



## Helping to End Addiction Long-term: NIH Trends and Perspectives

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Disorders and Stroke**



NIH HEAL Initiative and Helping to End Addiction Long-term are service marks of the U.S. Department of Health and Human Services.





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# Emerging Issues in the Opioid Crisis: Collision of COVID-19 on Overdose and Treatment

May 17, 2021

Presented by Nora D. Volkow, M.D., Director, NIDA

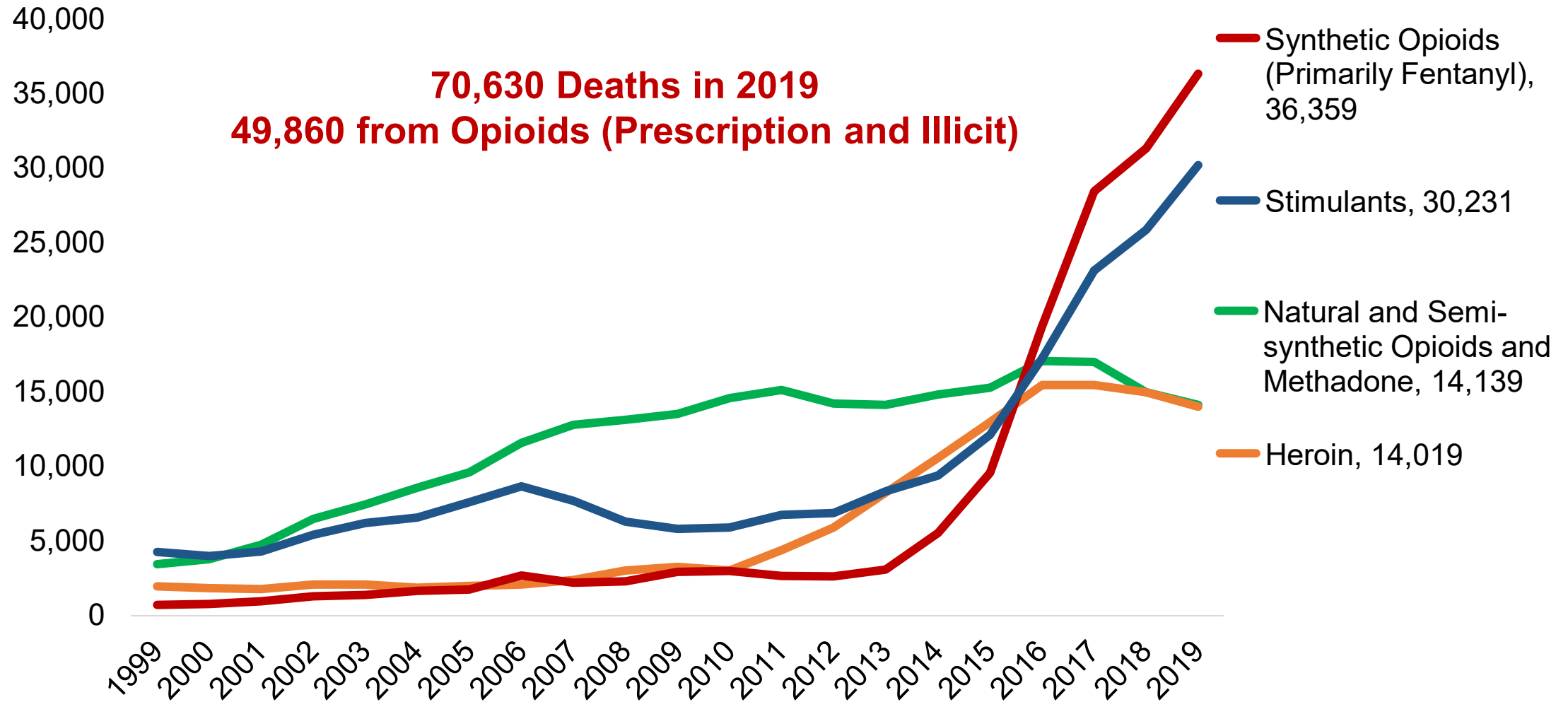


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# Evolution of Drivers of Overdose Deaths, All Ages

