

The Silent Killer: Naloxone's Invisible Effects on the Drug Epidemic

Scott T. Cross

Grove City College

Abstract

The history of opioid use in the world stretches back millennia, to the times of the ancient Egyptians. Over this period, these drugs had several practical purposes and were used routinely. However, during the beginning of the 20th Century, the United States began regulating opioid use as part of a broader increase in governmental authority. Similar situations can be examined with regards to the prohibition of alcohol. Drug overdose deaths began to rise in part due to this increased regulation, and the government commenced “the war on drugs” in an effort to battle this new form of death plaguing the people. As deaths continued to rise, the government subscribed to a newer, progressive agenda, providing naloxone, an antidote to opioid overdoses, to the public. This opioid reversal drug was increased in availability through various government subsidies and organizations in a way that made it monetarily free in many cases. The results of this policy, based on the Peltzman effect, are that people felt safer and, therefore, engaged in riskier behavior. The data demonstrates that in many cases, the behavior was so extreme as to cause more deaths than before the introduction of naloxone.

“Even the best of intentions to help or to serve the socially vulnerable can also simultaneously perpetuate—or even exacerbate—oppression, humiliation and dependency of one kind or another.”¹

~ Philippe Bourgois

Introduction

Human action represents the bedrock upon which all study of sound economics is based. This human action takes place when individuals make choices about the future in the face of uncertainty. The choices that individuals make are effected by a verity of separate factors including time preference, past experiences, and future predictions. An additional factor that frequently plays a role in the actions that people take is different coercive measures imposed by the state. These edicts or laws are imposed and enforced with the intent of either promoting or dissuading members of the citizenry from engaging in various forms of activity.

When a law is imposed, the law may be of two principal types: either it promotes and protects private property, or it rejects and attacks private property. An example of a law that promotes private property in a free society is the fact that murder is illegal in virtually every country on earth. This implies that the governments of these countries have passed laws prohibiting one person from killing another without due cause, the obvious intent being to discourage this kind of behavior.

Additionally, the fact that murder is illegal indicates that there is some form of punishment for breaking the law. It is this punishment which convinces people on the margins, who otherwise would have committed murder, to not act out of an unwillingness to suffer the possible consequences of his actions if the perpetrator is caught. In the process, laws of this

¹ Philippe Bourgois. 2000. “Disciplining addictions: The Bio-Politics of Methadone and Heroin in the United States,” *Culture, Medicine, and Psychiatry* 24, no. 2: 168-169.
<http://philippebourgois.net/www.philippebourgois.com/Culture%20Medicine%20Psychiatry%20Methadone%2000.pdf>

nature also promote private property. Killing a person arbitrarily is a clear violation of private property rights. By the government offering protection to people's lives, it is essentially strengthening the natural law of private property rights rather than interfering in the laissez-faire economy.

However, other legal intrusions into the free market actually serve as an attack on individuals, diluting the citizen's private property rights. Often, the effects of these interventions yield wholly unexpected results. As the venerable economist Ludwig von Mises pointed out, all government intervention leads to consequences that are detrimental to the economy as a whole, and it is often the case that these consequences are so severe that they actually counteract whatever benefit was intended by the law in the first place.² A significant, yet often overlooked, example of this is the promotion of Naloxone as a reversal of Opioid overdoses.

History of Opioids

According to The National Institute on Drug Abuse, "opioids are a class of drugs that include the illegal drug heroin, synthetic opioids such as fentanyl, and [drugs] available legally by prescription, such as oxycodone (OxyContin), hydrocodone (Vicodin), codeine, morphine, and many others."³ Opioids are justified in use by the fact that they can be used as a pain retardant. Licensed doctors often prescribe these drugs with the intent of alleviating some pain that their patients are experiencing.

Historically speaking, opioids are not in any way some kind of new invention. Records of their use have been discovered and documented in Egyptian tombs, in the ancient Greek city of

² Ludwig von Mises. 1998. *Human Action: A Treatise on Economics*. Auburn: Ludwig Von Mises Institute. 736-737. https://cdn.mises.org/Human%20Action_3.pdf

³ National Institute on Drug Abuse. 2024. "Opioids." U.S. Department of Health and Human Services, Accessed January 24, 2024, <https://nida.nih.gov/research-topics/opioids>

Thebes, and in the archeological excavations of Sumerian villages.⁴ Traditionally extracted from the seeds of the poppy plant (*Papaver somniferum*), opium, which is a type of opioid, has been immortalized in various different cultures, an example being this fact being the Greek's incorporation of opium in an assortment of different myths about their plethora of mythical gods.⁵

Early on, opioids were found to have multiple practical purposes. The Ebers Papyrus, an ancient Egyptian medical manuscript dating back to approximately 1500 B.C., describes how opium can be effectively used to sedate children.⁶ Hippocrates, often considered the Father of Modern Medicine and for whom the Hippocratic Oath is named, is thought to have “prescribed ‘meconium’ (probably poppy juice) as [a] purgative, narcotic and to cure leucorrhea.”⁷ In the 19th century, opium from China began to bloom with popularity, especially among women, with the Roosevelt family in the U.S. notably making a large portion of its fortune with the sale of the drug.

