

Maternal Mortality Part 4

Putting U.S. Maternal Mortality into a Global Context & the Persistence of Racial Disparities in the U.S.

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How does the U.S. compare to the rest of the world?



U.S. in a Comparative Context, 1910, 1927, 2020

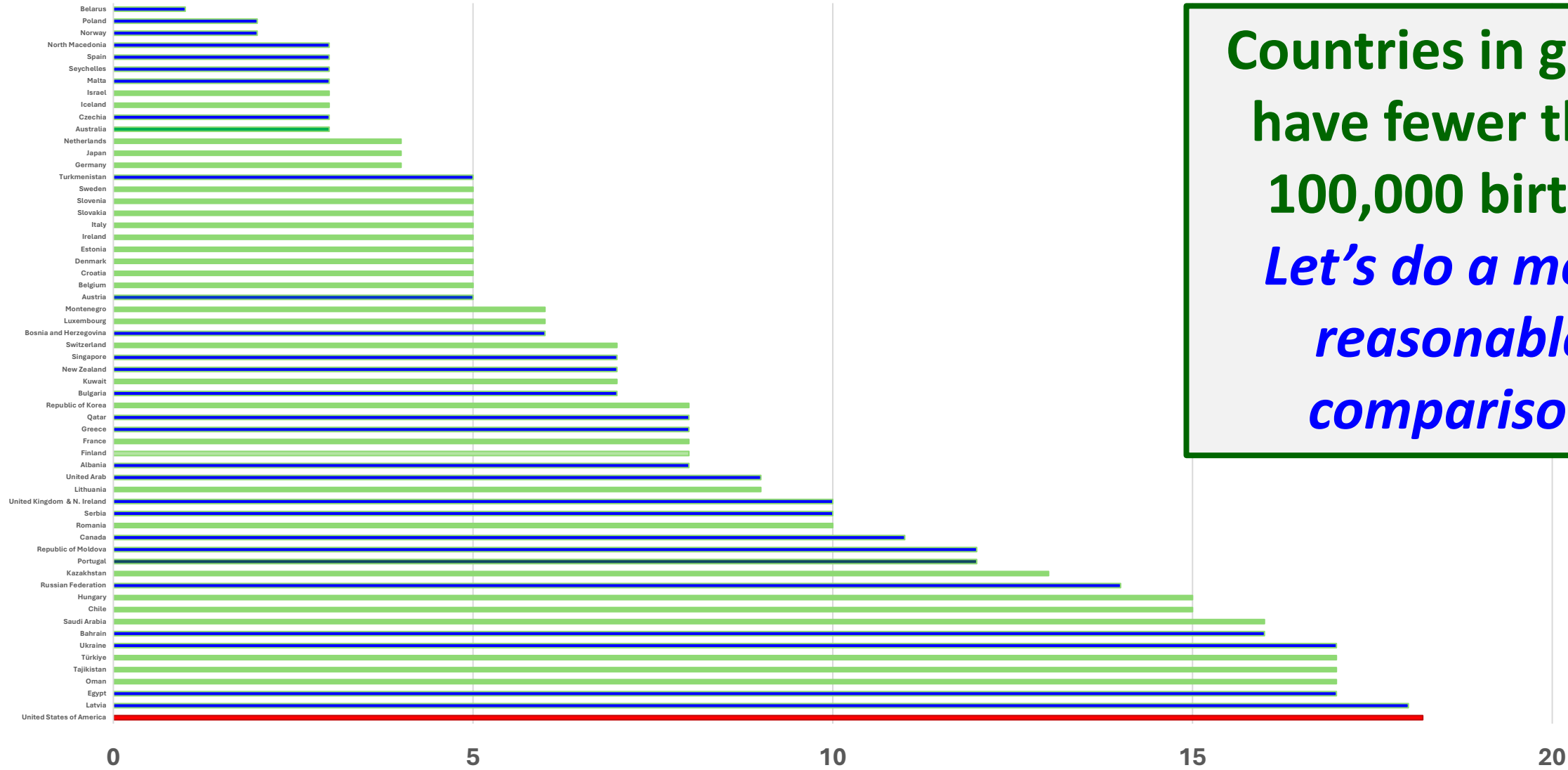
| | 1901-1910 ¹ | 1927 ² | 2020 ³ |
|------------------------------|------------------------|-------------------|-------------------|
| | per 100K births | per 100K births | per 100K births |
| Norway | 290 | 245 | 2 |
| Australia | 530 | 592 | 3 |
| Italy | 270 | 264 | 5 |
| Sweden | 230 | 278 | 5 |
| Northern Ireland | 550 | 480 | 5 |
| New Zealand | 460 | 491 | 7 |
| France | 520 | 287 | 8 |
| England & Wales ⁴ | 410 | 411 | 10 |
| United States ⁵ | 650 | 647 | 24 |

Sources & Notes:

1. Meigs. Maternal Mortality in U.S. & other countries. 1917; 2. Tandy. Comparability of Maternal Mortality Rates in the United States and Certain Foreign Countries. 1933; 3. WHO. Trends in Maternal Mortality, 2000-2020; 4. UK rate in 2020; 5. Based on 10 reporting areas (CT,ME,MA,MI,NH,PN,RI,VT,NYC, DC) in 1910 & about 90% of all births in 1927.

Maternal Mortality Ratios (per 100,000 births), 2020

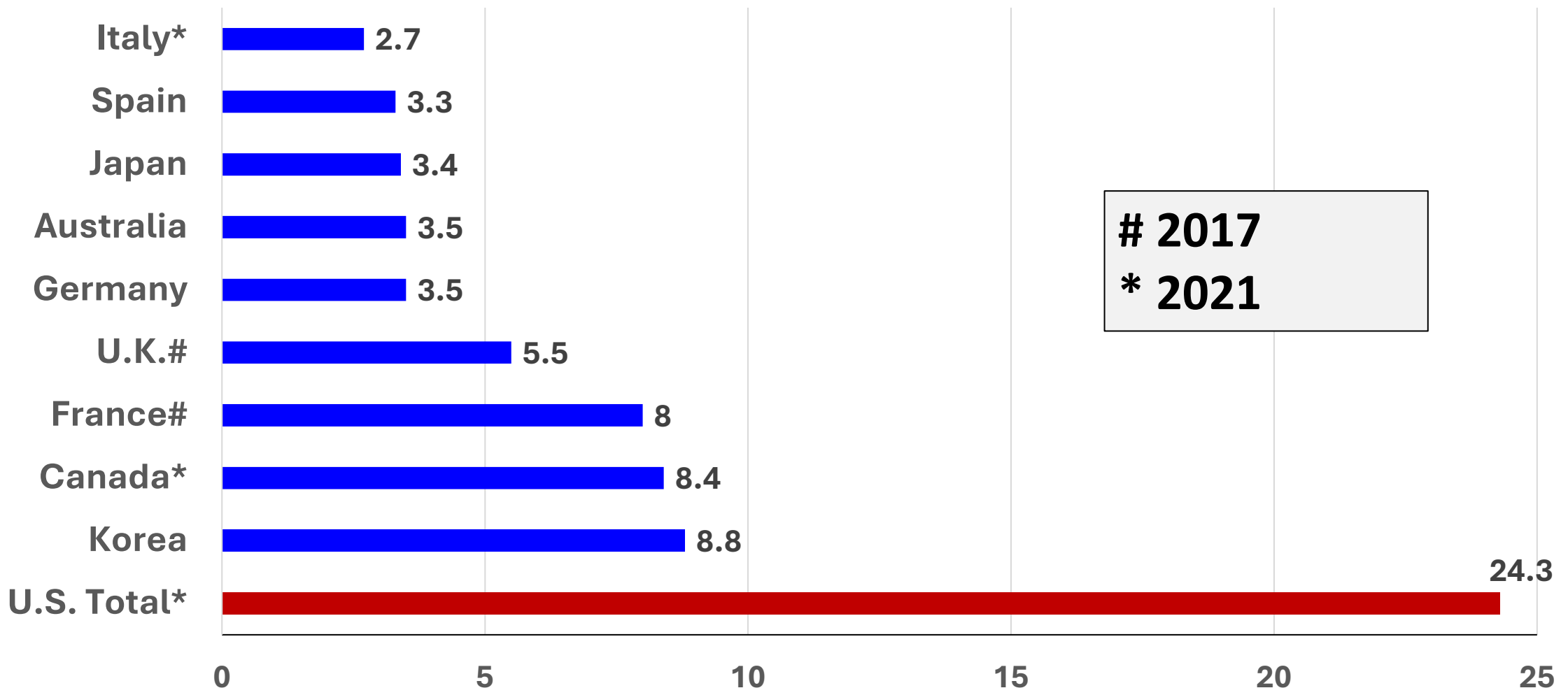
Using the most conservative measure (PMSS) we have of U.S. maternal mortality



