

Opioid Deaths by Race in the United States, 2000–2015

PAA 2017, Session 133: Trends and Causes of Adult Mortality in
the United States

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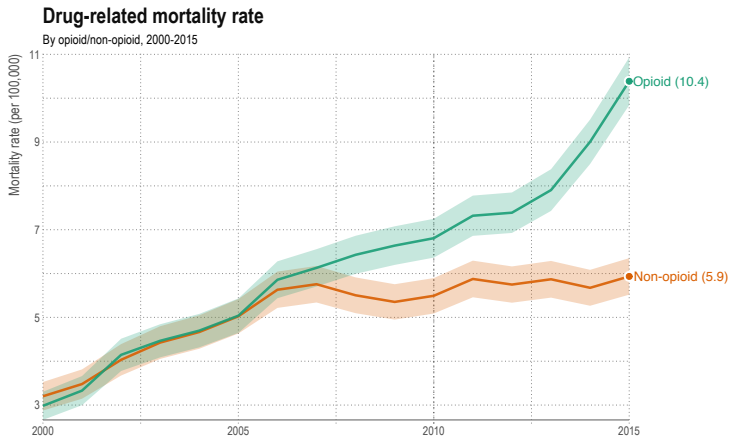
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April 28, 2017

Motivation



Drug Deaths Reach White America

By THE EDITORIAL BOARD JAN. 25, 2016

New York Times

PostPartisan • Opinion

The opioid epidemic: For whites only?

By Charles Lane August 18, 2016



Washington Post

Is the Prescription Opioid Epidemic a White Problem?

Helena Hansen, MD, PhD; Julie Netherland, PhD

[DISCLOSURES](#) | Am J Public Health. 2016;106(12):2127-2129.

Medscape

HEALTH

Drug Overdoses Propel Rise in Mortality Rates of Young Whites

By GINA KOLATA and SARAH COHEN JAN. 16, 2016

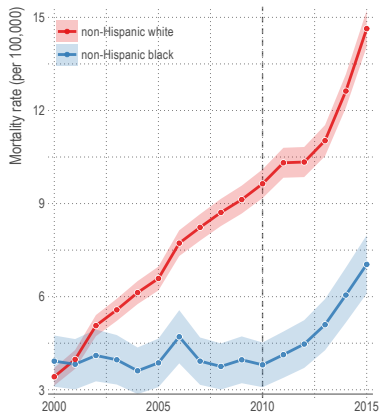
New York Times



Motivation

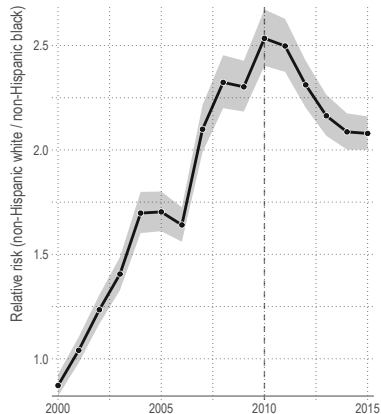
Opioid-related mortality rate

By race/ethnicity, 2000-2015



Relative risk

Opioid-related mortality, 2000-2015



Aims

Gain a better understanding how opioid deaths differ **by race** and what has contributed to the change in trends over time.

Stratify by age and look at

- ▶ Underlying cause of death
- ▶ Deaths by opioid type
- ▶ Presence of multiple opioids

Motivate future research to better target health policy and rehabilitation programs in different areas and for different subpopulations.

