

# Why are Opioids Such a Big Deal?

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## INTRODUCTION

One can hardly turn on the television or listen to the radio today without hearing mention of America's ever burgeoning drug crisis. In particular, the word that often is often used in conjunction with this crisis is "opioid." So, why are opioids such a big deal? Why are they so pervasive in today's headlines? After all, the President, himself, has declared them a national emergency.

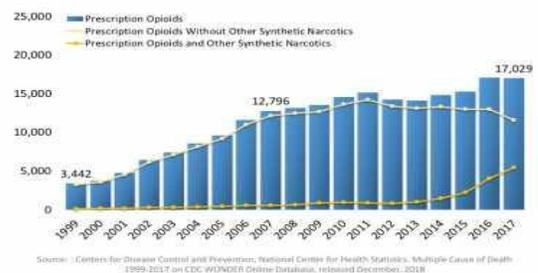
According to the National Institute on Drug Abuse, 130 individuals overdose everyday from opioids in the United States (National Institute on Drug Abuse 2019). According to the same institution, in 2017 more than 47,000 people died as a result of opioid abuse and misuse; during that same year an estimated 1.7 million people were afflicted with a prescription opioid disorder and another 652,000 afflicted with a heroin addiction (National Institute on Drug Abuse 2019). These staggering statistics beg the question, "Why?." What has brought about this new epidemic in America? What have been the driving factors that have propagated the opioid epidemic on society? This paper's aim is to examine the underlying causes of the opioid epidemic, and present possible solutions or courses of action.

Before we delve too far down the rabbit hole, I think it is important to first examine the different facets of opioid abuse currently in the country. On the one hand you have prescription drug abuse and misuse. This abuse can come in many forms and fashions. It may present itself as something seemingly harmless, such as keeping leftover narcotics and popping one whenever you have a bad sprain or a terrible headache or something much more serious such as true addiction. According to the National Institute on Drug Abuse, roughly 12-29% of patients prescribed opioids for chronic pain misuse them, and between 8% and 12% of those patients develop some type of opioid use disorder (National Institute on Drug Abuse 2019). Prescription drug abuse can also be much more malicious. Opioid drug addiction often drives crime, such as burglary and theft and often can these events can get violent. The interesting thing about opioids is that one of the large groups of individuals becoming reliant upon them are not your typical miscreants, rather it is the elderly.

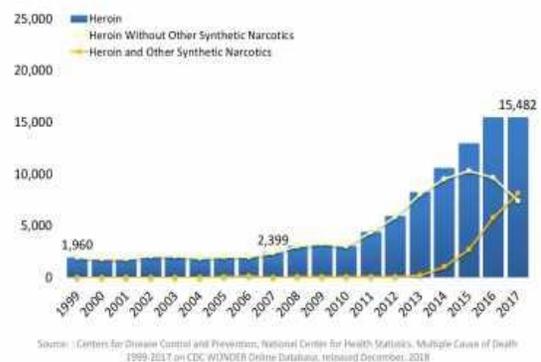
The other side of opioid misuse and abuse is in the form of heroin; roughly 4% to 6% of people who misuse prescription opioids make the transition over to heroin (National Institute on Drug Abuse). Heroin overdoses per year have increased almost

800% during the past two decades, closely mirroring the increase in prescription opioid overdose rates (shown in figures 1 and 2). These sharp increases in the amount of people dying every year forces one to ask what is driving the addiction. Why are opioids so addicting, and in turn, dangerous?

**Figure 1: National Drug Overdose Deaths Involving Prescription Opioids**



**Figure 2: National Drug Overdose Deaths Involving Heroin among all ages**



Opiates are extremely addictive due to the ways in which they interact in the brain. Opioids bind to one of three receptors in the brain, depending on what class of opioid they are; these opioid receptors can be either the mu, delta, or kappa receptors. Opioid receptors are normally activated by a family of endogenous peptides such as dynorphins, enkephalins, and endorphins (European College of Neuropsychopharmacology, 2007). These peptides are naturally released by neurons in the brain and cause feelings of euphoria and have an analgesic effect. These effects are also what makes them so addicting. These facts and figures now beg the question, "What is driving the opioid epidemic?"

