

## 50-year war on drugs imprisoned millions of Black Americans

By Aaron Morrison | AP

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Landscaping was hardly his lifelong dream.

As a teenager, Alton Lucas believed basketball or music would pluck him out of North Carolina and take him around the world. In the late 1980s, he was the right-hand man to his musical best friend, Youtha Anthony Fowler, who many hip hop and R&B heads know as DJ Nabs.

But rather than jet-setting with Fowler, Lucas discovered drugs and the drug trade at the height of the so-called war on drugs. Addicted to crack cocaine and involved in trafficking the drug, he faced decades-long imprisonment at a time when the drug abuse and violence plaguing major cities and working class Black communities were not seen as the public health issue that opioids are today.

By chance, Lucas received a rare bit of mercy. He got the kind of help that many Black and Latino Americans struggling through the crack epidemic did not: treatment, early release and what many would consider a fresh start.

“I started the landscaping company, to be honest with you, because nobody would hire me because I have a felony,” said Lucas. His Sunflower Landscaping got a boost in 2019 with the help of Inmates to Entrepreneurs, a national nonprofit assisting people with criminal backgrounds by providing practical entrepreneurship education.

Lucas was caught up in a system that imposes lifetime limits on most people who have served time for drug crimes, with little thought given to their ability to rehabilitate. In addition to being denied employment, those with criminal records can be limited in their access to business and educational loans, housing, child custody rights, voting rights and gun rights.

It’s a system that was born when Lucas was barely out of diapers.

Fifty years ago this summer, President Richard Nixon declared a war on drugs. Today, with the U.S. mired in a deadly opioid epidemic that did not abate during the [coronavirus](#) pandemic’s worst days, it is questionable whether anyone won the war.

Yet the loser is clear: Black and Latino Americans, their families and their communities. A key weapon was the

An Associated Press review of federal and state incarceration data shows that, between 1975 and 2019, the U.S. prison population jumped from 240,593 to 1.43 million Americans. Among them, about 1 in 5 people were incarcerated with a drug offense listed as their most serious crime.

The racial disparities reveal the war's uneven toll. Following the passage of stiffer penalties for crack cocaine and other drugs, the Black incarceration rate in America exploded from about 600 per 100,000 people in 1970 to 1,808 in 2000. In the same timespan, the rate for the Latino population grew from 208 per 100,000 people to 615, while the white incarceration rate grew from 103 per 100,000 people to 242.

Gilberto Gonzalez, a retired special agent for the Drug Enforcement Administration who worked for more than 20 years taking down drug dealers and traffickers in the U.S., Mexico and in South America, said he'll never forget being cheered on by residents in a predominantly Hispanic neighborhood near Los Angeles as he led away drug traffickers in handcuffs.

"That gave me a sense of the reality of the people that live in these neighborhoods, that are powerless because they're afraid that the drug dealers that control the street, that control the neighborhood are going to do them and their children harm," said Gonzalez, 64, who detailed his field experiences in the recently released memoir "Narco Legenda."

"We realized then that, along with dismantling (drug trafficking) organizations, there was also a real need to clean up communities, to go to where the crime was and help people that are helpless," he said.

Still, the law enforcement approach has led to many long-lasting consequences for people who have since reformed. Lucas still wonders what would happen for him and his family if he no longer carried the weight of a drug-related conviction on his record.

Even with his sunny disposition and close to 30 years of sober living, Lucas, at age 54, cannot pass most criminal background checks. His wife, whom he'd met two decades ago at a fatherhood counseling conference, said his past had barred him from doing things as innocuous as chaperoning their children on school field trips.

"It's almost like a life sentence," he said.

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Although Nixon declared the war on drugs on June 17, 1971, the U.S. already had lots of practice imposing drug prohibitions that had racially skewed impacts. The arrival of Chinese migrants in the 1800s saw the rise of criminalizing opium that migrants brought with them. Cannabis went from being called "reefer" to "marijuana," as a way to associate the plant with Mexican migrants arriving in the U.S. in the 1930s.

By the time Nixon sought reelection amid the anti-Vietnam War and Black power movements, criminalizing heroin was a way to target activists and hippies. One of Nixon's domestic policy aides, John Ehrlichman, admitted as much about the war on drugs in a [22-year-old interview](#) published by Harper's Magazine in 2016.

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all outgrowths of the drug war.

Federal policies, such as mandatory minimum sentencing for drug offenses, were mirrored in state legislatures. Lawmakers also adopted felony disenfranchisement, while also imposing employment and other social barriers for people caught in drug sweeps.

The domestic anti-drug policies were widely accepted, mostly because the use of illicit drugs, including crack cocaine in the late 1980s, was accompanied by an alarming spike in homicides and other violent crimes nationwide. Those policies had the backing of Black clergy and the Congressional Black Caucus, the group of African-American lawmakers whose constituents demanded solutions and resources to stem the violent heroin and crack scourges.

“I think people often flatten this conversation,” said Cassandra Frederique, executive director of the Drug Policy Alliance, a New York-based nonprofit organization pushing decriminalization and safe drug use policies.

“If you’re a Black leader 30 years ago, you’re grabbing for the first (solution) in front of you,” said Frederique, who is Black. “A lot of folks in our community said, ‘OK, get these drug dealers out of our communities, get this crack out of our neighborhood. But also, give us treatment so we can help folks.’”

The heavy hand of law enforcement came without addiction prevention resources, she said.

Use of crack rose sharply in 1985, and peaked in 1989, before quickly declining in the early 1990s, according to a [Harvard study](#).

Drug sales and use were concentrated in cities, particularly those with large Black and Latino populations, although there were spikes in use among white populations, too. Between 1984 and 1989, crack was associated with a doubling of homicides of Black males aged 14 to 17. By the year 2000, the correlation between crack cocaine and violence faded amid waning profits from street sales.

Roland Fryer, an author of the Harvard study and a professor of economics, said the effects of the crack epidemic on a generation of Black families and Black children still haven’t been thoroughly documented. A lack of accountability for the war on drugs bred mistrust of government and law enforcement in the community, he said.

“People ask why Black people don’t trust (public) institutions,” said Fryer, who is Black. “It’s because we have watched how we’ve treated opioids — it’s a public health concern. But crack (cocaine) was, ‘lock them up and throw away the key, what we need is tougher sentencing.’”

Another major player in creating hysteria around drug use during the crack era: the media. On June 17, 1986, 15 years to the day after Nixon declared the drug war, NBA draftee Len Bias died of a cocaine-induced heart attack on the University of Maryland campus.

Coverage was frenzied and coupled with racist depictions of crack addiction in mostly Black and Latino communities. Within weeks of Bias’s death, the U.S. House of Representatives drafted the Anti-Abuse Act of 1986.

The law, passed and signed by Reagan that October, imposed mandatory federal sentences of 20 years to life in prison

“One of the things that I thought would help me, that I thought would be my rehab, was when Len Bias died,” Lucas said. “I thought, if they showed me evidence (he) died from an overdose of smoking crack cocaine, as much as I loved Len Bias, that I would give it up.”

“I did not quit,” he said.

He was first introduced to crack cocaine in 1986, but kept his drug use largely hidden from his friends and family.

“What I didn’t know at the time was that this was a different type of chemical entering my brain and it was going to change me forever,” Lucas said. “Here I am on the verge of being the right-hand man to DJ Nabs, to literally travel the world. That’s how bad the drug did me.”

By 1988, Fowler’s music career had outgrown Durham. He and Lucas moved to Atlanta and, a few years later, Fowler signed a deal to become the official touring DJ for the hip hop group Kris Kross under famed music producer Jermaine Dupri’s So So Def record label. Fowler and the group went on to open for pop music icon Michael Jackson on the European leg of the “Dangerous” tour.

Lucas, who began trafficking crack cocaine between Georgia and North Carolina, never joined his best friend on the road. Instead, he slipped further into his addiction and returned to Durham, where he took a short-lived job as a preschool instructor.

When he lacked the money to procure drugs to sell or to use, Lucas resorted to robbing businesses for quick cash. He claims that he was never armed when he robbed “soft targets,” like fast food restaurants and convenience stores.

Lucas spent four and a half years in state prison for larceny after robbing several businesses to feed his addiction. Because his crimes were considered nonviolent, Lucas learned in prison that he was eligible for an addiction treatment program that would let him out early. But if he violated the terms of his release or failed to complete the treatment, Lucas would serve more than a decade in prison on separate drug trafficking charges under a deal with the court.

He accepted the deal.

After his release from prison and his graduation from the treatment program, Fowler paid out of his pocket to have his friend’s fines and fees cleared. That’s how Lucas regained his voting rights.

On a recent Saturday, the two best friends met up to talk in depth about the secret that Lucas intentionally kept from Fowler. The DJ learned of his friend’s addiction after seeing a Durham newspaper clipping that detailed the string of robberies.

Sitting in Fowler’s home, Lucas told his friend that he doesn’t regret not being on the road or missing out on the fringe benefits from touring.

