Every Mother Initiative

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MATERNAL FETAL MEDICINE, UNIVERSITY OF UTAH
Postpartum Hemorrhage: Definition, Risk Factor Assessment, Prevention, Early Recognition and Response

ERIN A. S. CLARK, MD
MATERNAL FETAL MEDICINE, UNIVERSITY OF UTAH
OCTOBER 13, 2015
Disclosures

⊙ I have no conflicts of interest relevant to this presentation

⊙ I receive research support from AirStrip for a study evaluating the feasibility of at-home NSTs
Disclosures

- I was on call last night and delivered 15 babies
- I slept zero
- I accidently brewed decaffeinated coffee this morning 😞
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Objectives

Discuss how PPH definition, risk factor assessment, prevention, early recognition and response can be integrated into the healthcare system.
So...we have these tools. What do we do with them??
November 24

- Systems Level Readiness: Medical and surgical management including uterotonic medications and procedures (intrauterine balloon, uterine compression suture)
January 12

- Systems Level Readiness:
  OB Rapid Response Teams and Algorithms
UNIVERSAL OB MATHMATICAL CONSTANT
UNIVERSAL OB MATHMATICAL CONSTANT

240 =
UNIVERSAL OB MATHMATICAL CONSTANT*

240 =

FETAL HR + MD HR

*M. Varner, MD
Obstetrician/Mathematician
Choosing a PPH Definition

- Primary hemorrhage: Occurs within the first 24 hours of delivery
- In the U.S., it is classically defined by volume of blood loss
  - EBL >500 mL after vaginal birth
  - EBL >1000 mL after cesarean delivery
- Revised definition of >1000 mL after any delivery
  - “Active bleeding >1000 mL within the 24 hours following birth that continues despite the use of initial measures including first-line uterotonic agents and uterine massage.”

Choosing a Definition

- Revised definition of >1000 mL after any delivery
  - Consistent for all deliveries
  - Identifies women at high risk of adverse clinical outcomes
  - However, need protocol-driven earlier threshold to begin treatment
Choosing a Definition

- UUHSC has retained the ‘classic definition’
  - Ongoing quality improvement and safety initiative (comparing apples to apples)
  - Care algorithm is based on this definition
  - Concern regarding delayed treatment if we changed the definition

- From a hospital perspective, definition consistency is critical to implementing education and clinical protocols
- From a state perspective, definition consistency will be important for prospective assessment of trends and for comparisons
Choosing a Definition

- Can we reach consensus?
- Do we need to reach consensus?
Risk Factor Assessment

- Risk factors derived from the California Maternal Quality Care Collaborative [http://www.cmqcc.org](http://www.cmqcc.org)
- Evidence-based
- Expert consensus
- Modifiable for each institution / hospital
  - We made minor modifications for UUHSC after multi-disciplinary committee review
Obstetric Hemorrhage Care Guidelines

All patients are active participants in their care. Patients should be informed of any risk factors they may have or develop for PPH and advised of recommendations for their care. These recommendations may be individualized to reflect the patient’s decisions.

Prenatal Assessment Planning
Identify and prepare for patients with special considerations: placenta previa/accreta, bleeding disorders or those who decline blood products (and have risk factors).

<table>
<thead>
<tr>
<th>Low Risk</th>
<th>Medium Risk – Red Dot</th>
<th>High Risk – Red Dot</th>
</tr>
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<tbody>
<tr>
<td>No previous uterine incision</td>
<td>TOLAC</td>
<td>Placenta previa</td>
</tr>
<tr>
<td>Singleton pregnancy</td>
<td>Multiple gestation</td>
<td>Suspected placenta accreta or percreta</td>
</tr>
<tr>
<td>&lt;4 previous births</td>
<td>≥ 4 previous births</td>
<td>Hematocrit &lt; 30 AND other risk factors</td>
</tr>
<tr>
<td>No known bleeding disorder</td>
<td>History of previous PPH</td>
<td>Platelets &lt; 20,000</td>
</tr>
<tr>
<td>No history of PPH</td>
<td>Large uterine fibroids</td>
<td>Known coagulopathy – draw/send appropriate lab tests as specifically ordered for this patient</td>
</tr>
<tr>
<td>Polyhydramnios</td>
<td>Estimated fetal weight &gt; 4 kg</td>
<td></td>
</tr>
<tr>
<td>Morbid obesity (BMI &gt; 35)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Admission Hemorrhage Risk Factor Evaluation

