

Fighting Overprescription of Opioids

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by

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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Preface

How can lethal drug overdoses in the United States be prevented? Success in the effort to stem the epidemic of drug overdoses in the US requires both medical and social interventions.

How can students be inspired to scientific discovery? By stimulating students' curiosity, endowing them with a sense of purpose, and offering them the joy of discovery, success in such an effort can rob addictive drugs of their attractions. The technical project aspired to create a cloud chamber clock, a mechanism never before invented. This clock would inspire students by exposing them to the realm of quantum particles with a visually exciting timepiece. The operating clock would emit alpha particles students could observe. The research team did not complete the project, but with our project report, future research teams could finish the clock.

How do organizations fight overprescription of opioids as medications in the United States? Public health initiatives and healthcare reforms can prevent drug overdoses. These social efforts are joined with large financial settlements for remedial care that are paid out by pharmaceutical companies responsible for circulating the drugs in the first place. With settlement money from pharmaceutical companies, and with research and educational efforts from nonprofits, an effective response to the drug overdose problem has developed.

The United States health system has perpetrated a problem of excessive prescription of opioid medications. This crisis began in the United States in the 1990s with the first prescriptions of opioid medications. The CDC states that, “overdose deaths involving prescription opioids (natural and semi-synthetic opioids and methadone) [have continued to increase] since at least 1999” (CDC, 2023). In *Annals of Surgery*, Thiels (2017) showed significant overprescription of opioids to patients recovering from elective surgeries. This study found that over 80% of the participating patients were prescribed more than the recommended amount of opioid medication. These prescriptions often lead to addiction problems and even risk death in the patients who receive medication without proper guidance. When patients suffer the consequences of poor oversight in taking opioid medications, the medical professionals responsible for prescribing the drugs receive some of the blame and their reputations are tarnished.

In response, several organizations are seeking a solution to this epidemic by fighting against prescription of opioid medications. The organizations involved in this fight consist of advocacies for both patients and practitioners as well as pharmaceutical companies responsible for producing prescription medications. These organizations use policies, propose methods, and financially support programs in the medical community to protect both patients and medical practitioners in the arena of opioid prescriptions.

Review of Research

In a study of the US opioid crisis, Cantor (2021) contends that DEA, FDA, and CDC responded inconsistently to the distinctive risks of prescription opioids. These agencies failed to advise and regulate local health departments that supply and monitor patients. Cantor finds ineptitude in such agencies' responses. Hudspeth (2019) found that boards of nursing primarily focus on assisting with provider education to reduce the number of opioid prescriptions. His research revealed the cooperation of several professional associations in forming a four-phase process for prescribing opioids. These phases would be implemented on a patient-by-patient basis and allow for medical professionals to have a clear track to follow when prescribing pain medication. White, Perrone, Watts, and Malm (2021) found that the collaboration between social groups, police, and researchers provided an avenue of fighting prescription drug addiction by presenting treatment with Narcan. Haffajee (2019) reviewed the rates of opioid overdose mortality in rural counties in the United States. He found that rural counties were often at higher risk due to less access to medical professionals and treatment programs that could help battle opioid addictions. One final group of researchers, Cochran, Hruschak, DeFosse, and Hohmeier (2016) found that the literature published by pharmacy groups has a significant impact in the reduction of opioid prescriptions. This use of literature was partly implemented in response to the failures of prescription drug monitoring programs, programs that would track user data and repeated medication fills to report suspicious patterns. These papers all attempt to understand the social interactions between organizations involved in presenting a solution to the opioid epidemic in America.

The primary participants in this research project consist of professional organizations advocating for greater regulation and pharmaceutical companies responsible for producing opioid-based medications. One professional organization, the American College of Emergency Physicians is urging lawmakers to propose legislation that heightens the requirements for prescribing opioids in pain management situations (ACEP, n.d). Tied to their role in the opioid epidemic, ACEP's declared mission is to, "serve as the leading advocate for emergency physicians, their patients, and the public." ACEP does this by writing articles and releasing emergency care guides to practitioners responsible for treating patients with pain medication needs. These articles urge medical professionals to make good use of assessment resources and PDMPs (Prescription Drug Monitoring Programs) to ensure patients at high risk of opioid addiction are cared for properly. ACEP uses these methods to fight for the protection of both the patients at risk of opioid hazards as well as the emergency professionals, who frequently come under review by regulators.

