

Race/Ethnicity Trends in Polysubstance Overdose Deaths in Texas: 2010–2019

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Center for Health Statistics
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TEXAS
Health and Human
Services

December 2021

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1. Introduction

Polysubstance use refers to the consumption of multiple drugs—either simultaneously, sequentially, or unknowingly—when consuming a drug that may contain other unknown substances or contaminants. Simultaneous use of multiple drugs, such as prescription opioids, benzodiazepines, psychotropics, and illicit drugs, including cocaine, heroin, and synthetic opioids, contributes substantially to overdose morbidity and mortality. Recent reports published by the Department of State Health Services Center for Health Statistics have focused on sex and age group trends in polysubstance overdose.¹ This analysis prioritized assessing trends in polysubstance overdose deaths in Texas by race/ethnicity.

This report highlights trends in polysubstance drug overdose deaths in Texas from 2010 to 2019 stratified by race and ethnicity. All data were derived from the [DSHS Vital Statistics Section](#) (DSHS VSS) death certificates. Each death certificate includes multiple causes of deaths as assessed by medical certifiers. The data contain all deaths that occurred in Texas, including deaths of non-Texas residents, and deaths of Texas residents that occurred outside of Texas. DSHS VSS queried the death certificate data to identify overdose-related causes of death based on International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) codes following the National Center for Health Statistics (NCHS) guidance (Appendix A). These ICD-10 codes include accidental overdose of drug, wrong drug given or taken in error, drug taken inadvertently; accidents in the use of drugs; and accidental poisoning by unspecified drugs, medications, and biological substances (ICD-10, Chapter XX). To determine rate denominators, yearly race/ethnic-specific mid-year populations estimates for Texas were obtained from the Texas Demographic Center.²

From 2010 to 2019, polysubstance opioid overdose deaths increased across nearly all racial/ethnic groups. While the greatest rates and counts of polysubstance opioid overdose deaths were seen among non-Hispanic White Texans, other groups also saw substantial increases in deaths over the last 10 years. Opioid polysubstance overdose deaths among non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other) remained low, but nearly doubled from 2010 to 2019.

The substance combinations that accounted for the greatest percent increase in deaths from 2010 to 2019 across all racial/ethnic groups included opioids and psychostimulants (e.g., amphetamine, methamphetamine), as well as opioids and cocaine, and synthetic opioids.

¹ Opioid Polysubstance Overdose Deaths in Texas 2010-2019:
<https://healthdata.dshs.texas.gov/dashboard/list/drugs-and-alcohol/opioids/>

² Texas Demographic Center Estimates:
<https://demographics.texas.gov/data/tpepp/estimates/>

2. Polysubstance Overdose Death Trends by Race/Ethnicity

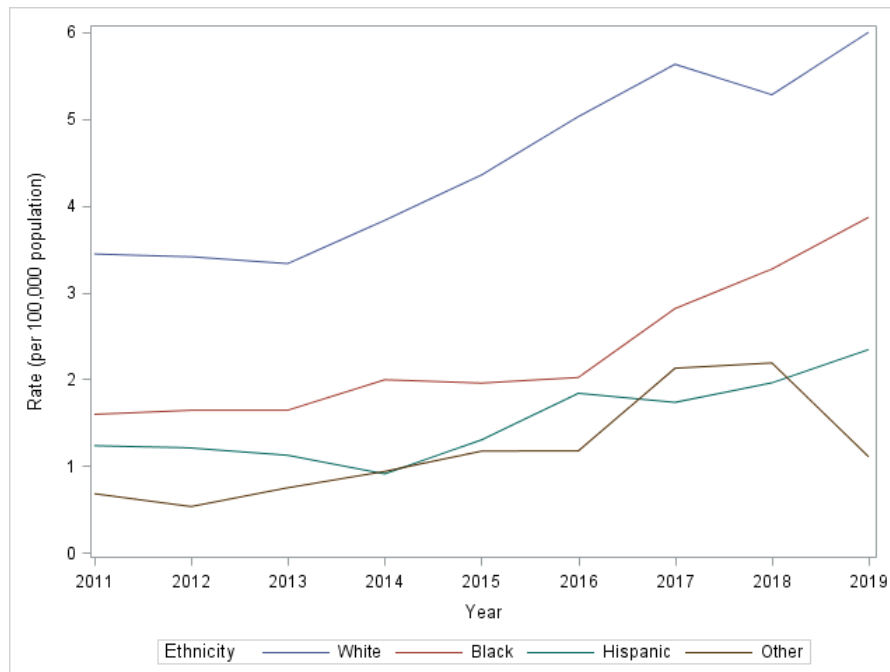
Overview

Opioid polysubstance overdose deaths have steadily increased in Texas since 2015 across nearly all racial/ethnic groups. From 2011 to 2019, polysubstance overdose death rates approximately doubled among non-Hispanic White, non-Hispanic Black, and Hispanic populations, with 2019 seeing the highest rates among these groups (Figure 1).

While most opioid polysubstance overdose deaths occurred among non-Hispanic White populations, number of deaths also increased among non-Hispanic Black and Hispanic populations during 2010 to 2019 (Figure 2.). From 2011 to 2018, polysubstance overdose deaths among non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other) increased steadily but decreased in 2019.

