10/03/2025

Overdose Death Trends in Georgia: Examining Racial and Ethnic Differences 2019-2023

Drug Surveillance Unit
Epidemiology Division
Georgia Department of Public Health

GEORGIA DEPARTMENT OF PUBLIC HEALTH

Public Health Implications
• Ensure interventions consider the cultures and characteristics of White, Black, and Hispanic persons in their planning stages rather than have a "catch-all" approach.
• Ensure substance use interventions and harm reduction practices extend to less urbanized areas to assist those in need.
• Increase public awareness of all the benefits of current harm reduction practices such as syringe service programs.
• Continue educating people who use drugs, their community, and individuals who work in an institutionalized setting on overdose signs, naloxone use, and other harm reduction practices to strengthen these potential intervention points.
• Further research needs to be done to create a new gold standard for individuals who are seeking help but mainly use stimulants instead of opioids.

INTRODUCTION:

There were over 106,000 drug overdose deaths withing the United States of America in 2021,[1] a number that has been steadily increasing year after year. The growing number of deaths suggest that primary prevention efforts need to be strengthened.[2] Noted disparities in minoritized communities, such as the Black community and the Hispanic community, have shown that these groups are experiencing a higher rate increase in overdose deaths compared to the White Community.[3-5] The increase in deaths has been largely driven by illicitly manufactured fentanyl (IMFs) that is often mixed with other substances either intentionally or unintentionally. The contamination of substances with fentanyl has led to more overdose deaths caused by polysubstance use that could potentially aggravate any underlying health issues a person may have. While current national studies and reports have not been able to fully explain the disproportionate impacts of drug overdose deaths on marginalized communities, some potential reasons include limited access to specialized harm reduction care, their limited access to naloxone distribution, training, and use, and different types of discrimination (interpersonal, institutional, etc.[5-8]). Polysubstance use and the increase in death rate in marginalized groups nationally mirrors the trend seen within Georgia. Previous reports of the current state of the drug overdose epidemic within Georgia have been created, yet none has been derived to understand the circumstances that differ behind the White, Non-Hispanic, Black, Non-Hispanic, and Hispanic individuals who died from a drug overdose. The objective of

this analysis is to identify racial and ethnic disparities using the unique circumstances and variables collected within SUDORS (State Unintentional Drug Overdose Reporting System) data to help inform current and future prevention efforts that can address intersectionality.

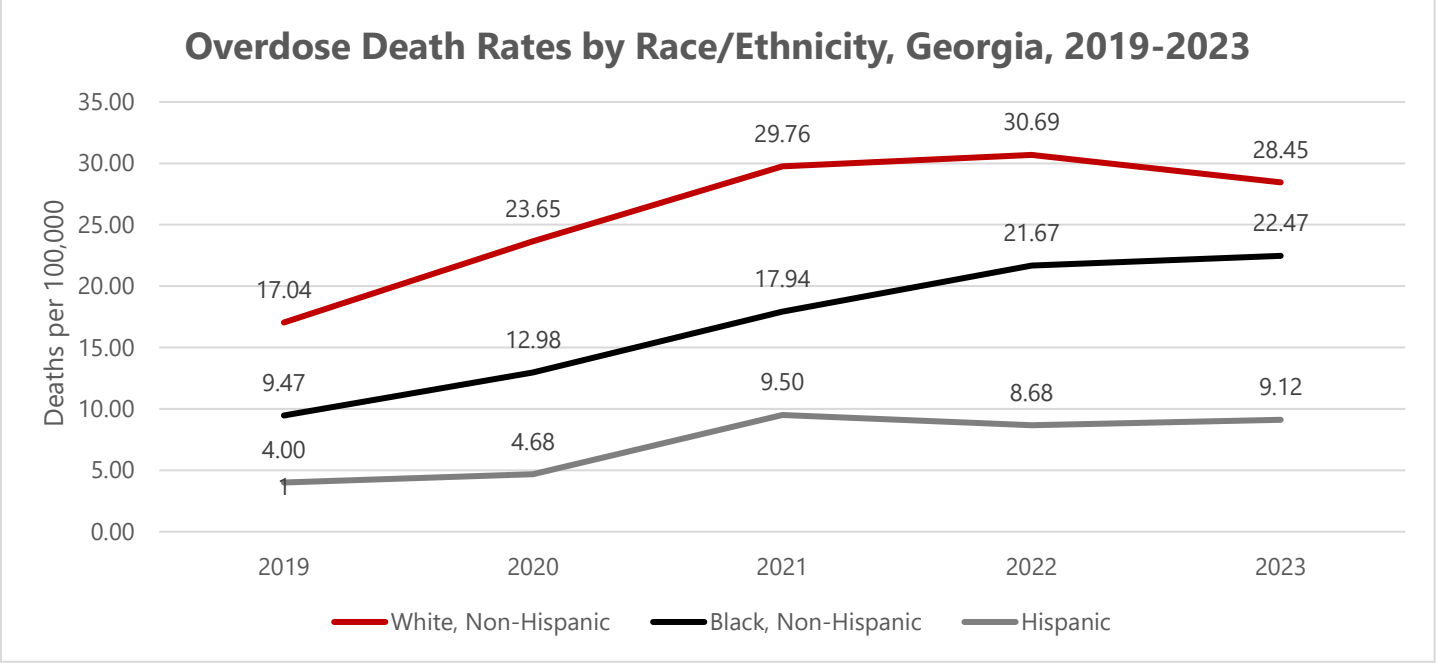
METHODS:

Data of unintentional and undetermined fatal drug overdoses was gathered from the SUDORS database from 2019 – 2023 and has a total of 10,625 decedents. The system includes information on decedents gathered from coroner/medical examiner reports, toxicology reports, death certificate, autopsy reports, and EMS report. Population counts for rate calculations were gathered from the Georgia Department of Public Health's Online Analytical Statistical Information System (OASIS). Rates were calculated as deaths per 100,000. This report utilizes the classification of the 2013 NCHS Urban-Rural classification scheme to categorize urban vs rural counties. Decedents who were missing the race and/or ethnicity variable and decedents who did not fall into White, Non-Hispanic, Black, Non-Hispanic, or Hispanic were excluded from analysis (N=153). Descriptive statistics were gathered for each variable of interest, stratified by whether the decedent was White, Non-Hispanic (N=7130), Black, Non-Hispanic (N=2934), and Hispanic (N=408). Logistic regression was used to assess the measure of association between the individual being Black, Non-Hispanic vs White, Non-Hispanic and Hispanic vs White, Non-Hispanic using odds ratios. Analysis for this report was performed using Microsoft Excel and SAS 9.4.

