

Maternal Health: Improving Outcomes and Reducing Disparities

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Innovation Summit**

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OBJECTIVES

01

Recognize critical disparities in maternal morbidity and mortality.

02

Identify factors that contribute to racial disparities in maternal health outcomes.

03

Outline steps to eliminate preventable maternal morbidity and mortality.

THE STATE OF MATERNAL HEALTH IN THE U.S

While maternal mortality rates are an important indicator of the health and well-being of a society, it does not tell the full story.



For every individual who dies as a result of their pregnancy, it is estimated that 20 or 30 more experience significant lifelong complications that affect their health and well-being.

THE STATE OF MATERNAL HEALTH IN THE U.S

01

The United States has the highest maternal mortality rate among high-income countries.

02

Pregnancy-related mortality has not improved over the past decade.

03

Severe maternal morbidity has been steadily increasing in recent years.

04

Over 80% of maternal deaths are said to be preventable.

05

Despite advancements in medical care, racial disparities in maternal health persist.

Eugene Declercq and Laurie Zephyrin, *Severe Maternal Morbidity in the United States: A Primer* (Commonwealth Fund, Oct. 2021). <https://doi.org/10.26099/r43h-vh76>

How We Improve Maternal Health. (2018, May 18). Official Web Site of the U.S. Health Resources & Services Administration. <https://www.hrsa.gov/maternal-health>

CDC. (2024, May 20). Severe Maternal Morbidity. Maternal Infant Health. <https://www.cdc.gov/maternal-infant-health/php/severe-maternal-morbidity/index.html>

Trost SL, Beauregard J, Njie F, et al. Pregnancy-Related Deaths: Data From Maternal Mortality Review Committees in 36 US States, 2017-2019. Centers for Disease Control and Prevention, US Department of Health and Human Services; 2022.

Hill, L., Artiga, S., & Ranji, U. (2022, November 1). Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them. Kaiser Family Foundation. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/>



