

# GaPQC AIM Collaborative Obstetric Hemorrhage Bundle

## Readiness

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# Disclosure

The presenter reports no endorsements or financial relationships that would present a conflict of interest

# Objectives

- Identify the components of the hemorrhage cart/kit
- Articulate the risk factors for Hemorrhage
- Verbalize quantification of blood loss
- Explain the Massive Transfusion Protocol
- Discuss the process of Simulation Drills for Hemorrhage management

# Obstetrical Hemorrhage

Quantified blood loss during the intrapartum or postpartum period that may lead medical emergency

# AIM

## What is AIM?

Collaboration

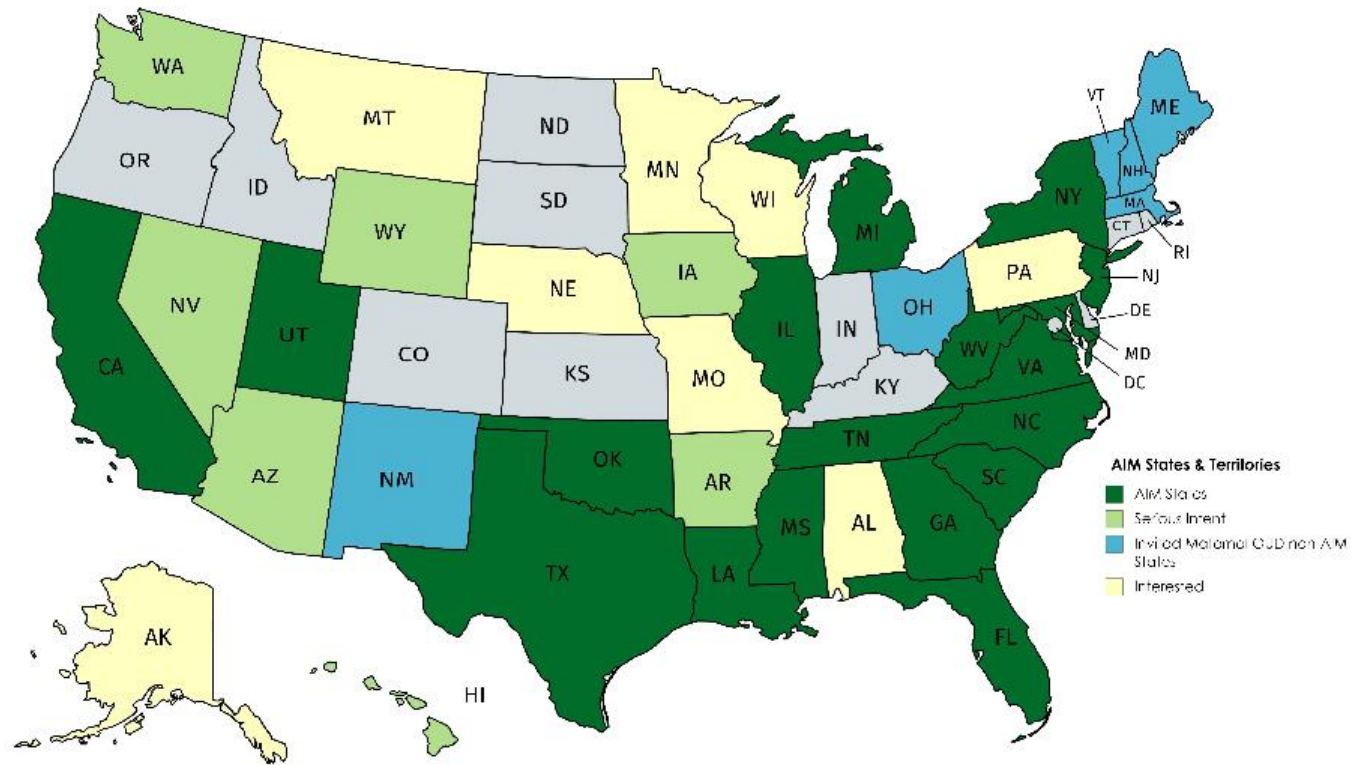
Partnership

Standardization

Evidence-based

Symbiotic Relationship

# AIM



# Safety Bundle

Readiness

Recognition & Prevention

Response

Reporting / System Learning

# Readiness – Hemorrhage Cart

Cart or kit





# Readiness – Supplies

## Hemorrhage Cart

### OB Hemorrhage Medication Kit: Available in L&D and Postpartum Floor PYXIS/refrigerator

- Pitocin 20 units per liter NS 1 bag
- Hemabate 250 mcg/ml 1 ampule
- Cytotec 200mg tablets 5 tabs
- Methergine 0.2 mg/ml 1 ampule