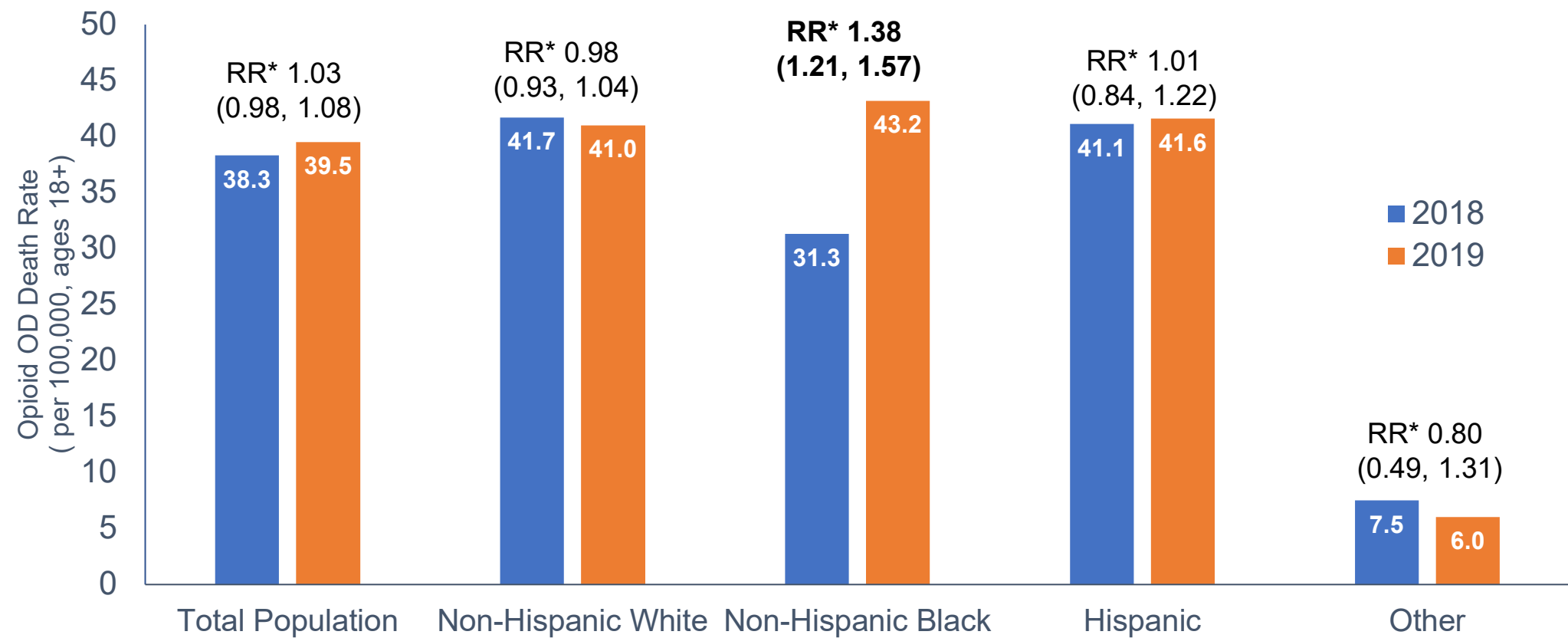
Analgesics → Heroin → Fentanyl → Stimulants



Source: The Multiple Cause of Death data are produced by the Division of Vital Statistics, National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), United States Department of Health and Human Services (US DHHS).

