# Study to evaluate timing of pushing on C-section rates, birth complications

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A baby is evaluated soon after delivery. Drs. Alison Cahill and Methodius Tuuli are leading a large, multicenter trial of 3,400 women to determine the best ways to manage the second stage of labor, the stage in which mothers push to deliver their babies. Credit: Brian Marston

More than 3 million pregnant women give birth annually in the United States. But physicians still know little about the best ways to manage the crucial second stage of labor, the stage that is the hardest physically on mothers and their babies.

Difficulties at this stage can lead obstetricians to recommend C-sections rather than vaginal deliveries.

As women begin the second stage of labor, most are urged to push as soon as the cervix has dilated to 10 centimeters. A competing theory holds that women should delay pushing until they feel the urge to push.

Researchers at Washington University School of Medicine in St. Louis have received an $8.7 million grant from the National Institutes of Health (NIH) to study how best to manage the second stage of labor. The five-year grant will support a large, multicenter trial of 3,400 women at six hospitals across the United States.

"Many current practices in labor and delivery have come from tradition," said Alison Cahill, MD, co-principal investigator of the study and associate professor of obstetrics and gynecology. "Many providers believed that delayed pushing would improve rates of vaginal delivery and reduce infant complications. But when we looked at past studies, delayed pushing, compared with immediate pushing, sometimes caused more problems for babies."

Previous studies comparing these two approaches involved small numbers of patients or obstetric practices no longer in use today and often reported contradictory results.

In the current study, women will be randomly assigned to two groups. Women in one group will be asked to begin pushing as soon as the cervix is fully dilated. Women in the second group will be instructed to wait for 60 minutes after the cervix is dilated to begin pushing.

Cahill and Methodius Tuuli, MD, co-principal investigator and assistant professor of obstetrics and gynecology, will assess the timing of pushing on the rate of vaginal and C-section deliveries. They also will determine

whether immediate or delayed pushing shortens the second stage of labor and leads to fewer health problems in babies and mothers.

"Our current C-section rates are of great concern," said Cahill, who along with Tuuli delivers babies at Barnes-Jewish Hospital. "C-sections are performed for a number of reasons. If we start solving some of these problems and help women deliver their babies vaginally, we can lower the C-section rates."

The researchers also will determine if immediate or delayed pushing reduces the rates of serious neonatal infections, lung problems and neonatal intensive care admissions. Additionally, Cahill and Tuuli will use ultrasound to evaluate the effects of immediate versus delayed pushing on pelvic floor injuries, which lead to incontinence in women in later years.

The hospitals involved in the study are: Barnes-Jewish Hospital, Missouri Baptist Medical Center, Oregon Health & Science University Hospital, Hospital of the University of Pennsylvania, Pennsylvania Hospital, and the University of Alabama in Birmingham Hospital. The data will be collected and analyzed at Washington University School of Medicine.

"If we can figure out how to better manage the second stage of labor, this information can have a very broad impact on the health of moms and babies for years to come," Tuuli said.

Provided by Washington University School of Medicine in St. Louis