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APHA
AMERICAN PUBLIC HEALTH ASSOCIATION

Quality, Equity, and Maternal Health

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'I Can't Breathe': Peaceful Demonstrators Continue To Rally Over George Floyd's Death

June 3, 2020 · 9:54 PM ET

npr

Not listened to

HANNAH HAGEMANN

SCOTT NEUMAN

Nothing Protects Black Women From Dying in Pregnancy and Childbirth

Not education. Not income. Not even being an expert on racial disparities in health care.

by **Nina Martin**, ProPublica, and **Renee Montagne**, NPR, Dec. 7, 2017, 8 a.m. EST

PROPUBLICA TOPICS ▾ SERIES ▾ ABOUT

Shalon MauRene Irving was a lieutenant commander org/ e uniformed ranks of the U.S. Public Health

LOST MOTHERS

How Hospitals Are Failing Black Mothers

A ProPublica analysis shows that women who deliver at hospitals that disproportionately serve black mothers are at a higher risk of harm.

by **Annie Waldman**, Dec. 27, 2017, 8 a.m. EST

Erica Garner Andrew Burton/ Getty Images

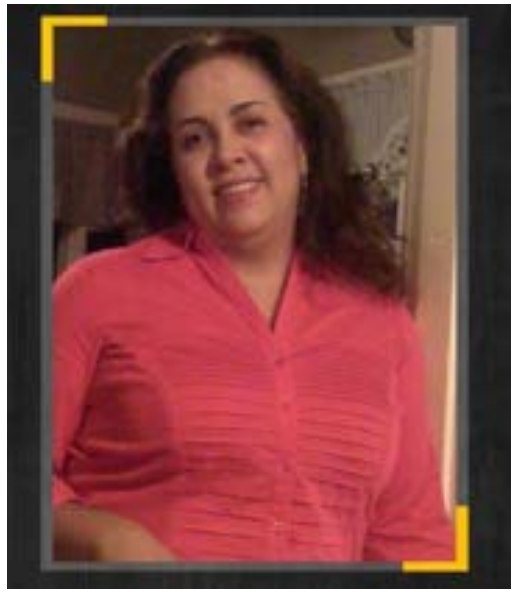
Racism Linked to High Maternal and Infant Mortality for Native Women

"We stopped keeping statistics on the number of Native moms and babies that are lost in our region; it was just too upsetting."

