Changing Hospital Culture: Collaborative Response to Emergency Cesarean Sections

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Background

- Illinois Dept. of Public Health (IDPH) Visit January 2012
- Decision to Incision time for Emergency Cesarean Sections- “30-Minute Rule”
- American College of Obstetrics & Gynecology (ACOG) Standard of Care
- Data Collection

- Gap Analysis
  1. All Birth Center Staff not using Standardized Nomenclature
  2. Perceived Lack of Communication & Teamwork
Continuing Education

• Departmental process improvement project

• Planned for interprofessional groups

• The group planned 2.0 CNE through the Ohio Nurse’s Association (ONA) & 1.0 CME through the hospital’s CME Coordinator

• 9 classes were held for OB physicians, anesthesiologists, residents, APNs, Birth Center nursing staff, OBTs, PCTs, medical and nursing students were presented
IOM Report

• “At least 44,000 people, and perhaps as many as 98,000 people, die in hospitals each year as a result of medical errors that could have been prevented, according to estimates from two major studies.”

• “Failure of communication”

IOM 1999 Report; “To Err is Human”
Root Causes of Morbidity & Mortality

Root Causes of Perinatal Deaths & Injuries

- Communication
- Orientation/training
- Patient assessment
- Staffing
- Availability of info
- Competency/credentialing
- Procedural compliance
- Environment/safety/security
- Leadership
- Continuum of care
- Care planning
- Organization culture

Percent of 31 events

Includes issues related to accurate interpretation and timely communication of fetal assessment data
PART I – NICHD NOMENCLATURE: SPEAKING A COMMON LANGUAGE WHEN INTERPRETING FETAL MONITOR TRACINGS
Objectives

• Discuss briefly the history of standardized fetal monitoring terminology

• Review the basic definitions & categorical levels of NICHD Nomenclature (Standardized Communication for Fetal Heart Rate Pattern Interpretation)

• Apply NICHD Nomenclature to fetal monitor tracings
2010 NCC Monograph

• …in an effort to address the educational needs of nurses, residents, midwives and obstetricians, the NCC monograph was developed and summarizes the NICHD nomenclature from the National Institute of Child Health and Human Development Research Planning Workshop that occurred back in 1997.
In Addition…

- NICHD Categories were added to the computer charting system for the nursing staff
- C/S decision time was added for ease in data collection
- Professional responsibility was discussed with key stakeholders regarding:
  1. Continuing education and certification
  2. Accurate diagnosis
  3. Medical record reflecting the same message
Standardized Nomenclature

NICHD Standard Nomenclature supported by:

1. American College of Obstetrics & Gynecologists (ACOG)
2. Association of Women’s Health, Obstetrics & Neonatal Nurses (AWHONN)
3. American College of Midwives (ACM)
“Standardization has long been recognized as an essential element of patient safety, and a growing body of contemporary evidence confirms that standardization can reduce adverse outcomes and malpractice claims. In FHR monitoring, standardization can help ensure that common obstacles to rapid delivery are not overlooked and that decisions are made in a timely fashion.”
Collaboration

“All perinatal staff should participate in education about the chosen language together, even though it has not been traditional for nurses and doctors to attend the same EFM class. Certification in EFM could encourage ongoing education for nurses and physicians as a team.”

Kathleen Simpson Rice, PhD, RN, FAAN
PART II - CRITICAL CONCEPTS FOR TEAMWORK TRAINING IN OBSTETRICS
Goal: Meet the Needs Identified in the Gap Analysis

• Implemented a teaching plan for staff to improve standardized communication and teamwork skills

• Provided interdisciplinary education involving standardized communication skills and emergency cesarean section drill simulation for the team stakeholders
Standardized Communication

- Briefing
- SBAR
- Closed loop communication
- Situational awareness
- Situation monitoring
- Debriefing
Team Communication Skills

• Using SBAR - Situation, Background, Assessment, Response, to orient team members as they arrive to the situation

• Transparent Thinking > Think out loud among team members

• Directed and Closed Loop Communication > Directing communication to a particular person either by using their name or visual cues, and confirming receipt of the message
Interdisciplinary Drills for Teamwork Skills

• Interdisciplinary education and drill simulation for stakeholders

• Reinforcement of the participant’s responsibilities

• Culture change support
Utilize Available Departmental Resources

- Cross trained & flexible Birth Center staff
- All labor & delivery nurses are able to scrub on cesarean sections
- Support of obstetricians and anesthesiologists
- Unified goal for positive outcomes
Barriers that Impede Compliance in achieving the “30-minute rule”

- Staffing challenges
- Anesthesia delays
- Resources
- Lack of knowledge > standardized communication and protocol
Safety Drills in Progress Today

Pardon the high level of activity and noise

...drills are conducted to improve your care!
Interdisciplinary Team Response for Emergency Cesarean Sections

- The charge nurse makes necessary phone calls
- Staff prepares and moves the patient to the operating room
- Anesthesiologist is ready for the patient in the operating room
- Physicians assist with the patient’s transfer to the operating room
- The newborn team prepares for the resuscitation of the infant
Primary Labor & Delivery Nurse Response

• Stays with the patient
• Coworkers assist the primary nurse by bringing to the room supplies, consents, urinary catheter, intravenous fluids, medications and...
• …helps the primary nurse transfer the patient to the operating room
“It Takes a Village”...
Program Goals