Countries in green have fewer than 100,000 births.
Let's do a more reasonable comparison



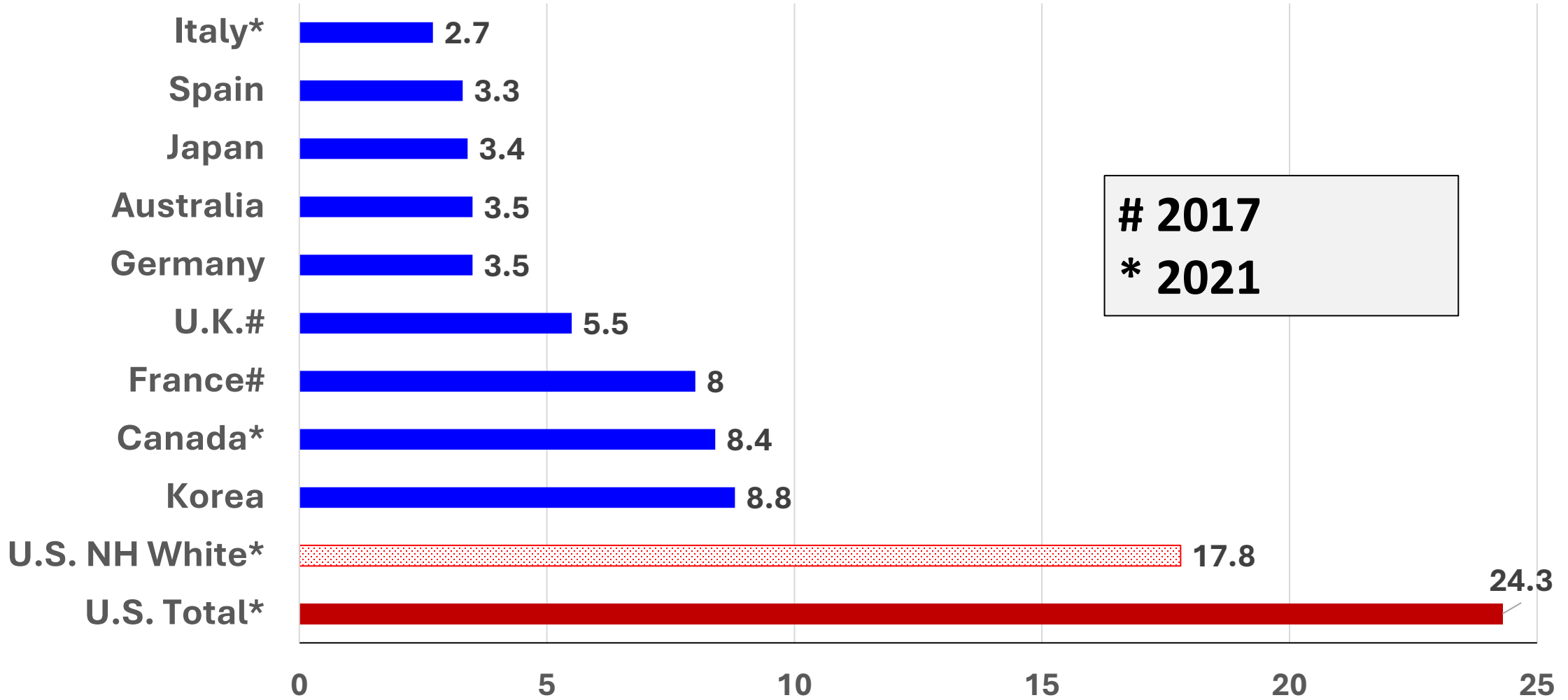
U.S. Maternal Mortality Ratio (per 100,000 births) Compared to Industrialized Countries with 300,000+ births, 2021-22



Source: OECD Health Data 2024 & U.S. Pregnancy Related Mortality System.



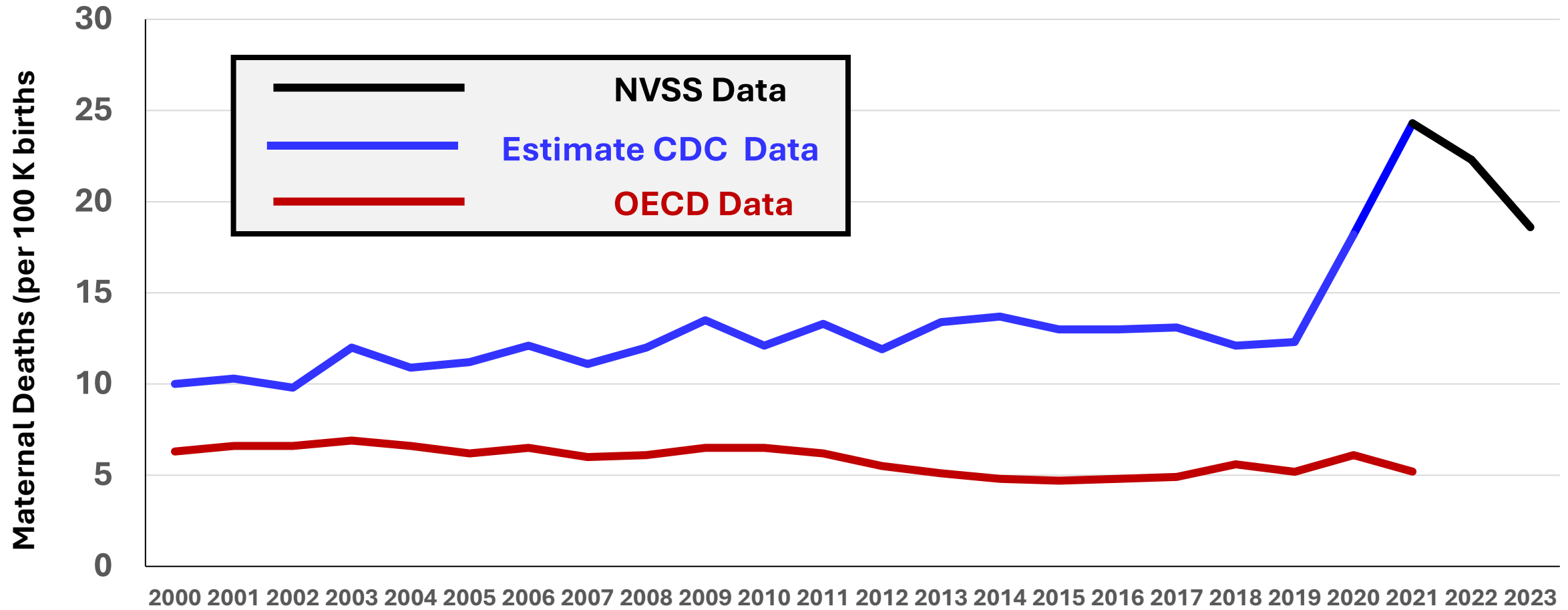
U.S. Maternal Mortality Ratio (per 100,000 births)* Compared to Industrialized Countries with 300,000+ births, 2021-22