“All I needed was to be around you,” Lucas said.

“Right,” Fowler replied, choking up and wiping tears from his eyes.

Lucas continued: “You know, when I was around you, when there was a party or whatnot, my job, just out of instinct, was to watch your back.”

Not everyone was as lucky as Lucas. Often, a drug offense conviction in combination with a violent gun offense carried much steeper penalties. At the heights of the war on drugs, federal law allowed violent drug offenders to be prosecuted in gang conspiracy cases, which often pinned homicides on groups of defendants, sometimes irrespective of who pulled the trigger.

These cases resulted in sentences of life imprisonment without the possibility of parole, a punishment disproportionately doled out to Black and Latino gang defendants.

That's the case for Bill Underwood, who was a successful R&B and hip hop music promoter in New York City in the late '70s through the '80s, before his 33-year incarceration. A judge granted him compassionate release from federal custody in January, noting his lauded reputation as a mentor to young men in prison and his high-risk exposure to COVID-19 at age 67.

As the AP reported in 1990, Underwood was found guilty and sentenced to life without parole for racketeering, racketeering conspiracy and narcotics conspiracy, as part of a prosecution that accused his gang of committing six murders and of controlling street-level drug distribution.

"I actually short-changed myself, and my family and my people, by doing what I did," said Underwood, who acknowledges playing a large part in the multimillion-dollar heroin trade, as a leader of a violent Harlem gang from the 1970s through the 1980s.

Underwood is now a senior fellow with The Sentencing Project, a nonprofit pushing for an end to life imprisonment. He testified to Congress in June that his punishment was excessive.

"As human beings, we are capable of painful yet transformative self reflection, maturity, and growth, and to deny a person this opportunity is to deny them their humanity," he said in the testimony.

Sympathy for people like Underwood can be hard to come by. Brett Roman Williams, a Philadelphia-based independent filmmaker and anti-gun violence advocate, grew up watching his older brother, Derrick, serve time in prison for a serious drug offense. But in 2016, his brother was only a month out on parole when he was killed by gunfire in Philadelphia.

"The laws are in place for people to obey, whether you like it or not," Williams said. "We do need reform, we do need opportunities and equity within our system of economics. But we all have choices."

Rep. Cori Bush of St. Louis, following similar action by several members of Congress before her, last month introduced legislation to decriminalize all drugs and invest in substance abuse treatment.

"Growing up in St. Louis, the War on Drugs disappeared Black people, not drug use," Bush, who is Black, wrote in a statement sent to the AP. "Over the course of two years, I lost 40 to 50 friends to incarceration or death because of the War on Drugs. We became so accustomed to loss and trauma that it was our normal."

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Drug abuse prevention advocates, however, claim that broad drug legalization poses more risks to Americans than it would any benefits.

Provisional data released in December from the Centers for Disease Control and Prevention show overdose deaths from illicit drug use continued to rise amid the global COVID-19 pandemic. And according to the latest Drug Enforcement Administration narcotics threat assessment released in March, the availability of drugs such as fentanyl, heroin and cocaine remained high or plateaued last year. Domestic and transnational drug trade organizations generate tens of billions of dollars in illicit proceeds from sales annually in the U.S., the DEA said.

“Many people think drug prevention is ‘just say no,’ like Nancy Reagan did in the ‘80s, and we know that did not work,” said Becky Vance, CEO of the Texas-based agency Drug Prevention Resources, which has advocated for evidenced-based anti-drug and alcohol abuse education for more than 85 years.

“As a person in long-term recovery, I know firsthand the harms of addiction,” said Vance, who opposes blanket recreational legalization of illicit drugs. “I believe there has to be another way, without legalizing drugs, to reform the criminal justice system and get rid of the inequities.”

Frederique, of the Drug Policy Alliance, said reckoning with the war on drugs must start with reparations for the generations senselessly swept up and destabilized by racially biased policing.

“This was an intentional policy choice,” Frederique said. “We don’t want to end the war on drugs, and then in 50 years be working on something else that does the same thing. That is the cycle that we’re in.”

“It has always been about control,” Frederique added.

As much as the legacy of the war on drugs is a tragedy, it is also a story about the resilience of people disproportionately targeted by drug policies, said Donovan Ramsey, a journalist and author of the forthcoming book, “When Crack Was King.”

“Even with all of that, it’s still important to recognize and to celebrate that we (Black people) survived the crack epidemic and we survived it with very little help from the federal government and local governments,” Ramsey told the AP.

Fowler thinks the war on drugs didn’t ruin Lucas’ life. “I think he went through it at the right time, truth be told, because he was young enough. Luke’s got more good behind him than bad,” the DJ said.

Lucas sees beauty in making things better, including in his business. But he still dreams of the day when his past isn’t held against him.

“It was the beautification of doing the landscaping that kind of attracted me, because it was like the affirmation that my soul needed,” he said.

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Morrison reported from New York. AP writers Allen G. Breed in Durham, North Carolina, and Angeliki Kastanis in Los Angeles contributed.

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**ASAM** American Society of  
Addiction Medicine

## Public Policy Statement on Advancing Racial Justice in Addiction Medicine

### Background

Addiction involves complex interactions among an individual's brain circuits, genetics, the environment, and their life experiences.<sup>1</sup> Racism disproportionately shapes the environment and life experiences of Black, Hispanic/Latinx, Asian, Pacific Islander, Native American, and other racially oppressed and disenfranchised people (hereinafter collectively referred to as Black, Indigenous, People of Color (BIPOC)), adversely influencing both their risk of developing addiction and their access to evidence-based addiction treatment services. While police and civilian murders of Black people in the United States of America have highlighted the deadly consequences of racism, they have also illuminated the impact of the long-standing systemic racism in the United States. Systemic racism has been defined as "a system in which public policies, institutional practices, cultural representations, and other norms work in various, often reinforcing ways to perpetuate racial group inequity."<sup>2</sup>

This is the first of a series of policy statements on racial justice through which ASAM reiterates the fundamental axiom that systemic racism is a social determinant of health<sup>3</sup> that has had profound, deleterious effects on the lives and health of BIPOC. These statements are part of ASAM's effort to recognize, understand, and then counteract the adverse effects of America's historical, pervasive, and continuing systemic racism, specifically with respect to addiction prevention, early intervention, diagnosis, treatment, and recovery. The goal of this series is to increase structural competency, defined as "the capacity... to recognize and respond to health and illness as the downstream effects of broad social, political, and economic structures,"<sup>4,5</sup> among addiction medicine professionals, public health authorities, policymakers and others with societal influence or authority. Structural competency bridges research on social determinants of health with clinical interventions, and prepares clinical trainees to act on systemic causes of health inequalities.

ASAM recognizes the racism and discrimination that BIPOC patients, their families, and addiction medicine professionals consistently face in their personal and professional lives. Every day, addiction medicine professionals confront the tragic consequences of racial injustice among the patients and communities we serve – from the disproportionate incarceration of BIPOC with the disease of addiction, to treatment barriers for many BIPOC, to rising overdose deaths and ongoing discrimination.<sup>6,7</sup> ASAM denounces and commits to challenging racial injustice by working toward solutions to the addiction crisis that recognize the role of systemic racism in creating and reinforcing health inequities.<sup>8</sup>

Drug policy has supported systemic racism. Drug controls arose from a mix of motives, some of which were laudable, but many of which were based in racist ideology. Racial bias has emerged



in policies as written and applied. The impact of systemic racism in drug policy and addiction medicine is evident in:

- De-medicalization (from medicalization to criminalization): Addiction medicine is older than criminalization, but this initial era ended with the passage of the 1914 Harrison Narcotic Tax Act (Ch. 1 38 Stat 785) (HNTA). The passage of the HNTA as well as its enforcement was dominated by explicit racism directed against immigrant Asian and Hispanic/Latinx labor, Black men and concern about women stolen into “white slavery”<sup>9</sup> – and it ushered in a period that prioritized policing over public health.
- Criminal legal reform failures: Mandatory sentencing guidelines, codified in the 1984 Sentencing Reform Act, were intended to address racial inequities in the criminal legal system. However, unguided discretion at the local and prosecutorial level worsened inequities primarily through guilty pleas rather than judicial action. Systemic racism in drug policy is perhaps most easily recognized in the Anti-Drug Abuse Act of 1986, which enacted a 100-fold greater sentencing disparity for water-insoluble cocaine base (“crack”) versus powder cocaine.
- Selective and discriminatory recognition of addiction as a medical condition: The federal and state response to crack use in the 1980s and 1990s focused funding on law enforcement, which was then targeted at BIPOC. Conversely, three-quarters of federal funding to address the opioid epidemic, associated more closely with white people, went to research, treatment, and prevention.<sup>10</sup> Media portrayals of Black and Hispanic/Latinx people who use heroin as criminals and white people who use prescription opioids as sympathetic victims reinforced the racialized policy response to drug use.<sup>11</sup>
- Inequitable expansion of treatment: Motivated, in part, by an association of the opioid crisis with white people and in response to the historic location of addiction treatment with the criminal legal system, the Drug Addiction Treatment Act of 2000 (DATA 2000) was enacted to expand care in the medical setting. However, the benefit of expanded treatment has been unequal. Opioid use disorder (OUD) treatment remains segregated, with Black and Hispanic/Latinx people more likely to receive methadone,<sup>12</sup> which is only available in highly regulated systems, and white people more likely than people of other races to receive buprenorphine, which is available in an office- based setting.<sup>13</sup>
- Beyond the multiple problems with the treatment of OUD, neglect of the health concerns of BIPOC communities continues in other ways: In 2020, sales restrictions were placed on flavored tobacco products except for those featuring menthol, the product most often used by Black people.<sup>14</sup> In essence, this prioritized tobacco company profits over the health of Black people. In addition, alcohol outlet density remains far greater in Black and Hispanic/Latinx neighborhoods.<sup>15</sup> Some have argued that this fact reflects structural racism in the built environment.<sup>16, 17</sup>

