

Maternal Mortality: Racial disparities by state, 2013-2017

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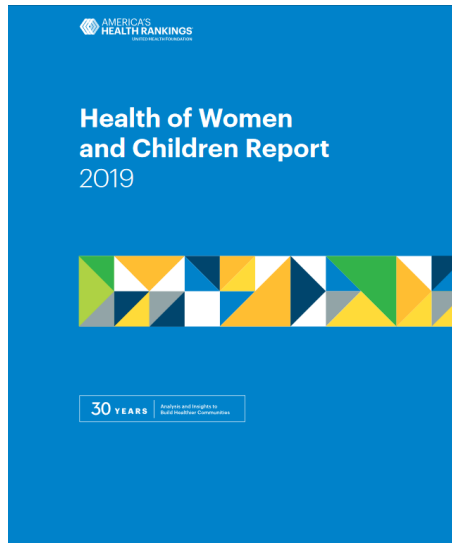
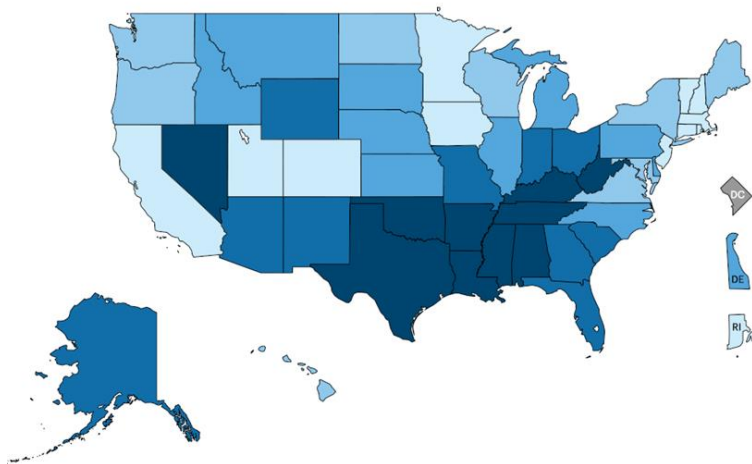
Presenter Disclosures

Elise Parks

- (1) The following personal, professional, and financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

Category of Relationship:

Independent Contractors (contracted research and/or clinical trials) with United Health Foundation



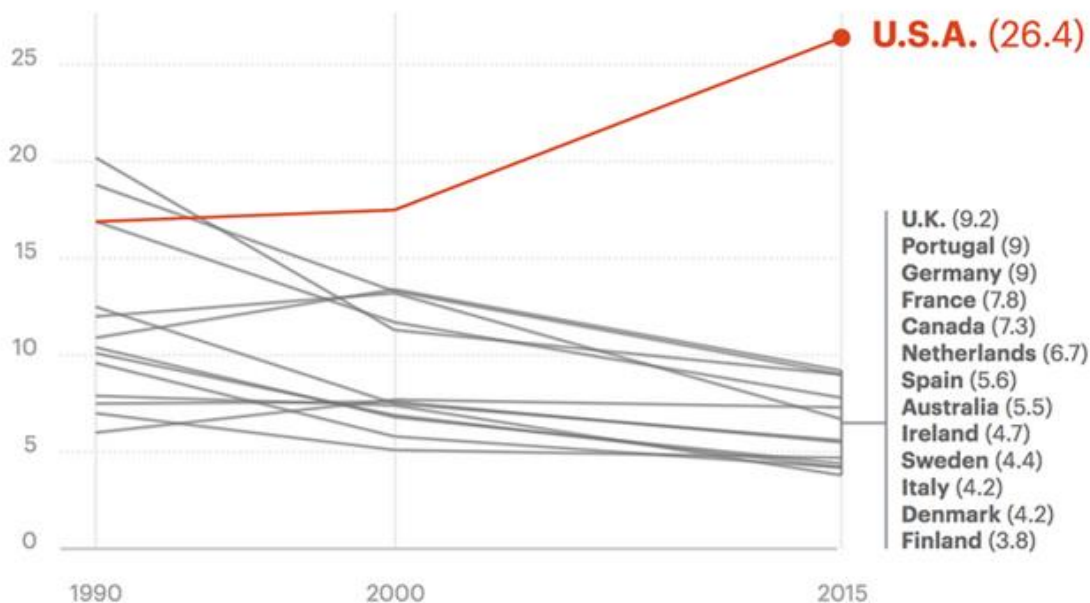
Health of Women and Children Report funded by United Health Foundation

Background

- Maternal mortality is a rising concern
- Trending upwards in the U.S. while declining in other countries^[1]

Maternal Mortality Is Rising in the U.S. As It Declines Elsewhere

Deaths per 100,000 live births



Notes

"Global, regional, and national levels of maternal mortality, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015," *The Lancet*. Only data for 1990, 2000 and 2015 was made available in the journal.