2017
* 2021



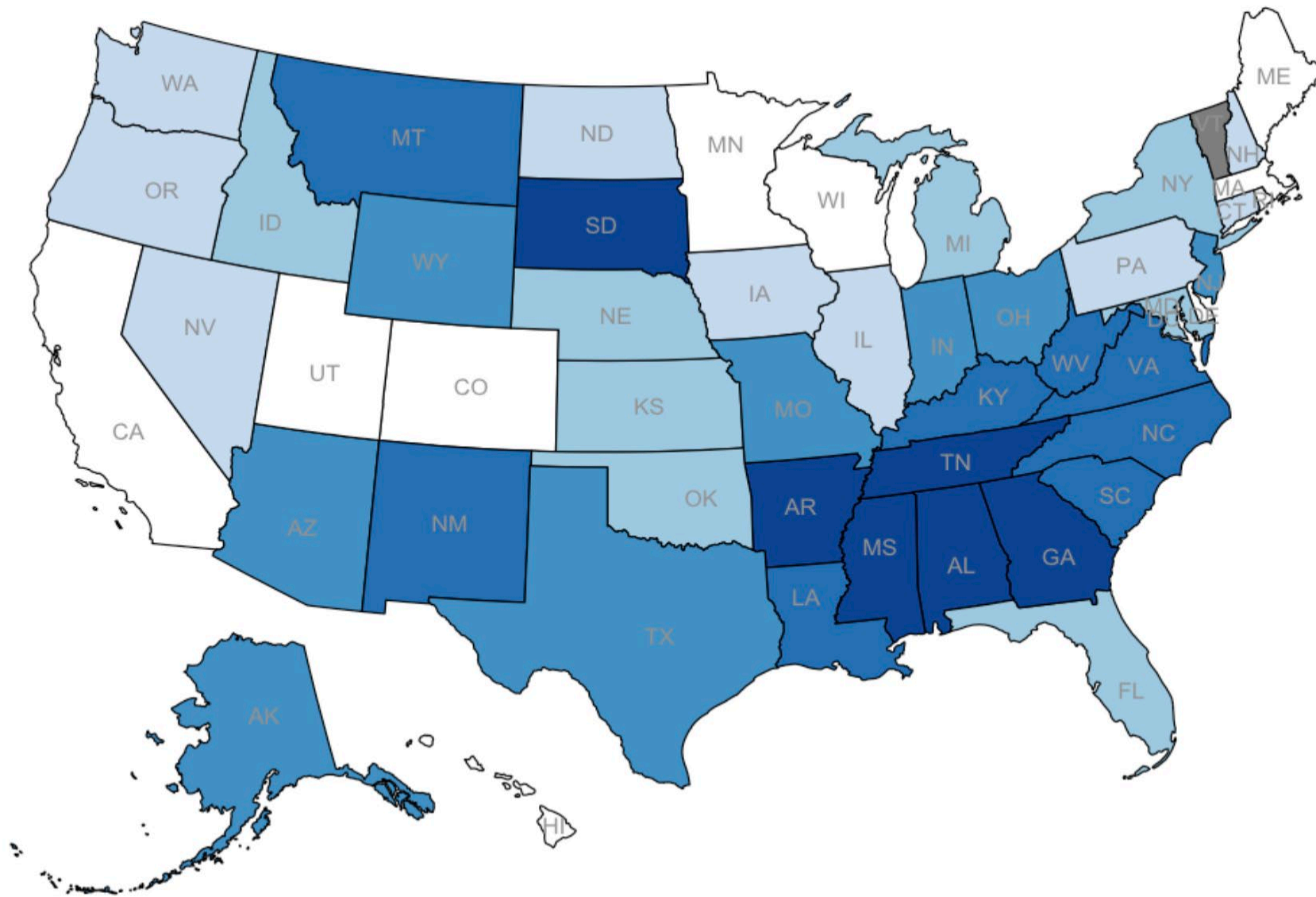
Maternal Mortality Ratio (per 100K births), 2000-2023, U.S. & Comparable Countries*



* Countries with **300,000+** births (2019): Australia, Canada, France, Germany, Italy, Japan, S. Korea, Spain, United Kingdom

Sources: OECD Health Data 2024; & U.S. Estimated from NVSS & Pregnancy Mortality Surveillance System

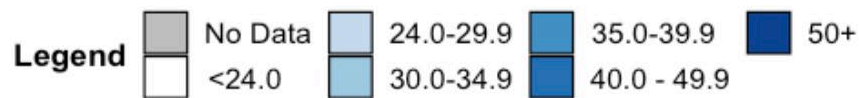
www.birthbythenumbers.org



Pregnancy Related Mortality[#] Ratios, U.S. States*, 2018-22

Deaths during pregnancy through 1 year postpartum

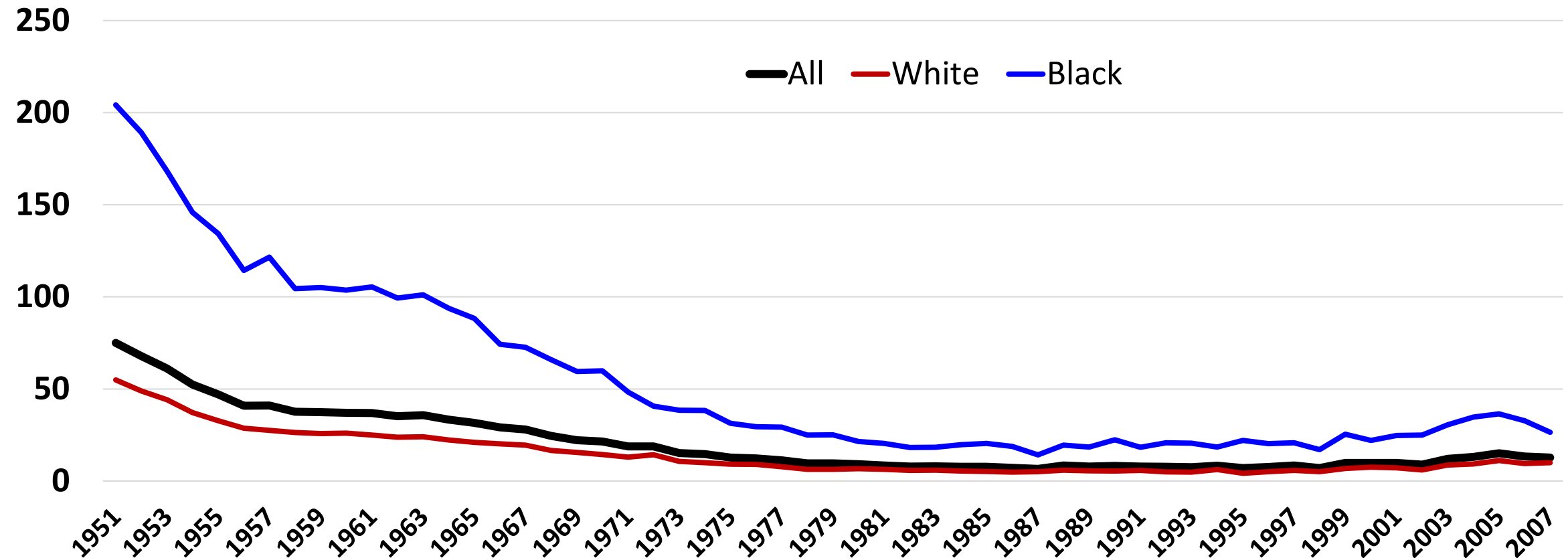
* States with < 10 pregnancy related deaths, 2018-2022, are excluded from reporting



