BEYOND THE BODY COUNT

UNDERSTANDING THE OPIOID EPIDEMIC

ALISA ROTH
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THE STATISTICS ARE STARK: In 2016, 115 people a day died of an opioid overdose in the U.S. That’s more than 40,000 people over the course of the year. These are alarming figures on their own, and even more horrifying when you consider that they represent a 30 percent increase in the number of deaths compared to 12 months prior. This is an epidemic that does not discriminate. The number of overdoses rose across age, race, and geography; they were present in rural, suburban, and urban areas. And while death rates from all kinds of drug use have gone up in the past few years, the numbers make it clear that opioids are especially lethal. In both 2015 and 2016, they accounted for well over half of all overdose deaths in the United States.

But the death rates are only the beginning, says Guohua Li, DrPH, MD, the M. Finester Professor of Epidemiology and Anesthesiology. By focusing on the fatalities, we risk missing the extent of the crisis and, with that, important opportunities for intervention. “This epidemic has been defined by fatalities,” says Li, who is also founding director of the Columbia Mailman School’s Center for Injury Epidemiology and Prevention. “The consequences for population health go far beyond the body count.”

For starters, he points to the enormous number of babies with prenatal exposure: He estimates that 5 of every 1,000 babies are born dependent on opioids. Fetal alcohol syndrome, by comparison, occurs in somewhere between 0.2 and 1.5 of every 1,000 births. But while the government estimates that fetal alcohol syndrome costs about $2 million over the course of a person’s lifetime, we don’t know what the costs—financial or physical—will be for a person born dependent on opioids.
Issues, let alone offer treatment for them. Furthermore, many drug treatment programs, including some funded by the federal government, aren’t staffed with licensed mental health clinicians.

Mauro would also like to see more harm reduction programs, such as the supervised injection facilities currently being discussed in New York City and Philadelphia or increasing access to naloxone, the drug that can reverse overdoses. Acknowledging that continued substance use—and relapse—is also part of substance use disorder, she says, will help reduce the stigma that can be a barrier to many seeking treatment. “One of the tricky parts,” she says, “is that stigma crosses . . . borders [of socio-economic status]. The need for treatment is also everywhere. I don’t think we need to focus on one specific area. It’s such a broad problem that every community needs support.”

That, says Silvia Martins, PhD, MD, associate professor of Epidemiology, is why a coordinated effort across states, agencies, and organizations is essential. “Let’s say [you have] efforts to work on changes in prescribing practices,” she says, “but no efforts for overdose prevention or reducing stigma, then [you will] have problems on other levels.” Making it harder for people to get prescription opioids may send them in search of heroin, for example, or if the stigma isn’t addressed, then people will continue to avoid seeking treatment.

What does coordination look like in practice? For starters, it’s linking databases, so that authorities can track the epidemic from multiple angles: What patients are doctor shopping? Which doctors are overprescribing? Who is overdosing and dying? Getting treated with naloxone? Being sent to detox? “In an ideal world,” says Martins, “all of this would be linked.” Rhode Island and Kentucky have made significant strides, she says. New York City has several initiatives on the table. But it’s often easier said than done, both for technical reasons—even in the age of big data, making databases talk to one another isn’t always easy—and cultural ones—there’s legitimate concern about privacy protections. Martins is currently in the process of building an interdisciplinary center that integrates faculty from the Columbia Mailman School with those

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COST ACCOUNTING

Other, more easily quantified economic costs have been documented in recent years, from people whose substance use keeps them from working to lost productivity, including companies operating below capacity because they simply can’t find enough eligible workers who can pass a drug test.

Public safety is a growing concern, too. Li’s research has long focused on motor vehicle fatalities. Those had been declining for almost 30 years, he says, until around 2014 when they started to go up again. He believes opioid use—or a combination of opioid and alcohol use—is at least partly to blame. In a 2017 analysis published in the American Journal of Public Health, he reported that prescription opioids were detected in more than 7 percent of drivers killed in motor vehicle crashes; in 1995, the number was only 1 percent. Following that study, the U.S. Department of Transportation (DOT) issued new rules, stating that drug testing in DOT-regulated industries, such as commercial trucking, must now include synthetic and prescription opioids.

COORDINATED CARE

The scale and urgency of the crisis means that it’s hard, as Li notes, for authorities to focus on much beyond emergency response: trying to treat addiction and prevent more overdose deaths. But even that is difficult, says Pia Mauro, PhD, assistant professor of Epidemiology. For one thing, she says, there needs to be more access to community-based treatment. In a 2016 study, she found that although nearly half of all people with a substance use disorder had a co-occurring psychiatric disorder, many addiction treatment facilities didn’t even ask about mental health issues, let alone offer treatment for them. Furthermore, many drug
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at Columbia’s medical school and the Morningside campus and is focused on analyzing the effects of a wide range of opioid policies implemented at the local level, including changes in prescribing practices to curb the development of opioid use disorders among medical users, harm reduction for those already using opioids and heroin, and the expansion of medication-assisted treatment.

Analysts have their work cut out for them, says Christine Maurro, PhD ’14, assistant professor of Biostatistics, a research partner with Martins and epidemiologist Pia Mauro (no relation). The annual National Survey on Drug Use and Health produced by the Substance Abuse and Mental Health Services Administration has frequent updates to its questions and definitions, she notes, which can significantly complicate work to uncover trends over time. Likewise, simultaneous revisions at the state level to medical and recreational marijuana policies and prescription opioid monitoring programs can complicate assessments of which programs are actually reducing opioid use and overdoses. “There are all these moving pieces,” says the biostatistician. “We’re trying to solve a really important problem and we want to make sure we’re rigorous in our analyses.”

Perhaps the most effective strategy for saving lives, says Martins, is primary prevention—averting opioid addiction in the first place—an effort still in its infancy. “In an ideal world,” she says, “primary prevention of any substance use and educating people on how to use substances in a way that is safe for them would begin as early as elementary school, with age-appropriate curriculum, classes, and messages.” “Just say no” campaigns won’t be enough. “People need clear information about risks and benefits, so they can make informed decisions as they grow and become exposed to substances.”

Investigative reporter ALISA ROTH is author of Insane: America’s Criminal Treatment of Mental Illness, an exposé of the mental health crisis in U.S. courts, jails, and prisons.