EconoFact Chats: The Evolving Opioid Crisis

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Michael Klein:

I'm Michael Klein, executive editor of EconoFact, a nonpartisan web-based publication of The Fletcher School at Tufts University. At EconoFact, we bring key facts and incisive analysis to the national debate on economic and social policies, publishing work from leading economists across the country. You can learn more about us and see our work at www.econofact.org.

Michael Klein:

The opioid crisis is the other great epidemic affecting the United States. New data from the Centers for Disease Control and Prevention show that more than 90,000 people died of a drug overdose in 2020, a 30% increase over 2019. That's more Americans dying from a drug overdose in 2020 than the combined deaths from car accidents, AIDS, and gun violence in that year, and even greater than all US military casualties in Vietnam and Iraq combined. In fact, drug overdose deaths have been rising in the United States since the beginning of this century, and this has been largely driven by opioids. What has been the source of this epidemic? What policies can address this? And what can individuals do? I'm welcoming back to of EconoFact Chats Professor Alicia Sasser Modestino of Northeastern University to discuss this issue. Along with her appointments in the Economics Department in the School of Public Policy at Northeastern, Alicia also serves as a research director of the Dukakis Center for Urban & Regional Policy. Previously, she was a senior economist at the Federal Reserve Bank of Boston. Alicia, welcome once again to EconoFact Chats.

Alicia Sasser Modestino:

Thanks, Michael. It's good to be back.

Michael Klein:

It's good to have you back on the show. Alicia, in the introduction, I mentioned that there were more than 90,000 drug deaths in the United States in 2020. How many of these were from opioid overdoses?

Alicia Sasser Modestino:

About three-quarters, or roughly 69,000. And we are not out of the woods yet. Monthly state data is showing us that overdose rates are on pace to break another record in 2021. The combination of increased stress, reduced access to care, and greater prevalence of more lethal drugs is all contributing to the mental health COVID wave the healthcare professionals have been sounding the alarm for, for about a year now.

Michael Klein:

There's a well-known book by the Princeton University economist Angus Deaton and Anne Case called Deaths of Despair and the Future of Capitalism. In that book, they talk about the rise and deaths of young and middle-aged White men without a college degree. Has the opioid crisis likewise been concentrated on this demographic?

Alicia Sasser Modestino:

It certainly was initially, but that picture has been changing. Although opioid overdose-related deaths among non-Hispanic Whites have typically exceeded that of other groups, rates among Blacks have risen more steeply in recent years, and one study showed a 38% increase in the opioid overdose death rate for non-Hispanic Black individuals in the year just prior to the pandemic. And sadly, preliminary data indicates this trend may have even accelerated during the pandemic, so that the prevalence of an opioid overdose for Black Americans may now even surpass that of White.

Michael Klein:

Are there any guesses why this has been happening?

Alicia Sasser Modestino:

Well, the initially lower opioid death rate among Blacks reflected a lack of access to prescription opioids that was rooted in misperceptions and biases in the healthcare system, including the undervaluing of Black American self-reports of pain, and stereotyping by providers. A recent meta-analysis found that compared to Whites, Black patients were 29% less likely to be prescribed opioids for pain. However, with the rise of synthetic opioids, such as illicitly manufactured fentanyl, the gap in opioid death rates by race has narrowed.

Michael Klein:

Has the opioid crisis occurred more in some places in this country than in others?

Alicia Sasser Modestino:

That's right. Another factor has been geography. So prescribing opioids, the rate per capita is five times higher in rural versus urban counties, where Whites are still largely the majority. And those places are the places that experience those higher rates of deaths of despair that Deaton and Case were talking about. So deaths related to opioid overdose, alcohol abuse, suicide, as well as higher rates of unemployment and lower rates of insurance coverage.

Michael Klein:

Was the opioid epidemic only in the United States, or like COVID, did it rise to the level of a pandemic in other countries as well?