Source: *The Lancet*

Credit: Rob Weychert/ProPublica

Background

- Black-white racial disparity persists
 - For the past five decades, black women's risk of pregnancy-related death has been nearly four times greater than that of white women.^[2]
 - Independent of income and education
- Around 63% of maternal deaths are preventable.^[3]

Research Question

- State-level variation:
 - What is the range of disparity across states?
 - Do any states not have a black-white disparity?
 - Which states have the greatest and least disparity between black and white maternal mortality ratios?

Methods

Maternal mortality definition:

- *The number of deaths within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy from any cause related to, or aggravated by, pregnancy or its management excluding accidental or incidental causes per 100,000 live births.*
- ICD-10 Codes: A32, all O codes except late maternal deaths (O96 and O97)

Methods

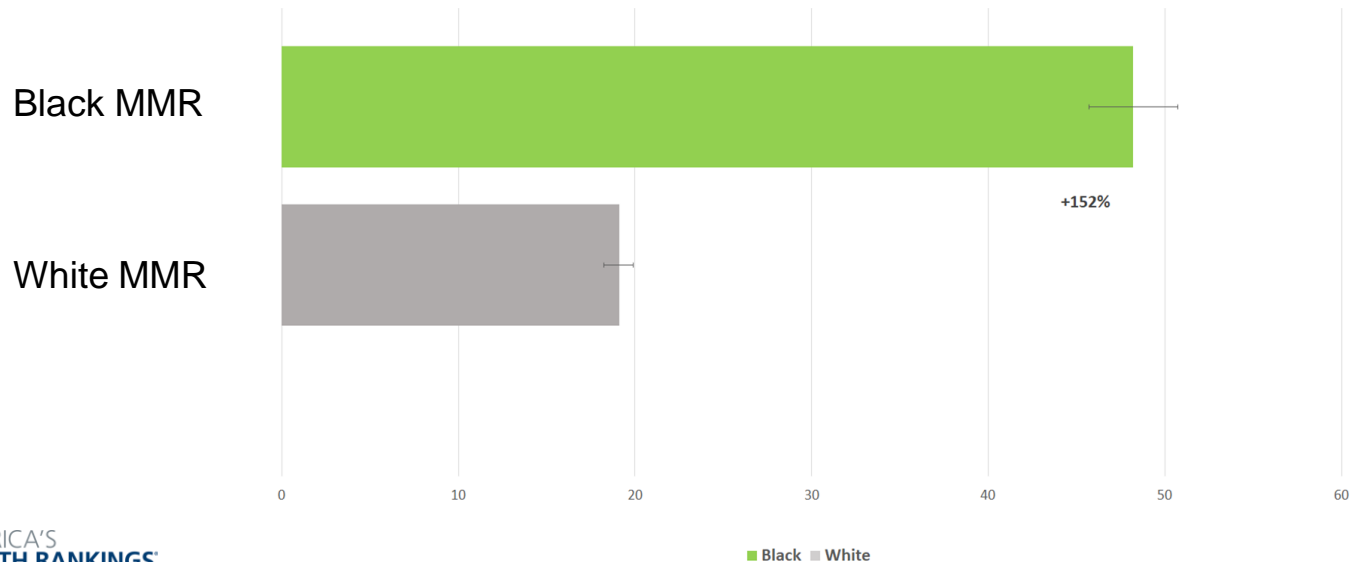
- 2013-2017 National Vital Statistics System CDC WONDER
- Included states with at least 10 deaths over the 5-year period
- Non-Hispanic black and non-Hispanic white

Methods

- Maternal mortality ratios (MMRs) and 95% confidence intervals
 - (number of maternal deaths/100,000 live births)
- Maternal mortality black-to-white disparity ratios
 - (black MMR/white MMR)

