

Racial and Ethnic Disparities in Accidental Drug Overdose Deaths – Rhode Island, 2016–2020

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INTRODUCTION

After gradually increasing from 2000 to 2019, in 2020 accidental drug overdose deaths increased by over 30% in the United States, with over 93,000 predicted deaths.¹ While accidental drug overdose deaths have declined from 2016 to 2019 in Rhode Island, in 2020 Rhode Island mirrored national trends and the number of accidental drug overdose deaths increased by 25%, from 308 in 2019 to 384 in 2020.²

Nationally, provisional demographics data shows that drug overdose deaths in 2020 increased across all age and race/ethnicity groups when compared to 2019. The largest percent increases, however, were seen among the younger population, American Indian or Alaska Native, Asian, Black, and Hispanic/Latino communities.³ To help guide prevention efforts and address the increase in fatal drug overdoses in Rhode Island, we examined accidental drug overdose deaths in Rhode Island from 2016 to 2020 to identify if racial and ethnic disparities were present, and if they contributed to the rapid increase in fatal overdoses observed in 2020. We also studied how the rate of accidental drug overdose deaths varied by substances contributing to the cause of death for different race and ethnicity groups.

METHODS

We obtained data on all accidental drug overdose deaths from January 1, 2016 to December 31, 2020 from the Rhode Island Office of the State Medical Examiners (OSME). The OSME determine cause and manner of death based on autopsy results, toxicology testing, scene investigation, and medical history. Accidental drug overdose deaths were identified by selecting deaths where the manner of death is “Accident” and manner type is “Drug Medication”.⁴

Substances contributing to the cause of death were extracted from the cause of death fields and results were presented overall and for the most common reported substances. Race and ethnicity fields were combined to create mutually exclusive groups. Individuals with Hispanic ethnicity were categorized as Hispanic or Latino for all races and individuals with non-Hispanic or unknown ethnicity information were categorized according to their races. To allow for rate calculations, only accidental drug overdose deaths among Rhode Island residents were included in the analysis. Additionally, all decedents among Asian or unknown race and ethnicity were excluded from analysis due to small numbers.

Single-race population estimates, 2010–2020, for Rhode Island from CDC Wide-ranging Online Data for Epidemi-

ologic Research (CDC WONDER) were used to calculate rate of accidental drug overdose deaths per 100,000 Rhode Island residents.⁵ In line with Rhode Island Department of Health’s (RIDOH) Small Numbers Reporting Policy, unstable rates were suppressed.⁶ All data analyses were performed in SAS Version 9.4.

FINDINGS

From January 1, 2016 to December 31, 2020, 1,666 accidental drug overdose deaths occurred in Rhode Island, of which 171 occurred among non-residents and 15 occurred among Asian or unknown race and ethnicity, leaving 1,480 decedents for the analysis. Of these deaths, 118 (8.0%) were among non-Hispanic blacks, 163 (11.0%) were among Hispanic or Latinos, and 1,199 (81.0%) were among non-Hispanic whites (**Table 1**). The three most common substances contributing to the cause of fatal overdoses included opioids (inclusive of fentanyl), fentanyl, and cocaine, involved in 1,269, 991, and 665 deaths, respectively. When comparing the rate of accidental drug overdose deaths per 100,000 Rhode Island residents, the rates increased from 2018–2020 for Hispanic or Latino and for the non-Hispanic black populations. Among the non-Hispanic white population, the fatal overdose rate decreased from 2016–2019 and increased from 2019–2020. Comparing rates from 2018–2020, the largest increase in the rate of accidental fatal drug overdoses (80%) was observed among the non-Hispanic black population from 29.9 per 100,000 (95% CI, 16.5–43.4) in 2018 to 53.9 per 100,000 (95% CI, 36.1–71.8) in 2020 (**Figure 1**). Additionally, the rate of accidental drug overdose deaths in 2020 was highest among non-Hispanic blacks (53.9; 95% CI, 36.1–71.8).

In 2020, the rate of opioid-involved, fentanyl-involved, and cocaine-involved fatal overdoses per 100,000 Rhode Islanders was highest among non-Hispanic blacks (opioid: 49.3; fentanyl: 47.8; cocaine: 40.1) when compared to Hispanic or Latinos (opioid: 21.0; fentanyl: 20.4; cocaine: 12.5) and non-Hispanic whites (opioid: 29.9; fentanyl: 24.8; cocaine: 17.2) (**Table 1**). The rate of opioid-involved fatal overdoses increased for all three race and ethnicity groups from 2019 to 2020, with the largest increase observed among non-Hispanic blacks (2019: 26.4; 2020: 49.3).