Drug Legislation

This popularity and practical use served as the backdrop to the events of the 1900s. This century was characterized by a dizzying increase in government authority, most of which was justified by the insistence that measures needed to be taken for the health, safety and wellbeing of the citizens. These reforms came to the drug sector in the year 1914. In that year, the same

⁴ Danilo Freire Durante. 2005. “Opium and Opioids: A Brief History.” *Revista Brasileira De Anestesiologia* 55, no. 1: 135–46. Accessed January 18, 2024. <https://doi.org/10.1590/S0034-70942005000100015>.

⁵ P. G. Kritikos and S. P. Papadaki. 1967. “The History of Poppy and Opium and Their Expansion in Antiquity in the Eastern Mediterranean Area.”, *United Nations*. 17-38. https://www.unodc.org/unodc/en/data-and-analysis/bulletin/bulletin_1967-01-01_3_page004.html

⁶ M. M. Cohen. 1969. “The history of opium and opiates.” *Texas Medical Journal*, 65: 76-85.

⁷ Durante. “Opium and Opioids: A Brief History.” 135–46.

year that saw the commencement of the first World War, Congress passed the Harrison Narcotics Act in the United States.

This piece of legislation dictated that “manufacturers, sellers, and distributors [of narcotics had] to register with the Bureau of Internal Revenue under the U.S. Treasury Department.”⁸ A heavy tax was placed on certain drugs while others were outright banned. This was the first time there was a Federal law prohibiting opioids. Prior to this, several states had restrictions on the sale of narcotics, but these were not consistently or effectively enforced. Doctors had routinely prescribed these drugs, and almost anyone could get their hands on some, even if the states banned them, if they wished with little cost to themselves or others.⁹

The Harrison Narcotics Act put an end to all of this. Doctors, who were once eager to help their patients in the best way they believed possible, now had to cope with the extra cost of complying with the new overarching Federal regulations. Patients, who were experiencing excruciating pain, now faced the comparatively increased possibility of not being able to get the painkillers they needed because of the added cost of finding a certified doctor to supply the required prescription. Even if an individual had taken certain drugs before, knew the risks in doing so, and subjectively preferred that drug to others, he was now barred from using it based on the new Federal law.

Disconcertingly, the Harrison Narcotics Act, and similar legislation that followed in its wake, were welcomed with open arms by vast swaths of the adoring public with the

⁸ Drug Enforcement Administration. 2021. “Opium Order Form,” DEA Museum, Accessed January 24, 2024, <https://museum.dea.gov/museum-collection/collection-spotlight/artifact/opium-order-form>

⁹ David T. Courtwright. 1992. *Treating Drug Problems: Vol. 2: Commissioned Papers on Historical, Institutional, and Economic Contexts of Drug Treatment*. Washington DC: National Academies Press US, Accessed January 24, 2024, <https://www.ncbi.nlm.nih.gov/books/NBK234755/>

understanding that the government required more power for the greater good, not only of the population as a whole, but also for the benefit of the society and culture of the country. Safety was preached as paramount and, if the government was allowed to regulate who consumed what, everyone would be safer, leading to a better civilization.

Prohibition Parallels

This mindset was not relegated to the drug sector alone but can be observed in the prohibition of alcohol as well, arguably a drug in and of itself. In this time of renewed temperance and religious morality, people began to not only endeavor to be “better” people themselves by abstaining from alcohol and other drugs, but then attempted to force every other citizen of the country to also exhibit this same newfound distaste for impropriety by making the materials in question illegal. The use and sale of this paraphernalia would then be punishable under law by the state.

Unlike narcotics, alcohol then was then taken the additional step of being Constitutionally banned in the 18th Amendment. What followed is well known with regards to alcohol, and often overlooked or dismissed with regards to drugs. Many drugs and narcotics, in addition to alcohol, were forced to be withdrawn from the legal market completely, with the sellers instead pulling back into the black market of illicit exchanges to engage in trade. This was the era of the bootleggers, the drug cartels of alcohol. The lay person is well aware of the fact that both the bootlegger of the early 20th century and the contemporary drug dealer are both more likely to use violence and even kill another person than their law-abiding counterparts. However, they are not always able to give a coherent reason as to why this is the case.

The reason, of course, has to do with the concept of opportunity cost. It is less costly for the bootlegger, who is already engaged in illegal activity, to commit additional crimes than for

the person who has not participated in illicit activity. An individual who is actively committing a crime already has the potential of being caught and consequently punished for his actions. This person, who is already risking punishment, is forgoing comparatively less by committing additional crimes because he is already breaking the law. Conversely, an individual who has not yet broken the law has more to lose from breaking the law a first time than any time after. In other words, the costs are higher for the latter than the former.

The Drug Epidemic

Precisely the same process played out with drugs as with alcohol. Despite the stark differences in the amount of crime surrounding the two substances, alcohol prohibition was eventually repealed while the narcotics were not granted that same privilege.^{10, 11} This fact served as the catalyst for what would eventually become known as the “drug epidemic” the causes of which will be discussed in more depth at a later time.