# HEALing Communities Study: Opioid Overdose Death Rate Trends

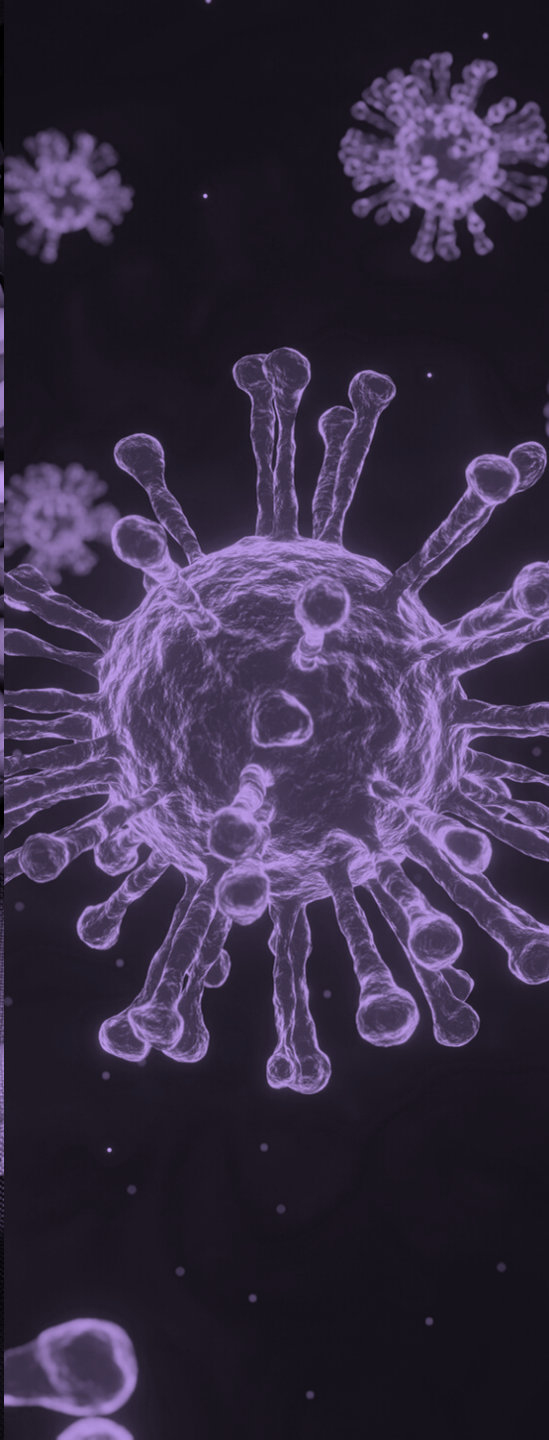
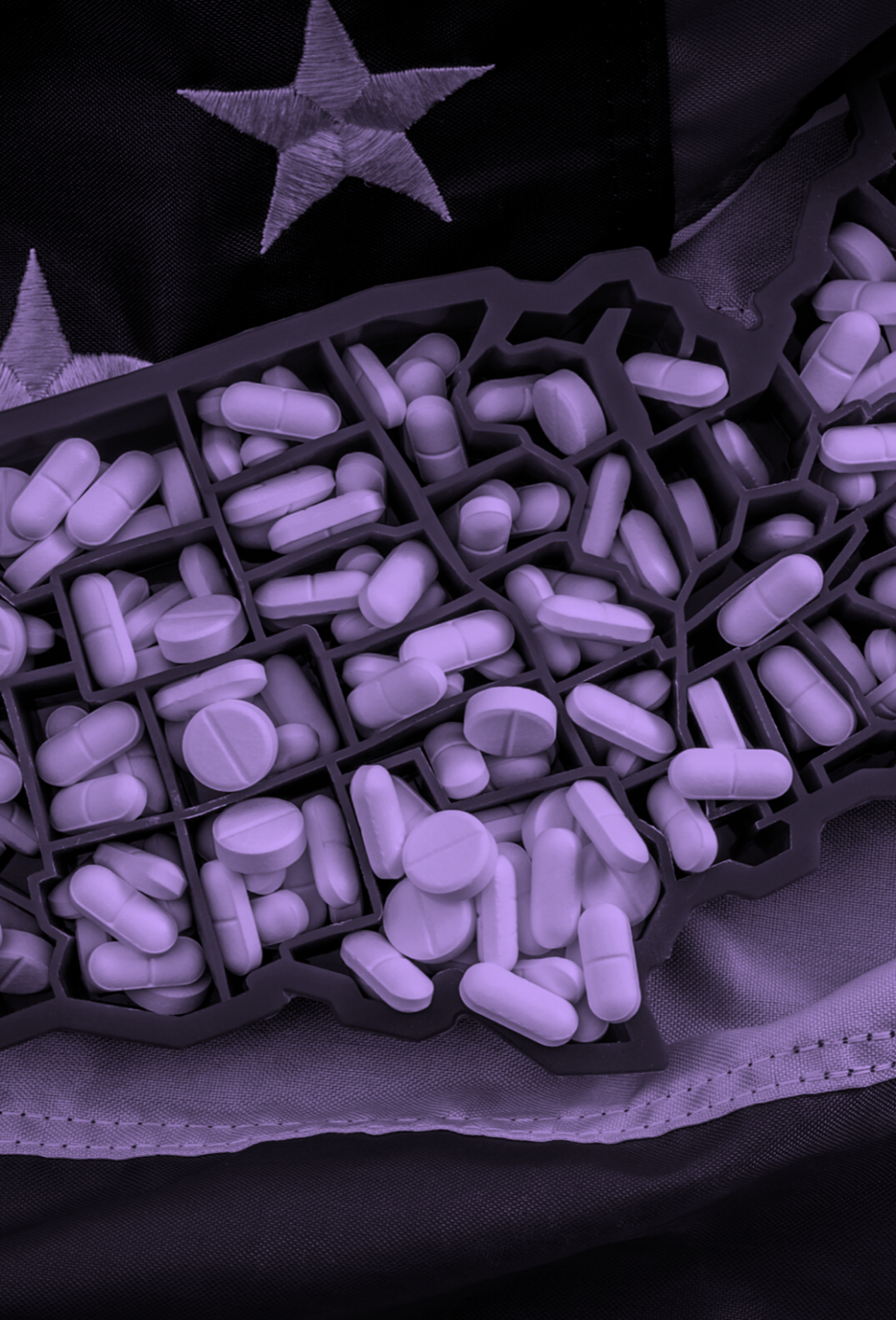
## All Study Communities By Race/Ethnicity, 2018-2019



