

RESEARCH OVERVIEW OF MATERNAL MORTALITY AND MORBIDITY IN THE UNITED STATES

Maternal health is a complex issue that is influenced by many interrelated factors. This section provides background information about maternal health outcomes in the United States generally, as well as those specific to Black women. It analyzes the known and suspected drivers of Black maternal mortality and morbidity while also identifying research gaps and areas in need of further investigation. The information presented here draws from research in the fields of medicine and public health, but advocates should note that it is not a comprehensive review of the scientific literature. Rather, this brief provides maternal health advocates with a sampling of relevant research that can be used to inform a rights-based policy agenda that is guided by evidence and beneficial to Black women.

I. Defining maternal mortality and morbidity

In the United States, a growing number of women die or face serious injury as a result of pregnancy and childbirth. To measure the extent of these risks, researchers commonly discuss maternal deaths in terms of ratios, with the maternal mortality ratio (MMR) representing the number of women who die from pregnancy-related causes for every 100,000 live births. As defined by the Centers for Disease Control and Prevention (CDC), pregnancy-related deaths are those that occur during pregnancy or within the following year due to pregnancy complications, because of a chain of events initiated by pregnancy, or because of an unrelated condition that was aggravated by pregnancy.¹

A directly related event called severe maternal morbidity (SMM) refers to instances where women almost die from a life-threatening complication during pregnancy or childbirth.² Maternal morbidity can be understood as a continuum, with a healthy pregnancy at one end of the spectrum, and maternal death at the other.³ Some researchers refer to severe maternal morbidity as a “near miss,”⁴ and to maternal mortality as “the tip of the iceberg.”⁵

Maternal mortality and morbidity are on the rise in the United States

At the global level, a greater proportion of women are surviving pregnancy and childbirth every year.⁶ Since 1990, 169 different countries have successfully managed to reduce their MMR.⁷ But after achieving decades of stunning progress on maternal health during the early twentieth century, the U.S. MMR is rising again.⁸ With an MMR of 14 deaths for every 100,000 live births, the United States currently ranks 46th in the world in measures of maternal mortality.⁹ This not only puts the United States behind wealthy countries like the United Kingdom, Japan, and Sweden, but also behind less wealthy countries such as Libya and Kazakhstan.¹⁰

Significantly, the United States is one of only 13 countries in the world where the MMR is now worse than it was 15 years ago.¹¹ Although some of this recorded increase in the U.S. MMR may be due to improvements in detecting maternal deaths, experts believe that data collection changes cannot fully

explain it.¹² The simultaneous rise in maternal morbidity further suggests that the rising U.S. MMR represents a very real decline in maternal health outcomes.

Like maternal mortality, cases of SMM are becoming more common. For every woman who dies as a result of her pregnancy, approximately 100 women receive a life-threatening diagnosis or undergo a life-saving procedure during their delivery hospitalization.¹³ Such severe maternal morbidity now affects around 60,000 women in the United States every year, and that number has been increasing steadily.¹⁴ For instance, the rate of hospitalizations due to severe delivery complications more than doubled between 1998 and 2011.¹⁵ These increases in SMM are likely driven by a combination of factors, including (but not limited to) higher maternal age, obesity, rising cesarean delivery rates, and a growing number of pregnant women with pre-existing chronic medical conditions.¹⁶ The increase in SMM combined with the increase in maternal mortality in the United States sharply contrast with global trends towards safer pregnancy and childbirth, and is especially significant considering that the United States spends more on health care than any other country.¹⁷

Black women are most at risk for poor maternal health outcomes

Not all women face the same risks during pregnancy and childbirth. Black women in the United States are between three and four times more likely to die from pregnancy-related causes than White women,¹⁸ and are twice as likely to suffer from SMM.¹⁹ The Black/White disparity in maternal mortality applies to Black women across all education levels²⁰ and persists even after controlling for differences in socio-economic status.²¹ It is this disproportionate risk that Black women face during and after childbirth that drives the maternal mortality and morbidity crisis in the United States. Thus, understanding and addressing factors impacting maternal mortality and morbidity among Black women will not only reduce disparities, it will improve MMR and SMM rates overall.

Where a Black woman resides may also affect her maternal health outcomes. Cities and states with large Black communities have some of the worst maternal health outcomes. This pattern can be seen in urban coastal cities like New York and Washington D.C., but is particularly apparent across the American South.²² For example, Georgia has one of the highest maternal death rates in the country. This is in large part due to the fact that Black women in Georgia have an MMR of 39 deaths per 100,000 live births, a ratio that is four times greater than the ratio for White women there.²³ Similarly, Mississippi has an MMR of 29 for White women, but the MMR for Black women is even higher at 54.²⁴ At that rate, a Black woman in Mississippi is more likely to suffer a maternal death than a woman in Palestine, Mexico, or Egypt.²⁵

“Black women’s maternal death rate has been shockingly high for decades, with few voices outside public health communities calling for action. What will it take to get people to recognize not just the racial disparity in death rates but the disparity in concern over U.S. Black women’s health and lives?”

—CYNTHIA GREENLEE,
HISTORIAN AND WRITER

II. Racial and gender inequalities surround Black women’s health

According to the medical community, the leading direct causes of maternal death in the United States include heart conditions, infections, severe bleeding (hemorrhage), blood clots (embolism), pregnancy-induced high blood pressure (preeclampsia), and stroke (cerebrovascular accident).²⁶ A large proportion of these deaths are preventable.²⁷ Health experts agree that it is possible for the United States to reduce maternal mortality and morbidity,²⁸ and the avoidable inequalities in health between Black and White women provide evidence of that. The clinical solutions to preventing and managing pregnancy complications already exist, and are well known within the health field.²⁹ Health experts have also established that good maternal health outcomes require sufficient access to prenatal care, skilled attendants during birth, and postnatal care.³⁰ Since research shows that some women in the United States don’t receive the optimal or recommended levels of maternal care, these shortcomings represent opportunities to prevent future deaths.

