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Gregg Lincoln
steellinco@gmail.com

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An Overview of the Drug Epidemic in the United States with a Focus on Opioids, Cocaine, and
Marijuana

Gregg Lincoln

Murray State University

Abstract

The prescription drug epidemic and illegal drug crisis has been at a steady incline for the last few decades. The United States have recently seen a rapid increase in overdose deaths, E.R. visits, and reports of misuse of prescription opioids and drug abuse (Meyer, Patel, Rattana, Quock, & Mody, 2014, p. 380). Part of the problem stems from doctors that write prescriptions for any ache or pain without thought for the potential addiction and destruction that it can cause if not used responsibly (Malinowski, 2018, p. 1032). As of 2016, at least 174 people die every day in the U.S. as a result of drug poisoning (Drug Enforcement Administration [DEA], 2018, p. v). Part of the issue also results from the constant flow of counterfeit and illegal drugs coming across the border and being sold on the street. There have been attempts in the past to stifle the outbreaks but with little success. While most prescription opioid addicts start as patients, they often end up moving on to hard drugs because of the easier access. For others, it has become so easy to obtain drugs on the street that they fall into the trap of temptation and are then addicted, causing drastic changes to their lifestyle for the rest of their lives. This epidemic is creating huge consequences for our nation and how it functions as a society to the point that none can argue that the state of the epidemic seems to require the focus of the nation in order to achieve success.

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Introduction

The current state of the drug crisis in the United States is exactly that- a crisis. With hospital visits, rehab sessions, and overdose deaths on an exponential climb, the United States is in a literal state of emergency and is certainly in a full-scale epidemic. With only marginal success in combatting the problem, it seems as if there are few answers to the outbreak. Our nation is witnessing major damage to many facets of society along with the obvious harm to individual citizens suffering from the effects of this crisis, largely consisting of opioids, cocaine, and marijuana.

Part of understanding the problem lies with understanding the history of drugs and their development into the creation of an addicted society. It is from opium that we get our different opioid pharmaceuticals and heroin (Labonville, 2017). It is a general consensus that opium was the first drug to ever be synthesized and used (Brownstein, 1993, p. 5391). The Sumerians, around modern-day Iraq, cultivated the poppies and isolated opium from their seed capsules around the end of the third millennium B.C. (Brownstein, 1993, p. 5391). Later, other parts of the world started utilizing the natural plants that were native to their areas for similar purposes as well. Coca plants grow in Central and South America, and today Columbia serves as the primary grower and distributor of cocaine (DEA, 2018, p. 39). Less recorded is the history of marijuana, although it is thought to have originated in central Asia and there are mentions of it being used by the ancient Greeks and Egyptians (National Institute on Drug Abuse for Teens [NIDA for Teens], 2015). Today the U.S. gets most of its marijuana through the drug trades in Mexico, despite the significant amount being grown domestically (DEA, 2018). While originally used for more ceremonious and natural purposes, the desired effects of these different types of drugs soon gained popularity and began to spread across the globe. As time went on, more developed

versions of the drugs like heroin, mixed substances, and even synthetic drugs started to be experimented with. These inventions made their way to the United States in the form of tonics and treatments but quickly became popular recreational substances (Kolodny, et al., 2015). As the demand began to rise and the development of stronger and more effective drugs started to thrive, the desire and addiction of these new and versatile drugs began to rise as well.

The prescription opioid crisis started in the 1990s when doctors began prescribing opioid-derived pain killers in increasing quantities with the promise that people would not become addicted to them (Malinowski, 2018, p. 1031). Unfortunately, that was not the case, and the increase in opioid prescriptions led to a widespread and out of control misuse of prescription and non-prescription opiates, leading it to become more evident than ever that the severity of their addictiveness was underestimated (National Institute on Drug Abuse [NIDA], 2019). Addiction treatment has not been able to keep up with the problem, and along with negative stigmas about the rehabilitation process and use of medication in treatment, treatment for affected individuals is very insufficient (Volkow, 2014).

This emerging problem led to a societal drain on multiple levels. Financially, the addiction, treatment, and deaths caused by illegal drug use and prescription drug misuse is a major factor in our debt-to-GDP ratio. In the year 1985 alone, there were \$58.3 billion in losses to the economy because of drug addiction (Meyer et al., 2014, p. 373). While that number is already staggering, it has continued to rise at a very rapid rate. Take that information into account along with the number of people who die and are no longer able to financially contribute to society, and the addiction really becomes a massive drain on society. Another piece of that drain on society is the thriving illegal drug trade. Many things move across the United States border illegally and drugs are one of them. These activities have also created the terrible gang

problem that we have in our country. Additionally, the health care system is suffering as it struggles to keep up with treating those that abuse drugs with not only their addiction problems but the other health issues that develop along with it or as a result of their unhealthy lifestyles.

While the government has made some great attempts at solving our nation's drug problem, it has overall continued to increase. Several new agencies have been formed, laws passed, regulations made, and money spent to try to research the science behind the problem, treat individuals, promote healthy lifestyles, and stop criminal behavior. While politics often fuel the direction that the government takes in opioid and drug issues, the federal government is increasing its action, but the future is still uncertain.

Types of Drugs

Opioids

Opioids are a pain-relieving drug usually used to treat moderate pain but are also used as an anesthetic and to treat diarrhea. Technically, the term opioid is a classification and a catchall for multiple types of drugs (Labonville, 2017). Opioids are a subclass of narcotics, and opiates are a subclass of opioids (Labonville, 2017). Each term has specific distinctions as to why they are classified this way.

Opiates are natural substances that come from opium. Opium is synthesized from the poppy plant and contains chemical compounds, examples of which are morphine and codeine (Labonville, 2017). It is widely agreed that the Sumerians (now modern-day Iraq) were the first to cultivate the poppy plant and isolated opium from its seeds around the third millennium B.C. (Brownstein, 1993, p. 5391). Its production remained that way until 1806 and the advent of morphine, which was named after the Greek God Morpheus, the God of dreams. A few short years later and codeine was invented as well (Brownstein, 1993, p. 5391).

Opioids are a product that works by binding the same receptors as opiates, but they do not occur naturally (Labonville, 2017). All opioids are either semi-synthetic or fully synthetic (Labonville, 2017). Synthetic opioids are manufactured chemically while semi-synthetic opioids are a hybrid generally mixing chemical modifiers to natural opium (Labonville, 2017). Examples of synthetic opioids are methadone and fentanyl while examples of semi-synthetic opioids are oxycodone and hydrocodone (Labonville, 2017). The first developments in altering opioids were around 1939 with the discovery of meperidine (Brownstein, 1993, p. 5391). Since that time, there have been tremendous leaps and bounds in the production on different opioids and its use.

Both opiates and opioids are in the narcotics class. Narcotics are a class of drug characterized by causing drowsiness, euphoria, dependency, and narcosis (Labonville, 2017). These drugs can be synthetic or non-synthetic (Labonville, 2017). While opiates, opioids, and narcotics all technically have a different meaning, the term opioid is now widely accepted as the preferred term to describe all three (Labonville, 2017). This is in part because of the negative connotation that comes with the word narcotic. The term narcotic is usually viewed negatively because it is generally associated with the illegal drug trade (Labonville, 2017). It is certainly easy to see why such a generalization has been made. In the last twenty years there has been an exponential climb in the amount of people who use heroin. Singling out any time, say 2007 to 2013, we see that there has been a three-fold increase in heroin use in the United States (Bauman et al., 2019). That translates to more than half a million Americans using heroin in 2013 (Bauman et al., 2019). With the continued increase in heroine users and the increase of people illegally taking opioids, it is obvious that the narcotic drug market is being exploited and that it is contributing to the crisis on the border. It is of absolute importance that the continual rise of heroin use is combatted as it is now being cut with fentanyl, and due to the nature of the drug, is

at a much higher risk of killing people (Bauman et al., 2019). Unfortunately, it seems as if there has yet to be a legitimate fix to the issue.

Cocaine

The drug cocaine is actually a product of the plant known as coca (Petersen & Stillman, 1977, p. 17). Coca, a plant from Central and South America, has been used by the indigenous natives possibly since pre-historic times, and their methods haven't changed much since then either (Petersen & Stillman, 1977, p. 17). Typically, they will take the leaves and chew them, periodically dipping the substance in some lime to aid in its use (Petersen & Stillman, 1977, p. 17). While there are other ways people use coca and its byproducts today, this is still the preferred method of many people in Central and South America (Petersen & Stillman, 1977, p. 17).

Around 1860, the drug known as cocaine was derived from the coca plant, and people began to experiment with it (Petersen & Stillman, 1977, p. 17). Modernly, there are three basic types of cocaine, but they mostly differ in the way they are delivered into the body (National Institute on Drug Abuse [NIDA], 2016). The methods of delivery are orally, intranasally, intravenously, and by inhalation (NIDA, 2016). The methods of delivery all center around the fastest way to get the drug into the bloodstream (NIDA, 2016). People use cocaine orally by rubbing it onto their gums (NIDA, 2016). Powder cocaine is used by snorting it, which covers the nasal tissues so it is rapidly absorbed (NIDA, 2016). People also inject cocaine by dissolving it in water and injecting it, which delivers a quicker and more powerful high (NIDA, 2016). The other method is by smoking the crack rock (NIDA, 2016). Crack cocaine is made by adding starch and boiling the liquid down into a rock (NIDA, 2016). It is called crack because of the crackling sounds it makes when placed in fire. Cocaine used this way became very popular

because its absorption into the bloodstream is almost as fast as injection but with less risks (NIDA, 2016).