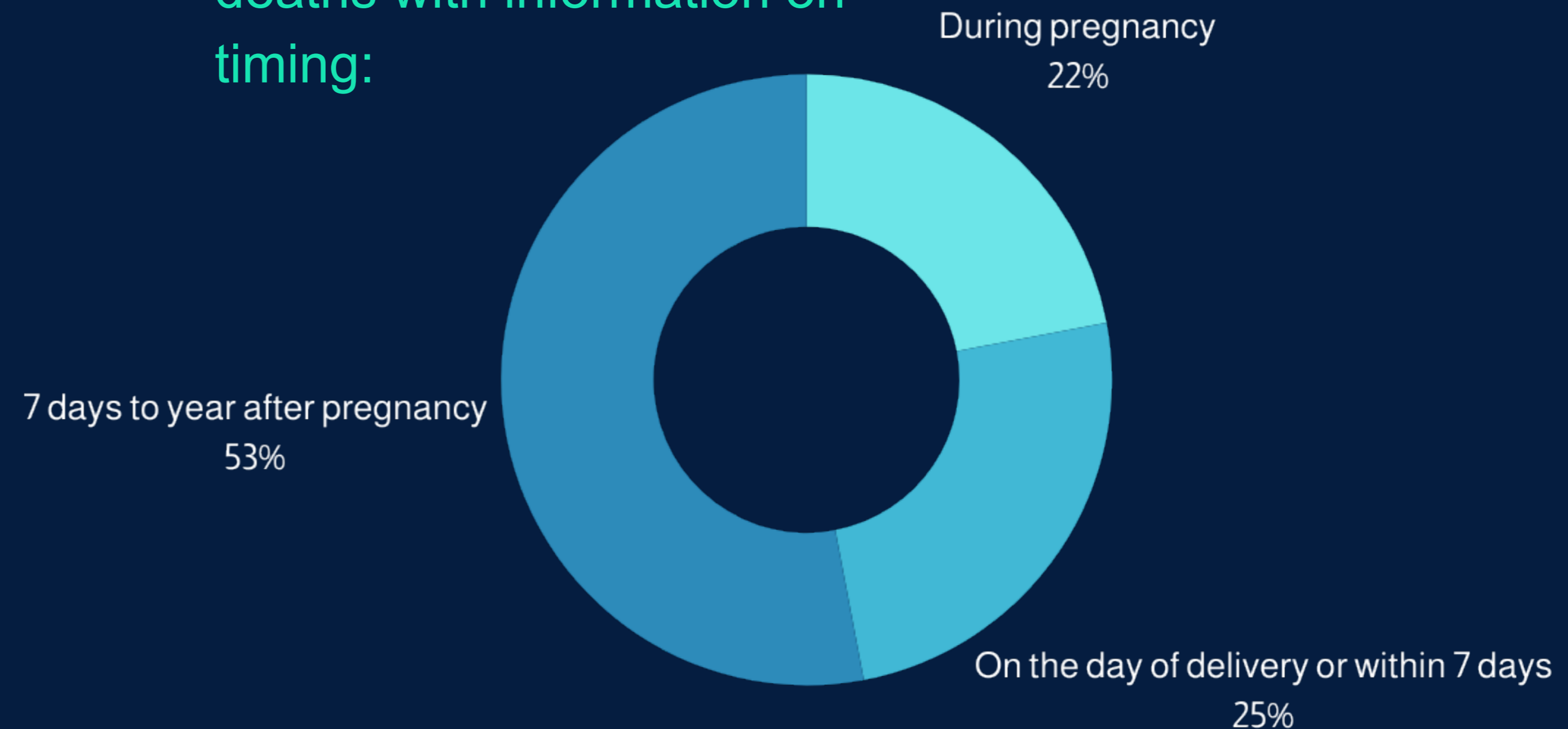
THE STATE OF MATERNAL HEALTH IN THE U.S

According to 2017-2019 data from Maternal Mortality Review Committees (MMRCs):

The leading underlying causes of pregnancy-related death include:

- Mental health conditions (including deaths to suicide and overdose/poisoning related to substance use disorder) (23%)
- Excessive bleeding (hemorrhage) (14%)
- Cardiac and coronary conditions (relating to the heart) (13%)
- Infection (9%)
- Thrombotic embolism (a type of blood clot) (9%)
- Cardiomyopathy (a disease of the heart muscle) (9%)
- Hypertensive disorders of pregnancy (relating to high blood pressure) (7%)

Among pregnancy-related deaths with information on timing:



THE STATE OF MATERNAL HEALTH IN THE U.S

According to 2017-2019 data from Maternal Mortality Review Committees (MMRCs):

Among pregnancy-related deaths with information on underlying cause of death, leading underlying cause of death varied by race and ethnicity.

Non-Hispanic
Black People

*Cardiac and coronary
conditions*

Hispanic and non-
Hispanic White
People

*Mental Health
Conditions*

Non-Hispanic
Asian people

Hemorrhage

DISPARITIES IN MATERNAL MORBIDITY AND MORTALITY

Pregnant people from historically marginalized racial and ethnic groups have higher rates of maternal mortality and morbidity.

Black women and Native American & Alaska Native women disproportionately experience adverse pregnancy outcomes, including maternal mortality, compared to women of other racial and ethnic groups.

- Black women:
 - have a higher rate of giving birth to small-for-gestational-age (SGA) infants than white women, and
 - are more likely to experience gestational diabetes and preeclampsia, which puts them at risk for developing long-term cardiovascular disease.

2022 National Healthcare Quality and Disparities Report [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (US); 2022 Oct. Report No.: 22(23)-0030. PMID: 36475568.

Hill, L., Artiga, S., & Ranji, U. (2022, November 1). Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them. Kaiser Family Foundation. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them/>

Lister, R., Baldwin, S., & Graves, C. (2020). Black Box Warning: Cardiovascular Complications Make Motherhood Unsafe for African American Women. *World journal of gynecology & womens health*, 4(1), .000578. <https://doi.org/10.33552/wjgwh.2020.04.000578>

DISPARITIES IN MATERNAL MORBIDITY AND MORTALITY

Unexpected outcomes of labor and delivery that result in significant short- or long-term consequences to a woman's health.

