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/accrete, bleeding disorders or those who decline blood products (and have risk factors)

Admission Hemorrhage Risk Factor Evaluation

Low Risk	Medium Risk – "U" Dot **Treat 2 or more risk factors as "high risk"**	High Risk – "U" Dot
• No previous uterine incision • Singleton pregnancy • <4 previous births • No known bleeding disorder • No history of PPH	• Hct<30 • 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 • Platelets < 20,000 • Known coagulopathy – draw/send appropriate lab tests as specifically ordered for this patient

Admission Assessment & Planning		Ongoing Risk Assessment
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&C 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	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 giving the ordered Methergine/Hemabate (must notify the OB Resident 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	**ACT**	**THINK** (differential diagnosis)
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 If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify	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 uteronics as ordered - Vital Signs q5 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 uteronics • Rule out retained products of conception • Laceration • Hematoma Surgeon: • Inspect for uncontrolled bleeding at all levels, esp. broad ligament, posterior uterus and retained placenta	Consider potential etiology • Uterine atony • Trauma/laceration • 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.

UTEROTONIC AGENTS for POSTPARTUM HEMORRHAGE

Drug	*Administration Priority*	**Dose**	**Route**	**Frequency**	**Contraindications**	**Possible Side Effects**
Pitocin		30 units in 500 ml	IV	Per Guideline	Hypersensitivity to the drug	Usually none; potentially hypotension, nausea, vomiting, hyponatremia with prolonged IV administration
Methergine		0.2 mg	IM	Q 2-4 hours	Hypertension	Severe hypertension, nausea, vomiting
Hemabate		250 mcg	IM	Q 15 minutes for 8 doses/24 hours	Asthma/bronchospasm	Bronchospasm, diarrhea, nausea, vomiting, fever/chills
Cytotec		800 mcg	PR	One dose	Hypersensitivity to the drug	Diarrhea, nausea, vomiting, fever/chills

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>
<tr><th>MOBILIZE</th><th>ACT</th><th colspan="2">THINK (differential diagnosis)</th></tr>
<tr><td rowspan="3">L & D
Send out the OB Rapid Response Stage 2 PPH (come now) page
This alerts the whole team to respond

Recommend that the patient is moved to the OR at this time.

If the patient is on a postpartum unit and has progressed to a Stage 2 PPH she is transferred immediately to L&D
➢ Notify L&D of transfer

If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify</td><td rowspan="3">Primary nurse/L&D Rapid Response Team

• Call the Blood Bank and notify them of the need for emergency blood products as directed
• Tasks/responsibilities as designated on the OB Rapid Response grid</td><td colspan="2">Sequentially advance through procedures and other interventions based on etiology</td></tr>
<tr><td>Vaginal Birth:
Evaluate for uterine atony:
• Continue with uterotonics
• Uterine tamponade balloon
• Consider surgical interventions
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</td><td>Cesarean Section:
• Continue with uteronics
• B-Lynch
• O’Leary
• Uterine tamponade balloon</td></tr>
<tr><td colspan="2">If Amniotic Fluid Embolism (AFE):
Maximally aggressive respiratory, vasopressor and blood product support</td></tr>
<tr><td colspan="4">Once Stabilized: modified postpartum management with increased surveillance</td></tr>
<tr><td colspan="4">If cumulative blood loss > 1500 mL, >2 units of PRBC’s given, hemodynamically unstable or suspicion for DIC: Proceed to Stage 3</td></tr>
</table>

Stage 3: OB Hemorrhage

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

MOBILIZE	**ACT**	**THINK** (differential diagnosis)
Patient must be moved to the OR at this time if she is not already there If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify	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**

Once stabilized:

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

Blood Products

Packed Red Blood Cells (PRBC): • Type & Screen :approximately 60-90 minutes to complete • Type & Cross: approximately 30 minutes to covert T&S to cross matched blood • If you cannot wait the 30 minutes for cross matched blood you may receive: ➢ O negative ➢ Type specific blood but not crossmatched	1 unit typically increases to Hct by 3 %
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.**

Postpartum Unit Care

1. All patients are to have all blood loss quantified by weighing. These assessments are to be entered into the I&O section of the electronic medical record
2. Any patient who has been identified as being at risk for Postpartum Hemorrhage or has had a Postpartum Hemorrhage requires increase surveillance for 24H post delivery. This includes Q2 hour fundal/lochia checks.
3. If a patient's fundus is assessed to be not firm but EBL < 500 for a vaginal delivery or < 1000 for C/S the nurse should:
    - Vigorous crede
    - Have the patient empty her bladder
    - Consider giving the ordered Methergine/Hemabate (must notify the OB Resident if this is given*)

      If this is a CHC, UUHN, UFP, BCHC or private provider patient please notify them as well
4. Initiate a lactation consultation for any patient who is breastfeeding and had a PPH

Last updated: February 11, 2014