

Letters

RESEARCH LETTER

Nonfatal Opioid Overdoses at an Urban Emergency Department During the COVID-19 Pandemic

Psychosocial consequences related to coronavirus disease 2019 (COVID-19) may place individuals at a heightened likelihood of opioid overdose or relapse.^{1,2} In 1 study,² emergency medical services responses to opioid overdoses in Kentucky were increased in the early weeks following the COVID-19 state emergency declaration compared with the 52 previous days. This increased risk of opioid overdose may be particularly concerning among Black patients, who have been overrepresented in COVID-19-related infections, hospitalizations, and deaths, as well as associated socioeconomic consequences.³⁻⁵ Given that emergency departments offer an opportune setting to initiate treatment, this study compared numbers of nonfatal, unintentional opioid-related overdoses presenting to an urban emergency department during the early months of the pandemic relative to the previous year.

Methods | Patients with opioid overdoses from March 1 to June 30, 2019, and from March 1 to June 30, 2020, were identified from electronic medical records from the Virginia Commonwealth University based on the following chief concern terms: *overdose*, *opioid*, *heroin*, *fentanyl*, and *altered mental status*. Data on opioid overdose fatalities during the second quarter of 2020 were unavailable for analyses because cause-of-death determination is often delayed for months pending toxicology testing and autopsies.² Intentional opioid overdoses (ie, suicide attempts) and nonopioid-related opioid overdoses (ie, patients who did not receive naloxone or were not reported as suspected opioid overdoses) were also excluded. The number of acute myocardial infarction diagnoses, identified from *International Statistical Classification of Diseases and Related Health Problems, Tenth Revision* code I21.9, and the number of total emergency department visits were examined as comparisons during the same time periods.

Manual medical record reviews to abstract patient characteristics were conducted by 2 research team members and discrepancies checked against the electronic medical record. Demographic characteristics included age, sex, race/ethnicity, and insurance status. Visit characteristics included the percentage of patients who received a naloxone prescription to fill at their community pharmacy, received a list of contact information for local treatment resources and/or a referral at discharge, received an addiction medicine consult if admitted, and accessed opioid agonist or antagonist treatment at the institution's outpatient clinic. Descriptive statistical analyses were performed using SPSS version 27 (IBM). This project was approved by the Virginia Commonwealth University institutional review board and informed consent was waived.

Table. Demographic and Visit Characteristics of Patients With Opioid Overdose in March-June 2019 vs March-June 2020 in Richmond, Virginia

Characteristic	No. (%) ^a	
	March-June 2019 (n = 102)	March-June 2020 (n = 227)
Age, mean (SD), y	42.2 (14.2)	44.0 (13.3)
Sex		
Female	31 (30)	62 (27)
Male	71 (70)	165 (73)
Race/ethnicity ^b		
Black or African American	64 (63)	181 (80)
White	29 (28)	32 (14)
Hispanic	4 (4)	6 (3)
Asian	0	0
American Indian or Alaska Native	1 (1)	0
More than 1 race/ethnicity	1 (1)	0
Other ^c or unknown	3 (3)	8 (4)
Health insurance		
Uninsured or self-pay	45 (44)	91 (40)
Medicaid	31 (30)	88 (39)
Medicare	10 (10)	15 (7)
Commercial	6 (6)	18 (8)
Other or unknown	10 (10)	15 (7)
Received naloxone prescription at discharge	55 (54)	127 (56)
Received treatment resources/referral at discharge ^d	45 (44)	154 (68)
Admitted to inpatient or 24-h observation unit	17 (17)	46 (20)
Received addiction medicine consult if admitted	4 (4)	14 (6)
Attended opioid treatment at affiliated outpatient clinic	3 (3)	23 (10)

^a Percentages may not add to 100% due to rounding.

^b Race/ethnicity was obtained from patients' self-report data in their electronic medical records and was collected to examine demographic characteristics of opioid overdose cases.

^c The "other" category for race/ethnicity is an option that a patient can self-report. There is no specification of what race/ethnicity not listed in the table may be included in this category in the electronic medical record.

^d Resources include telephone numbers and addresses of treatment programs in the community.

Results | The total number of nonfatal opioid overdose visits increased from 102 between March and June 2019 to 227 between March and June 2020. In contrast, compared with 2019, the total number of acute myocardial infarction diagnoses decreased from 41 to 31 and the number of all emergency department visits decreased from 36 565 to 26 061 in March through June 2020.

Among patients who presented with a nonfatal opioid overdose in March through June 2019 and March through June 2020, the mean ages were 42.2 years and 44.0 years, 71 (70%) and 165 (73%) were male, 64 (63%) and 181 (80%) were Black,

and 45 (44%) and 91 (40%) were uninsured, respectively (Table). In terms of visit characteristics in March through June 2019 and March through June 2020, 55 (54%) and 127 (56%) patients received a naloxone prescription and 45 (44%) and 154 (68%) received treatment resources and/or a referral at discharge, respectively. However, only 4 (4%) and 14 (6%) of the 17 (17%) and 46 (20%) admitted patients received an addiction medicine consult, and 3 (3%) and 23 (10%) accessed treatment at the outpatient clinic after overdosing, respectively.

Discussion | In 1 emergency department in Virginia, a greater number of visits for opioid overdoses was observed in the first 4 months of the COVID-19 pandemic, and Black patients made up a relatively larger proportion of opioid overdose visits compared with the previous year. The study has several limitations. First, these findings were from 1 city's emergency department in a small sample of patients and may not be generalizable to other locations. Second, the number of opioid overdoses was underestimated because official reporting of fatal opioid overdoses is delayed and because patients who did not present to the emergency department were not included.

These findings demonstrate additional evidence of racial/ethnic disparities in health that have been magnified during the COVID-19 pandemic³⁻⁵ and the recent historical protests.⁵ The reasons for the increase in nonfatal opioid overdoses presenting to the emergency department warrant further investigation.

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Acquisition, analysis, or interpretation of data: All authors.

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Analysis of Drug Test Results Before and After the US Declaration of a National Emergency Concerning the COVID-19 Outbreak

The novel coronavirus disease 2019 (COVID-19) pandemic has exacerbated challenges for millions of adults with substance use disorders.¹ New obstacles for obtaining treatment exist as do increasing stressors, including isolation, unemployment, and illness.²

To better understand the pandemic's effects on drug use among those with or at risk of substance use disorders, we examined a convenience sample of urine drug test results.

Methods | The study protocol was approved by the Aspire independent review board and included a waiver of consent for the use of deidentified data. We conducted a cross-sectional

study of urine drug test results from patients diagnosed with or at risk of substance use disorders. The drug tests were ordered by health care professionals as part of a comprehensive treatment plan³ between November 14, 2019, and July 10, 2020.

Each specimen was derived from a unique adult patient. The analysis used definitive test results performed by liquid chromatography tandem mass spectrometry for cocaine, fentanyl, heroin, and methamphetamine. The patients who were reported to have been prescribed cocaine, fentanyl, or methamphetamine were excluded. A random sampling of 75 000 specimens were selected for both the period before COVID-19 (November 14, 2019, to March 12, 2020) and the period during COVID-19 (March 13, 2020, to July 10, 2020). The periods were based on COVID-19 being declared a national emergency on March 13, 2020.

A 2-sample proportion test was used to determine if significant changes occurred in the demographic characteristics provided by the ordering clinician during the 2 periods (Wilcoxon test was used for patient age). Logistic regression was performed to evaluate the association of collection time



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