Severe Maternal Morbidity (SMM):

- More likely to occur in Asian, American Indian, Black, Hispanic, and Pacific Islander women compared to White women.
- As well as....
 - aged 20 and younger
 - 40 and older
 - receiving Medicaid
 - cesarean delivery
 - residents of low-income Zip code
 - have maternal comorbid conditions

CESAREAN DELIVERIES

Black women
undergo more
cesarean deliveries

Even in low-risk
situations....

Recent study: Non-Hispanic Black and Hispanic nulliparous people who are low-risk at term undergo cesarean birth more frequently than low-risk non-Hispanic White nulliparous people.

MATERNAL MENTAL HEALTH

40% of Black women experience maternal mental health symptoms—nearly twice the rate of all women.

- Black women have increased risk factors for maternal mental health disorders due to higher levels of **trauma** exposure throughout their lifetime.
- Black women are more likely to develop PMADs and less likely to receive treatment for them.

Up to 40% of Latina and Hispanic women giving birth will experience a maternal mental health disorder such as maternal depression.

- Hispanic women experience the common risk factors in addition to unique issues related to immigration status, cultural/societal stigma, and higher prevalence of **traumatic** stress.
- Only 35% of the Latino and Hispanic population with mental illness receive care.

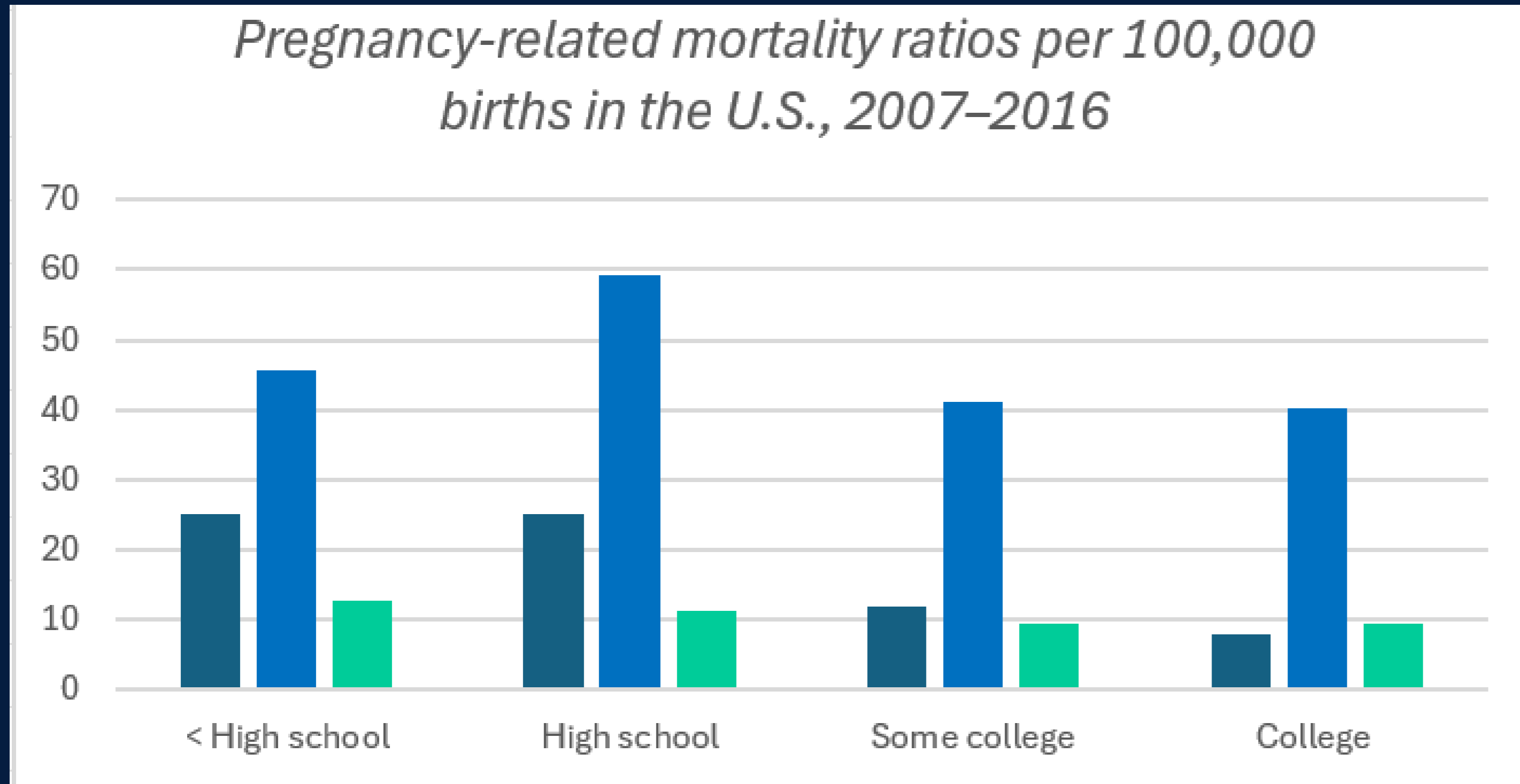
THE BLACK MATERNAL HEALTH CRISIS

In 2021, the maternal mortality rate for non-Hispanic Black women was 69.9 deaths per 100,000 live births.



Black women are over 3x more likely to die from a pregnancy related cause than White women.

Higher education does not protect black women from pregnancy-related death.



Maternal deaths are more common among Black mothers with a college education than they are among white mothers with less than a high school education.