Marijuana

Marijuana, also known as pot, weed, cannabis, dope, Maryjane, etc., is a mixture of the dried leaves and flowers of the plant *Cannabis sativa* (National Institute on Drug Abuse [NIDA], 2018b). It is a plant currently most popular for its ability to get a person high if smoked or ingested. The chemical in marijuana plants that gets a person high is THC, or tetrahydrocannabinol, a psychoactive chemical that alters the mind (Centers for Disease Control and Prevention [CDC], 2018a). The chemical is found in the resin of the leaves and buds, usually from the female cannabis plant (NIDA, 2018b).

Marijuana is most commonly smoked in hand-rolled cigarettes called joints, in a pipe, in a bong or waterpipe, or in a blunt, which is marijuana rolled in a cigar, though it can be used in other ways (NIDA, 2018b). Many people when using it medically, will brew it into a tea, and sometimes they cook it into foods like cookies, brownies, or various types of candy (NIDA, 2018b). These types of marijuana use are called edibles (NIDA, 2018b). It is also sometimes consumed by placing it in a vaporizer or made into a resin containing very high doses of marijuana's active ingredients (NIDA, 2018b). These different variations of resin have become very popular with people using marijuana both medicinally and recreationally (NIDA, 2018b). As stated above, marijuana has multiple uses including paper production, clothing, oils, rope, certain medicines and lotions, etc., but currently it is most commonly only used for its mind-altering effects (NIDA for Teens, 2015).

History of Drugs

Opioids

The origins of recreational drug use can be tracked as far back as the ancient Greeks and seen in the writings of other ancient civilizations (Brownstein, 1993, p. 5391). Because of obvious poor recordings of specific parts of history from these time periods, there is a general feeling of uncertainty surrounding when the opium poppy plant was first cultivated and where it was found (Brownstein, 1993, p. 5391). It is believed that it may have been grown for the consumption of its seeds before the people discovered that they could prepare opium from its leaves and ripe seeds (Brownstein, 1993, p. 5391).

As mentioned previously, it is difficult to use written records to determine the origin and early history of opium use and abuse because the descriptions of drugs that we are given by ancient authors are often non-specific and ambiguous (Brownstein, 1993, p. 5391). There is a possible mention of opiate production in Homer's "The Odyssey" where Helen gave Telemachus and his men something to help them overcome their sorrow concerning Odysseus and his absence (Brownstein, 1993, p. 5391). It is argued, however, that it was not opium given to Telemachus, but henbane instead. At any rate, the general consensus is that the scene was referencing opium use (Brownstein, 1993, p. 5391). Despite the difficulties that arise from trying to interpret ancient writings like "The Odyssey", they, along with archeological data, paint a clear picture of frequent opium use in antiquity (Brownstein, 1993, p. 5391).

It is also in general agreement that the Sumerians, from what is now modern-day Iraq, cultivated the poppy plant and were able to isolate opium from its seeds (Brownstein, 1993, p. 5391). From there it spread to India and then around the world, including early America. While the roots in illicit drug use and trafficking in the United States is unknown, there are some who hypothesize that it began in the early eighteenth century when people began to become obsessed with a popular, medical opium at the time: Dover's powder (Coffee, 2018, p. 2). Dover's powder

is an opium powder formerly used as a pain reliever and a diaphoretic (Dover's powder, n.d.). After its introduction in 1709, Dover's powder rose to prevalence in the United States and became one of the most popular and widely-used opium preparations in the United States for nearly two centuries (Coffee, 2018, p. 2). By the time the eighteenth century was ending, patented medicines that contained opium were sold in pharmacies, at grocery stores, and even through the mail (Coffee, 2018, p. 2). Later on, in the 1800s, opium smoking became popularized by miners and railroad laborers who immigrated to the United States from China (Coffee, 2018, p. 3). In fact, it became so popular that between the years 1880 and 1886 there was approximately 646,280 pounds of smoking opium imported to the United States through legal means (Coffee, 2018, p. 3). This practice was halted in 1887 after the formation of the anti-opium laws, which were directed at the Chinese, came into effect (Coffee, 2018, p. 3). It was around this same time period that the world saw the formulation of morphine and shortly after, codeine (Brownstein, 1993, p. 5391). Since then, these drugs have ushered us into the modern era of opioid use and formulation with more variations but minor developments to the types of opioids that are used today.

While advancements in the developments and creation of new opioids has slowed over the last decades, the opioid epidemic has been steadily exploding. Synthetic forms of opioid drugs have become more popular and widespread, but overall, little changes have occurred in the grand scheme of how opioids have been altered and used recently compared to past history. What has become the opioid epidemic that the nation is dealing with today primarily started gaining momentum in the 1990s and has been broken down into three stages. The first stage or wave was in the 1990s when synthetic opioids and methadone were prescribed extremely often (Centers for Disease Control and Prevention [CDC], 2018b). It has now been widely recognized

that in the 1990s the pharmaceutical companies developing the opioids made very inaccurate promises that not only were opioids effective at treating pain and chronic pain, but that they would not be addictive or cause major issues (Malinowski, 2018, p. 1031). Obviously, it has since been found that the opioids are not effective in managing pain long-term in noncancer patients, and instead, they often cause major complications, including likelihood of addiction. The sale and use of prescription opioids as well as accidental overdose deaths of the drugs in the United States has quadrupled since 1999 (Cobaugh et al., 2014, p. 1543). Because of the blind faith that physicians had in the prescription opioids and their willingness to prescribe them despite a lack of knowledge concerning their addictiveness and in some cases a lack of clinical data, a downhill spiral was born (Malinowski, 2018, p. 1032). We now know that giving patients long-term opioid therapy is usually the beginning point for high dose opioid therapy, a practice that often leads to addiction and illegal diversion of pills (Manchikanti et al., 2012, p. ES30-ES31). Even insurance companies have contributed to this issue. For example, United Healthcare, the nation's largest insurance provider makes it easier to give and fill a prescription for some opioids and yet very difficult for a patient to receive non-opioid medications (Malinowski, 2018, p. 1032). The more restrictions and obstacles that there are for certain drugs, the more likely that a physician or pharmacist will push for a different one (Malinowski, 2018, p. 1032). While it is unclear why groups like physicians or insurance companies have created this situation with their policies, it has only made the epidemic worse. Obviously, most speculate that money is the driving force behind these policies, but even this issue is only part of a very multifaceted crisis.

The second wave of the epidemic began in 2010 with a drastic increase in overdose deaths from heroin (CDC, 2018b). 2010 recorded 2,789 fatal overdoses of heroin, which was a

50% increase from the yearly amounts seen fairly consistently since the first stage began (Volkow, 2014, p. 9). The Centers for Disease Control and Prevention (2018b) have found that people that become addicted to prescription opioids are 40 times more likely to become addicted to heroin. Four out of five of heroin users started their drug problems with prescription opioids (Liu, Pei, & Soto, 2018). It has become quite evident that the misuse of prescription opioids often leads to the use of illicit drugs like heroin. Part of this is because it is cheaper and easier to obtain heroin and partly because of the tolerance that is developed on the prescription opioids that means that the person requires more of the drug in order to receive the same effects (Volkow, 2014, p. 8). This second wave marked a quick and very serious jump from the opioids received from prescriptions to the illegal drug heroin, creating an even bigger set of complications for the nation.

The third wave of the epidemic started in 2013 and was marked by an increase in deaths from the synthetic drugs like fentanyl (CDC, 2018b). In 2016 alone, there were over 20,000 deaths from fentanyl and similar drugs, primarily from illicitly manufactured fentanyl (IMF) (Liu et al., 2018). Fentanyl is a drug that is often counterfeited or made on the streets, making it even more dangerous since this increases the chances of contamination, impurities, or inaccurate potency that can cause additional problems for the person using it.

These three stages of the opioid epidemic in the last two decades have demonstrated the continuous and rapid progression of opioid abuse. What started as cultural use of opium and the development of opioids for the pain relief of serious pain has evolved into the addiction of opioids of all kinds at worsening levels. This progression only brings more death and destruction to our society made evident in the uninterrupted rise of issues.

Cocaine

The history of the drug substance known colloquially as cocaine has a relatively short history that roughly covers a little more than a hundred years (Petersen & Stillman, 1977, p. 17). However, the use of coca and coca leaves can be traced to pre-historic times (Petersen & Stillman, 1977, p. 17). It seems nearly impossible to date the exact time period when people started chewing the leaves of the coca plant, but it is believed that people started chewing the leaves for their euphoric effect around 6 A.D., with the earliest estimations of use falling around 3000 B.C. (Petersen & Stillman, 1977, p. 17). Archeologists have found evidence of this practice taking place in native Indian mummies they unearthed (Petersen & Stillman, 1977, p. 17). These mummies were buried with supplies of coca leaves and with pottery that depicted the characteristic cheek bulge of someone chewing coca leaves (Petersen & Stillman, 1977, p. 17). The same way that coca leaves were chewed back then is still being used today by many in South America (Petersen & Stillman, 1977, p. 17). The way this is done is the chewers will begin chewing a wad of leaves and then start to apply a quantity of lime to the substance (Petersen & Stillman, 1977, p. 17). They usually get this lime substance from the ashes after burning things like plants, shells, or limestone, of which the purpose is still debated by experts, but many believe that it is added for a multitude of reasons (Petersen & Stillman, 1977, p. 17). The purpose of the lime could be to improve the flavor, to potentiate the action, or possibly to aid in the release of cocaine from the coca leaf or even to simply increase salivation (Petersen & Stillman, 1977, p. 17).