RESULTS:

Overdose Deaths by Race/Ethnicity, 2019-2023											
	2019		2020		2021		2022		2023		% Increase 2019-2023
	N (%)	Rate	N (%)	Rate	N (%)	Rate	N (%)	Rate	N (%)	Rate	
Total	1310	13.10	1798	17.98	2364	23.48	2546	25.10	2463	24.06	101
Race/ Ethnicity											
White, Non-Hispanic	941 (72)	17.04	1306 (72)	23.65	1640 (64)	29.76	1688 (65)	30.69	1555 (62)	28.45	67
Black, Non-Hispanic	318 (24)	9.47	442 (24)	12.98	619 (26)	17.94	759 (29)	21.67	796 (32)	22.47	137
Hispanic	42 (3)	4.00	50 (3)	4.68	105 (4)	9.50	99 (4)	8.68	112 (5)	9.12	128

- Black, Non-Hispanic and Hispanic persons faced the largest rate increases of 137% and 128%, respectively. These are greater than 2x the rate increases for White, Non-Hispanic persons.



- The death rates for Black, Non-Hispanic and Hispanic persons death rates are trending upwards while the deaths rates for White, Non-Hispanic persons are trending downwards.

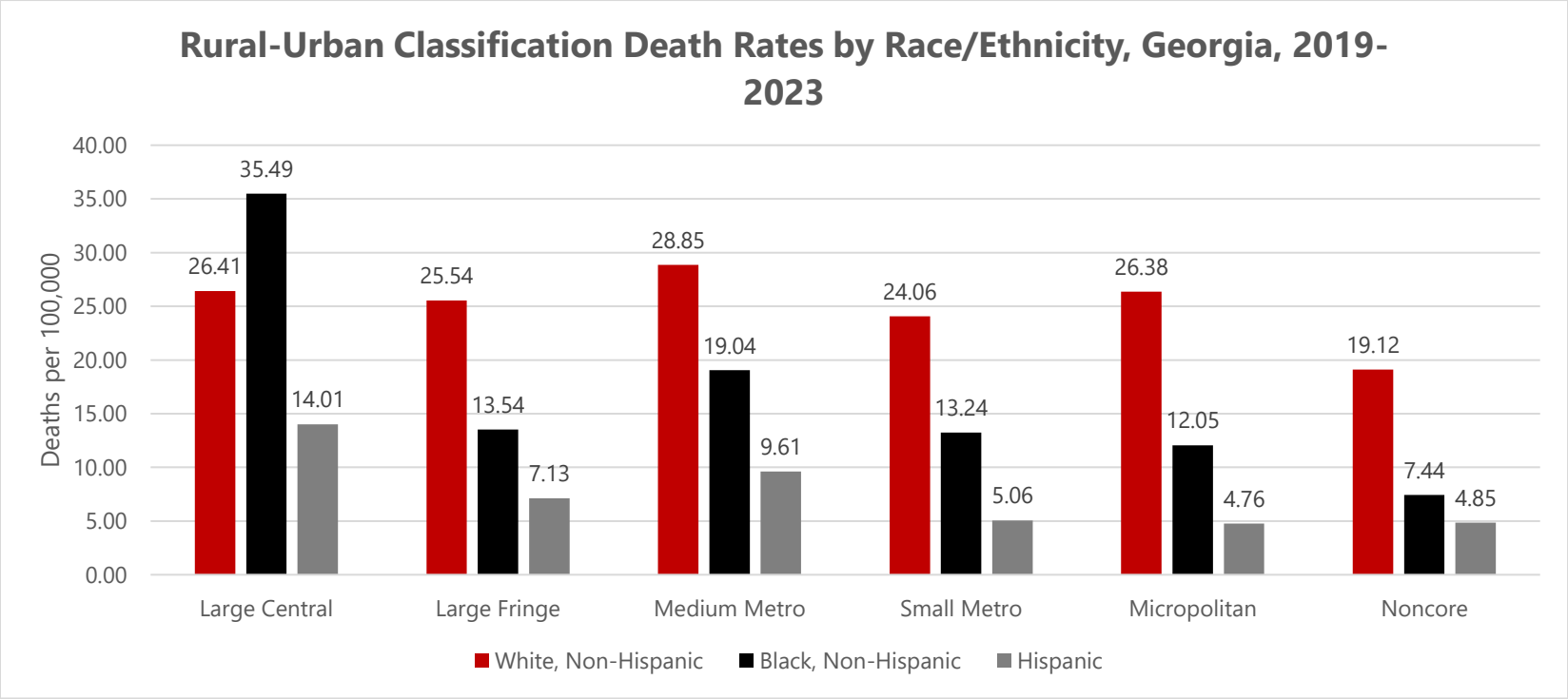
Overdose Deaths Selected by Demographics, Georgia, 2019-2023								
	White, Non-Hispanic		**Black, Non-Hispanic**		**Hispanic**		**Decedents**	
Total	**7130**		**2934**		**408**		**10472**	
	N (%)	**Rate**	**N (%)**	**Rate**	**N (%)**	**Rate**	**N(%)**	**Rate**
Age Category								
Under 15	6 (0.1)	0.02	12 (0.4)	0.07	0	0	18 (0.2)	0.04