Data: Emily E. Petersen et al., "Racial/Ethnic Disparities in Pregnancy-Related Deaths — United States, 2007–2016," *Morbidity and Mortality Weekly Report* 68, no. 35 (Sept. 6, 2019): 762–65.

Source: Eugene Declercq and Laurie Zephyrin, *Maternal Mortality in the United States: A Primer* (Commonwealth Fund, Dec. 2020).
<https://doi.org/10.26099/ta1q-mw24>

A Black mother with a college education is at 60 percent greater risk for a maternal death than a white or Hispanic woman with less than a high school education.

"I think she probably went to the doctor at least nine or 10 times in those two weeks"

"I know that last week she went almost every single day, and every time she was sent back home."

""She pushed back on the medical care teams."
"She kept saying that something wasn't right."

**"She knew her body in and out. She had a Ph.D.,
but one would have thought she had an M.D.
She was brilliant.."**

"She had researched everything about pregnancy and
delivery, and she was so prepared."



Higher income does not protect Black people from pregnancy-related death.

Studies indicate that high income Black women have the same risk of dying in the first year following childbirth as the poorest White women.



Among Black women, racial disparities exist across all US income and education levels.



Shalon Irving, Cardiac arrest caused by high blood pressure



Kyira Johnson, hemorrhagic shock



Congresswoman Cori Bush, Hyperemesis, preterm labor



Serena Williams, Pulmonary embolisms



Allyson Felix, Severe Preeclampsia



Beyoncé Knowles-Carter, Preeclampsia

FACTORS DRIVING DISPARITIES IN MATERNAL HEALTH

Life Course Conceptual Framework:
Societal and community factors, as
well as interpersonal ones, affect
maternal outcomes.