Alicia Sasser Modestino:

Yeah. It's not just the US, but we are the worst. So overdose rates have risen in Canada, Australia, Europe, but the US still leads to pack. We consume roughly 30% of the world's opioids, despite accounting for only 4% of the global population. And it's not like the demand for addictive substances is going to vary a lot across countries. So lots of people have pointed to the structure of the US healthcare system that really facilitates what economists call supplier-induced demand -- where pharmaceutical companies are able to market medications to providers and even directly to patients. And that really increases the prescribing of these drugs.

Michael Klein:

So that kind of supply-induced demand doesn't occur in other countries, because doctors aren't courted the way they are by pharmaceutical companies?

Alicia Sasser Modestino:

That's right, not to the extent that they are here in the US.

Michael Klein:

So that push by pharmaceutical companies that you mentioned led to what you identify as the first of three waves in the rise of opioid deaths.

Alicia Sasser Modestino:

That's right. That first wave began in the 1990s with increased prescribing of opioids, things like OxyContin. Other commonly misused prescription opioids were things like hydrocodone, like Vicodin, and also codeine.

Michael Klein:

So there's been a lot in the news lately about Purdue Pharma. How did companies like that aggressively market their opioid products like OxyContin?

Alicia Sasser Modestino:

Right. Well, first off, Purdue Pharma argued this opioid was not addictive because of the time-release nature of the drug, which we know now is not true. Also, they were able to get pain listed as a fifth vital sign, which meant that when doctors came to treating pain, it became part of proper patient care. And that really helped grow the market for OxyContin.

Michael Klein:

So that was a big change, right? That pain becomes a fifth vital sign.

Alicia Sasser Modestino:

Absolutely. And that really became a marker for whether or not you were a good physician, whether or not you were performing well as to whether or not you were helping to treat your patients in terms of pain, and using the best tools that you had. And so that's where we got this really aggressive marketing to doctors. For example, in Massachusetts, one of the states where we have the highest rates of opioid overdose death, the opioid manufacturers paid hundreds of doctors across the country as much as $25,000 a pop for speaking and consulting and other services.

Michael Klein:

So you described this first wave, and the wave ended. When did this first wave start to abate?

Alicia Sasser Modestino:

Well, around 2010, we see the death rate from prescription opioids leveling off at around 5 deaths per 100,000. And that slow down in the mortality rate happened as we were realizing that this was a problem, and the amount of opioids being prescribed in the US started to decline. So we peaked in 2010 in terms of the pain medication per capita, and then this pretty much decreased every year through 2015. And the decline was really attributed to both this increasing awareness of the risks associated with opioids, as well as state-level policies that were really trying to reduce that overprescribing.

Michael Klein:

What do you mean by overprescribing?

Alicia Sasser Modestino:

So with overprescribing, the likelihood that opioid medications are abused is much higher. So this is where patients are getting an opioid for conditions maybe they don't need it for. They're getting too many pills, they're getting too many refills. And then in addition to this, there's also the problem where that medication can be diverted from the primary patient to a secondary user. So according to the CDC, more than a third of opioid-related deaths are attributed to secondary users of prescription opioids, meaning friends and family using these medications. And more than half of these people who misused pain relievers in the past year got it from family or a friend. It was mostly given, but also bought or even taken from their friend or relative.

Michael Klein:

I had shoulder surgery a few years ago, and got a prescription for opioids. I only used about half of them, and then the rest are just, I guess, still sitting in that container in my medicine cabinet. So when, Alicia, did the next wave begin after this first wave?

Alicia Sasser Modestino:

So the second wave of the crisis began around 2010, and that was basically driven by a rapid increase in overdose death involving heroin.

Michael Klein:

But wait, heroin's not a prescription drug. So how did the first wave give rise to the second wave?

Alicia Sasser Modestino:

Well, it might be tempting to separate deaths associated with the legal prescription of opioids from those associated with illegal substances like heroin, but really, there's a lot of overlap between the two. And so for example, interviews of heroin users in a treatment program found that 75% of them began opioid abuse after 2000, reporting that their first regular opioid was actually a prescription drug.

Michael Klein:

So this is linked to that idea of overprescribing, I guess.

