



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.

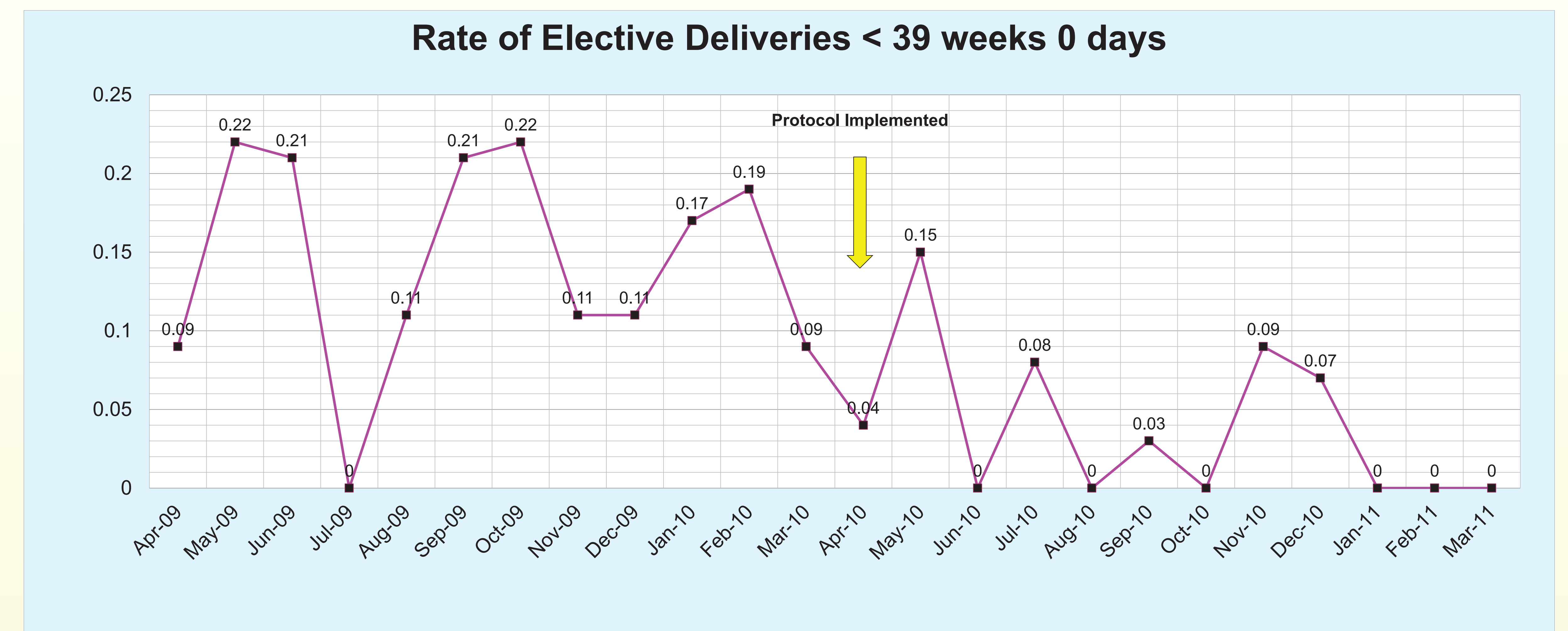
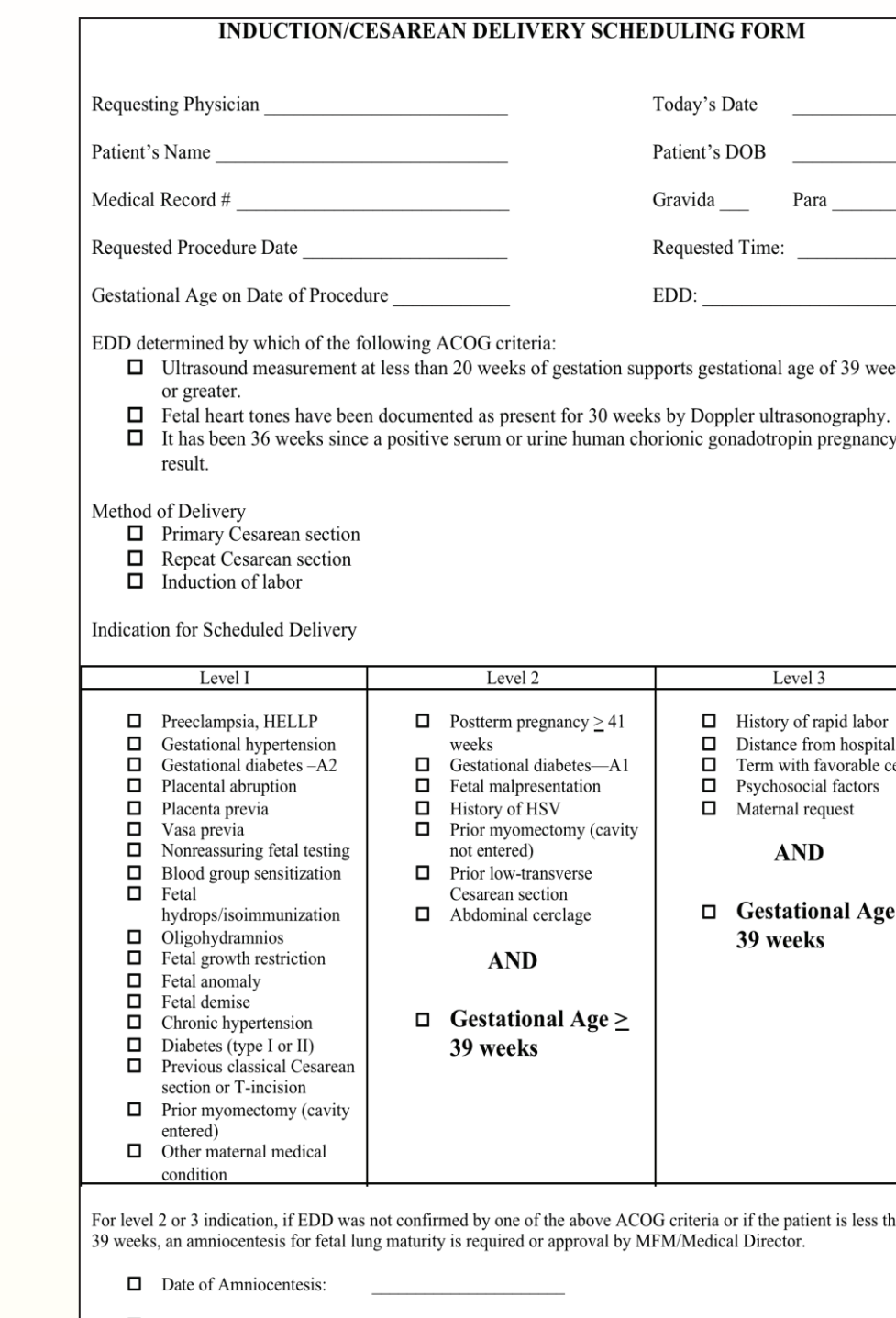
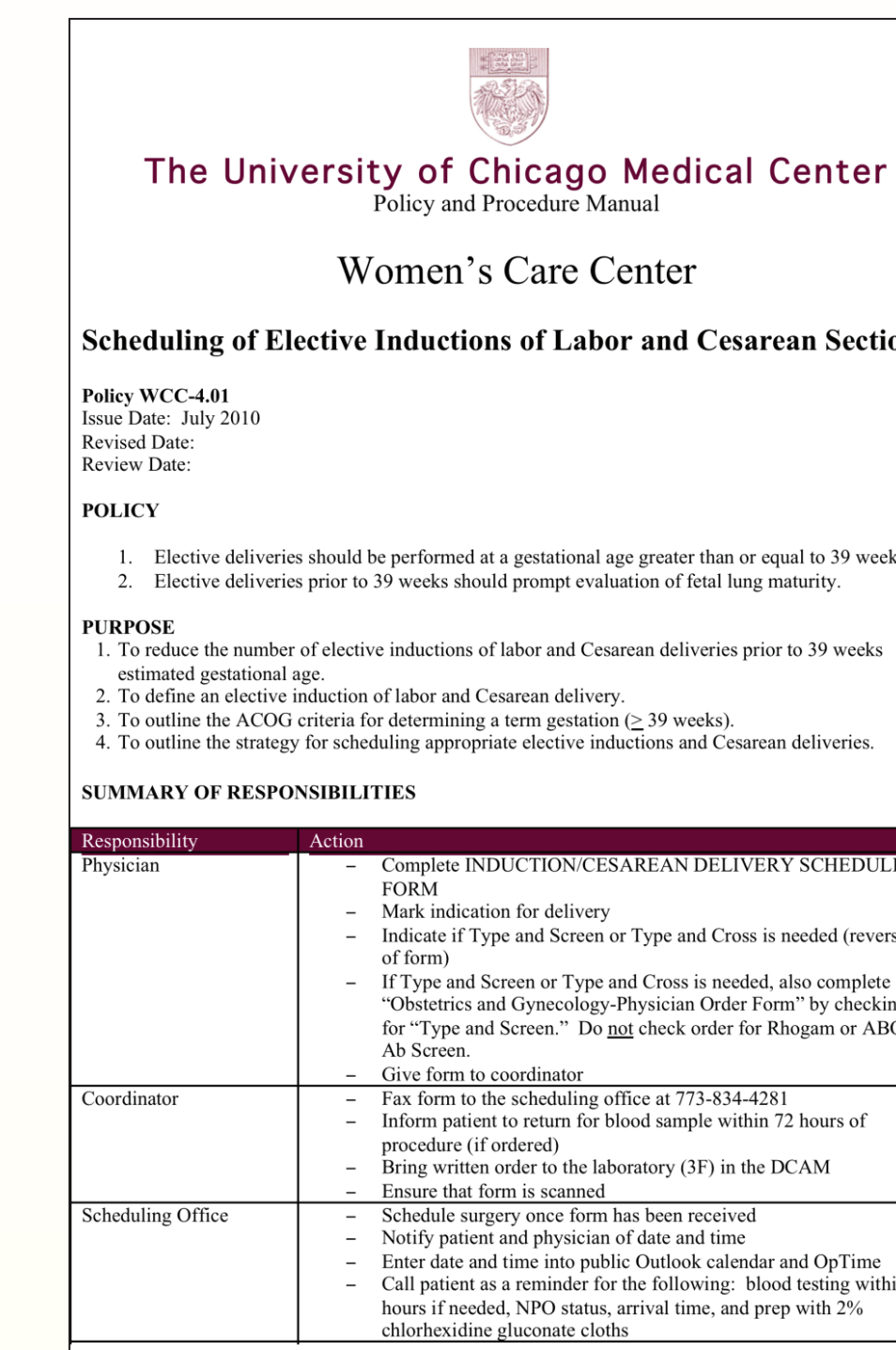
Methods/Data Analysis

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

- 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.
- Nursing and physician education of the neonatal and maternal implications of an elective delivery less than 39 weeks.
- Standardization of a scheduling form for all deliveries in the Women's Care Center.
- 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.
- 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).
- 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.
- 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 ($p < 0.0001$).



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.

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