OB Excellence: Postpartum Hemorrhage (PPH) - DATA ANALYSIS

Perinatal University

Speaker/Master Instructor: Carol A. Curran RNC, MS, OGP
CEO & Founder: Clinical Specialists Consulting & Perinatal University
745 Kingston Drive * Virginia Beach VA 23452 * Phone/Fax: 757.631.8837*
Email: cscinc@cscwebsite.org
Website(s): www.perinatalu.org
www.cscwebsite.org
www.abcdefm.com

*Course Handouts: Copyright©2011 PerinatalU. All Rights Reserved.

Course Objectives

- Analyze current Data relative to postpartum hemorrhage (PPH) practice, procedure, and patient safety
- Between participants, compare and contrast DATA relative to PPH practice, procedure, and patient safety
- Discuss DATA goals relative to national, state, and local standards relative to PPH practice, procedure, and patient safety

🌞 BEST - Practice Management Guidelines
B: BEST Decision
E: Evidence-Based
S: Simple & Safe
T: Team Focused

🌞 BESsT -

Postpartum Hemorrhage
Practice Management Guidelines

**PPH Rates: Total, Early, Late, Near-Miss:**

1. TOTAL
2. Early: < 24 Hours
3. Late: > 24 Weeks
4. NEAR-MISS [total]:
5. Oxytocin Induced
6. MgSO4 Induced
7. Multiple Medication Induced [Pit + MgSO4]
8. Prolonged Indx: > 12-24 [after 4cm, Primip vs Multip]
9. PPH Safety Techniques
Group Discussion #1

Question ?: [*Actual or Best Estimate]

 Hospital PPH Rates?
  - TOTAL = Early [< 24 hours] + Late [≥ 24 hours]
  - Early ONLY

 Does you Hospital have a plan to decrease PPH?
  - How? What are your Objectives? Are they Evidence-based?

Data Analysis: Resources

- Joint Commission (JCAHO)
- Agency for Healthcare Research and Quality (AHRQ)
- National Quality Forum (NQF)
- National Perinatal Information Center (NIPC)
- MD Hospital Quality Indicator Project
- Institute of Medicine (IOM)
  - Adverse Outcome Index (AOI)
  - Weighted Adverse Outcome Score (WAOS)
  - Severity Index
- Patient Safety First: BEACON Collaborative

The Joint Commission

 Perinatal Core Measures

*General ORYX requirements for hospitals*

Hospitals are required to collect and transmit data to The Joint Commission for a minimum of four core measure sets or a combination of applicable core measure sets and non-core measures.

Agency for Healthcare Research & Quality

- US Department of Health & Human Services: AHRQ
- National Quality Measures Clearinghouse
  - The National Quality Measures Clearinghouse (NQMC™), sponsored by AHRQ, U.S. Department of HHS, has included Joint Commission measures in its public database for evidence-based quality measures and measure sets. NQMC is sponsored by AHRQ to promote widespread access to quality measures by the healthcare community and other interested individuals.

- The Hospital Quality Alliance
  - The AHA, FAH, and AAMC have launched a national voluntary initiative to collect and report hospital quality performance information. This effort is intended to make critical information about hospital performance accessible to the public and to inform and invigorate efforts to improve quality.
    - The Joint Commission, NQF, CMS, AHRQ and others support this initiative
    - Currently over 30 measures are reported on Hospital Compare including the ten “starter set” measures, and additional measures on which hospitals also voluntarily report. The measures reflect recommended treatments for acute myocardial infarction, heart failure, pneumonia, surgical care, asthma care for children, and the patient’s perspective of hospital care.
National Quality Forum
#0474: Elective Delivery
National Perinatal Information Center/Quality Analytic Services (NPIC/QAS) is a non-profit organization which began in 1985 with a charter membership of major perinatal centers across the United States. Since that time it has become recognized as an invaluable information and research resource to the health care community. NPIC/QAS has expertise in the analysis of large data sets, development of comparative benchmarking quality and utilization reports and evaluation of direct service programs.

MOD: March of Dimes
Toward Improving the Outcome of Pregnancy III (TIOP III): Enhancing Perinatal Health Through Quality, Safety & Performance Initiatives
http://www.npic.org/MOD_TIOPIII_FinalManuscript.pdf
Over 40 Organizations & Experts Collaborated
156 page Document
Chapter 7: Quality Improvement Opportunities in Intrapartum Care

Institute of Medicine: IOM

BEACON/Perinatal Safety First Collaborative
Perinatal Safety First Goals:
Elective Deliveries: 0%-None
Birth Trauma: < 5%

Group Discussion #2
Question ?: [*Actual or Best Estimate]
❖ What are YOUR Hospital’s Perinatal Benchmarks relative to OVD & Birth Trauma Rates
   o TOTAL: Birth Trauma Related to OVD
   o TOTAL: OVD Rate
      o TOTAL = Vacuum & Forceps
      o Vacuum ONLY
      o Forceps ONLY
❖ What resources did YOUR Hospital use to determine YOUR benchmark parameters?