More and more, public health research is focusing on the ways that social and economic conditions influence people’s risk of poor health, as well as the systems that are put in place to prevent or treat those health problems. The social determinants of health—the social and economic circumstances in which people are born, grow up, live, work and age—are shaped by social hierarchies, economics, and policy decisions.³¹ These conditions explain in part why some people are healthier than others, or at a minimum, not as healthy as they could be.³² In the United States, racial disparities in health are closely linked to economic disadvantage, reflecting systemic obstacles to health that disproportionately affect women of color.³³ Factors such as poverty, lack of access to health care, social inequality, and exposure to racism all undermine health,³⁴ and may contribute to the elevated number of Black maternal deaths.³⁵

Poverty

Although the root causes of maternal mortality and morbidity are multiple and complex,³⁶ the maternal health crisis in the United States must be understood in the context of rising poverty levels and significant economic inequalities. Higher poverty rates are associated with higher rates of maternal mortality for all women,³⁷ but Black women are more than twice as likely to live in poverty as White women are.³⁸ Nationally, a quarter of all adult Black women live below the federal poverty threshold.³⁹ Across the South, the proportion of Black women living in poverty is even higher.⁴⁰ A 2011 report on maternal mortality by Amnesty International showed that U.S. states with high poverty rates had MMRs that were 77% higher than states where more people live above the poverty line.⁴¹ With 19.5 million people living in poverty, the South is the poorest region of the country.⁴²

For nearly four decades, both income inequality and wealth inequality have risen in the United States as the richest segment of society has captured a greater share of the country’s wealth.⁴³ The Great Recession (2007-2009) has further stressed low and middle income families, and despite the recent economic recovery, the median household income is still 6.5% lower than it was before the recession began.⁴⁴ Unemployment is twice as high for Black women compared to White women,⁴⁵ and fully employed Black women earn an average of 63 cents for every dollar paid to White men⁴⁶ (White women earn 78 cents for every dollar that White men earn⁴⁷). Education can help increase Black women’s total earnings, but it doesn’t close the pay gap.⁴⁸ Thus, the same communities that are experiencing some of the highest rates of maternal mortality and morbidity are also those struggling with low, unequal, or

stagnant wages, unemployment and underemployment, home foreclosures, a lack of health insurance, and reductions to safety net programs that many low-income families rely on for their health and economic security.

Access to care

Disparities in access to care for racial minorities in the United States persist despite the enactment of the Affordable Care Act (ACA), which included the elimination of racial disparities as a primary goal. Women of color are still more likely than White women to lack health insurance,⁴⁹ and the barriers to care that they face place them at higher risk for poor maternal health. Moreover, the states with some of the widest health disparities in the country have rejected Medicaid expansion, one of the ACA's main tools to cover the uninsured. As a result, poor adults in these states fall into a coverage gap when they earn too much to qualify for Medicaid, but not enough to purchase private health insurance, even with tax subsidies.⁵⁰

Nine out of ten people who fall into the coverage gap live in the South, and Black adults are more likely than any other racial group to be affected by it.⁵¹ The states that have refused to expand Medicaid are primarily located in the Deep South, and they remain among the lowest ranked states when it comes to Black women's health insurance coverage.⁵² However, if all the states in the United States were to expand Medicaid, nearly six in ten currently uninsured Black adults would be eligible.⁵³

For many women, problems with access to health care start before pregnancy due to lack of access to family planning services and regular primary care. Low-income people and people of color are less likely than higher income people and White people to have a usual primary care provider,⁵⁴ and many of the rural and inner-city areas where Black women live suffer from provider shortages and a lack of health care infrastructure.⁵⁵ Inadequate transportation options, caregiving responsibilities, and the inability to take time off work can push routine health care visits even further out of reach.⁵⁶

The poorest women in the United States are also five times more likely than their wealthy counterparts to experience an unintended pregnancy, a circumstance that raises the risk of complications, and can contribute to poorer health outcomes for both mothers and their babies.⁵⁷ Since 1981, low-income women have seen a substantial increase in unintended pregnancies, while the rates for higher-income women consistently declined.⁵⁸ And compared to women of other racial and ethnic groups, Black women have the highest unintended pregnancy rate of all.⁵⁹ Without the support necessary to effectively time their pregnancies, Black women are more likely to enter pregnancy having missed out on the benefits of preconception care.

Additionally, since Black women are less likely than other women to be insured, they are also less likely to get recommended care for disease prevention and management.⁶⁰ As a result, Black women living in Southern states are not only more likely to lack access to health care and insurance,⁶¹ they are also more likely to have chronic health conditions that are risk factors for maternal death, such as diabetes and chronic hypertension.⁶² While early identification of these types of co-morbidities and pregnancy complications through preconception and prenatal care can help ensure appropriate treatment and better outcomes, Black women receive alarmingly low rates of prenatal care during the first trimester of pregnancy compared to women from most other racial and ethnic groups.⁶³ Postnatal care is also limited because most U.S. health plans restrict such care to a single appointment six weeks after childbirth, unless a complication has been recognized.⁶⁴ Combined, these disparities in access expose a pattern

“There’s a Medicaid provider database but it’s not publicized on the Medicaid website. You have to dig for it . . . You might be able to find six providers on the databases that say they’re available, and they’re not taking you. They’re full of clients, because there’s only X number of Medicaid OB/GYNS, or in the [Mississippi] Delta, you have counties that only have one Medicaid OB/GYN in the whole county. There’s only one . . . For some women, there literally is no one to switch to. Unless they can drive out of that county, there’s no one . . . And if you’re high risk, there’s only X many number of doctors who will take you . . . My doctor was very— not rude, but very cold . . . I didn’t want him to deliver my last baby, but I didn’t have a choice; he was the only doctor because I was high risk . . . There was only one Medicaid provider that would treat me . . . His whole thing with me was, you’re a teenager who’s pregnant, so I’m just going to be very stern with you because I feel like that’s how I have to deal with you.”

