

What You Need to Know About Maternal Mortality



There is a maternal mortality crisis in the United States. After an enormous drop between 1900 and 1950, and an additional steady decline between 1950 and 1987, the maternal mortality rate in the U.S. has [increased dramatically](#) over the past 25 years. The U.S. is the only developed country experiencing this trend.¹

1987

7.2

American mothers died per 100,000 live births.

2014

18

American mothers died per 100,000 live births.

This means that every year, between 700 and 900 [American mothers die as a result of childbirth, and about 50,000](#) nearly die after experiencing severe complications (known as “severe maternal morbidity”).² A [recent study](#) by the CDC Foundation determined that 60 percent of these deaths were preventable.³

The risk of pregnancy-related death for Black women, at 40 per 100,000 births between 2011 and 2014, is more than [three times higher than that of white women](#) (12.4/100,000), pointing to the devastating impacts of implicit bias and racism in health care delivery, as well as a lack of access to high-quality health care.⁴ The trend worsened between 2006 and 2013, with one analysis finding the rate rose from [38.9 between 2006 and 2010](#) to [43.5](#) in 2013, a 12 percent increase.⁵ [Another study](#) that combines CDC health statistics and county-level cause of death data finds the rate of maternal mortality among Black women rising from 39/100,000 to 49/100,000 between 2005 and 2014.⁶

Key definitions

Maternal mortality rate: The number of pregnancy-related deaths per 100,000 deliveries. The [Centers for Disease Control](#) counts any death during pregnancy, delivery, or up to a year after delivery due to a condition caused or aggravated by pregnancy, as “pregnancy-related maternal mortality.”⁷

Severe maternal morbidity rate: Medical jargon for severe pregnancy complications that occur during labor and delivery, such as seizure or hemorrhage, that while traumatic and with potentially permanent consequences, are not fatal. [Severe maternal morbidity](#) (SMM) has been increasing in recent years and affected 50,000 women in 2014. The rate of severe maternal morbidity in the U.S. has increased by [nearly 200 percent since 1993](#), when the rate was 43.3 cases per 10,000 deliveries; by 2014, that number had increased to 144/10,000. By far the largest increase in SMM comes due to an increase in blood transfusions. But [not all practitioners agree](#) on what combination of conditions constitutes SMM, so it’s important to note that after excluding blood transfusions, the rate of SMM increased at a smaller, but still significant, rate of 20 percent, from 28.6 in 1993 to 35.0 in 2014.⁸