The contemporary consequence of this racist history is seen in:

- The lack of focus on evidence-based SUD prevention research among BIPOC<sup>18, 19</sup> and lack of access to secondary prevention interventions such as overdose education and naloxone distribution programs within BIPOC communities;<sup>20, 21</sup>
- The lower availability of evidence-based treatment (particularly buprenorphine) for BIPOC and the continued experience of discrimination within treatment programs and systems;<sup>22</sup>
- The unequal deployment of drug testing with markedly different consequences for BIPOC when their test results are positive;<sup>23, 24</sup>
- The underrepresentation of BIPOC in scientific studies, thus yielding interventions that may not be culturally appropriate;<sup>25, 26</sup> and

- Markedly different rates of incarceration despite national survey data that suggest that BIPOC and whites use drugs at similar rates.<sup>27</sup>

The overcriminalization of drug use by BIPOC and disparate policing of BIPOC who use drugs is well documented.<sup>22</sup> The effects of this discrimination are devastating and lasting. Addiction medicine professionals are too often silent and accepting of a system that mandates inappropriate treatment.

Both racism and criminal-legal system involvement are traumatizing. Addiction medicine professionals have the opportunity to counteract that trauma in their practices through trauma-informed care. The principles and practice of trauma-informed care – a strengths-based care delivery approach to engaging people with histories of trauma that recognizes the presence of trauma symptoms and acknowledges the role that trauma has played in their lives<sup>28, 29</sup> – can promote a culture of safety, empowerment, and healing.<sup>30, 31, 32</sup> Increasing the diversity of the addiction medicine workforce and staff of addiction medicine programs and practices can also help improve patient care, satisfaction, and outcomes and alleviate health disparities.<sup>33, 34, 35, 36</sup> While these issues extend beyond addiction medicine, this statement focuses on steps that addiction medicine professionals and all health care professionals who treat patients with addiction can take to advance racial justice. Subsequent statements will address broader public health and social issues and make recommendations for broader policy and societal change.

## **Recommendations:**

The American Society of Addiction Medicine recommends:

- 1) Addiction medicine professionals should examine their own motivations, biases, and practices related to BIPOC to deliver equitable, compassionate, and anti-racism-informed<sup>37</sup> medical care to all patients. Research is needed to identify best practices for motivating and facilitating such an examination.
- 2) Addiction medicine professionals must lead medical practices and treatment programs that acknowledge and respond to patients' experiences of racism by (a) trusting and respecting patients' experiences through trauma-informed care, (b) assessing patients for social determinants of health, including those that are linked to racism, and connecting them with community resources, and (c) evaluating their medical practices based on staff diversity and BIPOC patient satisfaction and retention in treatment.
- 3) Addiction medicine professionals should develop proficiency<sup>38</sup> in, practice, and demonstrate leadership in trauma-informed care as well as structural competency, so that they can (a) understand patient experiences in the context of structural factors that influence their health; (b) intervene to address those structural factors, such as inequalities in law enforcement, housing, education, access to health care, and other resources, that put patients at risk for unhealthy substance use and addiction or limit their access to prevention, treatment and recovery supports; and (c) collaborate with community leaders and health professionals with humility and patience.<sup>39</sup>
- 4) Providers of addiction medicine training in medical school, residency, fellowship and continuing medical education (CME) programs should review their curricula to identify gaps related to trauma-informed care, structural competency, and racial understanding. Clinical educators should develop and promote training courses grounded in trauma-informed care and structural competency to improve the outcomes of patients who are socially

marginalized by virtue of their race, e.g., those who are identified more frequently by the criminal legal system due to disparate policing and then are referred or mandated to addiction treatment.

- 5) Addiction medicine professionals should advocate for policies that lead to a more diverse addiction treatment workforce and should seek opportunities to mentor BIPOC clinicians into the field. Robust funding should be made available and targeted for scholarships and loan repayment for BIPOC addiction medicine professionals.
- 6) Addiction medicine professionals should advocate for policies that ensure BIPOC at risk of, or with, addiction have equitable access to evidence-based prevention, early intervention, treatment, and harm reduction services. Further, addiction medicine professionals should advocate for policies that are designed to eliminate structural inequalities in social and economic factors that influence substance use and addiction (e.g., law enforcement practices and access to housing, education, and health care), as these social determinants of health contribute to health disparities between BIPOC and white people.
- 7) Addiction-related research should strive to include an equitable representation of BIPOC researchers and participants in study design, implementation, and dissemination of results. Addiction-related research should evaluate the impact of systemic racism on drug use; risk and protective factors for addiction; and access to prevention interventions, treatment and harm reduction options, and recovery support services. Clinical resources and recommendations should be designed with consideration of the broad social, political, and economic structures that affect health and illness. Community-based participatory research methods can help build trust between researchers and BIPOC given historical research practices.

*Adopted by the ASAM Board of Directors February 25, 2021.*

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<sup>1</sup> See ASAM Definition of Addiction: <https://www.asam.org/Quality-Science/definition-of-addiction>

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- <sup>2</sup> Full definition: “A system in which public policies, institutional practices, cultural representations, and other norms work in various, often reinforcing ways to perpetuate racial group inequity. It identifies dimensions of our history and culture that have allowed privileges associated with “whiteness” and disadvantages associated with “color” to endure and adapt over time. Structural racism is not something that a few people or institutions choose to practice. Instead it has been a feature of the social, economic and political systems in which we all exist.” Aspen Institute. “11 Terms You Should Know to Better Understand Structural Racism.” July 11, 2016. Available at <https://www.aspeninstitute.org/blog-posts/structural-racism-definition/>
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# Systemic Racism and Substance Use Disorders

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## ABSTRACT

Increasing attention to systemic racism in the United States in all aspects of life has sharpened focus on its effects on the health outcomes of Black, Latinx, and Indigenous populations. Racial disparities in substance use disorders remain a significant public health problem in mental health, and psychiatrists require sufficient knowledge and awareness to help address these disparities. First, this article reviews evidence of racial disparities in substance use

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disorders. We then discuss the historical and legal foundations of systemic racism and substance use disorder disparities and explore research examining the role of systemic racism in substance use disorder outcomes on structural and individual levels. Finally, we discuss recommendations for providing substance use disorder care in a more racially equitable manner. [*Psychiatr Ann.* 2020;50(11):494-498.]

Substance use disorders (SUD) represent a major health concern both nationally and globally, and psychiatrists play a key role in reducing the suffering associated with these conditions. Although recent decades have seen significant scientific breakthroughs in our understanding of SUD, expanding the tools available to psychiatrists, the persistence of racial disparities in SUD represent a continued significant failure in public health efforts. To address these disparities, psychiatrists must hold a clear understanding of the social and institutional factors that determine SUD outcomes. This article reviews racial disparities in SUD, examines their historical roots and explanatory theories for their persistence, and makes recommendations for providing racially equitable SUD care.