—KAYLA, SISTERSONG STORY
CIRCLE PARTICIPANT, MS

in which Black women have more limited access to adequate health care at every point along the reproductive life course, raising the likelihood of a higher risk pregnancy, maternal morbidity, and maternal mortality.

Quality of care

When serious complications like hemorrhage or stroke are identified, monitored, and treated efficiently and appropriately, women are more likely to survive them. However, even when health care is accessible to them, women of color may not receive appropriate, timely, quality care on an equitable basis. According to the 2013 National Healthcare Disparities Report, Blacks and Latinos received worse care than Whites on 40% of measures, while poor people received worse care on 60% of measures compared to higher income people.⁶⁵ Problems with quality of care extend to sexual and reproductive health care, and they ultimately contribute to higher rates of maternal mortality and morbidity.

A safe experience with childbirth may depend heavily on the health care setting where a pregnant woman delivers. Standards of care and best practices for handling obstetric emergencies do exist, but variability in clinical performance still contributes to disparities and poor outcomes.⁶⁶ Without standard approaches to handling such emergencies, some women receive appropriate, high quality care while others do not.⁶⁷ Site of care is especially important for Black women. Black people receive health care in a concentrated number of U.S. hospitals, and these sites have been shown to provide lower quality of care in a range of areas, including obstetrics.⁶⁸ For instance, three-quarters of Black women in the United States deliver their babies in only one-quarter of U.S. hospitals.⁶⁹ A recent, nationwide study of hospital deliveries found that hospitals serving higher proportions of Black patients also have the highest

rates of SMM. Even after adjusting for sociodemographic characteristics, clinical factors, and hospital characteristics, Black women delivering at hospitals that serve many Black patients had the highest risk, while White women delivering at hospitals that serve few Black patients had the lowest risk. Notably, in the high Black-serving hospitals, the adjusted risk of SMM increased for women of all backgrounds.⁷⁰ This evidence adds to a growing body of literature suggesting the need to target improvements in quality of care at hospitals serving Black and minority communities.⁷¹

“We have to address race—and racial discrimination in particular—if we are going to see any improvement in maternal and infant health in the United States.”

—ELIZABETH DAWES GAY,
PUBLIC HEALTH AND
REPRODUCTIVE JUSTICE
CONSULTANT

Racial Discrimination

Past and present experiences with racial discrimination shape Black patients’ interactions with their medical providers, and stereotypes, implicit bias, and mistrust continue to interfere with care. Studies show that Black patients are treated differently than White patients with the same symptoms, receiving fewer diagnostic and therapeutic interventions, and even less pain medication.⁷² While providers of color can help to mitigate cultural barriers in the U.S. health system, the lack of diversity in medicine limits their impact. Black physicians are more likely than White physicians to serve medically underserved areas and populations⁷³ and have been shown to increase access to health care for Black patients,⁷⁴ earn higher levels of patient trust and satisfaction,⁷⁵ and in some cases, spend more time with Black patients than White physicians do.⁷⁶ However, while Black people make-up 13% of the U.S. population, only 4% of U.S. physicians are Black.⁷⁷

Racism may also contribute to poor maternal health by acting as a stressor that compromises Black women’s overall health and well-being.⁷⁸ Research into racism as a psychosocial stressor suggests

that, over time, such stress can lead to physiological changes that make the body more susceptible to disease.⁷⁹ In the absence of sufficient resources to cope with the stress of racism, physiological responses may weather the Black body, leading to poor maternal health outcomes.⁸⁰ Existing research involving infant health supports this theory. High levels of racial discrimination have been associated with negative birth outcomes.⁸¹ Unlike White mothers, Black mothers and their babies have an increasing risk of poor birth outcomes between their late teens and their twenties.⁸² As Black women age, their health profiles worsen, especially among those who are also low-income. Researchers suggest that these adverse health characteristics are related to the hardships associated with persistent social inequality, and that these effects compound with age.⁸³

III. An urgent need for more research and action on Black maternal health

The U.S. health system is the most technologically reliant and expensive health system in the world.⁸⁴ Fatal and near-fatal pregnancy complications escalate the costs of this health care, as do the increasing numbers of chronic health conditions and unintended pregnancies. Beyond the financial costs, maternal mortality and morbidity have profound repercussions for women and their families. For the 60,000 women who survive SMM,⁸⁵ many will experience short or long term disability.⁸⁶ For over 600 women in the United States each year, pregnancy will lead to death.⁸⁷ Some of these women will leave children behind, and their families will lose needed income, support, and stability. The implications of such a loss are difficult to quantify. But Black communities, particularly those in the South, know that these losses are not rare enough. For the last six decades, Black women have suffered a maternal mortality risk that is at least three times higher than White women, and yet this disparity has persisted, unaddressed.⁸⁸

As U.S. maternal mortality and morbidity rates rise to a level that cannot be ignored, stark racial disparities in the experience and provision of health care are coming to light. The problems associated with poor maternal health are finally gaining visibility, but more research into the causes and solutions is greatly needed. Insightful research will first require more comprehensive data collection. The Centers for Disease Control and Prevention (CDC) currently requests records of pregnancy-related deaths from all states, but there is no nationwide standard or system to compel, collect, and analyze high-quality, comprehensive data on maternal deaths and complications. Moreover, state and local practices vary substantially in terms of the depth of data they collect, their commitment to analyzing it, and the steps they take to prevent future maternal health problems.

Beyond data collection, we need stronger systems for analyzing maternal health information and generating evidence-based recommendations that prevent future harms. Some states have taken proactive measures to understand and correct the systemic failures that lead to maternal deaths by implementing maternal mortality review processes. However, there is an ongoing need to strengthen these processes through the development of best practices and to expand them in states where there is currently no mechanism in place to identify and review maternal deaths.⁸⁹ And, since these review mechanisms focus solely on maternal mortality, it is essential that similar efforts are made to better understand cases of maternal morbidity, as well as the underlying determinants of health that most impact Black women. Finally, a comprehensive maternal health research agenda must ensure that the insights gained from this research are shared with stakeholders and translated into sustainable, evidence-based solutions.