The drugs that had been made illegal have since exploded in popularity and use due to a variety of different factors. Additionally, they have also increased in potency, a fact which has contributed to the increase in addiction and subsequent overdose deaths that have also been growing in number for the past several decades. According to the Centers for Disease Control and Prevention (CDC), the 12 month period ending in August of 2023 saw one of the highest overdose rates in the U.S. ever, with 106,363 individuals being confirmed dead as a result of overdoses and an additional 5,764 predicted dead but not yet confirmed for that same time period.¹² This number, though it swelled to alarming proportions following the lockdowns that

¹⁰ Aaron O’Neill. n.d. “Prohibition: US Homicide and Suicide Rate 1900-1950.” Statista. Accessed January 26, 2024. <https://www.statista.com/statistics/1088644/homicide-suicide-rate-during-prohibition/>.

¹¹ Drug Enforcement Administration. n.d. “The Early Years.” Accessed January 24, 2024. <https://www.dea.gov/sites/default/files/2018-05/Early%20Years%20p%2012-29.pdf>.

¹² Centers for Disease Control. 2024. “Products - Vital Statistics Rapid Release - Provisional Drug Overdose Data.” Accessed January 17, 2024, <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>

were experienced in 2020 as a result of the government's response to the coronavirus, had been increasing steadily for decades.

As the drug related deaths shot upward in the 19th century, due almost entirely to government intervention, this same government began to apply additional interference into the economy to repair the damage for which it was responsible. As always, these policies only caused the situation to become worse.¹³ These government obstructions reached their culmination in a sense in 1971 when the 37th President of the U.S., Richard Nixon, began what is generally “considered the first... war on drugs-style foreign policy,” with Ronald Raegan actually using the phrase “war on drugs” not long after.¹⁴ In addition to the new administration that was created, the Drug Enforcement Administration, and the sizeable increase in punishment severity for drug crimes, 1971 also saw the birth of a new substance that was championed as the overdose victim's savior: naloxone.

Naloxone As Government's Response

According to the National Institute on Drug Abuse, a subset of the government's National Institute of Health, naloxone is “an opioid antagonist...[which] means that it attaches to opioid receptors and reverses and blocks the effects of other opioids.”¹⁵ The drug can be administered, either by nasal spray or injection, to a person who has overdosed on opioids and used to revive them, in many cases saving them from death. Naloxone, which is also frequently referred to by

¹³ Ludwig von Mises. 1944. *Bureaucracy*. United States: Yale University Press. 119, https://cdn.mises.org/Bureaucracy_3.pdf

¹⁴ Justin Reid. 2022. “‘An Exercise in International Extortion’: Operation ‘Intercept’ and Nixon’s 1969 War on Drugs.” Chapman University. Accessed January 20, 2024, https://digitalcommons.chapman.edu/war_and_society_theses/31/

¹⁵ National Institute on Drug Abuse. 2022. “Naloxone DrugFacts.” National Institute on Health. January 11, 2022. <https://nida.nih.gov/publications/drugfacts/naloxone>.

its brand name, Narcan, acts as an antidote, restoring normal breathing to a person who has overdosed and resuscitating them, often in a matter of minutes.¹⁶

Despite being developed and receiving a patent in 1961, it was not until 1971 that naloxone actually received government approval from the Food and Drug Administration (FDA) to be used in the treatment of overdoses.¹⁷ After this took place, naloxone was then able to be legally utilized in the public. However, the drug's use was reserved almost exclusively for medical personnel in emergency rooms and ambulances to treat overdoses.

The FDA's approval of additional narcotics in the 1990s, famously OxyContin, contributed to physicians vastly increasing their prescription of these pain relievers.¹⁸ Since patients in the U.S. are unable to simply take drugs that they believe would help them without a prescription, the drug companies that produced the opioids concentrated their advertising on the prescribers themselves. Physicians, impressed by the promises of the opioid makers, increased their rate of prescribing. The number of prescriptions has increased steadily, with the year 2022 bearing witness to over 130 million opioid prescriptions being dispensed according to the CDC.¹⁹ Since advertising, in the words of Mises, is simply "business propaganda," one must not be entirely surprised at the accusations that the drug companies downplayed the addictiveness of

¹⁶ E. W. Boyer. 2012. "Management of Opioid Analgesic Overdose." *New England Journal of Medicine* 367 no. 2: 146–155. <https://www.nejm.org/doi/full/10.1056/NEJMra120256>

¹⁷ Kailash Sundaram. n.d. "A Historical Perspective of Naloxone Access and Distribution, a Harm Reduction Approach." Accessed January 24, 2024. https://projects.iq.harvard.edu/files/historyopioidepidemic/files/sundaram_final_paper.pdf

¹⁸ National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Health Sciences Policy, Committee on Pain Management and Regulatory Strategies to Address Prescription Opioid Abuse, Jonathan K. Phillips, Morgan A. Ford, and Richard J. Bonnie. 2017. *Opioid Approval and Monitoring by the U.S. Food and Drug Administration*. Washington, D.C., DC: National Academies Press. Accessed January 26, 2024. [https://www.ncbi.nlm.nih.gov/books/NBK458654/#:~:text=In%20the%201960s%20and%201970s,%20\(OxyContin%2C%201995\).](https://www.ncbi.nlm.nih.gov/books/NBK458654/#:~:text=In%20the%201960s%20and%201970s,%20(OxyContin%2C%201995).)