## RACIAL DISPARITIES AND SUD Burden of SUD in Black, Latinx, and Indigenous People

Although SUD are prevalent among all racial groups, the burden of disease is

disproportionate among Black, Latinx, and Indigenous people. Indigenous youth have more than a 500% higher mortality rate due to opioid-related overdose compared to the general population, as well as the largest percent change increase in number of deaths between 1991 and 2015.<sup>1</sup> Black people are also disproportionately burdened by substance-related problems, with higher rates of morbidity, mortality, and adverse social and legal consequences.<sup>2</sup> From 1999 to 2001, Black people in metropolitan areas had higher substance-related death rates compared to other racial groups.<sup>1</sup> Overdose death rates from 2014 to 2017 increased in the Black population, with the sharpest rise from synthetic opioids, increasing by 818% compared to other races.<sup>3</sup> Among Latinx people, experiencing racial discrimination has been associated with an increased risk of alcohol use among women and an increased risk of drug use among men.<sup>4</sup> Although the total volume of drinks per month was not higher among Latinx people,<sup>5</sup> they experienced more adverse events and increased mortality related to alcoholic cirrhosis than other racial groups.<sup>2,6</sup>

## Race and SUD Treatment Availability, Retention, and Outcomes

Treatment for SUD is less available for Black, Latinx, and Indigenous people than it is for White people. In the 2009 National Survey of Substance Abuse Treatment Services, counties that had no access to outpatient SUD facilities had a



higher percentage of residents who were Latinx, living in poverty, uninsured, and living in rural areas.<sup>7</sup> Furthermore, counties with a higher percentage of Black and Latinx residents were less likely to have an outpatient SUD facility that accepts Medicaid. The opioid crisis has further underscored differences in treatment availability. Despite an increase in opioid-related deaths, growth in buprenorphine treatment has been limited to populations with higher income and lower percentages of people who are not White.<sup>8</sup> From 2012 to 2015, buprenorphine was prescribed to 12.7 million White patients, compared to 363,000 people of other races or ethnicities.<sup>9</sup> In addition, one study found that Black, Latinx, and Indigenous people across treatment settings and types were less likely than White people to complete treatment, with these disparities also observed in posttreatment outcomes.<sup>10</sup> A recent study found Latinx clients receiving outpatient SUD treatment to be at greater risk than their White counterparts to be arrested for driving under the influence (DUI) in the year after treatment. Characteristics of clients' residential community were found to be important, with clients living in communities with a higher proportion of Black residents significantly more likely to have a DUI arrest in the year after beginning treatment.<sup>10</sup>

### CAUSES OF RACIAL DISPARITIES IN SUD

The importance of systemic racism in driving health outcomes has been increasingly studied in recent years. The best evidence to date suggests that systemic racism operates at institutional, social, and psychological levels in ways that shape numerous health outcomes. Funded research in SUD has largely focused on neurobiological etiologies and interventions, and thus the broader social forces that shape SUD-related racial disparities remain understudied.

However, accumulated work in race and SUD have shed light on ways in which systemic racism may contribute to SUD racial disparities. Based on current work, factors that underpin SUD-related racial disparities in the United States include (1) deeply-rooted institutional racial biases that structure the experience of all Americans; (2) the effect of racism-related stressors on the biopsychosocial functioning of non-White people; and (3) the conscious and unconscious biases that shape behaviors directed at people of color, including among health care practitioners. It is important to recognize that systemic racism operates differently and has diverse effects on producing health disparities in different racial groups. In addition, the health effects of systemic racism in many groups, particularly in Indigenous, Asian, and Latinx populations, remain markedly understudied. Finally, systemic racism does not operate in isolation to produce disparities in health outcomes; rather, racism acts in concert with other forms of systemic discrimination such as sexism, homophobia and transphobia, and anti-immigrant bias.<sup>11</sup> Efforts to understand how these forms of discrimination operate together are often referred to as intersectionality.

### Historical and Legal Roots of Racial Disparities in SUD

Current racial disparities in SUD outcomes find their antecedents in the overtly racist framework of early US drug policy.<sup>12</sup> The Harrison Act of 1914<sup>13</sup> began as a registration requirement for anyone who produced, manufactured, compounded, dispensed, sold, or distributed opium or coca products or derivatives. After its passage, this became legally interpreted to mean that opioids could not be prescribed to treat opioid addiction, as addiction was not considered a "disease" and thus not within the purview of physicians. The background and context of the law included

government publications linking cocaine use with African Americans, and opioid use with Chinese Americans.<sup>14</sup> Media stories claimed that White women who used these substances were running off with men of different races. In an example published by *The New York Times* in 1914,<sup>15</sup> an article described how Black men become murderous, and better marksmen, under the influence of cocaine. Between 1898 and 1914, numerous articles<sup>16-18</sup> were published exaggerating the association between crime and cocaine use among Black men. Similarly, images of threat by Chinese immigrant opium dens proliferated. Soon after the passage of the Harrison Act, physicians became reluctant to treat addictions, and patients were forced to undergo abrupt withdrawal from narcotics.<sup>19</sup> Many people with SUD began as a consequence illicitly obtaining substances.<sup>20,21</sup> The Harrison Act set a precedent for future laws linking substance use, race, and fears of violent crime, including the 1934 Marijuana Tax Act that associated cannabis use with "Mexican reefer madness."<sup>22</sup>

"The War on Drugs," coined by President Richard Nixon in 1971 and expanded by President Ronald Reagan in the 1980s, was the national response to the opioid and crack epidemic that was devastating Black communities.<sup>23</sup> During this period, the size and presence of the federal drug control agencies increased and used measures such as mandatory sentencing and no-knock warrants.<sup>23</sup> As a result, and with the implementation of the Violent Crime Control and Law Enforcement Act of 1994 during President Bill Clinton's Administration, nonviolent drug offenses increased the incarcerated US population from 50,000 to 400,000 by 1997.<sup>24</sup> New policies intended to address drug use were developed using a racialized framework, and Black people were criminalized at much higher rates than White people. The effects of these policies are evident today

with Black people representing 12% of the US adult population in 2017 and making up roughly 30% of the incarcerated population.<sup>23</sup>

## Structural Factors

Structural racism refers to how the collective practices of multiple interlocking institutions within a society have discriminatory effects based on race. These institutional systems include housing, education, health care systems, banks, and media representation.<sup>11</sup> Whereas in the past, many of these systems discriminated based on separating races in the language of the law—such as during the institution of slavery and Jim Crow law eras of US history—systemic discrimination is now more commonly seen in institutions that act in a *de facto* racially discriminatory manner.<sup>25</sup> An important example with respect to SUD and racial disparities is the criminal justice system, which in recent decades dramatically expanded its rate of incarceration, largely due to an increase in criminal justice responses to substance misuse, disproportionately affecting Black and Latinx people, exemplified by the “War on Drugs” described above.<sup>26</sup> This “war” has selectively targeted Black neighborhoods and imposed significantly harsher penalties for identical drugs in forms more commonly used by Black people rather than White people.<sup>27</sup> In addition to its destructive effects on the lives of incarcerated people and the major disruptions placed on families, the “War on Drugs” increased the stigma associated with seeking substance use treatment in communities of color, and particularly increased the fear of coming forward with substance use problems due to the threat of harsh criminal justice penalties.

## Racism and Stress

Psychological stress has long been seen as an important precipitant in the development of SUD. In the case of people of color, increased levels of stress

may be caused by both daily interpersonal slights and microaggressions associated with racial identity, as well as by the stress associated with the greater likelihood of experiencing other forms of structural racial disadvantage, such as living in resource-poor neighborhoods or having less access to education, unemployment, or financial institutions. Several studies have found that discrimination is associated with greater likelihood of substance use.<sup>28,29</sup> Some research has suggested substance use may represent a form of attempting to reduce the psychological distress associated with chronic racial discrimination, whereas more recent work has suggested that chronic stress associated with racial discrimination may create neurobiological vulnerabilities to SUD.<sup>30</sup> Other scholars have suggested that the role of historical and current trauma, rooted in the aftermath of such experiences as the European colonization of Indigenous people and the periods of the institution of slavery and Jim Crow laws for African Americans, are important drivers of substance use disparities in the US.<sup>31</sup>

## Biases within Substance Use Treatment Systems

There is a substantial body of work that has found that racial biases shape behavior, leading to barriers in housing, employment, and access to financial resources for Black, Latinx, and other people of color.<sup>32</sup> Implicit bias refers to unconscious mental processes that lead to unrecognized negative feelings and judgments toward specific people based on their group affiliation or identity, including racial identity.<sup>33</sup> Included in this work is research showing that clinician bias shapes their health care decision-making.<sup>33</sup> For example, there has been a long history, corroborated by recent empirical evidence, that physicians are more likely to underrate the pain experiences of Black patients, including

holding the conscious belief that Black people are less sensitive to pain.<sup>34</sup> Clinician bias may help explain why people of color in medication-assisted treatment for opioid use disorder (MOUD) are less likely to be prescribed buprenorphine and more likely to be prescribed methadone, which is often subject to significant regulatory burden including daily pick-ups, in contrast to White people, who are more likely to be prescribed buprenorphine.<sup>35</sup>

## RECOMMENDATIONS

Best practices in the treatment of SUD are clearly defined and should be distributed equally among racial groups. Crucial to the treatment of SUD in Black, Latinx, and Indigenous communities is addressing decades of violence, poverty, stigmatization, widespread incarceration, and generational substance use.<sup>23</sup> A culturally sensitive approach to treatment includes collaborations between health care systems and community leaders to identify and address social determinants of health. Understanding a community’s relationship to places of worship, housing circumstances, places of employment, and cultural centers can help identify public policy needs and facilitate access to evidence-based approaches to treatment.<sup>36</sup> Economic stability and neighborhood safety can affect the overall health of residents in the community and contribute to persistent SUD. Treatment plans that involve case management services can help address some of the psychosocial needs of people with SUD by increasing social services access. Equally important is identifying services already present and trusted within communities to distribute accurate information, reduce stigma associated with seeking treatment, and linking to evidence-based programs.<sup>37</sup> Community members reluctant to engage with medical systems—sometimes due to fear of reprisal or mistrust of health care systems—may be more likely



to engage with indigenous leaders or peer recovery networks. These agencies are vital for spreading treatment information and increasing access to harm reduction initiatives such as naloxone, sterile syringes, and sexually transmitted infection prevention.