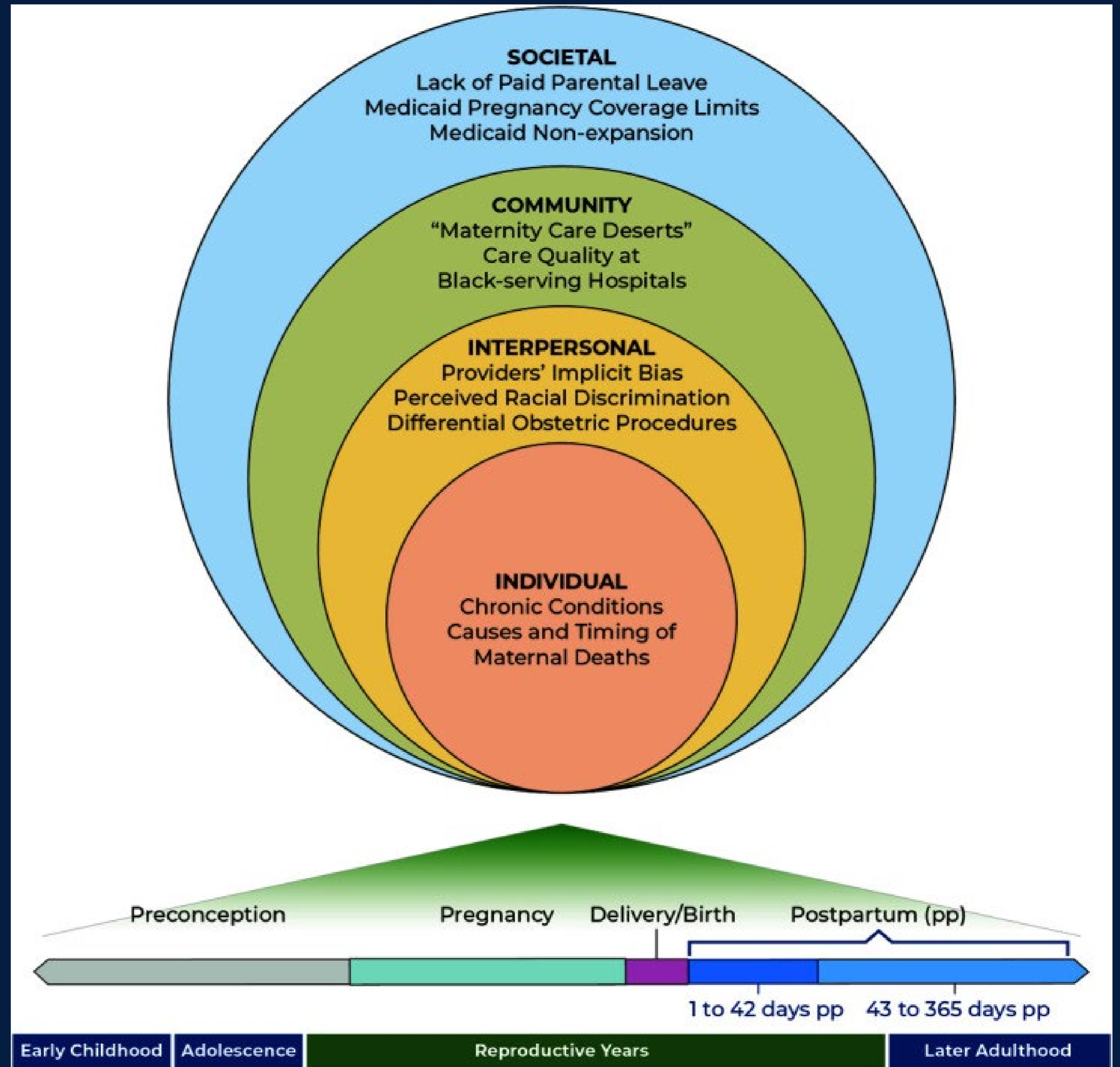


Figure 7

Health Disparities are Driven by Social and Economic Inequities



KEY FACTORS DRIVING DISPARITIES IN MATERNAL HEALTH

- Social Determinants of Health
- Racism and discrimination; Weathering/Structural Determinants of Health
- Underlying health conditions



Hill, L., Artiga, S., & Ranji, U. (2022, November 1). Racial Disparities in Maternal and Infant Health: Current Status and Efforts to Address Them. Kaiser Family Foundation. <https://www.kff.org/racial-equity-and-health-policy/issue-brief/racial-disparities-in-maternal-and-infant-health-current-status-and-efforts-to-address-them>

Vital Signs: Maternity Care Experiences — United States, April 2023

Weekly / September 1, 2023 / 72(35);961–967

- Mistreatment during pregnancy and delivery
- Bias and discrimination
- Distrust of the healthcare system

- Survey reveals....