15-24	470 (7)	1.71	173 (6)	1.00	83 (20)	1.48	726 (7)	1.44
25-34	1663 (23)	6.04	630 (21)	3.65	119 (29)	2.13	2412 (23)	4.79
35-44	1981 (28)	7.20	757 (26)	4.39	115 (28)	2.06	2853 (27)	5.66
45-54	1539 (22)	5.59	597 (20)	3.46	60 (15)	1.07	2196 (21)	4.36
55-64	1130 (16)	4.11	531 (18)	3.08	27 (7)	0.48	1688 (16)	3.35
65+	350 (5)	1.27	233 (8)	1.35	4 (1)	N/A	587 (6)	1.17
Sex								
Male	4661 (65)	1.48	2090 (71)	12.11	330 (81)	5.9	7081 (68)	14.06
Female	2469 (35)	0.51	844 (29)	4.89	78 (19)	1.4	3391 (32)	6.73
Marital Status								
Married	1294 (18)	4.70	433 (15)	2.51	83 (20)	1.48	1810 (17)	3.59
Never Married	3108 (44)	11.29	1856 (63)	10.75	263 (64)	4.70	5227 (50)	10.38
Widowed	324 (5)	1.18	78 (3)	0.45	4 (1)	N/A	406 (4)	0.81
Divorced	2109 (30)	7.66	429 (15)	2.49	41 (10)	0.73	2579 (25)	5.12
Married but Separated	145 (2)	0.53	59 (2)	0.34	11 (3)	0.20	215 (2)	0.43

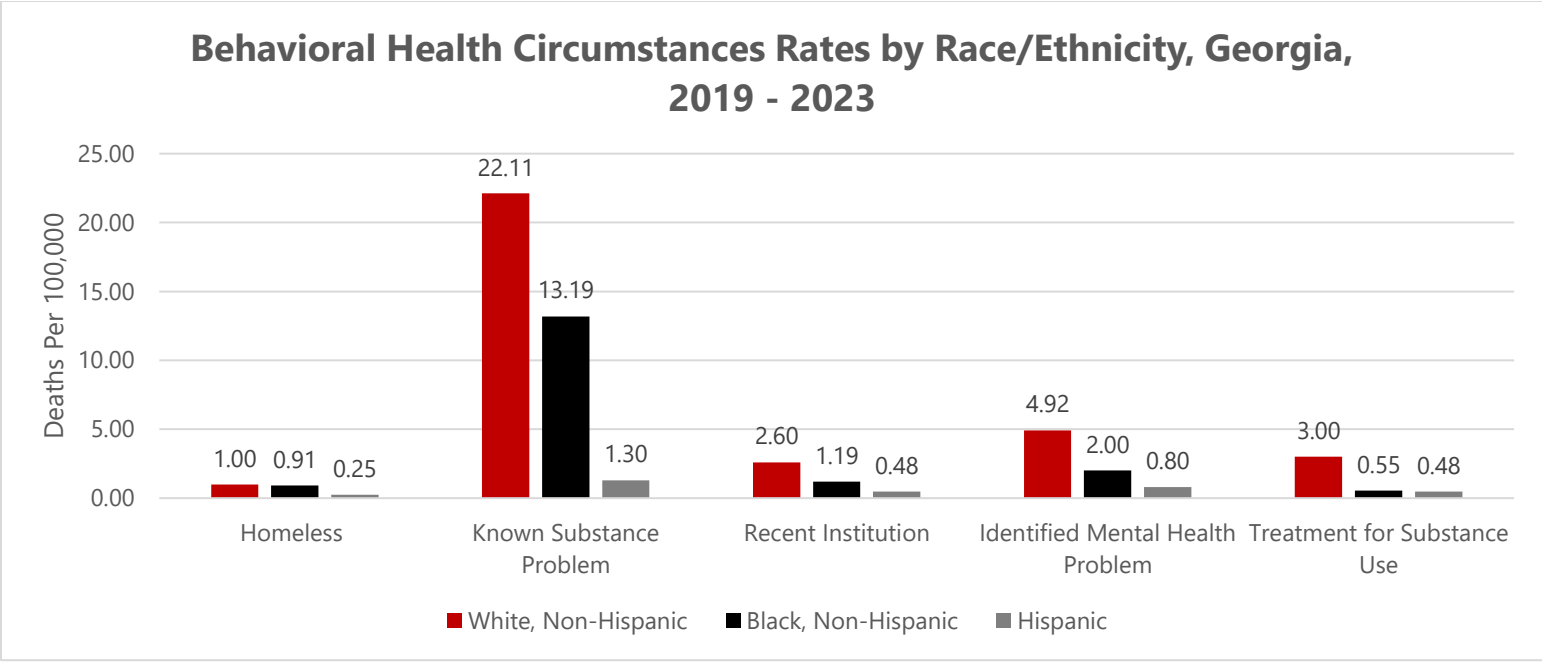
Unknown	150 (2)	0.55	79 (3)	0.46	6 (1)	0.11	235 (2)	0.47
Education Level								
8th grade or less	181 (3)	0.66	54 (2)	0.31	51 (13)	0.91	286 (3)	0.57
9th – 12th grade	1292 (18)	4.69	572 (20)	3.31	87 (21)	1.56	1951 (19)	3.87
High School Graduate or GED	3504 (49)	12.73	1491 (51)	8.64	173 (42)	3.09	5168 (49)	10.26
Some college credit	999 (14)	3.63	390 (13)	2.26	46 (11)	0.82	1435 (14)	2.85
Associate's Degree	376 (5)	1.37	138 (5)	0.80	16 (4)	0.29	530 (5)	1.05
Bachelor's Degree	433 (6)	1.57	130 (4)	0.75	14 (3)	0.25	577 (6)	1.15
Master's Degree	75 (1)	0.27	24 (1)	0.14	0	0.00	99 (1)	0.20
Doctorate	28 (0.4)	0.10	5 (0.2)	0.03	0	0.00	33 (0.3)	0.07
Unknown	242 (3)	0.88	130 (4)	0.75	21 (5)	0.38	393 (4)	0.78

- Black, Non-Hispanic and White, Non-Hispanic persons trends with past reports of having a higher percentage of deaths and higher rate in the 35-44 age range. Hispanic persons had a higher percentage of death in the 25-34 age category (29%) with almost 50% of all deaths occurring in individuals younger than 35.
- Among both males and females, Black, Non-Hispanic persons and Hispanic persons had higher rates of death compared to White, Non-Hispanic persons.

