Peripartum Hemorrhage

Antenatal and intrapartum management for all patients:

Risk stratification: See table
- Risk factors should be assessed at 3 time points:
  - On admission
  - At complete dilation
  - At delivery

Active management of the third stage of labor:
- 20 IU oxytocin IV or 10 IU IM at delivery with controlled cord traction and suprapubic countertraction
  - For low-risk patients, cord traction with suprapubic countertraction may be deferred at provider discretion
- Fundal massage after placental delivery per unit protocol
  - **Table: Risk stratification**

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antenatal risk factors (present on admission)</strong></td>
<td>None</td>
<td>Prior cesarean delivery or uterine surgery</td>
<td>Placenta previa</td>
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<tr>
<td></td>
<td></td>
<td>Polyhydramnios</td>
<td>Suspected morbidly adherent placenta</td>
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<td></td>
<td></td>
<td>Parity &gt; 4</td>
<td>Platelets &lt; 70,000</td>
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<tr>
<td></td>
<td></td>
<td>History of prior PPH</td>
<td>Active clinically significant bleeding</td>
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<tr>
<td></td>
<td></td>
<td>Large myomas</td>
<td>Known maternal coagulopathy</td>
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<tr>
<td></td>
<td></td>
<td>EFW &gt; 4000 g</td>
<td>2 or more medium risk factors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BMI &gt; 40</td>
<td>Provider discretion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hct &lt; 30</td>
<td></td>
</tr>
<tr>
<td><strong>Intrapartum risk factors</strong></td>
<td>None</td>
<td>Chorioamnionitis</td>
<td>New clinically significant bleeding</td>
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<tr>
<td></td>
<td></td>
<td>Prolonged oxytocin exposure (&gt;24 hours)</td>
<td>2 or more medium risk factors (antenatal and/or intrapartum)</td>
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<tr>
<td></td>
<td></td>
<td>Prolonged 2nd stage (&gt;4 hours)</td>
<td>Provider discretion</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Magnesium sulfate exposure</td>
<td></td>
</tr>
<tr>
<td><strong>Labs</strong></td>
<td>T&amp;S</td>
<td>T&amp;S</td>
<td>T&amp;S</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Prepare pRBCs (2 units)</td>
</tr>
<tr>
<td><strong>Notify</strong></td>
<td>N/A</td>
<td>Charge RN</td>
<td>Charge RN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OB anesthesia team</td>
<td>OB anesthesia team</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Blood bank</td>
</tr>
</tbody>
</table>
**Staging:** Advance stage if meet criteria in any of 5 categories

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBL</td>
<td>&gt;500 mL for SVD</td>
<td>&gt;1000 mL for CS</td>
<td>&gt;1500 mL</td>
</tr>
<tr>
<td>VS</td>
<td>Changes not attributed to baseline, including:</td>
<td></td>
<td>Unstable VS despite resuscitation</td>
</tr>
<tr>
<td></td>
<td>HR&gt;110</td>
<td>BP&lt;90/60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>O2 sat &lt; 95%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medications</td>
<td>3 uterotonics given</td>
<td>≥ 4 uterotonics given</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td></td>
<td>Ongoing bleeding after 15 minutes</td>
<td></td>
</tr>
<tr>
<td>Transfusion</td>
<td>1-2 u pRBCs</td>
<td></td>
<td>≥ 3 PRBCs</td>
</tr>
</tbody>
</table>
Stage 1:
EBL > 500 mL (SVD), >1000mL (C/S)

OR vital sign changes OR 3 uterotonics given

Primary RN
- Call provider to bedside
- Notify charge RN to activate stage 1
- Administer meds & fluids
- VS q 5min.
- O2 PRN sat <95%
- Fundal massage
- Strict ins & outs

Charge RN
- Assign 2nd RN
- Retrieve PPH cart
- Notify: scrub, anesthesia, OB chief (if not OB service patient)
- FYI blood bank
- Assign runner for blood bank

Second RN
- Retrieve PPH med kit, IV Fluids, warm blankets
- Quantify EBL q5-10 minutes by weighing pads, laps or blankets
- Document

OB, FM, or CNM
- ID and treat per etiology
- I&O cath or place Foley
- Order T&C 2x units

OB Chief: Notify OB attending
Stage 2:
Ongoing bleeding after 15 minutes
OR > 3 uterotinics given
OR HR > 125, BP < 80/50

CONSIDER MOVE TO OR

Primary RN
- Notify Charge RN re: Stage 2
- Place 2nd IV & draw labs (CBC, BMP, coags PT/PTT, fibrinogen)
- Admin meds & IV fluids
- VS q5min
- O2 prn sat <95%
- Fundal massage
- Strict ins & outs

Charge RN
- Call OB (chief, attending) to bedside if not OB patient
- Call anes to bedside
- Update blood bank
- Notify VIRPRN

Second RN
- Retrieve meds & fluids
- Quantify EBL q5-10min
- Document

OB, FM, or CNM
- Continue to treat as per etiology
- Insert Foley with urimeter
- Consult with OB
- Transfer care to OB if moving to OR

Anes
- Assist with access & labs
- Order labs
- Order 2u pRBCs, 2u FFP
Stage 3:
EBL > 1500 mL
OR unstable VS despite resuscitation

MOVE TO OR

Primary RN
- Notify Charge RN re: Stage 3
- Complete Stage 2 checklist if bypassed
- Circulate in OR

Charge RN
- Complete Stage 2 checklist if bypassed
- Notify blood bank re: OB PPH Transfusion protocol
- Call MFM back up
- Send runner to blood bank to retrieve 4u pRBCs, 2u FFP, or at OB/anes discretion
- Notify house supervisor re: possible need for ICU bed
- Update family

Second RN
- Retrieve meds and fluids
- Quantify EBL q5-10min
- Document

OB, FM, or CNM
- Continue to treat as per etiology
- Insert Foley with urimeter
- Notify ICU bed commander re: possible bed need

Anes
- Assist with access & labs
- Order labs & products
- Re-dose antibiotics if C/S
- Invasive monitoring PRN
- Volume replace.
- Med admin.

Revised 1/17/17 LC/TSI
These algorithms are designed to assist the primary care provider in the clinical management of a variety of problems that occur during pregnancy. They should not be interpreted as a standard of care, but instead represent guidelines for management. Variation in practices should take into account
such factors as characteristics of the individual patient, health resources, and regional experience with diagnostic and therapeutic modalities.

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