



# Cardiovascular Disease and Maternal Health

## CARDIOVASCULAR DISEASE AND MATERNAL HEALTH

Despite the decrease in maternal mortality worldwide, the maternal mortality rate continues to rise in the United States. The U.S. has the highest maternal mortality rate in the developed world, with an estimated 700 women dying each year from pregnancy-related complications and three in five pregnancy-related deaths being preventable.<sup>1</sup> Cardiovascular disease (CVD) is the leading cause of death among women in the U.S. accounting for about 1 in every 3 female deaths, as well as the leading cause of maternal death in the U.S., posing a threat to women's heart health during pregnancy and later in life.<sup>1,2</sup>

An estimated 30% - 40% of pregnant women have at least 1 factor that can lead to long-term health problems, and 20% - 30% carry a predictor of CVD disease risk.<sup>3</sup> It is estimated that CVD is present in 1% - 4% of the nearly 4 million pregnancies in the U.S. each year, with heart disease and stroke accounting for more than 1 in 3 (34%) of pregnancy related deaths.<sup>1,4</sup> The metabolic demands on the mother's heart during pregnancy can often expose underlying or silent cardiac issues, which is why pregnancy is often referred to as nature's stress test. The early identification of CVD could prevent at least a quarter of maternal deaths.<sup>5</sup> Moreover, significant disparities in maternal care and outcomes persist across race, ethnicity, geography, income, and other sociodemographic factors, in addition to systemic inequities that pose access barriers to care and exacerbate poor maternal health outcomes in the U.S.



As the nation's oldest and largest voluntary health care organization dedicated to reducing death and disability from CVD, the American Heart Association (AHA) has an obligation to be part of the dialogue and solutions that support equitable improvements in cardiovascular and maternal health.

## CARDIOVASCULAR DISEASE RISK FACTORS

- 10% of all pregnancies are affected by hypertensive disorders of pregnancy (HDP) which includes gestational hypertension and pre-eclampsia, and women who experience HDP are on average twice as likely to developing cardiovascular disease later in life.<sup>6</sup>
- Pregnant women who experience gestational hypertension are at greater risk for developing hypertension, stroke, CVD, and type 2 diabetes later in life.<sup>7</sup>
- Women who experience pre-eclampsia during pregnancy are four times more likely to develop hypertension and three times more likely to develop type 2 diabetes mellitus later in life.<sup>8</sup>
- Research suggests that women who enter pregnancy obese have more than six times greater odds of developing gestational hypertension compared to women who enter pregnancy at an ideal weight.<sup>9</sup>
- Women who suffer from gestational diabetes have a 7-fold increased risk for future cardiovascular disease later in life.<sup>10</sup>

## DISPARITIES IN MATERNAL HEALTH OUTCOMES

- Black and American Indian/Alaska Native women are two to three times more likely to die from pregnancy-related complications in comparison to their white counterparts.<sup>11</sup>
- Among Black women, cardiomyopathy and other cardiovascular conditions are among the two leading underlying causes of maternal mortality.<sup>11</sup>
- An estimated 40% of all U.S. counties, mainly rural, lack a qualified childbirth provider (obstetrician, midwife, or family physician).<sup>12</sup>

## FACT SHEET: Maternal Health

- Rural women face higher maternal mortality rates (29.4 maternal deaths per 100,000) in comparison to urban women (18.2 maternal deaths per 100,000).<sup>13</sup>
- An estimated 42.3% of all births in the U.S relied on Medicaid in 2018.<sup>14</sup>
- Women over the age of 35 have 1.2 times the risk of developing pre-eclampsia.<sup>15</sup> Women aged 40 or older are 30 times more at risk of heart-disease related maternal death compared to women younger than 20 years.<sup>5</sup>
- Incarcerated pregnant women are more likely to face barriers to access to regular and immediate quality care, as there is a lack of standardization and requirements for OB/GYN services. The 2015 National Health Survey of Prison Care found that out of 34 participating states with obstetric services available both on-site and off-site, 29 sent prisoners off-site for deliveries when possible.<sup>16</sup>
- The most common substances used during pregnancy are tobacco, alcohol, and other illicit substances (marijuana, opioids, and cocaine). According to the 2017 National Survey on Drug Use and Health, 14.7% of pregnant women use tobacco products, 11.5% of pregnant women use alcohol, and 8.5% of pregnant women use illicit drugs.<sup>17</sup>
- A recent CDC study found that from 1999 to 2014 the number of pregnant women suffering from opioid use disorder at the time of delivery has quadrupled.<sup>18</sup>

## AHA ADVOCATES

To improve maternal health outcomes, we must continue to work to equitably expand women's access to affordable, high-quality, patient-centered medical care, before, during, and after pregnancy.

- Primary care providers, OB/GYNs, cardiologists, and social services should coordinate care in a way that facilitates better assessment of patient risks and needs, and prompt intervention where necessary.
- Improve awareness of heart disease and cardiovascular disease risk factors among all women, particularly those of reproductive age.
- Strengthen public health infrastructure and improve the health system's ability to explore and respond to social determinants of health related to maternal health outcomes.
- Leverage technology to better track and report patient data, including data regarding sex, race, ethnicity, and social determinants of health.
- Prioritize the provision of underutilized, high value-services such as pregnancy and maternal health education and home visits, and mitigate the provision of low-value care and overuse of certain pregnancy and delivery related services such as elective and unnecessary c-sections, or other hospital-related services for low-risk pregnancies.
- Explore the viability of payment models that reimburse less "traditional" providers and facilities that have been proven to demonstrate positive maternal health outcomes such as birth centers, midwifery care, and doulas.<sup>19</sup>

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