Endnotes

- ¹ *Reproductive Health: Pregnancy-Related Deaths*, CENTERS FOR DISEASE CONTROL & PREVENTION (CDC), <http://www.cdc.gov/reproductive-health/MaternalInfantHealth/Pregnancy-relatedMortality.htm> (last visited Mar. 29, 2016) [hereinafter *Pregnancy-Related Deaths*].
- ² *Reproductive Health: Severe Maternal Morbidity in the United States*, CDC, <http://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html> (last visited Apr. 1, 2016).
- ³ Lale Say et al., *Maternal Near Miss – Towards a Standard Tool for Monitoring Quality of Maternal Health Care*, 23 BEST PRACTICE & RESEARCH CLINICAL OBSTET. & GYNAECOL. 287, 293 (2009). See also Michael C. Lu et al., *Putting the “M” Back in the Maternal and Child Health Bureau: Reducing Maternal Mortality and Morbidity*, 19 MATERNAL CHILD HEALTH J. 1435, 1437 (2015).
- ⁴ *The WHO Near-Miss Approach*, WHO, http://www.who.int/reproductivehealth/topics/maternal_perinatal/nmconcept/en/ (last visited Apr. 1, 2016).
- ⁵ William M. Callaghan et al., *Severe Maternal Morbidity among Delivery and Postpartum Hospitalizations in the United States*, 120 OBSTET. GYNECOL. 1029, 1034 (2012) [hereinafter Callaghan et al., *Severe Maternal Morbidity among Hospitalizations*].
- ⁶ WHO, TRENDS IN MATERNAL MORTALITY: 1990 TO 2015 70-77 (2015), http://apps.who.int/iris/bitstream/10665/194254/1/9789241565141_eng.pdf [hereinafter TRENDS IN MATERNAL MORTALITY].
- ⁷ *Id.* In addition to the 169 countries that have reduced their MMR, one (Canada) has held constant, neither reducing nor increasing its rate.
- ⁸ *Id.*; *Reproductive Health: Pregnancy Mortality Surveillance System*, CDC, <http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PMSS.html> (last updated Jan. 21, 2016) [hereinafter *Pregnancy Mortality Surveillance System*].
- ⁹ TRENDS IN MATERNAL MORTALITY, *supra* note 6. See also *Pregnancy Mortality Surveillance System*, *supra* note 8 (showing that the CDC also tracks trends in maternal mortality and stating their estimate for the 2012 U.S. average pregnancy-related mortality ratio—the last year data is available—at 15.9 deaths per 100,000 live births, with the ratio for Black women at 41.1). Because there is no mandatory, centralized system for collecting and analyzing maternal mortality surveillance data in the U.S., estimates of the MMR can vary.
- ¹⁰ TRENDS IN MATERNAL MORTALITY, *supra* note 6.
- ¹¹ *Id.*
- ¹² Elliott K. Main, *Maternal Mortality: New Strategies for Measurement and Prevention*, 22 CURRENT OPINION IN OBSTET. GYNECOL. 511, 511 (2010); see also *Pregnancy Mortality Surveillance System*, *supra* note 8.
- ¹³ Callaghan et al., *Severe Maternal Morbidity among Hospitalizations*, *supra* note 5, at 1034. See also William M. Callaghan et al., *Identification of Severe Maternal Morbidity during Delivery Hospitalizations, United States, 1991-2003*, 199 AM. J. OBSTET. GYNECOL. 133.e1 (2008).
- ¹⁴ Elizabeth A. Howell et al., *Black-White Differences in Severe Maternal Morbidity and Site of Care*, 214 AM. J. OBSTET. GYNECOL. 122.e1, 122.e1 (2016); Andreea A. Creanga et al., *Maternal Mortality and Morbidity in the United States: Where Are We Now?*, 23 J. WOMEN'S HEALTH 3, 6 (2014) [hereinafter Creanga et al., *Maternal Mortality and Morbidity*].
- ¹⁵ *Reproductive Health: Severe Maternal Morbidity in the United States*, CDC, <http://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html> (last visited Mar. 29, 2016).
- ¹⁶ *Id.*; see also *Pregnancy Mortality Surveillance System*, *supra* note 8 (“Many studies show that an increasing number of pregnant women in the United States have chronic health conditions such as hypertension, diabetes, and chronic heart disease”).
- ¹⁷ Compare Your Country Online Tool, *Health Profile: Health Expenditure*, OECD HEALTH STATISTICS 2015, <http://www.compareyourcountry.org/health?cr=oced&cr1=oced&lg=en&page=2> (last visited Mar. 24, 2016). See also LAUREN M. WIER & ROXANNE M. ANDREWS, Agency for Health Research & Quality, THE NATIONAL HOSPITAL BILL: THE MOST EXPENSIVE CONDITIONS BY PAYER, 2008, HCUP STATISTICAL BRIEF #107 2 (Mar. 2011), available at http://www.ncbi.nlm.nih.gov/books/NBK53976/pdf/Bookshelf_NBK53976.pdf (showing that in 2008, U.S. hospitals billed more than \$55 billion for inpatient visits related to pregnancy and delivery).
- ¹⁸ *Pregnancy Mortality Surveillance System*, *supra* note 8; Myra J. Tucker et al., *The Black-White Disparity in Pregnancy-Related Mortality from 5 Conditions: Differences in Prevalence and Case-Fatality Rates*, 97 AM. J. PUB. H. 247, 247-249 (2007).
- ¹⁹ Andreea A. Creanga et al., *Racial and Ethnic Disparities in Severe Maternal Morbidity: a Multistate Analysis, 2008-2010*, 210 AM. J. OBSTET. GYNECOL. 435, 437 (2014).
- ²⁰ Priya Agrawal, *Same Care No Matter Where She Gives Birth: Addressing Variation in Obstetric Care through Standardization*, HEALTH AFFAIRS BLOG (Sept. 12, 2014), <http://healthaffairs.org/blog/2014/09/12/same-care-no-matter-where-she-gives-birth-addressing-variation-in-obstetric-care-through-standardization/>.
- ²¹ GOPAL K. SINGH, U.S. DEP'T OF HEALTH & HUMAN SERVICES, HEALTH RESOURCES & SERVICES ADMINISTRATION, MATERNAL & CHILD HEALTH BUREAU, MATERNAL MORTALITY IN THE UNITED STATES, 1935-2007: SUBSTANTIAL RACIAL/ETHNIC, SOCIOECONOMIC, AND GEOGRAPHIC DISPARITIES PERSIST 3 (2010), <http://www.hrsa.gov/ourstories/mchb75th/mchb75maternalmortality.pdf>.
- ²² See, e.g. New York City DEP'T OF HEALTH & MENTAL HYGIENE, BUREAU OF MATERNAL, INFANT & REPROD. HEALTH, PREGNANCY-ASSOCIATED MORTALITY: NEW YORK CITY, 2006-2010 9 (2015) [hereinafter PREGNANCY-ASSOCIATED MORTALITY: NEW YORK CITY], <http://www.nyc.gov/html/doh/downloads/pdf/ms/pregnancy-associated-mortality-report.pdf> (showing that in New York City, Black women are 12 times more likely than White women to die of pregnancy-related causes); SINGH, *supra* note 21, at 5 (showing that during 2003-2007, the MMR in the District of Columbia was 41.6).
- ²³ GEORGIA DEP'T OF PUBLIC HEALTH, GEORGIA MATERNAL MORTALITY: 2012 CASE REVIEW 4 (June 2015), https://dph.georgia.gov/sites/dph.georgia.gov/files/MCH/MMR_2012_Case_Review_June2015_final.pdf.
