

## Improving Perinatal Safety

### The Elimination of Elective Deliveries Before 39 Weeks

Hospitals and health systems are feeling the push to eliminate early elective newborn deliveries within their organizations. Up to 10 percent of all U.S. newborn deliveries are scheduled to be induced before 39 weeks without medical reason.<sup>1</sup> This practice may carry medical risks for both the infant and mother.

#### Emerging Importance

The national rate of labor induction has more than doubled, from 9.5 percent in 1990 to 22.5 percent in 2006.<sup>2</sup> The growth rate for elective inductions is much greater than the rate for inductions that are ruled medically necessary. Possible reasons for inducing labor are detailed in the box to the right.

Recent initiatives have focused on eliminating inductions during weeks 37 to 39 of gestation. Although the mother is considered at term, clinical evidence has shown that inducing labor during this period increases the likelihood of negative health outcomes for the newborn and mother (see figure 1).

Studies have confirmed that fetal brains continue to develop even during the last week before birth. As a result, elective early term deliveries can lead to adverse neonatal outcomes such as increased neonatal intensive care unit admissions, tran-

sient tachypnea, respiratory distress syndrome, sepsis and feeding problems.<sup>3</sup>

#### Frequency of Elective Deliveries

Despite the risks associated with early elective deliveries, they remain prevalent due to patient and physician demand. Expectant mothers appreciate the convenience of knowing their delivery date and being able to plan around it. Additionally, mothers with prior difficult pregnancies often push for early inductions to ensure that their physician will be at the delivery. Obstetricians and gynecologists can avoid potential calendar conflicts by scheduling inductions and also please their patients in a competitive market.

#### Work of External Organizations

The American Congress of Obstetricians and Gynecologists has been advocating against elective inductions for almost 20 years, distributing guidelines for hospitals to follow. The Institute for Healthcare Improvement and the March of Dimes each have hospital-focused programs to guide implementation of 39-week rules. The Leapfrog Group has begun to publish early elective delivery data annually. The Centers for Medicare and Medicaid Services and the Partnership for Patients, a federally funded program, are bringing

together facilities across the country to pledge to eliminate early elective deliveries. Also, hospitals that choose to report the Joint Commission's five perinatal core measures must include the number of elective deliveries before 39 weeks.

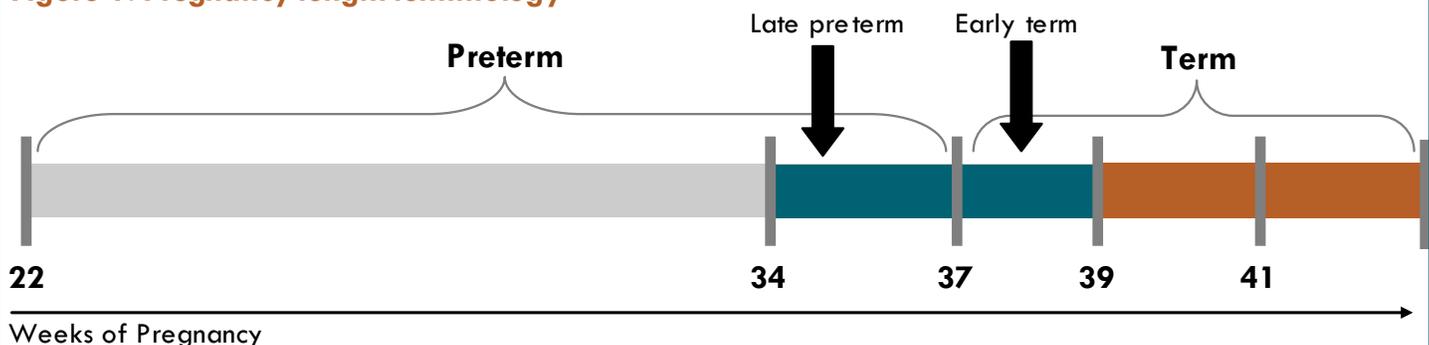
#### Role of the Hospital

To effectively decrease the occurrence of elective inductions, hospitals must address the causes for demand and educate patients on potential adverse outcomes. Some hospitals will have to collaborate with physicians to restructure their current labor and delivery case-referral processes to prevent early elective inductions.