Admission Assessment & Planning
Type and Screen all patients on admission
Evaluate for risk factors on admission
- It is strongly recommended that all women who meet criteria for medium/high risk have IV access
- If high risk, T&Cs for 2 units PRBC’s & keep ahead 2; keep these units available for 24 hours post delivery
- Identify women who may decline transfusion and counsel and consent
If the patient has moderate/high risk for PPH:
- Review OB Hemorrhage Guideline

Ongoing Risk Assessment
Evaluate for development of additional risk factors in labor:
- Prolonged 2nd stage labor (4 hours, including time for “rest and descend”)
- Any oxytocin use
- Sustained antepartum bleeding
- Chorioamnionitis

Risk Factors in this column are considered medium risk and need to be added to admission risk factors
Treat 2 or more risk factors as “high risk”

Stage 0: All Births – Prevention & Recognition of OB Hemorrhage

- Active management of the third stage of labor
- Administer all IV Pitocin per postpartum Pitocin guideline or give 10 U Pitocin IM
- After initial EBL for delivery is determined all subsequent blood loss will be quantified (weighed) for 24 hrs and documented in I&O
- Ongoing evaluation of vital signs per guideline/orders
- Empty bladder; patients who have received an epidural/spinal are cathed (straight or Foley) prior to transfer to postpartum
- If patients fundus is not firm but EBL <500:
  1. Vigorous crede for at least 15 seconds
  2. Empty her bladder
  3. Consider Methergine (notify the OB Resident/Provider if this is given)
Comprehensive Education Prior to Implementation

- Multi-disciplinary committee review and revision...and revision...and revision...and revision
- CONSENSUS
- Labor and delivery staff education
- Nursing education
- Physician education (from multiple practice groups)
- CNM education
- Resident education (ob/gyn and off-service)
Comprehensive Education Prior to Implementation

- Iterative process:
  - Educate...revise...educate...revise...educate...
  - Educate...educate...educate...educate...educate...
Make Care Guideline Easily Accessible

- Distribute during educational sessions
  - Provide paper and electronic copies
- Post on the unit near work stations and ‘the board’
  - Post in bathrooms, break rooms
- Display in common areas (posters)
- Put documents into the EMR, if possible
Make Care Guideline Easily Accessible
Links to OB risk assessment are integrated into EMR navigators for nurses and providers.

No EMR?
Find ways to integrate the assessment into work flow... Forms, checklists.
### Initial Nursing Assessment

#### EMR Or Checklist

---

© 2015 Epic Systems Corporation. Used with permission.
Membrane Status: SROM
Rupture Date: 10/06/15
Rupture Time: 1330
Fluid Color: (!) Meconium

Dilation: 10
Effacement (%): 100
Station: +1

Baseline FHR: 120 per minute
Fetal heart variability: moderate
Fetal heart rate accelerations: **present**
Fetal heart rate decelerations: variable
Uterine contractions: regular, every 2 minutes

### OB Risk Assessment

<table>
<thead>
<tr>
<th>OB Maternal Risk Factors</th>
<th>OB Anesthesia Risk Factors</th>
<th>PPH Risk Factors</th>
<th>PPH Risk Evaluation</th>
<th>Overall OB Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Greater than or equal to 4 previous vaginal births</td>
<td>Medium Risk</td>
<td>Maternal Risk</td>
</tr>
</tbody>
</table>
DISPLAY RISK ASSESSMENT FOR EASY REFERENCE:
Grease board - electronic and ‘old school’
Summary reports or chart flags

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Risk Factor Assessment

- What strategies have you used?
- What creative strategies can you brainstorm?
Prevention, Early Recognition and Response

- Algorithm derived from the California Maternal Quality Care Collaborative [http://www.cmqcc.org](http://www.cmqcc.org)
- Evidence-based
- Expert consensus
- Modifiable for each institution / hospital
  - We made minor modifications for UUHSC after multi-disciplinary committee review
# Obstetric Hemorrhage Care Guidelines

All patients are active participants in their care. Patients should be informed of any risk factors they may have or develop for PPH and advised of recommendations for their care. These recommendations may be individualized to reflect the patient’s decisions.