\* Rate Ratio for 2019 vs 2018 with 95% Confidence Interval

*Under review, Am. J. Public Health*

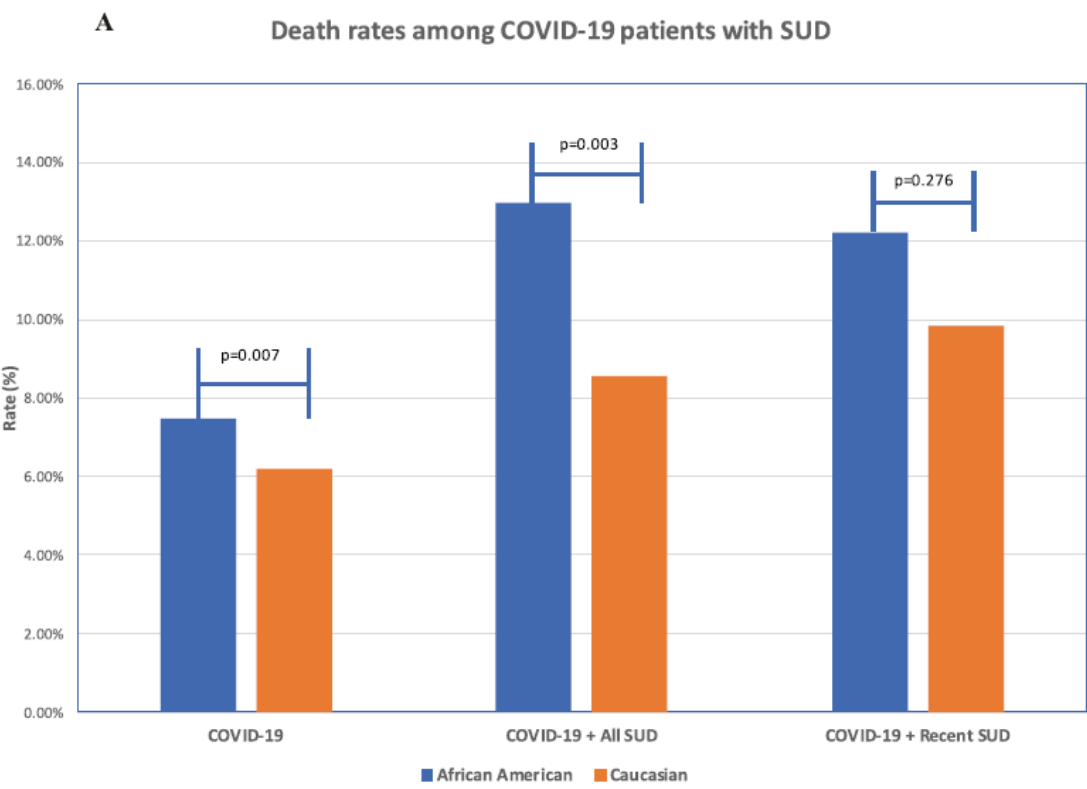
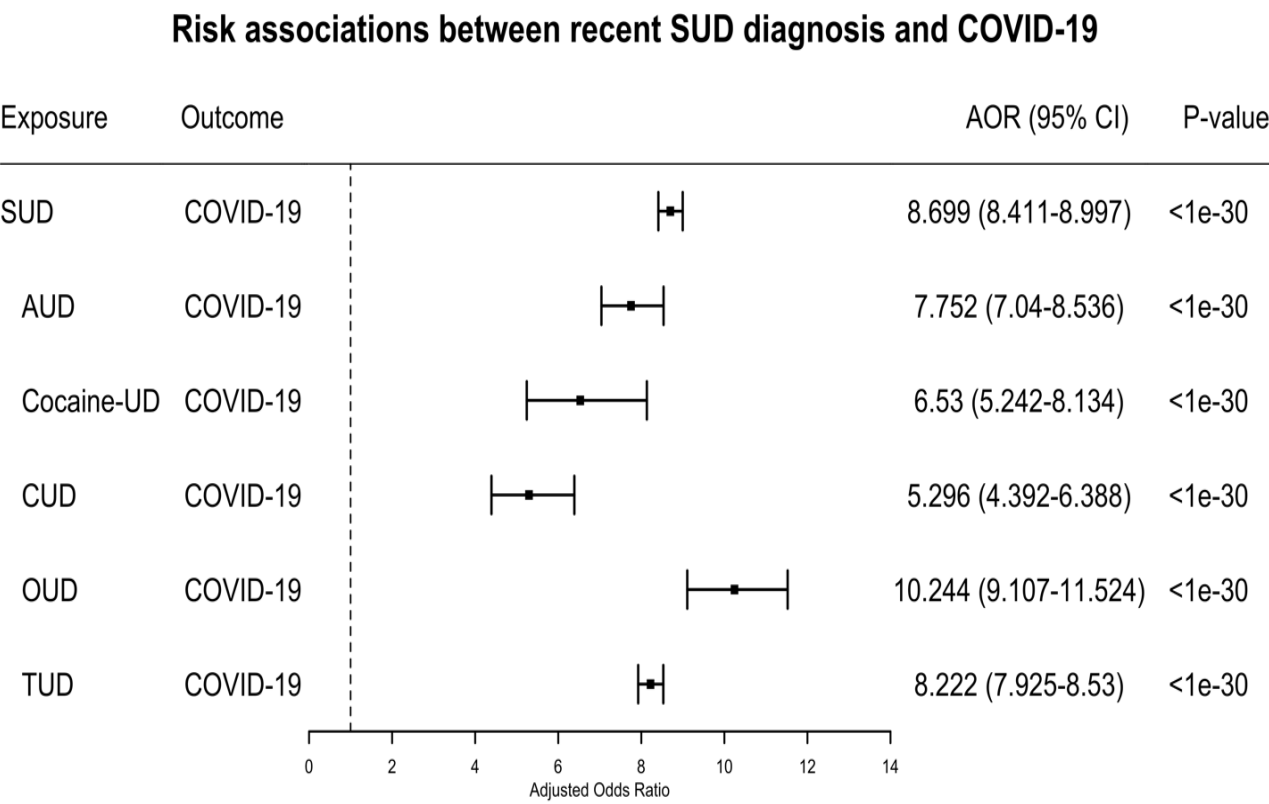