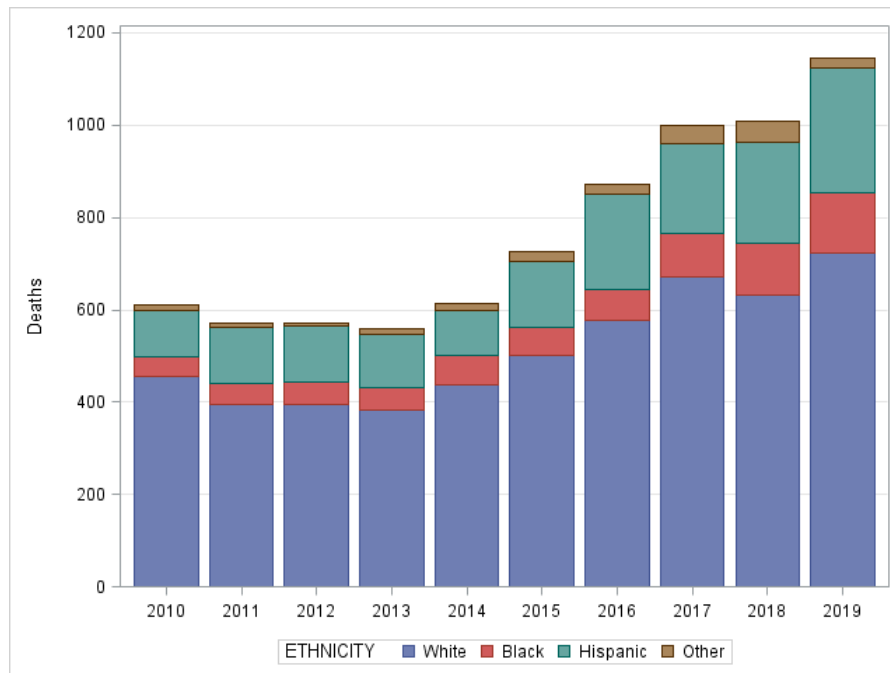
Figures 1 and 2 highlight overdose death rates and trends involving opioids in combination with another substance, including different classes of opioids and non-opioid substances, by race/ethnicity group.

Figure 1. Polysubstance Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

Figure 2. Polysubstance Overdose Deaths by Race/Ethnicity, 2010–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

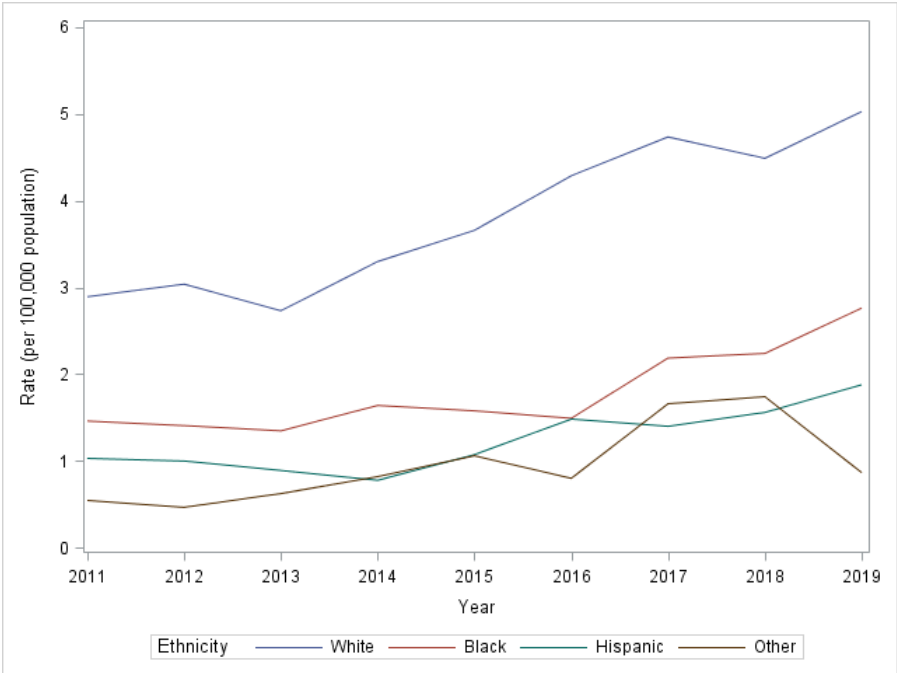
Opioid Combined with Non-Opioid Overdose Deaths

Much of the increase in overdose deaths over the past decade is due to a co-involvement of opioids and non-opioid substances. Non-opioids include substances such as cocaine, benzodiazepines, and psychotropics (including psychostimulants like amphetamine/methamphetamine).

The most predominant drug combinations of this class were opioids and benzodiazepines, followed by opioids and cocaine, and opioids and psychotropics (mainly psychostimulants).