Novel, multicomponent treatment approaches to SUD within hospital systems are also opportunities to address social determinants of health. Hospital systems within low income and ethnically diverse communities have become necessary hubs for implementing low-barrier access to broad substance use treatment. Furthermore, hospitals can prevent morbidity and mortality and connect patients with psychosocial and behavioral services by integrating addiction treatment within primary care, case management, infectious diseases treatment, and gynecological and behavioral health services.

To further reduce gaps in addiction treatment services, medical education would need to broaden to include training in unconscious bias and stereotyping, person-centered care approaches that have enhanced social/structural determinants of health components, and training in cultural humility, a stance of self-critique and openness to cultural perspectives beyond one's own.<sup>38</sup> Medical training institutions can use such curricula to better train clinicians in delivering addiction treatment to socioeconomically and racially diverse populations. This can be further enhanced by partnering educational curricula with community groups. From a legal standpoint, federal drug policy should de-emphasize criminalization of drug use and expand access to evidence-based treatments—medical and psychosocial—for SUD.

## CONCLUSIONS

Addiction policy and treatment has historically been tied to discrimination and criminalization efforts. Recent

events calling attention to systemic racism, occurring against the backdrop of the opioid epidemic, represent an opportunity to promote policy-based, evidence-based treatments and at the same time remedying the long-standing, multigenerational consequences of punitive and discriminatory systemic factors. Many approaches are discussed here, including collaborating with and working within communities, increasing access to harm-reduction strategies and MOUD, providing multicomponent care in hospitals, increasing the diversity of clinicians, and providing antiracist training for clinicians now and for those who will train in the future.

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Original Investigation | Substance Use and Addiction

# Incidence of Treatment for Opioid Use Disorder Following Nonfatal Overdose in Commercially Insured Patients

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## Abstract

**IMPORTANCE** Timely initiation and referral to treatment for patients with opioid use disorder seen in the emergency department is associated with reduced mortality. It is not known how often commercially insured adults obtain follow-up treatment after nonfatal opioid overdose.

**OBJECTIVE** To investigate the incidence of follow-up treatment following emergency department discharge after nonfatal opioid overdose and patient characteristics associated with receipt of follow-up treatment.

**DESIGN, SETTING, AND PARTICIPANTS** A retrospective cohort study was conducted using an administrative claims database for a large US commercial insurer, from October 1, 2011, to September 30, 2016. Data analysis was performed from May 1, 2019, to September 26, 2019. Adult patients discharged from the emergency department after an index opioid overdose (no overdose in the preceding 90 days) were included. Patients with cancer and without continuous insurance enrollment were excluded.

**MAIN OUTCOMES AND MEASURES** The primary outcome was follow-up treatment in the 90 days following overdose, defined as a combined outcome of claims for treatment encounters or medications for opioid use disorder (buprenorphine and naltrexone). Analysis was stratified by whether patients received treatment for opioid use disorder in the 90 days before the overdose. Logistic regression models were used to identify patient characteristics associated with receipt of follow-up treatment. Marginal effects were used to report the average adjusted probability and absolute risk differences (ARDs) in follow-up for different patient characteristics.

**RESULTS** A total of 6451 patients were identified with nonfatal opioid overdose; the mean (SD) age was 45.0 (19.3) years, 3267 were women (50.6%), and 4676 patients (72.5%) reported their race as non-Hispanic white. A total of 1069 patients (16.6%; 95% CI, 15.7%-17.5%) obtained follow-up treatment within 90 days after the overdose. In adjusted analysis of patients who did not receive treatment before the overdose, black patients were half as likely to obtain follow-up compared with non-Hispanic white patients (ARD, -5.9%; 95% CI, -8.6% to -3.6%). Women (ARD, -1.7%; 95% CI, -3.3% to -0.5%) and Hispanic patients (ARD, -3.5%; 95% CI, -6.1% to -0.9%) were also less likely to obtain follow-up. For each additional year of age, patients were 0.2% less likely to obtain follow-up (95% CI, -0.3% to -0.1%).

**CONCLUSIONS AND RELEVANCE** Efforts to improve the low rate of timely follow-up treatment following opioid overdose may seek to address sex, race/ethnicity, and age disparities.

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## Key Points

**Question** How often do commercially insured patients obtain follow-up treatment for opioid use disorder after a nonfatal opioid overdose?

**Findings** In this cohort study of national commercial insurance claims for 6451 patients, 16.6% of patients obtained follow-up treatment after a nonfatal opioid overdose. Among those who had not received treatment for opioid use disorder before the overdose, patients of older age, female sex, black race, and Hispanic ethnicity were less likely to obtain follow-up.

**Meaning** Timely treatment for opioid use disorder following overdose appears to be low among commercially insured patients, with race/ethnicity, sex, and age disparities.

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## Introduction

Each year, the emergency department (ED) provides care for an increasing number of patients who present with opioid overdose as well as medical complications of opioid use disorder (OUD).<sup>1-3</sup> The ED serves as an essential touchpoint for patients seeking care for withdrawal and addiction.<sup>4-7</sup> A key strategy in secondary prevention of opioid overdose deaths is the engagement of patients with OUD in treatment following discharge.<sup>8-11</sup>

However, few patients successfully transition to treatment following nonfatal overdose.<sup>12-14</sup> In evidence from 2 states, less than 5% of Medicaid patients initiated treatment with medication for opioid use disorder (MOUD) following overdose.<sup>13,14</sup> For patients who are ready to engage in treatment, care coordination can help to overcome barriers to access.<sup>4,9</sup> Yet hospitals have few incentives and capacity to provide resource-intensive care navigation after ED visits.<sup>5,8,15-18</sup>

Patients have high risk of death in the days immediately following opioid overdose.<sup>19,20</sup> The initiation of MOUD during or after emergency care is associated with improvements in a variety of patient outcomes, including all-cause mortality and engagement in outpatient treatment, and other hospital-based interventions have been developed.<sup>12,21-24</sup> As a consequence, policy makers have identified the transition of patients from emergency care to sustained treatment (termed *warm handoffs*) as an urgent priority.<sup>25-28</sup>

In this study, we sought to examine the rate of follow-up treatment after discharge from the ED following overdose in a national population of commercially insured adults. Previous studies have focused on single states, the Medicaid population, and MOUD treatment.<sup>12-14,29</sup> To our knowledge, no previous studies have included the full scope of treatment services available to patients.

We also sought to examine patient-level characteristics associated with timely receipt of follow-up care. Evidence suggests that significant treatment disparities on the basis of race, sex, and geography have emerged as the opioid epidemic has evolved, possibly owing to differences in health insurance coverage.<sup>30-37</sup> We hypothesized that these treatment disparities by race and sex would persist within a commercially insured population.

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## Methods

### Data Sources, Study Population, and Outcomes

We conducted a retrospective cohort study of adult patients who were discharged from the ED following treatment for opioid overdose between October 1, 2011, and September 30, 2016. We used an administrative claims database, the Optum Clinformatics Data Mart (Optum).<sup>38,39</sup> The Optum database includes all inpatient, ED, outpatient, and pharmacy claims from a large national health insurance company that enrolled between 15 million and 18 million unique patients each year during the study period. Data analysis was performed from May 1, 2019, to September 26, 2019. The institutional review board at the University of Pennsylvania determined that this study was exempt from review because data are deidentified. This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline for cohort studies.<sup>40</sup>

### Selection of Patient Cohort

We identified ED encounters for opioid overdose in the study period for patients with commercial insurance coverage (eFigure 1 in the [Supplement](#)). To do so, we used previously validated *International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)* and *International Statistical Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)* diagnosis codes before and after October 1, 2015, respectively (eTable 1 in the [Supplement](#)).<sup>41-44</sup> We used Current Procedural Terminology codes to specifically identify ED encounters (eTable 1 in the [Supplement](#)).<sup>45</sup>

We excluded encounters for patients who did not have continuous insurance enrollment for 90 days before and after the date of the overdose, to provide a sufficient window to measure patient

exposures and outcomes and exclude fatal overdoses. We excluded patients with age younger than 18 years.