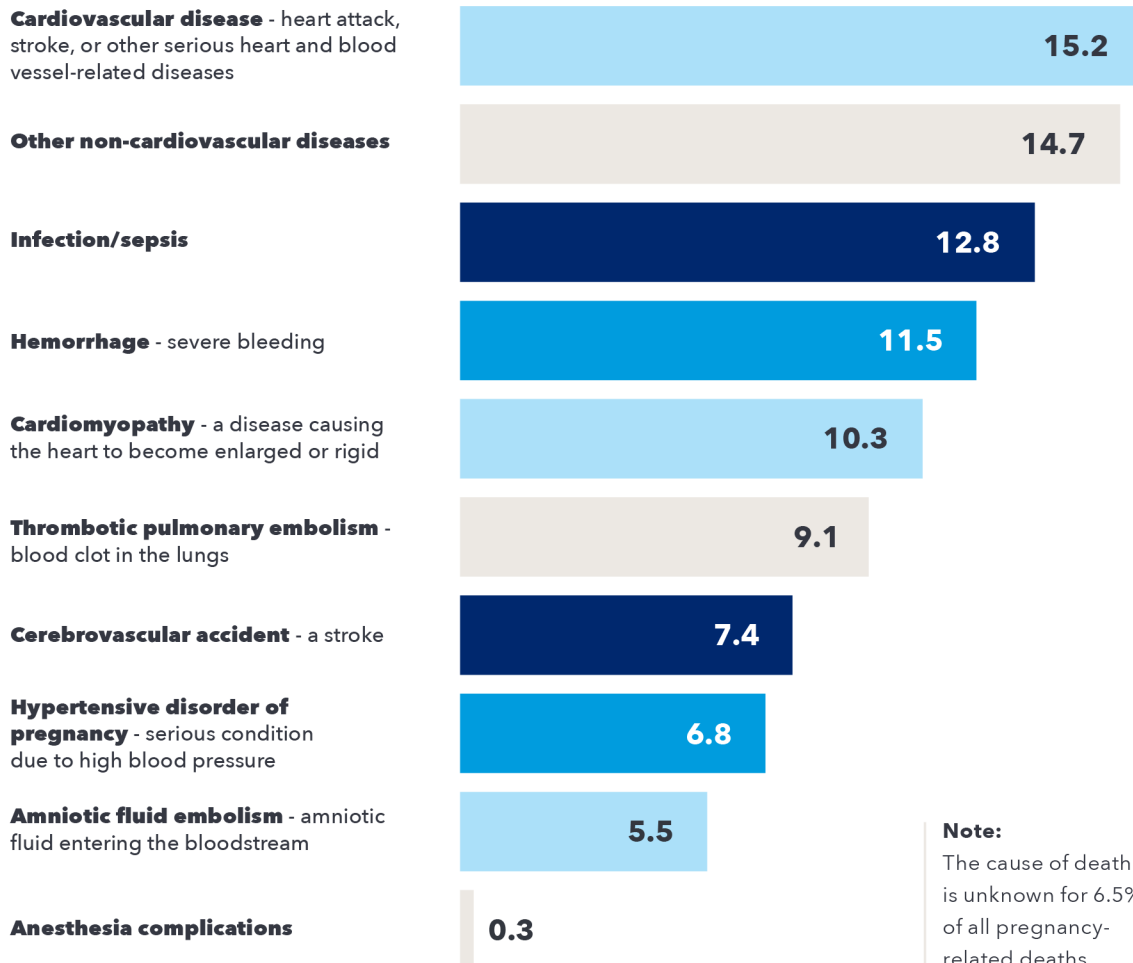
Pregnancy-related death: To be counted by the CDC, a death has to be a result of a condition either caused by or aggravated by the pregnancy (i.e. death because of a car accident is not counted).⁹



Causes of pregnancy-related death in the United States

2011 - 2014

PERCENTAGE OF ALL PREGNANCY-RELATED DEATHS



Explaining the “Noise” in the Data

The National Vital Statistics system and the World Health Organization counts only deaths up to 42 days after delivery as “maternal mortality,” even though some [researchers](#) have pointed out that the effects of pregnancy-related conditions – such as hemorrhage, infection, and anemia – may last longer. Different methodologies and problems with undercounting and overcounting at the state level mean that there are multiple credible measures of pregnancy-related maternal mortality. Unless otherwise specified, this fact sheet will use the CDC’s Pregnancy Mortality Surveillance System (PMSS), developed in 1986 with the American College of Obstetricians and Gynecologists (ACOG). PMSS counts any maternal deaths due to conditions caused or significantly aggravated by the pregnancy up to a year after delivery.¹⁰

Structural Racism and Black Maternal Mortality

At over 40 deaths per 100,000 live births, the maternal mortality rate for Black women is more than [three times higher](#) than that of white women, at 12.4. It is also higher than that of Latinas ([12/100,000](#)), who were almost [twice as likely](#) as Black women to be without health insurance.¹¹

A study of [five years of data collected in New York City](#) found that the maternal mortality rates among Black women did not greatly improve with education levels. Even among women with at least a college degree, Black mothers were more than twice as likely to experience severe complications during childbirth than white mothers.¹²

One plausible cause of this disparity is that the stress of experiencing racism has a physical effect on the body that contributes to disproportionately high maternal health risks for Black women. One [study](#) by Arline Geronimus suggests that racism causes premature aging in the cells of Black Americans, a process that she terms “weathering.” Her study found that among Black women in their 40s and 50s, the chromosomal structures known as telomeres (commonly used as a biomeasure of aging) showed 7.5 years more aging than in white women of comparable years.¹³ Michael Lu, a professor of public health at George Washington University who studies disparities in care, [suggests health care providers recognize that the weathering effect](#) ages a pregnant Black patient more than her biological age.¹⁴

“It tells you that you can’t educate your way out of this problem. You can’t health-care-access your way out of this problem. There’s something inherently wrong with the system that’s not valuing the lives of Black women equally to white women.”

