

Supplemental Materials for ‘Surging Racial Disparities in the US Overdose Crisis’

Supplemental Methods

Records describing the rate of drug-related overdose mortality per 100,000 people by race/ethnicity and type of drugs involved from 1999 to 2019 were accessed through CDC WONDER¹. Overdose mortality deaths were defined as those corresponding to the underlying cause of death ICD-10 codes for drug-related accidental (X40-X44), intentional (X60-X64), assault-related (X85) and undetermined intent (Y10-Y14). The “All Opioids” category included those deaths with multiple cause of death (MCD) ICD-10 codes corresponding to T40.0-T40.4 and T40.6, spanning opium, heroin, other opioids, methadone, fentanyl and other synthetic narcotics, and other and unspecified narcotics. The “Heroin” category corresponded to deaths coded as T40.1 The “Cocaine” category corresponded to deaths coded as category T40.5. “Fentanyl and Synthetic Opioids” corresponded to deaths coded as MCD ICD-10 T40.4, which does not include methadone. “Prescription Opioids” referred to deaths coded as T40.2 “other opioids” also frequently referred to as “natural and semisynthetic opioids” which are generally understood to be those opioids most commonly prescribed in the healthcare system. This approach is conservative as it may underestimate a small number of overdoses in the “Fentanyl and Synthetic Opioids” category which stemmed from a prescription source. “Methamphetamine” deaths corresponded to MCD ICD-10 T43.6. This MCD code refers to “psychostimulants with abuse potential,” which is known to overwhelmingly refer to methamphetamine, and is typically referred to as such². Overdose deaths were obtained by year, race, Hispanic origin, and for state and national totals.

“Latinx” individuals were defined as those for whom death certificates indicated that Hispanic origin was “Hispanic or Latino” regardless of race. “Non-Hispanic White”, “Non-Hispanic Black”, “Non-Hispanic Asian or Pacific Islander”, and “Non-Hispanic American Indian or Native Alaskan” individuals were defined as those for whom Hispanic origin was not listed as “Hispanic or Latino” (including a very small number of individuals for whom Hispanic origin was not stated) and race was listed as “White”, “Black”, “Asian or Pacific Islander” and “American Indian or Native Alaskan” respectively.

The WONDER platform suppresses counts for which fewer than 10 deaths would be shown, which limits the state-level comparisons that can be made between race/ethnicity groups. For state-years where comparisons could be made, the rate for each racial/ethnic group was compared to that of Non-Hispanic White individuals as a ratio.

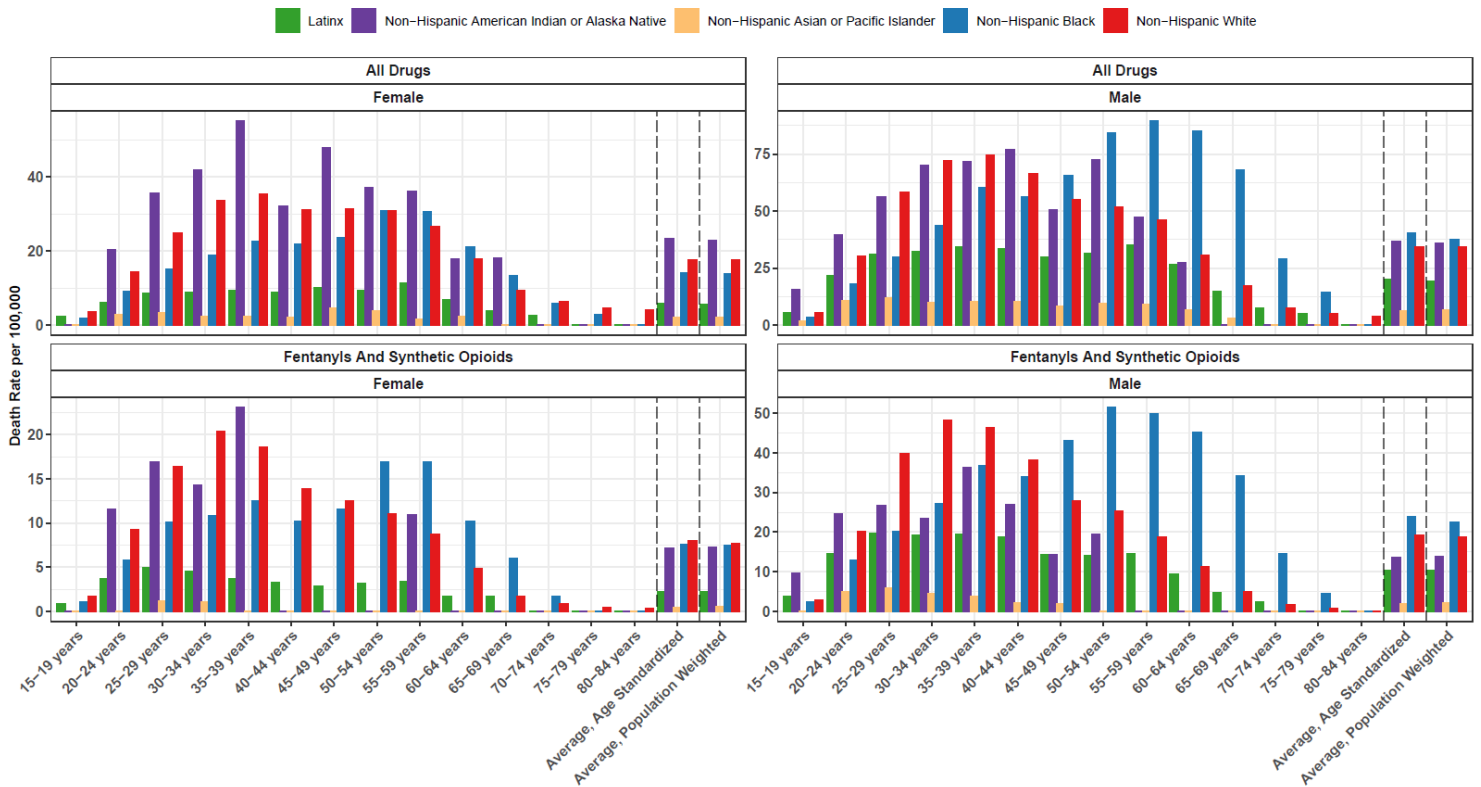
All analyses were conducted in R version 4.0.3.

Supplemental References

1. CDC WONDER [Internet]. [cited 2021 Mar 25]; Available from: <https://wonder.cdc.gov/>
2. Han B, Cotto J, Etz K, Einstein EB, Compton WM, Volkow ND. Methamphetamine Overdose Deaths in the US by Sex and Race and Ethnicity. *JAMA Psychiatry* [Internet] 2021 [cited 2021 Mar 25]; Available from: <https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2774859>

Supplemental Results

Age and Sex Pattern of Total and Fentanyl and Synthetic Opioid Related Overdose Deaths in 2019



Supplemental Figure 1. Rates per 100,000 people of all-drug related and fentanyl and synthetic opioid involved overdose deaths are shown by race/ethnicity, sex, and 5-year age group in 2019. Age-standardized and population-weighted all-age averages are also shown for each group. A small number of rates corresponding to a number of deaths below 10 are suppressed, and rates for individuals below age 15 and over age 84 are not shown, although they are included in the population weighted and age-standardized averages.