Hemorrhagic Distress: Incidence
 Underdeveloped Nations
   ● 1 in 1,000 Deliveries
 United Kingdom
   ● 1: 100,000 Deliveries
 United States
   ● 1900- 700:100,000
   ● 2009-7-10:100,000
   □ 26-28% Increase over 10 years
Joint Commission:

Core Measures in Perinatal Care
1. PC-01: Elective Delivery
2. PC-02: Cesarean Delivery
3. PC-03: Antenatal Steroids
4. PC-04: Health care–associated bloodstream infections in newborns
5. PC-05: Exclusive breast milk feeding

Joint Commission: Sentinel Event Alert #30; 2004

Sentinel Event Alert

Issue 30 - July 21, 2004

Editor’s Note to Sentinel Event Alert Issue # 30

Please note that the Sentinel Event statistics have changed since the Sentinel Event Alert Issue #30 was drafted. As of December 31, 2005, there are a total of 109 cases of perinatal death or permanent disability that have been reported to the Joint Commission for review under the Sentinel Event Policy. Of those 109 cases, 93 resulted in infant death and 16 cases involved major permanent disability.

Preventing infant death and injury during delivery

While a healthy and safe birth for the mother and infant is the goal for all labor and delivery units—regardless of the level of services available—in some instances, what should be a joyous, celebratory event turns to tragedy when the newborn dies. The rate of perinatal mortality in the U.S. has steadily declined to a rate of 6.9 deaths per 1,000 live births in 2001. (1) Nevertheless, since 1996, a total of 47 cases of perinatal death or permanent disability have been reported to the Joint Commission for review under the Sentinel Event Policy. Cases considered reviewable under the Sentinel Event Policy are “any perinatal death or major permanent loss of function unrelated to a congenital condition in an infant having a birth weight greater than 2,500 grams.” Forty of the cases resulted in infant death and seven cases involved permanent disability. The mothers ranged in age from 13 to 41, with the average and median age being 27 years, and in just over one-half of the cases, it was the first child. The average gestation was 39 weeks.

While the absence of early and regular prenatal care is a leading contributor to the risk of infant death, review of the JCAHO’s 47 cases reveals that lack of prenatal care was an identified maternal risk factor in just 4 percent of cases. Other identified maternal risk factors included age (13 percent), previous C-section (11 percent), diabetes (4 percent), and substance abuse (4 percent). Identified complications during the birth included: non-reassuring fetal status (77 percent), placental abruption (8 percent), ruptured uterus (8 percent), and breech presentation (6 percent). Forty-nine percent of the cases were emergency C-section; 46 percent vaginal deliveries; and 4 percent delays in C-section decision. Of the vaginal deliveries, 21 percent were vacuum extraction delivery or attempted; 13 percent mid forceps delivery or attempted; 11 percent failure to do indicated C-section; and 8 percent vaginal birth after C-section (VBAC).

Root causes identified

In the 47 cases studied, communication issues topped the list of identified root causes (72 percent), with more than one-half of the organizations (55 percent) citing organization culture as a barrier to effective communication and teamwork, i.e., hierarchy and intimidation, failure to function as a team, and failure to follow the chain-of-communication. Other identified root causes include: staff competency (47 percent), orientation and training process (40 percent), inadequate fetal monitoring (34 percent), unavailable monitoring equipment and/or drugs (30 percent), credentialing/privileging/supervision issues for physicians and nurse midwives (30 percent), staffing issues (25 percent), physician unavailable or delayed (19 percent), and unavailability of prenatal information (11 percent).
Risk reduction strategies

As required under the Sentinel Event Policy, based on their root cause analyses, organizations develop an action plan citing the steps they will take to reduce the risk of similar future adverse events. The risk reduction strategies identified by these organizations include:

- Revise orientation and training process (70 percent)
- Physician education and counseling (36 percent)
- Revise communication protocols (36 percent)
- Reinforce chain-of-communication policy (28 percent)
- Revise competency assessment (25 percent)
- Standardize equipment and drug availability (25 percent)
- Conduct team training (25 percent)
- Revise consultation and on-call policies and procedures (23 percent)
- Revise Medical Staff credentialing and privileging process (21 percent)
- Institute changes in the patient assessment policy (21 percent)
- Standardize the evaluation and monitoring process (21 percent)
- Revise the staffing plan and process (17 percent)
- Adopt American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists (ACOG) guidelines for perinatal care (3) (13 percent)
- Institute mock OB emergency training drills (11 percent)
- Revise the conflict resolution policy (8 percent)
- Revise transfer policies and procedures (4 percent)

AHRQ: Instrumental Vaginal Birth


National Quality Forum

The NQF has approved a set of national voluntary consensus standards for measuring the quality of hospital care. These measures will permit consumers, providers, purchasers, and quality improvement professionals to evaluate and compare the quality of care in general acute care hospitals across the nation using a standard set of measures. The majority of the Joint Commission’s measures are endorsed by NQF and are denoted on the measure information forms.