#### Medical Reasons to Induce Labor<sup>4</sup>

- \* Placenta abruptio
- \* Postterm pregnancy ( $\geq 41$  weeks)
- \* Maternal conditions including:
  - » Preeclampsia
  - » Hypertension
  - » Diabetes
  - » Chronic renal disease
- \* Fetal problems including:
  - » Insufficient growth
  - » Congenital anomalies
  - » Prior stillbirth
  - » Fetal demise
- \* Psychosocial

Figure 1. Pregnancy length terminology



# Case Studies

## Woman’s Hospital: Eliminating elective early term deliveries through interdisciplinary teamwork

**Background:** Woman’s Hospital is a 225-bed, nonprofit tertiary care center located in Baton Rouge, Louisiana. The hospital employs five hospitalist ob/gyns and five fetal medicine physicians. Additionally, 65 independent ob/gyns are affiliated with the hospital. Woman’s formally launched a collaborative with the Institute for Healthcare Improvement in 2007 to eliminate elective inductions prior to 39 weeks. This partnership initially created a perinatal bundle for clinical use to address concerns about the health outcomes of newborns, which can vary by gestational age and cervix favorability. As clinical and policy support grew, the initiative evolved into a larger movement to reduce all early elective deliveries, including cesarean sections and inductions.

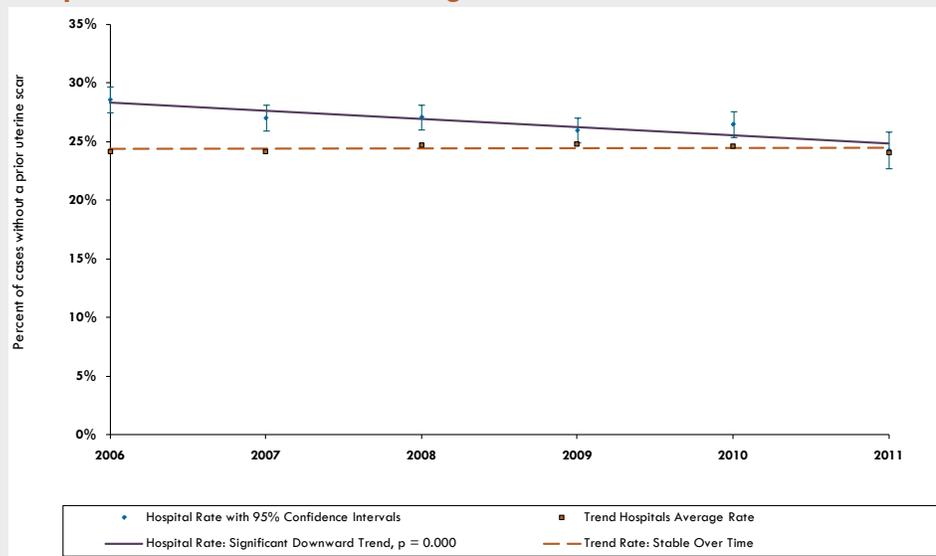
**Goal:** 90 percent of all babies will be delivered at 39 weeks or later as a result of 100 percent perinatal bundle compliance.

**What they did:** Woman’s formed a multidisciplinary council of nurse managers, quality specialists and the chief of obstetrical services. Team members including nurse champions and community physicians attended IHI meetings every six months to review evidence-based practices and discuss their progress in perinatal bundle implementation with other organizations in the same pursuit. These team members later shared what they had learned and led a discussion on Woman’s most recent data. The entire team addressed any discrepancies in the data and suggested changes that could perfect the guidelines and thereby improve outcomes. All team members provided input and would agree on the appropriate next steps.

**Impact:** Senior management instituted a “hard stop” on all early elective deliveries. From 2006–2011, Woman’s saw a 19 percent decrease in primary C-section deliveries (see figure 2) and more than a 50 percent decrease in operative vaginal deliveries. NICU admissions declined by 28.9 percent over the same period.