Although coca use preceded the Inca empire and was previously used by other native tribes, it is most commonly associated with the Incan civilization which rose to prominence in the 11th century and who were the first to cultivate the plant so that it might have bigger leaves and higher yields (Petersen & Stillman, 1977, p. 18). By the end of the 15th century, the Topa

Inca had coca farms and a monopoly on the coca market, restricting the sale and use of coca to only high-profile members of society or for special prizes or situations (Petersen & Stillman, 1977, p. 18). For the most part, it was only to be used in religious ceremonies (Petersen & Stillman, 1977, p. 18).

It is around this time that the Spanish began a conquest in South America. They soon realized the natives' dependence on the coca plant (Petersen & Stillman, 1977, p. 19). They at first sought to use the plant to control the natives and make them more favorable, although, it wasn't until much later, around the 1800s, that the Spaniards occupying pieces of South America decided that the coca plant was marketable enough to ship back to Spain (Petersen & Stillman, 1977, p. 20). Spanish physicians desired it for its therapeutic effects (Petersen & Stillman, 1977, p. 20). They believed that it could be used to treat a variety of ailments, including skin disorders, asthma, colds rheumatism, laryngitis, toothaches, and other disorders (Petersen & Stillman, 1977, p. 21). People also encouraged its use as a stimulant drink in Spain to stem the economic drain on Spain from importing coffee (Petersen & Stillman, 1977, p. 21). They also believed that should it replace other stimulant drinks in Europe, they could corner the market, being the sole coca provider in all of Europe (Petersen & Stillman, 1977, p. 21). Despite the accounts describing the usefulness of the coca plant, it failed to attract interest in Europe, and many even doubted the authenticity of its medicinal and recreational ability (Petersen & Stillman, 1977, p. 21). Some attribute this to a deterioration of the constitution of the leaves over such a long sea voyage resulting in a lack of effect, and the fact that the environment and soil in Europe did not lend itself to favor the needs of the coca plant (Petersen & Stillman, 1977, p. 21).

By around 1850, there began to be experiments and tests seeking to isolate and use the ingredient in coca that made it so special (Petersen & Stillman, 1977, p. 21). It was Albert

Niemann who first isolated the drug in 1860 that has become known as cocaine (“Origin and History”, n.d.). Over the next 20 years it began to gain popularity in the medical field (“Origin and History”, n.d.). It was used in eye, nose, and throat surgery as an anesthetic, and it was used to limit bleeding by constricting blood vessels (“Origin and History”, n.d.). It was also open for regular consumption being used in various food and drink items like tea and Coca-Cola (“Origin and History”, n.d.). It even began to gain notable popular standing being championed by the respected Venetian physician Sigmund Freud (Petersen & Stillman, 1977, p. 22). He cheered it on for its use both in treatment and recreationally and spoke of its ability to treat the opium habit that many people had grown (Petersen & Stillman, 1977, p. 23). He also remarked about the drug’s powerful ability to ward off hunger, fatigue, sleep, and that cocaine compelled people to intellectual effort, attributes that he witnessed in himself and others (Petersen & Stillman, 1977, p. 23). While Freud did not believe the reports about its addictive nature and adverse consequences of use, he compiled a long list of uses for cocaine claiming they had the ability to be used as a stimulant, to treat digestive disorders dealing with the stomach, to treat wasting diseases, to treat addiction specifically relating to alcoholism and opiate addiction, to treat asthma, as an aphrodisiac, and as a reliable local anesthetic (Petersen & Stillman, 1977, p. 23).

In the last two decades of the 19th century, there developed a serious interest both in coca and cocaine and spawned a relatively uncritical promotion and advocacy of patented medicines and tonics that have been infused with cocaine (Petersen & Stillman, 1977, p. 27). At this time, there were very few restraints governing the production and sale of remedies that contained a variety of what is now regarded as abusable substances (Petersen & Stillman, 1977, p. 27). Because there was such extreme enthusiasm toward cocaine from people prominent in the scientific community, it is not surprising that it was actively promoted for commercial interests.

It even gathered the support of people of note like Dr. William Martindale, president of the Pharmaceutical Society of Great Britain, who advocated for its use commercially as a treatment for numerous medical problems as well as in the developments of tonics and stimulant drinks, even suggesting that it replace coffee (Petersen & Stillman, 1977, p. 27).

This sudden obsession with cocaine and coca didn't last however, by 1914, the Federal Harrison Narcotics Acts was passed, which effectively restricted all distribution of cocaine (Petersen & Stillman, 1977, p. 30). Over time, more and more laws were passed that made getting and using cocaine more difficult and more illegal. After it was outlawed, most cocaine use became specific to the high-class individuals like the musicians, actors and actresses and other noticeable figures, along with certain affluent drug dealers that lived in the ghetto (Petersen & Stillman, 1977, p. 31). This is to due partly because when it was made illegal, it drastically increased in price, making it only available to the affluent members of society (Petersen & Stillman, 1977, p. 31). By the 1930s, cocaine use began to once again be on the rise, slowly growing until its renaissance in the 1970s placing it firmly in the lime light as a drug of status (Petersen & Stillman, 1977, p. 32). Since then, it has been a staple in music and film, often dramatizing it and aiding in its prominence (Petersen & Stillman, 1977, p. 32). Modernly, cocaine still has a tight grasp amongst citizens of the United States, and it is no longer a drug meant purely for the affluent due to the fact that crack cocaine is cheaper and has become popular in poorer, predominantly African American communities (Petersen & Stillman, 1977, p. 32). As of late, there is every indication that its popularity is still rising.

Marijuana

Marijuana, also known as cannabis or hemp, has quite a long history, going back several thousand years (NIDA for Teens, 2015). It is believed that it originated in central Asia (NIDA

for Teens, 2015). However, in most cultures the purpose of marijuana was not to get high, but instead it was greatly valued for its other properties (NIDA for Teens, 2015). Hemp fibers were valued for making cloths and various different textiles while the seeds were used for food and oil (NIDA for Teens, 2015). It is believed that the plant they used was relatively low in THC, the psychoactive chemical responsible for the intoxication felt when ingesting marijuana (NIDA for Teens, 2015). It is believed however, that the ancient civilizations did know of its mind-altering effects and may have grown different strains of the plant for this purpose as well (NIDA for Teens, 2015). The older evidence of this is from approximately 500 B.C. where there were burned hemp seeds found in the graves of shamans in China and Siberia (NIDA for Teens, 2015). It is believed that it was not used for recreational purposes but rather as a religious and healing tool (NIDA for Teens, 2015). The use of marijuana appears in ancient medical books from Egypt and Greece, describing its use to help with stomach issues similar to how it is used medically today (NIDA for Teens, 2015).

The first recorded recreational use of marijuana is from an ancient Greek historian named Herodotus (484-425 B.C.) (NIDA for Teens, 2015). He described how the Scythian people from Eurasia inhaled the vapor of cannabis seeds and flowers thrown on heated rocks (NIDA for Teens, 2015). Since then, marijuana has made its way around the world and has been used for various different reasons (NIDA for Teens, 2015). In the 1500s, it made its way to North and South America via European settlers (NIDA for Teens, 2015). The settlers used hemp to make many things like sails, rope, clothing, paper, and other valuable commodities (NIDA for Teens, 2015). Growing hemp was very popular in the American colonies, but it was for the purpose of manufacturing goods (NIDA for Teens, 2015). This is in part due to the fact that the hemp they grew had very little THC in it (NIDA for Teens, 2015). Hemp was however, a very big part of

their early economy (NIDA for Teens, 2015). Fast forward to the 1800s, and people had begun to use marijuana medically, as it was helpful in treating the symptoms of cholera (NIDA for Teens, 2015). By the 19th century, cannabis oil was included in all sorts of tonics, remedies and medicines to treat a wide variety of sicknesses (NIDA for Teens, 2015). This is during the time before practical medicine when it was believed that herbal and animal extract could treat illnesses (NIDA for Teens, 2015). Marijuana started coming under restriction in 1937 with the passing of the Marijuana sales tax (Bridgeman, & Abazia, 2017). Then, with the passing of the Controlled Substances Act of 1970, it was prohibited under federal law (Bridgeman, & Abazia, 2017).

In 1996, California became the first state to allow legal access medical cannabis with doctor supervision under the Compassionate Use Act (Bridgeman, & Abazia, 2017). As of January 1, 2017, 28 states as well as Washington D.C., Guam, and Puerto Rico had legislation governing medical cannabis sale and distribution (Bridgeman, & Abazia, 2017). As of 2017, eight states made marijuana legal for recreational use for adults (Bridgeman, & Abazia, 2017). These states are Alaska, California, Colorado, Maine, Nevada, Oregon, Washington, Massachusetts, and the District of Columbia (Bridgeman, & Abazia, 2017). It seems evident that other states are heading in the same direction also. Regardless, marijuana remains the most widely-used illegal drug in both the United States and Europe (Budney, Roffman, Stephens, & Walker, 2007).

Areas of Society Effected

The drug problems and the prescription opioid crisis in the United States has had a very serious effect on our society through many different facets of our culture and systems of government. Not only does the issue bring great changes to individual health and how health care

operates, it also alters the functions of our economy, the justice system, pharmaceutical industry, and life lost to broadly name a few. Understanding the affects that these issues have on our country will help us to not only grasp the seriousness of the problem but also hopefully how to curb it in order to get a significant dilemma turned around for the health of our nation as a whole.