¹⁹ Centers for Disease Control. 2023. "United States Dispensing Rate Maps." U.S. Department of Health and Human Services. Accessed January 24, 2024. <https://www.cdc.gov/drugoverdose/rxrate-maps/index.html>.

their products.²⁰ This occurrence offered yet another possible avenue for individuals to become addicted on drugs, overdose, and require naloxone to spare their lives. With the increase in demand for naloxone, the price of the drug began to rise as well.

Beginning in 1996, in part due to the increase in prescriptions, “an increasing number of programs provided laypersons with training and kits containing...naloxone.”²¹ These programs served to increase the availability of naloxone to the general population. Furthermore, as naloxone became more common and well known amongst the population, calls began to increase for the drug to be made more available and affordable to the general public so that it could be used to prevent more potential overdose deaths.

The government, responding to both this increased demand for naloxone and a freshly found compassion for drug addicts, began to increase the availability of naloxone. As Philip R. Kavanaugh points out, “governments... coordinated with drug companies to propagate the overdose reversal drug naloxone (Narcan) as a ‘kinder/gentler’ state response.”²² Rather than imposing higher fines and longer prison sentences as it did originally, the government exhibited a more progressive strategy and sought to treat the addicts with compassion by providing them with new ways to attain naloxone.

The caring attitude the government adopted pushed it to widen the availability of naloxone. The U.S. Department of Health and Human Services set about in 2015 to “combat opioid overdoses... [by] accelerating development of new naloxone formulations and user-

²⁰ Mises. *Human Action: A Treatise on Economics*. 316.

²¹ Centers for Disease Control. 2015. “Opioid Overdose Prevention Programs Providing Naloxone to Laypersons — United States, 2014.” U.S. Department of Health and Human Services. Accessed January 23, 2024. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6423a2.htm>.

²² Philip R. Kavanaugh. 2022. “Narcan as Biomedical Panic: The War on Overdose and the Harms of Harm Reduction.” *Theoretical Criminology* 26 no. 1: 132–52. <https://doi.org/10.1177/1362480620964779>

friendly products and expanding naloxone utilization.”²³ Beginning in March of 2023, the U.S. Food and Drug Administration (FDA) granted the naloxone nasal spray approval so that it could be procured without a prescription over the counter (OTC).²⁴

No longer would the government force people to get a prescription, taking valuable time out of their day simply to get a permission slip from their doctor to buy naloxone. Instead, individuals could merely walk into “drug stores, convenience stores, grocery stores and gas stations, as well as online” and get naloxone whenever they pleased.²⁵ The executive office in the U.S. at the time, under the Biden-Harris Administration, championed this decision of the FDA, explaining that this new privilege granted to naloxone will “pave the way for the life-saving medication to be sold directly to consumers... ‘making naloxone more accessible.’”²⁶

This is undoubtedly true. By removing obstacles for consumers, even minor ones, people on the margins will be comparatively more likely to engage in the behavior where the opportunity costs are reduced. In this case, consumers will buy more naloxone. Often the costs are even lower for naloxone than for the vast majority of other drugs. Certain states, including, notably, Ohio, instituted programs that actually distributed naloxone to residents of the state free of charge.²⁷ Other states set the bar only slightly higher by requiring their residents to watch a

²³ Ravi Gupta, Nilay D. Shah, and Joseph S. Ross. 2016. “The Rising Price of Naloxone — Risks to Efforts to Stem Overdose Deaths.” *The New England Journal of Medicine* 375 no. 23: 2213–15. <https://doi.org/10.1056/nejmp1609578>.

²⁴ Food and Drug Administration. 2023. “FDA Approves First Over-the-Counter Naloxone Nasal Spray.” FDA. Accessed January 25, 2024. <https://www.fda.gov/news-events/press-announcements/fda-approves-first-over-counter-naloxone-nasal-spray>.

²⁵ U.S. Food and Drug Administration. “FDA Approves First Over-the-Counter Naloxone Nasal Spray.”

²⁶ Food and Drug Administration. 2023. “The Biden-Harris Administration Takes Critical Action to Make Naloxone More Accessible and Prevent Fatal Overdoses from Opioids like Fentanyl.” US Department of Health and Human Services. Accessed January 22, 2024. <https://www.hhs.gov/about/news/2023/03/29/biden-harris-administration-takes-critical-action-make-naloxone-more-accessible-prevent-fatal-overdoses-opioids-fentanyl.html>

²⁷ Ohio Department of Mental Health and Addiction Services. n.d. “Obtaining-Free Naloxone.” Innovative Ohio Platform. Accessed January 25, 2024. <https://mha.ohio.gov/know-our-programs-and-services/naloxone-sitearea/obtaining-free-naloxone>.

brief informational video before handing out free naloxone. As Jennifer Doleac and Anita Mukherjee point out in their research paper, although most states and local governments do not keep track of naloxone distribution, two of them are exceptions to this trend. North Carolina tracked naloxone distribution for several years in the mid-2010s in addition to Maryland where “numbers imply that distribution [of naloxone kits] jumped 1,731%.”²⁸

