The Overdose Crisis is Not Over: Race, Age, and Sex Disparities in Opioid-Related Acute Care, 2016–2023

Submission ID 3004053

Submission Type Paper

Topic Opioids and other Controlled Substances: Use and Abuse, Prescribing, Dispensing, and/or Administering

Status Submitted

Submitter Tiffany Xie

Affiliation Washington University in St. Louis

Participant(s) Tiffany Xie (Presenter), Brian Tirado (Co-Author), Kevin Xu (Co-Author)

SUBMISSION DETAILS

If your paper is not accepted, please elect if you would like your submission to be reviewed as a poster. Yes, I would like to be reviewed as a poster.

Summary National reports of declining overdose mortality may obscure rising opioid-related risk in specific patient populations. This study examines trends in opioid-related ED visits and hospitalizations among Medicaid enrollees by race, age, and sex, identifying older non-Hispanic Black adults as an emerging high-risk population whom clinicians should prioritize for opioid use disorder screening, treatment, and overdose prevention.

The questions following the above will ask you to breakdown your summary.

Background Recent national reports have described declines in overdoses in the US. Whether these declines extend equitably across the intersection of race, age, and sex remains unclear.

Educational Learning Objectives

Learning Objective 1 Recognize that older non-Hispanic Black adults represent an emerging high-risk population for opioid-related morbidity, despite national trends suggesting overall improvement in overdose outcomes

Learning Objective 2 Use national data to identify clinical opportunities to engage middle-aged and older Black patients in opioid use disorder screening, treatment, and overdose prevention

Learning Objective 3 Integrate awareness of age-, sex-, and race-specific opioid-related risk into opioid use disorder screening and assessment in older adults

Methods We conducted a retrospective cohort study of 625,228 non-Hispanic White and non-Hispanic Black Medicaid enrollees aged 19 to 64 years with at least one substance-related acute care encounter (emergency department visit or inpatient admission) between January 2016

and December 2023, using the Merative MarketScan Multi-State Medicaid Database. The primary outcome was the annual proportion of substance-related encounters involving an opioid-related diagnosis, stratified by race, age, and sex. Secondary outcomes were inpatient encounters with opioids as the primary diagnosis and opioid-related poisoning encounters. Negative binomial regression models with an offset for total substance-related encounters estimated year-specific Black-White rate ratios within each age-by-sex stratum.

Results Among White enrollees, the proportion of opioid-related acute care encounters declined across all age and sex strata. Among Black enrollees, the proportion rose, notably among middle-aged and older adults. The Black-White rate ratio narrowed substantially in older strata, reaching 0.96 (95% CI, 0.89-1.04) by 2023 among men 45-54 and 0.83 (0.76-0.89) among men 55-64, compared with 0.36 and 0.64, respectively, in 2016. Narrowing among women was more modest; among women aged 55-64, the rate ratio increased from 0.51 to 0.67 over the same period. In secondary analyses, opioid-related poisoning admissions among Black men aged 55-64 rose from a rate ratio of 0.82 (0.66-1.02) in 2016 to 1.62 (1.25-2.10) in 2023, with admissions for Black men 55-64 exceeding those for their White peers by 2023.

Conclusion These findings reveal intersectional disparities in opioid-related acute care utilization during a period of national overdose deceleration. While opioid-related acute care utilization has declined among non-Hispanic White Medicaid enrollees, middle-aged and older non-Hispanic Black enrollees have experienced rising opioid-related morbidity, with rates of opioid-related poisoning admissions exceeding those of their White peers by 2023.

Scientific Significance Older non-Hispanic Black populations experienced increases in opioid-related acute care utilization during a time where opioid-related morbidity and mortality appeared to be decreasing among White populations, highlighting the need for intersectional analyses of opioid use disorder trends. These intersectional patterns are obscured by aggregate national trends and underscore the need for opioid use disorder screening, treatment, and overdose prevention efforts tailored to the needs of older Black adults.

Will your paper cite external research? Yes

Please cite all references here in AMA format.
1. Kiang MV, Humphreys K. Recent Drug Overdose Mortality Decline Compared With Pre-COVID-19 Trend. Jama Network Open. 2025;8(2).
2. Post LA, Ciccarone D, Unick GJ, et al. Decline in US Drug Overdose Deaths by Region, Substance, and Demographics. JAMA Netw Open. 2025;8(6):e2514997.
3. Cadet K, Smith BD, Martins SS. Intersectional Racial and Sex Disparities in Unintentional Overdose Mortality. JAMA Netw Open. 2025;8(4):e252728.
4. Smith MK, Planalp C, Bennis SL, et al. Widening Racial Disparities in the U.S. Overdose Epidemic. Am J Prev Med. 2025;68(4):745-753.
5. Stokes EK, Pickens CM, Wilt G, Liu S, David F. County-level social vulnerability and nonfatal drug overdose emergency department visits and hospitalizations, January 2018-December 2020. Drug Alcohol Depen. 2023;247.
6. Friedman JR, Nguemeni Tiako MJ, Hansen H. Understanding and Addressing Widening Racial Inequalities in Drug Overdose. Am J Psychiatry. 2024;181(5):381-390.

