# Supplementary Online Content

Friedman JR, Hansen H. Evaluation of increases in drug overdose mortality rates in the US by race and ethnicity before and during the COVID-19 pandemic. *JAMA Psychiatry*. Published online March 2, 2022. doi:10.1001/jamapsychiatry.2022.0004

**eMethods.**

This supplementary material has been provided by the authors to give readers additional information about their work.

# eMethods

1. Total drug overdose mortality counts for the 1999-2019 period were obtained from the CDC WONDER platform (https://wonder.cdc.gov/controller/saved/D76/D243F427) stratified by race, ethnicity, and year of occurrence. Both population counts, and counts of overdose fatalities were provided, and used as the denominator and numerator, respectively.

2. Overdose mortality rates for 2020 were calculated using provisional race/ethnicity stratified drug overdose mortality counts released by the National Center for Health Statistics (https://www.cdc.gov/nchs/data/health_policy/Provisional-Drug-Overdose-Deaths-by-Quarter-and-Demographic-Characteristics-2019-to-2020.pdf).

3. Mid-year population estimates by race/ethnicity for the year 2020 were obtained from the CDC Wonder platform (https://wonder.cdc.gov/single-race-single-year-v2020.html).

4. Total drug overdoses were defined by the following ICD-10 codes:

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| X40 (Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics) |
| X41 (Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified) |
| X42 (Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified) |
| X43 (Accidental poisoning by and exposure to other drugs acting on the autonomic nervous system) |
| X44 (Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances) |
| X60 (Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics) |
| X61 (Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified) |
| X62 (Intentional self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified) |
| X63 (Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system) |
| X64 (Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances) |
| X85 (Assault by drugs, medicaments and biological substances) |
| Y10 (Poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics, undetermined intent) |
| Y11 (Poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified, undetermined intent) |
| Y12 (Poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified, undetermined intent) |
| Y13 (Poisoning by and exposure to other drugs acting on the autonomic nervous system, undetermined intent) |
| Y14 (Poisoning by and exposure to other and unspecified drugs, medicaments and biological substances, undetermined intent) |

5. 'Latinx' individuals were defined as any persons for which ethnicity was defined as Hispanic or Latino, regardless of race. "American Indian or Alaska Native, Non-Hispanic," "Black or African American, Non-Hispanic," and "White, Non-Hispanic" individuals were defined as individuals of each race, who had their ethnicity listed as "non-Hispanic."

6. Rates were calculated as total drug overdose deaths per 100,000 population, according to mid-year population.

7. Year-to-year percent change values were calculated for each year *t* in a race/ethnicity group-specific fashion according to the following formula:

$$((Overdose\ Death\ Rate_t / Overdose\ Death\ Rate_{t-1}) - 1) * 100\%.$$

8. Data were visualized using R version 4.0.3.