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## Admission Hemorrhage Risk Factor Evaluation

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- Singleton pregnancy  
- <4 previous births  
- No known bleeding disorder  
- No history of PPH | - TOLAC  
- Multiple gestation  
- ≥4 previous births  
- History of previous PPH  
- Large uterine fibroids  
- Polyhydramnios  
- Estimated fetal weight > 4 kg  
- Morbid obesity (BMI > 35) | - Placenta previa  
- Suspected placenta accreta or percreta  
- Hemoglobin < 30 AND other risk factors  
- Platelets < 20,000  
- Known coagulopathy – draw/send appropriate lab tests as specifically ordered for this patient |

## Admission Assessment & Planning

- Type and Screen all patients on admission

## Ongoing Risk Assessment

- Evaluate for development of additional risk factors in labor:
  - Prolonged 2nd stage labor (4 hours, including time for “rest and descend”)
  - Any oxytocin use
  - Sustained antepartum bleeding
  - Chorioamnionitis

Risk Factors in this column are considered medium risk and need to be added to admission risk factors

### Treat 2 or more risk factors as “high risk”

## Stage 0: All Births – Prevention & Recognition of OB Hemorrhage

- Active management of the third stage of labor
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- Ongoing evaluation of vital signs per guideline/orders
- Empty bladder; patients who have received an epidural/spinal are cathed (straight or Foley) prior to transfer to postpartum
- If patients fundus is not firm but EBL <500:
  1. Vigorous crede for at least 15 seconds
  2. Empty her bladder
  3. Consider Methergine (notify the OB Resident/Provider if this is given)
Stage 1: OB Hemorrhage: Meet one or more of the following criteria

1. Cumulative Blood Loss > 500 ml vaginal birth or > 1000 ml C/S  
   AND/OR  
2. Sustained Active Bleeding

**MOBILIZE**

- L & D - Initiate OB Rapid Response: Stage 1 PPH*
- If in the OR – just page the CN to make her aware
- Postpartum (MNBC or WSC units) – Initiate OB Rapid Response: Stage 1 PPH*
  
  *Call 1-2222 or use Smartweb Team to go immediately to the bedside to evaluate the patient

**ACT**

- Primary nurse / L&D Rapid Response team
  - Tasks are designated on OB Rapid Response grid including:
    - Constant crede until uterine tone improves
    - IV resuscitation
    - Administer uterotonics as ordered
    - Vital Signs q 45 minutes
    - Empty bladder
    - Oxygen to maintain Sat≥95
    - Keep patient warm
- Charge Nurse:
  - Initiate the Hemorrhage/Massive Hemorrhage Care set
  - Order T&C 2 Units PRBC’s/keep ahead 2 if not already done
- Physician or Midwife:
  - Initiate treatment for atony-sequentially advance through appropriate uterotonics
  - Rule out retained products of conception
  - Laceration
  - Hematoma
- Surgeon:
  - Inspect for uncontrolled bleeding at all levels, esp. broad ligament, posterior uterus and retained placenta

**THINK** (differential diagnosis)

- Consider potential etiology
  - Uterine atony
  - Trauma/aceration
  - Retained placenta
  - Amniotic fluid embolism
  - Coagulopathy
  - Placenta accreta
  - Uterine rupture

Patient should respond to these interventions within 10 minutes. If not, or if other procedures (uterine tamponade/banjo curette) are needed, move on to the Stage 2 response. If the patient is on Postpartum Unit, she needs to be transferred to L&D immediately.

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**UTEROTONIC AGENTS for POSTPARTUM HEMORRHAGE**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Administration Priority</th>
<th>Dose</th>
<th>Route</th>
<th>Frequency</th>
<th>Contraindications</th>
<th>Possible Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pitocin</td>
<td></td>
<td>30 units 500 ml</td>
<td>IV</td>
<td>Per Guideline</td>
<td>Hypersensitivity to the drug</td>
<td>Usually none; potentially hypotension, nausea, vomiting, hyponatremia with prolonged IV administration</td>
</tr>
<tr>
<td>Metherine</td>
<td></td>
<td>0.2 mg</td>
<td>IM</td>
<td>Q 2-4 hours</td>
<td>Hypertension</td>
<td>Severe hypertension, nausea, vomiting</td>
</tr>
<tr>
<td>Hemabate</td>
<td></td>
<td>250 mcg</td>
<td>IM</td>
<td>Q 15 minutes for 8 doses/24 hours</td>
<td>Asthma/bronchospasm</td>
<td>Bronchospasm, diarrhea, nausea, vomiting, fever/chills</td>
</tr>
<tr>
<td>Cytotec</td>
<td></td>
<td>800 mcg</td>
<td>PR</td>
<td>One dose</td>
<td>Hypersensitivity to the drug</td>
<td>Diarrhea, nausea, vomiting, fever/chills</td>
</tr>
</tbody>
</table>
## Stage 2: OB Hemorrhage