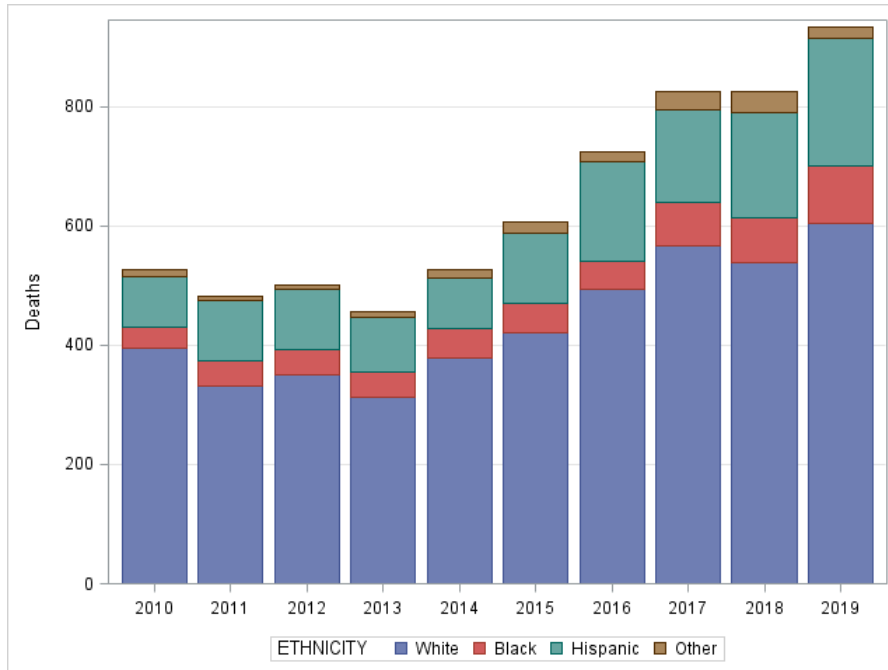
Increases in death rates and counts were seen across all race/ethnicity groups (Figures 3 and 4). The largest percentage increases from 2011 to 2019 occurred among non-Hispanic Black persons (89 percent), followed by Hispanic persons (83 percent), non-Hispanic White persons (76 percent), and non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other) (59 percent).

Figure 3. Opioid and Non-Opioid Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

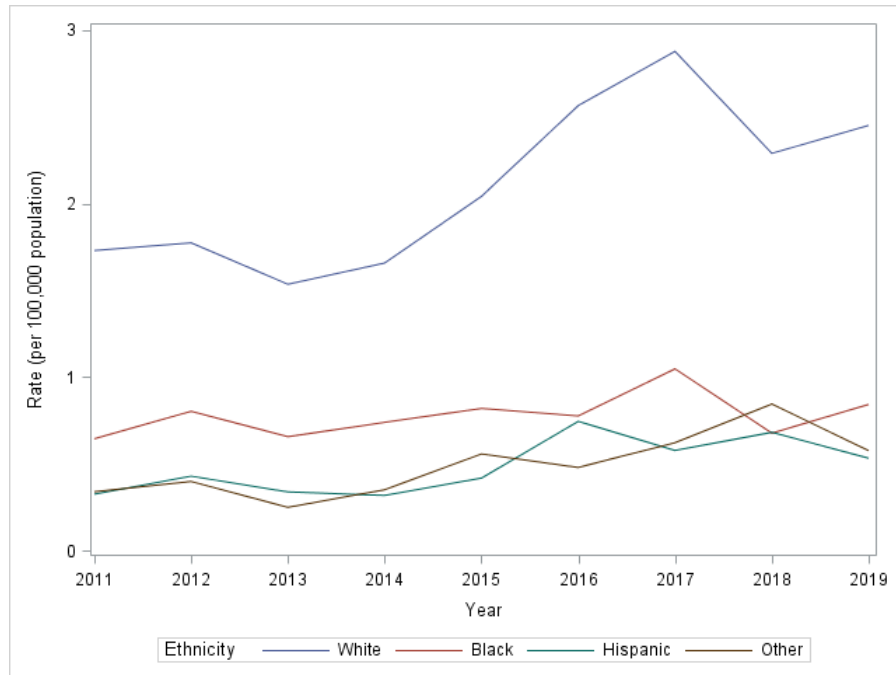
Figure 4. Opioid and Non-Opioid Overdose Deaths by Race/Ethnicity, 2010–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

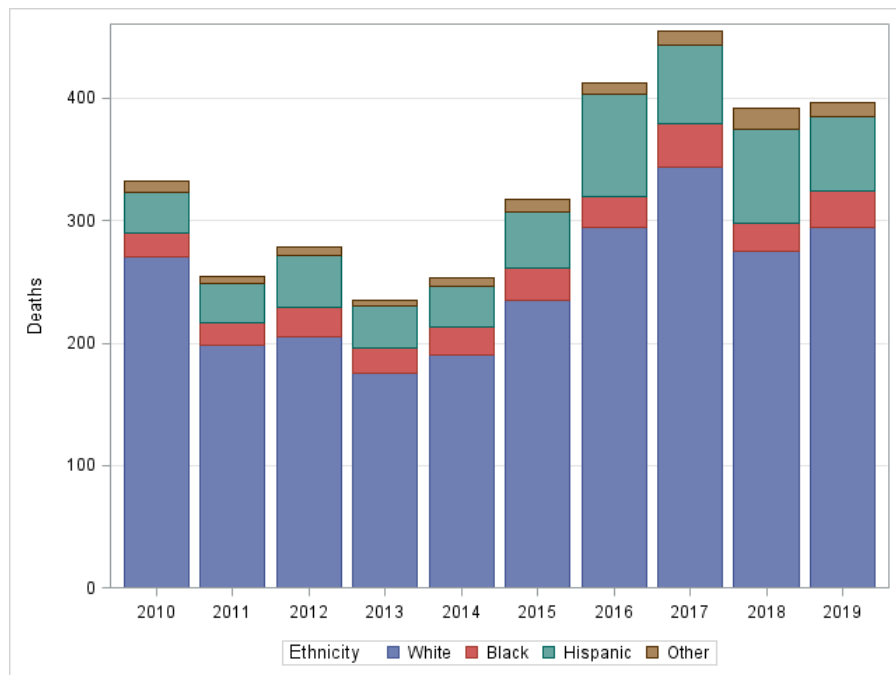
Rates of death involving opioids with benzodiazepines increased across all racial/ethnic group categories (Figure 5). Among Hispanic Texans, the number of deaths involving opioids and benzodiazepines almost doubled from 2010 to 2019. White populations had steady increases in this type of death after 2014. Among non-Hispanic Black and non-Hispanic Asian and persons in all other non-Hispanic racial groups (Other), this kind of overdose death remained mostly stable from 2010 to 2019 (Figure 6).