The Persistence of Racial Disparities

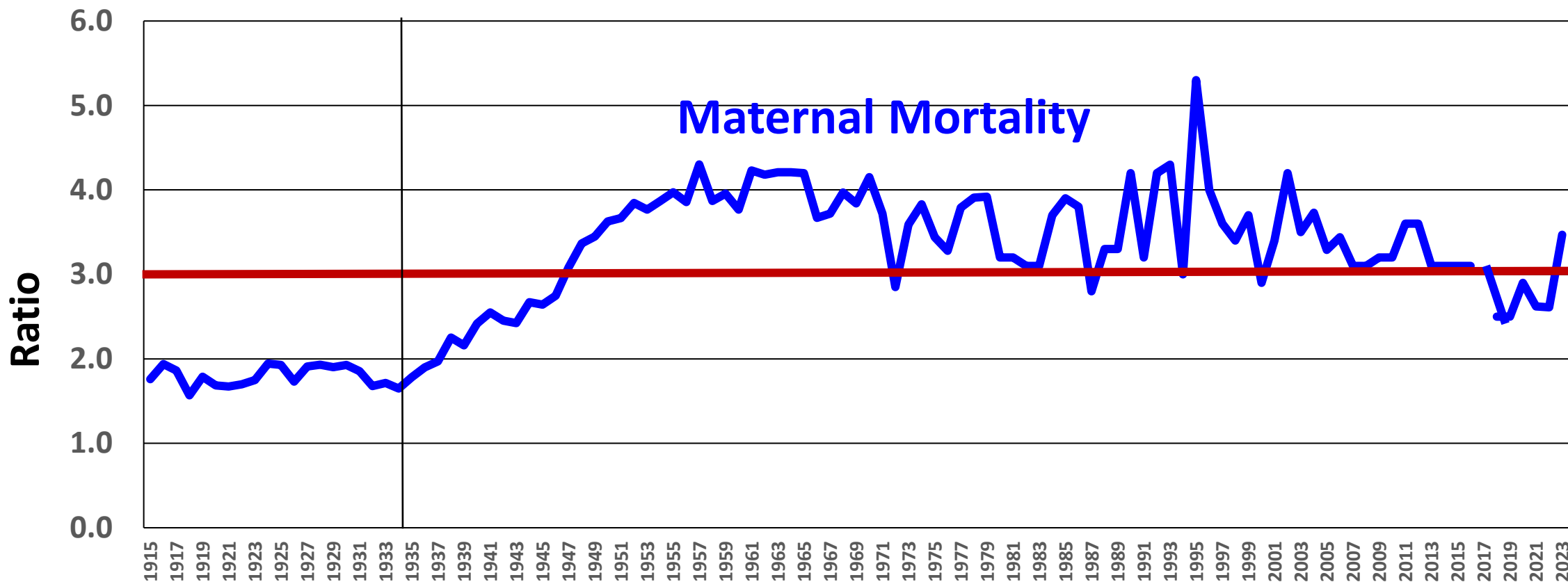


U.S. Maternal Mortality (per 100,000 live births), 1951-2007 by Race



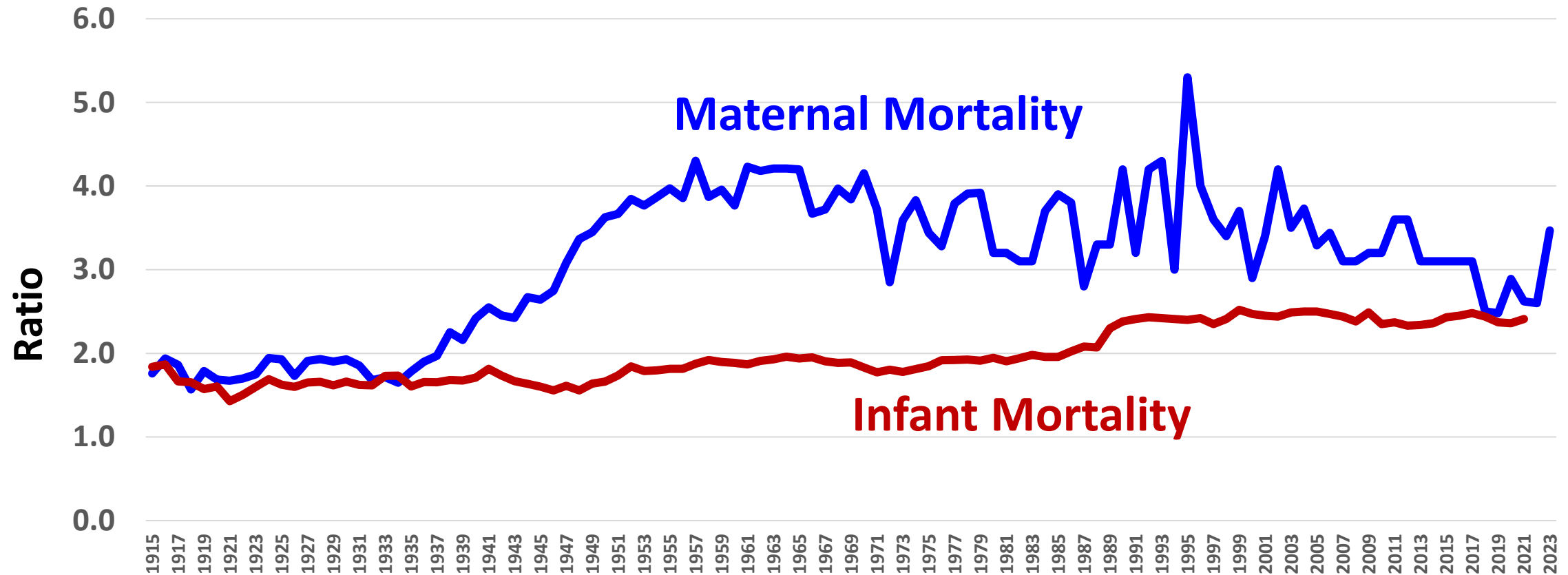
Source: NCHS. Maternal Mortality and Related Concepts. Vital & Health Statistics. Series 33; #3. & annual data reports. 1915-1960 data from NCHS. *Vital Statistics Rates In The United States 1940-1960*. NOTE: Shifts in measurement (e.g. not all states were part of registration system prior to 1933; infant race was based on race of the child until 1980 & then race of the mother post 1980) accounts for some of the variation over time. 2007-2016 based on 2 year estimates of the pregnancy related mortality rate: Petersen E. *MMWR*.9/6/19.

Black to White Ratios, U.S. Maternal Mortality, 1915-2023



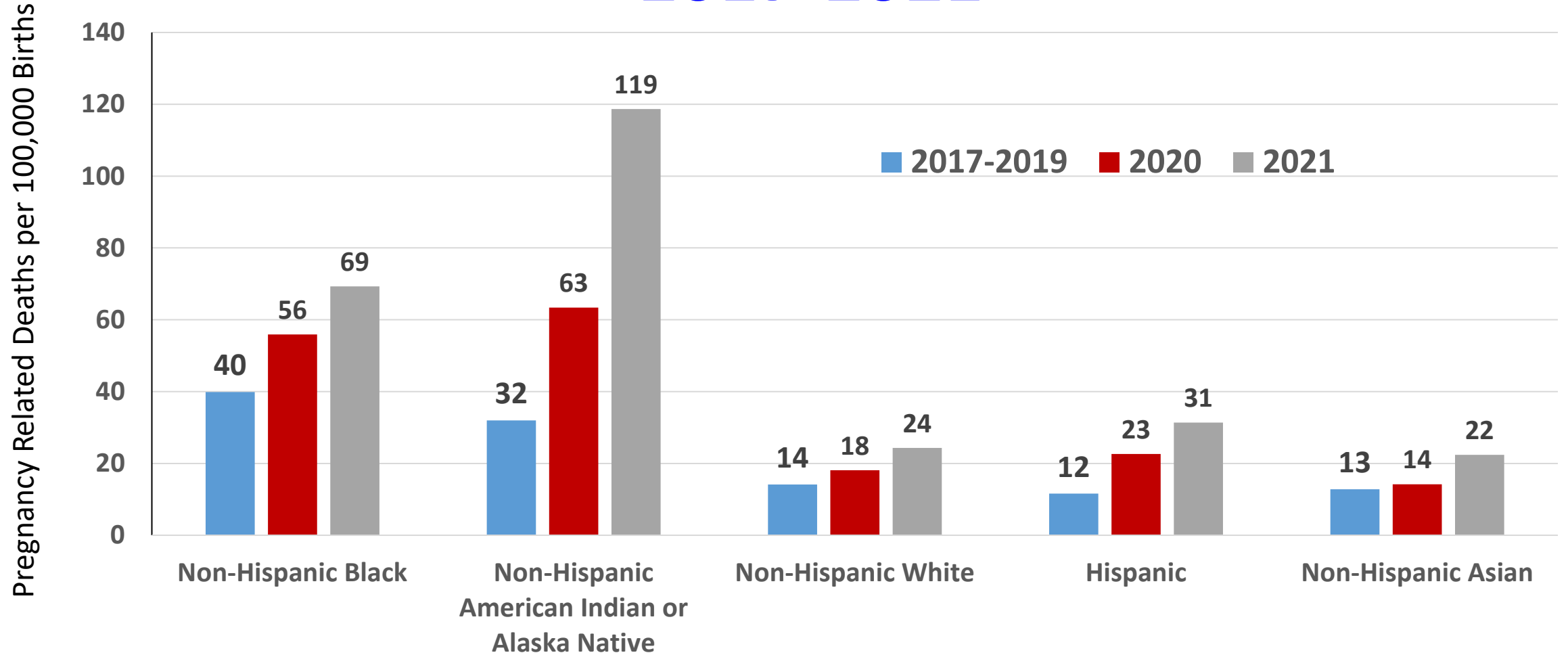
Source: NCHS. Maternal Mortality and Related Concepts. Vital & Health Statistics. Series 33; #3. & annual data reports. 1915-1960 data from NCHS. *Vital Statistics Rates In The United States 1940-1960*. NOTE: Shifts in measurement (e.g. not all states were part of registration system prior to 1933; infant race was based on race of the child until 1980 & then race of the mother post 1980) accounts for some of the variation over time. 2007-2016 based on 2 year estimates of the pregnancy related mortality rate: Petersen E. *MMWR*.9/6/19.