**Challenges to implementation:** Many physicians believed the decline in NICU admissions was not a direct result of the decrease in early elective deliveries, attributing the change to the updated NICU admission criteria. Patients argued that scheduling childbirth was more convenient, giving them the opportunity to plan for child care and family leave, for example. To alleviate tension between patients, physicians and the hospital, Woman’s instructed physicians to cite hospital regulations that restricted them from performing inductions without medical necessity, essentially putting “blame” on the facility. To directly educate patients, the hospital provided physicians with pamphlets identifying the risks associated with elective inductions.<sup>5</sup>

**Figure 2. Primary cesarean delivery rates at Woman’s Hospital in comparison to the national average, 2006–2011**



\*Source: National Perinatal Information Center

## Seton Family of Hospitals: Using clinical outcomes and data to gain system support for quality initiative

**Background:** Seton Family of Hospitals, a member of Ascension Health, operates 38 facilities in 11 counties of Central Texas and employs more than 500 physicians for its 1,341 beds. As a result of the release of *To Err Is Human* by the Institute of Medicine, in 2003 Ascension launched “Journey to Zero,” a systemwide campaign to deliver safe care within several clinical areas. Ascension piloted a different safety and quality initiative within different facilities, and Seton was designated as the pilot site for programs to reduce birth traumas.

**Goal:** The Perinatal Safety Alpha Initiative, a part of the Ascension Health Handling All Neonatal Deliveries Safely (HANDS) program, aimed to eliminate inductions prior to 39 weeks unless medically necessary.

**What they did:** In late 2003, Seton Family implemented the “39-week rule.” The hospital held physicians accountable for declining all induction requests prior to 39 weeks that were not medically necessary. Each hospital has a review process in place for induction requests. The unit clerk reviews each request and then sends it to a labor and delivery nurse for approval. The request eventually reaches the chief of obstetrics for final approval. During the implementation, if a physician performed an elective induction prior to 39 weeks, the case was sent to a peer review panel. This process, first tested in one facility, became standard across the six Seton hospitals that have labor and delivery services and eventually across Ascension.

**Impact:** Since July 2005, Seton has not performed one elective induction before 39 weeks within the system. Birth trauma incidence rates decreased significantly, from 30 per 10,000 in the period 2000–2003 to an average of 2 per 10,000 since 2007 (a 93 percent reduction). NICU admissions also declined, and for more than six years, Seton has seen zero NICU admissions that are attributable to elective inductions prior to 39 weeks. NICU charges declined from \$4 million to about \$186,000 per year. As a result, annual malpractice premiums across Ascension dropped by millions of dollars.

**Challenges to implementation:** Physicians were initially skeptical of the 39-week rule, but they adhered to the policy once data confirmed the correlation between early elective inductions and poor outcomes. Regular data updates, which highlighted the positive health outcomes, also compared the number of elective inductions by physicians, encouraging compliance. Additionally, Seton provided interdisciplinary training for obstetrical team members to further educate them of the new rule. Some patients did complain of uncomfortable pregnancies and indicated a desire for the added convenience of scheduled deliveries. In response, physicians reminded expectant mothers of the health risks associated with early elective delivery and advised them to focus on the health of the baby.<sup>6</sup>