Figure 5. Opioid and Benzodiazepines Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

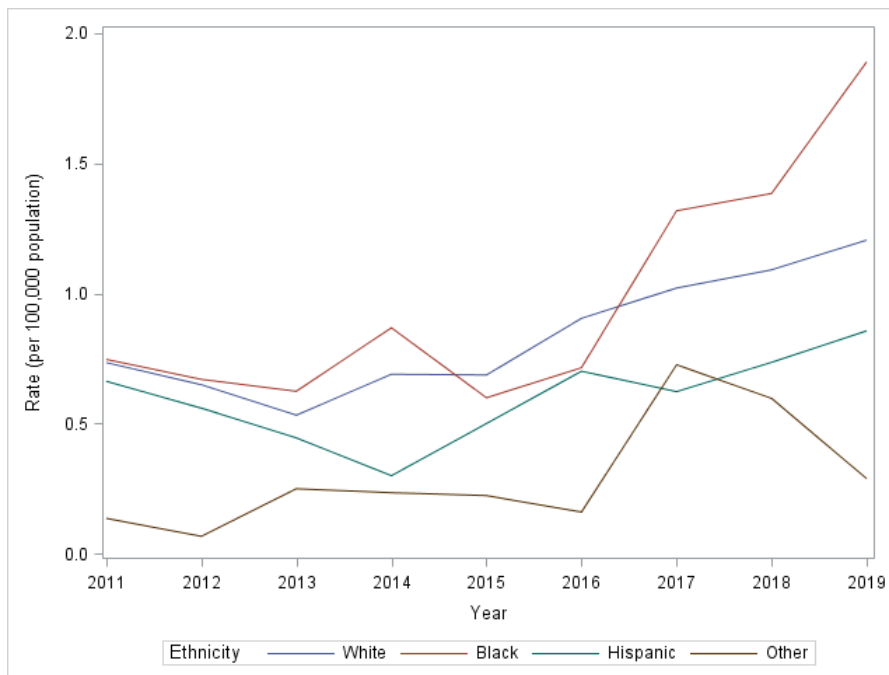
Figure 6. Opioid and Benzodiazepines Overdose Deaths by Race/Ethnicity, 2010–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

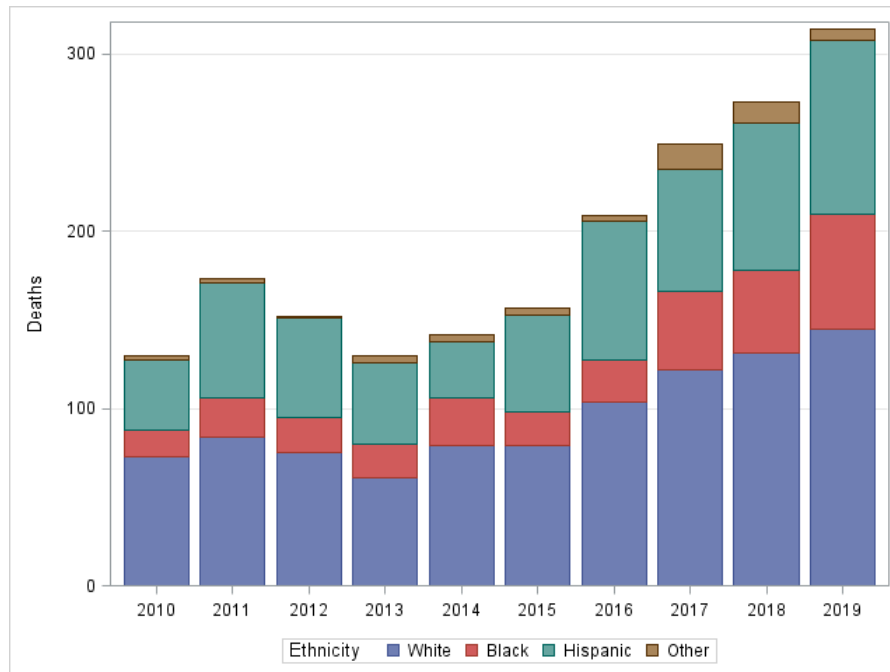
Polysubstance overdose deaths involving opioids and cocaine increased from 2010 to 2019, especially after 2015 (Figures 7 and 8). The rate of death among non-Hispanic Whites and Hispanics fluctuated throughout the period analyzed, with the highest rates in 2019. This same type of death more than quadrupled among non-Hispanic Blacks from 2010 to 2019, with 65 deaths and the highest rate among all race/ethnicity groups in 2019. Deaths among non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other) increased almost five-fold from 2016 to 2017, but decreased in 2019.