Black to White Ratios, U.S. Infant & Maternal Mortality, 1915-2023



Source: NCHS. Maternal Mortality and Related Concepts. Vital & Health Statistics. Series 33; #3. & annual data reports. 1915-1960 data from NCHS. *Vital Statistics Rates In The United States 1940-1960*. NOTE: Shifts in measurement (e.g. not all states were part of registration system prior to 1933; infant race was based on race of the child until 1980 & then race of the mother post 1980) accounts for some of the variation over time. 2007-2016 based on 2 year estimates of the pregnancy related mortality rate: Petersen E. *MMWR*.9/6/19.

U.S. Pregnancy Related Mortality by Race, 2017-2021



Source: CDC Pregnancy Related Mortality Surveillance System.

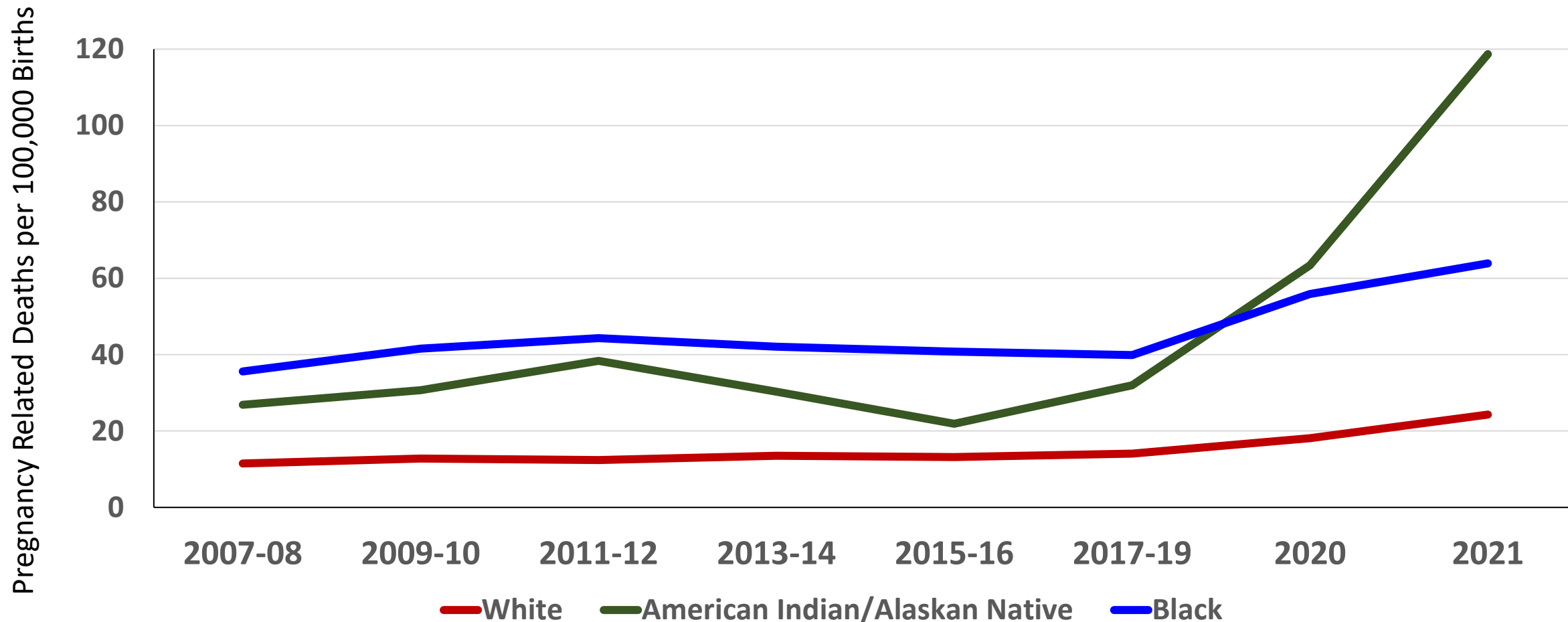
https://www.cdc.gov/maternal-mortality/php/pregnancy-mortality-surveillance/?CDC_AAref_Val=https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm



U.S. NVSS Maternal Mortality, by Race/Ethnicity, 2018-2023

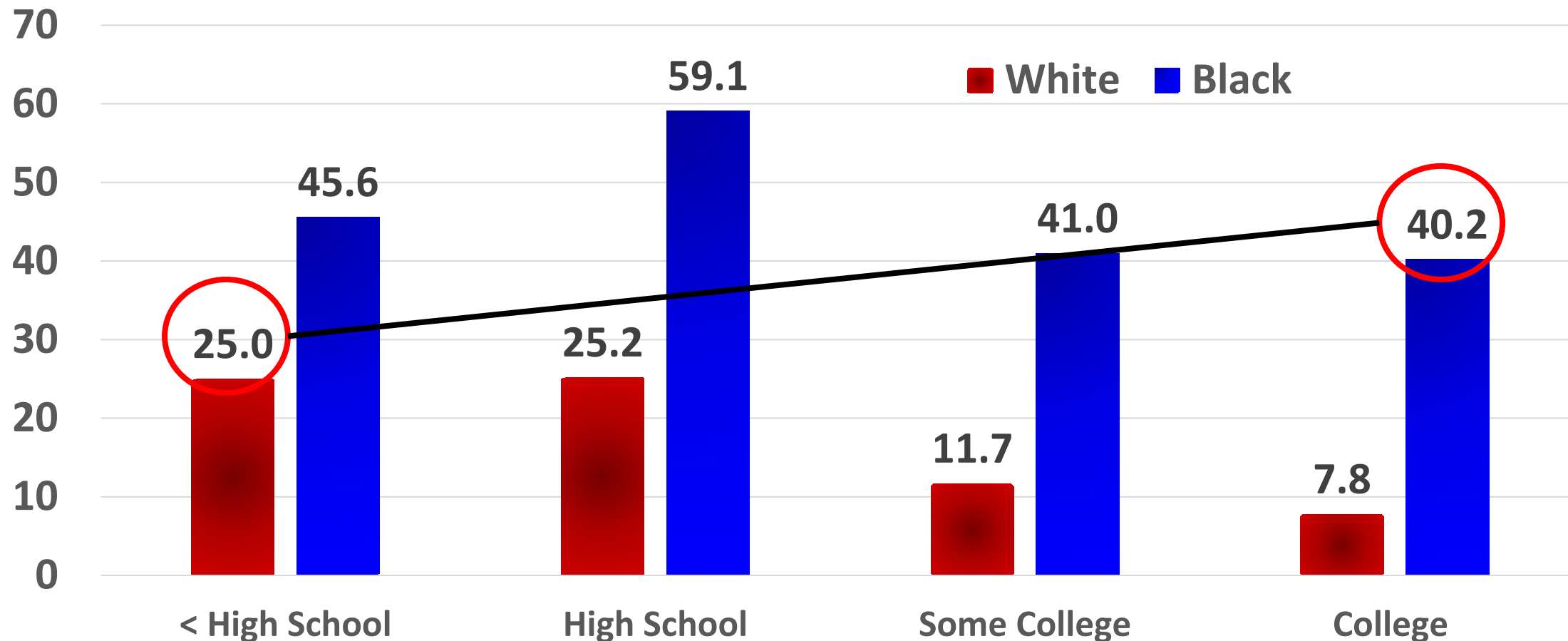
| | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|------------------------|------|------|------|-------|------|------|
| Non-Hisp. White | 14.9 | 17.9 | 19.1 | 26.6 | 19.0 | 14.5 |
| Non-Hisp. Black | 37.3 | 44.0 | 55.3 | 69.9 | 49.5 | 50.3 |
| Hispanic | 11.8 | 12.6 | 18.2 | 28.0 | 16.9 | 12.4 |
| Non-Hisp Asian | 13.3 | 13.8 | 12.3 | 16.8 | 13.2 | 10.7 |
| Non-Hisp. AIAN | * | 49.2 | 48.5 | 118.7 | 46.7 | 40.7 |
| All | 17.4 | 20.1 | 23.8 | 32.9 | 22.3 | 18.6 |