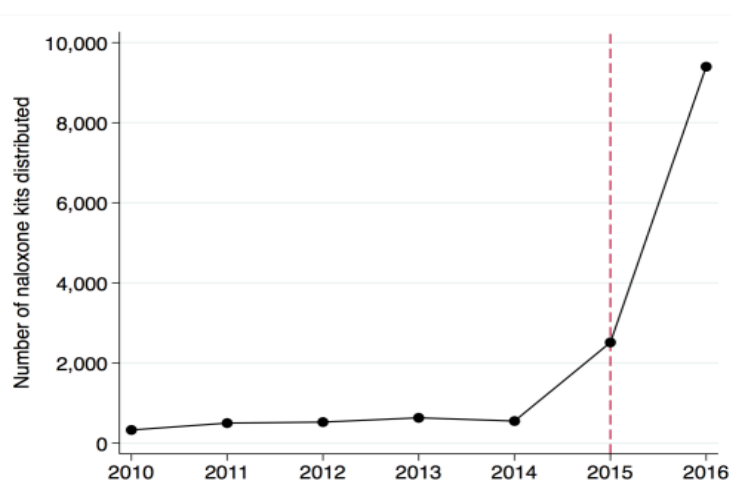


Fig. 1: Number of naloxone kits distributed in Baltimore before and after Maryland naloxone access was expanded.

(Jennifer L. Doleac and Anita Mukherjee; IZA Institute for Labor Economics, 2018)

Fig. 1 shows the sharp increase in distribution of naloxone kits that abruptly occurred in Baltimore. Although it had begun to rise, distribution numbers shot upward and reached all-time highs after access was expanded.

²⁸ Jennifer L. Doleac and Anita Mukherjee. 2018. “The Moral Hazard of Lifesaving Innovations: Naloxone Access, Opioid Abuse, and Crime” *IZA Institute for Labor Economics*. Lecture Series (2018). <https://docs.iza.org/dp11489.pdf>

Results of the Policy

As governments of all sizes began subsidizing naloxone, in many cases eliminating all monetary expenses all together so that the residents could simply ask and receive the drug whenever they felt the need, the opportunity cost of obtaining naloxone is tainted so that people are not able to make accurate decisions and calculations based on the artificially low price and effort needed to acquire the good. In this way, more naloxone is used than naturally would have been because people make decisions and calculations based off the lower price and consider it a low-cost expense to go through the process of procuring a needed drug, free of monetary cost.

Because of this lower price, more people have access to naloxone. With this higher access to naloxone comes a higher likelihood that a witness to an overdose, or the overdosed individual himself, will have the overdose reversal drug near enough to use and save the overdose victim. An example of this can be seen in the state of Tennessee. From the end of 2017 to the beginning of 2023, after distributing more than 450,000 units of naloxone, the Tennessee Department of Mental Health & Substance Abuse Services “has documented at least 60,000 lives saved because of naloxone distributed during that time.”²⁹ It can be confidently assumed that this number was greatly increased due to the government subsidizing naloxone and heightening its availability. If naloxone was more expensive, less people would have it to use on someone who overdosed. Furthermore, similar heartwarming stories of lives saved can be found in the other states as well.

Some point to these instances where naloxone was used as proof that the government’s subsidization of the drug is a laudable practice. That this policy saves lives. The National Institute on Drug Abuse holds that “naloxone distribution was predicted to prevent 6 percent of

²⁹ Tennessee Department of Mental Health and Substance Abuse Services. n.d. “Regional Overdose Prevention Specialists.” [www.tn.gov](https://www.tn.gov/behavioral-health/substance-abuse-services/prevention/rops.html). Accessed January 25, 2024. <https://www.tn.gov/behavioral-health/substance-abuse-services/prevention/rops.html>.

overdose deaths, 1 for every 227 naloxone kits distributed.”³⁰ Armed with these statistics, government officials and other social organizations advocate for increased government spending in the area of overdose prevention. After all, they point out, it would be unethical to withhold care from the vulnerable individuals who are addicted to opioids, condemning them to death, when it was fully within the power of the community and the government to prevent it by keeping naloxone cheap, affordable, and available.

Economic Analysis

Despite these well-intentioned arguments, economic analyses of the issue would seem to contradict these contentions. The basis for this reasoning comes principally from the research and work of Sam Peltzman, after whom the Peltzman Effect is named. This phenomenon of the Peltzman Effect takes place when certain safety measures are implemented to incentivize certain actions by the public. However, at certain times, these good intentions lead to unintended incentives that often bring about negative consequences. At times, these negative consequences lead to results that are more detrimental than the original situation, actually increasing the behavior that the law was supposed to lessen.

Peltzman first outlined his understanding of this occurrence with regards to seatbelt laws in a paper published in 1975. He pointed out that the National Traffic and Motor Vehicle Safety Act, which forced the wearing of seatbelts in automobiles to increase the safety of people in the cars, actually made the drivers feel safer when they drive.³¹ This added feeling of security actually incentivizes the operators of vehicles to drive more recklessly, thereby counterintuitively

³⁰ National Institute on Drug Abuse. 2021. “Is Naloxone Accessible?” U.S. Department of Health and Human Services. Accessed January 25, 2024. <https://nida.nih.gov/publications/research-reports/medications-to-treat-opioid-addiction/naloxone-accessible>.

³¹ Peltzman, Sam. 1975. “The Effects of Automobile Safety Regulation.” *Journal of Political Economy* 83 no. 4: 677–725. <http://www.jstor.org/stable/1830396>

actually decreasing the safety of drivers, passengers, and even pedestrians. Thus, the law of seatbelt wearing, although adopted to save lives, hypothetically resulted in higher risk taking and less safety, representing a perfect example of intentions not necessarily leading to desired outcomes.