– Raegan McDonald-Mosley
Chief Medical Officer
Planned Parenthood of Maryland

Racism, disrespect, and bias within the medical system can also affect the outcomes for expectant mothers. A 2017 survey by NPR, Harvard, and the Robert Wood Johnson Foundation showed that [33 percent of African-Americans had been discriminated against during a doctor’s visit – and 22 percent had avoided care entirely](#) out of fear of racial discrimination.¹⁵ The inequitable distribution of high-quality health care, another facet of structural racism, also contributes to disparate maternal mortality rates. An assessment of hospitals showed evidence of structural racism: In a [study of hospitals across seven states](#), when compared to hospitals that predominantly served white or Hispanic patients, hospitals that predominantly served Black patients performed worse in 12 out of 15 health care delivery indicators – and many of those services are related to reproductive and maternal health care, including elective deliveries, non-elective cesarean births and maternal mortality.¹⁶

U.S. Maternal Mortality in Global Context

In 2015, 49 different countries had lower rates of maternal mortality than the U.S., according to estimates in a [major international study](#) published in *The Lancet* and underwritten by the Gates Foundation.

The 2015 estimated U.S. rate of 26.4 maternal deaths per 100,000 live births was far worse than Australia (5.5), Japan (6.4), Canada (7.3), France (7.8), Germany (9.0) and the U.K. (9.8). The U.S. has the worst maternal mortality rates of any high-income country. ([See Table 1, p. 1784](#)).¹⁷

Estimated rate of maternal deaths per 100,000 live births in 2015.



Maternal Mortality Declines in the 20th Century

In the late 19th century, approximately [800 American women died per 100,000 births](#).¹⁸ In the early 1920s the maternal mortality rate [actually worsened](#) from its already high levels. [About 40 percent of these maternal deaths were due to sepsis](#), a life-threatening complication of infection – about half of those in the process of conventional birth, and most of the other half of that 40 percent from complications due to unsafe abortions before abortion was legal.¹⁹

In the 1940s, the rate of maternal mortality resumed its decline, hitting the rate of 100 in 100,000 by 1950, and plummeting further to roughly 7.2 in 100,000 in 1987. Then it began a troubling increase.

Backsliding: Since 1987, Maternal Mortality on the Rise

While the maternal mortality rate continued to decline in wealthy democracies with universal health care access, the U.S. began experiencing a troubling increase beginning in the late 1980s, with particularly high incidence among Black and rural women of all backgrounds. Given that the U.S. spends more per capita than any country on health care, the problem is not a lack of resources.²⁰

The Lack of Paid Family Leave Worsens Maternal and Infant Health Outcomes

The U.S. is [the only developed country in the world](#) that does not offer paid time off to new parents.²¹ According to the National Bureau of Labor Statistics, in 2017 [only an estimated 15 percent of private sector workers](#), or just over one in seven workers, had access to paid family leave through their employer.²² When employers are not required by law to pay for parental leave, many parents simply have no other choice but to return to work even while caring for a newborn – during a time when the new mother is recovering from the physical and mental strains of delivery and in some cases, serious complications. In fact, [up to one in four](#) new mothers in the U.S. goes back to work within two weeks, counter to [medical recommendations](#) for both maternal and infant health outcomes.²³

