pharma, he was encouraged to go out into the market to spread the patient demographic to those who “needed” OxyContin and to make the most profits he possibly could. The conversation puts the listener into the sales rep perspective.

Romine, T., & Wolfe, E. (2022, September 23). *Los Angeles School District will distribute overdose reversal drug to every K-12 school after student death, officials say*. CNN. Retrieved February 22, 2023, from <https://www.cnn.com/2022/09/23/us/los-angeles-schools-narcan-naloxone-overdose-response/index.html>

The CNN article details how the Los Angeles School District is now adopting Naloxone medications and spreading overdose prevention to be available through k-12 grades within the Southern California campus to decrease the accidental fatal overdose from occurring.

Rudd RA, Seth P, David F, Scholl L. Increases in drug and opioid-involved overdose deaths—United States, 2010–2015. *Morbidity and Mortality Weekly Report*. 2016b 65:1445–1452. DOI: 10.15585/mmwr.mm655051e1

The NIH report showcases the steady incline in rates of deaths involving opioids such as heroin, methadone, and fentanyl within the span of 2010-2015. The communities within US states were becoming devastated by the opioid epidemic and this increase generated response efforts to spread public health awareness.

Ruhm, C. J., Center, A., Association, A. P., Barocas, J. A., Birnbaum, H. G., Boslett, A. J., Bronson, J., Carson, E. A., Center for Behavioral Health Statistics and Quality, Centers for Disease Control and Prevention, Prevention, C. for D. C., Coughlin, T., (US), C. of E. A., Davenport, S., Dowell, D., Administration, D. E., & Investigation, F. B. of. (2020,

October 27). *The economic burden of opioid use disorder and fatal opioid overdose in the United States, 2017*. Drug and Alcohol Dependence. Retrieved January 21, 2023, from <https://www.sciencedirect.com/science/article/abs/pii/S0376871620305159>

Shipton, E. A., Shipton, E. E., & Shipton, A. J. (2018). A review of the opioid epidemic: What do we do about it? *Pain and Therapy*, 7(1), 23–36.
<https://doi.org/10.1007/s40122-018-0096-7>

Sivanathan, N. (2019, February 20). *How drug company ADS downplay risks*. Scientific American. Retrieved January 10, 2023, from <https://www.scientificamerican.com/article/how-drug-company-ads-downplay-risks/>

The Scientific American article writes on how prevalent the marketing of pharmaceutical drugs is within US advertisements. Majority of the drug companies downplay the side effects of their drugs and use these commercials as incentives to try their ‘life curing’ medication. Transparency is key to making pharmaceutical companies wealthy.

Statista Research Department, & amp; 5, J. (2023, January 5). U.S. Pharma TV ad spend 2020. Statista. Retrieved February 20, 2023, from <https://www.statista.com/statistics/953104/pharma-industry-tv-ad-spend-us/>

The data gathered from Statista Research Department claims that in 2020, pharmaceutical advertisements accumulated for 75% of all American television advertisements. The shocking statline showcases that American citizens are constantly being bombarded by medication ads which are ever evolving within the US nation. The 75% of pharmaceutical television ads accumulates to \$4.58 billion US dollars

Stanbrook , M., The New England Journal of Medicine (2017, June 1). A 1980 letter on the risk of opioid addiction | Nejm. Retrieved March 15, 2023, from <https://www.nejm.org/doi/full/10.1056/NEJMc1700150>

Tabatabai, M., Cooper, R. L., Wilus, D. M., Edgerton, R. D., Ramesh, A., MacMaster, S. A., Patel, P. N., & Singh, K. P. (2023). The effect of naloxone access laws on fatal synthetic opioid overdose fatality rates. *Journal of Primary Care & Community Health*, 14,
<https://doi.org/10.1177/21501319221147246>

This journal article documents the statistics of all US states' death rates due to opioid fatalities. The authors then compare which states are using naloxone as an alternative to combat fatal overdoses and the data shows that access to naloxone is indeed slowing down death rates while saving lives.

The New York Times. (2015, October 30). *The numbers behind America's heroin epidemic*. The New York Times. Retrieved February 21, 2023, from <https://www.nytimes.com/interactive/2015/10/30/us/31heroin-deaths.html>

The NY Times piece details how Americans have switched from banned opioid medications to much cheaper illicit drugs as the nation tries to halt giving out mass pain meds. However, opioid addiction still remains, creating a huge problem for addicted Americans who are looking for a cheaper alternative. Heroin usage has taken a huge spike in the wake of the opioid epidemic.

U.S. Department of Health and Human Services. (2021, June 9). *Prescription opioids Drugfacts*. National Institutes of Health. Retrieved February 21, 2023, from <https://nida.nih.gov/publications/drugfacts/prescription-opioids>

The National Institutes on Drug Abuse website provides information on what prescription opioids are and what dangers they provide if they are misused by patients or people who aren't prescribed them. The website explains the difference between tolerance and dependence when it factors in opioid addiction.

Wang, S.-C., Chen, Y.-C., Lee, C.-H., & Cheng, C.-M. (2019, September 2). *Opioid addiction, genetic susceptibility, and medical treatments: A Review*. MDPI. Retrieved September 7, 2022, from <https://www.mdpi.com/1422-0067/20/17/4294/htm>

This article details how opioid addiction is a very complex and chronic disease that is often characterized by relapse and remission. It goes further by stating that within the past decade as opioid overdose has risen dramatically, the US has raised public awareness that Methadone, buprenorphine, and naloxone have proven their effectiveness in treating addicted individuals, and each of them has different effects on different opioid receptors.

VICE. (n.d.). *The opioid effect: An Ohio family rebuilds after addiction*. Video. Retrieved February 25, 2023, from https://video.vice.com/en_us/video/tonic-the-opioid-effect-an-ohio-family-rebuilds-after-addiction/5947fe954f77face6c418ac7

The VICE video does a good job putting the camera into the household of parents who are currently fighting from opioid addiction. I thought it was important to include such a vile piece of documentation because it allows the viewer to get a closer-interpersonal interaction with fellow Americans who are suffering from opioid dependence. The idea was to showcase that this could happen to any American household, not just rural areas.