We then limited the cohort to encounters for an index opioid overdose, defined as an encounter for opioid overdose with no ED encounter or hospital admission for opioid overdose in the preceding 90 days. We excluded encounters resulting in inpatient hospital admission to obtain a cohort of patients stable for ED discharge and likely to not have disability or sequelae from the overdose. In addition, we excluded encounters for patients with diagnosis of cancer based on treatment claims *ICD-9-CM* and *ICD-10* diagnosis codes in the preceding 90 days (eTable 1 in the [Supplement](#)).<sup>12,46,47</sup> Patients with pain related to active cancer diagnoses represent a separate population and may be prescribed high doses of prescription opioids.<sup>29</sup> Of the remaining encounters, we included only the first index opioid overdose for any individual patient during the study period (eFigure 1 in the [Supplement](#)).

### Outcomes

The primary outcome was whether the patient obtained follow-up treatment in the 90 days following the index opioid overdose. We defined follow-up treatment as the presence of either 1 pharmacy claim for MOUD or 1 medical claim for an outpatient or inpatient opioid treatment encounter. For pharmacy claims, we identified National Drug Codes for all formulations of buprenorphine, buprenorphine with naloxone, or naltrexone (eTable 2 in the [Supplement](#)).<sup>48-50</sup> Methadone maintenance therapy was not covered by insurance for this population during the study period and was not included in this study. Medical claims for treatment encounters had an *ICD-9-CM* or *ICD-10-CM* diagnosis code for opioid use disorder in any position (eTable 3 in the [Supplement](#)) and Current Procedural Terminology or Healthcare Common Procedure Coding System codes for a variety of services including outpatient clinic visits, psychiatric services, inpatient and outpatient behavioral health services, outpatient treatment programs, and case management (eTable 3 in the [Supplement](#)).<sup>50</sup> Repeated ED or inpatient hospital encounters were not included as follow-up treatment.

Supplemental analyses were performed for the purpose of hypothesis generation. These included secondary outcomes that were the receipt of MOUD independently from treatment encounters within 90 days of the index overdose. We also examined the number of days from the index overdose to follow-up treatment. To address the absence of mortality data, we determined the date of service for the last insurance claim for all patients in the cohort. We performed a sensitivity analysis excluding patients for whom there was no claim beyond the 90-day follow-up period. Although the absence of claims does not indicate death, we could not ensure survival to the end of the follow-up period for those patients.

### Covariates

We examined patient-level characteristics as covariates that we hypothesized could be associated with access to follow-up treatment, including patient age, sex, and race/ethnicity. Optum uses data on race/ethnicity that is self-reported or derived from administrative data sources. We also included geographic location, according to 4 United States Census Regions (Northeast, South, Midwest, West).<sup>51</sup> Year of the index overdose was included given the increasing overdose incidence over the study period.<sup>52</sup> We examined the type of overdose (heroin or prescription opioid) based on diagnosis codes.<sup>41</sup> Prescription opioid refers to medications available by prescription but does not mean that the patient received a prescription for the medication.

We also included exposures to treatment for behavioral health conditions in the 90 days preceding the index overdose. We included the presence of claims for anxiety or depression based on *ICD-9-CM* or *ICD-10-CM* diagnosis codes (eTable 1 in the [Supplement](#)) due to potential association with overdose.<sup>50</sup> We also included claims for prescription opioid medications and benzodiazepines in the 90 days preceding the index overdose using American Hospital Formulary Service Pharmacologic-Therapeutic Classification codes.<sup>53</sup> In addition, we determined whether patients had



pharmacy claims for MOUD or medical claims for treatment encounters in the 90 days preceding the index overdose.

### Statistical Analysis

First, we described the patient cohort, stratified by overdose type. We used 2-sided  $\chi^2$  tests and *t* tests to describe differences in the cohort between overdose type. Next, we summarized patient outcomes, stratified by overdose type and treatment for OUD in the 90 days preceding the overdose.

We then used multivariable logistic regression models to examine the association between patient characteristics, as described in the first paragraph of the Covariates section, and the binary primary outcome. Given that patients were hypothesized to more likely access follow-up treatment if they had received recent treatment before the overdose, we stratified the analyses based on whether patients had received OUD treatment in the 90 days before the overdose. For ease of interpretation, we used predictive margins to report average adjusted probability and absolute risk differences (ARDs), with 95% CIs.<sup>54,55</sup> For categorical variables, ARD represents the difference in adjusted probability of follow-up treatment between patients with a given characteristic and the reference value.

In addition to the primary analysis, we investigated potential interactions between race/ethnicity and overdose type by including an interaction term in the logistic regression model. Also, we used multivariable logistic regression models to examine the association between patient characteristics and the secondary outcome of MOUD treatment alone. In addition, we used Kaplan-Meier failure analysis to examine days to receipt of follow-up treatment, stratified by overdose type. Data analysis was conducted from June 1, 2019, to September 1, 2019. Analyses were performed using Stata software, version 15.1 (StataCorp LP).

## Results

The total cohort consisted of 6451 patients, of whom 1896 (29.4%) overdosed from heroin and 4555 (70.6%) overdosed from prescription opioids (**Table 1**). Further delineation of the type of opioid overdose is reported in eTable 7 in the [Supplement](#). The mean (SD) age was 45.0 (19.3) years and there were 3267 (50.6%) women. A total of 4676 patients (72.5%) reported their race as non-Hispanic white, 601 patients (9.3%) reported their race as black, and 536 patients (8.3%) who reported Hispanic ethnicity. Only 682 patients (10.6%) received treatment for opioid use disorder in the 90 days preceding the overdose, including 320 (5.0%) with pharmacy claims for MOUD. Patients with heroin overdose significantly differed across all patient characteristics compared with those with prescription opioid overdose.

### Primary Analysis

For all patients in the study cohort, 1069 individuals (16.6%; 95% CI, 15.7%-17.5%) obtained follow-up treatment in the 90 days following overdose (**Figure 1**; eTable 8 in the [Supplement](#)). Among the 5769 patients who did not receive treatment for OUD in the 90 days before the overdose, 643 (11.1%; 95% CI, 10.3%-12.0%) obtained follow-up treatment. Among the 682 patients who received treatment before the overdose, 426 individuals (62.5%; 95% CI, 58.7%-66.1%) patients obtained follow-up.

In the adjusted analysis for patients who did not receive treatment before the overdose, patients with prescription opioid overdose were less likely to obtain follow-up compared with heroin overdose (**Table 2**) (ARD, -8.8%; 95% CI, -11.2% to -6.5%). Compared with patients of non-Hispanic white race, black (ARD, -5.9%; 95% CI, -8.6% to -3.6%) and Hispanic (ARD, -3.5%; 95% CI, -6.1% to -0.9%) patients were less likely to obtain follow-up. Women were less likely to obtain follow-up than men (ARD, -1.7%; 95% CI, -3.3% to -0.5%). For each additional year of age, patients were 0.2% less likely to obtain follow-up (95% CI, -0.3% to -0.1%). However, patients with recent treatment

for anxiety, including a treatment encounter for anxiety (ARD, 3.4%, 95% CI, 1.1%-5.8%) or prescription for a benzodiazepine (ARD, 2.8%; 95% CI, 0.7%-5.0%), were more likely to obtain follow-up. In this adjusted analysis, there was no statistically significant change with regard to the rate of patients obtaining follow-up treatment over the 5 years of the study (Figure 2).

These associations were not present for patients who received treatment in the 90 days before overdose, apart from a decreased rate of follow-up for patients in the South (ARD, -15.0%; 95% CI, -25.9% to -4.1% and the West (ARD, -20.1%; 95% CI, -32.2% to -7.6%), compared with the Northeast (eTable 4 in the Supplement).

**Supplemental Analyses**

In supplemental analyses, differences in the adjusted probability of follow-up rate persisted across overdose type for black patients compared with non-Hispanic white patients (Figure 3). Among patients who did not receive treatment before overdose, black patients were less likely to obtain follow-up treatment than non-Hispanic white patients whether the index overdose was due to heroin (ARD, -8.8%; 95% CI, -11.5% to -6.1%) or prescription opioids (ARD, -4.7%; 95% CI, -5.7% to -3.7%). For Hispanic patients compared with patients of non-Hispanic white race, the difference in