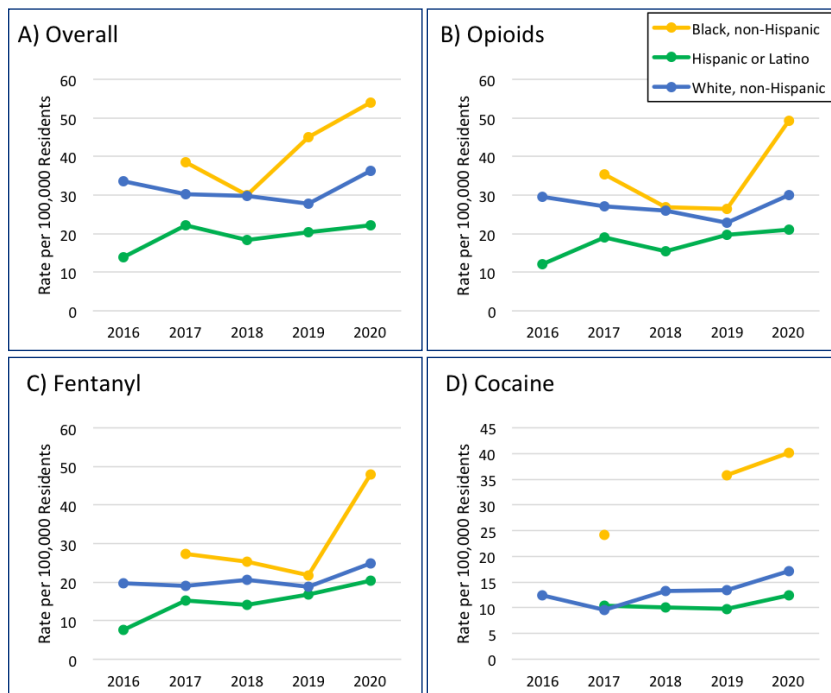
While 78% of accidental opioid involved deaths involved fentanyl overall, this varied by race and ethnicity from 87% among non-Hispanic blacks and 86% among Hispanic or Latinos to 76% among non-Hispanic whites.

Table 1. Number and Rate of Accidental Drug Overdose Deaths per 100,000 Rhode Island Residents by Race and Ethnicity and Select Substances Contributing to the Cause of Death, 2016–2020¹

Year	Overall ²		Opioids ²		Fentanyl ²		Cocaine ²	
	N	Rate (95% CI)	N	Rate (95% CI)	N	Rate (95% CI)	N	Rate (95% CI)
Black, non-Hispanic								
2016	11	*	5	*	<5	*	7	*
2017	24	38.6 (23.2–54.1)	22	35.4 (20.6–50.2)	17	27.3 (14.3–40.4)	15	24.1 (11.9–36.3)
2018	19	29.9 (16.5–43.4)	17	26.8 (14.1–39.5)	16	25.2 (12.9–37.6)	11	*
2019	29	45.1 (28.7–61.5)	17	26.4 (13.9–39.0)	14	21.8 (10.4–33.2)	23	35.8 (21.2–50.4)
2020	35	53.9 (36.1–71.8)	32	49.3 (32.2–66.4)	31	47.8 (31.0–64.6)	26	40.1 (24.7–55.5)
Hispanic or Latino								
2016	22	13.9 (8.1–19.6)	19	12.0 (6.6–17.3)	12	7.6 (3.3–11.8)	8	*
2017	36	22.1 (14.9–29.3)	31	19.0 (12.3–25.7)	25	15.3 (9.3–21.3)	17	10.4 (5.5–15.4)
2018	31	18.4 (11.9–24.8)	26	15.4 (9.5–21.3)	24	14.2 (8.5–19.9)	17	10.1 (5.3–14.8)
2019	35	20.3 (13.5–27.0)	34	19.7 (13.1–26.3)	29	16.8 (10.7–22.9)	17	9.8 (5.2–14.5)
2020	39	22.1 (15.2–29.0)	37	21.0 (14.2–27.7)	36	20.4 (13.7–27.1)	22	12.5 (7.3–17.7)
White, non-Hispanic								
2016	259	33.5 (29.4–37.5)	228	29.5 (25.6–33.3)	153	19.8 (16.6–22.9)	96	12.4 (9.9–14.9)
2017	232	30.2 (26.3–34.1)	208	27.1 (23.4–30.8)	146	19.0 (15.9–22.1)	74	9.6 (7.4–11.8)
2018	227	29.8 (25.9–33.7)	197	25.9 (22.2–29.5)	157	20.6 (17.4–23.8)	101	13.3 (10.7–15.8)
2019	209	27.7 (23.9–31.4)	172	22.8 (19.4–26.2)	142	18.8 (15.7–21.9)	102	13.5 (10.9–16.1)
2020	272	36.3 (32.0–40.6)	224	29.9 (26.0–33.8)	186	24.8 (21.2–28.4)	129	17.2 (14.2–20.2)

¹Source: Office of the State Medical Examiners. ²In line with RIDOH’s Small Numbers Reporting Policy, counts with fewer than 5 individuals (<5) and rates with relative standard errors greater than 30% (*) have been suppressed.