Uninsured and Rural Women Are At High Risk

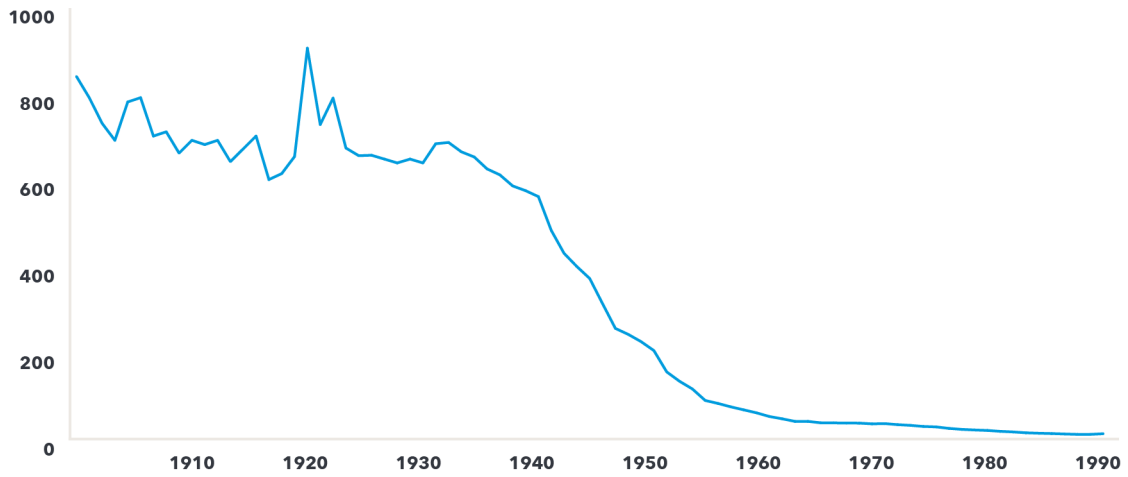
While pregnancy and childbirth are medically intensive experiences, the reality is that about 10 percent of the U.S. population, or 30 million people, are uninsured. And even among those who do have coverage, a [Commonwealth Fund study that looked at 2018 data](#) found that 29 percent were “underinsured,” meaning they were likely to delay care or have trouble paying medical bills due to the expense of deductibles or copays.²⁴ [So when the costs of delivery and pre- and post-partum care exceed \\$30,000](#), many uninsured or underinsured women are unable to afford all of the necessary medical care associated with pregnancy.²⁵ Though pregnant women have expanded eligibility to qualify for Medicaid beyond ordinary income limits, [benefits are cut off 60 days after delivery](#).²⁶

By 2017, 7 percent of white women, and 7 percent of Asian-Americans were uninsured, while 11 percent of Black and 19 percent of Hispanic women [did not have coverage](#). These figures [vary widely by state](#), and depend in particular on which states voluntarily chose to deny health care to tens of thousands of citizens by foregoing Medicaid expansion.²⁷ [Research](#) from 2019 shows that states that have expanded Medicaid access for women of reproductive age significantly improved maternal health outcomes over those that did not.²⁸

Maternal Mortality Rate in the United States

1900 - 1990

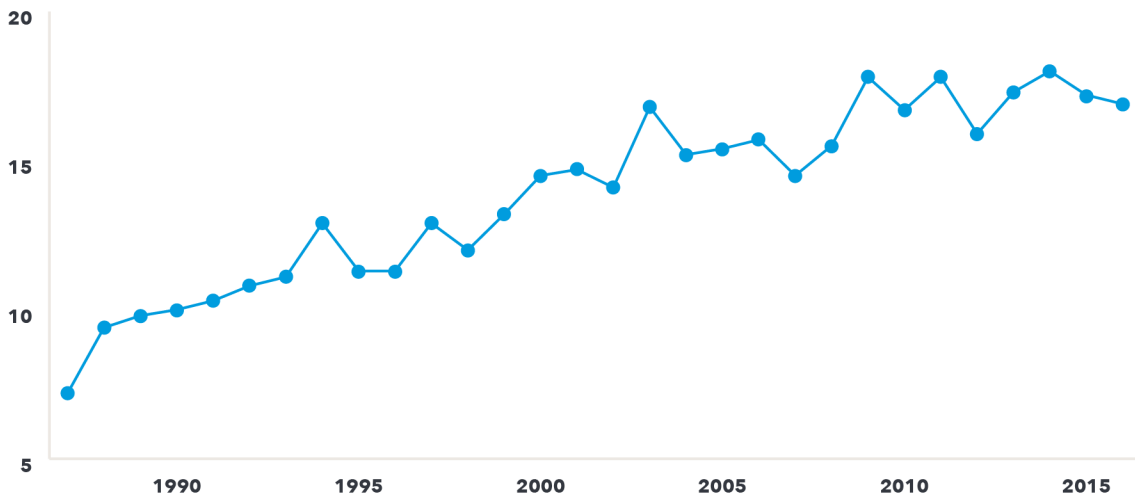
NUMBER OF PREGNANCY-RELATED DEATHS PER 100,000 LIVE BIRTHS