University of Pennsylvania's Leonard Davis Institute of Health Economics, another professional institution, prioritizes research into the social effects of healthcare. UPenn's LDI has a distinct interest in the economics surrounding opioid prescription and care for those suffering from substance use disorders (Perrone, 2022). This interest serves their greater mission "to achieve effective and efficient health care" via research into important issues in the realm of health care. In a recent article, UPenn's LDI discusses their research into individualizing opioid prescriptions. One of LDI's Senior Fellows Anish Agarwal led a study over the past five years on individual patients' usage of opioids post-surgery. This study received information from patients in the weeks following a surgery and was then given to surgeons, allowing them to analyze different patients' drug use patterns. This data was paired with demographical data to allow the

researchers to begin to build general profiles for proper opioid prescribing practices. These results from this study will be used by UPenn's medical system to try to ensure the proper amount of opioids are distributed to each patient upon completion of a surgery. The Leonard Davis Institute's report of this study helps lower the risk of improper opioid prescription and lower the risk levels of addiction for all patients.

Similar to UPenn's Leonard Davis Institute, Stanford's Institute for Economic Policy Research also serves to provide policy recommendations on the matter of opioid prescriptions to prevent further deaths in the opioid epidemic. Stanford's institute writes reports and articles that suggest policy reform based on economic research into the causes and correlations between different drug usage and overdose deaths. Molly Schnell (2019) found that, "Non-medical use of prescription opioids remains the second most common type of federally illicit drug use" to remind policy makers that prescription opioids are still among the most responsible drugs for overdose deaths. This comes as a reminder that despite the rise of illicit drugs in the opioid crisis, misplaced and abused prescription medications still make up a significant amount of drug addictions. This article, among others, serves as a firm reminder and encouragement to policymakers that prescription opioids are still a threat to the nation's health.

The American Medical Association is a participant group who cares deeply about the opioid epidemic as their entire mission is to support the medical profession in their care for patients and those suffering with a substance use disorder (Harris, 2020). The AMA regularly releases reports on the state of overdoses in the United States, reports that highlight the trends in drug prescriptions and overdose prevention over the course of the previous year. In the report from 2023, AMA's overdose report displayed statistics showing a "49.4% decrease in opioid prescriptions from 2012 to 2022" (AMA, 2023). In addition to statistics, these yearly reports list

overdose websites and other literature useful for helping medical practitioners protect their patients against the dangers of opioid addiction. The AMA make use of statistics and reports to persuade and encourage medical professionals.

The NIH, National Institutes of Health, is also quite interested in fighting against opioid addiction using research on the topic of pain medication prescriptions. They are similar to UPenn's Leonard Davis Institute in their focus on problems in healthcare (Phillips, 2017). HEAL, major long-term addiction treatment plan started by the NIH in 2018, aims to bring real change for patients facing opioid addictions and misuse. Through all of the studies and research conducted as part of this major plan, NIH has developed new response medications that will help treat those who misuse opioids.

Also, this HEAL initiative seeks to find ways to provide access to addiction treatment programs for the large majority of people who are at risk of an opioid use disorder. Their studies have found that, "most Americans at risk for or with an OUD (Opioid Use Disorder) do not receive these services" (NIH, 2023). To respond to this crisis of access, the NIH plans to conduct further research on implementing treatment programs into institutions likely to interact with those who struggle with addictions such as the criminal justice system and community centers. The NIH's HEAL initiative is a great example of a reactionary measure to prescription opioid addiction.