### OB Hemorrhage Tray:

#### Available on Postpartum Floor

- IV start kit
- 18 gauge angiocath
- 1 liter bag lactated Ringers
- IV tubing
- Sterile Speculum
- Urinary catheter kit with urimeter
- Flash light
- Lubricating Jelly
- Assorted sizes sterile gloves

### Labor and Delivery Emergency Hysterectomy Tray: Available in L&D OR Suite

- 4 Towel Clips, Backhaus (perforating) 5 1/4"
- 4 Mosquito, Curved, 5"
- 2 Clamp, Mixer 9"
- 2 Clamp, tonsil
- 2 Clamp, Allis, Extra-long 10"
- 2 Clamp, Allis 8"
- 2 Clamp, Babcock 8"
- 2 Clamp, Babcock 6 1/4"
- 2 Clamp, Lahey 8"
- 2 Clamp, Heaney-Rezak, Straight, 8"
- 8 Kelly, Curved 5 3/4"
- 2 Kelly, Straight 5 3/4"
- 8 Pean Curved, 6 1/4"
- 2 Forceps, Debakey, 9 1/2"
- 1 Forceps, Tissue with teeth 9 3/4"
- 1 Forceps, Russian 8"
- 1 Forceps, Smooth 8"
- 1 Forceps, Ferris Smith

### Labor and Delivery Emergency Hysterectomy Tray: Available in L&D OR Suite

- Forceps with Teeth, 6"
- 1 Forceps, Russian 8"
- 2 Forceps, Adson with Teeth
- 1 Forceps, Tissue, Smooth, 7"
- 2 Kocher, Straight, 8"
- 6 Forceps, Heaney, Curved, 8 1/4"
- NH, Mayo Hegar, 8"
- 4 Sponge Stick, 9 1/2"
- 1 Scissor, Jorgensen, Curved, 9"
- 1 Scissors, bandage 7"
- 1 Scissors, curved dissecting, Metzenbaum
- 1 Scissors, Mayo, curved
- 1 Scissors, sharp/blunt, Straight, 5 1/2"
- 1 Scissors, Curved Metzenbaum 12"
- 1 Scissors, Mayo Straight 11"
- 1 Scissors, Mayo Curved 11"
- 1 Knife Handle #3
- 1 Knife Handle #4
- 1 Knife Handle #3, Long
- 1 Retractor, Kelly, large
- 1 Retractor, Deaver, Large, 3' x 12"
- 1 Retractor, Deaver, Medium
- 2 Retractor, Med/large Richardson
- 1 Retractor, Balfour Blades
- 2 Retractor, Goulet, 7 1/2"
- 1 Suction, Yankauer Tip
- 1 Suction, Pool Tip

# Readiness – Process

## APPENDICES

### APPENDIX A. SAMPLE HEMORRHAGE POLICY AND PROCEDURE

#### Obstetric Hemorrhage Care Guidelines: Sample Policy and Procedure

<b>POLICY INDEX:</b> O			
<b>POLICY TITLE:</b> Obstetric Hemorrhage Care			
<b>DEPARTMENT AND USERS DISTRIBUTION:</b> Maternal Child Health, Labor and Delivery, Emer Blood Bank, Intensive Care Unit, Post-Anesthesia			
<b>Original Date of Issue:</b> _____			
<b>Reviewed Date</b>			
<b>Revised Date</b>			

#### PURPOSE

The purpose of this protocol is to provide guideline team in the event of obstetric hemorrhage. This protocol identifies stages of hemorrhage

#### POLICY STATEMENTS

Optimal response to obstetric hemorrhage require multiple disciplines and departments.

- Obstetric unit, anesthesia department, blood bank work together to identify necessary system support coordinated response to obstetric hemorrhage
- Obstetric physicians, obstetric RNs, certified in appropriately qualified clinicians are authorized hemorrhage.
- The OB hemorrhage critical pack/cart are always emergency in all areas of the hospital where we assignments for stocking and checking the cart example: medications will be kept together in a unit; the emergency medication packet will be on cart or a separate resuscitation cart will be des
- The Obstetric (OB) Hemorrhage general and least every three years.

#### OB HEMORRHAGE TOOLKIT

##### DEFINITIONS

General Hemorrhage:  $\geq 500$  ml blood loss for vaginal birth;  $\geq 1000$  ml blood Massive Hemorrhage:  $\geq 1500$  ml blood loss for any birth

##### MONITORING

Perform annual assessment of readiness to respond to an obstetric hemorrhage

#### SUMMARY OF STAGES OF OBSTETRIC HEMORRHAGE AND TREATMENT GOALS

##### Prenatal Screening and Treatment:

- Risk assessment
- Aggressive treatment of anemia
- Risk appropriate blood work on admission