Meet Stage 1 criteria with continued sustained active bleeding not responding to interventions within 10 minutes with < 1500 mL cumulative blood loss.

<table>
<thead>
<tr>
<th>MOBILIZE</th>
<th>ACT</th>
<th>THINK (differential diagnosis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L &amp; D</td>
<td>Primary nurse/L&amp;D Rapid Response Team</td>
<td>Sequentially advance through procedures and other interventions based on etiology</td>
</tr>
<tr>
<td>Send out the OB Rapid Response Stage 2 PPH (come now) page</td>
<td>Call the Blood Bank and notify them of the need for emergency blood products as directed</td>
<td>Vaginal Birth:</td>
</tr>
<tr>
<td>This alerts the whole team to respond</td>
<td>Tasks/responsibilities as designated on the OB Rapid Response grid</td>
<td>- Evaluate for uterine atony:</td>
</tr>
<tr>
<td>Recommend that the patient is moved to the OR at this time.</td>
<td>- Call the Blood Bank and notify them of the need for emergency blood products as directed</td>
<td>- Continue with uterotonics</td>
</tr>
<tr>
<td>If the patient is on a postpartum unit and has progressed to a Stage 2 PPH she is transferred immediately to L&amp;D</td>
<td>- Tasks/responsibilities as designated on the OB Rapid Response grid</td>
<td>- Uterine tamponade balloon</td>
</tr>
<tr>
<td>Notify L&amp;D of transfer</td>
<td></td>
<td>- Consider surgical interventions</td>
</tr>
</tbody>
</table>

If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify

---

**Once Stabilized:** modified postpartum management with increased surveillance

If cumulative blood loss > 1500 mL, >2 units of PRBC’s given, hemodynamically unstable or suspicion for DIC: Proceed to Stage 3

**Cesarean Section:**
- Continue with uterotonics
- B-Lynch
- O’Leary
- Uterine tamponade balloon

**Evaluate for lacerations:**
- Visualize and repair

**Evaluate for retained products of conception:**
- Manual removal
- D&C

**Evaluate for uterine inversion:**
- General anesthesia or Nitroglycerine for uterine relaxation for manual reduction

**If Amniotic Fluid Embolism (AFE):**
- Maximally aggressive respiratory, vasopressor and blood product support
### Stage 3: OB Hemorrhage

Cumulative blood loss > 1500 mL, need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC

<table>
<thead>
<tr>
<th>MOBILIZE</th>
<th>ACT</th>
<th>THINK (differential diagnosis)</th>
</tr>
</thead>
</table>
| Patient must be moved to the OR at this time if she is not already there | Primary nurse/L&D Rapid Response Team:  
  - Tasks/responsibilities as designated on OB Rapid Response grid  
  - Primary nurse or designee:  
    - Obtain/send ABG’s and labs as ordered | • Prevention of hypothermia, acidemia  
  - Conservative or definitive surgery:  
    - B-Lynch  
    - O’Leary  
    - Hysterectomy  
  - Transfuse blood products as needed  
  - Unresponsive coagulopathy  
  - Consider off-label use of factor rVIIa for severe PPH refractory to treatment |

If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify

Once stabilized:  
- Consider ICU transfer (notify the House Supervisor)  
- Vigilant postpartum management with increased surveillance