Alicia Sasser Modestino:

Yeah, this uptick in heroin overdoses really came along with the recognition that doctors were overprescribing. So states started regulating the amount that could be prescribed, and to whom, but by then an entire generation of patients had already become addicted to prescription opioids. And so when the tap was turned off, they turned to heroin, which was more readily accessible, less expensive, and offered a more potent high than the prescription opioid.

Michael Klein:

And did this likewise occur in certain regions of the country more than others?

Alicia Sasser Modestino:

Yeah. So that's where we really start to see illicitly manufactured opioids such as fentanyl really starting to take off.

Michael Klein:

But from what I understand, by 2016, the death rate for heroin also began to level off. How did that lead to then the third wave starting?

Alicia Sasser Modestino:

Yeah, that third wave with illicitly manufactured fentanyl started even before the second wave really leveled off, and that was because we saw these differences between the different kinds of fentanyl that are available. So legally manufactured medical fentanyl is actually 50 to 100 times more potent than just regular morphine, and that's usually what's been used to treat severe pain in cancer patients or those at the end of life.

Michael Klein:

So there is a legal fentanyl. There's a fentanyl that has an important medical purpose.

Alicia Sasser Modestino:

That's right. So it's not that all fentanyl is illegal, or that all fentanyl is not there for a legitimate medical purpose. And again, this is usually to treat excessive pain, particularly at end of life, and to provide palliative care. And in those cases, the doctors are really carefully calibrating the dosage, but in contrast, that illicit fentanyl, the illegal fentanyl, can be found in combination with other things like heroin, other counterfeit pills, and cocaine. And then in addition, it's also much less able to be determining what the dosage is. And so that's why the death rate due to illicit manufactured fentanyl was about 11 people per 100,000, and it's still rising.

Michael Klein:

So that's twice the death rate that you cited before, when these waves sort of abated a bit. And I introduced in the introduction, I mentioned that there were 90,000 deaths in 2020, so I guess things aren't really getting better, are they?

Alicia Sasser Modestino:

Not really. I mean, although the overall opioid prescribing rate in the United States has been declining since 2012, we're still using way too much. So there were still almost 47 opioid prescriptions written for every 100 Americans in 2019. Nearly one in five Americans have had at least one opioid prescription, and on average, they're actually getting three opioid prescriptions dispensed. Plus, the average number of days prescribed continues to increase as well as the potency, which is still around three times higher than it was in 1999.

Michael Klein:

So I actually know of two people in their twenties, who in the last few months have tragically died of opioid overdoses.

Alicia Sasser Modestino:

Yeah. Behind all these statistics, there are just tragic stories of lives lost, grieving families and friends. And I think most people probably know someone who has a problem with opioids, or maybe tragically has died.

Michael Klein:

So what can be done, Alicia?

Alicia Sasser Modestino:

Well, there are some policies that we've been trying out, and we do have some evidence on their effectiveness. And really, states have been trying to throw the kitchen sink at this, because it has really been such a crisis. So as of 2019, there were 15 states that had passed laws that limited opioid prescribing for what's called acute pain, so when you have an injury or you're having surgery. And this is in patients who have never had a prescription before. So many states are limiting this to a seven-day supply. Other states like Arizona, North Carolina, New Jersey, they're actually limiting this to just five days.

Michael Klein:

Has this been helping?

Alicia Sasser Modestino:

It's a step in the right direction, but some people feel like even these restrictions are unlikely to do much to reduce the risk of opioid dependence, because the CDC warns that the risk of long-term opioid use increases with each additional day of taking the pills, starting with the third day. And also, there's really just a lack of evidence as to whether these limitations actually help reduce opioid-related morbidity and mortality, meaning death, and also whether they are associated with these negative unintended outcomes.

Michael Klein:

So I've heard about these drug monitoring programs. What are those?

Alicia Sasser Modestino:

Yeah, so these are PDMPs, or prescription drug monitoring programs, and they are designed to make it more difficult for people to get prescription opioids from a physician by allowing the doctor to view the prescribing history of a given patient. And so they're really intended to limit what's known as doctor shopping, where patients maybe who have become addicted to the medication are visiting several doctors to be able to receive a higher quantity of opioids.