Avana Byrd | JUL 10. 2018 1:12PM EDT

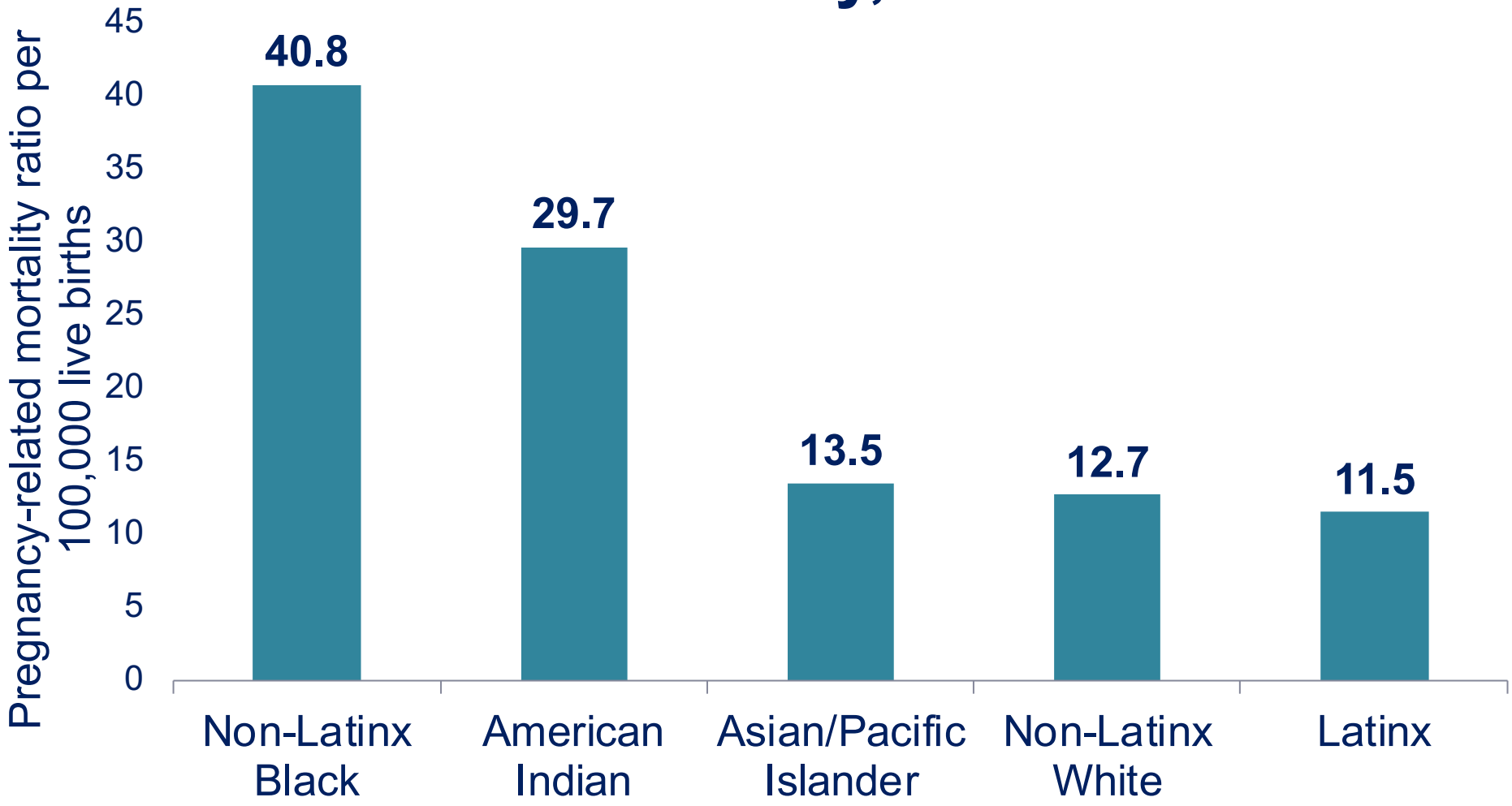
COLORLINES PUBLISHED BY race forward

HOT TOPICS ARTS & CULTURE CRIMINALIZATION TRUMP PRESIDENCY



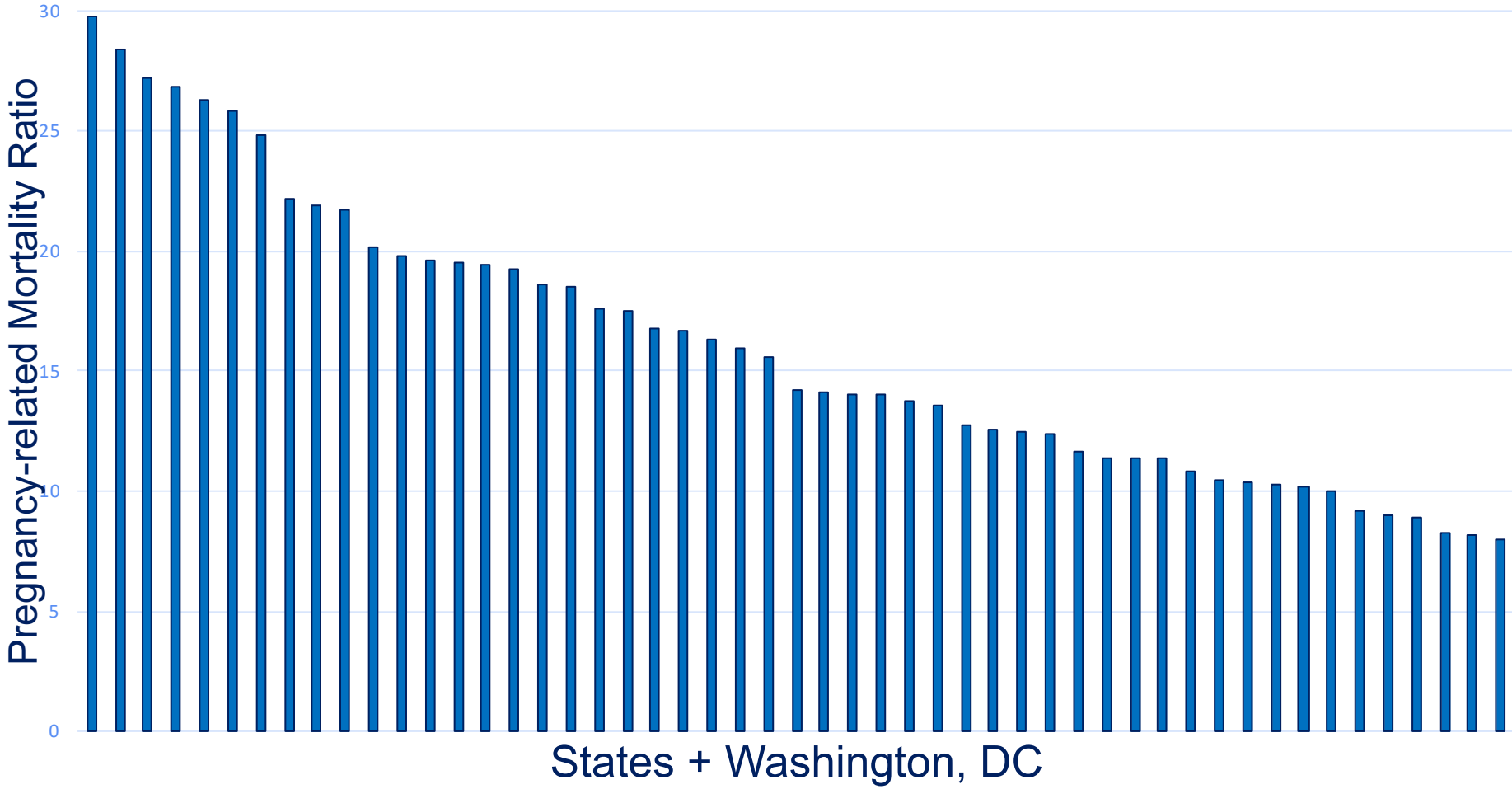
Rosa Diaz; Courtesy of Diana Diaz

Pregnancy-Related Mortality Ratios by Race-Ethnicity, 2007-2016



Petersen E et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths – United States, 2007-2016. MMWR. Sept. 6, 2019. vol 68. no 35.

Pregnancy-related Mortality Ratio by State and Washington, DC, 2007-2016



Petersen EE, Davis NL, Goodman D, et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. MMWR Morb Mortal Wkly Rep 2019;68:762–765, Attribution: Emily Petersen

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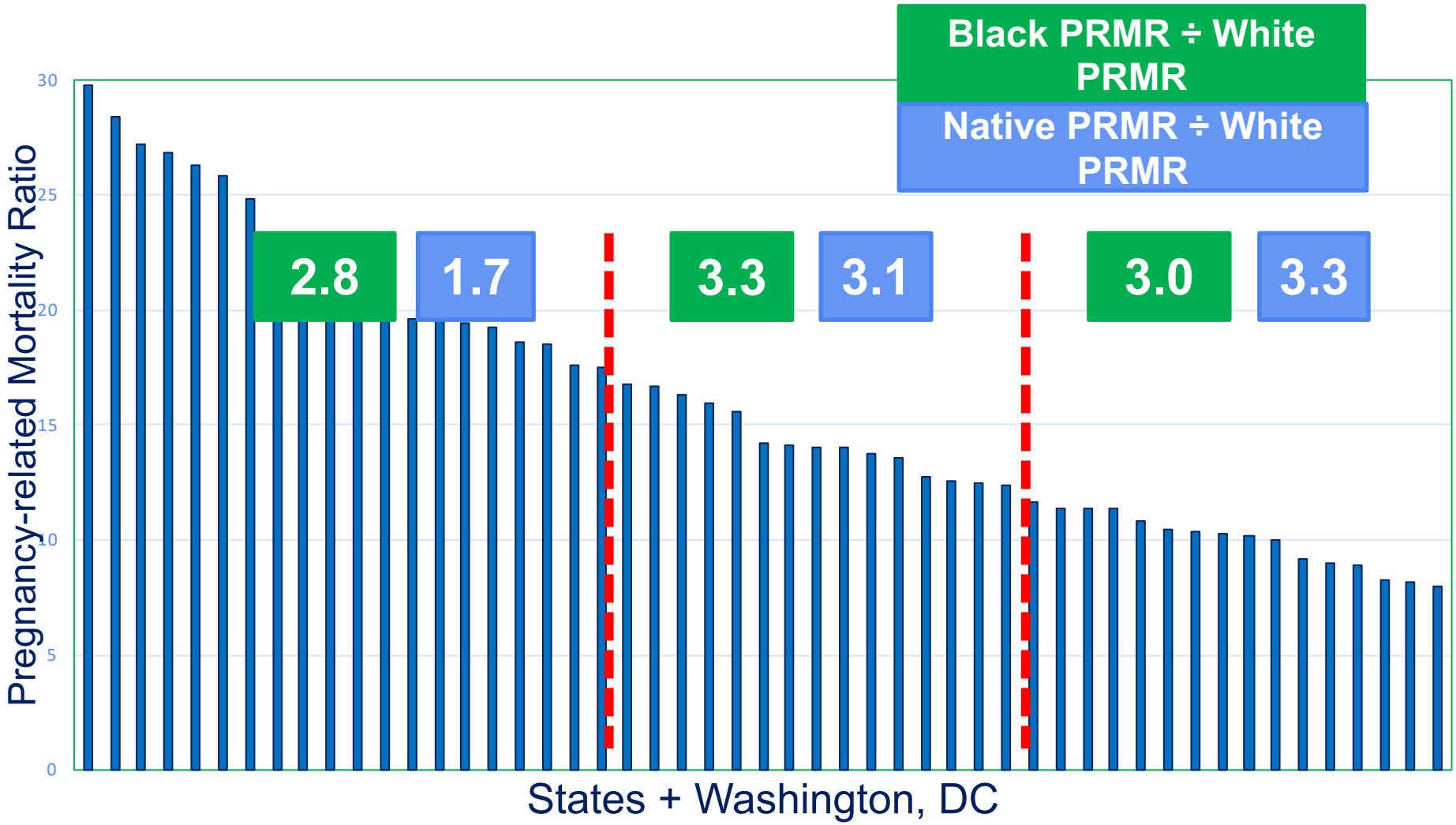