**Table 1. Characteristics of Patient Cohort, Stratified by Overdose Type<sup>a</sup>**

Characteristic	No. (%)		
	All patients (n = 6451)	Heroin (n = 1896)	Prescription opioid (n = 4555)
Age, mean (SD), y	45.0 (19.3)	31.0 (13.2)	50.8 (18.4)
Sex			
Male	3184 (49.4)	1291 (68.1)	1893 (41.6)
Female	3267 (50.6)	605 (31.9)	2662 (58.4)
Race/ethnicity			
Non-Hispanic white	4676 (72.5)	1450 (76.5)	3226 (70.8)
Black	601 (9.3)	148 (7.8)	453 (9.9)
Hispanic	536 (8.3)	135 (7.1)	401 (8.8)
Asian	78 (1.2)	9 (0.5)	69 (1.5)
Unknown	560 (8.7)	154 (8.1)	406 (8.9)
Year			
2011, quarter 4	229 (3.5)	40 (2.1)	189 (4.1)
2012	1099 (17.1)	239 (12.6)	860 (18.9)
2013	1164 (18.1)	276 (14.6)	888 (19.5)
2014	1248 (19.3)	362 (19.1)	886 (19.5)
2015	1387 (21.5)	475 (25.1)	912 (20.0)
2016, quarters 1-3	1324 (20.5)	504 (26.6)	820 (18.0)
Region			
Northeast	659 (10.2)	316 (16.7)	343 (7.5)
South	2627 (40.7)	617 (32.5)	2010 (44.1)
Midwest	1619 (25.1)	703 (37.1)	916 (20.1)
West	1546 (24.0)	260 (13.7)	1286 (28.2)
90 d Before overdose			
Anxiety treatment	1625 (25.2)	403 (21.3)	1222 (26.8)
Depression treatment	1416 (22.0)	322 (17.0)	1094 (24.0)
Prescription opioid claim	3266 (50.6)	317 (16.7)	2949 (64.7)
Benzodiazepine claim	2009 (31.1)	373 (19.7)	1636 (35.9)
MOUD claim	320 (5.0)	201 (10.6)	119 (2.6)
Buprenorphine	278 (4.3)	168 (8.9)	110 (2.4)
Naltrexone	42 (0.7)	33 (1.7)	9 (0.2)
Treatment encounter for OUD	539 (8.4)	347 (18.3)	192 (4.2)

Abbreviations: MOUD, medication for opioid use disorder; OUD, opioid use disorder.

<sup>a</sup> Two-sided t test and  $\chi^2$  tests were performed;  $P < .001$  for all patient characteristics.



adjusted follow-up rate was significant only for patients with prescription opioid overdose (ARD, -4.0%; 95% CI, -5.1% to 2.8%).

We investigated the secondary outcome of MOUD treatment alone. Among the 6131 patients who did not file an MOUD claim in the 90 days before the index overdose, 280 individuals (4.6%) had a claim for MOUD following the overdose. In adjusted analyses, patients who were older, women, black race, and experienced a prescription opioid overdose were less likely to obtain MOUD treatment, while patients with a prescription for a benzodiazepine or treatment encounters for OUD were more likely (eTable 5 in the Supplement).

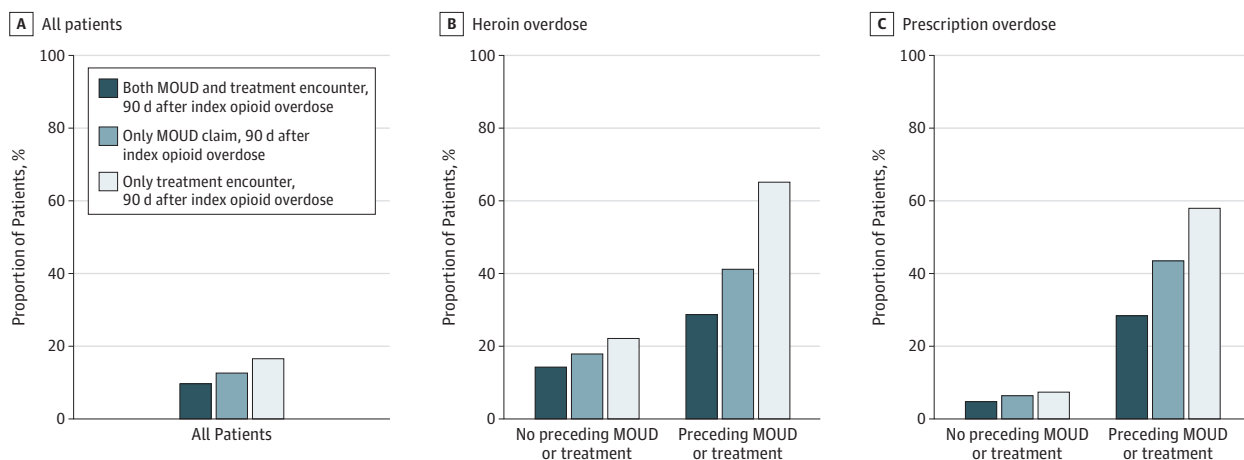
We examined the timing of follow-up treatment following the index overdose, with results of the Kaplan-Meier failure analysis shown in eFigure 2 in the Supplement. Among all 1069 patients who obtained follow-up treatment, 318 individuals (29.7%) did so in 7 or fewer days after the overdose. In addition, we performed a sensitivity analysis excluding 233 patients (3.6%) who did not have claims beyond the 90-day follow-up period, which demonstrated equivalent outcomes to the primary analysis (eTable 6 in the Supplement).

### Discussion

We analyzed commercial insurance claims to determine how often patients obtained treatment for OUD in the 90 days following ED presentation for nonfatal opioid overdose. Most had not received OUD treatment immediately preceding the overdose. Among that group, we found that only 11.1% of patients obtained follow-up treatment through an encounter in the outpatient setting, inpatient treatment, or filled prescriptions for a buprenorphine or naltrexone. The few patients that recently received treatment had a higher incidence of follow-up treatment. Despite the increasing number of overdoses across the years of this study, there was no significant change in the proportion of patients receiving follow-up treatment. Given that patients with commercial insurance likely have a superior ability to access care compared with patients who have public insurance, this persistently low rate suggests an opportunity for improvement.

Disparities in the receipt of follow-up treatment with regard to race/ethnicity, age, and age persisted within this cohort. In particular, black patients were half as likely to obtain treatment following overdose compared with non-Hispanic white patients. This disparity was present regardless of whether the overdose was due to heroin or prescription opioids. To our knowledge, these disparities in treatment following opioid overdose have not been previously documented. However, our findings are consistent with emerging evidence that there are disparities in

Figure 1. Patient Outcomes Stratified by Overdose Type and Treatment Status Before Overdose



Data shown for status at 90 days before overdose for all patients (A), heroin overdose (B), and prescription opioid overdose (C). MOUD indicates medication for opioid use disorder.

buprenorphine treatment with regard to race/ethnicity and sex.<sup>30,32,33,36</sup> Although this study cannot determine whether these disparities are associated with patient preferences, barriers to access, implicit or explicit bias, or other causes, it is important to better understand and account for these factors when designing systems that seek to improve engagement and equity in treatment.

Previous studies have examined changes in treatment rates before and after opioid overdose using data from individual states.<sup>12-14</sup> These studies primarily focused on medication treatment, with only one study including a limited range of treatment encounters. Our study included a range of possible treatments, from outpatient clinic visits to inpatient residential treatment. In general, we found that fewer than half of patients who obtained follow-up treatment received medication. Treatment with opioid agonists has been associated with reduced risk of relapse by 50% compared

**Table 2. Adjusted Probability of Follow-up Treatment After Opioid Overdose, for Patients Not Treated Before Overdose<sup>a</sup>**

Patient characteristics	Average adjusted probability, % (95% CI) <sup>b</sup>	P value <sup>c</sup>
Overdose type		
Prescription opioid	8.3 (7.3- 9.2)	[Reference]
Heroin	17.1 (15.1-19.2)	<.001
Age, at mean, y <sup>d</sup>	9.9 (9.1-10.7)	<.001
Sex		
Male	11.9 (10.9-13.0)	[Reference]
Female	10.1 (9.1-11.3)	.04
Race/ethnicity		
Non-Hispanic white	12.1 (11.1-13.0)	[Reference]
Black	6.1 (4.0-8.3)	<.001
Hispanic	8.5 (6.1-11.0)	.009
Asian	10.2 (2.8-17.5)	.62
Unknown	10.1 (7.4-12.8)	.18
Year		
2011, quarter 4	12.2 (7.9-16.6)	[Reference]
2012	9.3 (7.6-11.3)	.22
2013	11.5 (9.6-13.5)	.75
2014	10.0 (8.3-11.7)	.32
2015	12.9 (11.1-14.6)	.82
2016, quarters 1-3	11.1 (9.5-13.0)	.64
Region		
Northeast	14.0 (11.6-16.6)	[Reference]
South	10.4 (9.1-11.4)	.01
Midwest	11.1 (9.7-12.7)	.07
West	11.0 (9.3-12.8)	.06
90 d Before overdose		
Anxiety treatment		
No	10.3 (9.4-11.2)	[Reference]
Yes	13.8 (11.7-15.8)	.004
Depression treatment		
No	10.9 (10.1-11.9)	[Reference]
Yes	11.6 (9.7-13.5)	.64
Prescription opioid claim		
No	11.0 (9.9-12.1)	[Reference]
Yes	11.2 (9.8-12.7)	.84
Benzodiazepine claim		
No	10.3 (9.4-11.2)	[Reference]
Yes	13.2 (11.4-15.0)	.009

<sup>a</sup> Results are given for patients who did not receive treatment for 90 days before the index opioid overdose, defined as either a pharmacy claim for medication for opioid use disorder or medical claim for opioid use disorder treatment encounter.