When it comes to people that have started using prescription drugs recreationally, the numbers have skyrocketed over the past decade or so. Likewise, the number of deaths resulting from overdose have as well. As of 2016 at least 174 people die every day in the United States as a result of drug poisoning, which is more deaths each year than die from motor vehicle accidents, suicide, homicide, or firearms (DEA, 2018, p. v). The number of people that use prescription pain medications in an unauthorized way rose from 11 million in 2002 to 12.5 million in 2007 and from 1999 to 2007 there was a 124% increase in overdose deaths (Meyer et al., 2014, p. 372-373). The loss of life that the nation has seen just in actual deaths from overdose has been tremendous. This doesn't even take into account the years that are lost from a drug abuser even when they don't die from overdose. The strain of overusing medications and the unhealthy lifestyle that typically accompanies it drain their health and leave their economic and social footprint on society withered. This is because many people that are addicted to drugs will not be contributing to society through employment or seeing to the education and well-being of their children to the same degree as if they were healthy and able to function at a level closer to their potential. To the contrary, they will require more health care and treatment that will only continue to take away from the other aspects of their life. When abusing opioids, there is approximately a 17-18% reduction in a person's productive hours, referring to the time they would have spent being productive at either home or work (Florence, Zhou, Luo, & Xu, 2016, p. 5). So, even when there is not a loss of life through overdose, people who abuse drug can lose

time from their life due to poor health in addition to the time they lose that they could have spent doing something else.

As with opioids, the loss of years of life and time of productivity is also a problem with other abusing other drugs as well. The use of heroin has increased across almost all demographics in the past decades (Bauman et al., 2019). An increase in the use of the drug translates to more lives lost, more people with substance abuse disorders, and more consequences on our society. Death from heroin overdose in 2017 was over 15,000 people, representing a five-fold increase from 2010 (CDC, 2018b). In addition to this, heroin users often use other drugs as well. A study from 2013 found that more than nine in ten people that use heroin also use at least one other drug as well (CDC, 2018b). This means that people that abuse heroin tend to be so busy taking drugs and trying to get their next set of drugs for a fix that they don't have time for much else. Likewise, cocaine sends over 14,000 people to their death every year from overdose, although the number of users has steadily remained at around two percent of the nation's population (CDC, 2018b). Marijuana, on the other hand, does not typically send people to the hospital or cause overdose deaths. Marijuana is used by about 22.2 million people each month (NIDA, 2018b). While there are many negative affects of using marijuana, fatality is not really one of them, making it even more appealing and prevalent to young people. However, marijuana does cause marijuana use disorder in approximately 1.5 percent of the population, leading to various physical, but mostly social issues for those that use it (CDC, 2018b). Marijuana adversely affects people by causing complications with learning, memory, and attention so that they are typically functioning at a lower intellectual level than normal (NIDA, 2018b). For kids in school, marijuana has been shown to greatly decrease their likelihood of completing high school or going to college; instead they raise their chances of using other drugs,

becoming dependent on drugs, and committing suicide (NIDA, 2018b). For adults that are working, marijuana causes difficulties in performance as well. A study about postal workers showed that those that tested positive for marijuana before employment “had 55 percent more industrial accidents, 85 percent more injuries, and 75 percent greater absenteeism” than employees that were not users of marijuana (NIDA, 2018b). Many are fooled or fool themselves into using marijuana thinking that since they won’t get addicted or overdose then there are no negative consequences, but this is definitely not the case. While it is impossible to say how other factors play a role in the causalities in some of these statistics, it is very clear that those that are involved with drugs like marijuana are more likely to face unemployment, welfare dependence, criminal behavior, and lower levels of satisfaction in life (NIDA, 2018b). There are always negative consequences with drug abuse even when not easily seen.

These types of unhealthy and unrewarding lifestyles don’t leave much time for work and family, especially when you take into consideration the crime they might be involved in and the health problems that they have to deal as a result of their drug use. Drug abusers are not as able to contribute to themselves or society in the same ways as if they were healthy and otherwise unencumbered by the time that they end up spending being involved with the use of drugs. Being around other drug users or sellers also means that they are getting involved with other criminals, which only increases their chances of getting involved with additional criminal activity or risky behavior. An additional piece of information that is often overlooked is the fact that even these statistics from the CDC always take into account the population over the age of 12, meaning that the use of drugs is prevalent enough even at this young age to need to be included in their studies of drug use. Drug abuse is also not just an adult problem; it’s a problem that affects teens and pre-teens, too.

The Criminal Justice System

Another one of the ways that drug abuse has drained society is through the resources that must be allocated to dealing with the problems the crisis creates when they could be used for other issues. Due to the abuse, the criminal justice system has seen an increase in incarcerations, crime, and the time and energy needed to deal with both (Florence et al., 2016, p. 5). In 2004 it was reported that 91.4 percent of the federal prison population and 69.4 percent of the states' prison populations were serving because of drugs and drug trafficking (Coffee, 2014, p. 11). This translates to more employees needed to increase the manpower to handle these issues along with additional resources, which also means more of the taxpayers' money is required. All of this effort to basically just try to fix the symptoms of the opioid and drug crisis. As with other drugs, prescription drug dependence and abuse results in higher levels of crime. Many crimes are committed simply through the attempts to get, use, or sell prescription drugs. Other crimes are committed as a result of an unlawful lifestyle, since committing crimes tends to lead to more crimes. Additionally, various government agencies like the Drug Enforcement Administration (DEA) has had to step up its investigations and legal actions because of the problem with abuse of prescription opioids (Cobaugh, Gainor, Gaston, Kwong, Magnani, McPherson, ... & Krenzelok, 2014, p. 1547). In recent years, they have greatly increased their suspensions and fines on pharmacies and wholesalers that they believe to have dispensed opioid medications improperly or overlooked diversions of the drugs (Cobaugh et al., 2014, p. 1547). They also push for pharmacists to double-check the legitimacy of orders for opioids and to make sure that the prescription is both necessary according to the legal regulations and it is not for more medicine than is required for the patient. Throughout the more recent advancement of the opioid crisis, the legal system has definitely had to increase its vigilance to enforce laws and to add new laws in

order to try to keep the problem from getting out of control. Cocaine is another drug that is heavily linked to crime. Not only does it cause problems because of its illegal nature and the fact that it puts people around other criminals, its' pharmacological effects make the user more aggressive, sexually aroused, anxious, irritable, confused and paranoid while simultaneously lowering self-control (DeSimone, 2007, p. 627). This is a dangerous combination of physical and social circumstances for a person to be in. As part of the Arrestee Drug Abuse Monitoring program in 1998 that tested people over the age of 15 that were arrested for nondrug related violent or property offenses, it was found that 32.9 percent had tests that were positive for cocaine (DeSimone, 2007, p. 627). This is a high correlation considering that in that year's National Household Survey on Drug Abuse only 0.8 percent of participants reported using cocaine in the past month (DeSimone, 2007, p. 627). These factors surrounding drug use only make the work of our justice system more difficult and more taxing on the people working to make our nation safer and more stable.

Counterfeit Opioid Drug Market

Yet another negative effect that the opioid epidemic has had on our society is an increase in counterfeit drugs. Fake and pirated products are present in almost every industry, and the drug industry is no exception. Just like the vendors selling knock-off Gucci bags on the city streets, there are vendors, especially over the Internet that sell fake medications. Counterfeit drugs are a contributor to the opioid crisis and pose a multitude of problems. Counterfeit drugs are drugs that have possible contamination, incorrect dosing, or wrong ingredients (U.S. Food and Drug Administration, 2016). Counterfeit drugs may not even contain the necessary active ingredient and therefore pose serious health risks to the consumer (Blackstone, Fuhr, & Pociask, 2014, p. 217). People make counterfeit drugs because it is cheaper to skip steps and not go through legal

and medical regulations. Some of these drugs are simply made overseas and sold over the Internet, however some are even made on the street. It is very possible for a patient to take counterfeit medicine and have complications, no changes, or even die because they are not taking the actual medicine that they need. The makers and sellers of these medicines are only concerned with profit and therefore do not care about the health or well-being of the consumer at all.

Counterfeit opioid drugs also carry the same risks. The fake drugs are usually made so that the costs of production are lower, so there is a great chance that corners were cut. Contamination is a potential result as well, since authenticity and legitimacy cannot be guaranteed. However, people that buy counterfeit opioids are often looking for the cheapest avenue possible to get their high and so they seek out these cheaper but phony medications. Another issue with counterfeit drugs is that they also contribute to a decrease in our economy and jobs. This is because the research and creation of medicine is an intellectual property-driven industry. These industries account for over a quarter of all employment in the United States and pharmaceutical companies spend around 15-17% of their revenues on research and development (Blackstone et al., 2014, p. 221).

It was reported that counterfeit drugs generated \$75 billion in 2010 alone, representing a significant loss of money for the pharmaceutical companies (Blackstone et al., 2014, p. 221).

This translates to less and less money that the pharmaceutical companies are able to invest into the research and development of medication and diseases. This also results in a loss of incentive for innovation in the pharmaceutical industry. There is less reason to work and make advancements in your field if others will simply bypass your patents, ignore safety procedures, and sell to your consumers for cheaper. The driving need for more opioids fuels a desire for counterfeit drugs whether the consumer is aware of their bogus quality or not and the incentive for innovations is taking a huge hit for it. The opioid crisis is increasing the market for

counterfeit drugs in both the United States and around the world and simply creating more and more problems along with it.