Trends in pregnancy-related mortality in the United States

1987 - 2016

NUMBER OF PREGNANCY-RELATED DEATHS PER 100,000 LIVE BIRTHS PER YEAR



Geography also plays a role. Women in rural areas are less likely to receive preventive perinatal health care and screenings. [Less than half](#) of rural women live within a 30-minute drive of a health center capable of offering these services, and more than 10 percent must drive at least 100 miles.²⁹ More than 5 million women, spread across 1,085 counties, [live in “maternity deserts,”](#) meaning there is no hospital with obstetric care and zero OB/GYNs or certified nurse midwives in the county (80 percent of these “maternity deserts” are rural, and 20 percent are urban).³⁰ [Women in rural areas](#) have lower rates of perinatal care, and also higher level of pregnancy-related complications.³¹ An analysis of [2015 CDC data](#) found that the maternal mortality rate among women living in the most rural areas was 29.4 per 100,000 births, compared with 18.2 per 100,000 in large, metropolitan areas.³²

How to Reduce Maternal Mortality

The CDC Foundation estimates that roughly [60 percent of U.S. maternal deaths are preventable](#).³³ That makes the U.S. rate of maternal mortality a moral outrage, not just a tragedy, because leaders choose not to allocate health care resources that would prevent many of these deaths.

The CDC has a lengthy list of recommendations for [preconception care](#), ranging from regularly taking folic acid supplements to exploring health history for medical conditions that may affect the pregnancy, and another [set of recommendations](#) for prenatal consultations and staying healthy during pregnancy.³⁴

Care before and after delivery is crucial because that is where the majority of maternal deaths occur, rather than during labor and delivery. [Four out of five deaths](#) happen in the weeks and months before or after birth.³⁵

Due to the high uninsured rate in the U.S. and structural racism, women of color are less likely to receive critical prenatal care. [According to 2016 data](#), Black women are twice as likely as white women to receive prenatal care late, and three times as likely to receive no prenatal care at all. Native Americans and Native Hawaiians are even less likely to receive this crucial care, with 19 percent of women of these backgrounds receiving prenatal care late, or none at all.³⁶ Women who do not receive prenatal care [are three to four times more likely](#) to suffer pregnancy complications than those that do.³⁷

Reducing Disparities and Building Maternal Health Equity

The Maternal Health Task Force at the Harvard Chan School has [posted a series of recommendations](#) to address the disparate levels of maternal mortality among Black women. Among them: Black mothers – and indeed those from all backgrounds – need affordable access to prenatal and postpartum care, as well as to a delivery environment where staff are trained and equipped to address complications. Important ways to reduce the possibility of the hostile or disrespectful comments known as “microaggressions” are to hire a diverse staff, and offer trainings about the existence of overt and unconscious bias.³⁸

The organization [Black Mamas Matter Alliance](#) offers a [detailed](#) set of policy prescriptions, including the leadership of Black women and Black women-led organizations in creating policy on maternal mortality, a need for mechanisms to redress the racism and neglect within obstetrics, and continued expansion of health insurance access.³⁹ The [Center For American Progress](#) stresses the need to increase health care access, improve the delivery of care, identify barriers to maternal care, enhance care for families before and after birth, and improve data-collection practices.⁴⁰