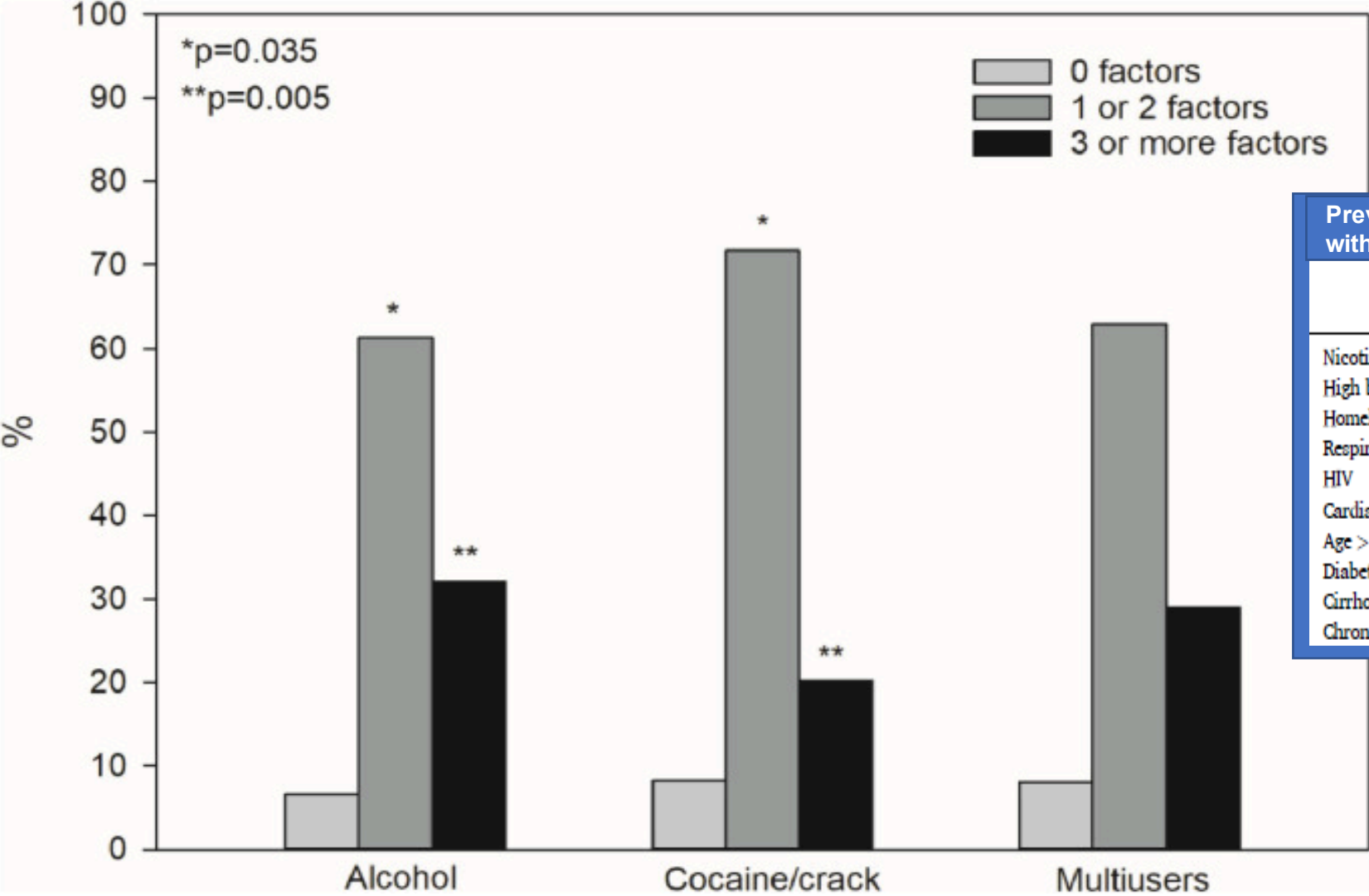
# **Intersection Between Drug Crisis and COVID-19**

# COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States

Quan Qiu Wang, David C Kaelber , Rong Xu , Nora D Volkow<sup>4</sup>




# Frequency and Comparison Of Number Of Risk Factors For COVID-19 According To Substance Use



Prevalence of Risk Factors for COVID-19 In Individuals with Substance Use Disorder				
	Total n=821	Alcohol n=305	Cocaine/Crack n=233	Multisusers <sup>1</sup> n= 283
Nicotine dependence	82.5	80.7	83.7	83.4
High blood pressure	26.6	38.0	12.9	25.4
Homelessness*	25.1	15.4	28.4	32.9
Respiratory*	23.4	23.3	21.2	25.2
HIV	7.3	3.7	7.1	11.4
Cardiac disease*	6.7	11.5	3.9	3.9
Age > 60 years	6.3	15.7	0	1.4
Diabetes	5.7	7.9	3.9	4.9
Cirrhosis	4.4	7.9	0.9	3.5
Chronic kidney disease*	3.6	3.6	2.1	4.6



# The CDC Recognizes Substance Use Disorders as an Underlying Medical Condition Associated with High Risk for Severe COVID-19

The screenshot shows the CDC website interface. At the top, the CDC logo is on the left, followed by the text "Centers for Disease Control and Prevention" and "CDC 24/7: Saving Lives, Protecting People™". On the right is a search bar labeled "Search COVID-19" with a magnifying glass icon. Below the header is a teal banner with the text "COVID-19". A white pop-up box is centered on the screen with the title "Substance use disorders". Inside the box, it states: "Having a substance use disorder (such as alcohol, opioid, or cocaine use disorder) **can make you more likely** to get severely ill from COVID-19." Below this, it says "Get more information:" followed by two bullet points: "[How to Recognize a Substance Use Disorder](#) Learn more about people who use drugs or have Substance Use Disorder and COVID-19 | CDC". At the bottom of the page, there is a section titled "People at Increased Risk" with a sub-section for "Older Adults". A disclaimer at the bottom right states: "This information is intended for a general audience. Healthcare providers should see [Underlying Medical Conditions Associated with High Risk for Severe COVID-19](#) for more detailed information."

CDC Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives, Protecting People™


Search COVID-19

COVID-19

## Substance use disorders

Having a substance use disorder (such as alcohol, opioid, or cocaine use disorder) **can make you more likely** to get severely ill from COVID-19.