1 in 5

About 20% of women reported mistreatment while receiving maternity care.

1 in 3

About 30% of Black, Hispanic, and multiracial women reported mistreatment.

45%

Almost half (45%) of women held back from asking questions or sharing concerns during their maternity care.

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The most common types of mistreatment reported were:

- Receiving no response to requests for help.
- Being shouted at or scolded.
- Not having their physical privacy protected.
- Being threatened with withholding treatment or made to accept unwanted treatment.

ELIMINATING PREVENTABLE MATERNAL MORBIDITY & MORTALITY

Respectful Maternity Care: Care that is free from harm and mistreatment, maintains privacy, confidentiality, and dignity, and allows for shared decision-making and support.

- Address unconscious bias: Provide training on cultural humility, cultural competency, and person-centered care.
- Create an environment of trust
- Include patient's support network
- Listen to patient concerns (CDC's Hear Her Campaign)
- Ensure patients are engaged in their care
- **Patient Activation: Coaching patients to voice concerns (ask questions) can offset racial bias**

Data from
MMRCs
determined
that over 80%
of deaths are
preventable.



"Patient Activation"

A University of Michigan-led study found that **coaching patients to voice their concerns about their medical care and advocate for themselves** can offset physicians' racial bias so it doesn't lead to inferior experiences for Black patients.

"What we found was that activating the patients to ask questions, to interrupt when necessary to make sure their needs were met, overrode the patterns of care and biases that physicians may hold about expected patient behaviors."

Jennifer Griggs, M.D., M.P.H., a p

ELIMINATING PREVENTABLE MATERNAL MORBIDITY & MORTALITY

- Integrated care delivery models
 - Innovative, patient-centered programs and approaches designed to improve the health of pregnant members based on their specific needs and risk levels.
- Alternative Prenatal Care Schedules
 - Remote Data Monitoring
 - Specialty Care, i.e. Maternal Fetal Medicine, Nutritionists, Genetics, etc.
 - OB/GYN's
 - Midwives
 - Doulas
 - CenteringPregnancy (R)
 - Behavioral Health
 - Cardiovascular Risk Assessments
 - Care Management
 - Substance Use Programs
 - Food/Housing Insecurity

ELIMINATING PREVENTABLE MATERNAL MORBIDITY & MORTALITY

- Target environmental issues and structural barriers
- Improve policies and programs

Address SDOH

- Food/Housing Insecurity
- Substance Use Programs
- Intimate Partner Violence: Initiatives, Workflows, Resources
- Telehealth & Alternative Prenatal Care Schedules
- Access to Reproductive Health Services
- Paid parental leave

ELIMINATING PREVENTABLE MATERNAL MORBIDITY & MORTALITY

- Enhance and diversify workforce



- Black people represent about 5% of the active physician workforce. Black female physicians represent about 2% of the workforce.
- Expand access to midwives and doulas.
- Incorporate equity into new provider education/training.

ELIMINATING PREVENTABLE MATERNAL MORBIDITY & MORTALITY

- Patient Education: Early identification of warning signs

More than half of pregnancy-related deaths happen up to one year after delivery.

Get Care for POST-BIRTH Warning Signs

Most women who give birth recover without problems. But any woman can have complications after the birth of a baby. Learning to recognize these POST-BIRTH warning signs and knowing what to do can save your life.

Call 911 if you have:

- Pain in chest
- Obstructed breathing or shortness of breath
- Seizures
- Thoughts of hurting yourself or your baby

Call your healthcare provider if you have:
(If you can't reach your healthcare provider, call 911 or go to an emergency room)

- Bleeding, soaking through one pad/hour, or blood clots, the size of an egg or bigger
- Incision that is not healing
- Red or swollen leg, that is painful or warm to touch
- Temperature of 100.4°F or higher
- Headache that does not get better, even after taking medicine, or bad headache with vision changes

Trust your instincts. ALWAYS get medical care if you are not feeling well or have questions or concerns.