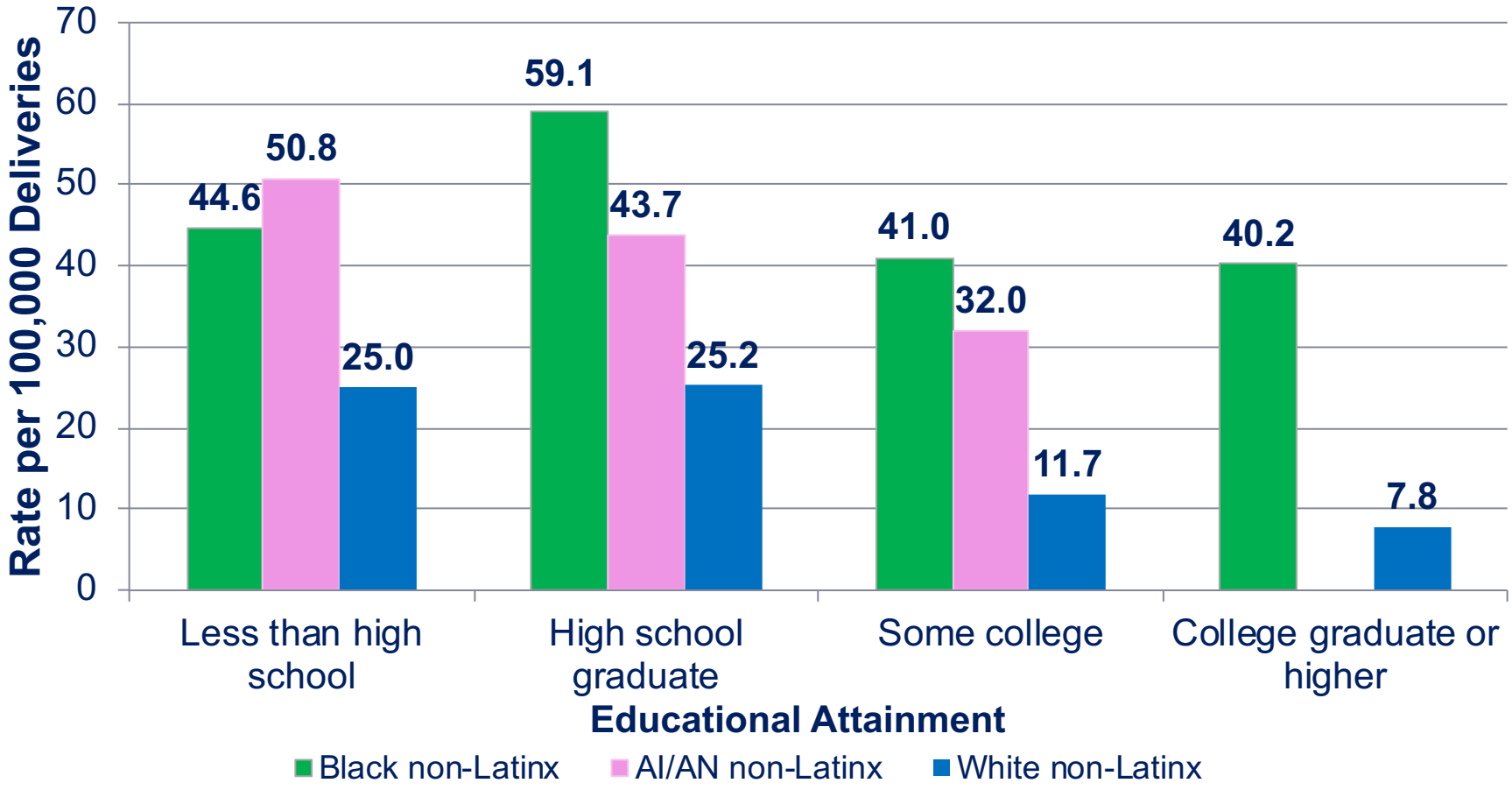
Petersen EE, Davis NL, Goodman D, et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016. MMWR Morb Mortal Wkly Rep 2019;68:762–765, Attribution: Emily Petersen

Definition of Disparities

- “Health equity and health disparities are intertwined. Health equity means social justice in health (i.e. no one is denied the possibility to be healthy for belonging to a group that has historically been economically/ socially disadvantaged). Health disparities are the metric we use to measure progress toward achieving health equity.”(Dr. Paula Braveman)

Braveman P. Public Health Rep. Jan-Feb 2014;129 Suppl 2:5-8.

Pregnancy-Related Mortality Ratios by Educational Attainment, 2006-2017



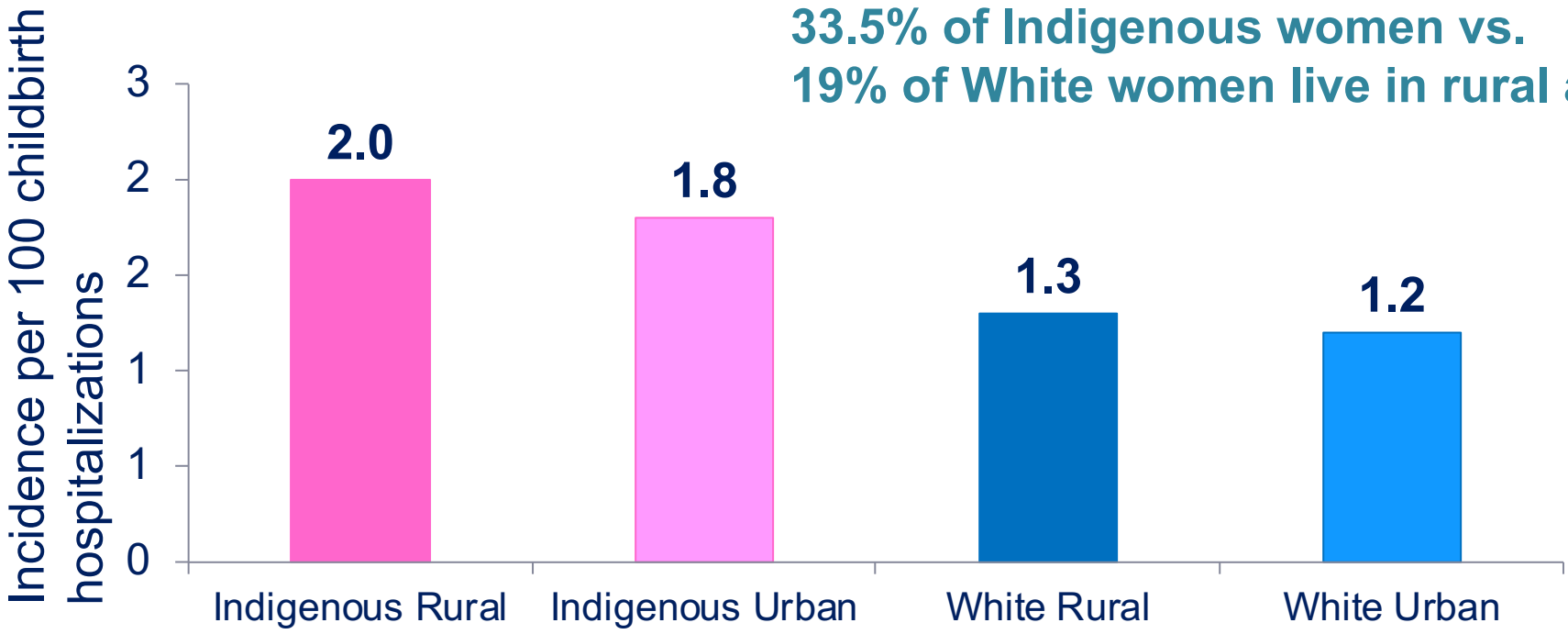
Source: Petersen E et al. Racial/Ethnic Disparities in Pregnancy-Related Deaths – United States, 2007-2016. MMWR. Sept. 6, 2019. vol 68. no 35.