Get more information:

- [How to Recognize a Substance Use Disorder](#) 
- [Learn more about people who use drugs or have Substance Use Disorder and COVID-19 | CDC](#)

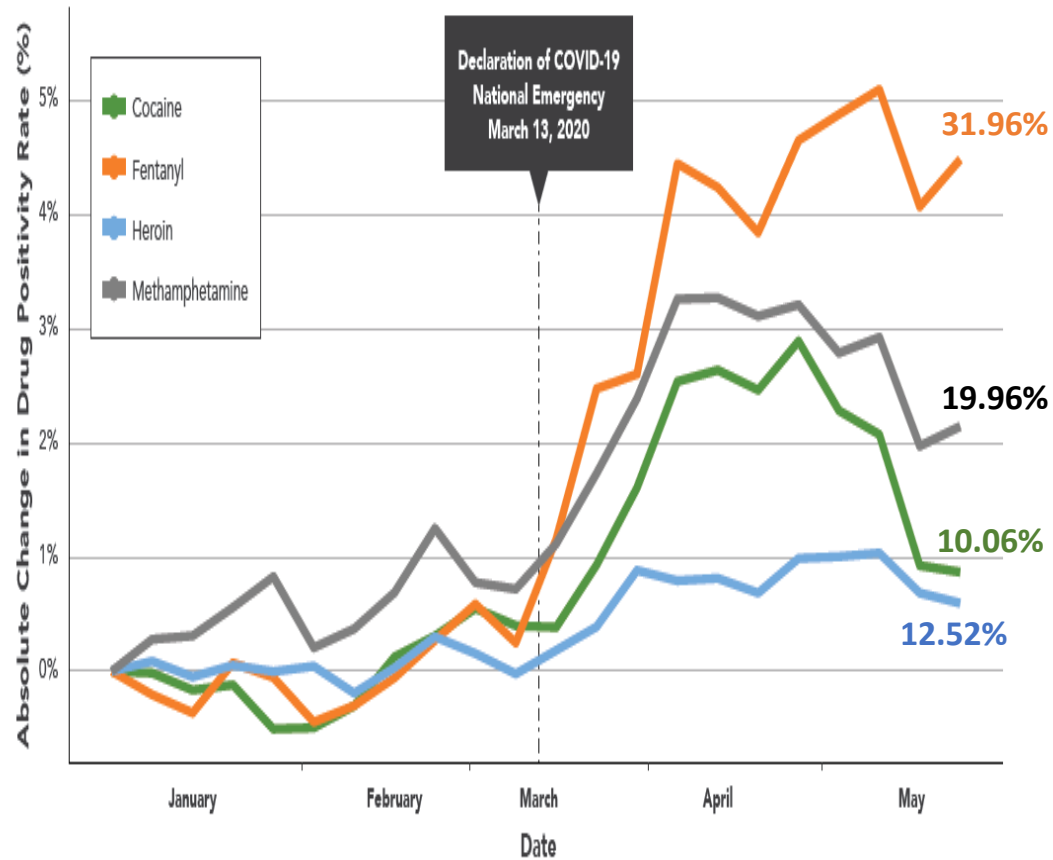
People at Increased Risk —

Older Adults

This information is intended for a general audience. Healthcare providers should see [Underlying Medical Conditions Associated with High Risk for Severe COVID-19](#) for more detailed information.