The Health Care System

Perhaps one of the biggest consequences of the prescription opioid and illegal drug crisis is the burden that has been placed on the health care system. First of all, there is a huge increase in the amount of money that is spent because of people that are abusing opioid prescriptions. A study conducted for the year 2013 concluded that \$30.8 billion was spent on health care and substance abuse treatment for prescription opioid use alone (Florence et al., 2016, p. 6). For the individual opioid abuser this number could represent an additional \$17,000 a year in medical expenses if they have Medicare, \$15,500 for private insurance, and over \$13,700 for Medicaid (Florence et al., 2016, p. 6). The additional care and treatment that is required for people that are abusing drugs or opioid medications or are dependent on them creates a significant increase in costs not only for them but the taxpayers as well. All of those insured with Medicaid or Medicare are funded by the taxpayers, placing a bigger burden on the public. The money that this issue costs the public is yet another reason why it has become such a major concern for the nation. No one likes the idea of having to shell out more money and go into deeper debt as a nation to care for drug abusers' bad lifestyles. The health care system has also had to make serious changes in the way that it operates with the rise in problems with prescription opioids. More steps have to be taken by physicians when prescribing opioids, the pharmacists must double check the orders and jump through extra hoops before filling them, health care facilities must make sure that employees are not stealing medicine, and administration workers have to be on the lookout for doctor shopping to name a few (Cobaugh et al., 2014, p. 1548-1541). These are examples of extra steps that those in the health care field have to go through to meet both federal regulations

and institutional policies in order to try to curb the problem with opioids (Cobaugh et al., 2014, p. 1549). Extra processes slow the system down and require more hours of labor, costing both the providers and consumers more time and money in order to compensate. The health care system has also had to counteract this issue with more education to health care workers about the necessary policy changes in addition to trying to teach and inform patients and the community about the dangers of using opioids nonmedically and becoming dependent on them. More studies and research must also be completed on the drugs that people abuse in understanding how to prevent people from abusing them and treat them when they do. Some of this research must be implemented into new practices for physicians when prescribing medications, too. Extra training and teaching for employees in health care facilities and pharmacies takes the employees away from their work, making their time cost more to the consumer, which is especially undesirable because of the fact that this means there is less time for the health care workers to help the actual consumers. Health care workers have also had to become more educated on the illegal drugs and how it effects the patients that they see. Especially with new street drugs being developed and previously known street drugs getting mixed with different drugs, it makes the work of the health care professionals even harder to diagnose issues and give the right treatment or medication to the patient. For example, when drug abusers come in to the emergency department, it can be very difficult for the staff to be able to decide which drug or often drugs the patient was taking. Obviously, treatment varies depending on the medical problem, but if the patient was taking multiple drugs, some perhaps mixed, and also has other illnesses or health problems, then it can pose quite a difficult and costly job for the medical personnel. Sometimes there is also not enough time to wait for laboratory tests to show what exactly is in the patient's system and the typical tests are not always the most accurate way to find some of the street drugs that are

becoming more common (Cobaugh et al., 2014, p. 1546-1547). Sometimes precious time cannot be wasted in treating the patient to stop and run the necessary tests, which simply makes it even harder for the medical professionals (Cobaugh, 2014, p. 1546-1547). Prescription opioid and drug dependence, abuse, and overdose have become a very serious problem because of the changes that it has made to the way that the health care systems in our nation operate.

The Economy

Like we've seen in the other areas of society discussed already, the effects on the economy from the prescription opioid and drug crisis are very severe. The National Drug Intelligence Center in its report on the economic impact of illicit drugs pinned the annual cost in 2007 from illicit drug use to be more than \$193 billion (2011, p. ix). This is also an increase from the same agency's study of the year 2002 that reported \$180.9 billion in economic cost from illegal drugs (National Drug Intelligence Center [NDIC], 2006). This is broken down further into the three areas that money is spent: healthcare totaling over \$11 billion, criminal justice costs totaling over \$61 billion, and loss of productivity coming in at just over \$120 billion (National Drug Intelligence Center [NDIC], 2011, p. ix). Not only have the purchases of both legitimate and illegal prescriptions of opioid increased dramatically in the past decades, but the ways that this affects other aspects of society have cost an unimaginable amount of money and resources. "Currently, more than \$9 billion is spent on opioids in a year. In addition, the White House Budget Office has estimated that drug abuse costs the US government nearly \$300 billion a year" (Meyer et al., 2014, p. 384). A different and very detailed study from analyzations of 2013 found that the economic burden in the United States from opioid dependence and abuse calculated an annual cost of \$78.5 billion, including government and public costs (Florence et al., 2016, p. 1). No matter what the exact number is, billions of dollars makes a huge difference in our society

and the way that future generations are brought up. Most of the money from the prescription opioid crisis is spent in health care and treatment, followed by criminal justice costs and loss of productivity (Florence et al., 2016, p. 1). The loss of productivity from all of these figures also has to take into account the way that businesses are affected. When their workers are on drugs, it causes a high turnover, higher chances of workplace incidents, more money paid to medical insurance, and higher chances of money or equipment stolen to pay for drug habits (NDIC, 2006). This absenteeism and loss of money to the drug using employee makes it harder for businesses financially, placing a burden on yet another group of people (NDIC, 2006). Another thing to be considered is how important early intervention can be. If earlier intervention takes place, then there will only be the costs with the basic intervention, however, if the drug problem continues, then society often pays twice: once to deal with the problematic behavior through incarceration or medical treatment and then twice through the loss of productivity from that person (NDIC, 2011). The financial burden that this crisis has placed on our nation is extremely high and without any additional intervention will only continue to skyrocket out of control, taking our resources away from other important matters, too.

Illegal Drug Trade

Because of the demand for illegal drugs, there is also a supply that naturally involves criminal activity. This creates additional problems for our criminal justice system as the drugs must be smuggled and with different groups trying to control the market in certain areas, gangs are formed, causing even more violence. Drugs are smuggled into the U.S. on a daily basis all over the country through many different ways: on airplanes, buses, personal vehicles, boats, backpacks, and more. The most prominent way though is across the southwestern border on vehicles going around the Border Patrol checkpoints and points of entry (DEA, 2018). The most

drugs make their way across into Texas and California, especially the San Diego area (DEA, 2018). This is a huge issue for not only the vast number of drugs that make their way into the country, but the crime and criminals that follow as well.

Fentanyl and other synthetic opioids are either used or mixed with other drugs like heroin and have become more and more popular causing increasing amounts of fentanyl to be confiscated more recently (DEA, 2018). Since fentanyl is created entirely in laboratories rather than with plant material, the majority of the illegal forms are made in China and Mexico, making both the Canadian border and Mexican border target areas for entry into the country (DEA, 2018, p. 32-33). The Mexican-produced fentanyl is typically in higher quantities but lower purity, whereas the Chinese send small amounts but almost completely pure packages of fentanyl into the U.S. (DEA, 2018, p. 33-35).

The heroin market is dominated by the Mexican Transnational Criminal Organizations (TCOs) by operating the smuggling routes and passing the drugs on to gangs in the U.S. that distribute them down to regional and local levels (DEA, 2018, p. 11). 91 percent of the heroin analyzed by the DEA was from Mexico (DEA, 2018, p. 18). 2017 saw 1,073 kilograms of heroin seized on just the San Diego portion of the southwestern border alone, which was a 59 percent increase from the total seized in 2016 (DEA, 2018, p. 18-19). The supply and demand of heroin in the United States has been increasing without fail for over a decade and it has brought almost nothing but death, crime, and health problems with it.

Almost all of the cocaine in the U.S. was grown in Columbia, evidenced by the fact that in 2017 the DEA has found that 93% of cocaine samples that were tested were of Columbian origin (DEA, 2018). Shipments of cocaine across the southern border has continued to increase to the point that there are also more traffickers willing to risk sending extremely large shipments

(DEA, 2018, p. 43). This is due to the increased demand for the drug and has led to more findings for the DEA (DEA, 2018, p. 43). In 2017 there were 13,205 kilograms of cocaine seized along the southwestern border, which still serves as the main entry point for drugs coming into the United States (DEA, 2018, p. 51).

Marijuana from Mexico and the Caribbean are considered to be of lesser quality than what is grown in the United States or Canada and yet hundreds of thousands of kilograms are still seized at the southwestern border each year (DEA, 2018, p. 85-88). Marijuana is frequently grown in secret on public lands or in warehouses in a greenhouse type room (DEA, 2018, p. 83-84). The prime place for marijuana growers is in three counties in California that have become known as the “emerald triangle,” helping to account for 72 percent of illegal cannabis plants that are eradicated by law enforcement each year (DEA, 2018, p. 82-84).

Gangs are a huge concern in our society for the damage that they cause due to violence, cultural infiltration, and financial toll to the country. Gangs are typically based around drug trafficking activities and are usually violent in protecting their territory (DEA, 2018, p. 107). There are neighborhood-based gangs, domestic gangs, which are more sophisticated, and transnational gangs, which are typically considered criminal organizations (DEA, 2018, p. 107-112). Drug-related activities and violence are dangerous to our youth and require extreme amounts of attention and resources from our government agencies and law enforcement. It is detrimental to our society and a very negative effect of the demand for illegal drugs in the United States.