Severe Maternal Morbidity (SMM)

- For every maternal death, 100 women experience severe maternal morbidity
- Life-threatening diagnosis or life-saving procedure
  - organ failure (e.g. renal, liver), shock, amniotic embolism, eclampsia, septicemia, cardiac events
  - ventilation, transfusion, hysterectomy
- Rates are increasing

Callaghan. Obstet Gynecol 2012;120:1029-36.

Severe Maternal Morbidity Among Indigenous and White Women by Rural-Urban Residence, 2012-2015



Kozhimannil. Obstet & Gynecol. 2020

Racial / Ethnic Disparities in Severe Maternal Morbidity

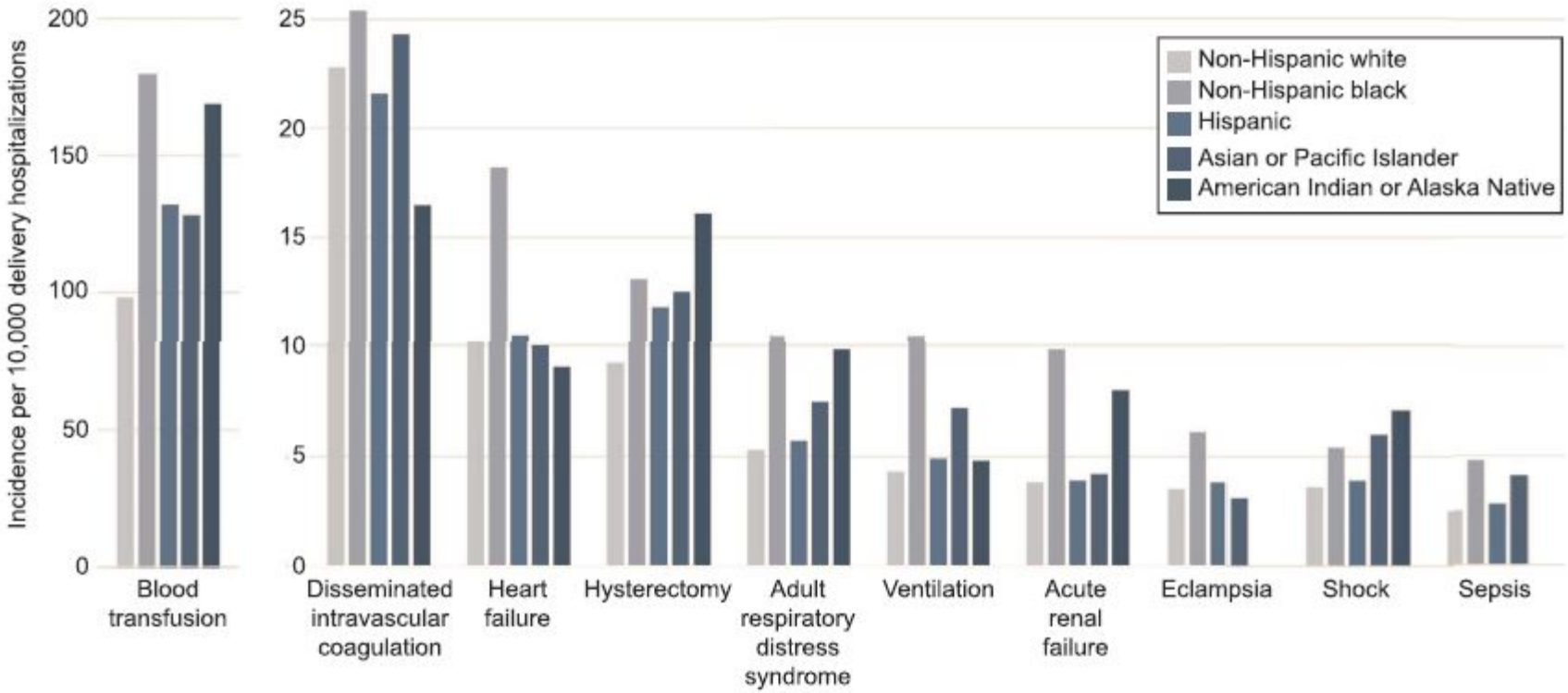
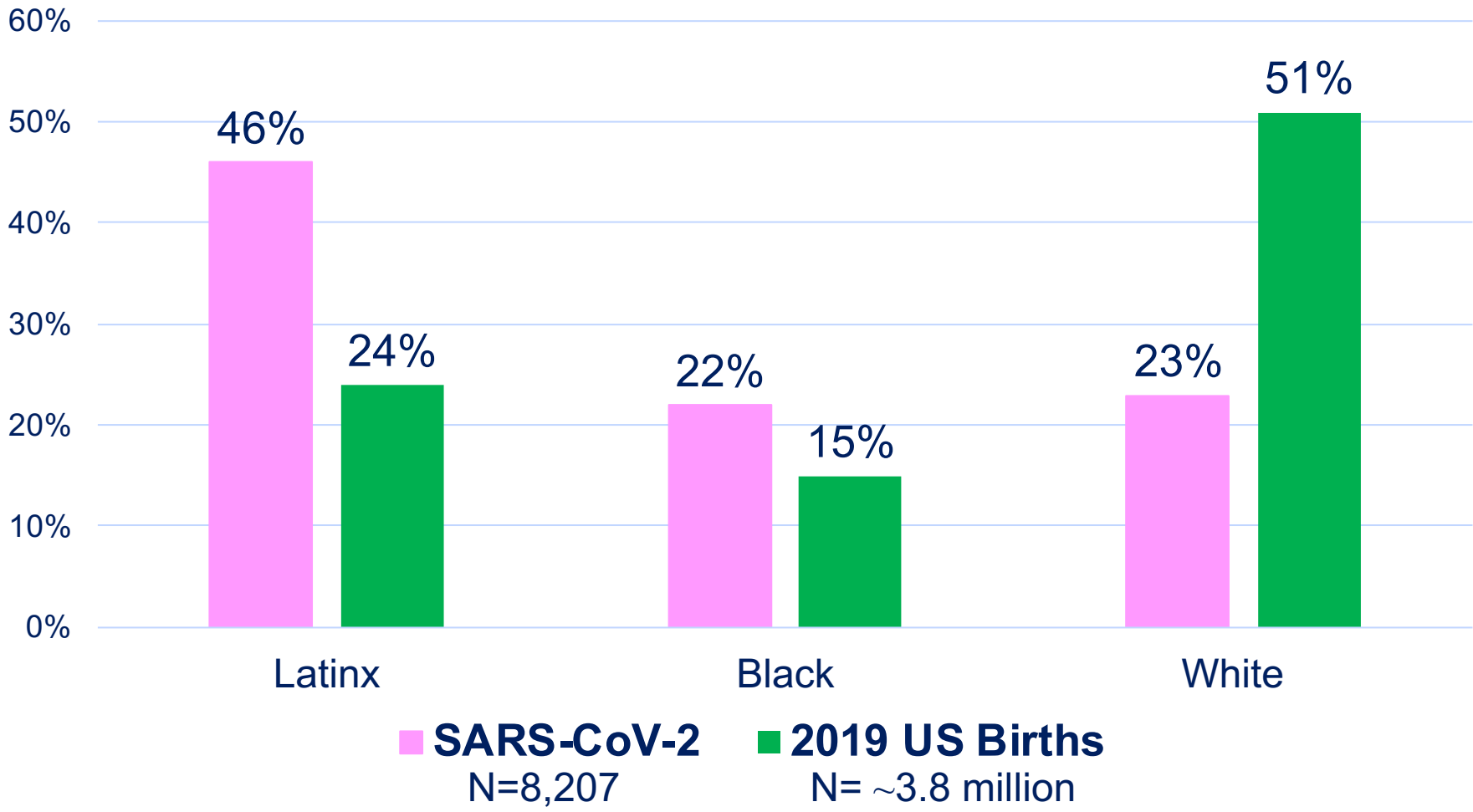


Fig. 2. Incidence of the 10 most frequent severe maternal morbidities per 10,000 delivery hospitalizations by race and ethnicity, United States, 2012–2015 (N=2,523,528). All data are survey-weighted and represented as rate per 10,000 delivery hospitalizations (95% CI). Adjusted for age, income, payer, rural vs urban residence, and hospital region.

