Research

The Opioid Epidemic: Costs, Causes, and Efforts to Fight It

TARA O'NEILL HAYES, RYAN MANOS | JANUARY 30, 2018

Executive Summary

- Opioids account for more than 42,000 deaths annually in the United states—and that figure is increasing.
- Drug manufacturers and doctors are trying to limit access to prescription opioids, with limited success, while many with substance-abuse disorders are moving from prescription opioids to illegal synthetic drugs that are much more powerful.
- Effective short-term and long-term treatment options exist, yet barriers to their access remain prevalent.
- Recent policy responses and funding proposals, such as reducing regulatory barriers to treatments and boosting funding to states, are insufficient on their own to resolve the crisis.

The Carnage of the Opioid Epidemic

In 2017 drug overdoses became the leading cause of death for Americans younger than 50 years old.[1] American life expectancy decreased by two and a half months for the first time since 1993—a demographic shift that physicians and researchers directly attribute to the nation's opioid crisis.[2]

While President Trump declared the opioid epidemic a public health emergency in late October 2017, it is an issue that has been ravaging American families for decades. The opioid epidemic has now claimed more American lives than the AIDS epidemic at its peak in the mid-1990s, yet unlike the AIDS epidemic, the opioid crisis has yet to reach its apex.[3] Opioids are currently responsible for 66 percent of all fatal overdoses in the nation and more than 42,000 deaths annually.[4] Every day, 115 Americans die from an opioid overdose

and this number is projected to increase in the next decade.[5] Without intervention, public health professionals worry that the epidemic will claim over 90,000 lives in 2025 alone.[6] Furthermore, the opioid death toll is projected to eclipse 500,000 Americans in the next decade.

These morbid statistics do not capture the full impact of the epidemic: There were more than 30 non-fatal overdoses for every opioid-related death in 2016.[7]

While no demographic group has escaped the reach of the opioid epidemic, particular communities throughout the nation have felt the burden of opioid overdoses more than others. For example, Cincinnati emergency services responded to 174 opioid overdoses in a six-day stretch of summer 2016. Next door, in Kentucky and West Virginia, opioid overdoses have strained resources and decimated rural communities.[8]

The opioid crisis certainly is hurting many in the United States. Before looking at public-policy solutions, it is vital to understand the causes and costs of the crisis and what options there are to combat it.

Sources of the Crisis

Between 1999 and 2010 the rate of opioid prescriptions in the United States quadrupled, culminating with enough pharmaceutical opioids in circulation for every American to have their own prescription bottle.[9] The addictive nature and historic over-prescription of opiates are at the root of the epidemic.[10] Of equal and perhaps more immediate concern, however, is the alarming growth in the number of deaths related to non-prescription fentanyl, heroin, and synthetic opioids, which now represent over half of all fatal opioid overdoses.[11]

Fentanyl—which can be mostly sourced to China, often with final manufacturing and packaging occurring in the United States[12]—is 100 times more powerful than morphine and 50 times stronger than heroin, roughly 94 percent of which enters the United States from Mexico.[13] Potency and low manufacturing costs have led to an increased street presence of fentanyl. Unaware of the strength of their narcotic, unsuspecting users are overdosing on fentanyl-laced heroin and synthetic opioids at an alarming rate.

The number of fentanyl-related deaths in the United States rose by 92 percent last year and is expected to fuel increased opioid overdoses in the years to come.[14] In fact, four out of every five heroin users started their addiction by abusing prescription opioids and transitioned to illegal substances because the prescription drugs were “far more expensive and harder to obtain” than illegal opioids.[15][16]

Costs of the Crisis

The rising numbers of overdoses impose a significant economic burden on the health care system. The costs come from both overdoses and other consequences of drug use. Dr. Richard Frank, a professor of Health Economics at Harvard, points out that intravenous drug use often causes the spread of other expensive diseases, such as HIV and Hepatitis C, which impose an expensive burden on the health care system.[17] The Centers for Disease Control and Prevention (CDC) estimated the cost of the epidemic to be $78.5 billion in 2015. Roughly $28 billion of those dollars were directly spent on health care related to opioid abuse, with insurance bearing the vast majority of those costs ($26 billion). Lost productivity related to non-fatal overdoses and incarceration accounted for $20 billion, while fatal overdoses cost $21.5 billion in lost productivity and health care costs. The remainder of the financial cost of the opioid epidemic, $7.7 billion, is attributed to criminal justice costs.

However, cost estimates of the epidemic are not unanimous and are subject to quantitative discrepancies over the cost of lost life and earning potential. The Council of Economic Advisers' November report put the full cost of the epidemic as greater than $500 billion in 2015, approximately six times higher than the CDC's estimate, and roughly 3 percent of total GDP.[18]

Regardless of which number is correct, the opioid epidemic is growing at the cost of American lives, productivity, and tax dollars.

Addressing the Root of the Crisis

The fundamental problem driving the crisis is abuse of both prescription opioids and the system used to obtain them. While the long-term over-prescription of opioids is now widely acknowledged by drug manufacturers, doctors, and regulators, these same parties are now making efforts to curb abuse, with mixed results.