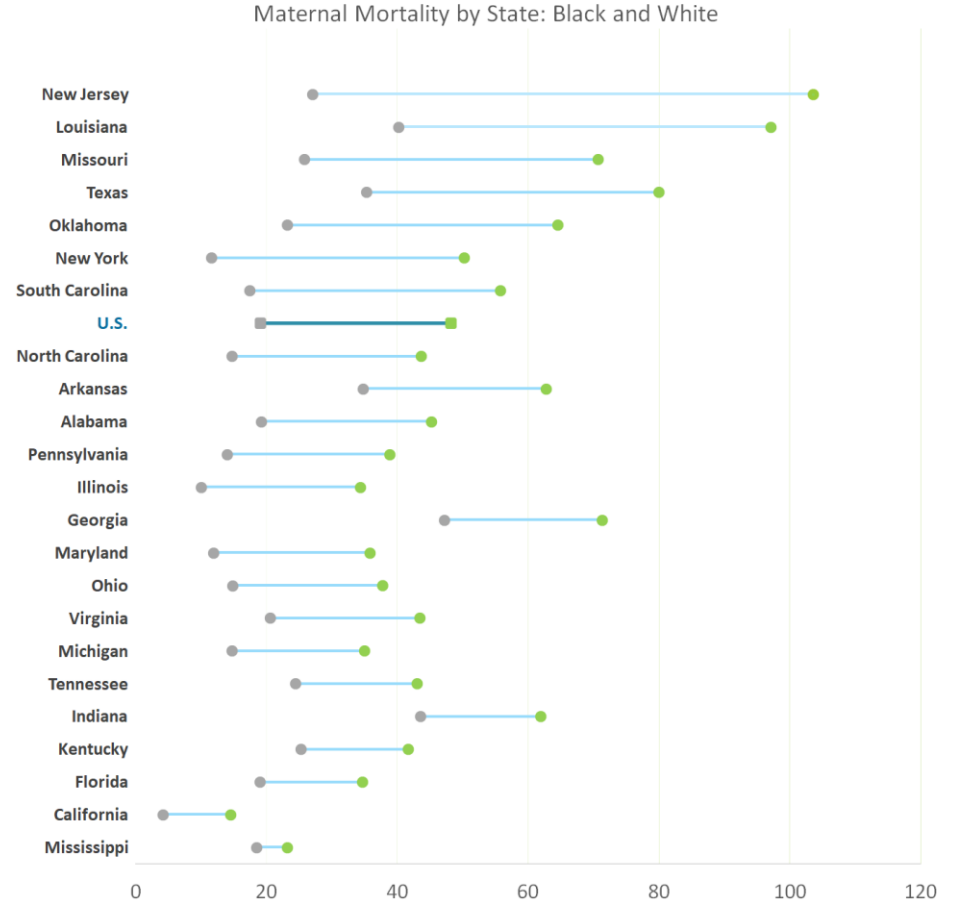
Results

- US: The maternal mortality ratio is **2.5x higher** among black women than white women
 - 48.2 vs 19.1 deaths per 100,000 births



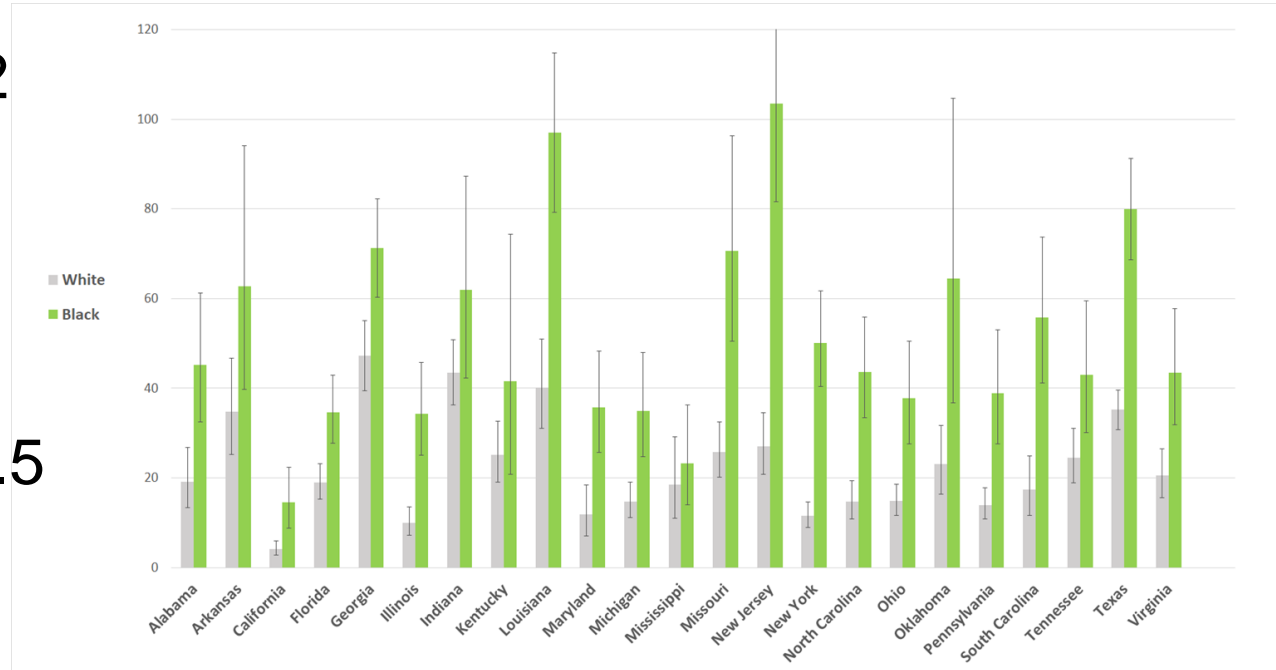
Results

- 23 states had at least 10 deaths for both races
- Black MMR higher in every state