**Stage 0:** Prevention and Recognition of OB Hemorrhage in All Births  
Active Management of Third Stage Labor  
Ongoing Quantitative Evaluation of Blood Loss  
Ongoing Evaluation of Vital Signs

**Stage 1:** Cumulative Blood Loss  $> 500$  ml vaginal birth or  $> 1000$  ml cesarean birth – Vital Signs  $> 15\%$  change or HR  $\geq 110$ , BP  $\leq 85/45$ , O<sub>2</sub> sat  $< 95\%$  – OR – Increased bleeding during recovery or postpartum  
**ACTIVATE HEMORRHAGE PROTOCOL, INITIATE PREPARATIONS, GIVE NO RESPONSE, MOVE TO PROSTAGLANDINS (HEMABATE, CYTOTEK, Information Table; Addendum A)**

**Stage 2:** Continued Bleeding or Vital Sign Instability and 1000-1500 ml cumulative blood loss  
**SEQUENTIALLY ADVANCE THROUGH MEDICATIONS AND PROCEDURES MOBILIZE HELP & BLOOD BANK SUPPORT; KEEP AHEAD WITH VOLUME AND BLOOD PRODUCTS**

**Stage 3:** Cumulative Blood Loss  $> 1500$  ml,  $> 2$  units PRBCs given, Vital Signs unstable  
Intravascular Coagulopathy  
**ACTIVATE MASSIVE TRANSFUSION PROTOCOL AND INVASIVE SURGICAL CONTROL BLEEDING**

#### OB HEMORRHAGE TOOLKIT

#### PROCEDURES

##### Prenatal, Admission and Ongoing Risk Assessment

- Identify and prepare for patients with special considerations: Placenta Previa/Accreta, Bleeding Disorder, or those who decline blood products
- Screen and aggressively treat severe anemia: if oral iron fails, initiate IV Iron Sucrose Protocol (**Best Practice: Iron Sucrose Protocol**) to reach desired Hgb/Hct, especially for at-risk mothers

#### Admission Assessment & Planning

<b>Verify Type &amp; Antibody Screen</b> from prenatal record If not available: <input type="checkbox"/> Order Type & Screen (lab will notify if 2 <sup>nd</sup> clot needed for confirmation) If prenatal or current antibody screen positive (if not low level anti-D from Rho-GAM): <input type="checkbox"/> Type & Crossmatch 2 units PRBCs All other patients: <input type="checkbox"/> Send Clot to blood bank	Evaluate for Risk Factors (see below) If medium risk: <input type="checkbox"/> Order Type & Screen <input type="checkbox"/> Review Hemorrhage Protocol If high risk: <input type="checkbox"/> Order Type & Crossmatch 2 units PRBCs <input type="checkbox"/> Review Hemorrhage Protocol <input type="checkbox"/> Notify OB Anesthesia Identify women who may decline transfusion <input type="checkbox"/> Notify OB provider for plan of care <input type="checkbox"/> Early consult with OB anesthesia <input type="checkbox"/> Review Consent Form
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#### Ongoing Risk Assessment