Figure 7. Opioid and Cocaine Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

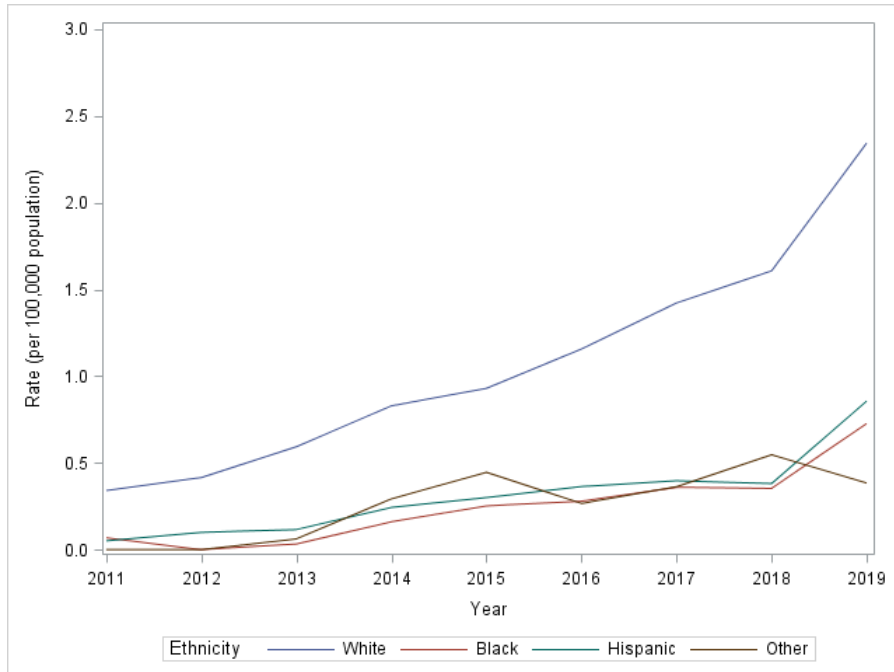
Figure 8. Opioid and Cocaine Overdose Deaths by Race/Ethnicity, 2010–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

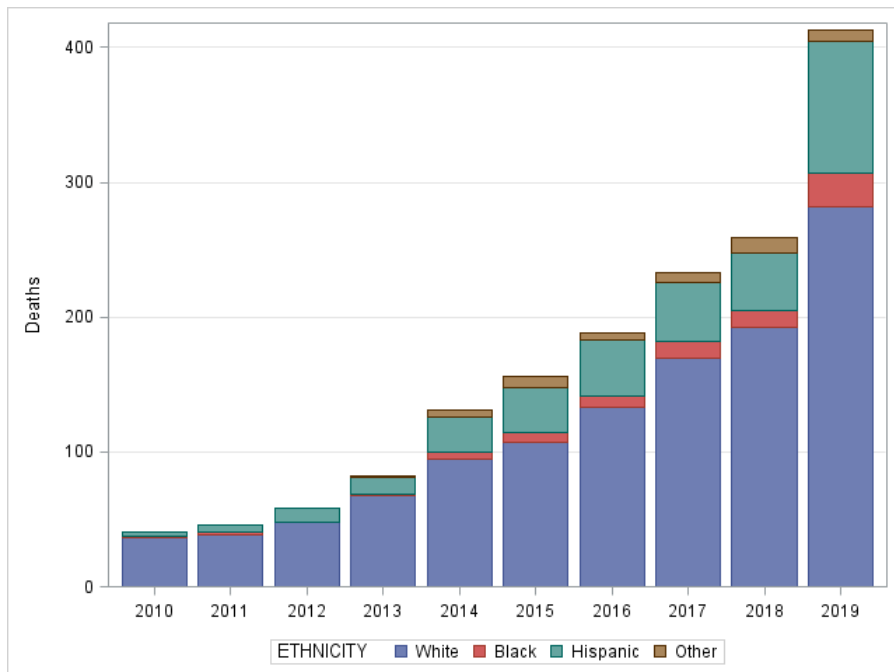
Rates of death involving a combination of opioids and psychostimulants considerably increased across most racial/ethnic groups from 2018 to 2019 (Figure 9). This type of death rose seven-fold among non-Hispanic White Texans from 2010 to 2019. Among Hispanics and non-Hispanic Blacks, this type of overdose death more than doubled between 2018 and 2019. Among non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other), there was a slight increase in deaths after 2013 but deaths remained relatively stable from 2015 to 2019 (Figure 10).

Figure 9. Opioid and Psychostimulants Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

Figure 10. Opioid and Psychostimulants Overdose Deaths by Race/Ethnicity, 2010–2019



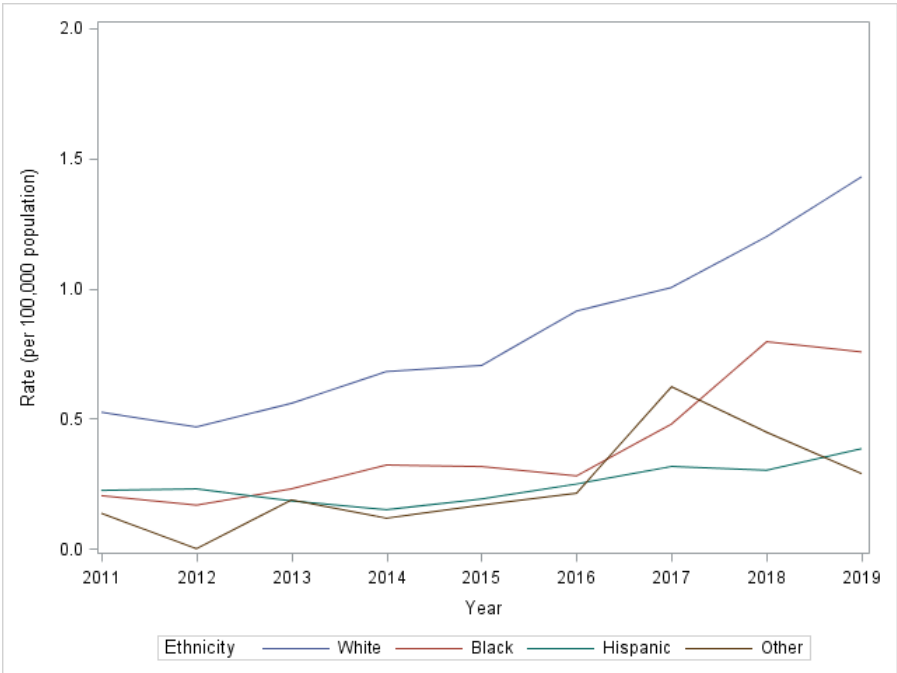
Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