- Hispanic persons had a higher percentage of individuals who were married (20%) compared to White, Non-Hispanic (18%) and Black, Non-Hispanic (15%) persons. Each demographic's highest rate was in the never married category.



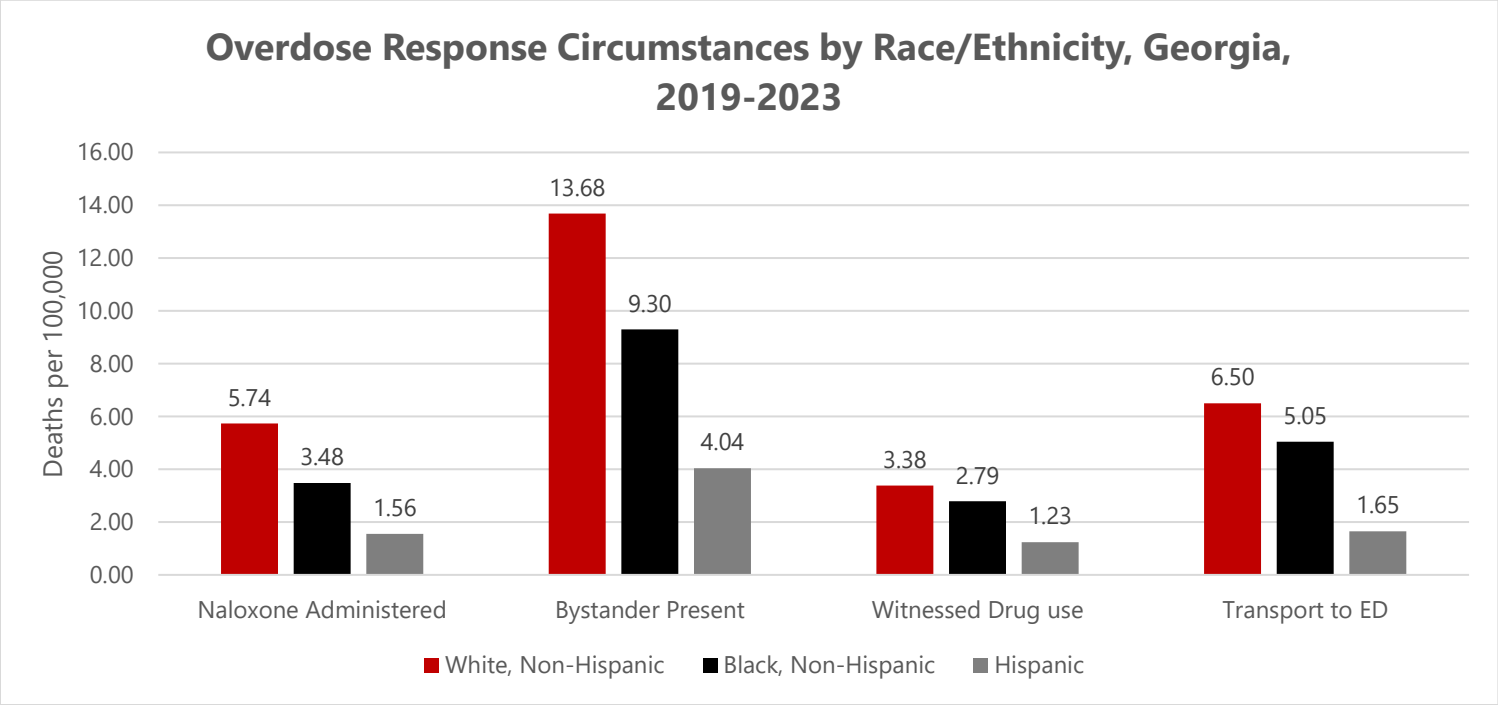
- Black, Non-Hispanic persons had the highest rate of death within the large central metro area at 35.49 per 100,000. This area also had the largest death rate for Hispanic persons at 14.01 per 100.000.
- In contrast, White, Non-Hispanic persons highest rate of death occurred in the medium metro area at 28.85 per 100,000.
- White, Non-Hispanic and Hispanic persons rate of death were similar across the classifications compared to that of Black, Non-Hispanic persons which showed more variability



- Though White, Non-Hispanic persons had higher rates for all circumstances variables, Black, Non-Hispanic persons had a higher percentage of were homeless[1] (5% vs 4 %, respectively).
- Among White, Non-Hispanic persons, the rate of a known substance abuse problem[2] (22.11 per 100,000) was higher compared to Black persons (13.19 per 100,000) and Hispanic persons (1.93 per 100,000).
- The rate for being recently institutionalized[3] for White, Non-Hispanic persons was 2x that of Black, Non-Hispanic persons and over 5x that for Hispanic persons.

[1] Homeless is defined as the decedents not having a fixed address at the time of death and living in a shelter, on the street, in a car, or in a makeshift quarter in an outdoor setting.
[2] A known substance abuse problem indicates that the decedent was known to have had a non-alcohol related substance abuse problem.
[3] Recent institution captures whether the decedent had been released from any institution (e.g. hospital, rheabiliatation facility, jail) within 1 month of death.