- ²⁴ MISSISSIPPI STATE DEP'T OF HEALTH, OFFICE OF HEALTH DATA AND RESEARCH, PREGNANCY-RELATED MATERNAL MORTALITY, MISSISSIPPI, 2011-2012, http://msdh.ms.gov/msdhsite/_static/resources/5631.pdf.
- ²⁵ TRENDS IN MATERNAL MORTALITY, *supra* note 6 (showing that in 2015, the MMRs for the occupied Palestinian territory, Mexico and Egypt were 45, 38, and 33 respectively).
- ²⁶ *Pregnancy Mortality Surveillance System*, *supra* note 8; *Maternal Mortality: Fact Sheet No. 348*, WHO, <http://www.who.int/mediacentre/factsheets/fs348/en/> (last updated Nov. 2015) [hereinafter *Fact Sheet No. 348*].
- ²⁷ Cynthia J. Berg et al., *Pregnancy-Related Mortality in the United States, 1987-1990*, 88 OBSTET. GYNECOL. 161, 161 (1996); Donna L. Hoyert et al., *Maternal Mortality, United States and Canada, 1982-1997*, 27 BIRTH 4, 4 (2000); Angela Nannini et al., *Pregnancy-Associated Mortality at the End of the Twentieth Century: Massachusetts, 1990-1999*, 57 J. AM. MED. WOMEN'S ASSOC. 140, 140 (2002).
- ²⁸ Lu et al., *supra* note 3, at 1435.
- ²⁹ *Fact Sheet No. 348*, *supra* note 26.
- ³⁰ *Id.*
- ³¹ WHO, COMMISSION ON SOCIAL DETERMINANTS OF HEALTH, FINAL REPORT: KEY CONCEPTS (2008), http://www.who.int/social_determinants/the-commission/finalreport/key_concepts/en/.
- ³² *Healthy People 2020: Social Determinants of Health*, OFFICE OF DISEASE PREVENTION & HEALTH PROMOTION (ODPHP), <http://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health> (last visited Mar. 29, 2016) [hereinafter *Social Determinants of Health*].
- ³³ *Healthy People 2020: Disparities*, ODPHP, <http://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities> (last visited Mar. 24, 2016).
- ³⁴ *Social Determinants of Health*, *supra* note 32.
- ³⁵ PREGNANCY-ASSOCIATED MORTALITY: NEW YORK CITY, *supra* note 22, at 5.
- ³⁶ See Ina May Gaskin, *Maternal Death in the United States: A Problem Solved or a Problem Ignored?*, 17 J. PERINATAL EDUC. 9, 9-13 (2008); Francine Coeytaux et al., *Maternal Mortality in the United States: A Human Rights Failure*, 83 CONTRACEPTION 189, 190 (2011), <http://www.arhp.org/UploadDocs/journaleditorialmar2011.pdf>; Berg et al., *supra* note 27, at 161-167.
- ³⁷ SINGH, *supra* note 21, at 3.
- ³⁸ NAT'L WOMEN'S LAW CTR., POVERTY & FAMILY SUPPORTS, NATIONAL SNAPSHOT: POVERTY AMONG WOMEN & FAMILIES, 2014 (Sept. 2015), <http://nwlc.org/wp-content/uploads/2015/08/povertysnapshot2014.pdf> (stating that the poverty rate for adult Black women in 2014 was 25.0% while the rate for adult White women in 2014 was 10.8%).
- ³⁹ *Id.*
- ⁴⁰ NAT'L WOMEN'S LAW CTR., POVERTY RATES BY STATE, 2012 (Sept. 2013), http://www.nwlc.org/sites/default/files/pdfs/final_compiled_state_poverty_table_2012.pdf (stating that the poverty rate for Black women in 2012 was 29.1% in Alabama, 32.9% in Arkansas, 26.3% in Georgia, 32.0% in Louisiana, 36.3% in Mississippi, 26.7% in North Carolina, 28.0% in South Carolina, and 26.5% in Tennessee).
- ⁴¹ AMNESTY INTERNATIONAL, DEADLY DELIVERY: THE MATERNAL HEALTH CARE CRISIS IN THE USA: ONE YEAR UPDATE SPRING 2011 7 (2011), available at <http://www.amnestyusa.org/sites/default/files/deadlydeliveryoneyear.pdf>.
- ⁴² CARMEN DE NAVAS-WALT & BERNADETTE PROCTOR, INCOME AND POVERTY IN THE UNITED STATES: 2014, U.S. CENSUS BUREAU (Sept. 2015), at 15, <http://www.census.gov/content/dam/Census/library/publications/2015/demo/p60-252.pdf>.
- ⁴³ Emmanuel Saez & Gabriel Zucman, *Wealth Inequality in the United States Since 1913: Evidence from Capitalized Income Tax Data*, WORKING PAPER No. 20625, at 1 (Nat'l Bureau of Econ. Research, Cambridge, MA), Oct. 2014, <http://gabriel-zucman.eu/files/SaezZucman2014.pdf>.
- ⁴⁴ DE NAVAS-WALT & PROCTOR, *supra* note 42, at 7.
- ⁴⁵ *Economic News Release: Table A-2. Employment Status of the Civilian Population by Race, Sex, and Age*, BUREAU OF LABOR STATISTICS, <http://www.bls.gov/news.release/empst.it02.htm> (last updated Apr. 1, 2016).
- ⁴⁶ THE AMERICAN ASSOCIATION OF UNIVERSITY WOMEN (AAUW), THE SIMPLE TRUTH ABOUT THE GENDER PAY GAP (Spring 2016), <http://www.aauw.org/research/the-simple-truth-about-the-gender-pay-gap/> (last visited April 7, 2016). (Analysis based on 2014 data).
- ⁴⁷ *Id.*
- ⁴⁸ *Id.*
- ⁴⁹ Algernon Austin, CENTER FOR GLOBAL POLICY SOLUTIONS, OBAMACARE REDUCES RACIAL DISPARITIES IN HEALTH COVERAGE 6-7, (Dec. 2015), <http://globalpolicysolutions.org/wp-content/uploads/2015/12/ACA-and-Racial-Disparities.pdf> (last visited April 6, 2016).
- ⁵⁰ *Who is Impacted by the Coverage Gap in States that Have Not Adopted the Medicaid Expansion?*, KAISER FAMILY FOUNDATION (KFF) [hereinafter *Who is Impacted?*], <http://kff.org/slideshow/who-is-impacted-by-the-coverage-gap-in-states-that-have-not-adopted-the-medicaid-expansion/> (last updated Jan. 2016).
- ⁵¹ *Id.*
- ⁵² Definitions of “Deep South” vary, but typically include Alabama, Georgia, Louisiana, Mississippi, and South Carolina as well as Texas, Florida, North Carolina, Tennessee and sometimes Arkansas. AVIS JONES-DEWEEVER, THE NATIONAL COALITION ON BLACK CIVIC PARTICIPATION, BLACK WOMEN'S ROUNDTABLE, 2015 BLACK WOMEN AND HEALTH FROM BLACK WOMEN IN THE U.S. 11 (2015), <http://ncbcp.org/news/releases/BWRRReport.BlackWomeninU.S.2015.3.26.15FINAL.pdf> (stating that North Carolina, South Carolina, Georgia, Alabama, Mississippi and Louisiana all have Black populations that exceed 20% of their total population, and in each of these states the percentage of uninsured Black women exceeds 17%).
- ⁵³ *Who is Impacted?*, *supra* note 50.
- ⁵⁴ U.S. DEP'T. OF HEALTH & HUMAN SERVS. (HHS), AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, 2012 NATIONAL HEALTHCARE DISPARITIES REPORT Chapter 9 (2013) [hereinafter 2012 NATIONAL HEALTHCARE DISPARITIES REPORT], <http://archive.ahrq.gov/research/findings/nhqrdr/nhnr12/chap9.html>.
- ⁵⁵ Majority Black zip codes were 67% more likely to meet the standard for a primary care physician (PCP) shortage area than the standard for a PCP adequate area. Darrell Gaskin et al., *Residential Segregation and the Availability of Primary Care Physicians*, 47 HEALTH