Opioid Co-Occurrence Overdose Deaths

Overdose deaths frequently involve more than one class of opioids used in combination, including both prescription and illicit drugs. This use can be either intentional or unintentional (e.g., the person does not know they are using different opioids simultaneously). Overall, opioid co-occurrence overdose deaths rose during the 2015 to 2019 period.

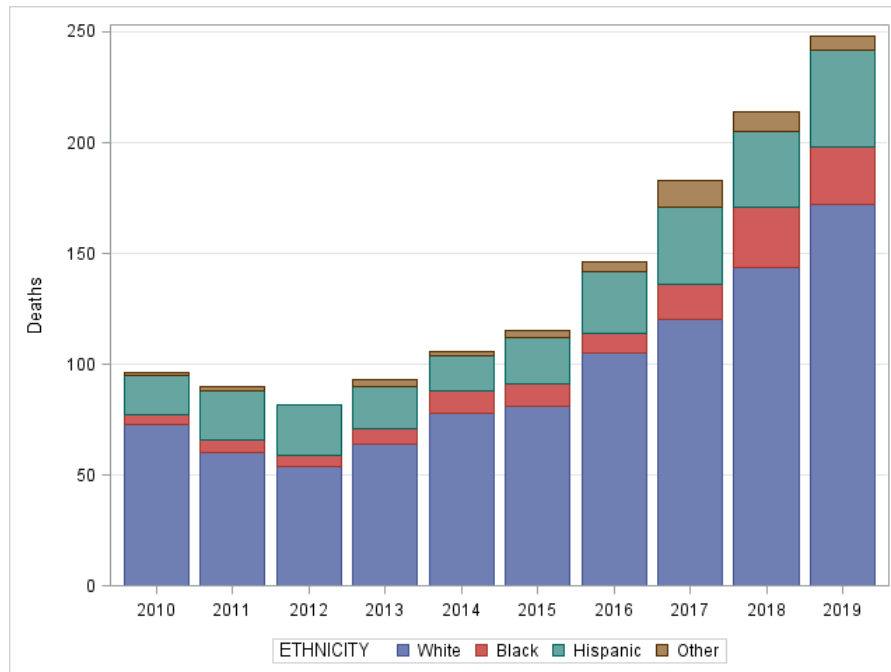
The rate of death for this substance combination more than doubled across nearly all racial/ethnic groups from 2011 to 2019, except among Hispanic populations (Figure 11). The greatest percentage increases in death rates occurred among non-Hispanic White populations, non-Hispanic Black populations, and non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other). The number of deaths involving more than one class of opioids steadily increased across all race/ethnicity groups (Figure 12).

Figure 11. Opioid Co-Occurrence Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

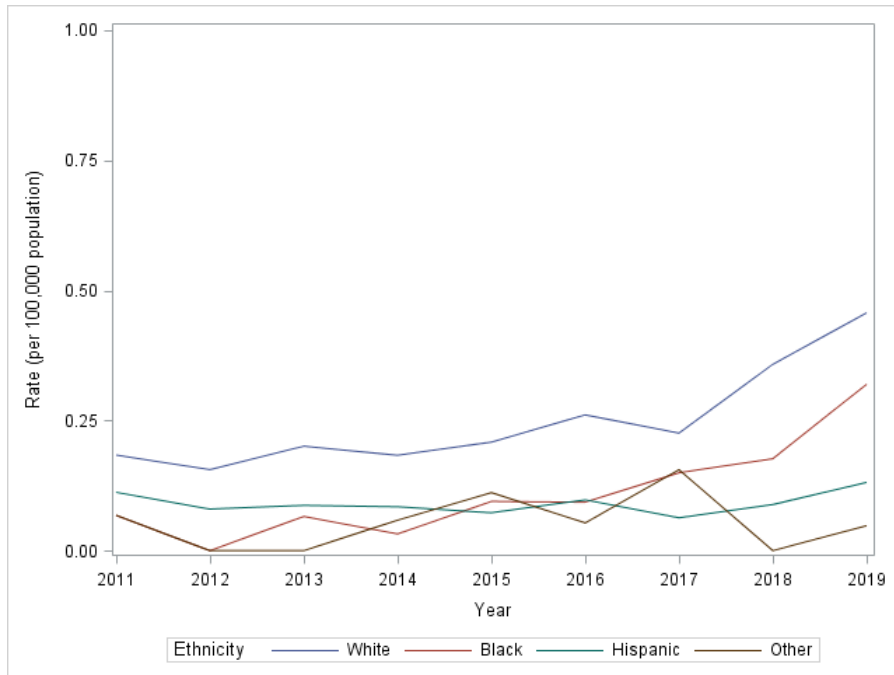
Figure 12. Opioid Co-Occurrence Overdose Deaths by Race/Ethnicity, 2010–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