Peltzman points out and maintains that the Peltzman Effect is not relegated only to the automotive sector. In a 2004 lecture that he gave while receiving an award given to him by the AEI-Brookings Joint Center, Peltzman indicates that, in addition to vehicular safety, compensating negative incentives can also be viewed in the Americans with Disabilities Act and the Endangered Species Act.³² An additional scenario in which the Peltzman Effect can be analyzed is with regards to the availability of naloxone as a response to drug overdoses.

As pointed out above, federal, state, and local governments have gone to great lengths and expended large amounts of resources in an effort to make naloxone as widely available as possible to the general public. The rationale behind this is that the more available the opioid reversal drug naloxone is, the more lives can be saved of those who abuse opioids. However, the work of Peltzman sheds some doubt on this assumption.

As Doleac and Mukherjee eloquently indicate, although naloxone undoubtedly reverses the effects of opioid overdoses, “it can also... unintentionally increase opioid abuse by providing a safety net that encourages riskier use.”³³ By offering the “safety net” of naloxone to opioid addicts, the government has effectively lowered the risk associated with using these narcotics. With this decrease in risks, the costs of using opioids also decreases, meaning people on the

³² Peltzman, Sam. 2005. *Regulation and the Natural Progress of Opulence Treatment*. Washington DC: The AEI Press. <https://www.aei.org/wp-content/uploads/2011/10/Peltzman-Lecture.pdf>

³³ Doleac and Mukherjee, “The Moral Hazard of Lifesaving Innovations: Naloxone Access, Opioid Abuse, and Crime”

margins, who may have been hesitant to do so, will begin using the drugs. Higher use entails a higher likelihood of the drugs being abused and the user overdosing. Those engaged in this comparatively riskier behavior do so under the moral hazard that either they or someone nearby will have naloxone on hand to revive them if they do overdose.

However, the fact that naloxone encourages riskier behavior does not in and of itself mean that the practice of making naloxone unnaturally available is a detrimental practice. This is to say, if the benefits of installing the policy outweigh the costs, the practice can still be declared to be at least nominally successful in achieving its stated end of saving the lives of opioid addicts. If the number of lives saved by administering naloxone is higher than the number of additional lives lost by people engaging in riskier behavior, the policy would be successful. Unfortunately, the work of Doleac and Mukherjee disputes this contention of success.

By using Google Trends data to analyze whether the populations in the areas where naloxone is being distributed were aware of naloxone's availability, the two economists examine related searches when naloxone access is increased in specific geographic areas. This data demonstrates that, in the areas where naloxone access expands, Google searches for "naloxone" increase by over 7%.³⁴ The implication of this is that the people in the areas where naloxone is available are, in fact, aware of the drugs availability.

Doleac and Mukherjee's research also demonstrates that the government's interventionist policies that expanded access to naloxone have not resulted in any of the desired consequences. In some cases, the results were the exact opposite of what was originally intended. As naloxone

³⁴ Doleac and Mukherjee, "The Moral Hazard of Lifesaving Innovations: Naloxone Access, Opioid Abuse, and Crime." 18.

access was inflated, it could be observed that this policy “increases opioid abuse and opioid-related crime, and does not reduce opioid-related mortality.”³⁵

In another study, the pair more succinctly point out that “no net measurable reduction in opioid related mortality” could be detected after the government had spent many millions of dollars on subsidies.³⁶ In some instances, the outcome was the exact opposite of what was anticipated. The Midwest seemed to be particularly affected, with an increase in naloxone availability actually leading to an increase in opioid related mortality.³⁷

Doleac and Mukherjee then venture the additional step of indicating that a variety of other detrimental drug related activities also tend to increase when naloxone is made unnaturally more available. In addition to drug abuse instances rising, “broadened access led to more opioid-related emergency room visits and more opioid-related theft.”³⁸ As can be seen, not only is the increase in naloxone availability correlated with an increase in risky behavior, such as excessive use and overdosing on opioids, that puts third parties at risk, but the policy has also incentivized individuals to resort to theft to facilitate their addiction, thus further violating the private property rights of others.

It must be noted that everything is multicausal, so the drastic increase in opioid related deaths is indisputably not related *only* to the increased availability of naloxone. Other contributing factors have undoubtedly played a prominent role in the cause and exacerbation of the drug epidemic. These other factors include the government’s original banning of many

³⁵ Doleac and Mukherjee, “The Moral Hazard of Lifesaving Innovations: Naloxone Access, Opioid Abuse, and Crime.”

³⁶ Jennifer L. Doleac and Anita Mukherjee. 2022. “The Effects of Naloxone Access Laws on Opioid Abuse, Mortality, and Crime.” *The Journal of Law & Economics* 65 no. 2: 211–38. <https://doi.org/10.1086/719588>

³⁷ Doleac and Mukherjee, “The Moral Hazard of Lifesaving Innovations: Naloxone Access, Opioid Abuse, and Crime.”

