

# Florida Perinatal Quality Collaborative

AT THE LAWTON AND RHEA CHILES CENTER FOR HEALTHY MOTHERS AND BABIES



Partnering to Improve Health Care Quality  
for Mothers and Babies

## Literature E-Bulletin on Non-Medically Indicated Deliveries <39 Weeks Gestation

Dear Perinatal Care Providers: Below is a list of recent literature on the issue of non-medically indicated deliveries <39 weeks gestational age. These references are provided to you by the Florida Perinatal Quality Collaborative through the generous support of a grant from the March of Dimes. You can click on the reference and go directly to the PubMed abstract for the article and access available full text articles. If you have any questions, please contact us at [fpqc@health.usf.edu](mailto:fpqc@health.usf.edu) or by phone at 813-974-8888.

[Oshiro BT, Kowalewski L, Sappenfield W, Alter CC, Bettgowda VR, Russell R, Curran J, Reeves L, Kacica M, Andino N, Mason-Marti P, Crouse D, Knight S, Littlejohn K, Malatok S, Dudley DJ, Berns SD. A multistate quality improvement program to decrease elective deliveries before 39 weeks of gestation. \*Obstetrics & Gynecology\*. 2013;0:1-7.](#)

This review of a successful, multi-state, quality improvement program to eliminate non-medically indicated deliveries before 39 weeks of gestation included 26 hospitals in the 'big five' states (Florida, California, Illinois, New York, and Texas) that account for 38% of all births for 2010 in the US. Hospitals were chosen to participate through a competitive proposal and interview process. The majority of hospitals were non-profit (75%), had an annual delivery volume of 2,000-4,999 (62.5%), designated level III perinatal care facility (70.8%) and located in a large metropolitan county (66.7%); 50% or greater of the hospital deliveries were covered by Medicaid, had a cesarean section rate less than 40% (68.2% of hospitals), and overall induction rates less than 30% (54.6% of hospitals). Each hospital was required to compose a quality improvement team consisting of a physician champion, nurse leadership, scheduler, and quality improvement staff; training and the March of Dimes toolkit were provided to each team. Early-term elective deliveries decreased 83% over the 12-month study period; elective deliveries decreased from 27.8% to 4.8%, elective inductions decreased 72% from 9.5% to 2.7%, and elective cesarean deliveries decreased 84% from 43.5% to 7.1%. Like previous studies have demonstrated, the "hard-stop" and strong physician leadership made the initiative stronger and more effective; similarly, there was no increase in stillbirths rates during the study period. This study demonstrates that a large-scale quality improvement program can be achieved in a group of diverse hospitals across multiple states through an organized and collaborative effort.

[Gee RE, Winkler R. Quality measurement: What it means for obstetricians and gynecologists. \*Obstetrics & Gynecology\*. 2013;121\(3\).](#)

Research has demonstrated that the quality of healthcare in the U.S. is far below what it could be with patients receiving little more than half of recommended evidence-based care. Quality measures are widely used as tools for information sharing and accountability of care-giver and health system quality. Beginning January 2014, delivery hospitals with 1,100 births or more per year will be required to report on the National Quality Forum Perinatal Care Core Measure set (PC-01 – PC-05), established by The Joint Commission. Measures to be reported are: elective delivery (PC-01), cesarean delivery (PC-02), antenatal steroids (PC-03), health care associated bloodstream infections in newborns (PC-04), and exclusive breastfeeding (PC-05). This article addresses how an individual obstetrician or gynecologist can help to advance quality measurement by understanding what is currently being measured in their practice and proposing additional measures if necessary. Providers and practices that track them are urged to share internally tracked measures. They conclude, "Ultimately, if we cannot measure outcomes, we cannot begin to manage them."

**American College of Obstetricians and Gynecologists. Committee Opinions # 559-561.  
Obstetrics and Gynecology. 2013; 121(4):904-915.**

**Committee Opinion #559 - Cesarean Delivery on Maternal Request:** Defined as a primary pre-labor cesarean delivery on maternal request in the absence of any maternal or fetal indications. In 2009, there were 1.3 million cesarean deliveries, 32.9% of all births, with an estimated 2.5% of all births being cesarean delivery on maternal request. After an extensive review of the available data, the committee recommends that in the absence of maternal or fetal indications for a cesarean delivery, a plan for vaginal delivery is safe, appropriate, and should be recommended. In the case of a cesarean delivery on maternal request, the following are recommended: the cesarean delivery should not be performed before 39 weeks of gestation; the cesarean delivery should not be motivated by the unavailability of effective pain management; and cesarean delivery on maternal request is particularly NOT recommended for women desiring several children – given that the risks of placenta previa, placenta accreta, and gravid hysterectomy increase with each cesarean delivery.

**Committee Opinion #560 - Medically Indicated Late-Preterm (34 0/7 – 36 6/7) and Early-Term (37 0/7 – 38 6/7) Deliveries:** Non-medically indicated deliveries before 39 weeks of gestation have been discouraged by ACOG and the Society for Maternal-Fetal Medicine (SMFM) for quite some time due to extensive research demonstrating an increased risk in adverse outcomes for babies born under 39 weeks. However, there are a number of maternal, fetal, and placental complications in which an early delivery is warranted. The timing of the delivery must balance the maternal and newborn risks of late-preterm and early-term delivery with the risks of further continuing the pregnancy. In some cases, providers will have to identify and weigh risks and benefits for the mother and newborn – making this an individualized process. These decisions should be dependent on determining an accurate gestational age and that testing for fetal lung maturity with amniocentesis should generally not be done. Included in the article is a large table of recommendations for the timing of delivery for specific conditions including indications commonly encountered in clinical practice, such as placenta previa, multiple gestations, preeclampsia, and diabetes.