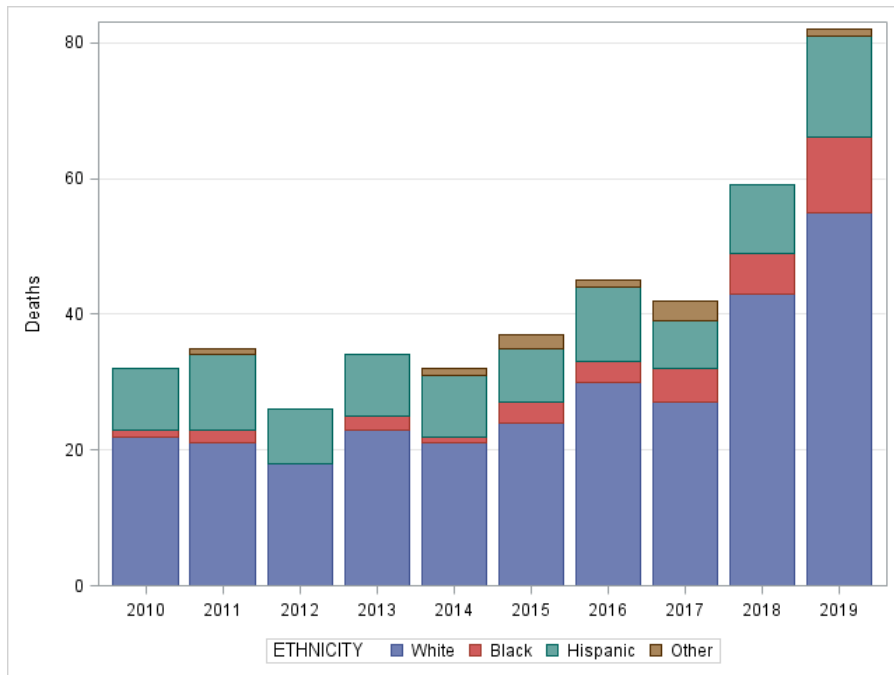
Overdose deaths involving heroin and commonly prescribed opioids (e.g., hydrocodone, oxycodone) more than doubled between 2015 and 2019 (Figures 13 and 14). This type of polysubstance overdose death was most common among non-Hispanic Whites, followed by non-Hispanic Blacks, Hispanics, and non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other).

Figure 13. Heroin and Commonly Prescribed Opioid Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

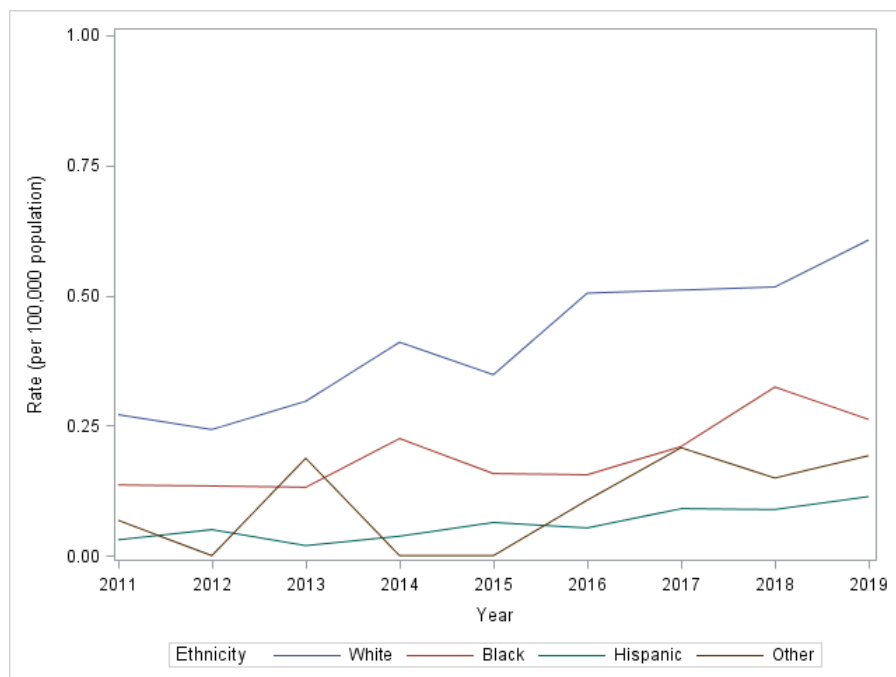
Figure 14. Heroin and Commonly Prescribed Opioid Overdose Deaths by Race/Ethnicity, 2010–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

