

Black women more likely to have labor or delivery complications due to systemic inflammation

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Black women are more likely than white women to experience a severe, unexpected complication during labor or delivery, particularly due to systemic inflammation, according to research being presented at the ANESTHESIOLOGY 2021 annual meeting.

Systemic inflammation, i.e., inflammation throughout the body, was one of four categories researchers identified when they looked for patterns in patients who experienced severe maternal morbidity (SMM)—an unexpected outcome of labor and delivery that results in significant short- or long-term consequences to a woman's health, including death.

Women can experience multiple complications or events associated with SMM (for example, kidney failure and eclampsia, which is extremely [high blood pressure](#) that causes seizures). The study found these complications or events can occur within four categories: [systemic inflammation](#) (includes shock, abnormal blood clotting, adult respiratory distress syndrome—ARDS—and being placed on a ventilator); cardiovascular events (includes [kidney failure](#), eclampsia and cerebrovascular events such as aneurysm); admission to the [intensive care unit](#); and hemorrhage (excessive bleeding) leading to blood transfusion.

Black women were at higher risk than white women in all four SMM categories, with the highest proportion of Black women experiencing

SMM due to systemic inflammation.

"Previous studies have reported the higher the number of SMM complications or events a [woman experiences](#), the higher the likelihood of death, but our study is the first to look at how these complications and events group together and their association with outcomes," said Andrea Ibarra, M.D., M.S., lead author and assistant professor of anesthesiology and perioperative medicine at the University of Pittsburgh School of Medicine. "We determined characteristics such as race, obesity and diabetes can identify which women are at higher risk of severe events, including death, in the various categories. That insight can spur efforts to develop new obstetric protocols and guidelines to improve care."

Researchers reviewed records of 97,492 deliveries at one institution between 2008 and 2017 and determined 2,666 (2.7%) included an SMM event and 49 women died within a year of delivery. They found 44% of the deliveries associated with SMM were pre-term (before the 37th week of pregnancy). Black women had higher rates of SMM (4.1%) than [white women](#) (2.4%).

Factors that increased the risk of experiencing SMM in all categories included being Black, having pre-existing diabetes or having preeclampsia. Cesarean delivery was an additional risk factor for hemorrhage category. Additional risk factors relating to women who fell in the systemic inflammation category were depression and social determinants, including low income or not graduating from high school.

"This research is crucial because most maternal morbidity is preventable," said Dr. Ibarra. "By identifying factors that put [women](#) at high risk of developing SMM complications or events, we can allocate more resources toward perinatal care."

Provided by American Society of Anesthesiologists

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