Data

- ▶ Multiple cause of death microdata, 2000–2015
 - ▶ Deaths are coded according to ICD-10
 - ▶ Underlying cause of death and up to twenty additional contributory causes
- ▶ Restrict analysis to non-Hispanic white and non-Hispanic black populations
- ▶ Overall mortality rates are age-standardized using 10-year age groups and the 2000 Census population as a standard

Defining opioid-related deaths

Opioid poisoning T-codes:

- ▶ T400: Opium
 - ▶ T401: Heroin
 - ▶ T402: Other natural and semi-synthetic opioids
 - ▶ T403: Methadone
 - ▶ T404: Other synthetic opioids
 - ▶ T406: Unspecified
-
1. Drug overdose deaths: combination of T-codes and underlying cause of overdose: X40-44, X60-64, Y10-14, X85
 2. Mental and behavioral complications due to opioid use (F110–F119)
 3. Other deaths with an opioid T-code as contributory cause

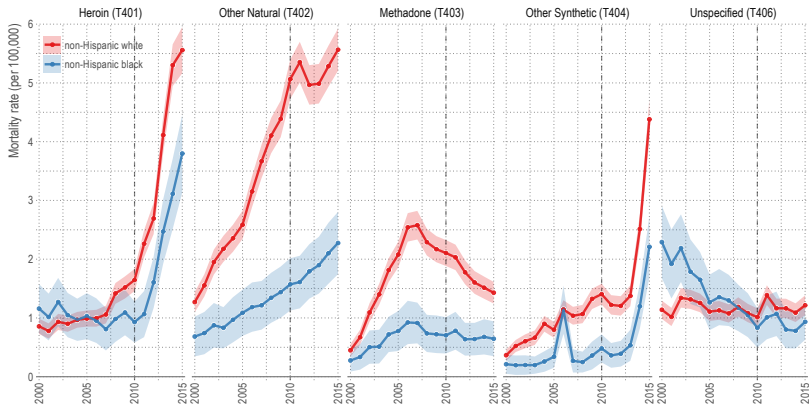
Key findings

Three key observations came out of analysis:

1. Main type of opioids underlying deaths has shifted
2. Age distribution of deaths differs by race
3. Presence of multiple opioids has increased

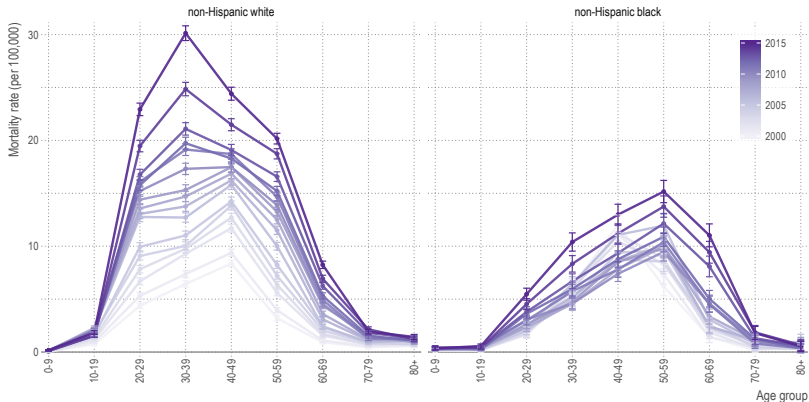
1. Type of opioids underlying deaths has shifted