Admon. Racial and Ethnic Disparities in Maternal Morbidity. Obstet Gynecol 2018.

Admon. Racial and Ethnic Disparities in the Incidence of Severe Maternal Morbidity in the United States, 2012-2015 Obstet Gynecol. 2018 Oct 5.

Covid-19 and Maternal Health Disparities: SARS-CoV-2 Infection During Pregnancy



CDC MMWR Weekly / Vol. 69 / No. 25; US Data, Jan 22–June 7, 2020;

Racism & Discrimination

Patient Factors
- Socio-demographics: age, education, poverty, insurance, marital status, employment, language, literacy, disability
- Knowledge, beliefs, health behaviors
- Psychosocial: stress, weathering, social support

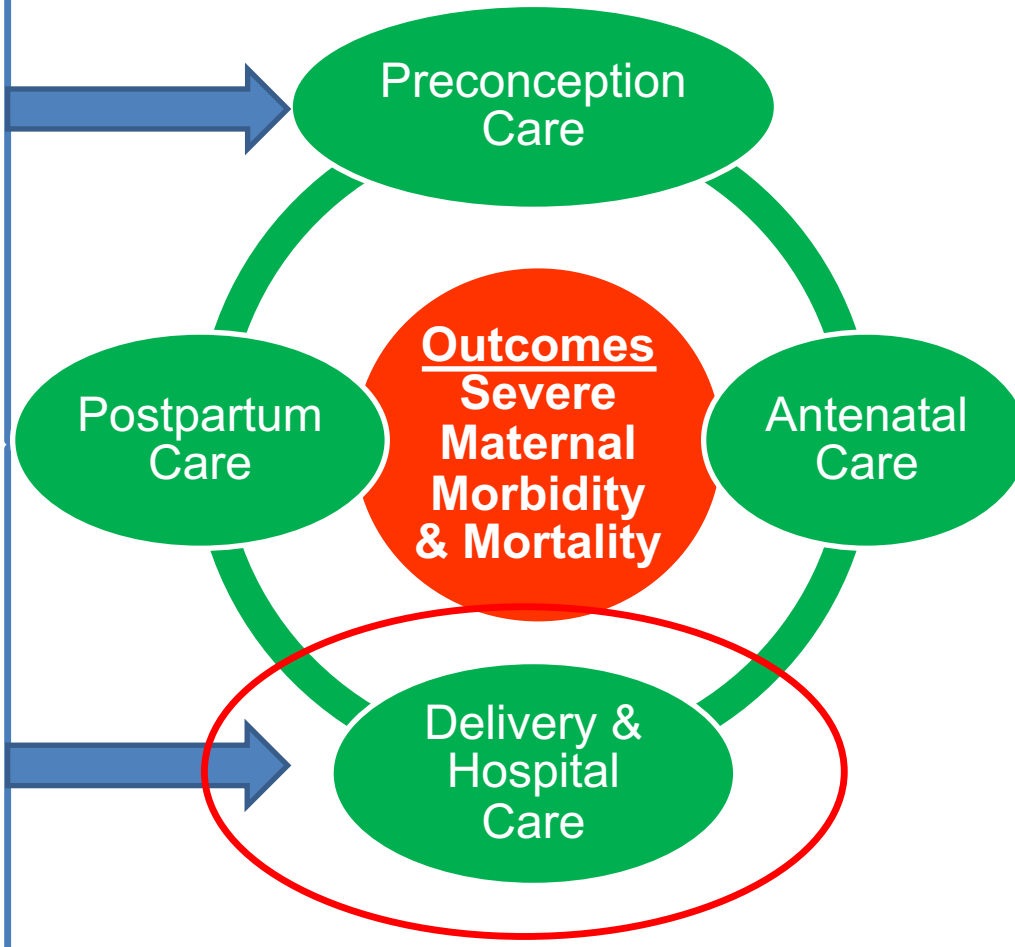
Community/ Neighborhood
- Community, social network
- Neighborhood: crime, poverty, built environment, housing

Clinician Factors
- Knowledge, experience, implicit bias, cultural competence, communi-cation

System Factors
- Access to high quality care, transportation, structural racism, policy

Health status: comorbidities (e.g. HTN, DM, obesity, depression); Pregnancy complications

Figure 1: Pathways to Racial and Ethnic Disparities in Severe Maternal Morbidity & Mortality