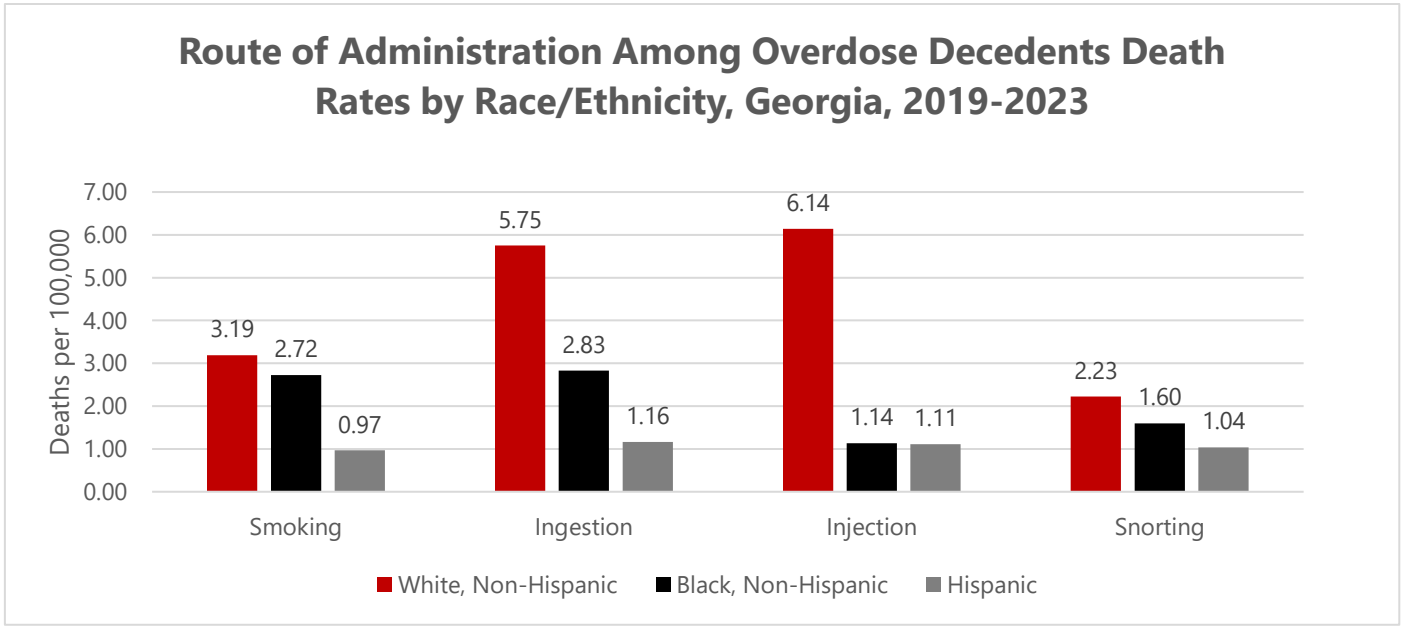
- White, Non-Hispanic persons had identified mental health problems[4] at rates over 2x that of Black, Non-Hispanic persons and Hispanic persons, and their rate of having received any type of treatment for substance[5] use was more than 5x that of Black, Non-Hispanic person and Hispanic persons.



- Naloxone[6] was administered at a considerably similar percentage for all communities (~21%) though White, Non-Hispanic persons had the highest rate (5.74 per 100,000).

[4] Identified mental health problems captures whether the decedent was known to have had a mental health problem at the time of death.
[5] Treatment of substance use captures whether the decedent had ever been treated for substance use disorder.
[6] Naloxone administered captures whether the decedent was administered naloxone at the time of death regardless of who administered it.

- Though White, Non-Hispanic persons had a higher rate of having a bystander[7] present at the time of injury and having the fatal drug use witnessed[8], Black, Non-Hispanic persons (55% & 16%, respectively) and Hispanic persons (55% & 17%) had a higher percentage of decedents in that fell within these 2 categories.
- Hispanics persons had the lowest rate of being transported[9] to the ED, being almost 4x less than the rate of White, Non-Hispanic persons.



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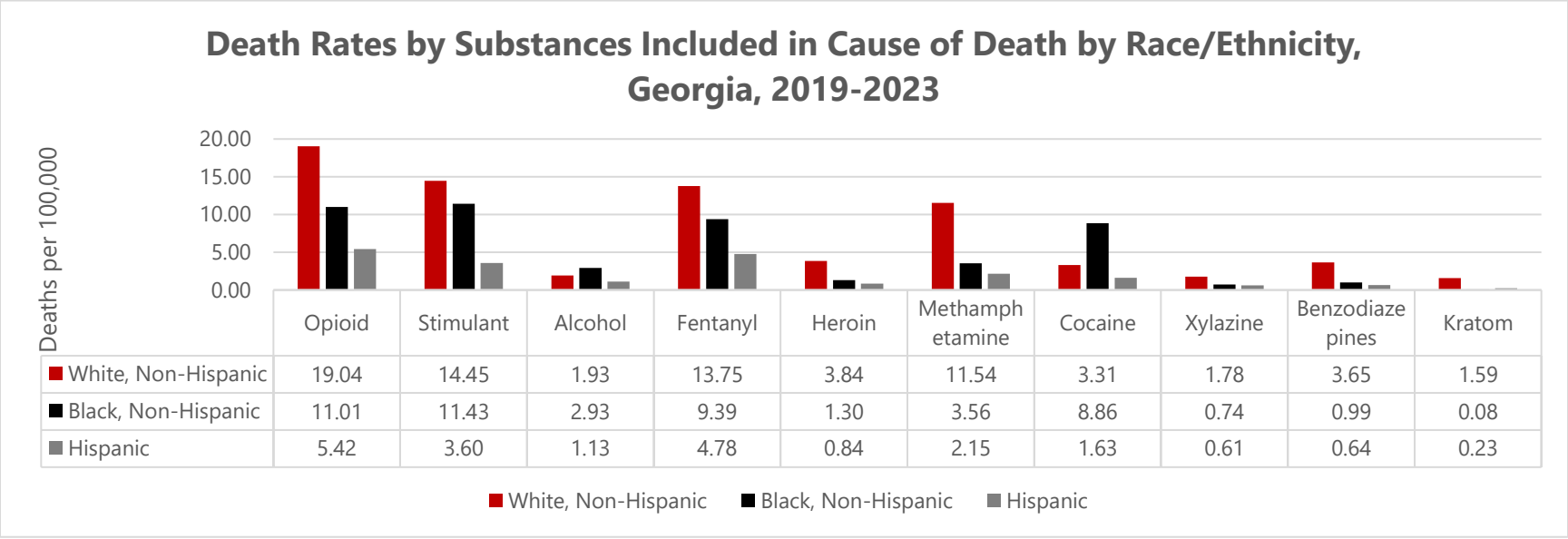
- The rate of injection among White, Non-Hispanic persons was almost 6x that of Black, Non-Hispanic persons or Hispanic persons.
- The highest rate among evidence of drug use for Black, Non-Hispanic persons was ingestion at 2.83 per 100,000. For Hispanic persons, the highest rate was also for ingestion at 1.16 per 100,000.