A report [co-authored](#) by the [Center for Reproductive Rights](#), the [National Latina Institute for Reproductive Health](#), and the [SisterSong Women of Color Reproductive Justice Collective](#), notes that CDC tracking of maternal mortality statistics relies on non-standardized data voluntarily offered by states. The report argues for more rigorous data collection practices; improved access to sex education and reproductive health care, particularly in states that have declined to expand Medicaid eligibility; and a concerted effort within the health care system to address discrimination, along with accountability measures.⁴¹

The important role of the doula in reducing pregnancy complications

“Evidence suggests that, in addition to regular nursing care, continuous one-to-one emotional support provided by support personnel, such as a doula, is associated with improved outcomes for women in labor.”

– The American College of Obstetricians and Gynecologists⁴²

Minnesota, Oregon, and parts of New York state allow Medicaid monies to pay for the services of doulas, who support pregnant individuals as experienced birthing coaches, advocates, and health care system navigators. Though [Medicaid reimbursement rates for doula services are still too low](#) to attract the number of doulas required to fill the need, increasing access has benefits for reducing pregnancy complications.⁴³ According to the [American Pregnancy Foundation](#), doulas serve to reduce the number of Cesarean sections, which increase the risk of maternal death by [infection and hemorrhage](#), and reduce the duration of labor by a quarter.⁴⁴ [Another study](#), using a theoretical model of 1.6 million women, found that the assistance of a doula would result in more than 202,000 fewer C-sections, 46 fewer maternal deaths, 99 fewer uterine ruptures, and 26 fewer hysterectomies. Using cost-benefit analysis tools, the researchers reached the conservative conclusion that with the cost of doula care for a first pregnancy at \$884 or less, it is actually a cost-saving measure. When doula care costs \$1,360 or less, it is still a cost-effective way to improve health outcomes.⁴⁵

For pregnant Black mothers, there is strong evidence that a doula can be an advocate against bias that might be unconscious or otherwise hard-to-spot for a woman distracted by the demands of labor. For example, doulas can be advocates when medical professionals do not take [complaints of pain by Black mothers seriously](#), which can mean complications may go untreated. Or doulas can serve as advocates who object to [condescending remarks](#) symptomatic of a broader contempt (i.e. “These people, the way they give birth is so dramatic”).⁴⁶

Another [study](#) highlighted the value of doulas by comparing pregnancy outcomes for 225 people in Greensboro, NC, most of whom are Black. They were at risk for difficult pregnancies due to factors like racial disparities and low incomes. The study found that those who had doulas were four times less likely to have a baby with low birth-weight; two times less likely to experience birth complications; and more likely to initiate breastfeeding than those without doulas. The study concluded that communication with doulas may have increased the mothers’ beliefs that they could positively impact their birth outcomes.⁴⁷

Statewide Success Stories

In 2006, the state of California collaborated with the Stanford University School of Medicine and founded the [California Maternal Quality Care Collaborative](#) (CMQCC) in an effort to reduce maternal mortality and morbidity rates. The Collaborative has reduced statewide maternal deaths from 16.9 per 100,000 in 2006 to 7.3 in 2013 – even as the national rate continued its troubling rise. The CMQCC has standardized training and materials for pre-eclampsia and hemorrhage, two of the most common causes of maternal mortality. The

toolkits and safety bundles are available to workers at the CMQCC's over 200 member hospitals, as well as the general public, and provide the best methods for early diagnosis and treatment.⁴⁸

North Carolina's Pregnancy Medical Home Program in 2011 correlates with the disappearance of a disparity in maternal mortality outcomes between white and Black mothers (At 23 deaths per 100,000 live births, [the rate is still higher](#) than the national average, but doesn't show the huge racial disparity that exists in every other state). Using Medicaid funds, the Pregnancy Medical Home Program directs doctors to screen pregnant women for common risk factors, such as high-blood pressure, diabetes, or seizure disorders. Women who test positively for a risk factor get assigned a "pregnancy manager" to monitor the condition closely and help direct treatment.⁴⁹

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