## Eliminating early elective deliveries at the state level in Louisiana and Texas

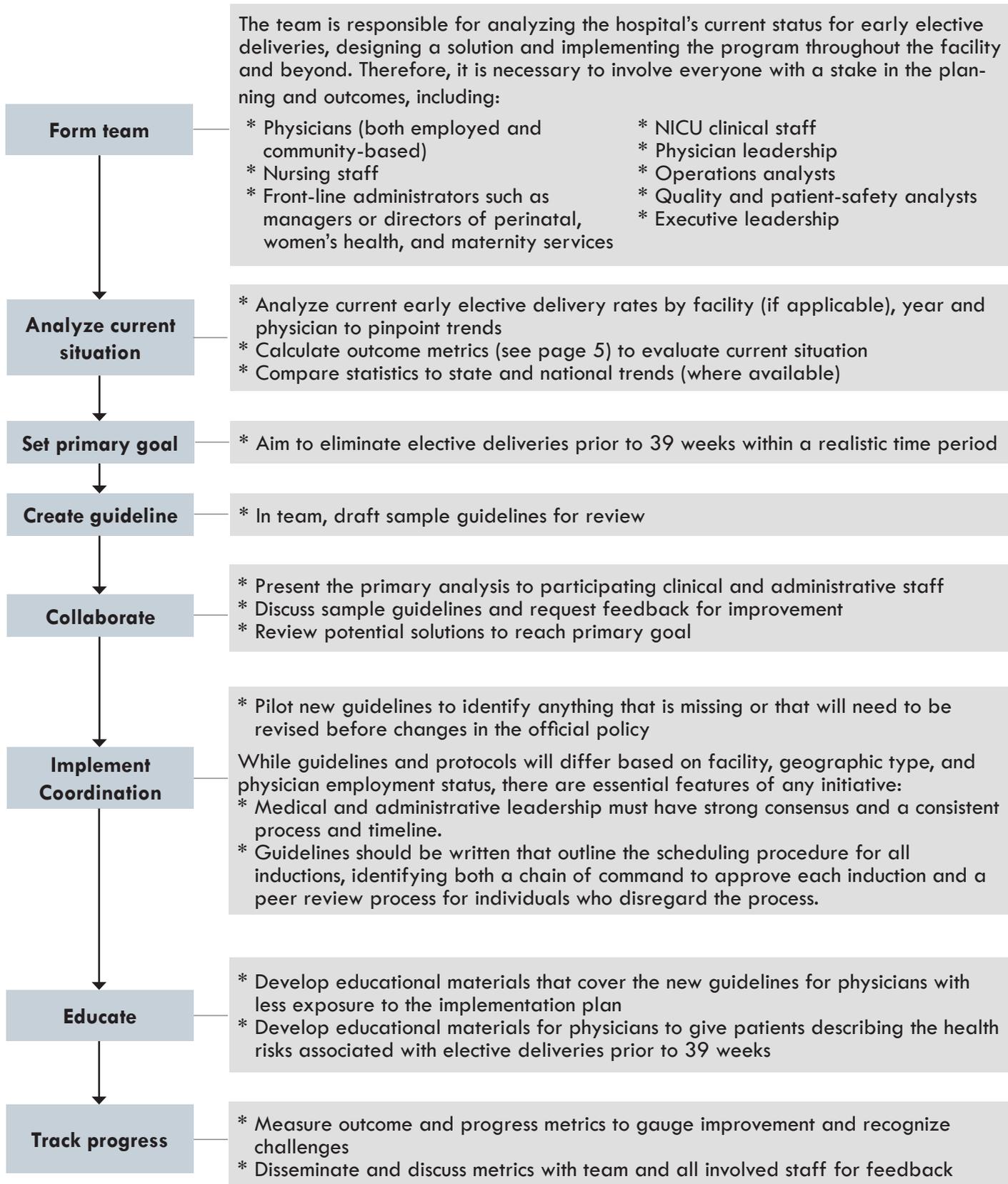
The desire to improve birth outcomes while reducing Medicaid expenditures has encouraged state governments to join the quest to eliminate unnecessary inductions prior to 39 weeks. States are working with hospitals and physicians in different ways to accomplish the same goal.

**Louisiana:** The Louisiana Department of Health and Human Services announced the 39-Week Initiative as part of a statewide project to improve birth outcomes. Led by Woman’s Hospital, 19 other hospitals throughout the state also pledged to eliminate elective deliveries prior to 39 weeks. To increase physician compliance, AMMICO, the largest supplier of malpractice insurance in the state, has partnered with DHH to provide a training course for continuing medical education credit. Completion of the course in combination with other educational programs will qualify each participating physician for a 10 percent reduction in malpractice premiums.<sup>7</sup>

**Texas:** Under a 2011 law, Texas Medicaid no longer reimburses hospitals for elective deliveries occurring prior to 39 weeks’ gestation when not medically necessary. Physicians will still be reimbursed at the normal rate.<sup>8</sup>

# API Implementation Overview

While program design will vary among organizations, there is a basic framework that hospitals and health systems can use as a guide to begin the process of eliminating elective deliveries before 39 weeks.



# Measuring Progress

The metrics detailed below are useful to evaluate the current state of the organization, monitor progress, identify challenges and recognize unforeseen consequences. Many process, outcome and balance metrics can be analyzed, and organizations may realize that changes come within each segment at different phases in program development and implementation. Gaining an understanding of the metrics in the beginning will aid teams in developing a program appropriate for their hospital. Organizations do not have to measure all of the metrics below but should choose the ones that make sense for their own situation.