Other Societal Implications

Finally, one of the effects that the drug crisis has on our society is an aspect that cannot really be measured but stings none the less. It may even be the most damaging to our society as

well. It is the emotional and psychological impact that occurs due to the events that are a result of the epidemic (Florence et al., 2016, p. 8). This boils down to situations like the family that is left behind when someone dies from overdosing, the loved ones that are trying to help someone through rehab, the police officers that are called when something goes wrong, or the teen that is pressured in the hallway at school to take the pill that everyone else is taking. Almost everyone is affected by this issue whether they realize it or not. Bosses, health care workers, government officials, emergency personnel, school teachers, parents, friends, and children are all having to suffer the consequences from the loss of life and loss of time that abusers of prescription opioids and illicit drugs are choosing to let take place. The quality of life being lost is something that cannot be measured easily for these types of scenarios however, it quite obviously decreases for the both the person abusing the drugs and those around them. A number cannot be placed on the quality of life that is being changed or taken away, but it can sometimes cause the most damage to the way that a society operates and perceives their way of life. These effects cannot be understated for those in direct contact with the abusers and especially those like children that are dependent on them. In fact, children may be the main suffers from this epidemic in our nation. Parents that abuse drugs often put their drug habits before the welfare of their children, leaving them in a position of frequent abuse and neglect (NDIC, 2006). Children in these situations sometimes go without proper medical treatment, shelter or even nourishment; they certainly aren't getting the attention and emotional support that they need in order to achieve their education or be successful in life (NDIC, 2006). Caring for these children sometimes becomes the responsibility of the state through welfare, fostering, or social work programs, placing an even bigger burden on the resources and finances of our nation (NDIC, 2006). These types of

circumstances are not only adding to the problems for those trying to battle the drug epidemic but also sets a poor example for children that only fuels the next generation of drug abusers.

Most people view this epidemic as an unacceptable practice in our society. The United States is losing out in so many ways that it is practically unbelievable. We are losing people, families, work productivity, productivity in the home, lots of money, resources, and energy that doesn't have to be lost. However, understanding the ways that this crisis has not only affected aspects of our society but even caused it to change, helps us to have a better understanding of what to do next, how to fix the problem, and how to communicate the process to the public in a way that they can both comprehend and serves as encouragement to aid in the solution. It has already become unarguable that irreparable damage has occurred in our nation from this crisis. Unless major changes occur, the illicit drug and prescription opioid crisis will continue to damage lives, the criminal justice system, the pharmaceutical industry, demand and costs for health care, the economy, and our culture.

Addiction and Treatment

Addiction

Addiction, for obvious reasons, has a very negative connotation surrounding it and the people that suffer from it. It is not to be ignored that those that are addicted have at some point made the decision to take some kind of drug that they know could cause problems for them eventually. However, when it comes to drug abuse, many people begin with the intent of just taking maybe one pill or a couple of pills to help treat the pain they experience as a result of a surgery, but the chemical responses can quickly take over their brain and it becomes more difficult for their self-control to fight off the temptations (National Institute on Drug Abuse [NIDA], 2018c). Addiction is the continuing of a certain behavior despite difficulties that arise

because of their choices. Marijuana users typically face “consequences such as relationship and family problems, guilt associated with use of the drug, financial difficulties, low energy and self-esteem, dissatisfaction with productivity levels, sleep and memory problems, and low life satisfaction” and yet many of them still continue (Budney et al., 2007). Addiction can be developed and continued based on the person’s desire, but it can also be a result of the changes that are caused in their brain from taking certain drugs. Most drugs affect the brain’s “reward circuit” and the release of dopamine, creating a sense of extreme happiness that leads them to carry on in unhealthy behaviors so that they can achieve that feeling again (NIDA, 2018c). Because the brain experiences such drastic changes to the way that it functions, it becomes very easy for the person to relapse, especially if treatment is not persistent. The patient must remain consistent in their treatment plan in order to protect themselves from abusing drugs again on both a behavioral level and a physical and neurological level.

Understanding how to treat those that are addicted, means first understanding some basic information about how they get addicted and some of the issues that they must deal with. A significant amount of people that become addicted to prescription opioids started out by taking them legally for a legitimate reason. In 2014 a demographical survey showed that 75 percent of drug addicts began their addiction from using prescription opioids for legitimate pain relief and then gradually became addicted and then worked their way on to other drugs like heroin (Bauman et al., 2019). Physicians have become very likely to give a prescription for opioids for pain management when perhaps another plan might have worked better. An additional piece of information that physicians sometimes have to consider when prescribing opioids is whether or not they are opioid tolerant or opioid naive (Cobaugh et al., 2014, p. 1540). Opioid tolerant is someone who has a stronger tolerance to the opioid medication either because they have been

taking opioids regularly or they have a history of opioid abuse or genetic reason for their tolerance (Cobaugh et al., 2014, p. 1540). Opioid naïve is defined as someone who has not taken any opioids in the last two weeks (Lail, Sequeira, Lieu, & Dhalla, 2014). Physicians need to consider this information so that they can properly manage pain without causing additional problems. If they were to give an insufficient dose of opioids to a person that was opioid tolerant, then the person may not have pain relief, which is particularly important after a surgery, or they could suffer from withdrawal (Cobaugh et al., 2014, p. 1540-1541). Likewise, with an opioid naïve individual the physician could very easily prescribe too much opioid medication and cause the person to develop a dependency. Prescribing opioids is something that happens at an alarming rate however, with addiction in mind, it is something that physicians and their patients should be more concerned about. An additional reason that prescription opioid addiction is so dangerous is its effect as a gateway for some people to heroin since four out of five people that try heroin started out with prescription opioids (Liu, Pei, & Soto, 2018). As the trend to frequently prescribe opioids continues, so does the use of heroin across almost every demographic and particularly in those that were low before: white Americans, women, and the higher income brackets (Bauman et al., 2019). Addiction to heroin is very likely for its users and it can quickly become a hard habit to break (National Institute on Drug Abuse [NIDA], 2018a). Addiction and long-term use of heroin can cause a variety of issues in most areas of the body like the veins, lungs, kidneys, liver, stomach, and reproductive organs as well as triggering insomnia and different types of infections (NIDA, 2018a). Withdrawal from heroin may even seem worse to users at the time as it can cause symptoms, such as “restlessness, severe muscle and bone pain, sleep problems, diarrhea and vomiting, cold flashes with goose bumps, uncontrollable leg movements, and severe heroin cravings” (NIDA, 2018a). The rapid increase of heroin users and

addicts was particularly fueled by the release of OxyContin in 1995 that created a surge of opioid addicts and then heroin addicts closely following (Bauman et al., 2019).

Cocaine is also a very commonly abused drug. About 14 percent of people who use it become dependent on it (Budney et al., 2007). While overall it causes issues very similar to those of opioids, it can be more dangerous. Over 40 percent of emergency room visits for drug misuse and abuse were because of cocaine use, making overdose a very serious concern (NIDA, 2016). Like opioids, cocaine alters the brain's reward system causing the brain to rely on cocaine in order to feel happiness or relief (NIDA, 2016). This effect creates a tolerance to the drug, requiring more for the same effects, however, with cocaine it also creates a sensitization, which means that it takes less cocaine to produce the negative side effects like anxiety, convulsions, and other toxic effects (NIDA, 2016). Obviously, the longer that a person uses cocaine the more damage that it does to them and the harder it is for them to stop. Users of cocaine often go on binges where they use repeatedly sometimes increasing the dose as they go, causing a drastic crash immediately afterwards (U.S. National Library of Medicine, 2019). When they crash, they experience very severe symptoms of withdrawal and cravings for more cocaine (NIDA, 2016). Many people can struggle with cravings for cocaine for years after they go through detox and can be triggered by memories or cues that they used to associate with cocaine (NIDA, 2016). This makes it even harder for a person to break their addiction and avoid relapse. The odds are really not in the favor of a person that tries using drugs especially with such serious consequences as these.

Unlike most other drugs, marijuana is not very addictive with only about nine percent of people who use it developing a physical dependence (NIDA, 2018b). This being said, more people are dependent on marijuana than any other drug simply because so many more people use

marijuana than other drugs (NIDA, 2018b). Those that do not necessarily become dependent still have a chance of developing a marijuana use disorder. About 30 percent of people that try marijuana develop a marijuana use disorder, which is when people experience withdrawal symptoms of which vary from person to person but include irritability, decreased appetite, and restlessness (NIDA, 2018b). Another thing that has been causing more dependency, more people with marijuana use disorder, and reactions that require medical treatment has to do with the increasing potency; levels of THC found in marijuana have increased from roughly 3.8 percent in the 1990s to 12.2 percent in 2014 and finally on to around 50 percent more recently, although some samples have been found to have 80 percent potency of THC (NIDA, 2018b). These steadily rising levels of THC found in the marijuana are a major concern for how the consequences of using the drug has increased, particularly for the brain development of adolescents and young adults that also represent the groups most likely to abuse the drug (NIDA, 2018b). While it certainly isn't the most addictive drug, marijuana still causes many problems when it comes to addiction and treatment.

Other information to understand when looking into addiction and treatment is concerning physical dependence, withdrawal, and tolerance. Physical dependence refers to when a person's body has adapted to the substance and requires it in order to avoid symptoms of withdrawal (Center for Substance Abuse Treatment [CSAT], 2004). It is possible for a person's body to become physically dependent without them meaning to or even feeling like they are dependent psychologically. This is part of the reason why people who simply take pain relievers for chronic pain can accidentally end up with dependency issues. The patient is taking the pills to help with the pain, but their body starts to get used to the medicine and then will only manage the pain with the assistance of the opioids. This is very similar to how people drink coffee to wake themselves

up and after a while, their body will not physically wake itself up until it has had coffee. The patient does not have an uncontrollable addiction, but their body has developed a dependence on a substance that it is used to receiving and therefore expects to receive it in order to continue functioning in the same way. This is an example of physical dependence without an addiction. A person can also have an addiction without physical dependence (CSAT, 2004). This occurs when the person has a desire or craving for the drug despite having been detoxified from the drug; their issue is psychological in nature rather than physical (CSAT, 2004). Both physical dependence and actual addiction need treatment in order to better the health of the individual and the impact this issue has on their behavior. Especially when physicians are prescribing opioids for chronic pain, both the chances of physical dependence and addiction should be discussed with the patient and perhaps even used as consideration for an alternative plan for pain management.