### CAUSATION

Since the advent of keeping time, opioids have played a central role in the course of history. Originally meant to describe a substance derived from the poppy plant, the term opioid has now come to describe any substance that acts directly on the opioid receptors in the brain. Modern day opioids (medicinal) as we know them first came in the form of morphine and was commercially available in the United States around the year 1820 (Duarte, 2005). Since then, opioids have been used as an analgesic in the practice of medicine. The habit-forming natures of the drugs were duly noted, even as use in medical practice continued to increase; this eventually led up to the first fully synthetic opioid, meperidine (it was closely followed by the development of methadone by Germany during WWII) (Duarte, 2005).

Since the advent of the first synthetic opioid, companies have been striving to make more potent and more efficient drugs. The epidemic really began in the mid-1990s when pharmaceutical companies began reassuring physicians that their drugs would be better suited to quell pain while remaining difficult to become addicted to. The companies also began recommending that physicians prescribe the medications for things other than mitigation of pain due to cancer, to the point that by the end of the 20<sup>th</sup> century over 80% of patients being treated with opioids were utilizing them for non-cancer induced pain (Liu et al). According to the Homeland Security and Governmental Affairs Committee in a report they published in 2018, in their second report on the subject, stated that the large pharmaceutical companies (Purdue Pharma L.P., Janssen Pharmaceuticals, Inc., Mylan N.V., Depomed, Inc., and Insys Therapeutics, Inc.) funneled almost nine million dollars into the coffers of 14 outside groups that were concerned with opioid related issues, such as chronic pain, between 2012 and 2017 (U.S. Congress 2018). This would suggest something along the lines of payoffs. These groups were not the physicians writing the prescriptions, but they did have influence. And, it was this influence that helped drive

the popularity of opiate prescribing. I believe it is also important to note that opioids have always been utilized in medicine, but in the past they were only prescribed in the most extreme and necessary cases. The trend of prescribing opioids for mundane, everyday cases has coincided with the increase in opioid abuse and misuse. There are those that argue this "push" by large pharm to promote use may well have directly resulted in the current epidemic, and to some degree I concur with this. However, I cannot place the entirety of the blame on the pharmaceutical companies. I had a very interesting conversation with prominent physician in my community, which happens to reside in an area that has felt the full weight of the opioid epidemic, and he made a very interesting point. He was of the opinion that the issue of who to blame for drug abuse all boiled down to three people, the physician, the pharmacist, and the patient. It was his argument that the physician should not be prescribing opioids for people or in instances in which he or she knows/suspects they will be abused or have a high likelihood of being abused, and if there is any question as to whether or not they will be abused then the prescription should not be written. Then, there is the pharmacist. Pharmacists have the right to refuse to fill a prescription; so, a pharmacist can and should refuse to fill an opioid prescription for a patient they know is abusing it. Lastly, there is the patient, who is the ultimate consumer (F.E. Conrad, personal communication 2018). There is, in my opinion, a misnomer, that patients are the innocents and I simply do not believe this is true. Yes, most people will, and should, yield to the opinion of their attending physician when it comes to medical advice and courses of treatment, after all they do usually know best. However, with the amount of information available at one's fingertips I find it absurd to believe that patients are blindly popping pills without any knowledge of the medication they are taking, especially when it is both the physician's and pharmacist's job to ensure the patient does indeed know the facts and possible consequences of taking the medication. This is in addition to the amount of press coverage that this class of drug is currently receiving.

### SOLUTION

There is no single, solitary solution to the opioid epidemic currently plaguing this nation. I believe that it will take a collaborative effort by several groups of people to reduce the negative effects that these drugs are currently having on our society. Admittedly, I normally am an individual who believes that less government involvement in anything is a good thing; however, I am of the opinion that certain government organizations such as the Food and Drug Administration, and even the United States Congress, should continue their surveillance of these

drug producing companies and ensure that the information being provided to the public is honest and unbiased, one way or another. I also believe that the individual physicians writing these prescriptions should reevaluate the needs of their patients and be more conservative in their prescription writing, only writing one when they believe it is absolutely and unquestionably justified. The third alteration to the system that I would make is I would have the pharmacists be more selective in the prescriptions they fill. If they suspect or have reason to suspect abuse, then the prescription should not be filled. Lastly, there is the patient. At the end of the day, the individual ultimately responsible for the misuse of the medication is the person taking it. The United States population as a whole needs to become more accountable for its actions. The taking of medication, and drugs in general, is a choice. Yes, addiction is a disease and should be treated as such, but it is also the result of conscious continuation of a behavior. This behavior can be altered, and it is up the individual to alter his or her own behavior.

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