³⁸ Doleac and Mukherjee, “The Effects of Naloxone Access Laws on Opioid Abuse, Mortality, and Crime.”

opioids to begin with, making activity surrounding the substances illegal, and what is known as the Iron Law of Prohibition, which points out the fact that banned substances, whether they are drugs or alcohol, become more potent after they are banned.³⁹

Examples of this include the fact that, during the prohibition of alcohol, beer and other common alcoholic drinks were not supplied as much, with producers instead putting their effort into making whisky and other more potent drinks, and the same parallels can be drawn with the illegal drug supply.⁴⁰ However, although these phenomena and others did undoubtedly play a role in exacerbating the drug epidemic, Doleac and Mukherjee definitively demonstrate that making naloxone more available also contributed, causing measurable negative outcomes to occur.

Conclusion

The United States government has positioned itself as the foremost protector of the people of the country and has identified narcotics as one of the most perilous dangers to the citizenry. Being unable to effectively ban drugs outright, government has decided to subsidize an antidote to opioid overdoses in an effort to minimize drug-related deaths, making the antidote, naloxone, more available to the public. However, in doing this, the government has constructed a moral hazard in which opioid users feel safer when an opioid antidote is available to them. And these individuals consequently engage in riskier behavior under the belief that there is a higher likelihood of receiving naloxone and being saved should they unintentionally overdose.

³⁹ James Ostrowski. 1989. "Cato Institute Policy Analysis No. 121: Thinking about Drug Legalization." The Cato Institute. Accessed January 31, 2024. <https://www.cato.org/sites/cato.org/files/pubs/pdf/pa121.pdf>

⁴⁰ Mark Thornton. 1991. *The Economics of Prohibition*. Salt Lake City: University of Utah Press. 89. https://cdn.mises.org/economics_of_prohibition_3.pdf

Additionally, other drug-related activities such as theft and visits to the emergency room also tend to increase when naloxone is made more available. The policy seems to incite people to engage in theft and waste the resources of the medical sphere by engaging in physically harmful behavior. Finally, the policy does not seem to be effective, with the average number of opioid overdose deaths not decreasing in most places and actually increasing in other places. Based on these findings, if the stated goal of the U.S. government is to minimize drug-related deaths and suffering, policy makers should seriously reconsider the subsidization of naloxone before more harm occurs than has already been committed.

References

- Bourgois, Philippe. 2000. "Disciplining addictions: The Bio-Politics of Methadone and Heroin in the United States," *Culture, Medicine, and Psychiatry* 24, no. 2: 168-169.
<http://philippebourgois.net/www.philippebourgois.com/Culture%20Medicine%20Psychiatry%20Methadone%202000.pdf>
- Boyer, E. W. 2012. "Management of Opioid Analgesic Overdose." *New England Journal of Medicine* 367 no. 2: 146–155. <https://www.nejm.org/doi/full/10.1056/NEJMra120256>
- Centers for Disease Control. 2015. "Opioid Overdose Prevention Programs Providing Naloxone to Laypersons — United States, 2014." U.S. Department of Health and Human Services. Accessed January 23, 2024.
<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6423a2.htm>.
- Centers for Disease Control. 2024. "Products - Vital Statistics Rapid Release - Provisional Drug Overdose Data." Accessed January 17, 2024, <https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>
- Centers for Disease Control. 2023. "United States Dispensing Rate Maps." U.S. Department of Health and Human Services. Accessed January 24, 2024.
<https://www.cdc.gov/drugoverdose/rxrate-maps/index.html>.
- Cohen, M. M. 1969. "The history of opium and opiates." *Texas Medical Journal*, 65: 76-85.
- Courtwright, David T. 1992. *Treating Drug Problems: Vol. 2: Commissioned Papers on Historical, Institutional, and Economic Contexts of Drug Treatment*. Washington DC: National Academies Press US, Accessed January 24, 2024,
<https://www.ncbi.nlm.nih.gov/books/NBK234755/>
- Doleac, Jennifer L. and Anita Mukherjee. 2022. "The Effects of Naloxone Access Laws on Opioid Abuse, Mortality, and Crime." *The Journal of Law & Economics* 65 no. 2: 211–38. <https://doi.org/10.1086/719588>
- Doleac, Jennifer L. and Anita Mukherjee. 2018. "The Moral Hazard of Lifesaving Innovations: Naloxone Access, Opioid Abuse, and Crime" *IZA Institute for Labor Economics*. Lecture Series (2018). <https://docs.iza.org/dp11489.pdf>
- Drug Enforcement Administration. n.d. "The Early Years." Accessed January 24, 2024.
<https://www.dea.gov/sites/default/files/2018-05/Early%20Years%20p%2012-29.pdf>.
- Drug Enforcement Administration. 2021. "Opium Order Form," DEA Museum, Accessed January 24, 2024, <https://museum.dea.gov/museum-collection/collection-spotlight/artifact/opium-order-form>
- Durante, Danilo Freire. 2005. "Opium and Opioids: A Brief History." *Revista Brasileira De Anestesiologia* 55, no. 1: 135–46. Accessed January 18, 2024.
<https://doi.org/10.1590/S0034-70942005000100015>.