Michael Klein:

But we saw before when the prescription opioids were cut back, then people turn to heroin. Is there a problem that this could occur again?

Alicia Sasser Modestino:

Yeah. So these unintended consequences do come into play with the PDMPs, and make it more difficult for people to access opioids from legal channels. And then again, we see people seeking illicit opioids on the black market, which then increases their likelihood of an overdose. One thing that's been a factor that has helped make these PDPs maybe more effective has been whether or not it's a must-access versus a voluntary thing. So initially, it was just a voluntary thing, where if you suspected somebody was abusing opioids, you would check this, and that would maybe just catch the most egregious kind of offenders who are doctor shopping. But now, there's some evidence that must-access PDMPs, where they require the physician to check the database on all cases, are actually more helpful in reducing these indicators of opioid abuse.

Michael Klein:

So you're talking about state-level policies, but I guess individuals could do things too, right?

Alicia Sasser Modestino:

That's right. And so we've actually, in Massachusetts, been piloting a community health center bring back program actually designed to basically take advantage of the low-hanging fruit that is sitting in people's medicine cabinets, like maybe in your medicine cabinet, Michael.

Michael Klein:

Exactly, yeah. It's there now. What should I do? Or what can I do?

Alicia Sasser Modestino:

So this kind of program actually encourages patients to return their unused opioid prescription medication, because we know that doctors are still prescribing more medication than you need. And the primary goal is then to reduce the supply of the prescription opioids that are available to secondary users so that we can ultimately reduce the likelihood of addiction overdose and death.

Michael Klein:

So where would I take it? I just don't flush it down the toilet, I guess, but I should take it someplace?

Alicia Sasser Modestino:

That's right. So this program is a pilot that's designed to allow people to bring it right back to where it was prescribed to them. So there's actually a kiosk set up in the community health center, where people can drop it in there. We've actually been piloting, since the pandemic began, a mail-back return system. So you get an envelope handed to you when you're prescribed your opioid, and you can just put it in the envelope when you're done with it and throw it in the mailbox. But you can always bring your prescription opioids back to a police station. They are always able to accept it. And also, lots of pharmacies around Massachusetts, like Walgreens and CVS, have those same kiosks available where you can dispose of your opioid medication.

Michael Klein:

So we're talking about what's happening in Massachusetts. Is this happening in other places in the country as well?

Alicia Sasser Modestino:

While other places in the country definitely have these kiosks set up in certain pharmacy locations, it kind of depends on the state. There's also national take-back days that you'll see advertised, although those are only once a year, so you kind of have to pay attention to those. Some of the interest in piloting this community health center buyback program has been to really expand this intervention across other sites in Massachusetts. And then once we demonstrate the effectiveness, potentially make it the way that pharmacies operate on a daily basis.

Michael Klein:

Has there been effectiveness? Have you found that people are returning their unused opioids?

Alicia Sasser Modestino:

Yeah. So we find that patients typically return at least half of the pills that they had been prescribed, so that suggests, again, that physicians are still prescribing more medication than is necessary. We even found some people, when they were notified by the pharmacist that they were receiving an opioid and how to return it, were surprised. They did not know they had been prescribed an opioid, and actually just

asked immediately for the medication to be returned to stock and have them prescribe something else. And then what we have found with the mail-back intervention is that people are actually three times more likely to return the medication via mail than having to come all the way back to the pharmacy and put it in the kiosk. So that's a potentially really promising strategy.

Michael Klein:

Well, when we're done recording, I'm going to take those extra pills in my medicine cabinet and go right over to the CVS and turn them in.

Alicia Sasser Modestino:

Awesome. I did the same thing when I started working on this. I didn't realize what was in my medicine cabinet. So I think there's a lot of awareness we can raise out there.

Michael Klein:

Alicia, I applaud the work that you're doing to bring careful analysis to try to address this incredibly important problem that's touched so many people's lives.

Alicia Sasser Modestino:

Thanks for having me again, and thanks again for raising the awareness. I think this is really going to make a difference.

Michael Klein:

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