SERVICES RES. 2353-2376 (Dec. 2012); See also *Recent Studies and Reports on Physician Shortages in the U.S.*, ASS'N. OF AM. MED. C. (Oct. 2012), <https://www.aamc.org/download/100598/data/>.

⁵⁶ USHA RANJI ET AL., KFF, WOMEN'S HEALTH CARE CHARTBOOK 32 (2011), <https://kaiserfamilyfoundation.files.wordpress.com/2013/01/8164.pdf>.

⁵⁷ GUTTMACHER INST., FACT SHEET: UNINTENDED PREGNANCY IN THE UNITED STATES (July 2015), <http://www.guttmacher.org/pubs/FB-Unintended-Pregnancy-US.html> [hereinafter UNINTENDED PREGNANCY IN THE UNITED STATES]; Denise D'Angelo et al., *Preconception and Interconception Health Status of Women Who Recently Gave Birth to a Live-Born Infant --- Pregnancy Risk Assessment Monitoring System (PRAMS), United States, 26 Reporting Areas, 2004*, MMWR Surveillance Summaries, CDC (Dec. 14, 2007), <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5610a1.htm>.

⁵⁸ UNINTENDED PREGNANCY IN THE UNITED STATES, *supra* note 57 (showing that rates of unintended pregnancy for women at or higher than 200% of the poverty line have been consistently declining for three decades; meanwhile the rate for women below 100% of the poverty line rose from 1981 to 2008, before declining in 2011, though still remaining higher than the 1981 rates).

⁵⁹ *Id.*

⁶⁰ 2012 NATIONAL HEALTHCARE DISPARITIES REPORT, *supra* note 54.

⁶¹ *Uninsured Rates for the Nonelderly by Race/Ethnicity, 2014*, KFF, <http://kff.org/uninsured/state-indicator/rate-by-raceethnicity/#map> (last accessed Feb. 19, 2016); Jessica Stephens et al., *Health Coverage and Care in the South in 2014 and Beyond*, THE KAISER COMMISSION ON MEDICAID AND THE UNINSURED: ISSUE BRIEF (KFF, Menlo Park, CA), updated June 2014, <https://kaiserfamilyfoundation.files.wordpress.com/2014/04/8577-health-coverage-and-care-in-the-south-in-2014-and-beyond-june-2014-update.pdf>.

