### Stage 0

- **Risk assessment**
- **Active management of 3rd stage**
- **Prepare for every patient according to hemorrhage risk factors**
- **Measure quantitative cumulative blood loss for every birth**
- **Active Management of 3rd Stage**
  - IV infusion or 10u IM
- **Positive Antibody Screen**
  - (prenatal or current, exclude low level anti-D from RhoGam): T&C 2 U

### Stage 1

- **Triggers:** CBL ≥ 500mL vaginal / ≥ 1000 mL cesarean with continued bleeding or Signs of concealed hemorrhage: VS abnormal or trending (HR ≥ 110, BP ≤ 85/45, O2 sat < 95%, shock index 0.9) or Confusion

- **Activate hemorrhage protocol**
- **Rule out hemorrhage causes besides atony**
- **Activate OB hemorrhage protocol and checklist**
- **Notify charge nurse, OB/ CNM, anesthesiologist**
- **VS, O2 Sat q5 min**
- **Record quantitative cumulative blood loss q5-15 min**
- **Careful inspection with good exposure of vaginal walls, cervix, uterine cavity, placenta. If intra-op, inspect broad ligament, posterior uterus and placenta.**
- **IV Access: Minimum 18 gauge**
- **Increase IV fluid (LR) and oxytocin rate**
- **Fundal/bimanual massage**
  - MOVE ON to 2nd level uterotonic if no response (see Stage 2 meds below)
- **Empty bladder: Straight cath or Foley with urometer**
- **Convert to High Risk and take appropriate precautions**
  - Consider T&C 2 Units PRBCs where clinically appropriate if not already done

### Stage 2

- **Triggers:** Continued bleeding w/ CBL < 1500 mL or VS remain abnormal

- **Sequentially advance through medications and procedures**
- **Mobilize team and blood bank support**
- **Keep ahead with volume and blood products**
- **Determine source of bleeding including concealed hemorrhage**
- **OB to bedside**
- **MOBILIZE team:** 2nd OB, OB Rapid Response, assign roles
- **Continue VS & record cumulative quantitative blood loss q5-15 min**
- **Complete evaluation of vaginal wall, cervix, placenta, uterine cavity**
- **Send additional labs including DIC panel**
- **If in Postpartum: Move to L&D/OR**
- **Evaluate for special cases:**
  - Uterine inversion
  - Amniotic fluid embolism
- **2nd Level Uterotonic:**
  - Methylergonovine 0.2mg IM (if no HTN) or - Carboprost 250 mcg IM (if no asthma) or
    - *Only if hypertensive and asthmatic*
    - Misoprostol 800 mcg SL
- **2nd IV access** (minimum 18 gauge)
  - Bimanual/uterine massage
  - TXA 1 gram - may repeat in 30 min
- **Vaginal:**
  - (typical order)
    - Move to OR
    - Repair any tears
    - D&C: r/o retained placenta
    - Place intrauterine balloon
- **Intra-op Cesarean:** (typical order)
  - Inspect broad ligament, posterior uterus, and placenta
  - Uterine sutures
  - Place intrauterine balloon
  - Uterine artery ligation
- **Notify Blood Bank of OB hemorrhage**
- **Bring 2 Units PRBCs to bedside, consider use of Emergency Release products (un-crossmatched) and transfuse per clinical signs – do not wait for lab values**
- **Use blood warmer for transfusion**
- **Consider activating MTP if there is continued bleeding**

### Stage 3

- **Triggers:** Continued bleeding with CBL > 1500mL or 2 units PRBCs given or abnormal VS or Suspicions of DIC

- **Initiate Massive Transfusion Protocol**
- **Invasive surgical approaches**
- **Expand team**
  - Advanced GYN surgeon
  - 2nd anesthesia provider
  - OR staff
  - Adult intensivist
- **Repeat:** coags & ABGs
- **Central line**
- **Family support**
- **Selective embolization (IR)**
- **Laparotomy**
  - Uterine sutures
  - Uterine artery ligation
  - Hysterectomy
- **Patient support**
  - Warmer for IV fluids
  - Upper body warming device
  - SCDs
- **Activate Massive Transfusion Protocol**
- **Transfuse aggressively**
- **Near 1:1 PRBC:** FFP
- **1 PLT apheresis pack per 4-6 units PRBCs**

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This table was adapted from the Improving Health Care Response to Obstetric Hemorrhage: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2015; supported by Title V funds.