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The Opioid Crisis: Tragedy, Treatments and Trade-offs

By Molly Schnell

KEY TAKEAWAYS

- The United States is in the midst of the worst drug epidemic in its history.
- The crisis is tied to increases in the clinical use of prescription opioids.
- Despite the rise of illicit opioids, prescription opioids remain part of the problem.
- Policies aimed at reducing opioid prescribing involve trade-offs.
- Finding the right balance between limiting abuse and managing pain is difficult, but necessary.

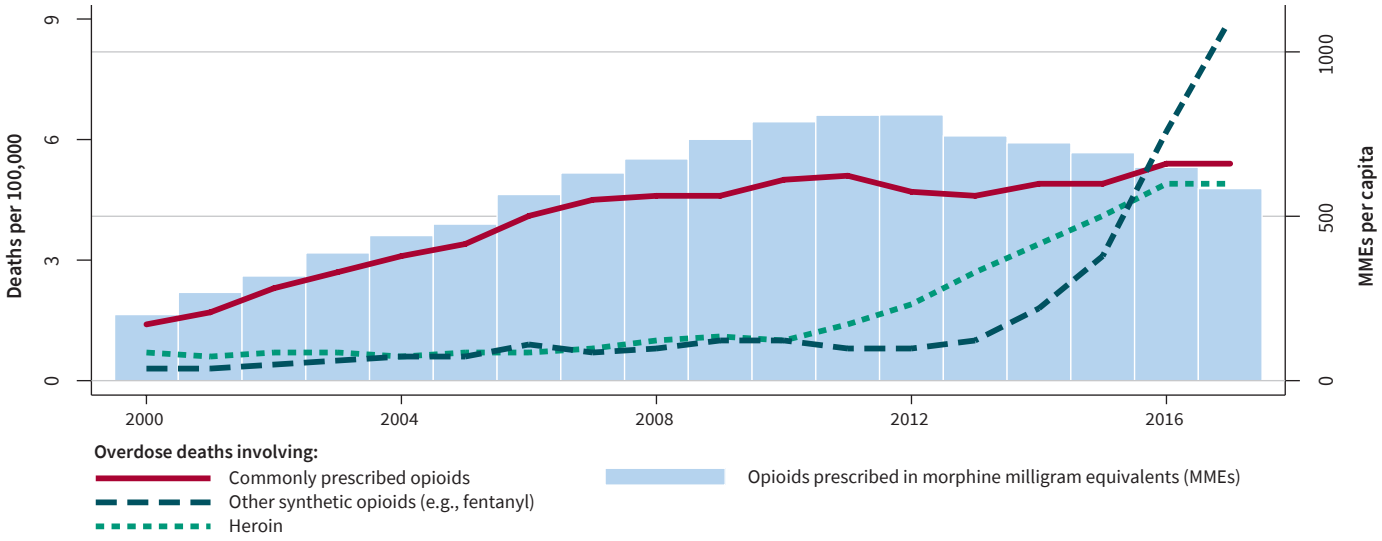
The United States has a drug problem. Overdose deaths have increased by more than 1,000 percent since 1980, with each of the past 28 years surpassing the last. With over 70,000 fatal overdoses in 2017 alone — an average of 192 deaths per day — drugs now kill more people than HIV/AIDS at the height of the epidemic in 1995. Opioids — prescription pain killers like OxyContin and Percocet, and illegal drugs including illicit fentanyl and heroin — are largely to blame.

The clinical use of prescription opioids in the United States quadrupled between 2000 and 2010, a rise that was accompanied by a nearly 300 percent increase in deaths involving these drugs (see Figure 1). While the exact numbers vary across locations, the takeaway remains the same: On average, areas that saw greater increases in opioid prescribing experienced greater increases in opioid-related mortality (Schnell and Currie, 2018).

With deaths from prescription opioids hitting a new high in 2010, things got even worse. Fatal heroin overdoses — which had been largely stable across the past decade — began to rise. Tied to the 2010 reformulation of a popular prescription opioid to make it more difficult to abuse (Alpert et al., 2018), fatal heroin overdoses have since increased by more than 400 percent.

And starting in 2013, deaths from synthetic opioids — including fentanyl — began to increase at unprecedented rates, accounting for 90 percent of the overall increase in drug-related mortality since 2012. While fentanyl is legally prescribed in the United States, evidence suggests that much of the fentanyl on the streets is illegally manufactured and comes from abroad.

Figure 1: Opioid prescriptions and overdose deaths between 2000 and 2017



Sources: National Vital Statistics System (CDC) and ARCOS System (DEA).

Prescription Opioids Are Still Part of the Problem

Does the rise of illicit opioids mean that prescription opioids are no longer a problem? Unfortunately, the numbers suggest that such a conclusion would be overly optimistic. Non-medical use of prescription opioids remains the second most common type of federally illicit drug use, second only to marijuana, and is over 12 times more common than heroin use (SAMHSA, 2018). And while overdose deaths involving prescription opioids leveled off in 2016, they remain at four-and-a-half times their level from 2000 and account for at least 40 percent of all opioid-related mortality.

Despite the rise of illicit opioids, prescription opioid abuse and the associated risks are not going away.