⁶² Some studies have found higher rates of comorbid conditions among pregnant Black women. See Howell et al., *supra* note 14, at 122.e3.

⁶³ E.g. HHS, AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, DISPARITIES IN HEALTHCARE QUALITY AMONG MINORITY WOMEN: FINDINGS FROM THE 2011 NATIONAL HEALTH CARE QUALITY AND DISPARITIES REPORTS 5 (2012), <http://archive.ahrq.gov/research/findings/nhqrdr/nhqrdr11/minority-women.pdf> (stating that 60.4% of Black women receive prenatal care in the first trimester, compared to 76.7% of non-Hispanic White women, 64.7% of Hispanic women, 76.5% of Asian/Pacific Islander women, and 55.1% of American Indian and Alaskan Native women); NAT'L INSTS. OF HEALTH, OFF. OF RESEARCH ON WOMEN'S HEALTH, WOMEN OF COLOR HEALTH DATA BOOK 103 (4th ed. 2014), <http://orwh.od.nih.gov/resources/policyreports/pdf/WoC-Databook-FINAL.pdf> (stating that 12% of American Indian, Alaskan Native, and Black women receive prenatal care only in the third trimester or not at all, compared to 9% for Hispanic women and 5% for Asian/Pacific Islander and non-Hispanic White women).

⁶⁴ Coeytaux et al., *supra* note 36, at 190.

⁶⁵ HHS, AGENCY FOR HEALTHCARE RESEARCH AND QUALITY, 2013 NATIONAL HEALTHCARE DISPARITIES REPORT 14 (2014), <http://www.ahrq.gov/sites/default/files/wysiwyg/research/findings/nhqrdr/nhqrdr13/2013nhdr.pdf>.

⁶⁶ Agrawal, *supra* note 20.

⁶⁷ *Id.*

⁶⁸ See, e.g. F. L. Lucas et al., *Race and Surgical Mortality in the United States*, 243 ANNALS OF SURGERY 281, 285 (2006) (showing that hospitals treating a large proportion of Black patients had higher mortality rates for a wide range of surgical procedures); Lenny López and Ashish K. Jha, *Outcomes for Whites and Blacks at Hospitals that Disproportionately Care for Black Medicare Beneficiaries*, 48 HEALTH SERVICES RESEARCH 114, 122-124 (2013) (showing that hospitals treating a large proportion of Black patients had higher mortality rates for heart attacks); Leo S. Morales et al., *Mortality among Very Low-Birthweight Infants in Hospitals Serving Minority Populations*, 95 AM. J. PUB. HEALTH 2206, 2210-2211 (2005) (showing that hospitals treating a large proportion of Black patients had higher mortality rates for very low-birthweight infants); Andreea A. Creanga, *Performance of Racial and Ethnic Minority-Serving Hospitals on Delivery-Related Indicators*, 211 AM. J. OBSTET. GYNECOL. 647.e1, 647.e5-e7 (2014) (showing that Black-serving hospitals performed worse than White- or Hispanic-serving hospitals on 12 of 15 delivery-related indicators).

⁶⁹ Howell et al., *supra* note 14, at 122.e5.

⁷⁰ *Id.* at 122.e5.

⁷¹ *Id.* at 122.e5-122.e6.

⁷² See, e.g. BRIAN D. SMEDLEY ET AL., INST. OF MEDICINE OF THE NAT'L ACADEMIES, UNEQUAL TREATMENT: CONFRONTING RACIAL AND ETHNIC DISPARITIES IN HEALTH CARE 162-174 (2003), available at <http://www.nap.edu/catalog/10260/unequal-treatment-confronting-racial-and-ethnic-disparities-in-health-care> (providing an overview of the "limited but growing" body of research about the ways that biased or prejudicial attitudes among health care providers can manifest in interactions with patients); Joshua H. Tamayo-Sarver et al., *Racial and Ethnic Disparities in Emergency Department Analgesic Prescription*, 93 AM. J. PUBLIC HEALTH 2067, 2071 (2003) (showing that physicians have demonstrated a lower likelihood of prescribing opioids to Black patients for migraines and back pain); Janice A. Sabin and Anthony G. Greenwald, *The Influence of Implicit Bias on Treatment Recommendations for 4 Common Pediatric Conditions: Pain, Urinary Tract Infection, Attention Deficit Hyperactivity Disorder, and Asthma*, 102 AM. J. PUBLIC HEALTH 988, 991 (2012) (showing that pediatricians' implicit attitudes and stereotypes about race affect their decisions about children's pain management, with their likelihood of prescribing narcotic pain medication to Black patients decreasing as their pro-White bias increased); Kevin A. Schulman et al., *The Effect of Race and Sex on Physicians' Recommendations for Cardiac Catheterization*, 340 N. ENGL. J. MED. 618, 621-625 (1999) (showing that race and sex independently influence physicians' decisions about how to manage patients complaining of chest pain, with Black women being significantly less likely to be referred for cardiac catheterization than White men).

⁷³ HHS, HEALTH RESOURCES AND SERVICES ADMINISTRATION, BUREAU OF HEALTH PROFESSIONS, THE RATIONALE FOR DIVERSITY IN THE HEALTH PROFESSIONS: A REVIEW OF THE EVIDENCE 9-10 (Oct. 2006), available at <http://bhpr.hrsa.gov/healthworkforce/reports/diversityreviewevidence.pdf>.

⁷⁴ Somnath Saha et al., *Patient-Physician Racial Concordance and the Perceived Quality and Use of Health Care*, 159 ARCH. INTERN. MED. 997, 997-998 (1999) available at <http://archinte.jamanetwork.com/article.aspx?articleid=485025> (stating that Black patients with Black physicians were more likely than those with non-Black physicians to report receiving preventative care and all needed medical

care).