Adapted from Howell EA. Clin Obstet Gynecol. 2018 Jun;61(2):387-399

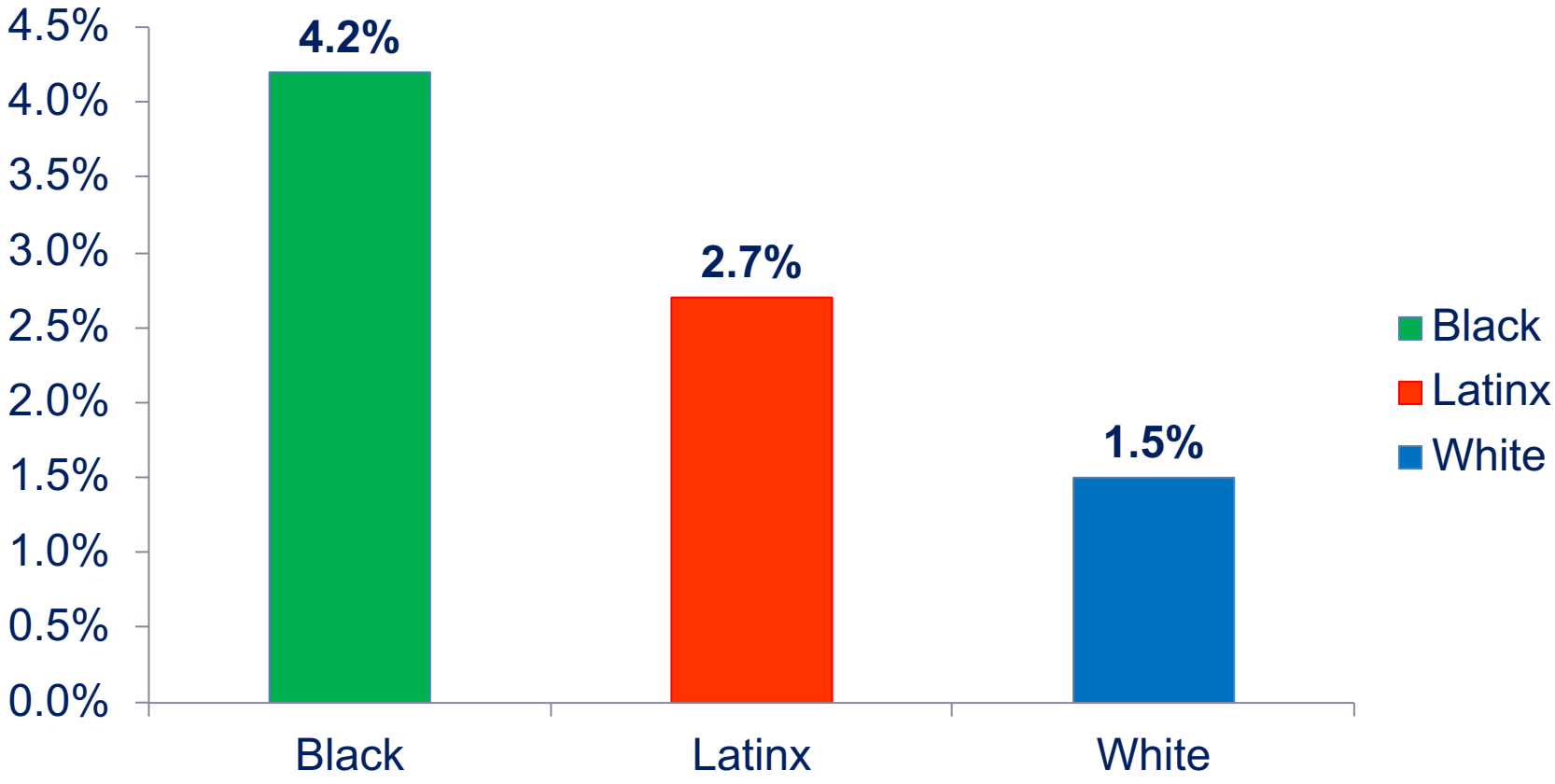
Our Research in New York City Hospitals

- Mixed methods study to investigate hospital quality and disparities in SMM
- Examine hospital risk-adjusted SMM and racial/ethnic distribution of deliveries
- Conduct qualitative interviews to examine safety culture, QI, and other factors
- Conduct focus groups to explore receipt of high quality care

*Funded by NIH #R01MD007651

Howell Am J Obstet Gynecol. 2016 Aug;215(2):143-52; Howell. Obstet Gynecol. 2017 Feb;129(2):285-294.

Severe Maternal Morbidity Rates in New York City

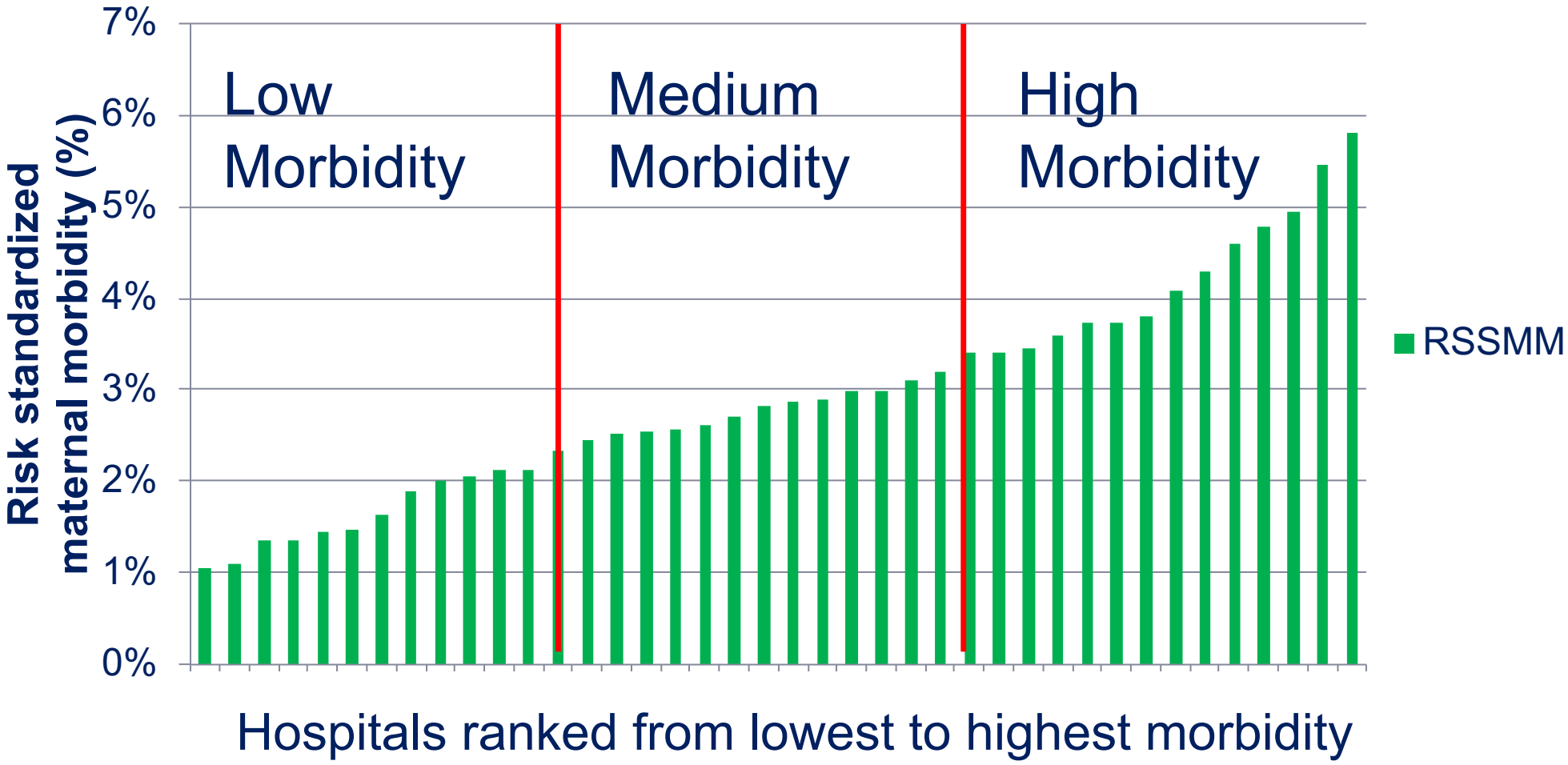


Howell Am J Obstet Gynecol. 2016 Aug;215(2):143-52; Howell. Obstet Gynecol. 2017 Feb;129(2):285-294.

