

# Birth setting study signals significant risks in planned home birth

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While the number of homebirths in the United States has grown over the last decade, researchers at New York-Presbyterian/Weill Cornell Medical Center have found that babies born at home are roughly 10 times as likely to be stillborn and almost four times as likely to have neonatal seizures or serious neurologic dysfunction when compared to babies born in hospitals.

The largest study of its kind, which includes data on more than 13 million U.S. births, will appear in the October issue of the *American Journal of Obstetrics and Gynecology* and is now available online. The risk is associated with the location of a planned birth, rather than the credentials of the person delivering the baby. The study findings showed that the risk of stillbirth is even greater in first-born babies – 14 times the risk of [hospital births](#). "The magnitude of risk associated with home delivery is alarming," says the study's lead author, Dr. Amos Grunebaum, chief of labor and delivery at New York-Presbyterian/Weill Cornell Medical Center and associate professor of clinical [obstetrics and gynecology](#) at Weill Cornell Medical College.

Given the study's findings, Dr. Grunebaum says obstetric practitioners have an ethical obligation to disclose the risks associated with planned home birth to expectant parents who express an interest in this delivery setting. He says, "Parents-to-be need to know that if they deliver at home, their baby has a greater risk of dying or having a serious neurological problem."

The study results were confirmed by analyzing birth certificate files from the U.S. Centers for Disease Control and Prevention (CDC) National Center for Health Statistics to assess deliveries by physicians and midwives in and out of the hospital from 2007 to 2010. The researchers looked at 5-minute Apgar scores of zero, [neonatal seizures](#) and serious [neurologic dysfunction](#). The Apgar score is a screening test to quickly assess the health of an infant one minute and five minutes after birth. A 5-minute Apgar score of zero is considered stillborn, although about 10 percent of these babies survive, usually with major health problems.

"The majority of pregnancies go smoothly," says Dr. Frank Chervenak, a study co-author and obstetrician and gynecologist-in-chief and director of maternal-fetal medicine at NewYork-Presbyterian/Weill Cornell Medical Center and the Given Foundation Professor and chairman of the Department of Obstetrics and Gynecology at Weill Cornell Medical College. "But in some instances," he says, "there can be unpredictable complications requiring immediate surgical intervention."

Every second is critical, notes Dr. Chervenak. "If an emergency occurs at home that requires hospital transport, it's often difficult to beat the clock to prevent death or neurological issues."

Dr. Chervenak stressed that the study's findings are based on the birth setting, not whether the provider is a physician or midwife. "It's all about location," he adds. "When a complication does arise, what's needed is access to a team of skilled specialists with the training and technology in place to handle emergency procedures. In a home, none of these options are available."

While this study sheds new light on out-of-hospital delivery, Dr. Grunebaum and his team suspect that the findings understate the actual risks. As Dr. Grunebaum explains, "In the CDC data set, the outcomes

for patients whose care began out of the hospital but were then transferred to the hospital due to complications are reported as hospital deliveries. If the data were corrected, the risk of out-of-hospital delivery is likely to be much greater."

Along with warning parents about potential risks, both Dr. Grunebaum and Dr. Chervenak say it's critical for caregivers and hospitals to create a welcoming and comfortable birthing environment, often a primary motivation for planned homebirth. "Childbirth is one of the most wonderful moments in humanity, and we recognize that parents may expect that giving [birth](#) at home will enhance the experience. In the end, we need to be frank with parents about the risks. At the same time, physicians, midwives and other practitioners need to do everything we can to contribute to the compassionate care of mothers-to-be and their infants," Dr. Chervenak says.

Provided by Weill Cornell Medical College

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