

Race- and gender-specific interventions may lower drug overdose death rates

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Minority communities in urban and rural areas have borne the brunt of the current drug overdose crisis, according to researchers who studied how drug treatment admissions and overdose deaths differed among race and gender. The findings suggest that interventions to address stimulant and opioid use that consider race and gender may prove more effective at preventing overdose deaths than current methods. Credit: Patrick Mansell / Penn State, [Creative](#)

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Interventions to address stimulant and opioid use that consider race and gender may prove more effective at preventing overdose deaths than current methods, according to a Penn State-led team of researchers who studied how drug treatment admissions and overdose deaths differed among race and gender. The researchers found that minority communities bore the brunt of the crisis in both urban and rural areas.

They reported their findings in the journal *Drug and Alcohol Dependence*.

The United States recorded more than 580,000 opioid and stimulant-related overdose deaths in the last 20 years, with 100,000 deaths in 2020 alone. Drug overdose deaths in the U.S. have continued to climb despite rising treatment admissions, with Black men and American Indian/Native Alaskan men and women hit the hardest by the overdose crisis, according to Penn State's Abenaa Jones, the Ann Atherton Early Career Professor in Health and Human Development and assistant professor of human development and [family studies](#), who was lead author on the paper.

"Substance use and its ramifications do more than impact the individual—they impact society as a whole," said Jones, who cited social costs such as higher unemployment rates and strains on the foster care and criminal justice systems, to name a few. "During the COVID-19 pandemic, overdose rates for Black individuals overtook those of whites for the first time. We wanted to delve into the nuances within those overdose deaths and also look at treatment admissions to gauge how treatment for [substance use disorders](#) looks among race, ethnicity and gender."

The researchers used the Substance Abuse and Mental Health Services Administration's Treatment Episode Data Set-Admissions to study substance use treatment admissions from 1992 to 2019. They used the Centers for Disease Control and Prevention's Wide-Ranging Online Data for Epidemiologic Research (WONDER) to examine reported overdose deaths from 1999 to 2020. The beginning dates of both data sets mark the years the data was first collected.

The research team grouped the data into six substance categories—cocaine, opioid, methamphetamines, cocaine and opioid, cocaine and methamphetamines, and opioid and methamphetamines—and examined treatment and overdose rates by race and gender. They found that treatment admissions have not kept pace with overdose deaths, and the overdose crisis has had the largest impact on [minority communities](#) in both urban and [rural areas](#). In particular, Black men and American Indian/Native Alaskan men and women were disproportionately affected.

"We know there are different patterns of overdoses and treatment by race, ethnicity and gender, and certainly for different substances," said Joel Segel, associate professor of health policy and administration at Penn State. "Bringing all these data together helps us see patterns—including where overdose cases and treatment are not matching—indicating there might be an important lack of treatment that needs to be addressed."

Although all [racial groups](#) and genders experienced increases in treatment admissions and overdose deaths during the last three decades—in some instances more than 600%—the researchers noted dramatic increases for Black men and American Indian/Native Alaskan men and women. Black men experienced the highest rate of cocaine-related overdose deaths of any group. American Indian/Native Alaskan communities experienced the highest rates of methamphetamine

treatment admissions and deaths.

The researchers also found that men have higher rates of treatment admissions and overdose deaths than women. However, previous research has shown that treatment disparities are heightened among women, who face barriers such as cost, lack of child care and transportation, and stigmatization.

"If a mother has unmet treatment needs, it's going to impact the next generation," said Jones. "They may have their children removed and put in foster care or sent to live with extended family. The breakup of the family is very hard on everyone involved. Helping women with substance use issues to stay in recovery and increase their pro-social and positive health factors leads to women who are more capable in raising their children well. It also fosters women who can provide for their children emotionally, psychologically and financially. Intervening with women is unique because you typically get to help two generations at once."

Polysubstance use, or the combination of opioids and stimulants, is driving the current wave of drug overdoses, said the researchers.

"Fentanyl is strong and relatively cheap, so you see other substances get adulterated with it," Segel said. "In earlier waves, individuals were intentionally taking heroin or prescription opioids. I think part of what's currently going on is there are cases where someone thinks they're using methamphetamines or cocaine but does not necessarily know that the substance contains fentanyl."

In the last two decades the crisis has hit hardest in high-distressed neighborhoods, or rural and urban places with low income, a lack of housing, underserved schools, and other factors that would put an individual at a disadvantage simply by living there, said Jones. Racial

and ethnic minorities tend to live in these areas at higher rates than white individuals, and the stress caused by living in these adverse environments may lead to substance use as a means to cope. Higher distressed neighborhoods are more likely to see tainted drug supplies than other places, which can lead to the increased likelihood of fatal overdoses. In addition, these areas may lack access to naloxone, the life-saving opioid overdose reversal drug, she added.

The research findings show a need to develop [substance use](#) interventions that take race, ethnicity and gender into consideration, said the researchers. Such an intervention may include culturally sensitive components in treatment content; having providers and treatment support staff of the same racial/ethnic and gender identities as the population served; having providers and treatment staff with lived experience in addiction recovery, including bilingual staff; and accounting for logistical barriers that inhibit treatment access and completion, like transportation and child care. They also noted that increased access to lifesaving medications like naloxone and employing harm reduction strategies like fentanyl test strips can help to reduce [overdose deaths](#).

"Today more people have personal stories of family members affected by the overdose crisis," Jones said. "Our society is on the pay later plan, which is much more costly in terms of criminal justice costs and the costs of social disruptions. It's in our society's best interest to intervene sooner than to pay more later."

More information: A.A. Jones et al, Opioid and stimulant attributed treatment admissions and fatal overdoses: Using national surveillance data to examine the intersection of race, sex, and polysubstance use, 1992–2020, *Drug and Alcohol Dependence* (2023). [DOI: 10.1016/j.drugalcdep.2023.109946](https://doi.org/10.1016/j.drugalcdep.2023.109946)

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