7. Friedman J, Shover CL. Charting the fourth wave: Geographic, temporal, race/ethnicity and demographic trends in polysubstance fentanyl overdose deaths in the United States, 2010-2021. Addiction. 2023;118(12):2477-2485.
8. Friedman J, Beletsky L, Jordan A. Surging Racial Disparities in the U.S. Overdose Crisis. Am J Psychiatry. 2022;179(2):166-169.
9. Friedman J, Hansen H, Gone JP. Deaths of despair and Indigenous data genocide. Lancet. 2023;401(10379):874-876.
10. Gibbons JB, Harris SJ, Solomon KT, Sugarman O, Hardy C, Saloner B. Increasing overdose deaths among Black Americans: a review of the literature. Lancet Psychiatry. 2023;10(9):719-726.
11. Gibbons JB, McCullough JS, Zivin K, Brown ZY, Norton EC. Racial and ethnic disparities in medication for opioid use disorder access, use, and treatment outcomes in Medicare. J Subst Use Addict Treat. 2024;157:209271.
12. Shover CL, Friedman JR, Romero R, et al. Leveraging pooled medical examiner records to surveil complex and emerging patterns of polysubstance use in the United States. Int J Drug Policy. 2025;141:104397.
13. Cano M, Zhu DT, Friedman JR. Extreme vulnerability to overdose mortality: Intersections of detailed race/ethnicity, educational attainment, age, sex, and nativity. Drug Alcohol Depend. 2025;277:112945.
14. Friedman J, Hansen H. Trends in Deaths of Despair by Race and Ethnicity From 1999 to 2022. JAMA Psychiatry. 2024;81(7):731-732.
15. Larochelle MR, Bernstein R, Bernson D, et al. Touchpoints - Opportunities to predict and prevent opioid overdose: A cohort study. Drug Alcohol Depend. 2019;204:107537.
16. Ickovics JR, Kershaw TS, Westdahl C, et al. Group prenatal care and preterm birth weight: Results from a matched cohort study at public clinics. Obstet Gynecol. 2003;102(5):1051-1057.
17. Johnson JA, Moore B, Hwang EK, Hickner A, Yeo H. The accuracy of race & ethnicity data in US based healthcare databases: A systematic review. Am J Surg. 2023;226(4):463-470.
18. Nead KT, Hinkston CL, Wehner MR. Cautions When Using Race and Ethnicity in Administrative Claims Data Sets. Jama Health Forum. 2022;3(7).
19. Filice CE, Joynt KE. Examining Race and Ethnicity Information in Medicare Administrative Data. Med Care. 2017;55(12):e170-e176.
20. Kramer MR, Strahan AE, Preslar J, et al. Changing the conversation: applying a health equity framework to maternal mortality reviews. Am J Obstet Gynecol. 2019;221(6).
21. Henning-Smith CE, Hernandez AM, Hardeman RR, Ramirez MR, Kozhimannil KB. Rural Counties With Majority Black Or Indigenous Populations Suffer The Highest Rates Of Premature Death In The US. Health Affairs. 2019;38(12):2019-2026.
22. Jones CP. Levels of racism: a theoretic framework and a gardener's tale. Am J Public Health. 2000;90(8):1212-1215.
23. Braveman PA, Arkin E, Proctor D, Kauh T, Holm N. Systemic And Structural Racism: Definitions, Examples, Health Damages, And Approaches To Dismantling. Health Aff (Millwood). 2022;41(2):171-178.
24. Bailey ZD, Krieger N, Agenor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. Lancet. 2017;389(10077):1453-1463.
25. MacAfee LK, Harfmann RF, Cannon LM, et al. Sexual and Reproductive Health Characteristics of

Women in Substance Use Treatment in Michigan. Obstet Gynecol. 2020;135(2):361-369.
26. Blacketer C, Defalco FJ, Ryan PB, Rijnbeek PR. Increasing trust in real-world evidence through evaluation of observational data quality. J Am Med Inform Assn. 2021;28(10):2251-2257.
27. Young JC, Dasgupta N, Stürmer T, Pate V, Funk MJ. Considerations for observational study design: Comparing the evidence of opioid use between electronic health records and insurance claims. Pharmacoepidem Dr S. 2022;31(8):913-920.
28. Hurley RW, Bland KT, Chaskes MD, Guth D, Hill EL, Adams MCB. Evidence-based framework for identifying opioid use disorder in administrative data: A systematic review and methodological development study. Pain Med. 2025.