Tell 911 or your healthcare provider:

"I had a baby on _____ (Date) and I am having _____ (Specific warning signs)"

These post-birth warning signs can become life-threatening if you don't receive medical care right away because:

- Pain in chest, obstructed breathing or shortness of breath (trouble catching your breath) may mean you have a blood clot in your lung or a heart problem
- Seizures may mean you have a condition called eclampsia
- Thoughts or feelings of wanting to hurt yourself or your baby may mean you have postpartum depression
- Bleeding (heavy), soaking more than one pad in an hour or passing an egg-sized clot or bigger may mean you have an obstetric hemorrhage
- Incision that is not healing, increased redness or any pus from episiotomy or C-section site may mean you have an infection
- Redness, swelling, warmth, or pain in the calf area of your leg may mean you have a blood clot
- Temperature of 100.4°F or higher, bad smelling vaginal blood or discharge may mean you have an infection
- Headache (very painful), vision changes, or pain in the upper right side of your belly may mean you have high blood pressure or post-birth preeclampsia

Healthcare Provider/Clinic: _____ Phone Number: _____
Closest To Me: _____

This program is supported by funding from Merck, through Merck for Mothers, the company's 10-year, \$500 million initiative to help create a world where no woman dies giving life. Merck for Mothers is known as MSD in the United States and Canada.

Postpartum Cardiovascular Risk Screening

Medical history

- Smoking (number of cigarettes per day, number of years smoked)
- Physical activity (times per week, duration)
- Breast feeding (how long)
- History of hypertension, diabetes, or cardiovascular disease
- First degree family history of cardiovascular disease, hypertension, or diabetes

Physical examination

- Resting blood pressure and heart rate
- Body mass index and waist circumference

Biochemical testing

- Cholesterol/lipid profile
- Fasting glucose (or oral glucose tolerance testing if patient had gestational diabetes)
- Urine protein assessment (protein:creatinine ratio)

Nutrition assessment

ACOG Practice Bulletin 212

Association of Women's Health, Obstetric and Neonatal Nurses, Post-Birth Warning Signs

ELIMINATING PREVENTABLE MATERNAL MORBIDITY & MORTALITY

- Strengthen Preconception Care

Preconception Care, including contraceptive services and routine physicals and gynecological exams have been associated with reduced SMM.

Provide comprehensive and coordinated care

- Improve access
- Evidence-based care
- Health education and supportive resources
- Risk reduction strategies
- Screenings
- Collaboration with other healthcare providers
- Tailored counseling: Consider social needs, contextual, and environmental factors

Dude AM, Schueler K, Schumm LP, Murugesan M, Stulberg DB. Preconception care and severe maternal morbidity in the United States. *Am J Obstet Gynecol MFM*. 2022 Mar;4(2):100549. doi

Fowler JR, Jenkins SM, Jack BW. Preconception Counseling. [Updated 2023 Jun 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK441880/>

ELIMINATING PREVENTABLE MATERNAL MORBIDITY & MORTALITY

- Collaborate Across Sectors
- Support Community-Based Organizations



Program goals

- Provide exceptional care to the communities we serve
- Reduce health disparities by increasing access to health care and social services
- Save lives by detecting and diagnosing diseases

