

# 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.

[Hoffman MK, Merriam AA, Enrental DB. Fetal outcomes of elective delivery. Clinical Obstetrics and Gynecology 2014;57\(2\):401-414.](#)

To understand recommendations to reduce early elective deliveries before 39 weeks' gestation, this review explores research-based evidence for various fetal outcomes associated with elective delivery at increasing gestational ages.

- The following outcomes were examined: respiratory outcomes (acute resuscitation, respiratory support, and meconium aspiration); NICU admission; composite morbidity and mortality; macrosomia and shoulder dystocia; stillbirth; SIDS and perinatal mortality; chronic medical conditions in the newborn; and learning issues.
- Some research indicates minor racial differences in the above mentioned outcomes by gestational age.
- Benefits of waiting until 39 weeks include: lower risk of pulmonary immaturity, decreased NICU admission, reduced postnatal death (including SIDS), and better cognitive outcomes.
- Commonly cited reasons for induction, such as prevention of macrosomia and shoulder dystocia do not appear to be supported by the literature.
- “Available evidence suggests that for most newborns a policy of limiting elective delivery before 39 weeks appears to provide benefit in most areas that we chose to examine.”

[Osterman MJK, Martin JA. Recent declines in induction of labor by gestational age. NCHS data brief, no 155. Hyattsville, MD: National Center for Health Statistics. 2014.](#)

This brief explores trends in rates of labor induction across gestational age, maternal age, race and Hispanic origin, and by state.

- Induction of labor has increased for nearly 20 consecutive years. Throughout the 1980's, 90's and through 2006 the proportion of infants born at less than 39 completed weeks increased nearly 60% and births at 39 weeks or more declined more than 20%.
- Beginning in 2006, induction rates at 38 weeks of gestation declined for all maternal age groups under 40 and for each of the largest race and Hispanic origin groups.
- Since 2006, births occurring at less than 39 weeks have declined 12% and births at 39 weeks or more have increased 9%.
- Between 2006 and 2010, the largest changes in induction occurred among early-term birth with induction rates declining 6% and 16% at 37 and 38 weeks, respectively.
- Research has demonstrated greater risks of morbidity and mortality for non-medically indicated births occurring before 39 weeks of gestation, the spread of this knowledge through awareness campaigns and hospital efforts such as those of the March of Dimes 39 week initiative may be contributing to these declines.

[Doan E, Gibbons K, Tudehope D. The timing of elective caesarean deliveries and early neonatal outcomes in singleton infants born 37-41 weeks' gestation. Australian and New Zealand Journal of Obstetrics and Gynaecology 2014. doi: 10.1111/ajo.12220](#)

This large, retrospective cohort study evaluated the short-term neonatal outcomes by gestational age of singleton babies born by elective cesarean section between 37-41 weeks' gestation.

- Routinely collected, de-identified obstetric and neonatal data spanning a 12-year period (1998-2009) from two large perinatal referral centers in South East Queensland was used for analysis; 14,447 mother-baby pairs were included, 59.9% delivered before 39 weeks.
- Primary outcome was serious respiratory morbidity; secondary outcomes included NICU admission and assisted ventilation.
- Risk of adverse neonatal outcome significantly decreased with increasing gestational age.
- Compared to delivery at 39-41<sup>6</sup> weeks, births occurring from 37-38<sup>6</sup> weeks' gestation were almost triple the risk for serious respiratory morbidity (AOR 2.74; 95% CI 1.79-4.21); the risks of most secondary outcomes were at least doubled.
- "Elective cesarean section performed at 37-38<sup>6</sup> weeks is associated with poorer neonatal outcomes compared to those delivered at 39-41<sup>6</sup> weeks. This study supports recent recommendations to delay delivery by elective cesarean section until week 39 if possible."

[Berrien K, Devente J, French A, Cochran KM, McCaffrey M, Horton BJ, Chescheir N. The perinatal quality collaborative of North Carolina's 39 week project: A quality improvement program to decrease elective deliveries before 39 weeks of gestation. N C Med J. 2014;75\(3\):169-176.](#)

The Perinatal Quality Collaborative of North Carolina (PQCNC) launched an EED initiative from 2009-2010, enlisting the cooperation of 33 hospitals (approx. 60% of NC deliveries), ranging from small rural hospitals to large academic, regional, and tertiary care centers.

- Hospitals collected and submitted de-identified data and agreed to create a project team consisting of a physician, nurse, and administrative champions; they were also encouraged to engage patients and families as advisers.
- Project activities included: 3 in-person learning sessions, regional meetings, monthly webinars, a patient experience video, weekly electronic newsletters, secure extranet Web-site for sharing relevant literature and materials, and hospital team consultations; each team was encouraged to develop its own action plan specific to local needs and dynamics.
- During the 9 month project period, early elective deliveries decreased 45% (from 2% to 1.1% of all deliveries). Among all scheduled deliveries between 36 0/7 and 38 6/7 weeks of gestation, the percent of elective deliveries decreased 31.5% (from 23.63% to 16.19%).
- Repeat elective cesarean sections were the primary driver representing 70.6% of elective early-term deliveries and 14.1% of all scheduled deliveries before 39 weeks of gestation.
- The proportion of scheduled, early-term deliveries with a medical indication increased significantly from 62.4% to 88.2% during the project period.
- No increase in neonatal morbidities.
- Despite the success of the project, elective deliveries still account for almost 17% of all deliveries occurring between 36 0/7 and 38 6/7 weeks of gestation in participating hospitals.
- Hospitals reported a 'hard-stop' approach the most effective method in decreasing EED.

Compiled by FPQC Research Assistant Randi McCallian, MPH, CPH

Visit this link to view a short video about Early Elective Delivery in Florida

“We Just Haven’t Gone Far Enough”

<http://health.usf.edu/publichealth/chiles/fpqc/eed>

Please visit us at [FPQC.org](http://FPQC.org) or contact us at [FPQC@health.usf.edu](mailto:FPQC@health.usf.edu) for more information.

