

# Northwestern researchers trial new device that may support improved newborn health

December 21 2011

---

Despite the numerous medical advances that happen every day, the infant mortality rate in the United States is still higher than most European countries. While experts believe this is closely linked to the growing rate of pre-term births, researchers are committed to finding ways to make labor and delivery safer. Northwestern Medicine researchers are examining a new device that may support improved newborn health at delivery through closer monitoring of infant oxygen use during labor.

"Poor birth outcomes are often directly related to loss of oxygen during labor and delivery," explained Alan Peaceman, MD, chief of [maternal fetal medicine](#) at Northwestern Memorial Hospital and professor of [obstetrics and gynecology](#) at Northwestern University Feinberg School of Medicine who is the lead investigator on the study. "Through more advanced monitoring, we hope to identify red flags sooner and prevent dips in oxygen that may lead to long-term [health issues](#) for the baby."

STAN™ is fetal heart rate monitoring system that measures and tracks the electrical activity of the baby's heart via an internal electrode, along with uterine contractions and how well the baby uses oxygen during labor. It then interprets the data and signals clinicians when a significant change in oxygen levels or heart rate occurs. The monitor is approved by the Food and Drug Administration and is routinely used in Europe, but has not been widely adopted in the United States yet. At present, it is only available for patients enrolled in the study. If this study demonstrates improved outcomes, it is likely that the monitoring system

will become more widely available to mothers giving birth in this country.

"Current monitors measure heart rate alone, relying on the experience and judgment of the clinical team to interpret changes in data," said Peaceman. "This system captures additional measurements and interprets that data, which may eliminate the guesswork and offer a more accurate assessment of how well the baby is using [oxygen](#)."

Northwestern is one of 14 centers in the United States participating in the clinical trial, which researchers hope will enroll 11,000 women from across the country over the next three years. Subjects who opt to participate in this research study are randomly assigned to one of two groups. One will receive the standard fetal monitoring offered today, and the other will be monitored using the new system in addition to the existing method. The way in which fetal [heart rate](#) is monitored will be the only change to the labor and delivery experience, which will continue to be managed by the woman's doctor.

Peaceman is an active researcher who has led several studies that have changed the standard of obstetrical care. In 2008, results from the BEAM trial found that administering magnesium sulfate to women delivering before 32 weeks of gestation reduced the risk of cerebral palsy by 50 percent. Peaceman was also involved in studies that found the hormone hydroxyprogesterone to be effective in reducing the risk of delivery at less than 37 weeks gestation among women who had previously had a preterm birth.

"It is our duty to continually find ways to make childbirth safer," said Peaceman. "Research is an important way to evaluate current protocols and learn from [birth](#) statistics so we can improve [newborn health](#)."

Provided by Northwestern Memorial Hospital

Citation: Northwestern researchers trial new device that may support improved newborn health (2011, December 21) retrieved 19 April 2024 from

<https://medicalxpress.com/news/2011-12-northwestern-trial-device-newborn-health.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.