<sup>b</sup> Estimated with logistic regression model using predictive margins. Average adjusted probability is the adjusted rate, holding covariates at their actual values, at which patients obtain follow-up treatment within 90 days after the index opioid overdose, defined as either a pharmacy claim for medication for opioid use disorder or medical claim for opioid use disorder treatment encounter.

<sup>c</sup> P values are given for average marginal effects, which represent the difference in adjusted probability between a given characteristic and the reference group.

<sup>d</sup> Average adjusted probability for continuous variable (age) is given for the mean patient age (46.3 years).

with behavioral treatment alone.<sup>56</sup> Better understanding of current treatment and referral patterns may help inform efforts to expand evidence-based practices.<sup>57,58</sup>

We hypothesized that the rate of follow-up treatment would be higher for patients with commercial insurance, given potentially greater resources and access to care. While we cannot directly compare across studies, the rate of OUD treatment in this cohort did not appear to be appreciably higher in this cohort than that described in other populations. Not all patients can be expected to engage in treatment after overdose.<sup>4</sup> Higher rates of treatment engagement have been observed in experimental settings, often with screening of patients for substance use disorder.<sup>22,59-62</sup> While the optimal rate of follow-up treatment may be difficult to estimate, there is still need for widely implemented interventions that may help patients overcome the many pervasive barriers to accessing care.<sup>4,15</sup>

We intentionally examined outcomes for a short time following the overdose. Recent evidence suggests that risk of death is high immediately following overdose, with nearly 5% of deaths occurring within 2 days of discharge from the ED.<sup>19</sup> In a secondary analysis, only 30% of patients who obtained follow-up did so within 7 days. Patients may benefit from rapid linkage to treatment,

Figure 2. Proportion of Index Opioid Overdoses by Quarter, Stratified by Overdose Type and Receipt of Follow-up Treatment

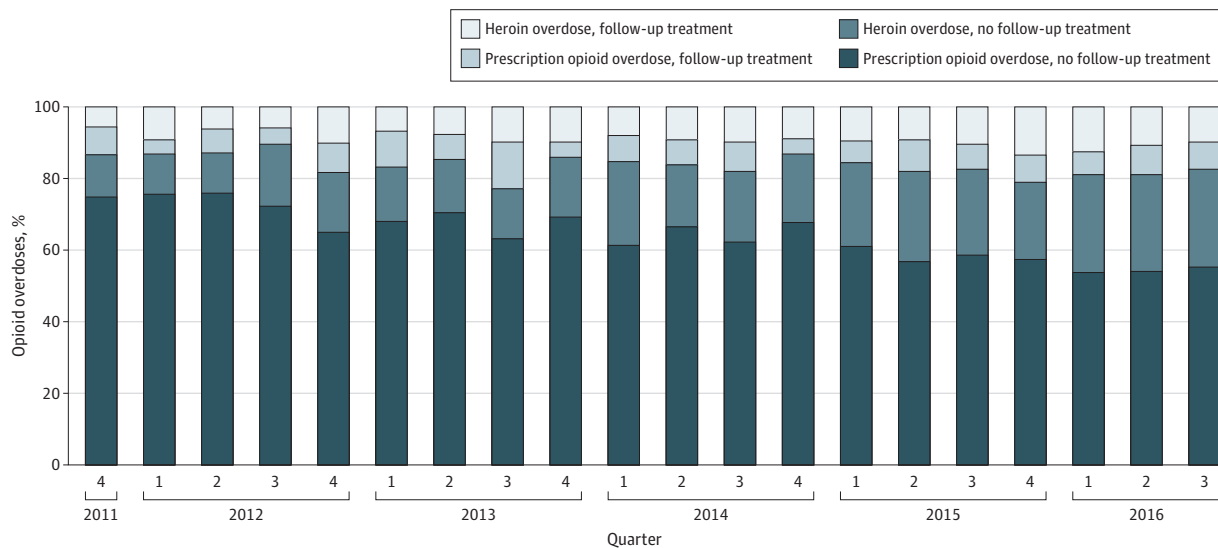
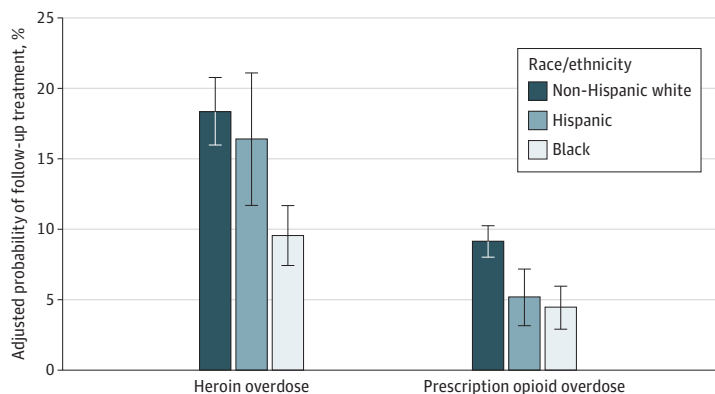


Figure 3. Average Adjusted Probability of Follow-up Treatment After Opioid Overdose, by Overdose Type and Race/Ethnicity



Estimated from logistic regression model with interaction term for overdose type and race/ethnicity. Error bars denote 95% confidence intervals for average adjusted probability. Results shown only for patients who had not received treatment for opioid use disorder in the 90 days before the index opioid overdose. Race/ethnicity was self-reported or derived from other administrative data sources.

potentially through recovery specialists who can provide navigation and harm reduction counseling regardless of the client's willingness to engage in treatment.<sup>3-5</sup>

### Limitations

This study has several limitations. First, we cannot account for patients who pay for OUD treatment out-of-pocket. Although treatment services, including MOUD, were covered by the insurer during the study period, some patients may have elected to pursue alternative options. Second, this study did not include patients who obtain methadone maintenance therapy. Methadone is an important treatment modality for many patients with opioid use disorder. However, methadone was not covered for this indication by the insurer during the study period. It is possible that patients in this cohort obtained methadone through self-pay or other mechanisms, although this rate cannot be estimated from these data and is difficult to extrapolate from other sources.<sup>63-65</sup> Third, these data do not specifically account for patient deaths in the days following the index overdose. However, additional analysis that only included patients known to have survived to the end of the follow-up period showed similar results.

Fourth, the use of administrative claims data in this study limits our ability to ascertain the reasons that patients obtain or do not obtain follow-up treatment. It is not known whether patients do not receive appropriate referrals, lack treatment facilities in their communities, or may be unwilling to engage in treatment. A corollary limitation is that patients may have received prescriptions for MOUD but not filled those prescriptions. Fifth, this cohort likely includes patients who may not have OUD, which may explain differential rates in follow-up treatment for patients with heroin and prescription opioid overdose. Regardless, patients with accidental prescription opioid overdose also should obtain timely follow-up for reevaluation, medication adjustment, and discussion of the long-term risks associated with opioid use.

### Conclusions

Engagement of patients into treatment following opioid overdose is necessary to prevent subsequent opioid overdose death and other harm. Among commercially insured patients who were not receiving active addiction treatment, only 11.1% received follow-up treatment after an overdose. We showed apparent disparities in treatment with regard to race/ethnicity (eg, black patients were half as likely to obtain follow-up compared with non-Hispanic white patients), sex, and age. Research is needed to better understand the mechanisms behind these disparities. As health professionals adopt evidence-based practices for initiating medications for treatment of OUD and linking patients to sustained treatment, payers and policy makers should implement strategies to overcome systemic barriers to ensure that patients are given the best opportunity to access timely treatment. These interventions must account for disparities to ensure expanded and equitable access to life-saving treatment following overdose.

### ARTICLE INFORMATION

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#### SUPPLEMENT.

**eFigure 1.** Flowchart for Selection of Patient Cohort

**eTable 1.** ICD-9-CM, ICD-10, CPT, and AHFS Codes for Selection of Patient Cohort and Patient Characteristics

**eTable 2.** National Drug Codes for Medications for Opioid Use Disorder

**eTable 3.** CPT, HCPCS, ICD-9-CM, and ICD-10-CM Codes for Treatment Encounters

**eTable 4.** Adjusted Probability of Follow-up Treatment After Opioid Overdose for Patients Treated Prior to Overdose

**eTable 5.** Adjusted Probability of MOUD Treatment After Opioid Overdose, Stratified by Treatment Status Prior to Overdose

**eFigure 2.** Kaplan-Meier Failure Curve for Days to First Follow up Treatment Following Index ED Overdose

**eTable 6.** Adjusted Probability of Follow-up Treatment After Opioid Overdose, Excluding Patients Without Known Claims Beyond 90-Day Follow-up Period (Sensitivity Analysis to Address Potential Mortality During Follow-up Period)

**eTable 7.** Index Opioid Overdoses by specific ICD-9 or ICD-10 Diagnosis Code, With Number and Frequency for Each Diagnosis Code

**eTable 8.** Patient Cohort and Unadjusted Outcomes, Stratified by Overdose Type and Treatment Status Before Overdose