The National Rural Health Association (NRHA) stands for the small towns and rural areas that cover the majority of the United States. According to their studies, rural areas face significant rates of opioid prescription misuse and distinct lack of treatment and recovery resources. In a 2017 report on the crisis they stated that, "53% of rural counties [are left] without any prescribing physician and 30 million people [are] living in counties where treatment is

unavailable” (NRHA, 2017). This statement shows the clear need for access in the rural counties where opioid addiction persists just as much as in urban areas. In suggesting a response to this obstacle, the report listed several opportunities for change. One such suggestion was to, “Improve the availability of MAT [Medication Assisted Treatment] prescribers, chemical dependency professionals and mental health professionals in rural areas”. This along with many other suggestions serve as the National Rural Health Association’s response to the opioid crisis. Compared to the earlier organizations, the NRHA presents a unique perspective as they stand to serve a specific subsection of the American population, and thus have more specific suggestions for policy changes.

In contrast to these national professional organizations, smaller advocacy groups such as ProjectOpioid and OverdoseLifeline. ProjectOpioid, a small nonprofit based out of Florida, develops resources and coordinates volunteers in response to localized opioid addiction problems. ProjectOpioid’s focus has tended more towards reacting to opioid overdoses instead of preventing the distribution of opioid medication. As part of their response, they release reports on the state of opioid overdoses in Florida every year. The most recent report encourages volunteers with statistics such as, “Florida witnessed a 2.6% decrease in drug overdose fatalities in 2022, marking the first decline in four years” (ProjectOpioid, 2023). These reports are filled with statistics and other persuasive language designed to inspire people to join the fight against opioid addiction.

OverdoseLifeline, an advocacy based out of Indiana, aims to educate youth on the risks of opioid medication abuse. Founded by a family directly affected by losing a son to an opioid overdose, the advocate group has a clear vision to help serve families and young people also struggling with addiction. This group creates curriculum that can be entered into standard youth

health education with regular school schedules and educates youth before they even encounter the opportunity to misuse opioid drugs. The TINAD (This is Not About Drugs) program is designed to help students, “recognize opioid overdose symptoms, the basics of the opioid reversal drug naloxone (NARCAN), the importance of calling 911, the rise in synthetic opioids (fentanyl), and the practice of fentanyl-laced street drugs and counterfeit pills” (OverdoseLifeline, 2020). Their programs all aim to help young people recognize that opioid medications are just as dangerous and harmful as illicit street drugs such as heroin.

Alongside OverdoseLifeline’s curriculum and reports, they also began a mentorship program to provide space for teens to be vulnerable about their struggles or the effect of family members struggling with opioid addictions. This free clinic offers teens the opportunity to learn more about how to handle the effects of drug addictions and be a force for change in their families and communities. Students get paired up with mental health professionals and mentors who provide more specialized insight and care into their unique situations. OverdoseLifeline serves in the fight against opioid addiction both in written methods with reports and curriculum as well as taking a real, side by side stand with the youth victims of the problem.

On the other side from the advocate groups, the pharmaceutical companies responsible for producing addictive medications also play a role in the prescription opioid crisis. Cardinal Health, a producer of opioid-based medication in the US, has made an effort to also take a stand against misuse of prescribed specialty drugs. Cardinal Health is participating in a country-wide settlement that will provide 46 of the 50 US states with monetary support for patients suffering from opioid addiction, whilst also providing data from their company to aid in fighting against pharmaceutical fraud (Cardinal Health, 2022).

In addition to settlements, Cardinal Health has instituted a strict Controlled Substance Monitoring Program (CSMP) within their company (Cardinal Health, n.d.). This program aims to identify suspicious orders of prescription medication and limit the amount of controlled substances patients are able to receive. However, Curtis Haas, of Pharmacy Times, claims that these programs are actually hurtful to the patients they affect (Haas, 2023). His argument states that these CSMPs are not evidence-based programs and fail to account for an individual patient's needs and only restricts access based on an arbitrary threshold limit. He says that this, "methodology for these thresholds has not been clear or shared with health care professionals," leading to significant confusion and harm for patients who still have needs for pain medication. Haas advocates for a combined effort of these pharmaceutical companies along with medical professionals to determine a better system for setting threshold limits and tailoring their monitoring system to the needs of each pharmacy.

