Prevention of Elective Deliveries Less Than 39 Weeks and 0 Days Gestational Age

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Introduction

- The American College of Obstetrician and Gynecologist (ACOG) and the American Academy of Pediatrics (AAP) recommend avoiding elective deliveries prior to 39 weeks estimated gestational age.
- Elective deliveries, between 37 and 39 weeks, carry significant risk for neonatal morbidity.
- Intervention studies have not shown any increase in the stillbirth rate for singleton pregnancies by delaying delivery until 39 weeks.
- There are also maternal implications to elective deliveries less than 39 weeks, including increased rates of failed inductions and the need for a Cesarean delivery, particularly in the nulliparous female with an unfavorable cervix.
- Multiple safety organizations, including the National Quality Forum and The Joint Commission, have identified elective deliveries prior to 39 weeks as an opportunity to improve neonatal and maternal outcomes and have included it as an important quality indicator for hospitals.
- In fact, the Joint Commission has designated this particular issue as one of its five Perinatal Core Measures (PC-01 Elective Deliveries).
- Within the Women's Care Center at the University of Chicago, we found an unusually high rate of elective deliveries less than 39 weeks and hypothesized that it was due to a lack of a protocol and/or processes for scheduling these procedures.

Aims of the Initiative

To reduce the number of elective inductions of labor and Cesarean deliveries prior to 39 weeks and 0 days estimated gestational age.

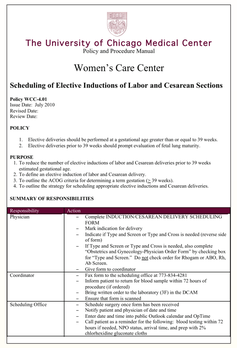
Methods/Data Analysis

The following initiatives were undertaken in the Women's Care Center:

1. Formalization of a written protocol that addressed: (a) the definition of an "elective delivery", (b) the ACOG criteria for determining a term gestation (> or = 39 weeks), and (c) the process for scheduling an appropriate induction or Cesarean delivery.
2. Nursing and physician education of the neonatal and maternal implications of an elective delivery less than 39 weeks.
3. Standardization of a scheduling form for all deliveries in the Women's Care Center.
4. Inability to schedule an induction or Cesarean delivery less than 39 weeks without an amniocentesis for fetal lung maturity or written approval by the Medical/MFM Directors.
5. An audit of every scheduled procedure in the Women's Care Center for one year pre- and post-implementation of the protocol to determine the estimated gestational age and the indication for delivery from the electronic health record (MRView® and Epic).
6. Determining the impact of the protocol on the rate of elective induction of labor and Cesarean delivery less than 39 weeks and 0 days, by comparing rates of these variables 1 year pre- and 1 year post-implementation of the protocol.
7. Outcomes were compared using Fisher's exact 2-tailed test, with $p < 0.05$ required to reject the null hypothesis.

Results/Outcomes

- Implementation of a written protocol for the Women's Care Center on 4/1/2011.
- Adoption of a consistent process for scheduling inductions and Cesarean deliveries within the Women's Care Center.
- Reduction in the number of elective Cesarean sections and inductions of labor less than 39 weeks and 0 days from 14% to 4% pre- versus post-implementation ($p < 0.0001$).



The University of Chicago Medical Center
Policy and Procedure Manual

Women's Care Center

Scheduling of Elective Inductions of Labor and Cesarean Sections

Policy WCC-4.01
Effective Date: July 2010
Revised Date:
Review Date:

POLICY

1. Elective deliveries should be performed at a gestational age greater than or equal to 39 weeks.
2. Elective deliveries prior to 39 weeks should prompt evaluation of fetal lung maturity.

PURPOSE

1. To reduce the number of elective inductions of labor and Cesarean deliveries prior to 39 weeks estimated gestational age.
2. To standardize the process for induction of labor and Cesarean delivery.
3. To outline the ACOG criteria for determining a term gestation (≥ 39 weeks).
4. To outline the strategy for scheduling appropriate elective inductions and Cesarean deliveries.

SUMMARY OF RESPONSIBILITIES

Responsibility	Action
Physicians	– Complete INDUCTION/CESAREAN DELIVERY SCHEDULING FORM – Mark indication for delivery – Indicate if Type and Screen or Type and Cross is needed (reverse side of form) – Order Type and Screen or Type and Cross is needed, also complete "Obstetrics and Gynecology Physician Order Form" by checking box for "Type and Screen." Do not check order for Rhogam or ABO, Rh, Ab Screen – Give form to coordinator
Coordinator	– Fax form to the scheduling office at 773-834-4281 – Inform patient to return for blood sample within 72 hours of scheduled procedure – Being written order to the laboratory (30) in the DCAM – Ensure that form is scanned
Scheduling Office	– Schedule surgery once form has been received – Notify patient and physician of date and time – Call patient and confirm date in Outlook calendar and OpTime – Call patient one business day before the following: Blood testing within 72 hours if needed, NPO status, arrival time, and prep with 2% chlorhexidine gluconate cloths