Pregnancy Related Mortality Ratios (per 100,000 births) by Race/Ethnicity, U.S. 2007-2021.



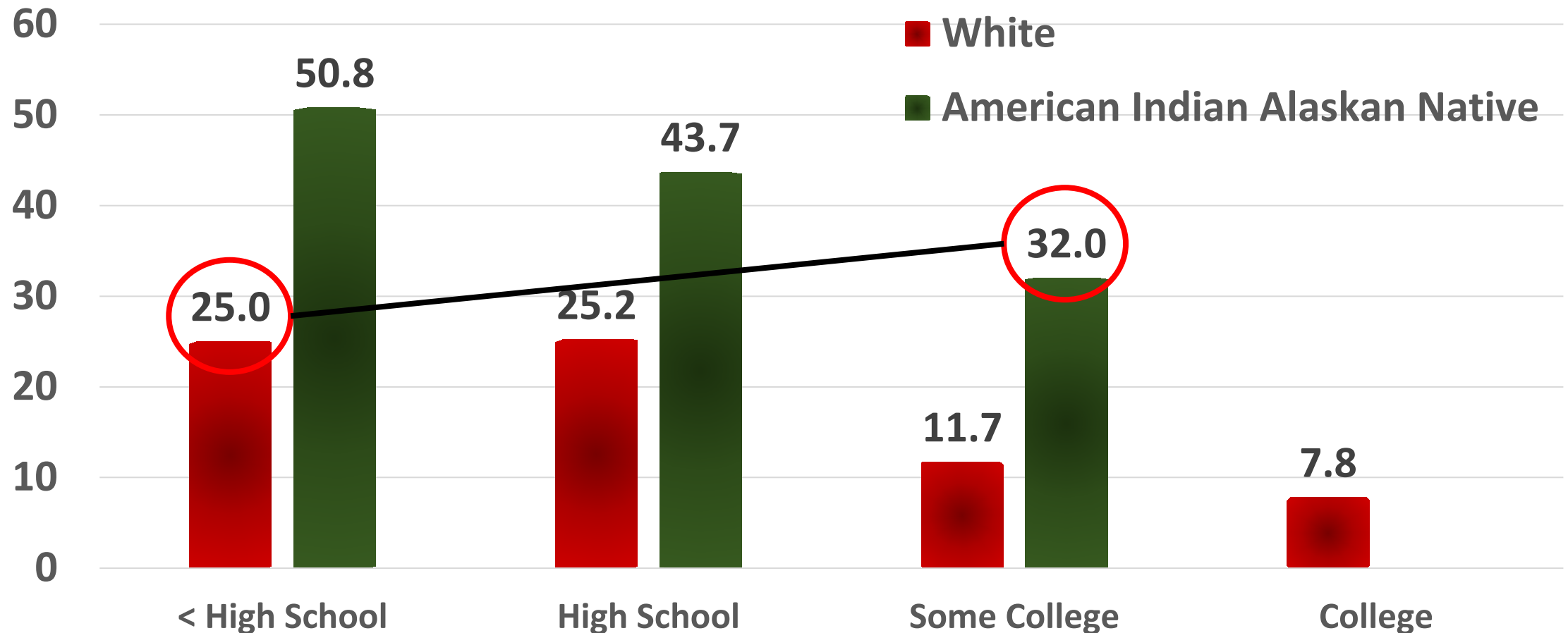
Source: Petersen E. et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — U.S., 2007–2016 . *MMWR*. 9/6/19; 68(35):762-765. & CDC Website (2016-20); <https://www.cdc.gov/maternal-mortality/php/pregnancy-mortality-surveillance/index.html>

Pregnancy-related mortality ratios (per 100,000 live births) by race/ethnicity, U.S. 2007-2016



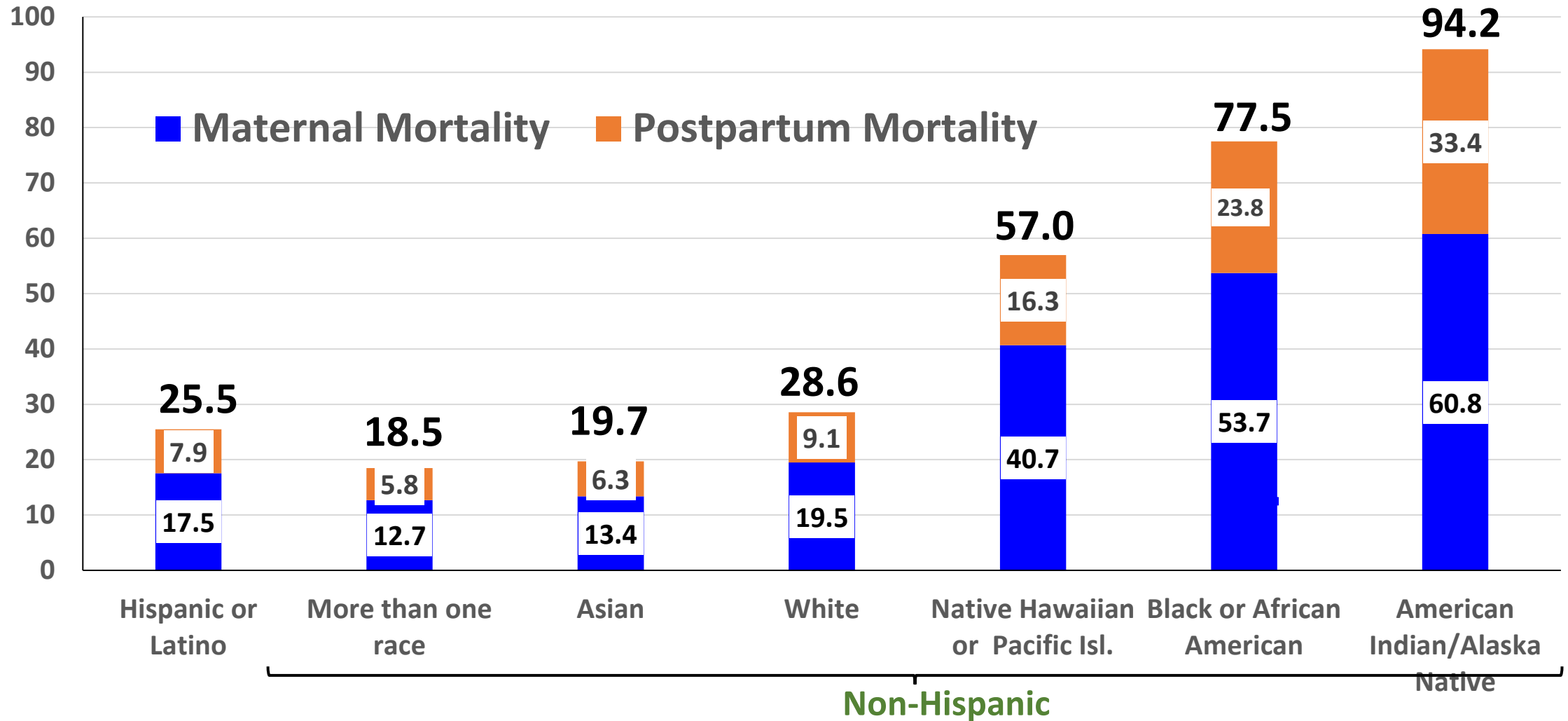
Source: Petersen E et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. *MMWR* 2/7/19; 68 (35): 762-765.