Results

- White MMR ranged from 4.2 in CA to high of 47.2 in GA
- Black MMR ranged from 14.5 in CA to high of 103.6 in NJ



Results

DISPARITY RATIOS:

1) New York:

- 50.1 vs 11.5 deaths/100,000 live births

23) Mississippi:

- 23.2 vs 18.5 deaths/100,000 live births

New York	4.3
New Jersey	3.8
California	3.5
Illinois	3.4
South Carolina	3.2
Maryland	3.0
North Carolina	3.0
Oklahoma	2.8
Pennsylvania	2.8
Missouri	2.7
Ohio	2.6
U.S.	2.5
Louisiana	2.4
Michigan	2.4
Alabama	2.4
Texas	2.3
Virginia	2.1
Florida	1.8
Arkansas	1.8
Tennessee	1.8
Kentucky	1.6
Georgia	1.5
Indiana	1.4
Mississippi	1.3

Conclusions

- No state is without a black-white disparity in maternal mortality
- When addressing the MMR, states must consider the role of structural, overt, and covert racism in maternal deaths and near-misses
- It's not race, it's...

Racism

Limitations

Data quality concerns with NVSS:

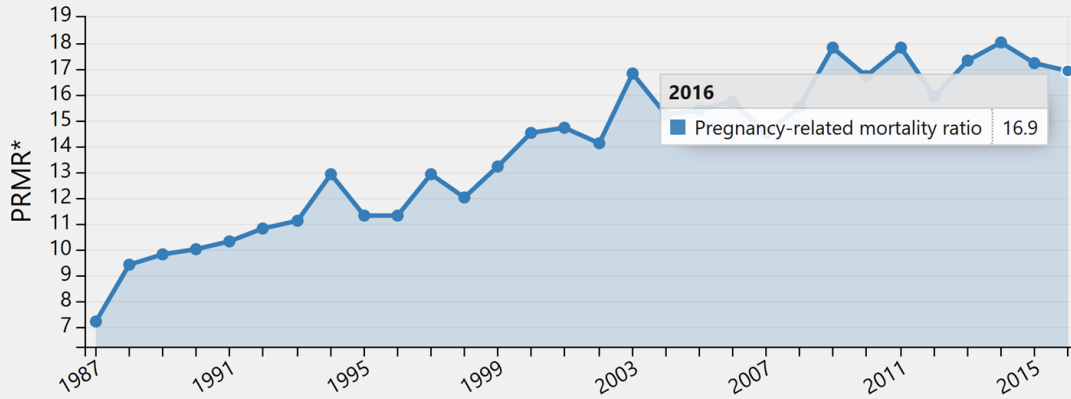
- Pregnancy checkbox addition to death certificate may have resulted in over-estimation of MMR
 - Ideal data would be from MMRCs; but is restricted
- Between-state comparison isn't recommended given differences in implementation of checkbox and death certificate recording

Limitations

- Confusion around maternal mortality statistics:
 - Other definitions: Pregnancy-related deaths (CDC)
 - Other data sources:
 - Pregnancy Mortality Surveillance System
 - State maternal mortality review committees

Limitations

Trends in pregnancy-related mortality in the United States: 1987-2016



*Number of pregnancy-related deaths per 100,000 live births per year

■ Pregnancy-related mortality ratio

SOURCE:

<https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm>

Other resources

- Black Mama's Matter Alliance
 - <https://blackmamasmatter.org/resources/literature/>
- Alliance for Innovation on Maternal Health (AIM)
 - <https://safehealthcareforeverywoman.org/patient-safety-bundles/>

Questions?

Thank You.

Explore data.

Gain insights.

Learn more about your state.

VISIT: www.AmericasHealthRankings.org

- 1) Alkema, L., Chou, D., Hogan, D., Zhang, S., Moller, A. B., Gemmill, A., ... & Say, L. (2016). Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. *The Lancet*, 387(10017), 462-474.
- 2) Building U.S. Capacity to Review and Prevent Maternal Deaths. (2018). Report from nine maternal mortality review committees. Retrieved from http://reviewtoaction.org/Report_from_Nine_MMRCs
- 3) Tucker MJ, Berg CJ, Callaghan WM, Hsia J. The Black-White disparity in pregnancy-related mortality from 5 conditions: differences in prevalence and case-fatality rates. *American Journal of Public Health*. 2007 Feb;97(2):247-51.