Reducing pregnancy-related maternal deaths in the United States

The United States has the highest maternal mortality rate in the developed world.

The African American maternal mortality rate is three to four times higher than that for whites, regardless of income level.

U.S. pregnancy- or childbirth-related maternal deaths are increasing, while declining in other nations.

An estimated 60 percent of U.S. pregnancy-related deaths are preventable.

To address the problem, states have established Maternal Mortality Review Committees to analyze deaths and devise high-impact preventions and interventions, and the CDC provides a free tool that standardizes pregnancy and childbirth care.

Trends: The U.S. maternal mortality rate is among the world’s highest, and it’s climbing

Currently in the United States, more women are dying from pregnancy- and birth-related complications than in any other developed country. Moreover, in most of the world, maternal mortality has been declining, whereas U.S. maternal deaths have been increasing, especially since 2000. The U.S. maternal mortality rate (MMR; deaths per 100,000 live births) is between three and six times higher than those of peer nations (Figure 1). The U.S. rate is not only high but it’s climbing, from 16.9 in 1990 to 26.4 in 2015.

Disparities: Within the U.S., MMRs vary widely by race, ethnicity, state, and age

Maternal mortality rates vary substantially by race, ethnicity, state, and age within the United States. African American women are at greatest risk, being up to four times more likely to die from pregnancy-related causes than non-Hispanic white women, regardless of age (Figure 2). Moreover, high-income black women are at greater risk of dying during or after pregnancy than low-income white women. The District of Columbia has the nation’s highest maternal mortality rate at 40.7, with Georgia (39.3), New Jersey (37.3), and Arkansas (35.4) close behind (see Figure 3); this in part reflects a larger proportion of black women living in these locations, and underscores the complex intersection of race and geography.

In the U.S., heart disease, non-cardiovascular diseases, and infection are the top three causes of maternal death

According to CDC maternal death data from 2011 to 2014, heart disease, non-cardiovascular diseases, and infection or sepsis are the top three causes of maternal death for all races in the United States, with hemorrhage a close fourth (Figure 4). Again, however, African American mothers are three to four times more likely to die from these pregnancy- or childbirth-related causes than white women. Most maternal deaths (45 percent) occur while the mother is pregnant or in the first 42 days after giving birth.
Contributing factors: Socioeconomic and societal context is strongly associated with racial disparities in maternal deaths

To understand the unusually high— and increasing—rates of U.S. maternal mortality, public health experts are comparing findings from biological studies that characterize stress and the environment to those of social scientists studying income, health, and wealth. Within this framework, evidence suggests that the causes of the black-white divide in maternal mortality are greatly influenced by the considerable stress associated with societal and systemic racism experienced by black women in America. Stress can cause or worsen cardiovascular and hypertensive disorders such as new-onset high blood pressure in pregnancy. A review last year found that hypertension and seizures caused by it are 60 percent more common and more severe among black women than among white women. A recent study found that there were only two hypertensive disorder-attributed maternal deaths in the United Kingdom between 2012 and 2014, suggesting that deaths from hypertensive disorder during pregnancy are largely preventable.

Strategies: Preventing maternal deaths by identifying and addressing causes

Public health experts are analyzing the causes and correlates of the high U.S. maternal mortality levels to find solutions. Recognizing the importance of gathering, standardizing, and analyzing data to guide prevention and intervention efforts led state and local health agencies to develop a maternal mortality review data system for use by Maternal Mortality Review Committees, which review maternal deaths, assess preventability, identify contributing factors, recommend improvements, and measure the potential impact of implemented recommendations. Public health officials also suggest that committees include discussion of where people live, their income level, and their race/ethnicity—key social determinants of health—and make specific recommendations to address differences in health care quality and access across populations.

A coalition of health experts studied data from nine state-based Maternal Mortality Review Committees and found that factors related to providers and systems of care are among the leading contributors. Recommended strategies:

1. When a woman arrives at the hospital in labor, ensure that the extent of care she needs is accurately established;
2. Establish and disseminate clear policies regarding prevention initiatives;
3. Enforce policies and procedures related to obstetric hemorrhage; and
4. Improve policies related to patient management, including instructions for reducing the rate of Caesarean deliveries, and identifying providers who are not following best practices.

Similar to the Maternal Mortality Review Committees’ approach, the CDC provides a free web-based tool, the Levels of Care Assessment Tool (CDC LOCAtE), which standardizes definitions of terms and recommended levels of care, which currently vary widely among states. CDC LOCAtE is being widely adapted with the hope of reducing pregnancy- and birth-related maternal deaths in the United States.

For sources and more information, go to https://www.irp.wisc.edu/resource/reducing-pregnancy-related-maternal-deaths-in-the-united-states
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Thirty eight percent of deaths occur during pregnancy, and 18 percent happen between 43 days and one year after giving birth.


B. Wolfe, W. Evans, and T. E. Seeman, eds., The Biological Consequences of Socioeconomic Inequalities.


Learn more about CDC LOCATe at https://www.cdc.gov/reproductivehealth/maternalinfanthealth/LOCATe.html.