- Food and Drug Administration. 2023. “The Biden-Harris Administration Takes Critical Action to Make Naloxone More Accessible and Prevent Fatal Overdoses from Opioids like Fentanyl.” US Department of Health and Human Services. Accessed January 22, 2024. <https://www.hhs.gov/about/news/2023/03/29/biden-harris-administration-takes-critical-action-make-naloxone-more-accessible-prevent-fatal-overdoses-opioids-fentanyl.html>
- Food and Drug Administration. 2023. “FDA Approves First Over-the-Counter Naloxone Nasal Spray.” FDA. Accessed January 25, 2024. <https://www.fda.gov/news-events/press-announcements/fda-approves-first-over-counter-naloxone-nasal-spray>.
- Gupta, Ravi, Nilay D. Shah, and Joseph S. Ross. 2016. “The Rising Price of Naloxone — Risks to Efforts to Stem Overdose Deaths.” *The New England Journal of Medicine* 375 no. 23: 2213–15. <https://doi.org/10.1056/nejmp1609578>.
- Kavanaugh, Philip R. 2022. “Narcan as Biomedical Panic: The War on Overdose and the Harms of Harm Reduction.” *Theoretical Criminology* 26 no. 1: 132–52. <https://doi.org/10.1177/1362480620964779>
- Kritikos, P. G. and S. P. Papadaki. 1967. “The History of Poppy and Opium and Their Expansion in Antiquity in the Eastern Mediterranean Area.”, *United Nations*. 17-38. https://www.unodc.org/unodc/en/data-and-analysis/bulletin/bulletin_1967-01-01_3_page004.html
- Mises, Ludwig von. 1944. *Bureaucracy*. United States: Yale University Press. 119, https://cdn.mises.org/Bureaucracy_3.pdf
- Mises, Ludwig von. 1998. *Human Action: A Treatise on Economics*. Auburn: Ludwig Von Mises Institute. 736-737. https://cdn.mises.org/Human%20Action_3.pdf
- National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division, Board on Health Sciences Policy, Committee on Pain Management and Regulatory Strategies to Address Prescription Opioid Abuse, Jonathan K. Phillips, Morgan A. Ford, and Richard J. Bonnie. 2017. *Opioid Approval and Monitoring by the U.S. Food and Drug Administration*. Washington, D.C., DC: National Academies Press. Accessed January 26, 2024. [https://www.ncbi.nlm.nih.gov/books/NBK458654/#:~:text=In%20the%201960s%20and%201970s,%20\(OxyContin%2C%201995\).](https://www.ncbi.nlm.nih.gov/books/NBK458654/#:~:text=In%20the%201960s%20and%201970s,%20(OxyContin%2C%201995).)
- National Institute on Drug Abuse. 2021. “Is Naloxone Accessible?” U.S. Department of Health and Human Services. Accessed January 25, 2024. <https://nida.nih.gov/publications/research-reports/medications-to-treat-opioid-addiction/naloxone-accessible>.
- National Institute on Drug Abuse. 2024. “Opioids.” U.S. Department of Health and Human Services, Accessed January 24, 2024, <https://nida.nih.gov/research-topics/opioids>
- National Institute on Drug Abuse. 2022. “Naloxone DrugFacts.” National Institute on Health. January 11, 2022. <https://nida.nih.gov/publications/drugfacts/naloxone>.

- Ohio Department of Mental Health and Addiction Services. n.d. "Obtaining-Free Naloxone." Innovative Ohio Platform. Accessed January 25, 2024. <https://mha.ohio.gov/know-our-programs-and-services/naloxone-sitearea/obtaining-free-naloxone>.
- O'Neill, Aaron. n.d. "Prohibition: US Homicide and Suicide Rate 1900-1950." Statista. Accessed January 26, 2024. <https://www.statista.com/statistics/1088644/homicide-suicide-rate-during-prohibition/>.
- Ostrowski, James. 1989. "Cato Institute Policy Analysis No. 121: Thinking about Drug Legalization." The Cato Institute. Accessed January 31, 2024. <https://www.cato.org/sites/cato.org/files/pubs/pdf/pa121.pdf>
- Peltzman, Sam. 1975. "The Effects of Automobile Safety Regulation." *Journal of Political Economy* 83 no. 4: 677–725. <http://www.jstor.org/stable/1830396>
- Peltzman, Sam. 2005. *Regulation and the Natural Progress of Opulence Treatment*. Washington DC: The AEI Press. <https://www.aei.org/wp-content/uploads/2011/10/Peltzman-Lecture.pdf>
- Reid, Justin. 2022. "'An Exercise in International Extortion': Operation 'Intercept' and Nixon's 1969 War on Drugs." Chapman University. Accessed January 20, 2024, https://digitalcommons.chapman.edu/war_and_society_theses/31/
- Sundaram, Kailash. n.d. "A Historical Perspective of Naloxone Access and Distribution, a Harm Reduction Approach." Accessed January 24, 2024. https://projects.iq.harvard.edu/files/historyopioidepidemic/files/sundaram_final_paper.pdf
- Tennessee Department of Mental Health and Substance Abuse Services. n.d. "Regional Overdose Prevention Specialists." [Www.tn.gov](http://www.tn.gov). Accessed January 25, 2024. <https://www.tn.gov/behavioral-health/substance-abuse-services/prevention/rops.html>.
- Thornton, Mark. 1991. *The Economics of Prohibition*. Salt Lake City: University of Utah Press. 89. https://cdn.mises.org/economics_of_prohibition_3.pdf