Early Elective Delivery (EED)

SAMAR MUZAFFAR, MD MPH
MO HEALTHNET
OVERSIGHT COMMITTEE
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EED Background

- Elective delivery 37 to < 39 weeks gestation
- ACOG advises against non-medically indicated deliveries prior to 39 weeks
- A survey by Goldenberg et al (Obstet Gynecol 2009 Dec;114(6):1254-8) found that 92% of insured women thought that giving birth prior to 39 weeks is safe
- EED increased from 20% in 1990 to 29% of all live births in 2006

EED Background

- EED associated with complications
  - Increase in obstetrical procedures and maternal complications
  - Increased NICU admissions
  - Increased transient tachypnea of the newborn (TTN)
  - Increased respiratory distress syndrome (RDS)
  - Increased ventilator support
  - Increased suspected or proven sepsis
  - Increased risk of death in the first year of life
  - Problems with brain development, including psychological, behavioral, and emotional long-term morbidity
  - Increased newborn feeding problems
  - other transition issue

EED Background

- HCA 2007 study
  - ~10% of 18,000 deliveries were EED without medical necessity
  - Of those, almost 18% delivered at 37 to 38 weeks and 8% delivered at 38 to 39 weeks required neonatal care for 4.5 days on average, compared to 4.6% at 39 weeks and beyond

EED Background

- National Initiative: EED identified as key quality indicator for obstetric hospital care
  - The Joint Commission
  - National Quality Forum
  - Leapfrog Group
  - March of Dimes

EED Background

- According to the Clark, SL et al, Journal of Obstetrics and Gynecology (210; 203: 449.e1-6),
  - policies backed by peer review only are less effective than hospital adoption of "hard stop" policies to prevent this practice.
  - propose that a 5% rate of elective early term delivery would be a reasonable national quality benchmark.
  - posit that a "hard stop" policy could reduce early elective delivery to < or =2%.

MHD Evaluation

In an effort to determine the health and fiscal impact of early elective deliveries, the MO HealthNet Division (MHD) has researched short-term outcomes and costs of babies born as a result of an Early Elective Delivery (EED; 37-38 weeks gestation) in comparison to babies that were born as a result of a spontaneous vaginal Full-Term Delivery (FTD; 39-plus weeks gestation).

This study used administrative (claim) data to examine 6,842 babies born in calendar year 2010.

MHD evaluation

- EED infants were identified using the following criteria from the birth certificate:

  - Gestational age of 37 or 38 weeks
  - No medical indications
  - Inductions/Vaginal
  - C-Sections

MHD Evaluation

Using these criteria,1,802 EED infants were identified (26.3% of the total 6,842 infants).

- 671 (9.8%) were born by Early Elective C-Section
- 1,131 (16.5%) by Early Elective Vaginal delivery after induction.

MHD Evaluation

FTD infants were identified using the following criteria from the birth certificate:

- Gestational age of 39-plus weeks
- No medical indications
- Spontaneous vaginal delivery

Using these criteria 5,040 infants were identified (73.7%) and born at FTD

The total delivery costs and inpatient length of stays for the EED infants are higher than those of the FTD group.

CY 2010 No Medical Indication on Birth Certificate	Number of Babies	Average Length of Stay	Total Cost Delivery Inpatient Stay (Claims Only*)	Average Cost Delivery Inpatient Stay (Claims Only*)
EED C-Sections	671	3.27	$1,935,302.28	$2,884.21
EED Induced Vaginal	1,131	2.03	$1,853,548.84	$1,638.86
FTD Spontaneous Vaginal	5,040	2.02	$7,755,603.52	$1,538.81

MHD Evaluation

- Based on these data, allowing EED infants to reach full gestation and achieve spontaneous vaginal delivery would
  - avoid complications associated with EED, improving outcomes,
  - achieve an approximate cost reduction exceeding one million dollars annually ($1,015,915.50).

MHD Evaluation

- Actual savings would likely be significantly greater, since our estimates do not include other costs such as additional outlier payments, KICK payments, and physician charges for baby claims with higher than ‘normal’ inpatient costs incurred.

Immediate healthcare needs of EED vs. FTD infants in terms of higher level of nursery care required after delivery

Level IV Nursery (NICU)	Number of Babies	Percent of Babies	Total Days	Average Days
EED C-Sections	12	1.788%	53	4.4
EED Vaginal – Induced	11	0.973%	99	9.0
FTD Spontaneous Vaginal	43	0.853%	43	4.7

MHD Evaluation

- EED babies have a higher incidence of NICU care than the FTD babies.
- The percent of EED babies born via c-section who required NICU care is 52.29% higher than FTD infants requiring NICU days.
- The percent of FTD babies requiring NICU days is 12.3% lower than babies born via EED vaginal delivery after induction requiring NICU days

Similar patterns are found when reviewing total costs of healthcare (claims data) for the first year of life, with total costs for EED infants being over 50% greater than the costs for FTD infants.

CY 2010 No Medical Indication on Birth Certificate	Number of Babies	Total Cost First Year of Life	Cost Per Baby First Year of Life
EED C-Sections	671	$20,228,790.73	$30,147.23
EED Vaginal - Induced	1131	$35,557,198.12	$31,438.73
FTD Spontaneous Vaginal	5040	$98,939,205.93	$19,630.79

MHD Evaluation

- While the optimal method for data collection regarding early elective deliveries is by individual chart review, this administrative claim review clearly documents increased healthcare needs and costs for babies born as a result of an early elective delivery.

MHD Evaluation

- MHD findings are consistent with the LeapFrog Group, March of Dimes and other national studies in that babies born as a result of Early Elective Deliveries have increased health care needs as well as higher health care costs.

MHD Plans

- Convene clinicians and other stakeholders
- Review the data and come to consensus
- Develop an evidenced-based, best practice policy as a payer
  - Goals:
    - To improve maternal and fetal outcomes
    - Reduce health care costs associated with EED and associated complications