⁷⁵ *Id.* at 998, 1000-1002 (stating that Black patients with Black physicians were more likely than those with non-Black physicians to rate their physicians as excellent and that, of the variables used to measure patient satisfaction, the strongest association with racial concordance appeared in the higher ratings that Black patients gave to Black physicians for treating them with respect).

⁷⁶ LAURA CASTILLO-PAGE, ASSOCIATION OF AMERICAN MEDICAL COLLEGES, DIVERSITY IN THE PHYSICIAN WORKFORCE: FACTS & FIGURES 2006 10 (2006), <http://www.rwjf.org/content/dam/farm/reports/charts/2006/rwjf12748> (stating that "race-concordant visits were longer, by about 2.2 minutes, and had higher ratings of positive patient affect").

⁷⁷ *Diversity in the Physician Workforce: Facts & Figures 2014 - Section II: Current Status of the U.S. Physician Workforce*, ASSOCIATION OF AMERICAN MEDICAL COLLEGES (Dec. 3, 2014), <http://aamcdiversityfactsandfigures.org/section-ii-current-status-of-us-physician-workforce/>.

⁷⁸ See, e.g. Cheryl L. Giscombé & Marci Lobel, *Explaining Disproportionately High Rates of Adverse Birth Outcomes among African Americans: The Impact of Stress, Racism, and Related Factors in Pregnancy*, 131 PSYCHOL. BULL. 662, 667-668 (2005) and Nancy Krieger, *Racial and Gender Discrimination: Risk Factors for High Blood Pressure?*, 30 SOC. SCI. MED. 1273, 1277-1278 (1990) (showing that racism acts as a form of chronic stress in the lives of Black American women); Nancy Krieger and Stephen Sidney, *Racial Discrimination and Blood Pressure: The CARDIA Study of Young Black and White Adults*, 86 AM. J. PUB. HEALTH 1370, 1373-1376 (1996) (showing an association between racial discrimination and responses to unfair treatment and elevated blood pressure among Black adults); Robert L. Goldenberg et al., *Bacterial Colonization of the Vagina during Pregnancy in Four Ethnic Groups*, 174 AM. J. OBSTET. GYNECOL. 1618, 1619-1620 (1996) and Jennifer F. Culhane et al., *Maternal Stress is Associated with Bacterial Vaginosis in Human Pregnancy*, 5 MATERNAL AND CHILD HEALTH J. 127, 127, 129-132 (2001) and Aziz R. Samadi and Robert M. Mayberry, *Maternal Hypertension and Spontaneous Preterm Births among Black Women*, 91 OBSTET. GYNECOL. 899, 902 (1998) (showing that Black women have significantly higher rates during pregnancy of bacterial vaginosis, which is associated with chronic stress in pregnant women, and of hypertensive disorders); Hope Landrine and Elizabeth A. Klonoff, *Racial Segregation and Cigarette Smoking among Blacks: Findings at the Individual Level*, 5 J. HEALTH PSYCHOLOGY 211, 217-218 (2000) and Irene Yen et al., *Racial Discrimination and Alcohol-Related Behavior in Urban Transit Operators: Findings from the San Francisco Muni Health and Safety Study*, 114 PUB. HEALTH REPS. 448, 449, 454-455 (1999) (showing that segregation and racial discrimination are associated with negative health effects and unhealthy coping behaviors).

⁷⁹ Amani Nuru-Jeter et al., *It's the Skin You're In: African-American Women Talk about their Experiences of Racism. An Exploratory Study to Develop Measures of Racism for Birth Outcome Studies*, 13 MATERN. CHILD HEALTH J. 29, 30 (2009).

⁸⁰ Fleda Mask Johnson et al., *Contextualized Stress, Global Stress, and Depression in Well-Educated, Pregnant, African-American Women*, 22 WOMEN'S HEALTH ISSUES e329, e330 (2012).

⁸¹ *Id.* at e329-e330.

⁸² Arline T. Geronimus, *Black/White Differences in the Relationship of Maternal Age to Birthweight: a Population-Based Test of the Weathering Hypothesis*, 42 SOC. SCI. MED. 589, 591-592, 594-595 (1996).

⁸³ *Id.* at 594-596.

⁸⁴ *US Spends More on Health Care than Other High-Income Nations but Has Lower Life Expectancy, Worse Health*, THE COMMONWEALTH FUND (Oct. 8, 2015), <http://www.commonwealthfund.org/publications/press-releases/2015/oct/us-spends-more-on-health-care-than-other-nations>.

⁸⁵ Creanga et al., *Maternal Mortality and Morbidity*, *supra* note 14, at 6.

⁸⁶ See Marge Koblinsky et al., *Maternal Morbidity and Disability and Their Consequences: Neglected Agenda in Maternal Health*, 30 J. HEALTH POPULATION & NUTRITION 124-130 (June 2012).

⁸⁷ *Pregnancy-Related Deaths*, *supra* note 1.

⁸⁸ SINGH, *supra* note 21, at 2.

⁸⁹ Belle Taylor-McGhee, *'We Simply Don't Know' Why Black Moms Die More Often*, WOMEN'S ENEWS (Dec. 14, 2012), <http://womensenews.org/2012/12/we-simply-dont-know-why-black-moms-die-more-often/>.

Featured Quotations

Page 2: Cynthia Greenlee, *Why Don't More People Care About Black Maternal Deaths?*, REWIRE (Oct. 25, 2013, 10:41 AM) (emphasis in original), <https://rewire.news/article/2013/10/25/why-dont-more-people-care-about-black-maternal-deaths/>.

Page 6: Elizabeth Dawes Gay, *In the U.S., Black Mothers Need More Than Health Care*, MATERNAL HEALTH TASK FORCE BLOG (Nov. 11, 2015), <https://www.mhtf.org/2015/11/11/in-the-u-s-black-mothers-need-more-than-health-care/>.

SisterSong Story Circles took place in April and May of 2014, in Atlanta, Ga. and Jackson, Miss. All names for Story Circle participants are pseudonyms.

Notes