### Blood Products

<table>
<thead>
<tr>
<th>Blood Product</th>
<th>Details</th>
<th>Effect</th>
</tr>
</thead>
</table>
| Packed Red Blood Cells (PRBC): | Approximately 60-90 minutes to complete  
  - Type & Screen: approximately 60-90 minutes to complete  
  - Type & Cross: approximately 30 minutes to convert T&S to cross matched blood | 1 unit typically increases to Hct by 3 % |
| If you cannot wait the 30 minutes for cross matched blood you may receive:  
  - O negative  
  - Type specific blood but not crossmatched |  |
| Fresh Frozen Plasma (FFP): | Approximately 30 minutes to thaw | 1 unit typically 180 ml and typically increased Fibrinogen by 10mg/dL |
| Platelets: | Approximately 15 minutes to thaw | Provides a transient 40-50 K increase in platelet count |
| Cryoprecipitate (Cryo): | Approximately 30 minutes to thaw | 10 pack typically raises Fibrinogen 80-100 mg/dL |
| Factor rVIIa | 1. Dose is 90 mcg/kg, infused over 3-5mins  
  2. Second dose 90 mcg/kg can be considered if there is no response in 20-30mins. | Do not use rFVIIa to compensate for an inadequate transfusion therapy - aim for PLTs> 50, INR<1.5 and fibrinogen >1g/l and correct acidosis, hypocalcemia and hypothermia before using rFVIIa. |
Prevention, Early Recognition and Response

- Do you have an algorithm?
- What does it look like? (Where do you find it?)
- What should it look like?
# Documentation of PPH

## Complications

Clinical chorioamnionitis? (maternal fever ≥ or = 38 degrees C (100.4 F) and at least one additional finding: maternal tachycardia, fetal tachycardia, uterine tenderness, foul/purulent amniotic fluid, maternal leukocytosis)

- **Yes**
- **No**

<table>
<thead>
<tr>
<th>Complication</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Abnormal Labor - Prolonged Latent Stage</td>
</tr>
<tr>
<td>Anesthetic Complications</td>
<td>Abnormal Labor - Prolonged First Stage</td>
</tr>
<tr>
<td>Dysfunctional Labor</td>
<td>Abnormal Labor - Prolonged Second Stage</td>
</tr>
<tr>
<td>Seizures During Labor</td>
<td>Postpartum Hemorrhage</td>
</tr>
<tr>
<td>Placental Abruption</td>
<td>Retained Placenta without Hemorrhage</td>
</tr>
<tr>
<td>Shoulder Dystocia</td>
<td>Unsuccessful TOLAC</td>
</tr>
<tr>
<td>Chorioamnionitis</td>
<td>Abnormal or nonreassuring FHR tracing leading to delivery</td>
</tr>
<tr>
<td>Placenta Accreta Spectrum</td>
<td>Suspected Cephalopelvic Disproportion</td>
</tr>
<tr>
<td>Hematoma</td>
<td>Unsuccessful Forceps Attempt</td>
</tr>
<tr>
<td>Malpresentation</td>
<td>Unsuccessful Vacuum Attempt</td>
</tr>
<tr>
<td>Cord Prolapse</td>
<td>Urinary Tract Injury</td>
</tr>
<tr>
<td>Malpresentation</td>
<td>Abnormal Labor - Arrest in First Stage</td>
</tr>
<tr>
<td>Postpartum Hemorrhage</td>
<td>Abnormal Labor - Arrest in Second Stage</td>
</tr>
</tbody>
</table>

**Additional complications**

1

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PPH Associated with Delivery

Postpartum Hemorrhage Associated with Delivery

Postpartum hemorrhage classification:
- Third stage (associated with retained, trapped, or adherent placenta immediately after delivery)
- Immediate Postpartum (1st 24 hrs after delivery of the placenta)
- Coagulation Defect Associated with Hemorrhage (DIC)

Postpartum hemorrhage stage:
- Stage 1: Cumulative blood loss > 500 mL vaginal birth, > 1000 mL C/S. Responds to treatment within 10 minutes
- Stage 2: Meets Stage 1 criteria with continued sustained active bleeding < 1500mL. Did not respond to treatment within 10 minutes
- Stage 3: Cumulative blood loss > 1500 mL. Need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC

Third Stage Maneuvers:
- Manual extraction
- Curettage

Curettage type:
- Suction
- Banjo curette

Uterotonics:
- Pitocin
- Cytotec
- Homohalide
- Methergine

Add Brief Postpartum Hemorrhage Comment(s)
Add Detailed Postpartum Hemorrhage Comment(s)
PPH Associated with Delivery

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Immediate PPH - Etiology:
- Atony
- Genital Tract Laceration
- Retained Products of Conception

Atony maneuvers:
- Uterine massage
- B-Lynch Suture
- O'Leary Suture
- Intrauterine Balloon

