



Eliminating Elective Inductions < 39 Weeks

February, 2010



Seton Perinatal Safety Project

- 2007 Joint Commission Codman Award
- 2009 Child Birth Connection Maternity Quality Matters Award



Perinatal Initiatives

- Focus on shared physician-specific data presented in a blinded fashion
- Implement Oxytocin Bundles & Operative Vaginal Delivery Bundle
- Initiate continuous small tests of change
- Revise all related protocols and policies to reflect current evidence-based best practices
- Develop customized, Network-specific reporting tools for communication using SBAR
- Adopt a common terminology for fetal heart monitoring
- Implement multi-disciplinary crisis simulation training, focusing on communication and teamwork



Elective Induction of Labor

- 2007 survey of 20,000 births in HCA hospitals revealed that 1/3 of all babies were electively delivered
- 5% of all births were delivered in a manner violating ACOG/AAP guidelines
- 3.2 % of deliveries in Seton Family of Hospitals prior to 2004 were elective inductions at <39 weeks



Risks Associated with Elective Induction

- Iatrogenic prematurity
 - 2009 RDS/TTN typical stay in NICU was 5 days
 - Average billed amount: \$26,800
- Increased rate of cesarean section
 - 2x for nulliparous with unfavorable cervixes
- Change in labor progression
- Prolonged hospital stay



The “Bundle” Concept

- Adopted by the Institute for Healthcare Improvement (IHI)
- A collection of processes needed to effectively and safely care for patients undergoing particular treatments with inherent risks
- Should consist of 3-5 evidence-based practices or precautionary steps



Elective Induction Bundle

- Assessment of gestational age (>39 weeks)
- Monitoring fetal heart rate for reassurance
- Pelvic assessment
- Monitoring and management of hyperstimulation



ACOG Criteria for Dating Pregnancy

- US measurement at <20 wks supports gestational age of at least 39 wks
- Doppler heart tones for at least 30 wks
- HCG for at least 36 weeks
- Mature fetal lung test result



Medical Indications for Induction

- Abruptio
- Chorioamnionitis
- Fetal demise
- Gestational hypertension
- Preeclampsia, eclampsia
- PROM
- Post-term pregnancy
- Maternal medical conditions
- Fetal Compromise



Logistic Reasons for Induction

- Treated similar to elective inductions
- Examples:
 - Risk of rapid labor
 - Distance from hospital
 - Psychosocial indications



Date _____

Labor Induction Scheduling Form

SMCA fax 324-1024 SMCW fax 324-4695 SNW fax 324-8034 SSW fax 324-9080 UMCB fax 324-7265

Patient _____ DOB: _____ MRN _____

G _____ P _____ Phone/contact : _____ Physician _____

Requested Date of Induction/ _____ Gestational Age on requested date _____

Dating criteria: LMP _____ First US on _____ @ _____ wks Final EDC _____
Criteria for lung maturity (circle one): N/A ACOG \geq 39 weeks +FLM L/S > 2.0 +PG other _____

Cervical Exam _____ / _____ / _____ Bishop score: _____ EFW _____ g Cephalic Breech

Indication (please \checkmark or specify)

High Priority (medically indicated, high maternal or perinatal risk)

- Abnormal fetal testing Fetal growth restriction
- Severe hypertension Premature rupture of membranes
- Other (please specify) _____

Intermediate Priority (medically indicated)

- Post-term gestation ($>$ 41 weeks)
- Maternal medical conditions _____
- Twins \geq 37 weeks
- Fetal demise
- Coordination of pediatric or maternal specialty care: _____
- Other (please specify) _____

Elective (nonmedical indication; meets ACOG criteria for term gestation or lung maturity proven)

- Maternal request or psychosocial considerations
- Previous fetal demise
- History of rapid labor, advanced cervical dilation, distance from hospital
- Other (please specify) _____

Informed Consent: I have discussed the indications, methods, agents, risks, benefits and alternative approaches for induction of labor, including the possibility of repeat induction with the patient, and she has agreed to proceed.

Note: Inductions are scheduled according to priority and capacity of the unit. Labor inductions may be subject to alternative arrangements by the L&D Charge Nurse or OB Section Chief according to unit census and staffing.

Signature of requesting physician _____ Date _____
(Verifying clinical information and request for induction)

Signature of Seton associate receiving request _____

Confirmed Induction _____ Time _____

Signature of Seton associate confirming scheduled date/time _____



Putting Patient Safety Into Everyone's Hands

- No scheduling of induction until bundle was met
- Set up chain of command for resolution of issues
 - Senior leadership support
 - Email discussion groups
- Patient education
- Weekly reports during initiation to maintain constant awareness of the bundle