Hospital Rankings

Observed rates: 0.6% to 11.5%; Risk standardized rates: 0.8% to 5.7%

Hospital Rankings



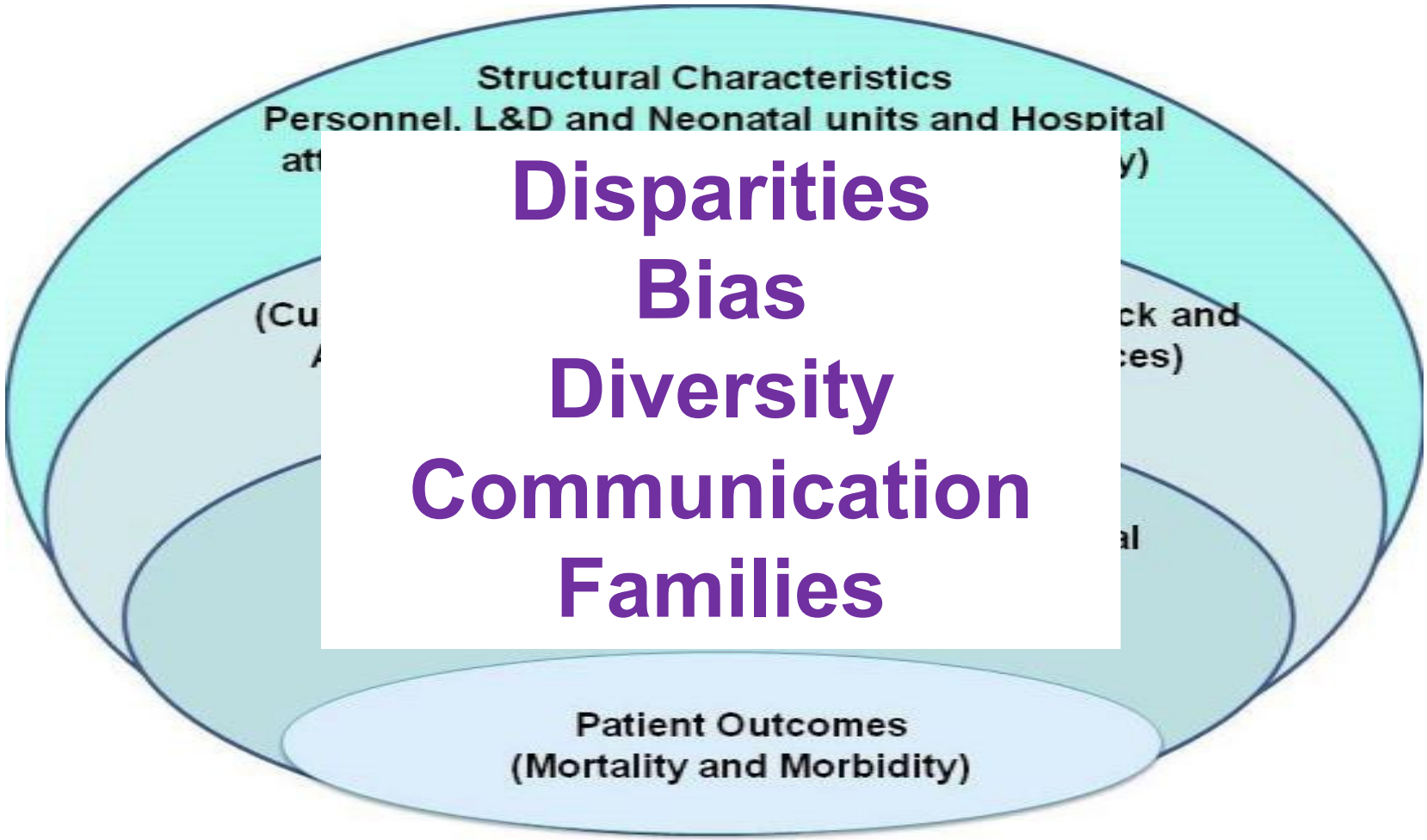
Observed rates: 0.6% to 11.5%; Risk standardized rates: 0.8% to 5.7%

Deliveries by Race / Ethnicity and Risk-standardized Hospital Morbidity

	Hospital Group by RSSMM*		
	Low	Medium	High
Black (%)	23	39	37
White (%)	65	17	18
Latinx (%)	33	38	29

Howell Am J Obstet Gynecol. 2016 Aug;215(2):143-52; Howell. Obstet Gynecol. 2017 Feb;129(2):285-294

Hospital Factors and Quality



Howell. Semin Perinatol. 2017 Aug;41(5):266-272

Common Themes

- Wide variation in quality measurement and improvement:
  - Metrics used
  - Staff assigned specifically to quality/safety
  - Whether and how data are distributed beyond leadership
- No one analyzes data to compare performance across race, ethnicity or insurance source
- Individual adverse events more likely to lead to quality improvement than monitoring trends

Focus Groups: Mothers' Words to Describe Childbirth Experience

Focus Groups Findings

- Traumatic Experience
  - “Traumatized,” “Scary,” “Never want to have a child again”
  - Complemented with gratitude
- Poor Communication
  - “They just rushed me to the OR, and that was it. I was just lying there. I'm cold. I'm shaking. I know I'm not feeling good, but nobody is telling me anything.”
- Not Feeling Heard
  - …I essentially diagnosed my own pulmonary embolism, because nobody was listening to me. It's very scary to me how much I really had to advocate [for myself].”

Levers to Reduce Disparities

Key Recommendations

- Collect self-identified race/ethnicity /language data
- Implement disparities dashboard; utilize QI to address identified gaps in care
- Encourage community participation in quality and safety committees
- Utilize enhanced maternal mortality and severe maternal morbidity reviews
- Enhance communication, shared decision making
- Implement bias trainings
- Promote a culture of equity

PATIENT SAFETY BUNDLE

Reduction of Peripartum Racial/Ethnic Disparities

CDC-MMRIA Bias Working Group

- Response to MMR committees reporting the role of bias in maternal death, but no distinct category for bias on MMRIA
- Aim to design a consistent approach for documenting racism and discrimination as contributing factors to pregnancy-related deaths
- Provide recommendations on how to prevent pregnancy-related deaths when bias is a contributing factor

Contributing Factors

CONTRIBUTING FACTOR KEY (DESCRIPTIONS ON PAGE 4)

- Access/financial
- Adherence
- Assessment
- Childhood abuse/ trauma
- Chronic disease
- Clinical skill/ quality of care
- Communication
- Continuity of care/ care coordination
- Cultural/religious
- Delay
- Discrimination
- Environmental
- Equipment/technology
- Interpersonal racism
- Knowledge
- Law Enforcement
- Legal
- Mental health conditions
- Outreach
- Policies/procedures
- Referral
- Social support/isolation
- Structural racism
- Substance use disorder - alcohol, illicit/prescription drugs
- Tobacco use
- Unstable housing
- Violence
- Other

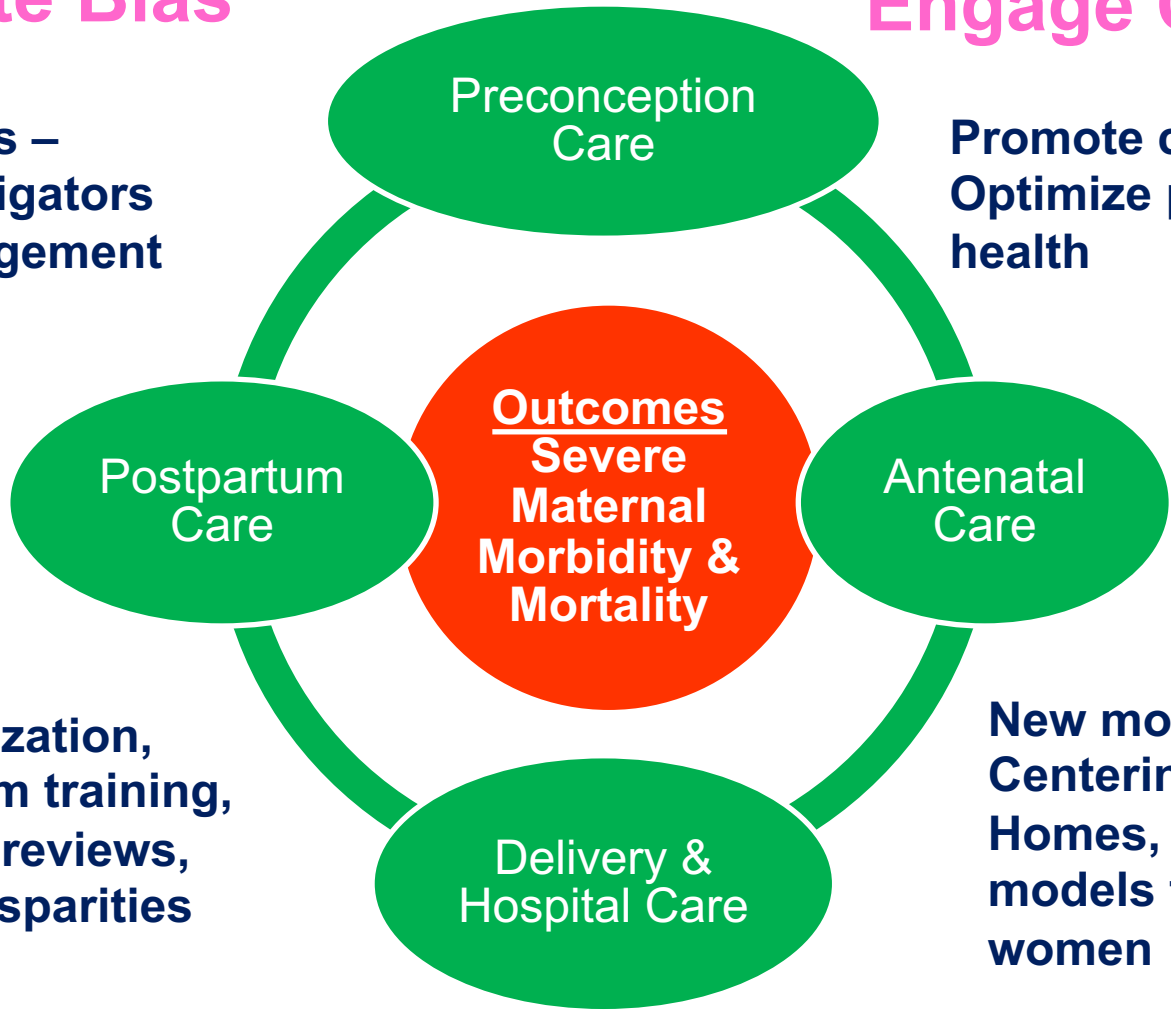
Levers to Reduce Racial and Ethnic Disparities in Severe Maternal Morbidity & Mortality