Pharmaceutical manufacturers have sought in some cases to modify the addictive nature and potential for abuse of their prescription opioids. One such example comes from the creator of Opana, Endo Pharmaceuticals, which reformulated the drug in 2012 to prevent patient abuse of the drug by crushing and snorting it.[19] The reformulation added a protective coating to the pill so that would no longer be possible. This change had an unfortunate side effect, however: it led addicted users to begin injecting the drug intravenously. Opana's experience shows that reformulating drugs may do little to halt abuse, and in some cases may result in even more dangerous behavior.

Rather than alter the drug itself, prescribers and pharmacy benefit managers (PBMs) have

begun to change their practices and guidelines to limit prescription lengths and dosages. The CDC recently published guidelines for prescribing opioids to establish an effective protocol while encouraging communication between patients and providers on the dangers of opioid abuse.[20] CVS Caremark was an early adopter of these guidelines and has limited initial opioid prescriptions to seven days, with certain exceptions.[21] The company also limits daily dosages and requires that immediate-release versions of opioid pharmaceuticals be provided prior to authorizing the use of extended-release opioids.

Skeptics of prescribing guidelines claim that they decrease access to pain medication that is necessary to maintain a positive quality of life. These critics argue that Americans who properly adhere to their prescriptions and only receive relief from pharmaceutical opioids are unfairly affected. Physicians have also voiced their displeasure with the administrative burden imposed by the CDC's prescription guidelines. The modern health care trend toward emphasizing value rewards physicians for cost savings and requiring doctors to follow time-consuming—and thus costly—prescription guidelines without consideration of the impact on applicable quality metrics could penalize doctors or minimize adoption.[22]

Short-Term Treatment for Overdoses

Thankfully, for someone in the midst of an opioid overdose, an immediate solution exists, provided it can be administered in time. Naloxone is surprisingly effective, reversing 93 percent of opioid overdoses.[23] In response to the opioid crisis, access to naloxone has increased drastically in the United States. Walgreens currently sells naloxone over the counter in 45 states to distribute the life-saving drug as widely as possible. Pennsylvania has adjusted its budget to allow for the purchase of naloxone for use by first responders in cities like Philadelphia, where there were nearly 1,000 fatal overdoses in 2016 alone.[24]

Despite the capabilities of naloxone, the antidote is not without critics who claim that naloxone is too expensive and may even encourage drug use. While there is no evidence to suggest that naloxone increases drug use, in some cases the cost of reversing an opioid overdose has risen by more than 1,000 percent.[25] Driving this cost increase are pharmaceutical price hikes and demand increases due to the introduction of fentanyl and potent synthetic opioids, which have forced first-responders to administer multiple doses of naloxone to revive victims.

Naloxone may be effective at saving lives, but it cannot, by itself, solve the crisis. In order to combat the epidemic, it is imperative to transition those addicted to opioids to longer-term solutions to their condition, such as medication-assisted therapy.

Long-Term Treatment

Medication-assisted treatment (MAT) combines behavioral health therapies with pharmaceutical treatment for opioid use disorder. MAT combines the use of medications such as methadone and buprenorphine, to wean users off of dangerous opioids, with intensive behavioral therapy. This treatment combination eases the discomfort from withdrawal while also addressing mental health issues that make users vulnerable to addiction, such as depression and anxiety.

This two-sided approach addresses directly the cyclical relationship between opioid use and mental health issues. Individuals with poor mental health are more likely to abuse opioids, while prolonged opioid abuse causes mental health ailments. Evidence has shown the best way to break the cycle of misuse is through integrated care that treats physical and mental conditions related to pain management. Because of its multi-faceted approach, MAT has been proven to be the most effective way of treating opioid addiction, as the pharmaceuticals remove the physical need to use opioids while behavioral therapy solves underlying mental health issues related to addiction.[26] As a result, MAT has been shown to reduce the illegal use of opioids markedly.[27] In support of MAT, the director of the National Institute for Drug Abuse, Dr. Nora Volkow said, "Outcomes are much better when you are on medication-assisted therapy. For one, it decreases risk of relapse — significantly. Second, MAT has also been shown to be effective in preventing infectious diseases like HIV. Third, medication-assisted therapy has been shown to be effective in preventing overdoses."[28]

Despite the proven efficacy of MAT, barriers to proper utilization remain an issue for those with opioid use disorder.[29],[30] The inclusion of addiction treatment in the Affordable Care Act's essential health benefits (EHB) did not entirely mitigate obstacles to receiving medication-assisted therapy, as the EHBs do not mandate coverage of all treatment options. As a result, the most effective treatment method may not be covered by insurance, making it potentially unaffordable for some. Furthermore, many health insurance plans throughout the United States require prior authorization, place limits on treatment duration, or require proof of failure using other treatment methods in order to cover MAT.[31]