CBOs

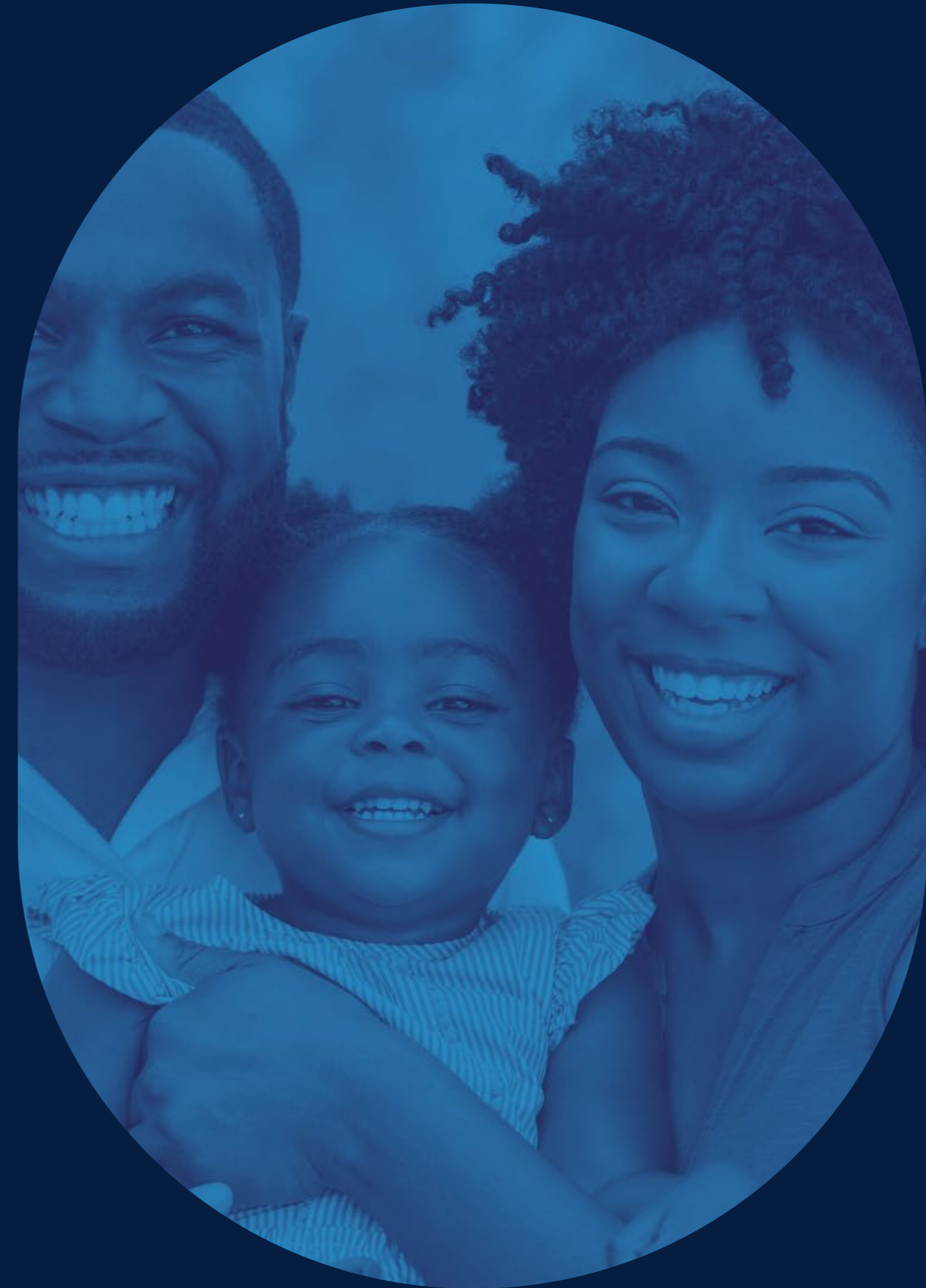
- *Have already been doing the work*
- *Understand the unique needs and challenges of the community*
- *Provide culturally-relevant, tailored services*
- *Bridge the gaps in healthcare services*

Laurie C. Zephyrin et al., "How Community-Led Maternal Health Models Can Thrive with Federal Funding," *To the Point* (blog), Commonwealth Fund, Sept. 13, 2024.
<https://doi.org/10.26099/FTSE-N084>

[Community-Based Models That Are Improving Equity and Black Maternal Health Outcomes: A Focused Analysis](#)

“Ending preventable maternal death must remain at the top of the global agenda. At the same time, simply surviving pregnancy and childbirth can never be the marker of successful maternal health care. It is critical to expand efforts reducing maternal injury and disability to promote health and well-being.”

World Health Organization



THANK YOU!

Questions?

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