## Process Metrics

- \* Maternal or newborn hospital admissions >5 days
- \* Community awareness of the dangers of elective early term deliveries
- \* Clinical team adherence to induction bundle policies
- \* Overall adherence to each step of new guideline
- \* Labor and delivery length of stay
- \* Physician, nurse and other clinical provider training attendance rates
- \* Use of combined vacuum and forceps
- \* Use of vacuum before 34–36 weeks

## Outcome Metrics

- \* Neonatal mortality rates
- \* Obstetric trauma
- \* Birth trauma
- \* Primary cesarean rate in electively induced patients
- \* Fourth-degree laceration rates
- \* Number of elective inductions before 39 weeks
- \* Episiotomy rates
- \* Respiratory distress syndrome
- \* Transient tachypnea of the newborn
- \* Newborn sepsis
- \* CPR or ventilation in first 24 hours
- \* Number of elective caesarean sections before 39 weeks

## Balance Metrics

- \* Employee satisfaction
- \* Independent physician satisfaction
- \* Labor and delivery overall volume
- \* Percent of market labor and delivery volume
- \* NICU admissions (overall and attributed to elective inductions)
- \* NICU charges

# Essential for Success

## Leadership Buy-in

- \* Retain clinical and administrative leadership from the beginning as a necessary precursor to physician buy-in
- \* Encourage collaboration among all stakeholders throughout the organization, including administrative and clinical management
- \* Improve adherence to the new policy through recognition by hospital leadership of the clinical staff's efforts to implement the new guidelines

## Physician Adherence

- \* Gain physician buy-in from the beginning by providing irrefutable data evidence (clinical outcomes and physician comparison data) to all affiliated physicians, focusing on the impact of induction rates on NICU admissions and adverse health outcomes in newborns
- \* Gather physician feedback on processes when guidelines are originally written and after initial test
- \* Maintain adherence through continual education and enforcement of agreed-upon processes
- \* Allow independent physicians to play a role in the implementation process

## Patient Education

- \* Educate patients about the risks that elective early term deliveries pose to both mother and child
- \* Provide educational information in various forms (written, electronic and oral) for consistent message on the importance of the last few weeks of pregnancy
- \* Recognize that hospital-sponsored education can ease difficulties faced by physicians who may refuse patients' requests to induce labor unless medically necessary

## Documented Process

- \* Avoid putting one staff member in a policing role, which can negatively impact staff satisfaction and adherence
- \* Establish a clear chain of command and process for correcting deviations from guidelines
- \* Document one consistent process, which will facilitate easier adoption across the hospital, system or region

### Endnotes:

1. *Strong Start Initiative: Improving Maternal and Infant Health Fact Sheet*. Centers for Medicare and Medicaid Services. Released February 7, 2012. Accessible at <http://www.cms.gov>
2. The Leapfrog Group. *Early Elective Deliveries (Between 37 and 39 Complete Weeks of Gestation)*. Released March 28, 2011. Accessible at <http://www.leapfroggroup.org>
3. Partnership for Patients: Centers for Medicare and Medicaid Services. *Addressing Obstetrical Harm through the Pay-for-Performance Network*. February 8, 2012.
4. Ibid.
5. Johnson, Cheri and Patricia Johnson. Personal interview with Woman's Hospital. January 9, 2012.
6. Mazza, Frank. Personal interview with Seton Family of Hospitals. January 9, 2012.
7. *Louisiana becomes first state to target elective births before 39 weeks; 20 hospitals sign on to 39-Week Initiative*. July 13, 2011. Accessible at: <http://new.dhh.louisiana.gov/index.cfm/newsroom/detail/1970>. Accessed February 2, 2012.
8. *Texas Hospitals and Physicians Must Limit Elective Inductions*. September 2011. Accessible at <http://babies411.com/infant-news/texas-hospitals-and-physicians-must-limit-elective-inductions.html>. Accessed February 2, 2012.





**Resources:**

For more information and resources on elective deliveries and perinatal safety, please visit <http://www.hpoe.org/topic-areas/obstetrical.shtml>

If you would like to participate in a perinatal safety national improvement project, please contact [HEN@aha.org](mailto:HEN@aha.org).

**Suggested Citation:**

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