

RESPONSE:

OB HEMORRHAGE EMERGENCY MANAGEMENT

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WHAT WE HAVE COVERED...

- READINESS
 - *EVERY UNIT*

- RECOGNITION & PREVENTION
 - *EVERY PATIENT*

RESPONSE...

- EVERY HEMORRHAGE
 - UNIT-STANDARD, STAGE-BASED, OBSTETRIC HEMORRHAGE EMERGENCY MANAGEMENT PLAN WITH CHECKLISTS
 - SUPPORT PROGRAM FOR PATIENTS, FAMILIES, AND STAFF FOR ALL SIGNIFICANT HEMORRHAGES

HEMORRHAGE

CUMULATIVE BLOOD LOSS \geq 1,000 ML OR BLOOD LOSS ACCOMPANIED BY S&S OF HYPOVOLEMIA

- > 500 ML BLOOD LOSS IN A VAGINAL DELIVERY SHOULD PROMPT INVESTIGATION
- TACHYCARDIA & HYPOTENSION ARE LATE SIGNS OF BLOOD LOSS IN PREGNANT WOMEN
- PRIMARY HEMORRHAGE- EXCESSIVE BLEEDING THAT OCCURS WITHIN FIRST 24 HOURS AFTER DELIVERY
- SECONDARY HEMORRHAGE OCCURS >24 HOURS AFTER DELIVERY AND MAY OCCUR UP TO 12 WEEKS PP

ETIOLOGIES

- TONE
- TRAUMA
- TISSUE
- THROMBIN

Lacerations/episiotomies

Uterine rupture

Retained Placenta

Placenta Coagulation Defect, Percreta

MANAGEMENT

- STANDARDIZED, MULTIDISCIPLINARY & MULTIFACETED APPROACH
- GOAL: HEMODYNAMIC STABILITY WITH ID AND TREATMENT OF UNDERLYING ISSUE
- RESOURCES:
 - WWW.SAFEHEALTHCAREFOREVERYWOMAN.ORG/PATIENT-SAFETY-BUNDLES/OBSTETRIC-HEMORRHAGE/
 - [HTTPS://WWW.CMQCC.ORG/RESOURCES-TOOL-KITS/OB-HEMORRHAGE-TOOLKIT](https://www.cmqcc.org/resources-tool-kits/ob-hemorrhage-toolkit)

MANAGEMENT

- FACILITIES WITH LIMITED RESOURCES
 - RURAL HOSPITALS
 - NEED TO DEVELOP A COMPREHENSIVE PLAN FOR OB EMERGENCIES INCLUDING PPH
 - ASSESS FOR AVAILABLE RESOURCES
 - CONSIDER TRANSFERRING “AT RISK” PATIENTS TO HIGHER LEVEL OF CARE FACILITY

STAGE 0

ALL BIRTHS: PREVENTION & RECOGNITION OF OB HEMORRHAGE

- ACTIVE MANAGEMENT OF THIRD STAGE
 - OXYTOCIN
 - FUNDAL MASSAGE
- ONGOING QBL
- ONGOING EVALUATION OF VS
- IF:

CUMULATIVE BLOOD LOSS >500 ML VAGINAL OR >1000 ML C/S

OR

VS >15% CHANGE OR HR \geq 110, BP \leq 85/45, O₂ SAT <95%

OR

INCREASED BLEEDING DURING RECOVERY/POSTPARTUM

PROCEED TO STAGE 1

STAGE 1

CUMULATIVE BLOOD LOSS > 500 ML VAGINAL BIRTH OR >1000 ML FOR C/S
OR
VITAL SIGNS >15% OR HR \geq 110, BP \leq 85/45, O₂ SATS <95%
OR
INCREASED BLEEDING DURING RECOVERY OR POSTPARTUM

- NOTIFY CHARGE NURSE
- ACTIVATE OB HEMORRHAGE PLAN/PROTOCOL
- INCREASE IV FLUIDS
- VS WITH O₂ SATS
- CUMULATIVE QBL
- GIVE SECOND UTEROTONIC AGENT AS ORDERED BY MD/CNM

IF:

CONTINUED BLEEDING or
CONTINUED VS INSTABILITY, and
<1500 ML CUMULATIVE BLOOD
LOSS
PROCEED TO STAGE 2

MANUAL MASSAGE
EXPLORATION, HEMATOMA
REVISION, LOGY (4 T'S)
CONTROLLED BLEEDING
LIGAMENTS,
POSTERIOR UTERUS, RETAINED
PLACENTA

| Drug | Dose | Route | Dose Frequency | Side Effects | Contraindications | Storage |
|---|---|------------------------|---|--|---|---|
| Pitocin | 10-40 units/ 1000cc LR or NS | IV infusion | Continuous | Usually none N/V, H₂O intoxication | Hypersensitivity to drug | Room Temp |
| Methergine | 0.2 mg | IM | Q2-4hr | HTN, N/V, hypotension | HTN, Pre-eclampsia, heart disease Hypersensitivity to drug | Refrigerate Protect from light |
| Hemabate (PG F_{2α}) | 0.25mg | IM | Q15-90min Max = 8/24 hours | N/V, F/C, diarrhea | Active cardiac, renal, liver, asthma, HTN Hypersensitivity to drug | Refrigerate |
| Cytotec (Misoprostol) | 600-1000 mcg | PR | Single dose | Fever | Rare Known allergy to prostaglandin Hypersensitivity to drug | Room Temp |

Stage 2

CONTINUED BLEEDING OR VS INSTABILITY AND <1500 ML CUMULATIVE BLOOD LOSS

- INITIATE RESPONSE TEAM
- NOTIFY BLOOD BANK
 - ORDER PRODUCTS AS ORDERED BY MD
 - ASSIGN SINGLE PERSON TO COMMUNICATE WITH BLOOD BANK
- INITIATE OB HEMORRHAGE RECORD
- PLACE FOLEY WITH UROMETER
- ASSIST PRIMARY NURSE PRN
- ESTABLISH 2ND LARGE BORE IV
- MAINTAIN ADEQUATE FLUID VOLUME
- TITRATE OXYTOCIN INFUSION TO UTERINE TONE
- ASSESS & ANNOUNCE VS Q 5 MIN
- ANNOUNCE CUMULATIVE QBL Q 5-10 MIN
- SET UP BLOOD WARMER/ADMINISTRATION SET
- ADMINISTER BLOOD PRODUCTS, MEDICATIONS, DRAW LABS AS ORDERD
- KEEP PATIENT WARM
- ADDITIONAL UTEROTONIC AGENTS
- BIMANUAL UTERINE MASSAGE
- ORDER 2 UNITS PRBC
- ORDER STAT LABS (CBC/PLTS, CHEM 14, PT/PTT, FIBRINOGEN)
- TRANSFUSE PRBC BASED ON CLINICAL SIGNS (DO NOT WAIT FOR LAB RESULTS)
- THINK 4 T'S:
 - TONE
 - TRAUMA
 - TISSUE
 - THROMBIN

BLOOD BANK: DETERMINE AVAILABILITY OF THAWED PLASMA, FFP, AND PTLs
CONSIDER THAWING 2 FFP & USE IF TRANSFUSING >2 UNITS PRBCS; PREPARE FOR POSSIBLE MASSIVE HEMORRHAGE

STAGE 2

VAGINAL BIRTH

C-SECTION

- RE-EVALUATE BLEEDING and VS
- IF CUMULATIVE BLOOD LOSS >1500ML,
>2 UNITS PRBCS GIVEN,
- VS UNSTABLE or SUSPICION FOR DIC
- PROCEED TO STAGE 3

• TISSUE (RETAINED PLACENTA)

- D&C

• TISSUE (PLACENTA ACCRETA)

- TRY AND REMOVE
- POSSIBLE HYSTERECTOMY

STAGE 3

CUMULATIVE BLOOD LOSS \geq 1500ML, >2 UNITS PRBCS GIVEN, VS UNSTABLE OR SUSPICION FOR DIC

- **PRIMARY NURSE:**

- VS AND CUMULATIVE BLOOD LOSS Q 5-10 MIN
- APPLY UPPER BODY WARMING BLANKET
- USE FLUID WARMER FOR FLUIDS AND BLOOD PRODUCT ADMINISTRATION
- APPLY SCDS TO LOWER EXTREMITIES
- CIRCULATE THE OR

- **CHARGE NURSE:**

- CALL IN ADDITIONAL RESOURCES NOT PRESENT
- CONTINUE TO OB HEMORRHAGE RECORD OR ASSIGN TO ANOTHER

- **2ND NURSE:**

- ASSIST WITH ADMINISTRATION OF MEDS, BLOOD PRODUCTS, DRAW LABS

- **3RD NURSE:**

- RECORDER

- **OB PHYSICIAN:**

- ORDER/INITIATE MTP
- MOVE TO THE OR (IF NOT ALREADY THERE)
- ORDER REPEAT OF LABS Q30-60 MIN

- **ANESTHESIOLOGIST:**

- ABGS
- A-LINE
- CENTRAL LINE
- VASOPRESSOR SUPPORT
- INTUBATION

- **CONSIDER OPTIONS:**

- SELECTIVE EMBOLIZATION (IR)
- ETIOLOGY BASED INTERVENTIONS NOT YET COMPLETED
- PREVENT HYPOTHERMIA, ACIDEMIA
- CONSERVATIVE OR DEFINITIVE SURGERY:
 - UTERINE ARTERY LIGATION
 - HYSTERECTOMY

BLOOD BANK: PREPARE TO ISSUE ADDITIONAL BLOOD PRODUCTS PRN- STAY AHEAD

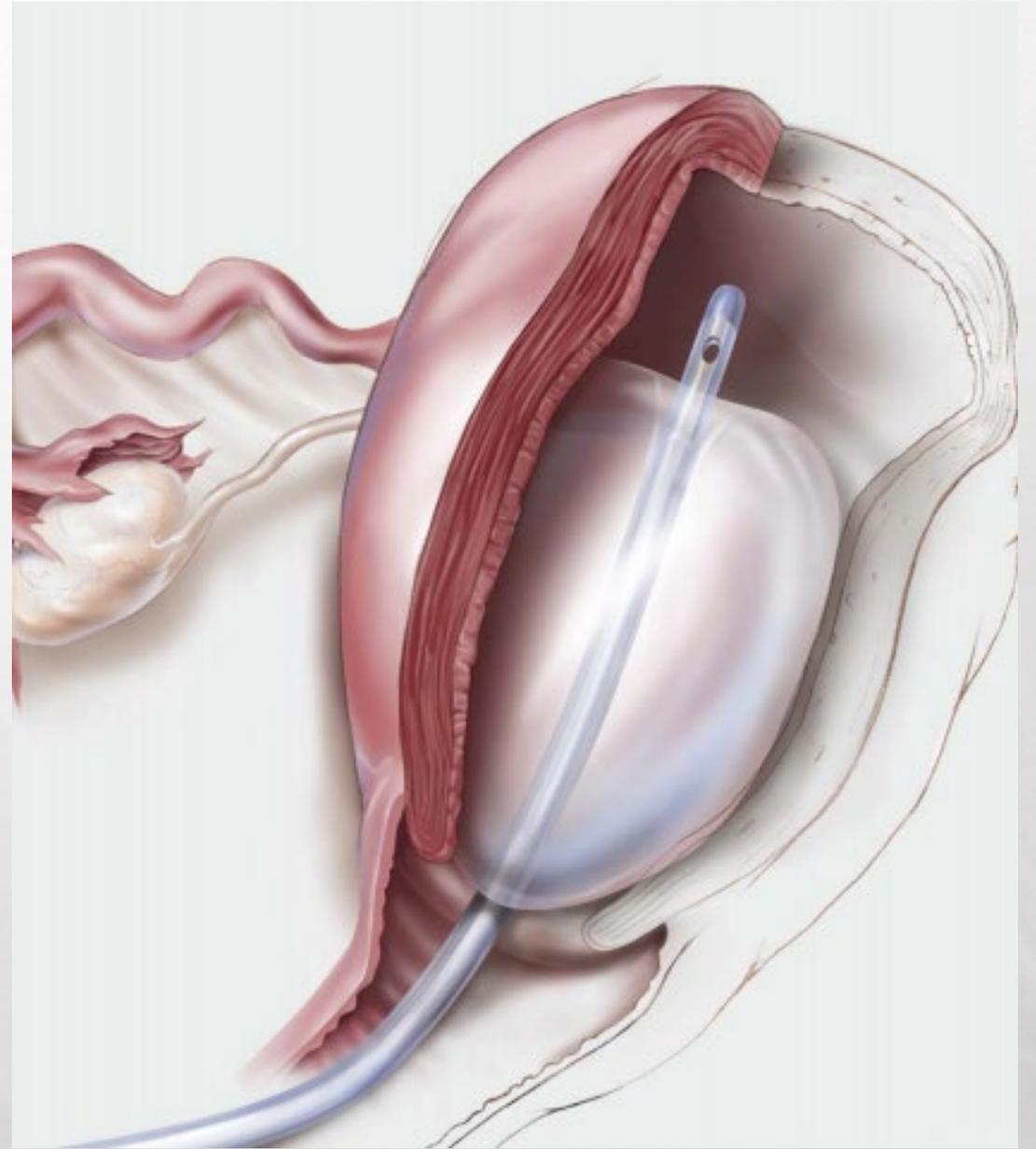
BLOOD PRODUCTS

- PRBCS
 - BEST FIRST LINE PRODUCT FOR BLOOD LOSS
 - TRANSFUSE O NEGATIVE BLOOD IN EMERGENCY
- FFP
 - GIVEN IN >2 UNITS PRBCS GIVEN OR PROLONGED PT/PTT
- PLTS
 - PRIORITY IF PLTS <50,000
- CRYO
 - PRIORITY IF FIBRINOGEN <80
 - BEST FOR DIC WITH LOW FIBRINOGEN AND NO NEED FOR VOLUME REPLACEMENT

OB HEMORRHAGE MANAGEMENT: MEDICAL & SURGICAL APPROACHES

MEDICAL MANAGEMENT

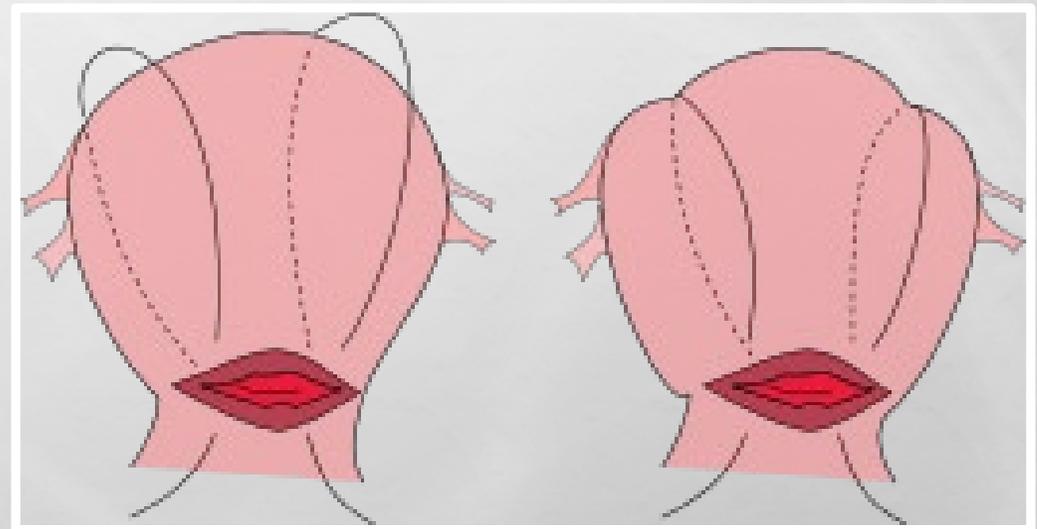
- UTEROTONIC AGENTS
- BIMANUAL UTERINE EXAM/
MASSAGE
- TAMPONADE TECHNIQUES
 - INTRAUTERINE
BALLOON TAMPONADES
 - FOLEY CATHETER
 - UTERINE PACKING
- UTERINE ARTERY
EMBOLIZATION



OB HEMORRHAGE MANAGEMENT: MEDICAL & SURGICAL APPROACHES

SURGICAL MANAGEMENT:

- D&C
- VASCULAR LIGATION
- UTERINE COMPRESSION SUTURES
- HYSTERECTOMY



OB HEMORRHAGE MANAGEMENT: MEDICAL & SURGICAL APPROACHES

OTHER:

- UNDIAGNOSED PLACENTA ACCRETA
- UTERINE RUPTURE
- INVERTED UTERUS
- SECONDARY HEMORRHAGE



RESOURCES:

- POSTPARTUM HEMORRHAGE. ACOG PRACTICE BULLETIN, NUMBER 183, OCTOBER 2017.
- [HTTPS://WWW.CPQCC.ORG/](https://www.cpqcc.org/)
- [HTTPS://SAFEHEALTHCAREFOREVERYWOMAN.ORG/PATIENT-SAFETY-BUNDLES/OBSTETRIC-HEMORRHAGE/](https://safehealthcareforeverywoman.org/patient-safety-bundles/obstetric-hemorrhage/)