Another pharmaceutical company with heavy influence on the opioid epidemic is Purdue Pharma. Purdue Pharma has also supported drug monitoring programs to attempt to ensure drugs stay within proper uses, primarily in response to their prior failure to maintain proper distribution (Purdue Pharma, n.d.). Not only does Purdue endorse monitoring programs, but they also seek to make a difference using education methods and ensuring patients know how to use their medication properly. Purdue "supports programs to educate patients on the proper handling, storage, and disposal of medications," and they use their literature to help reinforce this stance. All of these efforts are part of Purdue Pharma's reorganization plan after declaring chapter 11 bankruptcy.

In the early 2000s, Johnson & Johnson was the foremost supplier of pharmaceutical ingredients used to make opioids. In an effort to atone for their involvement in creating the

opioid crisis, Johnson & Johnson has agreed to contribute significant sums of money towards treatment and rehabilitation for people suffering from opioid addictions. The state of Washington's Attorney General's office released a statement identifying the amount and purpose of the funds supplied in a settlement by Johnson & Johnson. The statement purports that Johnson & Johnson will, "pay \$149.5 million to Washington state" and this money will be disbursed, "to local governments across the state to combat the epidemic in their communities" (Ferguson, 2023). The New Jersey-based pharmaceutical company has faced many trials over their role in starting the opioid crisis and have opted, in many cases similar to Washington state, to settle and provide money in support of rehabilitation. The settlement money provided has often been put towards methods of treating those affected as well as ensuring more tight regulation on opioid prescriptions.

These settlements are actually being tracked by a group dedicated to opioid settlement planning. This group analyzes settlement data from drug companies state by state and suggests ways for states to enable community level advocacies to spend the settlement funds. One of their guides for the state of New Mexico suggests that, "localities could create advisory bodies that include directly impacted people or hold townhalls to receive public feedback" (VitalStrategies, 2023). This group actively monitors the financial side of responding to the opioid crisis and how these pharmaceutical settlement funds can be properly used.

It should be noted that these pharmaceutical companies' primary motive is to make a profit by selling drugs to health departments regardless of the outcome. However, given the immense political pressure to respond to the opioid epidemic, it is in the best interest of these pharmaceutical companies to adhere to the regulations set in place. They would also benefit from

setting up programs to ensure proper usage of their drugs, ideally reducing the number of lawsuits in the future.

Both groups of participants have significant interest in reducing the number of opiate prescription medication overdoses. Combining each of the groups' missions, the overall goal of protecting the people of the United States is evident in the desire to fight against poor distribution of addictive medications.

Conclusion

In the case of the opioid epidemic, prescription medications have presented a significant problem and require a tact response. To respond to this crisis, many different groups have gotten involved, from the advocates for the patients and medical practitioners to the pharmaceutical groups under severe scrutiny from governmental regulators. All sides have some desire to see a real change in the communities heavily affected by opioid addiction, whether from a health and good will perspective or the monetary capitalist side of drug development. Both groups often used methods and policies that most aligned with their primary interest in responding to the crisis. Advocacy groups used literature and research to support healthy practices among medical groups as well as patients while pharmaceutical companies often resorted to financial settlements and endorsements to support the efforts of treatment and recovery programs.

This method of responding to a nationwide crisis concerning a subsection of the population could be applied to many other areas of national concern. For example, the case of gun violence in low income neighborhoods across the United States could benefit from a double sided response from advocate groups and gun distributors together. Advocate groups are naturally created for the express purpose of defending the victims while gun distributors would

benefit from removing their brand identity from violent crimes. Another case where this two sided response could work is in the case of sponsorships for NCAA athletes. The student athletes could receive aid from advocate groups who push for financial compensation for the students who lay their physical health on the line for the school. Sponsors can financially support the students because their image and performance can be beneficial for their brand. These two forces can work together similar to the response to the opioid epidemic.

Future research into the American opioid crisis could include the actual plans for distribution of treatments and recovery medications. Analysis of proposed strategies by these advocate groups would allow these plans to be improved upon and possibly used in other related fields. Further research could investigate proper judicial proceedings for the pharmaceutical companies involved. This research might allow regulators to extract the best response out of these companies to ensure no further health crises emerge from their products.

Opioids have presented a massive threat to the health of the American people for decades. It is encouraging to see participant groups with all different motives and agendas slowly but surely respond to this crisis. Given the efforts by these groups and their collective response, a healthy and opioid addiction-free future is possible for the American people.

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