INDUCTION/CESAREAN DELIVERY SCHEDULING FORM

Requesting Physician _____ Today's Date: _____
Patient's Name _____ Patient's DOB: _____
Medical Record # _____ Gravida ___ Para ___
Requested Procedure Date _____ Requested Time: _____
Gestational Age on Date of Procedure _____ EDD: _____

EDD determined by which of the following ACOG criteria:
- ☐ Ultrasound measurement at less than 20 weeks of gestation supports gestational age of 39 weeks or greater.
- ☐ Fetal heart tones have been documented as present for 30 weeks by Doppler ultrasonography.
- ☐ It has been 36 weeks since a positive serum or urine human chorionic gonadotropin pregnancy test result.

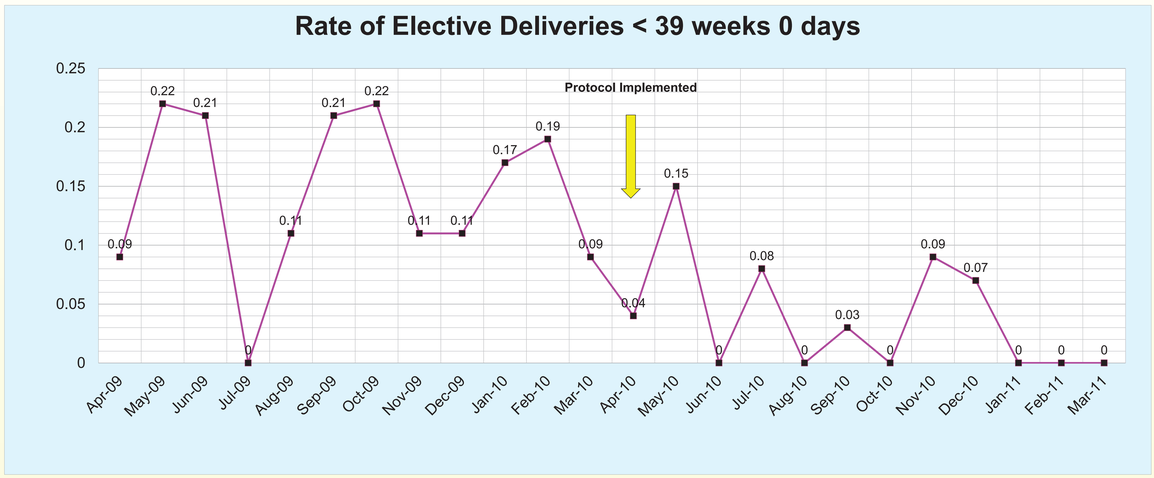
Method of Delivery
- ☐ Primary Cesarean section
- ☐ Repeat Cesarean section
- ☐ Induction of labor

Indication for Scheduled Delivery

Level 1	Level 2	Level 3
☐ Preeclampsia, HELLP ☐ Gestational hypertension ☐ Gestational diabetes - A2 ☐ Intrauterine growth restriction ☐ Placenta previa ☐ Vasa previa ☐ Nonreassuring fetal testing ☐ Blood group sensitization ☐ Rh ☐ Isoimmunization ☐ Oligohydramnios ☐ Fetal growth restriction ☐ Fetal anomaly ☐ Fetal demise ☐ Chronic hypertension ☐ Diabetes (type I or II) ☐ Previous classical Cesarean section or hysterotomy ☐ Prior myomectomy (cavity entered) ☐ Other maternal medical condition	☐ Preterm pregnancy ≥ 37 weeks ☐ Gestational diabetes – A1 ☐ Prior low-transverse Cesarean section ☐ History of HSV ☐ Prior myomectomy (cavity not entered) ☐ Prior low-transverse Cesarean section ☐ Abdominal cerclage **AND** ☐ **Gestational Age ≥ 39 weeks**	☐ History of rapid labor ☐ Distance from hospital ☐ Term with favorable cervix ☐ Grand multip ☐ Maternal request **AND** ☐ **Gestational Age ≥ 39 weeks**

For level 2 or 3 indication, if EDD was not confirmed by one of the above ACOG criteria or if the patient is less than 39 weeks, an amniocentesis for fetal lung maturity is required or approval by MFM/Medical Director.

☐ Date of Amniocentesis: _____
☐ Approved by: _____



Clinical Implications

Due to the successful implementation of this protocol, there has been a significant reduction in the number of elective deliveries less than 39 weeks and 0 days at the University of Chicago Women's Care Center. As a result, we would expect a reduction in both neonatal and maternal morbidity over time. The implementation of the protocol also improves the hospital's compliance with ACOG recommendations and the Joint Commission's Perinatal Core Measure (PC-01) to reduce elective deliveries less than 39 weeks.

References

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