• Steadily improve the response time to Emergency C-Sections
• Role Clarification for Team Responders
• Improve Birth Center morale and collaboration
PART III - NEONATAL OUTCOMES
Neonatal Outcomes

• Collaborative response by all team members is imperative

• Level II Nursery nurses were identified as stakeholders and essential resources

• Crucial to the success in changing and improving patient management and outcomes
Evidenced-based Concepts of FHR Interpretation and Management

• All clinically significant FHR decelerations reflect dysfunction of oxygen transfer from the environment to the fetus at one or more points along the oxygen pathway

• Significant metabolic acidemia is highly unlikely in the presence of moderate FHR variability and/or accelerations
Physiologic Basis of FHR Monitoring

• The objective of intrapartum FHR monitoring is to assess fetal oxygenation
• Fetal oxygenation involves the transfer of oxygen from the environment to the fetus and the subsequent fetal response
• Fetal neurologic injury due to disrupted oxygen transfer does not occur unless it progresses at least to the stage of significant metabolic acidemia (umbilical artery pH <7.0 and base deficit >12 mmol/L)

Normal: pH 7.26 +/- 0.07 Base Deficit* 4 +/- 3
Fetal Acidemia and Electronic FHR Patterns: Is there Evidence of an Association?

• The Journal of Maternal-Fetal and Neonatal Medicine (2006):
  – In the absence of catastrophic events, in a fetus with an initially normal FHR pattern, the development of significant acidemia in the presence of variant FHR patterns evolves over a significant period of time, of the order of at least one hour.
Review of Fetal Physiology and Acidemia
Adverse Neonatal Outcomes

• Hypoxic-ischemic encephalopathy (HIE)

• Criteria 1
  • Neonatal depression
  • (cord pH≤7.00
  • Apgar scores of ≤3 at 1 minute and or ≤5 at 5 minutes
  • Need of advanced resuscitation

• Criteria 2
  • Neonatal encephalopathy (difficulty with initiating and maintaining respiration, an altered alertness and excitability, and abnormal tone pattern, with or without seizures)
Sentinel Events

• Research Article: Perinatal morbidity and risk of hypoxic-ischemic encephalopathy associated with intrapartum sentinel events (AJOG 2012)

• Sentinel Events: Uterine rupture, placental abruption, umbilical cord prolapse, amniotic fluid embolism

• Conclusion: Intrapartum Sentinel Events are associated with a high incidence of perinatal morbidity and hypoxic-ischemic encephalopathy
Compounding Intrapartum Factors Associated with Category 2 or 3 FHR Patterns and Neonatal Outcome

- Emergency cesarean section/general anesthesia
- Premature labor
- Chorioamnionitis
- Polyhyramnios
- Oligohydramnios
- Prolonged rupture of membranes
- Prolonged labor
- Macrosomia
- Tachysystole
- Meconium stained amniotic fluid
- Placenta previa
Collaborative Response to Emergency Cesarean Section Guidelines

• To ensure the activation of appropriate personnel during an emergency cesarean section

• In alignment with hospital’s Regional Perinatal Network

• Guidelines and summary of roles described

• Approved by the OB physicians and Pediatric Hospitalist Group
Failure to Rescue

• Lack of identification of non-reassuring fetal heart rate pattern or sentinel event
• Lack of immediate emergency response and rescue plan
• It is imperative to respond to adverse events to the best of our ability
• A plan to respond to these events will assist in our global effort to improve maternal and neonatal outcomes
PART IV-POTENTIAL POSTPARTUM OUTCOMES
Program Objectives

• Identify potential negative postpartum outcomes related to emergency cesarean sections.

• Discuss supportive postpartum interventions to promote positive patient outcomes.
Potential Postpartum Outcomes

The *SURPRISING* and *UNEXPECTED* nature of an emergency cesarean section can have a *TRAUMATIC* affect on patient, infant *and* family.
Potential Postpartum Outcomes

• Post traumatic stress disorder
• Postpartum depression
• Disruption of maternal-infant bonding
• Unsuccessful breastfeeding experiences
• Negative effects on personal relationships
Identification of Educational Needs

• Development of an interdisciplinary response for promoting positive patient outcomes.

• Focusing on the importance of responding to emotional needs of mothers and families during postpartum period.
Kurt Lewin’s Three-Step Change Model

Identification of potential negative postpartum outcomes facilitates the need to change current practices and promote movement into evidence-based postpartum interventions that promote positive patient outcomes.
Supportive Postpartum Interventions

As explained by Redshaw and Hockley (2010),

“The role of the staff and the institutions in which care was provided were key factors in the way most women constructed their cesarean section experience” (p. 150).
Outcomes and Evaluations

Positive interdisciplinary responses emerged:

“It is great to be reminded that our actions have a direct impact on their birthing experiences.”
Outcomes and Evaluations

Promoting effective collaboration between healthcare professionals, patients and their families will ultimately enhance quality of care, patient safety and improve patients’ perspective of emergency birthing experiences.
Changing Hospital Culture

A *positive* change within culture will not only *promote* a new approach of professional practice, it will also *promote* an optimal new beginning for mother, infant and family.
Progress…

"30 Min. Rule" Compliance
“Notable improvements in Decision to Incision data since the last site visit.”
References


References, (cont’d)


• [www.acog.org](http://www.acog.org)
• [www.awhonn.org](http://www.awhonn.org)
• [www.midwife.org](http://www.midwife.org)
Questions, thoughts, comments?