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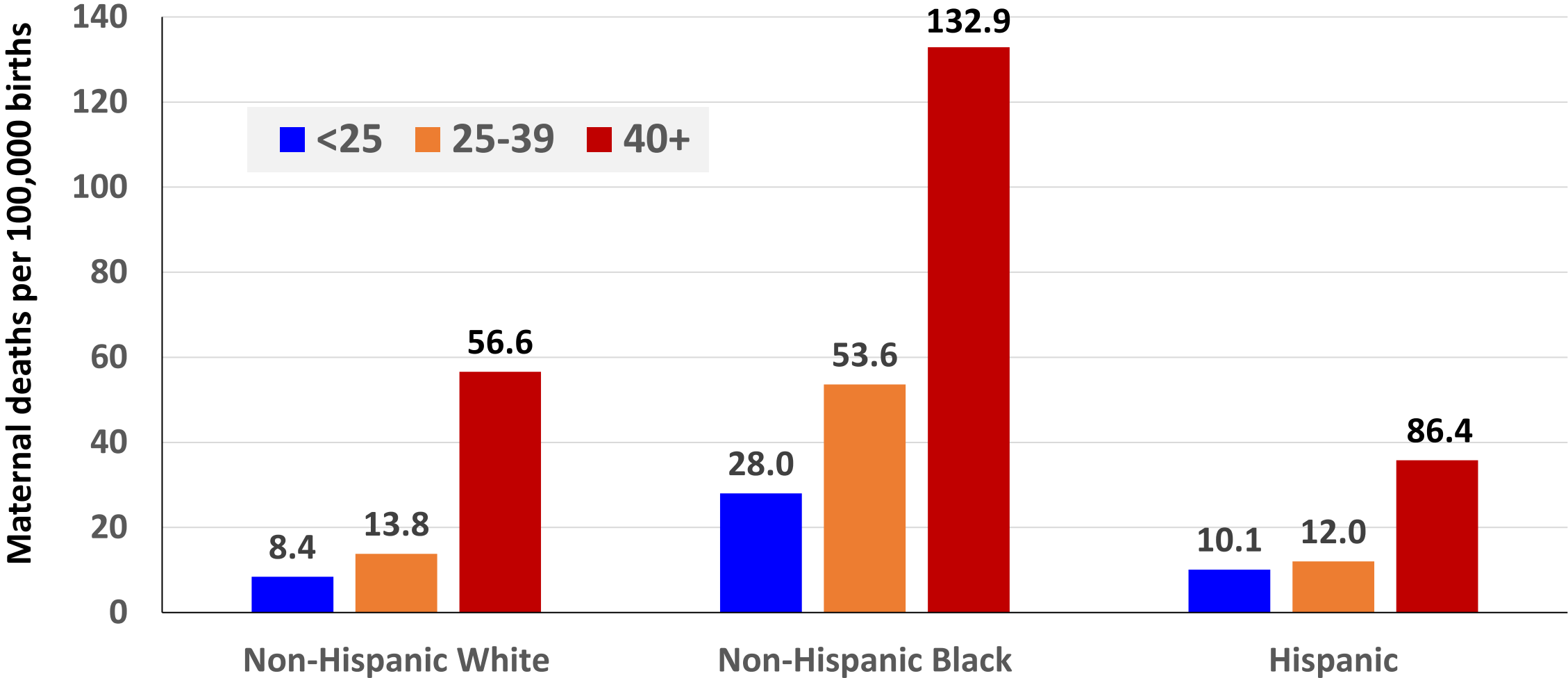


Source: Petersen E et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. *MMWR* 2/7/19; 68 (35): 762-765.

U.S. Maternal and Pregnancy Related Mortality, 2019-2023



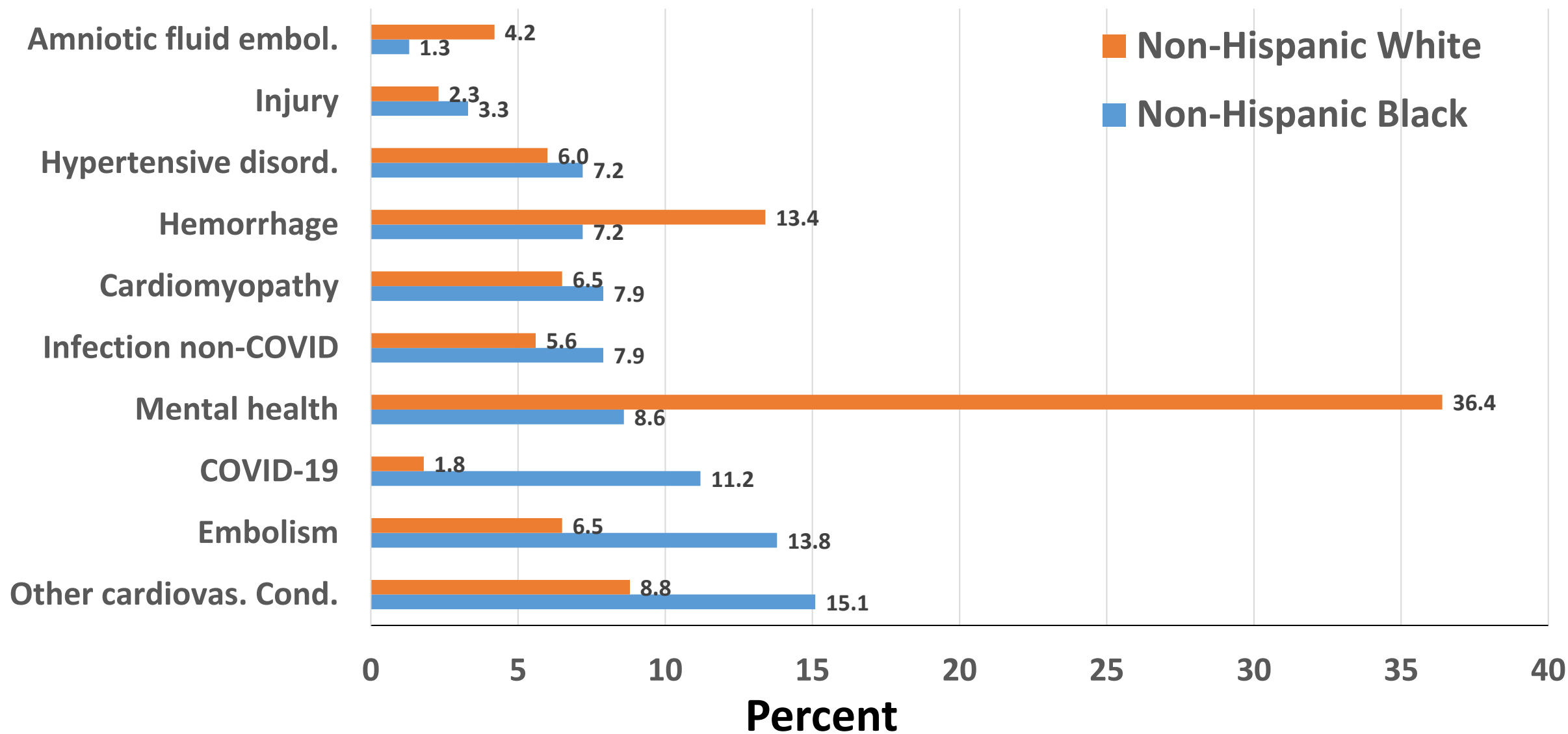
Maternal mortality rates, by race & Hispanic origin and age: United States, 2023



Source: Hoyert DL. Maternal mortality rates in the United States, 2022. NCHS Health E-Stats. 2024.

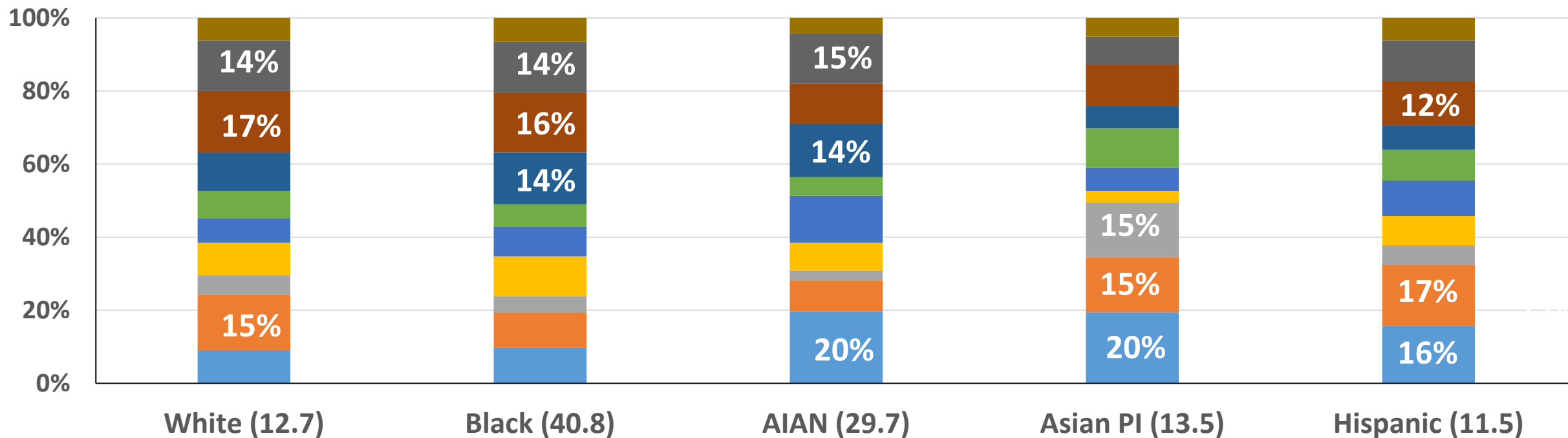


Underlying Causes of Maternal Deaths by Race, Maternal Mortality Review Committees, 38 U.S. States, 2020



Source: Trost SL, Busacker A, Leonard M, et al. Pregnancy-Related Deaths: Data from Maternal Mortality Review Committees in 38 U.S. States, 2020. CDC, U.S. DHHS; 2024. <https://www.cdc.gov/maternal-mortality/php/data-research/index.html#:~:text=Data%20on%20525%20pregnancy%2Drelated,Non%2DHispanic%20Black>

Cause-specific pregnancy-related mortality, by race/ethnicity, U.S., 2007-2016 (%)

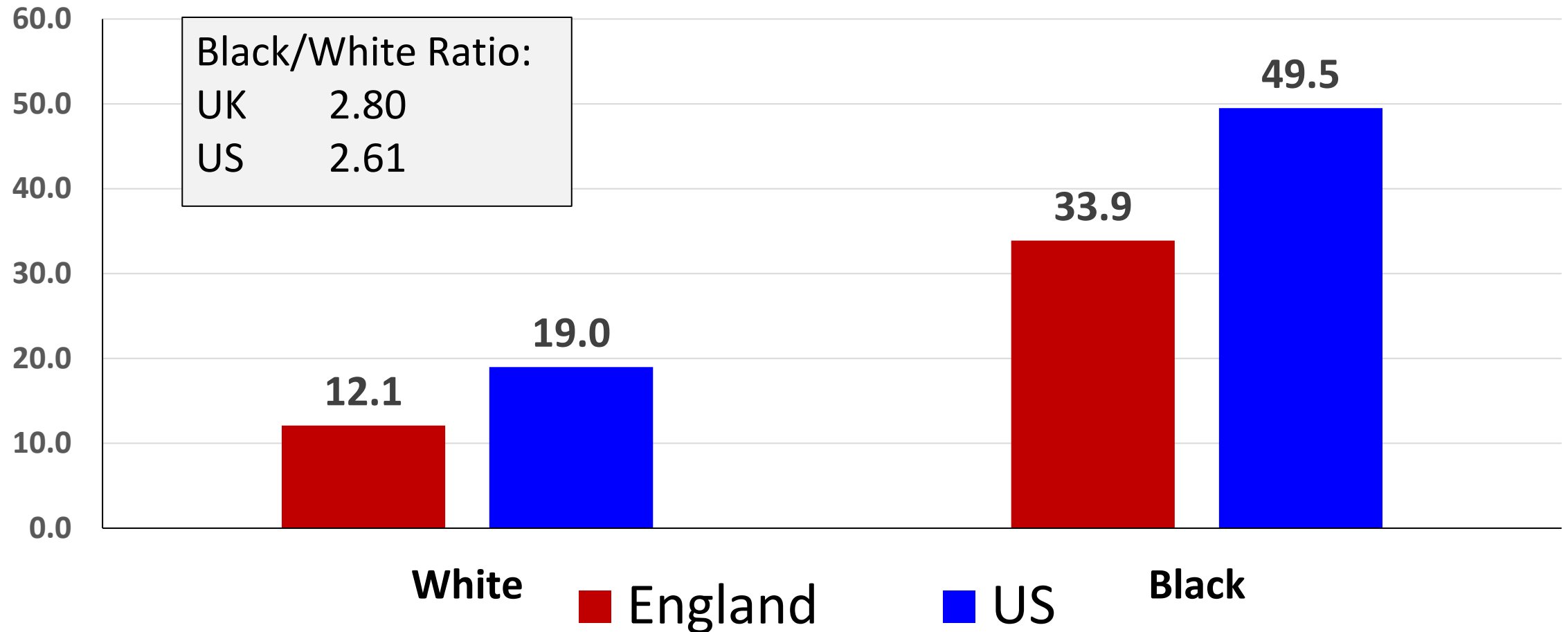


- Hemorrhage
- Infection
- Amniotic Fluid Embolism
- Blood Clots
- Hypertension
- Stroke
- Weak Heart Muscle
- Other Cardiac Condition
- Other NonCardiac Condition
- Other

AIAN – American Indian, Alaskan Native; **Asian PI** – Asian Pacific Islander

Source: Petersen E et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. *MMWR* 2/7/19; 68 (35): 762-765.

Maternal Mortality (per 100,000 births) by Race, U.S. (2022) and England (2020-2022)



Sources: U.S., Adjusted PMSS rate; 2/22/22; MBRRACE-UK. Confidential Enquiries into Maternal Deaths and Morbidity 2019-21. Oxford:NPEU, 2022.

Summary

- Racial disparities in maternal mortality have existing in the U.S. as long as data has been collected.
- The consistency of the disparity with Black maternal mortality ratios 3 to 4 times that of white maternal mortality for decades reflects the lack of progress made in the U.S.
- Presently, the disparity does not reflect SES differences, with maternal education providing no protection for Black mothers.
- The maternal mortality ratios for American Indian/Alaskan natives were also far higher than those for white and Hispanic mothers.