Individuals who are dependent on prescription opioids are also at far greater risk of turning to illicit opioids. Among those who started using heroin between 2002 and 2011, nearly 80 percent reported previously using prescription opioids non-medically, whereas only 1 percent of users initiating prescription opioid misuse reported prior heroin use (SAMHSA, 2013). While similar numbers are not available for fentanyl, overdoses often occur accidentally when people take heroin or counterfeit prescription pills that contain fentanyl without their knowledge.

As we look for solutions to the illicit opioid crisis, the pathway from legal to illegal opioid use cannot be ignored.

Furthermore, while opioid prescriptions peaked in 2012 and have steadily declined since, the clinical use of opioids in the United States remains at three times the level observed in 2000. According to the Centers for Disease Control, nearly 60 opioid prescriptions per every 100 Americans are still written annually, and medical providers in 16 percent of U.S. counties continue to prescribe enough opioids for every resident to have a prescription. And not all of these prescriptions are used as intended: Results from the National Survey on Drug Use and Health demonstrate that over 75 percent of individuals who misused a prescription opioid in 2017 got their most recent supply directly or indirectly from a medical provider.

Despite meaningful reductions to the supply of prescription opioids, legally prescribed opioids remain part of the problem.

Notably, there remains no agreed-upon level of appropriate prescribing. While some of the differences across specialties and locations indisputably reflect differences in pain profiles, prescribing differences exist even among physicians in the same specialty who practice in the exact same clinic (Schnell and Currie, 2018). And these differences can have consequences.

Researchers have found that long-term opioid use was 1.3 times more likely among patients who happened to see providers who were more likely to prescribe opioids (Barnett et al., 2017). While it remains unclear whether high-intensity prescribing reflects overprescribing or low-intensity prescribing reflects an undertreatment of pain, the prevalence of "doctor shopping" — a practice in which patients search over providers to access prescriptions — indicates that patients know that there is variation in prescribing and are willing to take advantage of it.

Adjusting Opioid Prescribing Practices

So what can be done?

We've seen a range of policies aimed at changing prescribing during the past decade. Many of them are based on the premise that providing practitioners with more information — either about their patients or their own prescribing practices — could be useful in guiding appropriate prescribing.

One such policy is the implementation of prescription drug monitoring programs (PDMPs) — electronic databases that track prescriptions for controlled substances. While nearly all states have PDMPs in operation, states differ in their requirements for when, if ever, providers are required to check the database before prescribing.

Studies demonstrate that "must access" PDMPs are successful in shifting prescribing practices, while voluntary PDMPs have no effects. Notably, mandatory PDMP use has been shown to reduce opioid prescribing by 9 percent (Meinhofer, 2018) and indicators of opioid abuse — such as obtaining a prescription from five or more prescribers or pharmacies — by up to 15 percent (Buchmueller and Carey, 2018). These reductions are accompanied by reductions in prescription opioid-related deaths: On average, states that mandated PDMP use experienced a 9 percent reduction in fatal prescription opioid overdoses (Meinhofer, 2018).

Recent work further demonstrates that opioid prescribing decreases by 10 percent when a physician is notified of a patient's overdose, suggesting that feedback on patient outcomes can shift prescribing behaviors (Doctor et al., 2018). This is in contrast to earlier work finding that simply informing potential overprescribers that their prescribing practices are highly unlike those of their peers does not change subsequent prescribing (Sacarny et al., 2016).

As pressure continues to grow for policymakers to solve the growing drug crisis, states are increasingly turning toward more heavy-handed policies to alter prescribing. Since 2016, nearly half of states have passed legislation limiting opioid prescribing, placing statutory caps on allowable number of days supplied and/or daily dosage in certain clinical circumstances. While it remains to be seen whether this wave of new legislation will be more effective than previous quantitative prescription limits, which were shown to have no impact on measures of opioid abuse (Meara et al., 2016), these policies are certain to limit clinical autonomy and threaten the ability of practitioners to address the needs of individual patients.

Opioid Policy Involves Trade-offs

So what ***should*** be done?

Efforts to reduce unnecessary prescribing may be required to prevent future addiction, but such policies are not without trade-offs. While quantitative prescribing limits have been decried for regulatory overreach, even light-touch policies to reduce opioid prescribing have costs.

Recent evidence suggests that mandated PDMP use, while reducing prescription opioid abuse as intended, leads to increases in overdoses involving illicit drugs (Meinhofer, 2018). And reformulating OxyContin to make

it more difficult to abuse — a strategy encouraged by the FDA — has been tied to the subsequent rise in heroin use (Alpert et al., 2018). When the legal supply of prescription opioids is disrupted, some users may substitute to other, potentially more dangerous, drugs.

Further, prescription opioids are legitimate medical products used to treat pain. Efforts to reduce prescribing therefore have the potential to make it more difficult for patients — even those who will use opioids appropriately — to access effective pain relief. Opioid policy is plagued by a fundamental trade-off between maintaining access to compassionate pain management and limiting prescription opioids available for misuse.

Any single policy is unlikely to be sufficient to address the current crisis. Policies aimed at reducing prescriptions should be paired with broad access to treatment for those with problematic opioid use. And policies must be designed so as to not prevent providers from using opioids as a tool to help manage their patients' pain.

As new policies are designed and implemented to battle the opioid crisis, policymakers must work closely with practitioners, patients, and researchers to identify — and promptly mitigate — any unintended consequences. Finding the right balance between limiting abuse and managing pain is difficult, but necessary.

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