Ohio Perinatal Quality Collaborative

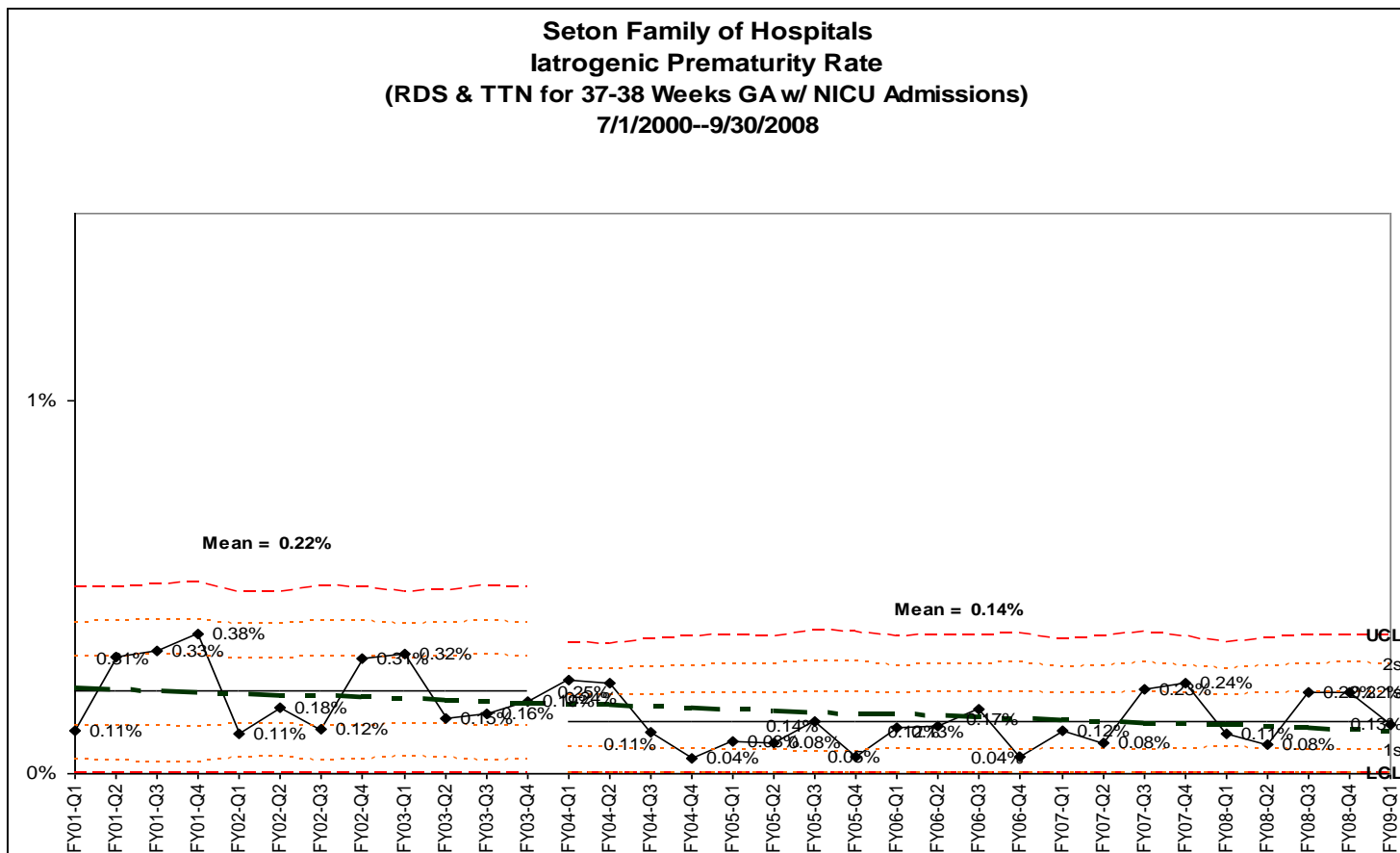
- Presented at MFM national conference in 2/2010
- 20 hospitals (47% of births in Ohio) collected baseline data for 60 days
 - Adopted interventions
 - Iterative tests of change
 - Chart review
 - Data sharing
- Scheduled births between 36 1/7 and 38 6/7 with no medical indication declined from 25% to below 5% ($p < 0.05$) over a 10 month period



Seton's Current State of Initiatives Newborn Injuries

- No elective inductions prior to 39 weeks of gestation since October 2005
 - Iatrogenic Pre-maturity Rate (37-38 weeks RDS & TTN) decreased from 2.2 per 1,000 live births to 1.4
 - 0.8 per 1000 presumed due to elective inductions
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- data submitted for publications by Landers S., et al.

Network Data—Iatrogenic Prematurity rate





Effects of Initiatives (FY 2001-2003 compared to FY 2005-2007)

- Rate of respiratory morbidity requiring NICU care in babies with iatrogenic prematurity fell from 0.24% to 0.14%
- Length of stay for NICU care for these infants fell from 10 to 8 days
- Hospital charges for NICU care for these infants fell from \$1,825,486 to \$1,010,620

- data submitted for publications by Landers S., et al.



Analysis of Babies with RDS Requiring NICU Support Born at 37-39 weeks

- Comparing pre-initiatives to post-initiatives:
 - Days in Oxygen: 3.8 to 3.1
 - Requiring surfactant: 12% to 6%
 - Needing NCPAP support: 80% to 74%
 - Requiring mechanical ventilation: 7% to 3%
 - Days of antibiotics received: 5.2 to 3.1
- During the pre-initiative stage, 9 of 69 (13%) were results of elective induction
- During the post-initiative time, 0 of 35 were results of elective induction

- data submitted for publications by Landers S., et al.