When a person stops using a substance that they have become dependent on they experience withdrawal. “Withdrawal syndrome consists of a predictable group of signs and symptoms resulting from abrupt removal of, or a rapid decrease in the regular dosage of, a psychoactive substance” (CSAT, 2004). During withdrawal the activities or functions that were being suppressed by the drug become overactive and the functions that were being heightened become repressed (CSAT, 2004). Withdrawal is typically very difficult and painful for the individual, which is why so many people struggle with stopping their drug addiction and why they often relapse. Withdrawal often includes intense symptoms, such as “severe pain, diarrhea, nausea, vomiting, hypertension, tachycardia, seizures,” and cravings for the drug (Volkow, 2014). As mentioned previously, this painful detoxification is why so many people find it practically impossible to get clean and cease their dependence on drugs. Withdrawal can be managed with medication, though, it is not very readily available for most people.

Tolerance is a term used often when discussing drug addiction and treatment. It refers to the way that a person's body becomes accustomed to the drug that is being taken, decreasing either the biological or behavioral response and therefore begins to need more of the drug to continue to produce the same effect on the person (CSAT, 2004). This occurs because the opioids being taken begin to reduce the brain's biological reward system by limiting its reaction to the drug (Volkow, 2014). Tolerance is why people have to take more and more of the drug as time goes on in order to feel the same effects as they did initially. Another issue concerning tolerance is the fact that it can create confusion about how much of the drug that a person thinks they can handle. This is especially the case after a period of recovery or treatment for the drug abuser. They usually do not realize that their body has lost some of their tolerance during abstinence from the drug and when they take a high dose again like they were used to doing before, it actually causes them to overdose (Volkow, 2014). This is quite obviously very dangerous and is yet another obstacle on the path of recovery for people that have substance abuse problems.

Tolerance also plays a part in the factors that leads a lot of drug abusers to move on to more potent and more dangerous drugs. Prescription opioid abusers often transition to worse drugs like heroin (Volkow, 2014). Because a person develops a tolerance to opioids and they tend to be more difficult to obtain and are more expensive, they move on to heroin (Volkow, 2014, p. 8). This transition to heroin is becoming increasingly more common and causes whole new sets of problems to combatting opioid addiction and treatment. Heroin itself has a very high rate of dependency at 24 percent of people that use it becoming addicted and physically dependent (Budney et al., 2007). Perhaps the worst drug for leading patients on to other drugs is marijuana. It is widely known as the gateway drug, because so many people try marijuana first

and a majority of people that are addicted to other drugs started out with marijuana (DeSimone, 1998, p. 149). The gateway hypothesis poses that people will abuse drugs in stages, often starting with alcohol then leading to tobacco, marijuana, and finally hard drugs (Tarter, Vanyukov, Kirisci, Reynolds, & Clark, 2006). However, the information and studies about the gateway hypothesis are hardly conclusive since each study finds extreme variation in the statistics (Tarter et al., 2006). There may be some gateway effect, but it is not always the case that marijuana will be the cause that led someone to harder drugs. There is significant correlation between marijuana use and both delinquency and availability of drugs on the street (Tarter et al., 2006). In other words, bad kids are going to get into whatever they can find. The gateway hypothesis, though, is driven in part by the evidence showing that there is an overwhelming majority of young cocaine abusers that had previously used cocaine (DeSimone, 1998, p. 149). It is not necessarily understood whether or not this progression is a result of a type of physical tolerance to marijuana that leads the drug abuser to move on to cocaine or whether or not it is simply a driving curiosity in the person (DeSimone, 1998, p. 149). Regardless of the reason, the use of marijuana often precedes the use of cocaine similarly to how opioid abusers sometimes move on to heroin.

Treatment

Yet another issue concerning the health care needs of drug abusers and their treatment is the fact that those who inject the drugs often do not have safe practices and end up developing other diseases, too. There has been a dramatic increase in HIV, hepatitis B and C viruses, and tuberculosis in opiate users in the last several decades (Strain & Stitzer, 2006, p. 18). The same is true for other drugs as well. Additionally, this doesn't take into consideration other diseases or medical issues that occur as a result of the unhealthy lifestyles of some drug abusers as well as the often occurrence of unsafe activities. Using needles for drugs is notorious for being unsafe

and causing major illnesses due to the sharing of the needles and not sterilizing needles. Needle borne illnesses like hepatitis and HIV/AIDS are a huge risk for those that use injection needles, which is a common for heroin and sometimes opioids or cocaine (NDIC, 2006). In fact, 123,235 people with AIDS in 2003 contracted the disease from injecting drugs intravenously (NDIC, 2006). This means that while being treated for drug dependence, there are usually other medical issues and diseases that need to be treated as well, sometimes including major or infectious diseases like those mentioned above. Once contracted and depending on the disease, these individuals may have the disease for the rest of their life, putting anyone that they share needles with or have sexual relations with at risk for developing it, too. Even after being receiving addiction treatment and possibly even remaining free from drugs for the rest of their lives, they and their loved still have to suffer some of the consequences of their previous lifestyle and decision to use harmful drugs.

While the availability and funding for truly effective programs for prescription opioid treatment is not what most would like it to be, the right kind of programs are essential in effectively treating opioid addictions (Volkow, 2014, p. 13-14). For a program to serve as a legitimately effective delivery system, it needs to involve all of these components: “behavioral interventions to support treatment participation and progress, infectious disease identification and treatment (especially HIV and HCV), screening and treatment of co-morbid psychiatric diseases, and overdose protection” along with the medication-assisted treatment (Volkow, 2014, p. 13). Medication-assisted treatment is extremely important in treating opioid use disorders even in special groups like pregnant or postpartum women (Phillips, Ford, & Bonnie, 2017). The primary medications used for treating opioid addiction are methadone, buprenorphine, and naltrexone (CSAT, 2004). Methadone is a synthetic agonist that can be used to treat severe

chronic pain and is now commonly used for cancer patients but has a primary role in preventing opioid withdrawal (Cobaugh et al., 2014, p. 1545). Its short half-life and ability to be safely administered daily makes it very advantageous but not without its difficulties (Cobaugh et al., 2014, p. 1545). It causes a decrease in consciousness as well as respiratory depression, which is why it is typically paired with naloxone to treat these inefficiencies (Cobaugh et al., 2014, p. 1545). Naloxone reverses the negative effects of the opioids and it usually used with other opioid treatment medications to offset side effects of those (Cobaugh et al., 2014, p. 1544-1545).

Buprenorphine is a partial-agonist used in opioid addiction to keep other opioids from binding to receptors and therefore canceling out its effects (Cobaugh et al., 2014, p. 1544). Naltrexone is an opioid antagonist used to block the effects of heroin and most opioids although, it must be used once the opioids are out of the patient's system, so it often not desired by the patient due to the commitment that they must make to detoxifying themselves (CSAT 2004). Unfortunately, the medication-assisted aspect of treatment is extremely underutilized (Volkow, 2014, p. 13). This is partly because of the negative stigma around the idea that the patients are simply replacing an addiction of one pill for an addiction of another like the methadone or buprenorphine (Volkow, 2014, p. 13). This leads to the medical professionals either not using the medications in treatment or not following through with enough dosage to actually help the patient (Volkow, 2014, p. 13).

However, medication-assisted treatment is not enough on its' own to prevent people from returning to their previous lifestyle and choices. Psychosocial therapies should be used to change the patient's behavior through therapy, mutual-help programs, or abstinence-based programs (CSAT, 2004). Psychosocial therapies are extremely effective in treatment along with medication but are not always properly used either (Strain & Stitzer, 2006, p. 120). Also, because of the inconsistency of patients and the fact that they often continue to use drugs while in therapy

and sometimes quit treatment altogether, staff can become discouraged and lose faith in the effectiveness of treatment (Strain & Stitzer, 2006, p. 120). Regardless of the treatment plan used, it is a very difficult process for most and requires a lot of support and determination. Despite these fallbacks, treatment programs for prescription opioid abuse has had many positive consequences. An analysis from 2005 found that patients undergoing methadone treatment for an opioid addiction resulted in less use an addiction of heroin, criminal activity, loss of employment and productivity, and the use of health care (Volkow, 2014, p. 12). It was even to the point that each dollar spent on the methadone treatment yielded \$38 worth of economic benefits (Volkow, 2014, p. 12). A decrease in criminal activity was demonstrated by a 12-month long court-ordered treatment program conducted on females in Florida showed a significant decrease in arrests (Moore & Young, 2018, p. 5). Treating opioid addictions as well as preventing them as much as possible has incredible benefits to our society and is very widely seen as the best course of action for curbing this opioid epidemic.

The treatment process for heroin is very similar to that of prescription opioids. It uses a combination of medicine and behavioral treatment (NIDA, 2018a). One of the most effective plans for medically treating heroin addictions is the combination of buprenorphine that reduces cravings and withdrawal symptoms and naltrexone, which stops the opioids from having any affects (NIDA, 2018a). This type of treatment requires full detoxification though, so it can be difficult to complete with some heroin users (NIDA, 2018a). Living situations or desire may keep the patient from continuing their medication, but once completed, it is very effective. The behavioral therapies usually used are cognitive-behavioral therapy and contingency management (NIDA, 2018a). Another medication to be noted with heroin is naloxone. As a drug that act to cancel out the effects of opioids, naloxone is often used in cases of overdose to reverse the

effects and hopefully save the person's life (CDC, 2018b). One of the common goals of the government and groups for assisting in the drug crisis is to make naloxone more readily available (CDC, 2018b). There is also a push in preventing more diseases by offering education and better access to syringe services programs that help to keep infectious diseases like hepatitis C and HIV from spreading (Rudd, Aleshire, Zibbell, & Gladden, 2016).