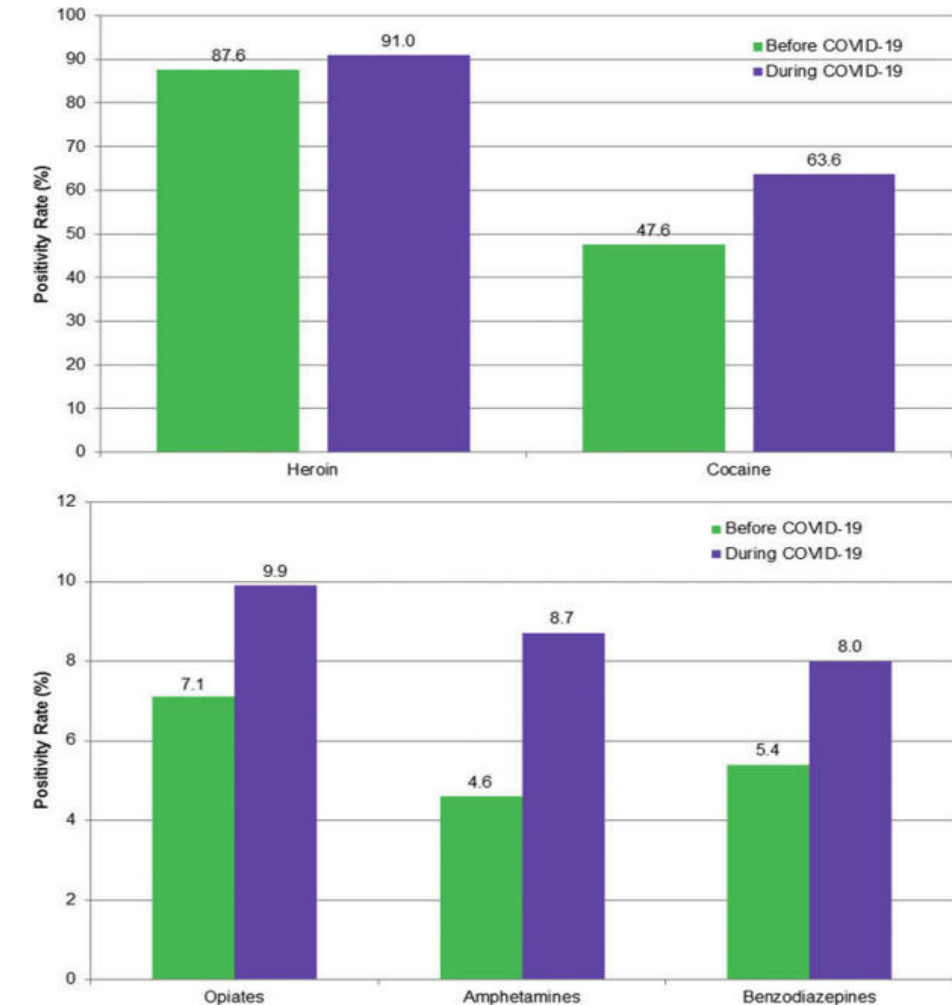


# Drug Use Increase During COVID



Millennium Health Signals Report™ **COVID-19 Special Edition**: Significant Changes in Drug Use During the Pandemic Volume 2.1 Published July 2020

## Fentanyl Positivity with Other Drugs Before and During COVID



# Overdose Deaths Increased Again in 2019 (and 2020\*)

	ALL DRUGS	HEROIN	NAT & SEMI – SYNTHETIC	METHADONE	SYNTHETIC OPIOIDS	COCAINE	OTHER PSYCHO- STIMULANTS (mainly meth)
October 2019 *	70,669	14,438	12,152	2,811	35,487	15,666	16,011
March 2020*	75,687	14,145	12,349	2,837	40,756	17,465	18,033
October 2020*	91,862	14,142	13,774	3,580	55,561	20,054	23,352
Year end October 2019-October 2020 Change	<b>+30.0%</b>	<b>-2.1%</b>	<b>+13.3%</b>	<b>+27.3%</b>	<b>+56.6%</b>	<b>+28.0%</b>	<b>+45.8%</b>

# Treating Fentanyl OUD and Overdoses

- Limited data on efficacy of medication to treat fentanyl OUD
- Methadone is effective in fentanyl OUD.
  - **Methadone protected against death, but relapse rates were high** ([Stone, et al., 2018](#), [Stone, et al. 2020](#)).
- Buprenorphine is effective in fentanyl OUD ([Wakeman, et al., 2019](#)).
  - Harder to initiate patients on buprenorphine
- Naltrexone no published data
- Deaths from fentanyl are increasing in spite of naloxone ([Torralva and Janowsky, 2019](#)).
- OD from fentanyl require multiple naloxone doses ([Schumann et al., 2007](#), [Somerville et al., 2017](#))
  - Shorter duration of naloxone ( $t_{1/2}$  1.3–2.4 h) than fentanyl ( $t_{1/2}$  7-8 h)
  - Slower clearance of fentanyl in frequent users
- Chest wall rigidity induced by fentanyl, which might reflect noradrenergic and cholinergic effects.



# Treating Methamphetamine Use Disorder and Overdoses

- No FDA approved medications
- Behavioral therapies: Most effective intervention is **contingency management** (uses rewards for evidence of abstinence) **combined with a community reinforcement approach** (uses recreational, familial, social, and vocational reinforcers, to make non-drug-using lifestyle more rewarding than substance use) (De Crescenzo et al., 2018).
- No overdoses reversal medications currently available

# **Treating Polysubstance Use Disorders**

## **Reverting Polysubstance Overdoses**

# How Do We Address the Failure To Implement Evidence Based Treatments?

- Sustainable models of care (use of pharmacies)
- Economic research (costs of not intervening; cost of relapse; averted cost with extended-release formulations)
- Integrated healthcare interventions
- Telehealth



# Thank You!