A shortage of MAT providers further limits accessibility. Currently, providers must obtain a certification and waiver to administer buprenorphine or methadone. [32],[33] As demand outpaces supply, this stipulation has become a hindrance to providing care. According to Dr. Roger Rosenblatt from the Annals of Family Medicine, more than 30 million Americans live in a county without a physician eligible to administer MAT.[34] According to the U.S. Surgeon General's Report on Alcohol, Drugs and Health, these barriers to treatment mean that only 10 percent of those with opioid-use disorder receive MAT.[35]

Efforts from Congress and the President

Congressional action to combat the opioid epidemic has had varying levels of success. Three key pieces of legislation that became law in 2016 directly addressed the opioid epidemic. The Comprehensive Addiction and Recovery Act of 2016 (CARA) and the 21st Century Cures Act have taken positive steps at reducing the scope and impact of the crisis. CARA increased access to naloxone and buprenorphine and provides funding for provider training programs, medication-assisted therapy, and drug abuse education. The 21st Century Cures Act included $1 billion in grant funding to be divided amongst states over a two-year period to combat opioid use disorder. In contrast, the Ensuring Patient Access and Effective Drug Enforcement Act hinders the Drug Enforcement Administration's (DEA) ability to stop opioid manufacturers and distributers that may be acting in a way that endangers public health and safety.

Congress has considered other measures as well. In January 2018, the Addiction Treatment Access Improvement Act was introduced by a bipartisan group of U.S. senators, which would take several steps aimed at expanding flexibility for physicians seeking to use medication-assisted therapies.[36]

President Trump used the Public Health Service Act to declare the opioid epidemic a national public health emergency in October 2017.[37] In doing so, the president set a 90-day window in which federal resources shall be allocated and regulations amended to assist states in their efforts to respond to the epidemic. The administration then announced that the emergency declaration would be extended an additional 90 days.[38] While the declaration does not provide any additional funding, it does instruct federal agencies to use grant money already in their budgets to combat the crisis.

These moves have had some specific impacts. Telemedicine regulations will be eased in an effort to stretch resources and expand opioid treatment to rural areas without credentialed providers. In addition, Dislocated Worker Grants will be expanded to provide income assistance to those receiving treatment for opioid use disorder. Finally, states have access to the limited remaining dollars available via the Public Health Emergency Fund. These shifts complement the DEA's recent announcement that, in keeping with CARA, it would be removing regulatory obstacles to allow nurse practitioners and physicians assistants to become certified to dispense buprenorphine.[39]

Without attaching additional funding, experts claim the president's declaration will make only a marginal difference in the fight against an epidemic of this magnitude.[40] The president opted not to declare a national emergency under the Stafford Act, which would have made Federal Emergency Management Agency (FEMA) funds available to combat the opioid crisis. However, the destructive hurricane season decimated FEMA's funding, and even if it had more money, the agency is not well suited for long-term issues like the opioid

epidemic.[41]

As cost projections of the opioid epidemic increase, requests for sustained, additional funding to control the epidemic will certainly continue. In 2017, health care reform efforts aimed to provide $45 billion in funding to states, distributed over a decade, to fight the opioid epidemic—a figure that health care professionals worried was much too low.[42] Harvard's Dr. Frank claims that Congress would need to allocate $190 billion over 10 years for the opioid epidemic to achieve meaningful results.[43]

Conclusion

Between 2010 and 2016 the rate of people with opioid use disorder increased by 493 percent.[44] As opioid abuse continues to skyrocket, it creates complex economic and social problems for the United States. While limitations on opioid prescriptions have been initiated, it is imperative to tackle underlying behavioral health issues that are intertwined with the epidemic. Without addressing root causes of the epidemic, prescription opioid users are likely to transition to unregulated heroin, fentanyl, or synthetic opioids.

On the supply side of the problem, the well-intentioned work of pharmaceutical companies, insurers, and PBMs to reformulate medications and limit prescriptions have been met with mixed success. Efforts on the treatment side are perhaps showing more promise for addressing the crisis. Access to the short-term solution to overdoses, naloxone, is imperative for reversing overdoses and saving lives in emergency situations. Even more crucial to success is the long-term, "gold standard" solution to the opioid epidemic, medication-assisted therapy. However, there are many barriers to MAT, such as insurance companies requiring prior authorization for coverage of treatment, and government mandates requiring that doctors receive permission to administer treatment. Finding collaborative and efficient ways to reduce such barriers is vital to curbing opioid abuse and restoring quality of life to Americans affected by the epidemic.

Congress has made strides in enacting legislation to combat the opioid epidemic, borne out in the passage of CARA and appropriations included in the 21st Century Cures Act. Most recently, President Trump's declaration of the opioid epidemic as a public health emergency made limited financial resources available to address the crisis. Regrettably, these efforts to achieve significant reductions in the epidemic have been relatively ineffective to date.

While no individual action has been a panacea for ending opioid abuse, recent experiences indicate that many things can be done to combat the crisis: improve provider access to training programs; reduce barriers to medication-assisted treatment; and ensure information about the dangers of opioid abuse is readily available to the public. Congress

may play a role in these reforms, but the burden of implementing them lies with a range of actors including state and local governments, insurance companies, drug manufacturers, medical-care providers, and patients.

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