- [http://www.qualityforum.org/Measures_List.aspx](http://www.qualityforum.org/Measures_List.aspx)

Perinatal Safety First Goals:

Elective Deliveries: 0%-None

Birth Trauma: < 5%

PPH:

**Indicators- Markers-Triggers:***

- Blood Transfusion Prior to Discharge: C/S or SVD
- ABL > 1000cc regardless of mode of Delivery
- > 15% Alteration in Vital Signs + Active Bleeding
- High Risk Status
POP QUIZ ?:
- Define Pulse Pressure?
- Normal Range?

Near-Miss Model
Definition
An Incident or unsafe condition with potential for injury or harm
More Frequent
Smaller in Size

Frequency Triangle

Near-Miss Model Definition
PPH:
- Blood Transfusion
- ABL > 1000cc
- No Active Management of Third Stage
- High Risk Status

Near-Miss Model
Layers of Safety:
Patient Protection/Armor
OB Excellence: OVD-DATA ANALYSIS

PPH Rates:
- TOTALs [All]:
  - Early [< 24 Hrs]
    - *NEAR-MISS DATA [Early Mgmt]
  - Late [≥ 24 Hrs]
    - *NEAR-MISS DATA [Prior to or Readmit]
  - Oxytocin Induced
    - *NEAR-MISS DATA [High/Fast Titration]
  - MgSO4 Induced
    - *NEAR-MISS DATA [Non-Neuro-protection Rx]
  - Multiple Medication Induced: (Pit + MgSO4)
    - *NEAR-MISS DATA
  - Prolonged Indx: > 12-24 [after 4cm, Primip vs Multip]
    - *NEAR-MISS DATA
  - Active Management of Third Stage Rate
    - *NEAR-MISS DATA [Absence of all 3 maneuvers performed]
  - HIGH Risk Status
    - *NEAR-MISS DATA [Absence of #2 PIV & T&C/T&S]

Group Discussion #3
Question ?:
- What tools does your unit have immediately available for the management and treatment of PPH?
  - Specific Items?
  - PPH Tool Kit or Tool Box?

Critical Thinking: PQRSI
- What would you do if you were the primary bedside RN caring for this patient?
  - 39wk, G3P1101- SVD x 2
  - Induction: VBAC at Term: Pitocin at 18mU
  - EFW: 3650gms (3rd Trimester U/S)
  - Mild Molding
  - Epidural for Pain Control & Comfortable
  - Patient complains of constant low abdominal pain
  - EFM Strip: see sample
  - Cx: C/7-8C/+1 vertex-ROA
  - Vaginal Bleeding noted during Cx Exam
  - Vital Signs: BP-89/57, P-118, R-26
Goals in Obstetrics

Third Stage Active Management
1. Administration of Uterotonic Agents At Delivery of Shoulders or Placenta
2. Controlled Cord Traction
3. Uterine Message after Delivery of the Placenta X 15 minutes, as appropriate

Perinatal Care GOALS

PPH Rates: (VE + Forceps)

1. TOTAL:
   1. **Dependent on Patient Population Risk Status**
   2. **Level III ↑ Rate**
   3. **Level I ↓ Rate**

2. Early < 24 Hrs [> 1000cc ABL]
   1. *NEAR-MISS DATA*
   2. **Dependent on Patient Population**
   3. **Level III ↑ Rate**
   4. **Level I ↓ Rate**

3. Medication Induced [Pit & MgSO4]
   1. *NEAR-MISS DATA*
   2. **Dependent on Patient Population**
   3. **Level III ↑ Rate**
   4. **Level I ↓ Rate**

4. Absence of Active Third Stage Mgmt
   1. *NEAR-MISS DATA*
   2. All Hospitals: 0%-NONE

Group Discussion #4
Question ?:

- Do you perform multidisciplinary PPH Drills periodically at your facility?
- How frequently?
- Who participates?
- Simulation or Live Drills?
- Videotaped?
- Debriefing?
Perinatal University
Patient Safety Goals:
- Increase Patient Safety thru Evidence, Education, Reliability, & Hard-stop Approach:
  - 100% Reduction in Elective Procedures prior to 39 weeks
  - 100% Reduction in Birth Trauma Events, all types
  - Increased Vertical Birth
  - Low & Slow Medically Indicated Inductions
  - Increased Spontaneous Vaginal Birth Rates
  - Absence of PPH

Increase Patient Safety thru Evidence, Education, Reliability, & Hard-stop Approach:
- 100% Reduction in Birth Trauma Events, all types
- Utilize OVD Checklist Approach
- Increased Perinatal OVD Patient Safety

www.perinatalu.org

Questions?

NOTES: