

**PPH: Readiness. Recognition. Response.**

**Postpartum Hemorrhage (PPH) Basic Knowledge Review**

**Purpose:** Establish baseline knowledge regarding PPH for all health care staff who may care for birthing women

**When/how to use:** Use as part of initial orientation to hospital birthing service, and as annual review

**Who to use:** All health care staff who may care for birthing women

**Definition of Postpartum Hemorrhage (PPH) per the American College of Obstetricians**

* Definition of PPH is cumulative blood loss ≥1000 mL **or** bleeding associated with signs/symptoms of hypovolemia within 24 hours of the birth process regardless of delivery route
* Blood loss of greater than 500 mL in a vaginal delivery should be considered abnormal. Additional investigation is advised

**General Causes of PPH**

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| **Primary (1st 24 hours after birth)** | **Secondary (24 hours up to 12 weeks after birth)** |
| Uterine atony\* (most common) | Subinvolution of placental site |
| Lacerations | Retained products of conception |
| Retained or adherent placenta | Infection |
| Coagulation defects (acquired) | Coagulation defects (congenital) |
| Inversion of uterus |  |

**Strategies for recognition, prevention and mortality reduction**

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| **Readiness** | **Recognition/Response**  **Antenatal** | **Recognition/Response**  **Intrapartum** | **Response/Reporting**  **If PPH Occurs** |
| Prepare hemorrhage cart | Screen and treat anemia | Use active management of third stage of labor | Follow emergency algorithm. Refer to stages of PPH |
| Establish and train team | Perform risk assessment | Avoid routine episiotomy | Use checklists for clinical guidance and documentation |
| Develop institutional specific action checklist | Perform US for risk of invasive placenta | Avoid instrument deliveries especially forceps | Provide support to patients families, staff |
| Develop emergency plan to access blood products | If risk is medium, deliver in facility with blood supply available | Measure quantitative cumulative blood loss | Complete post-event huddle and debrief |
| Institute unit-based education and drills | If risk is high, consider transfer to higher level of care | Track vital signs | Identify systems issues via interprofessional team review |
| Review PPH overview, action tools and references annually |  | Intervene using algorithms and action tools as provided |  |

**Basic Management Strategies**

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| **Stage** | **Definition** | **Management** |
| **Stage 1** | QBL 500-999 ml after vaginal delivery  QBL >1000 ml after cesarean delivery  Normal VS and labs | Call for help. Determine and treat cause. Fundal massage. IV fluid. Drain bladder. Administer medications. Confirm access to blood |
| **Stage 2** | QBL up to 1500 ml **OR** administration of two or more uterotonics  Normal VS and labs | Call for additional help. Place 2nd IV. Draw stat labs. Continue stage one meds. Consider TXA. Obtain 2 units PRBCs. Thaw 2 units FFP. For atony, consider balloon or packing. Consider move to OR |
| **Stage 3** | Continued bleeding EBL > 1500 ml  **OR** 2 RBCs given **OR** risk for coagulopathy  **OR** abnormal VS, Labs or Oliguria | Mobilize more help. Move to OR. Announce clinical status (VS, QBL) every 5-10 minutes. Continue stage one meds. Consider TXA. Initiate massive transfusion protocol |
| **Stage 4** | Cardiovascular collapse (massive hemorrhage, profound hypovolemic shock, amniotic fluid embolism | Additional resources. ACLS. Aggressive massive transfusion. Immediate surgical intervention (hysterectomy) |



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