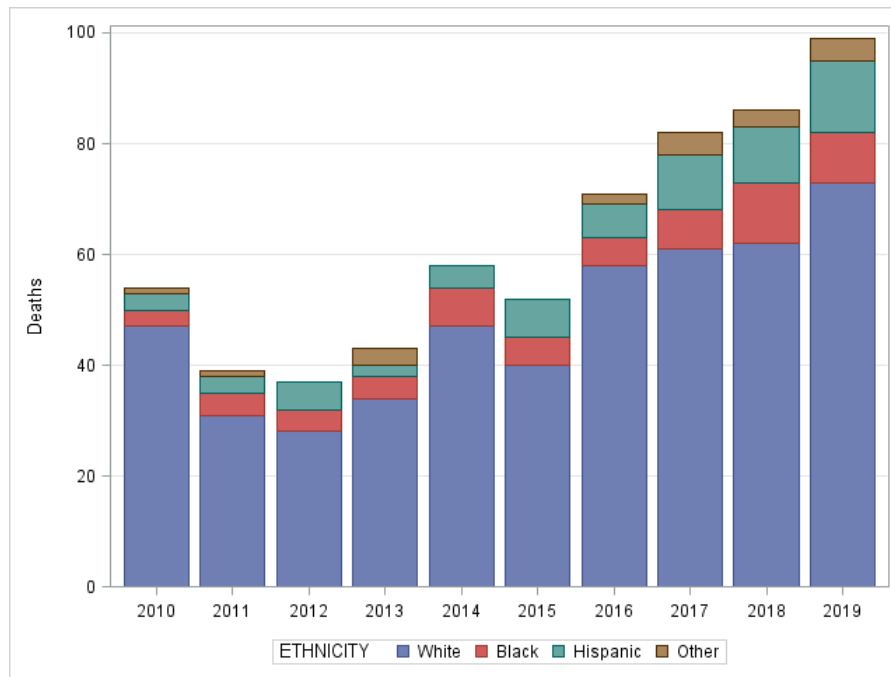
The increase in polysubstance overdose deaths attributed to synthetic opioids has accelerated over the last 10 years. Synthetic opioids are often taken along with other substances, such as commonly prescribed opioids. Rates of death due to this combination of drugs were highest among non-Hispanic Whites, followed by non-Hispanic Blacks, non-Hispanic Asians and persons in all other non-Hispanic racial groups (Other), and Hispanics (Figure 15). Deaths of this type almost doubled between 2010 and 2019 among non-Hispanic Whites, and steadily increased among non-Hispanic Blacks and Hispanics (Figure 16).

Figure 15. Commonly Prescribed Opioid and Synthetic Opioid Overdose Death Rates by Race/Ethnicity, 2011–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

Figure 16. Commonly Prescribed Opioid and Synthetic Opioid Overdose Deaths by Race/Ethnicity, 2010–2019



Data Source: Texas Department of State Health Services Vital Statistics Section death certificate data.

3. Conclusion

From 2010 to 2019, the largest number of opioid polysubstance overdose deaths in Texas occurred among non-Hispanic White populations; however, increases in opioid polysubstance overdose deaths among other racial/ethnic groups, including non-Hispanic Black and Hispanic populations, and, to a lesser extent, non-Hispanic Asian and persons in all other non-Hispanic racial groups (Other), were also evident from 2010 to 2019.

Health inequities experienced by communities of color may prevent them from accessing important services and resources (Amaro et al., 2021). Previous research has found that, even when substance use disorder treatment is available, racial/ethnic minorities may experience worse treatment outcomes than non-Hispanic Whites (Burlew et al., 2021). As such, public health initiatives aimed at preventing and treating substance use disorder and opioid use disorder should also focus on the intersectionality of race/ethnicity with other important sociodemographic characteristics (e.g., sex and gender, place, socioeconomic status, education level) to better address health and treatment outcome disparities.

Steady increases in overdose deaths involving both opioids and cocaine, and opioids and psychostimulants among non-Hispanic White, non-Hispanic Black, and Hispanic populations point to a need for health equity and prevention and intervention efforts at the individual, community, and policy level to ensure service access is readily available for all Texans.

Future studies from universities and research institutions should prioritize using geocoded data for analyses that may help identify communities at risk for future overdose deaths, as well as neighborhood and societal factors that affect social vulnerability to opioid and substance use at the community and societal levels. Further, more comprehensive data are needed to assess the full extent of the racial/ethnic disparities and trends presently seen across overdose deaths in Texas.

List of Acronyms

Acronym	Full Name
DSHS VSS	Department of State Health Services Vital Statistics Section
ICD-10	International Classification of Diseases 10th Revision
NCHS	National Center for Health Statistics

References

Amaro, H., Sanchez, M., Bautista, T., & Cox, R. (2021). Social vulnerabilities for substance use: Stressors, socially toxic environments, and discrimination and racism. *Neuropharmacology*, 188, 108518. <https://doi.org/10.1016/j.neuropharm.2021.108518>

Burlew, K., McCuistian, C., & Szapocznik, J. (2021). Racial/ethnic equity in substance use treatment research: The way forward. *Addiction Science & Clinical Practice*, 16(1), 50. <https://doi.org/10.1186/s13722-021-00256-4>

Appendix A. Causes of Death Classification

Cause of Death Categories	ICD-10 Codes	Notes
Any Opioid	T40.0, T40.1, T40.2, T.40.3, T40.4, T40.6	
Opium	T40.0	Also included in the Any Opioids category
Heroin	T40.1	Also included in the Any Opioids category
Commonly Prescribed Opioids (Natural and Semi-Synthetic Opioids)	T40.2 and T40.3	Also included in the Any Opioids category
Synthetic Opioids other than Methadone	T40.4	Also included in the Any Opioids category
Other and Unspecified Narcotics (Opioids)	T40.6	Also included in the Any Opioids category
Cocaine	T40.5	
Cannabis	T40.7	
Benzodiazepines	T42.4	
Psychostimulants	T43.6	Also included in the Psychotropic category
Psychotropic	T43	

Source: Ahmad FB, Rossen LM, Sutton P. Provisional drug overdose death counts. National Center for Health Statistics. 2021.

<https://www.cdc.gov/nchs/nvss/vsrr/drug-overdose-data.htm>