[7] A bystander is considered a person who is 11 years or older who had the opportunity to intervene at the fatal overdose.
[8] Witnessed drug use captures whether an individual 11 years or older witnessed the use of the substances in the fatal overdose.
[9] Transported to the ED captures whether the decedent was transported to the emergency department either by EMS or a personal vehicle.
[10] Evidence of buccal, suppository, and transdermal were not included due to their low counts.



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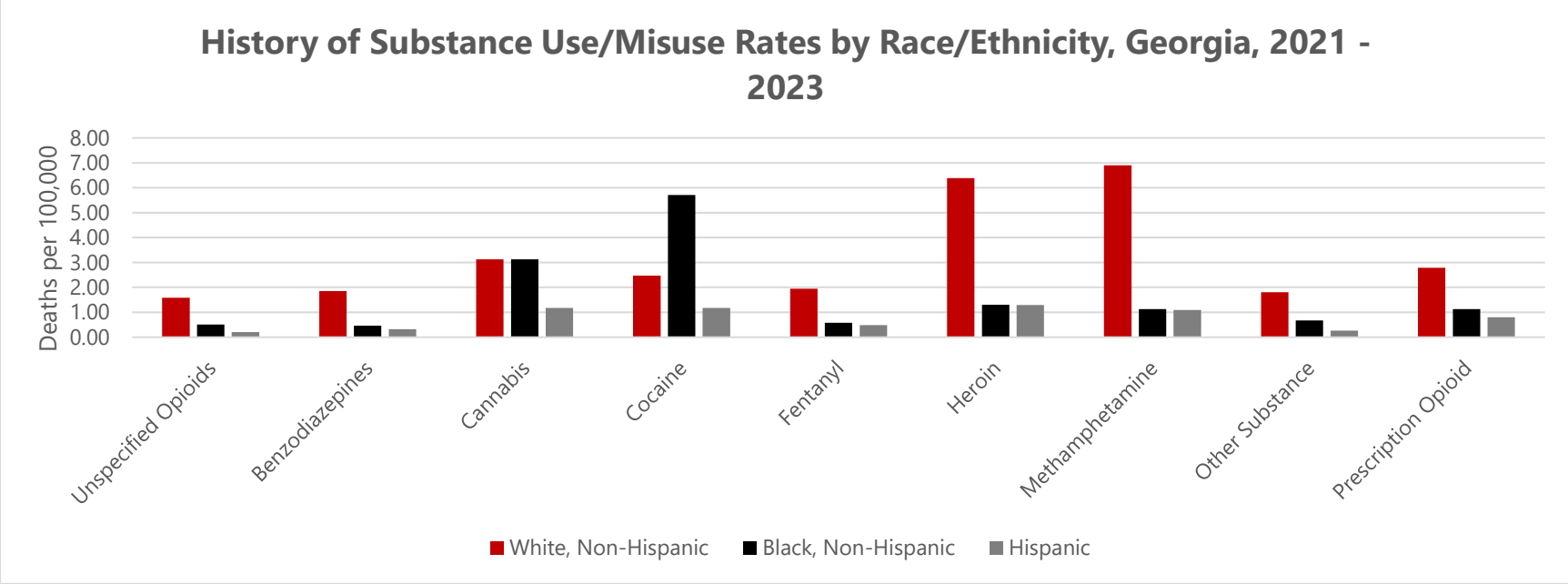
Death Rates by Substances Included in Cause of Death, Georgia, 2019-2023								
	White, Non-Hispanic*		**Black, Non-Hispanic**			**Hispanic**		
Total	7130		2934			408		
	N (%)	**Rate**	**N (%)**	**Rate**	**OR (CI)**	**N (%)**	**Rate**	**OR (CI)**
Cause of Death Substance Class								
Any Opioid as Cause of Death	5240 (73)	19.04	1900 (65)	11.01	0.66 (0.60,0.73)	303 (74)	5.42	1.04 (0.83, 1.31)

[11] Substances included in the cause of death categories are not mutually exclusive.

Any Stimulant as Cause of Death	3978 (56)	14.45	1973 (67)	11.43	1.63 (0.63, 0.94)	201 (49)	3.60	0.77 (0.63, 0.94)
Stimulant/Opioid Combination as Cause of Death								
Any Opioid and Stimulant	2546 (36)	9.25	1059 (36)	6.13	-	118 (29)	2.11	-
Opioid Only	2794 (38)	9.79	841 (29)	4.87	-	185 (45)	3.31	-
Stimulant Only	1432 (20)	5.20	914 (31)	5.29	-	83 (20)	1.48	-
Neither Opioid nor Stimulant	458 (6)	1.66	120 (4)	0.70	-	22 (5)	0.39	-

- Generally, White, Non-Hispanic persons had a higher rate of death for the following drugs: opioid, stimulant, fentanyl, heroin, methamphetamine, xylazine, benzodiazepines, and kratom.
- Black, Non-Hispanic persons had a higher rate of death for cocaine (8.86 per 100,000) and alcohol (2.93 per 100,000). The death rate for Black, Non-Hispanic persons for cocaine was more than double the rate of White persons (3.31 per 100,000) and greater than 5x the rate of Hispanic persons (1.63 per 100,000).
- Hispanic persons highest death rate occurred within the opioid category (5.42 per 100,000) which aligns with their highest percentage of deaths having an opioid only in the cause of death (45%).