Mortality rate, by race and underlying type of opioid, 2000-2015

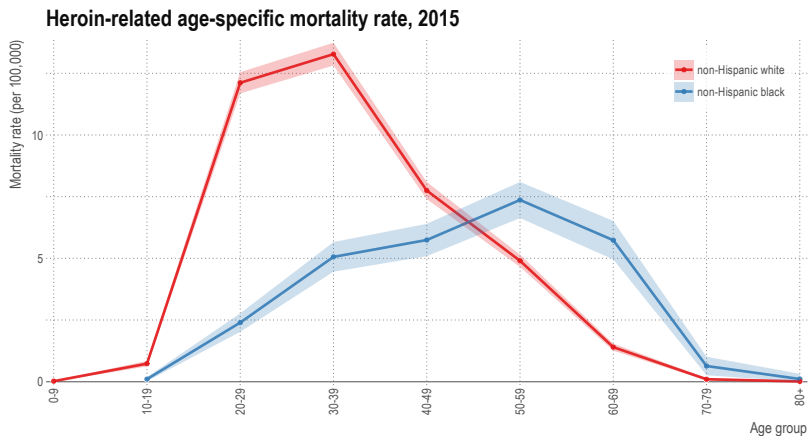


2. Age distribution of deaths differs by race

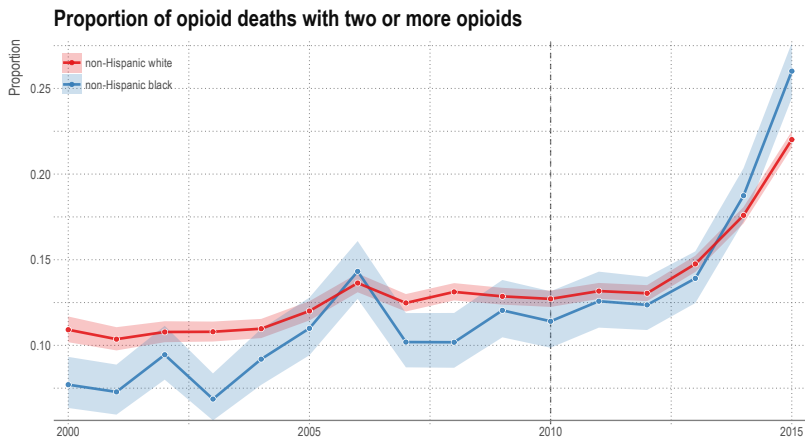
Age-specific opioid-mortality, by race and year



2. Age distribution of deaths differs by race

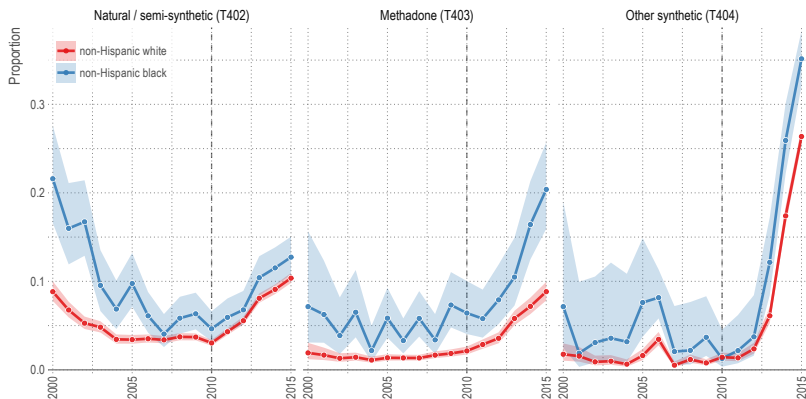


3. Presence of multiple opioids has increased



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Proportion of heroin (T401) deaths involving other opioids



Summary

Rising opioid mortality is an issue for both the white and black populations.

1. The trend in opioid deaths since 2000 has two stages:
 - ▶ 2000–2010: increase for the white population, driven by prescription opioids
 - ▶ 2010 onwards: increases for both the white and black populations, heroin and fentanyl-related opioids
2. Much of the increase in deaths due to heroin and fentanyl has occurred from a mixture of both drugs.
3. White population exhibits a comparatively younger age profile.

Questions / future work

1. How much of increase in heroin mortality is due to increased use versus increased potency?
2. What is driving the differences in age by race?

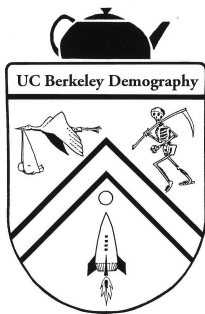
Drawing on:

- ▶ More detailed multiple cause of death data with residence information
- ▶ Data on prescriptions dispensed and drug use (e.g. National Survey of Drug Use and Health)

Thanks!

Code to reproduce graphs can be found here:

<https://github.com/MJAlexander/opioid-mcd>



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