Enhance Communication

Eliminate Bias

Engage Community

New models –
Patient navigators
Case management



Promote contraception
Optimize preconception health

QI, standardization, bundles, team training, simulations, reviews, protocols, disparities dashboard

New models – Centering, Medical Homes, enhanced models for high risk women

THANK YOU

Research Team

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Amy Balbierz MPH
Shoshanna Sofaer PhD

Twitter:
@LizHowellMD

New Contributing Factors

REVIEW to ACTION

CONTRIBUTING FACTOR DESCRIPTIONS

LACK OF **ACCESS/FINANCIAL** RESOURCES
System issues, e.g. lack or loss of healthcare insurance or other financial duress, as opposed to woman's noncompliance, impacted woman's ability to care for herself (e.g. did not seek services because unable to miss work or afford postpartum visits after insurance expired). Other barriers to accessing care: insurance non-eligibility, provider shortage in woman's geographical area, and lack of public transportation.

ADHERENCE TO MEDICAL RECOMMENDATIONS
The provider or patient did not follow protocol or failed to comply with standard procedures (i.e. non adherence to prescribed medications).

FAILURE TO SCREEN/INADEQUATE **ASSESSMENT** OF RISK
Factors placing the woman at risk for a poor clinical outcome recognized, and the woman was not transferred/transported to a provider able to give a higher level of care.

CHILDHOOD SEXUAL ABUSE/TRAUMA
The patient experienced rape, molestation, or one or more of the following: sexual exploitation during childhood plus persuasion, inducement, or coercion of a child to engage in sexually explicit conduct; physical or emotional abuse or violence other than that related to sexual abuse during childhood.

CHRONIC DISEASE
Occurrence of one or more significant pre-existing medical conditions (e.g. obesity, cardiovascular disease, or diabetes).

CLINICAL SKILL/QUALITY OF CARE (PROVIDER OR FACILITY PERSPECTIVE)
Personnel were not appropriately skilled for the situation or did not exercise clinical judgment consistent with current standard of care (e.g. error in the preparation or administration of medication or unavailability of translation services).

POOR **COMMUNICATION**/LACK OF CASE COORDINATION OR MANAGEMENT/ LACK OF CONTINUITY OF CARE (SYSTEM PERSPECTIVE)
Care was fragmented (i.e. uncoordinated or not comprehensive) among or between healthcare facilities or units, (e.g. records not available between inpatient and outpatient or among units within the hospital, such as Emergency Department and Labor and Delivery).

LACK OF **CONTINUITY OF CARE** (PROVIDER OR FACILITY PERSPECTIVE)
Care providers did not have access to woman's complete records or did not communicate woman's status sufficiently. Lack of continuity can be between prenatal, labor and delivery, and postpartum providers.

CULTURAL/RELIGIOUS, OR LANGUAGE FACTORS Demonstration that any of these factors was either a barrier to care due to lack of understanding or led to refusal of therapy due to beliefs (or belief systems).

DELAY

INADEQUATE **LAW ENFORCEMENT** RESPONSE
Law enforcement response was not in a timely manner or was not appropriate or thorough in scope.

LEGAL
Legal considerations that impacted outcome.

MENTAL HEALTH CONDITIONS
The patient carried a diagnosis of a psychiatric disorder. This includes postpartum depression.

INADEQUATE COMMUNITY **OUTREACH**/RESOURCES
Lack of coordination between healthcare system and other outside agencies/organizations in the geographic/cultural area that work with maternal health issues.

LACK OF STANDARDIZED **POLICIES/PROCEDURES**

Woman lived "on the street," in a homeless shelter, or in transitional or temporary circumstances with family or friends.

VIOLENCE AND INTIMATE PARTNER VIOLENCE (IPV)
Physical or emotional abuse perpetrated by current or former intimate partner, family member, or stranger.

OTHER
Contributing factor not otherwise mentioned. Please provide description.

Structural Racism: the systems of power based on historical injustices and contemporary social factors that systematically disadvantage people of color and advantage white people through inequities in housing, education, employment, earnings, benefits, credit, media, health care, criminal justice, etc.

Adapted from Bailey ZD. Lancet. 2017; 389(10077):1453-1463.

New Contributing Factors

CONTRIBUTING FACTOR DESCRIPTIONS

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DELAY

needed to keep appointment for psychiatric referral after an ED visit for exacerbation of depression).

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LACK OF STANDARDIZED **POLICIES/PROCEDURES**

underlying chronic lung disease).

UNSTABLE HOUSING
Woman lived "on the street," in a homeless shelter, or in transitional or temporary circumstances with family or friends.

VIOLENCE AND INTIMATE PARTNER VIOLENCE (IPV)
Physical or emotional abuse perpetrated by current or former intimate partner, family member, or stranger.

OTHER
Contributing factor not otherwise mentioned. Please provide description.

Discrimination: treating someone more or less favorably based on the group, class or category they belong to resulting from biases, prejudices, and stereotyping. It can manifest as differences in care, clinical communication and shared decision-making.

Adapted from Smedley BD. National Academies Press (US); 2003.

New Contributing Factors

REVIEW to ACTION

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Physical or emotional abuse perpetrated by current or former
intimate partner, family member, or stranger.

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Contributing factor not otherwise mentioned. Please provide
description.

Interpersonal Racism: discriminatory interactions between individuals resulting in differential assumptions about the abilities, motives, and intentions of others and differential actions toward others based on their race. It can be conscious as well as unconscious, and it includes acts of commission and acts of omission. It manifests as lack of respect, suspicion, devaluation, scapegoating, and dehumanization.

Adapted from Jones CP. Am J Public Health. 2000; 90(8): 1212–1215.