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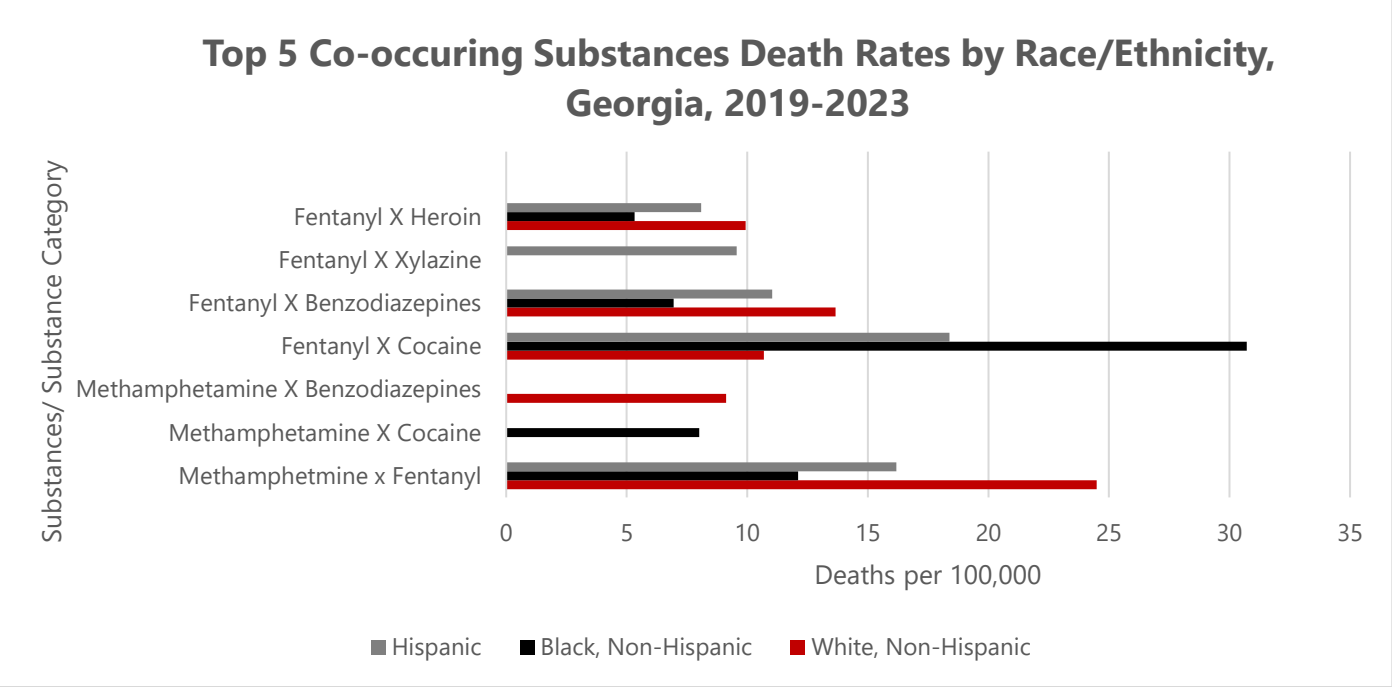
- White, Non-Hispanic persons highest rate of reported substance use was methamphetamine at 6.9 per 100,000 (23% of deaths) followed closely by heroin at 6.38 per 100,000 (22% of deaths).
- Black, Non-Hispanic persons highest rate of report substance use was for cocaine at 5.71 per 100,000 (28 % of deaths), and Hispanic persons highest rate was for heroin at 1.3 per 100,000 (14% of deaths) followed closely by cannabis and cocaine both being at 1.18 per 100,000 (13% of death).
- Black, Non-Hispanic and White, Non-Hispanic persons had a similar rate for reported cannabis use reporting 3.12 per 100,000 and 3.13 per 100,000 respectively.

[12] There was a change in the coding of variables in SUDORS in 2020 which would lead to over or underinflated values if the decedents prior to 2021 were included.



- There is some variability in the most common co-occurring[13] substances listed with the cause of death for each population. The highest co-occurring substances rate for White, Non-Hispanic persons was for methamphetamine and fentanyl at 24.49 per 100,000.
- The highest co-occurring substance rate for Black, Non-Hispanic persons and Hispanic persons was for cocaine and fentanyl at 30.71 per 100,000 and 18.38 per 100,000 respectively.

[13] Each group had different substances listed within their top 5 most common co-occuring substances which led to the inclusion of 7 different substance categories.

DISCUSSION:

This study highlights a few critical findings in the circumstances surrounding fatal drug overdoses for minorities within Georgia compared to the White population.

Though White, Non-Hispanic persons encompass most overdose deaths within the state of Georgia over a 5-year period, the rate of death for Black, Non-Hispanic persons is almost double that of White, Non-Hispanic persons and the rate of death for Hispanic persons is more than double that of White, Non-Hispanic persons. Hispanic persons had 50% of their deaths occur in individuals younger than 35 which varies from White, Non-Hispanic persons and Black, Non-Hispanic persons. Data also showed variability among where these fatal overdoses occurred with Black, Non-Hispanic and Hispanic persons having a higher death rate with the large central classification area (e.g. Fulton county) and White, Non-Hispanic persons having a higher rate of death in the medium metro classification areas (e.g. Bryan, Catoosa, Chatham).These facts illustrate the need for tailored interventions that entice populations of all ages, have cultural considerations regarding their implementation, and ensure that harm reduction practices take place all across the state, rather than being centralized to large cities.

Black, Non-Hispanic and Hispanic persons were likely to have a bystander present at the time of the fatal overdose and were more likely to have someone witnessing the fatal overdose. Having a bystander present is a key intervention point as it signifies a chance of having someone intervene and potentially save a life. It is crucial that individuals within these 2 communities, whether they identify as PWUD (people who use drugs) or not, are trained in overdose response, and if they identify as PWUD, they are knowledgeable about harm reduction practices. This was the only key intervention point that was higher for these 2 groups as White, Non-Hispanic persons had a higher rate of having received treatment for substances and the rate of having been recently institutionalized. These are 2 opportunities for intervention that will need to be further investigated to understand what can be done differently to ensure that all people receive proper care and follow-up to reduce their cases.

