### Stage 0

- **Every woman in labor/giving birth**

  - **Assessments**
    - Assess every woman for risk factors for hemorrhage.
    - Measure cumulative quantitative blood loss on every birth.

  - **Active Management**
    - **3rd Stage:**
      - Oxytocin IV infusion or 10u IM.
      - Fundal Massage-vigorous, 15 seconds min.

  - **Blood Bank**
    - If Medium Risk: T & Scr.
    - If High Risk: T&C 2 U.
    - If Positive Antibody Screen (prenatal or current, exclude low level anti-D from RhoGam): T&C 2 U.

### Stage 1

- **Blood loss: > 500 ml vaginal or >1000 ml Cesarean, or VS changes (by >15% or HR ≥ 110, BP ≤ 85/45, O2 sat <95%)**

  - **Assessments**
    - Ob back to bedside (if not already there).
    - **Extra help:** 2nd OB, Rapid Response Team (per hospital), assign roles.
    - VS & cumulative blood loss q 5-10 min.
    - Weigh bloody materials.
    - 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
      - Amn. Fluid Embolism

  - **Meds/Procedures**
    - IV Access: at least 18gauge.
    - Increase IV fluid (LR) and Oxytocin rate, and repeat fundal massage.
    - Methergine 0.2mg IM (if not hypertensive).
    - May repeat if good response to first dose, BUT otherwise move on to 2nd level uterotonic drug (see below).
    - Empty bladder: straight cath or place Foley with urimeter.

  - **Blood Bank**
    - T&C 2 Units PRBCs (if not already done).

### Stage 2

- **Continued bleeding with total blood loss under 1500ml**

  - **Assessments**
    - OB back to bedside (if not already there).
    - **Extra help:** 2nd OB, Rapid Response Team (per hospital), assign roles.
    - VS & cumulative blood loss q 5-10 min.
    - Weigh bloody materials.
    - 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
      - Amn. Fluid Embolism

  - **Meds/Procedures**
    - 2nd Level Uterotonic Drugs:
      - Hemabate 250 mcg IM or Misoprostol 800 mcg SL.
    - 2nd IV Access (at least 18gauge).
    - Bimanual massage.
    - Vaginal Birth: (typical order)
      - Move to OR.
      - Repair any tears.
      - D&C: r/o retained placenta.
      - Place intrauterine balloon.
      - Selective Embolization (Interventional Radiology).
    - Cesarean Birth: (still intra-op) (typical order)
      - Inspect broad lig, posterior uterus and retained placenta.
      - B-Lynch Suture.
      - Place intrauterine balloon.

  - **Blood Bank**
    - Notify Blood Bank of OB Hemorrhage.
    - Bring 2 Units PRBCs to bedside, transfuse per clinical signs – do not wait for lab values.
    - Use blood warmer for transfusion.
    - Consider thawing 2 FFP (takes 35+min), use if transfusing > 2u PRBCs.
    - Determine availability of additional RBCs and other Coag products.

### Stage 3

- **Total blood loss over 1500ml, or >2 units PRBCs given or VS unstable or suspicion of DIC**

  - **Assessments**
    - Mobilize team
      - Advanced GYN surgeon.
      - 2nd Anesthesia Provider.
      - OR staff.
      - Adult Intensivist.
    - Repeat labs including coags and ABG’s.
    - Central line.
    - Social Worker / family support.

  - **Meds/Procedures**
    - Laparotomy:
      - B-Lynch Suture.
      - Uterine Artery Ligation.
      - Hysterectomy.
    - Patient support.
      - Fluid warmer.
      - Upper body warming device.
      - Sequential compression stockings.

  - **Blood Bank**
    - Transfuse Aggressively Massive Hemorrhage Pack
      - Near 1:1 PRBC:FFP.
      - 1 PLT apheresis pack per 4-6 units PRBCs.

  - **Unresponsive Coagulopathy**
    - After 8-10 units PRBCs and full coagulation factor replacement: may consult rFactor VIII risk/benefit.