The maternal death rate has doubled in the past 10 years, but more women aren't necessarily dying before, during, or after childbirth, researchers say. The numbers can be attributed to new reporting methods.

According to the Center for National Health Statistics' Vital Statistics Report, which was released in January, the maternal death rate was 15 women per 100,000 live births in 2005 — a 100% increase compared to the 1996 rate of 7.5 deaths per 100,000 live births. But report co-author Donna Hoyert, PhD, says there's more to the numbers than meets the eye.

"We think the main reasons for the increase is, since 2003, states have been adding a separate question (on death certificates) about whether there was a recent pregnancy," Hoyert says. "In the past, that information was supposed to be reported in the cause of death section, but if nothing was reported about a pregnancy, we have no clue if hemorrhaging or other complications were related [to the death]."

Other states are expanding their definitions of maternal death from traditional causes, such as hemorrhage, preeclampsia, and blood clots. Fatal complications that occur more than 42 days and up to one year after delivery and deaths from external causes, such as unintentional injury and homicide, also are now included in the definition of maternal death, Hoyert says.

The original 42-day rule was based on the theory that it takes 42 days for the uterus to revert back to its pre-pregnancy condition. One of the reasons the extension was made to one year is there are a few direct birth-related conditions that can occur post-six weeks, such as cariomyopathy or embolism, according to the U.S. Centers for Disease Control and Prevention (CDC).

"The states aren't adopting these questions simultaneously, so we can expect to see the rate increase until everyone does," Hoyert adds.

Even if the increase is merely the result of heightened awareness and better reporting, a maternal death rate of 15 per 100,000 live births, which, in 2005 equated to 623 deaths, is disconcerting.

"It's difficult to understand what the current trends are given the new reporting, so it's important we continue monitoring to know where they are coming from," says Catherine Spong, MD, chief of the pregnancy and perinatology branch for the Eunice Kennedy Shriver National Institute of Child Health and Human Development (CHHD) at the National Institutes of Health and liaison between the CHHD and Society of Maternal Fetal Medicine.

Conducting maternal death reviews is one way to understand the underlying causes, says Cara Krulewitch, RN, CNM, PhD, chair of the data and management section of the division of research for the American College of Nurse Midwives. Such reviews — mandated by law in Maryland and under consideration in the District of Columbia —

identify specific causes of maternal death, says Krulewitch.

“It looks at each death and asks whether it was preventable or if measures could have been taken to minimize the chance of death,” she says. “It’s looking for gaps in services and unknown risk factors.”

External causes were added to the maternal death definition because of a series of studies, in which Krulewitch participated, that looked at associative causes of maternal death. The research indicated pregnant and postpartum women are at highter risk for domestic violence and homicide as well as suicide. But many more deaths can be attributed to the proliferation of obvious risk factors.

Advanced age, obesity, and cesarean delivery increase the risk for potentially fatal complications during pregnancy, delivery, and the postpartum period, says Richard Aubry, MD, MHP, director of academics and community obstetrics at Upstate Medical University in Syracuse, N.Y., and a member of The American College of Obstetricians and Gynecologists.

“There has been an increase in the average age of childbearing with an increase in the proportion of women over 35,” Aubry says, “and they have more problems with diabetes, hypertension, and obesity.”

Morbidly obese women, who are becoming pregnant more now then ever before, are predisposed to greater difficulty healing.

“If you do a cesarean on a patient that’s 120 pounds, her chance of having postoperative complications is small, but do one on a 300-pound patient and you get problems right away with wound healing and a host of other issues, such as infection and blood clots, well into the postpartum period,” Aubry says.

The most dramatic risk factor for maternal death is cesarean section, a request more women are making. According to the CDC, 29.1% of all births were via cesarean in 2004, a 40% increase since 1996.

“A [cesarean section] is a major abdominal surgery and there are complications associated that remain independent of anything related to pregnancy,” Krulewitch says. “The recovery time is longer, risk of infection is higher, and risk of hemorrhage is greater.”

Nurses can have a huge impact on minimizing risk factors, Spong says, by discussing potential problem areas with patients and ways to optimize the pregnancy by controlling health issues, Spong says. Also, nurses might suggest pregnant obese women consult with an anesthesiologist before labor.

Expectant mothers also should be apprised of the availability of midwives and doulas and

pain management technologies, which can make natural birth more tolerable and cesarean delivery less desirable, Aubry says.

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