Figure 1. Rate of Accidental Drug Overdose Deaths per 100,000 Rhode Island Residents by Race and Ethnicity, Select Substances Contributing to the Death, and Year, 2018–2020¹



¹Source: Office of the State Medical Examiners. Some rates have been suppressed in line with RIDOH’s Small Numbers Reporting Policy.

DISCUSSION

Beginning in December of 2019, Rhode Island saw a dramatic increase in the number of accidental drug overdose deaths, and in 2020 had the highest number of accidental drug overdoses deaths ever recorded. While the overall number of accidental drug overdose deaths in Rhode Island has been declining from 2016–2019, these gains were predominately experienced by the non-Hispanic white population, with stable or increasing rates observed among the Hispanic or Latino and non-Hispanic black population. While we have established that the increase in 2020 was not due to changes in EMS utilization or increased fatalities among individuals formerly in recovery,⁷ there are still many factors that could have contributed to the increase observed nationally and in Rhode Island in 2020. These factors include an increase in polysubstance use, expanding presence of fentanyl in the drug supply, or circumstances worsened by the COVID-19 pandemic such as: increased

isolation, changes in employment status, the drug supply, or housing status, and disrupted access to treatment and recovery services.

While the rate of fatal overdoses increased for all three race and ethnicity groups from 2018 to 2020, we observe a disproportionate increase in the rate of fatal overdoses among the non-Hispanic black population (80% increase) when compared to Hispanic or Latinos (22% increase) or non-Hispanic whites (20% increase). Additionally, this disproportionate increase among non-Hispanic blacks was sustained when stratified by opioid-involved, fentanyl-involved, and cocaine-involved fatal overdoses. Previous work by the Rhode Island Department of Health found that only 16% of non-Hispanic black individuals who died of an opioid-related overdose had received prior buprenorphine or methadone treatment, in contrast to 21.8% among Hispanic or Latino individuals and 44.9% among individuals who were non-Hispanic and white.⁷ Together, these findings highlight the need to better screen/identify non-Hispanic black and Hispanic/Latino individuals with opioid use disorder and connect them to care.

In addition to activities the health department is doing to combat the increase in 2020,⁸ to specifically address this health disparity, the Rhode Island Department of Health has expanded upon existing activities to better target non-Hispanic black and Hispanic populations. These included: 1) increasing funding to harm reduction organizations to expand their reach to previously undeserved communities, 2) increasing funding to the high-burden communities involved in our Community Overdose Engagement project (which have a large portion of non-Hispanic black and Hispanic or Latino residents), 3) hosting an Overdose Fatality Review team meeting in May of 2021 focused on non-Hispanic black and Hispanic or Latino decedents to identify additional ways the state could intervene and prevent these fatalities, and 4) conducting focus groups with non-Hispanic black and Hispanic population stakeholders to develop and implement effective communications campaigns and engagement efforts targeting these populations.

This study has several limitations. First, while our data can show substances that contributed to the cause of death, we are not able to draw conclusions on the intentionality of drug use. In 2020, 91% of cocaine-involved deaths among Hispanic or Latino individuals also involved fentanyl compared to 88% and 66% among non-Hispanic blacks and non-Hispanic whites, respectively (data not shown). However, we are not able to determine if a fatal overdose resulted from intentional polysubstance use or drug contamination (e.g., fentanyl-laced cocaine). Second, since we limited our study to Rhode Island residents only, decedents who have no fixed addresses due to unstable housing or homelessness may have been excluded from the analysis (54/171 excluded deaths had missing residency information). Finally, due to approximately 7% of deaths missing ethnicity information, Hispanic/Latino deaths are undercounted. Further studies are planned that utilize data from the State Unintentional

Drug Overdose Reporting System (SUDORS) to better understand factors contributing to the disproportionate increase in rate of accidental drug overdose deaths among the non-Hispanic black and Hispanic or Latino population. Information on circumstances surrounding victims' deaths such as polysubstance use, bystander presence, naloxone administration, experiencing homelessness will also be analyzed to provide insight on the increase in fatal overdoses in 2020.

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