Cocaine users that seek treatment are usually smoke crack users and also use other drugs in combination, making their addiction problems more complicated (NIDA, 2016). There are not currently any drugs approved by the U.S. Food and Drug Administration specifically for treating cocaine addiction, but research is focused on medications that target the dopamine receptors in the brain (NIDA, 2016). Most of cocaine addictions are treated through psychosocial therapy like cognitive-behavioral therapy and contingency management (NIDA, 2016). Even telephone-based communication has been successful in checking up with the patients and encouraging them to continue to stay clean (NIDA, 2016). There has been some research and clinical trials completed on a cocaine vaccine that helps keep the patient from relapsing although the success is limited and has been shown to work better on patients with a certain genome type, which has led to more intrigue and research into how genomes may affect drug addictions and treatment options (NIDA, 2016).

Treatment for marijuana is almost entirely based on adapting behavior and the social aspects of the person's addiction. Since marijuana creates almost no physical dependence and has little withdrawal symptoms compared to other drugs, the process for solving their issues with addiction is very psychologically based (Budney et al., 2007). However, this does not mean that people do not have difficulty in quitting their use of marijuana. On average the adults that seek treatment for a marijuana problem have been using marijuana almost daily for around 10 years

and have made an attempt to stop approximately six times (NIDA, 2018b). Most people tend to have problems with relapsing or even changing completely in the first place. One of the issues that clinical trials have found in the treatment of marijuana is that even those that enroll into treatment often only have the goal of reducing their use rather than abstaining from it completely (Budney et al., 2007). About 40 to 65 percent of people in treatment achieve their goals, whether it be to reduce or remove marijuana from their life, an issue that is also greatly affected by peoples' perception that marijuana is not a harmful drug (Budney et al., 2007). Though, it has been shown in various types of treatment programs that those who aim for abstinence rather than moderation are more likely to meet their goals (Budney et al., 2007). Another issue is that people with a marijuana use disorder most likely have addictions or very frequent use of alcohol or tobacco and sometimes use other drugs as well, making treatment of just one of the aspects of their addiction more difficult to manage and carry out to fulfillment (Budney et al., 2007). There is no medication that is approved for the precise purpose of treating marijuana use disorders, though, medication is sometimes used for some symptoms like sleep problems, depression, and anxiety (NIDA, 2018b). Unfortunately, treatment for marijuana use is not very effective when considering the numbers. Of the 4 million people that reported symptoms of marijuana use disorder in 2005 only about seven to eight percent actually received treatment and as mentioned above only around half of those will actually succeed (Budney et al., 2007). One of the problems with their success though has to do with the fact that most people do not have the desire to be in rehab but are put there by court order, a juvenile justice system, a school, or their parents (Budney et al., 2007). For obvious reasons, changing a person's behavior in spite of their personal desire is almost impossible. The treatments that are useful for marijuana use disorders are motivational enhancement therapy, cognitive-behavioral therapy, and contingency

management (Budney et al., 2007). These types of treatments are typically used together and have been found to be the most effective if they are (Budney et al., 2007). The motivational enhancement therapy is a set of individual counseling style sessions with a therapist that focuses on motivating the patient to change (Budney, et al., 2007). The cognitive-behavioral therapy is a set of either an individual or group counseling sessions that addresses skills that are useful in quitting marijuana and avoiding and managing problems that inhibit their progress (Budney et al., 2007). Finally, contingency management is based on a program originally designed for treating cocaine addiction that utilizes vouchers given to the patient upon drug tests several times a week (Budney et al., 2007). Some studies have shown that the contingency management approach with vouchers has yielded almost as good results even alone than any other combination of the three treatments combined (Budney et al., 2007). Overall, these therapy and treatment options work best in variations with different exposures being offered based on the individual and function to build up their desire to quit their drug addiction and rewards them when they do so (Budney et al., 2007).

Treating drug addictions can be a very long and difficult process for most people and the programs and plans differ greatly depending on the person and the drug or drugs that they are struggling with. Understandably, more research and funding for treatment is desired by treatment groups and government programs to better assist those with drug addictions and to curb the problem that our nation is facing. However, a balance will be needed in developing better plans to use both pharmacotherapies as well as behavioral or psychosocial programs in order to be effective and offer a solution that will be more permanent.

Government Involvement

For a long time, the government has been involved with the drug and prescription opioid epidemics through a variety of facets, such as health care, treatment for addiction programs, drug trafficking control, the justice department, and educational roles. The National Institute on Drug Abuse (NIDA) and the Drug Enforcement Administration (DEA) are examples of two agencies that have been added specifically in order to deal with these expanding issues. Other agencies that are involved with the drug epidemic are the Centers for Disease Control and Prevention (CDC), the Center for Substance Abuse and Treatment (CSAT), the Federal Drug Administration (FDA), the Office of National Drug Control Policy (ONDCP), the National Drug Intelligence Center (NDIC), and the Substance Abuse and Mental Health Services Administration (SAMHSA) (Malinowski, 2014, p. 1039). Generally speaking, the public looks to the government and their affiliates to take the lead on issues like these and to set the course for solving it.

Education is an important part of getting a hold on the problem (Volkow, 2014, p. 14). This means educating the doctors about safe-prescribing practices, teens about the risks and consequences of using drugs, and the community at large about their health and how to get help with addictions. “NIDA is advancing addiction awareness, prevention, and treatment in primary care practices, including the diagnosis of prescription drug abuse, having established four Centers of Excellence for Physician Information” (Volkow, 2014, p. 14). These Centers are to serve as national models and highlight the NIDA’s focus to provide additional training and education for physicians and medical workers regarding prescribing opioids, pill diversion, addiction, and treatment options for different drug problems (Volkow, 2014, p. 14-15). Educating the public about the drug problems in our nation and how to prevent it, treat it, and avoid it is a very important aspect of decreasing the issues that we are facing.

Over the last century or so, there has been increases in the drugs that are used, however, the war on drugs was primarily driven by issues with cocaine (Coffee, 2018, p. 3). People have since looked back in history and pointed out that certain periods of heavy crime could be linked to heavier cocaine usage and the epidemic that built up into the 1970s that lead President Richard Nixon to finally declare the war on drugs (Coffee, 2018, p. 3). This was accomplished through the creation of mandatory sentencing, increased use of law enforcement resources, shift of focus for drug agencies, and marijuana was labeled as a stricter Schedule I drug (Coffee, 2018, p. 3-4). While throughout the presidencies involved in the war on drugs, there were certainly some political agendas that affected the way that everything happened, however, over time there was an overall increase in incarcerations and the strictness of the laws on drugs until President Obama in 2010 (Coffee, 2014, p. 4-8). President Obama was seen to be more lenient on drug laws, although his presidency coincided with the push to decriminalize marijuana and use it medically in many states across the nation (Coffee, 2014, p. 7-8). This period of time also saw a shift in focusing on the issue as a criminal justice issue to viewing addiction as a health issue that needed to be treated (Coffee, 2014, p. 7-8). President Trump began his presidency declaring to escalate the war on drugs again, especially with an emphasis on border control (Coffee, 2014, p. 8).

The White House Office of National Drug Control Policy is responsible for the federal policies on illicit drug manufacturing, trafficking, drug-related crime, and drug-related health concerns (Centers for Disease Control and Prevention [CDC], 2012, p. 12). In 2010 the administration released the National Drug Control Strategy and altered it in 2011 to focus on special groups as well as include *Epidemic: Responding to America's Prescription Drug Abuse Crisis* (CDC, 2012, p. 12). One of the major components of this plan was the prescription drug

monitoring program, which almost every state has now adopted in some fashion (CDC, 2012, p. 12). The other components involve enforcing drug laws through the Drug Enforcement Administration, educating health care providers, and disposing of medications that are no longer needed in a safe location (CDC, 2012, p. 12). There has been a particular push for political aid and attention to be spent on the opioid crisis in recent years as it has progressed at an alarming rate. President Trump declared a national emergency in 2016 concerning the opioid epidemic (Malinowski, 2018, p. 1057). The same year Congress had pinned \$181 million for fighting the opioid epidemic in the Comprehensive Addiction and Recovery Act of 2016, although the funds were scattered and required to be renewed annually (Malinowski, 2018, p. 1057). The Budget Act of 2018 also appropriated \$6 billion to the opioid epidemic, but most consider these vague attempts for funding insufficient and without conviction (Malinowski, 2018, p. 1057-1058).

While more recent attempts to work on the drug and prescription opioid epidemics in the U.S. have made progress, it has not been enough to keep up with the rapidly increasing problem. Another big help to the cause has been the more health-related approach rather than a criminal justice approach to the problem much to the credit of scientific advancements into researching and understanding addiction and substance abuse disorders. However, most still look to the government and policymakers to accomplish more on solving this serious and pressing matter that it seems will only continue to get worse.

Conclusion

The illegal drug problem and the opioid epidemic in the United States has been on the rise for quite some time with no end in sight. These drug epidemics bring a lot of problems and long-lasting consequences that our society has had to deal with and will continue to adapt around in the future. Much work is needed in order to help the individuals with drug misuse and abuse

problems and to prevent others from going down the dangerous path of addiction as well. New policies and research may bring change, but only time will tell at this point.

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