Other atony maneuvers:

Uterotonics:
- Pitocin
- Cytotec
- Hemabate
- Methergine

Genital tract laceration comment:
- See laceration section for repair details

Retained products procedures:
- Manual extraction
- D&C

Uterotonics:
- Pitocin
- Cytotec
- Hemabate
- Methergine

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Add Brief Postpartum Hemorrhage Comment(s)
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### Postpartum Hemorrhage After Delivery

#### Postpartum Hemorrhage Classification
- **Immediate Postpartum Hemorrhage (1st 24 hours after delivery)**
- **Delayed Postpartum Hemorrhage (more than 24 hours after delivery)**
- **Coagulation Defect Associated with Hemorrhage (DIC)**

**Stage 1** - Cumulative blood loss > 500 mL vaginal birth, > 1000 mL C/S. Responds to treatment within 10 mins.

**Stage 2** - Meets Stage 1 criteria with continued sustained active bleeding < 1500mL. Did not respond to treatment within 10 minutes

**Stage 3** - Cumulative blood loss > 1500 mL, need for rapid administration of blood products, hemodynamically unstable or suspicion of DIC

#### Immediate Postpartum Hemorrhage (1st 24 hours after delivery)

**Etiology - Immediate PPH**

- **Atony**
  - Uterine massage
  - B-Lynch suture
  - O'Leary suture
  - Balloon

- **Uterotonics**
  - Pitocin
  - Cytotec
  - Hemabate
  - Methergine

- **Genital Tract Lacerations**

- **Retained Products Procedures**
  - Manual extraction
  - D&C

- **Uterotonics**
  - Pitocin
  - Cytotec
  - Hemabate
  - Methergine

**EBL Associated with Hemorrhage (mL)**

**Total EBL Since Delivery Including Hemorrhage Event (mL)**

**Postpartum Hemorrhage Narrative**

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Documentation of PPH Prevention: MD

Postpartum Hemorrhage Prevention
Risk stratification performed?
- Yes
- No

- No clinically significant bleeding at this time

*Active Management of the Third Stage of Labor*
- Pitocin started with the delivery of the baby
- Controlled cord traction
- Massage of the uterine fundus

*Prophylactic Medications Administered*
- Cytotec (see MAR for administration details)
- Methergine (see MAR for administration details)
- Hemabate (see MAR for administration details)

Needed clear delineation of PPH prevention versus treatment:
- Improved coding and capture
- Allowed tracking of PPH bundle components

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Documentation of PPH: RN

Our electronic note has clear sections for nurses and physicians to document WHAT THEY DO.

This works for PPH documentation, too.

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### Recorded Blood Loss After Vaginal Delivery

**Blood Loss Associated with Delivery**

<table>
<thead>
<tr>
<th>Vaginal delivery est. blood loss (mL):</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
</tr>
</tbody>
</table>

**Blood Loss Report**

**Mother’s Information**

**Start of Mother’s Information**

**IO Blood Loss**

<table>
<thead>
<tr>
<th>%Mom’s I/O Activity</th>
<th>Hospital Encounter</th>
</tr>
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<tbody>
<tr>
<td>Measured Blood Loss</td>
<td>357 mL</td>
</tr>
<tr>
<td>Estimated Blood Loss</td>
<td>200 mL</td>
</tr>
<tr>
<td>Total</td>
<td>557</td>
</tr>
</tbody>
</table>

### Recorded Blood Loss After Cesarean

**Blood Loss Associated with Delivery**

<table>
<thead>
<tr>
<th>Vaginal delivery est. blood loss (mL):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

**Blood Loss Report**

**Mother’s Information**

**Start of Mother’s Information**

**IO Blood Loss**

<table>
<thead>
<tr>
<th>%Mom’s I/O Activity</th>
<th>Hospital Encounter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured Blood Loss</td>
<td>65 mL</td>
</tr>
<tr>
<td>Estimated Blood Loss</td>
<td>30 mL</td>
</tr>
<tr>
<td>Estimated Blood Loss</td>
<td>673 mL</td>
</tr>
<tr>
<td>Total</td>
<td>758</td>
</tr>
</tbody>
</table>
Documentation of PPH

- How is your institution documenting PPH?
  - On L&D? On postpartum?

- Do you use forms or checklists?
Discussion