Current interventions, such as syringe service programs (SSPs), offer PWID sterile needles to help reduce or remove potentially HCV and HIV contaminated needles while also linking PWUD with various programs that assist with enhancing their well-being[9]. Data from this analysis showed that Black, Non-Hispanic and Hispanic persons had a rate of injection use 6x less than that of White, Non-Hispanic persons. Due to this difference in substance use patterns, these 2 minority

populations could be absent from the other beneficial services that tag along to SSPs such as linkage to care, education materials, and naloxone training due to the misconception of SSPs only being for PWID. In this case, it would be pertinent to promote all benefits of SSPs to create a more holistic image of the intervention for all populations.

Black, Non-Hispanic persons were 66% less likely to have an opioid listed in their cause of death compared to White, Non-Hispanic persons and 63% more likely to have a stimulant listed within the cause of death compared to White, Non-Hispanic persons. This is substantiated by Black, Non-Hispanic persons having a higher rate with cocaine listed as a cause of death drug (8.86 per 100,000), a higher history of reported cocaine use (5.71 per 100,000) and a higher rate of cocaine and fentanyl being co-occurring substances (30.71 per 100,000). White, Non-Hispanic persons showed a higher rate of reported methamphetamine use (6.9 per 100,000) and had the highest of rate of having methamphetamine and fentanyl being co-occurring substances (24.49 per 100,000). Among Hispanic persons, the highest co-occurring substances rate was also for cocaine and fentanyl (18.38 per 100,000). These rates help to promote a need for further research in treatments for substance use regarding stimulants. Currently, the gold standard for treating individuals who use/misuse stimulants is cognitive behavioral therapy and using rewards while individuals who use/misuse opioids have access to medications such as methadone, buprenorphine, and naltrexone in conjunction with cognitive behavioral therapy.

LIMITATIONS/CONSIDERATIONS:

- Data regarding different circumstance-specific variables and its quality is dependent upon the information gather by coroner/medical examiner offices during the death investigation.
- Injury county was used for the 2013 NCHS Urban-Rural Classification schemes for counties rather than residence county and may not be representative of where the decedent died.
- Rates with counts less than 5 were suppressed.
- Due to low counts over years, the following racial identities were not included Asian (includes Korean, Asian Indian, Vietnamese, Filipino, Chinese, Japanese, Other Asian), Native Hawaiian or Other Pacific Islander (includes Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander), American Indian or Alaska Native, other race, and unspecified race. Additionally, there were changes to the variable that captures race/ethnicity over the 4-year period, adding more specificities in 2023 compared to the 2019 options.

DATA DESCRIPTION:

Data Source
The State Unintentional Drug Overdose Reporting System (SUDORS) collects detailed investigative and toxicological information from coroners/medical examiners (CME) about unintentional and undetermined-intent drug overdose deaths to better understand the changing nature of the opioid epidemic and inform key stakeholders. Unintentional drug overdose deaths were derived from the death certificates of Georgia and non-Georgia residents who died in Georgia. Drug overdose deaths are deaths where the death certificate (DC) AND/OR the CME report indicates that acute drug toxicity directly caused the death.
Case Definitions
Opioid-involved overdose death Includes any case with an opioid listed in the cause of death. Involves both prescription opioid pain relievers (e.g., hydrocodone, oxycodone, and morphine), opioids used to treat addiction (e.g., methadone), as well as heroin and synthetic opioids (e.g., fentanyl that may be prescription or illicitly manufactured). Deaths with vague cause of death text (e.g., "mixed drug toxicity" or "polysubstance overdose") that have positive tox results for opioids are also included.
Rx opioid-involved overdose death Includes any case with a prescription opioid listed in the cause of death, including morphine, codeine, oxycodone, oxymorphone, tramadol, buprenorphine, methadone, hydrocodone, hydromorphone, meperidine, tapentadol, noscapine, dihydrocodeine, prescription fentanyl, alfentanil, sufentanil, or other prescription opioid. Deaths with vague cause of death text (e.g., "mixed drug toxicity" or "polysubstance overdose") that have positive tox results for Rx opioids are also included.
Heroin-involved overdose death Includes any case with heroin and/or heroin metabolite listed in the cause of death. Deaths with vague cause of death text (e.g., "mixed drug toxicity" or "polysubstance overdose") that have positive tox results for heroin and/or heroin metabolite are also included.
Fentanyl-involved overdose death Includes any case with fentanyl and/or fentanyl metabolite listed in the cause of death. Deaths with vague cause of death text (e.g., "mixed drug toxicity" or "polysubstance overdose") that have positive tox results for fentanyl and/or fentanyl metabolite are also included.
Cocaine-involved overdose death

Includes any case with cocaine and/or cocaine metabolite listed in the cause of death or positive on a tox screen. Deaths with vague cause of death text (e.g., "mixed drug toxicity" or "polysubstance overdose") that have positive tox results for cocaine and/or cocaine metabolite are also included.
Methamphetamine-involved overdose death Includes any case with methamphetamine listed in the cause of death or positive on a tox screen. Deaths with vague cause of death text (e.g., "mixed drug toxicity" or "polysubstance overdose") that have positive tox results for methamphetamine are also included.
Benzodiazepine-involved overdose death Includes any case with a benzodiazepine (e.g., alprazolam, clonazepam, diazepam, etc.) listed in the cause of death or positive on a tox screen. Deaths with vague cause of death text (e.g., "mixed drug toxicity" or "polysubstance overdose") that have positive tox results for benzodiazepines are also included.
2013 NCHS Urban-Rural Classification
Large Central Metro Counties in Metropolitan Statistical Areas (MSAs) of 1 million or more population that: 1. Contain the entire population of the largest principal city of the MSA, or 2. Have their entire population contained in the largest principal city of the MSA, or 3. Contain at least 250,000 inhabitants of any principal city of the MSA
Large Fringe Metro Counties in MSAs of 1 million or more population that did not qualify as large central metro counties.
Medium Metro Counties in MSAs of populations of 250,000 to 999,999.
Small Metro Counties in MSAs of populations less than 250,000.
Micropolitan (Nonmetropolitan Category) Counties in micropolitan statistical areas
Noncore (Nonmetropolitan Category) Nonmetropolitan counties that did not qualify as micropolitan.

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