**Committee Opinion #561 - Non-medically Indicated Early-Term Deliveries:** Delaying delivery to 39 weeks or beyond has long been a recommendation of ACOG and SMFM, and yet, the rate of non-medically indicated early-term deliveries in the US continues to rise. Research clearly indicates that for a healthy pregnancy, babies do better if delivered after 39 weeks. Some neonatal morbidities related to early-term delivery include: respiratory distress syndrome, transient tachypnea of the newborn, ventilator use, pneumonia, respiratory failure, NICU admission, hypoglycemia, 5-minute APGAR<7, and neonatal mortality. Some examples of medical indications for an early delivery <39 weeks include: preeclampsia, prior classical cesarean, fetal growth restriction, placental abruption, chorioamnionitis, premature rupture of the membranes (PROM), and more. ACOG supports the prevention of non-medically indicated early-term deliveries through the use of policies, such as the “hard-stop”, and demonstrates that these strategies are the most effective in decreasing the rate of non-medically indicated early deliveries. In addition, more research is warranted to ensure still birth rates do not increase and pregnancies that are at risk of perinatal morbidity in weeks 37 and 38 are better characterized.



[Declercq ER, Sakala C, Corry MP, Applebaum S, Herrlich A. Listening to mothers III: pregnancy and childbirth. New York: Childbirth Connection, May 2013.](#)

The LTM-III survey demonstrated that throughout the U.S., the majority of women don't know that a healthy pregnancy should continue for at least 39 weeks. The survey was completed by 2,400 mothers who gave birth to singleton babies in a U.S. hospital from July 2011 through June 2012. Mothers were asked to identify the earliest point in pregnancy when it is safe to deliver a baby, if there are no medical indications and the pregnancy is healthy. 79% of mothers believed that 38 weeks of gestation or less was a safe time to deliver. Only 18% of mothers responded that if there are no medical indications, waiting until 39 weeks of gestation is the safest and only 3% of mothers responding 40 weeks or beyond. The majority of mothers responded that the earliest week to deliver a healthy pregnancy is 37-38 weeks (35%), and another 25% answered 34-36 weeks. Only 1 in 5 mothers indicated, correctly, that a healthy pregnancy should continue for 39 weeks or beyond.

[Chiossi G, Lai Y, Landon MB, Spong CY, Rouse DJ, Varner MW, Caritis SN, Sorokin Y, et al. Timing of delivery and adverse outcomes in term singleton repeat cesarean deliveries. Obstetrics & Gynecology. 2013;121\(3\):561-9.](#)

This article evaluated the timing of elective delivery and adverse outcomes for singleton babies being born to a mother having a repeat cesarean. This prospective study spanned 4 years across 19 delivery hospitals and measured the composite maternal and neonatal outcomes in 23,794 repeat cesarean deliveries. Composite maternal outcomes included: pulmonary edema, cesarean hysterectomy, pelvic abscess, thromboembolism, pneumonia, transfusion, or death. Composite neonatal outcomes consisted of respiratory distress, transient tachypnea, necrotizing enterocolitis, sepsis, ventilation, seizure, hypoxic-ischemic encephalopathy, NICU admission, 5-minute Apgar of 3 or lower, or death. The researchers found that elective repeat cesarean delivery at 37 weeks of gestation had significantly higher risks of adverse maternal outcomes (OR 1.56, 95%CI 1.06-2.31), whereas elective delivery at 39 weeks was associated with better maternal outcomes. As for neonatal outcomes, delivery at 37 weeks (OR 2.02, 95% CI 1.73-2.36), or 38 weeks (OR 1.39, 95% CI 1.24-1.56) also had significant adverse neonatal outcomes. The authors conclude that for women seeking a repeat cesarean delivery, waiting until 39 weeks of gestation is optimal for both the mother and baby.

[Rose O, Blanco E, Martinez SM, Sim EK, Castillo M, Lozoff B, Vaucher YE, Gahagan S. Developmental scores at 1 year with increasing gestational age, 37-41 weeks. Pediatrics. 2013;131:e1475. Originally published online April 15, 2013.](#)

This study is a secondary analysis of data collected on 1,657 healthy, full-term infants born in Santiago, Chile between 37 and 41 weeks gestation. The researchers were looking to assess if any relationship existed between gestational age at birth and developmental scores at 1 year of age, using the Bayley Scales of Infant Development. When researchers controlled for birth weight percentile, gender, socioeconomic status, and home environment, they found increases in infant developmental scores by increasing gestational age. For each additional week of gestation, the Mental Development Index increased by 0.8 points (95% CI 0.2-1.4) and the Psychomotor Development Index increased by 1.4 points (95% CI 0.6-2.1). This evidence further supports that in a healthy pregnancy, birth at 39 to 41 weeks provides better developmental and health outcomes for babies than birth at 37-38 weeks.

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