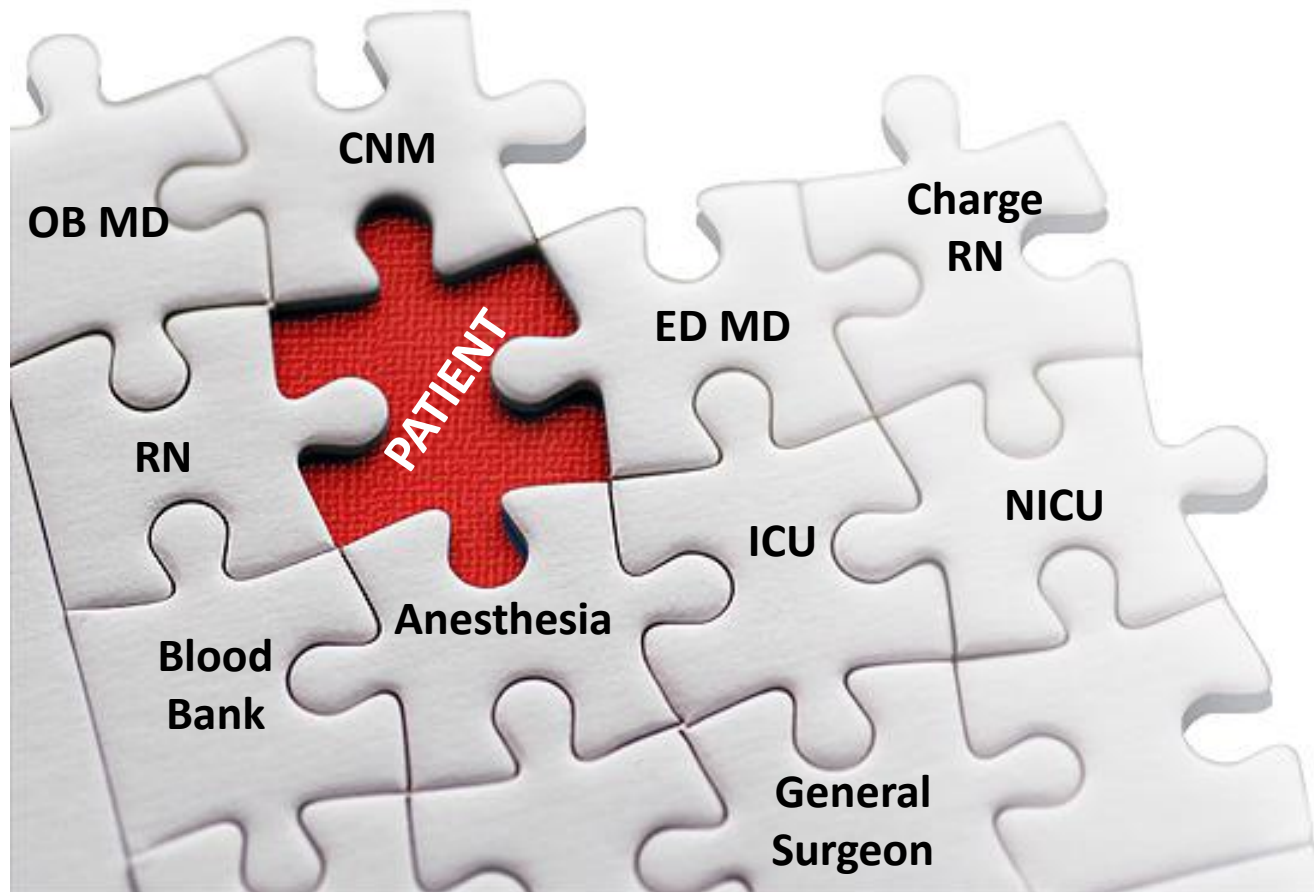
- Evaluate for development of additional risk factors in labor:
  - Prolonged 2<sup>nd</sup> Stage labor
  - Prolonged oxytocin use
  - Active bleeding
  - Chorioamnionitis
  - Magnesium sulfate treatment
- Increase Risk level (see below) and convert to Type & Screen or Type & Crossmatch
- Treat multiple risk factors as High Risk

#### Admission Hemorrhage Risk Factor Evaluation

Low (Clot only)	Medium (Type and Screen)	High (Type and Cross)
No previous uterine incision	Prior cesarean birth(s) or uterine surgery	Placenta previa, low lying placenta
Singleton pregnancy	Multiple gestation	Suspected placenta accreta or percreta
$\leq 4$ previous vaginal births	$> 4$ previous vaginal births	Hematocrit $< 30$ AND other risk factors
No known bleeding disorder	Chorioamnionitis	Platelets $< 100,000$
No history of PPH	History of previous PPH	Active bleeding (greater than show) on admit
	Large uterine fibroids	Known coagulopathy
	Estimated fetal weight greater than 4 kg	
	Morbid obesity (BMI $> 35$ )	

If admitted patients are started on magnesium sulfate they are at higher risk of postpartum hemorrhage.

# Readiness – Team



# Readiness – Blood Loss

## Cumulative Quantification



**Cumulative Blood Loss**

ITEM	Approx. Dry Weight (grams)	"Wet" weight (grams)	Wet weight minus Dry weight = Milliliters (ml) of fluid/blood (may have multiple items)	Total per Item						
Cloth Under Pad	639									
Blue Plastic Chux	10									
Delivery Pad (from delivery pack)	15									
Peripad	20									
Large Peripad	65									
Ice Pack	220									
Mesh Panties	0									
Lap Sponge (small)	10									
Lap Sponge (large)	20									
Green Towel	80									
Graduated Container Volume	<table border="1" style="width: 100%;"> <tr> <td>Estimated Amniotic Fluid Volume / Baseline _____</td> <td>Container #1 _____</td> </tr> <tr> <td>Irrigation Fluid Volume _____</td> <td>Container #2+ _____</td> </tr> <tr> <td>Non Blood Sub Total _____</td> <td>Minus Non-Blood _____</td> </tr> </table>		Estimated Amniotic Fluid Volume / Baseline _____	Container #1 _____	Irrigation Fluid Volume _____	Container #2+ _____	Non Blood Sub Total _____	Minus Non-Blood _____		
Estimated Amniotic Fluid Volume / Baseline _____	Container #1 _____									
Irrigation Fluid Volume _____	Container #2+ _____									
Non Blood Sub Total _____	Minus Non-Blood _____									
<b>TOTAL QUANTIFIED BLOODLOSS (ml)</b>										

# Readiness – Blood Products

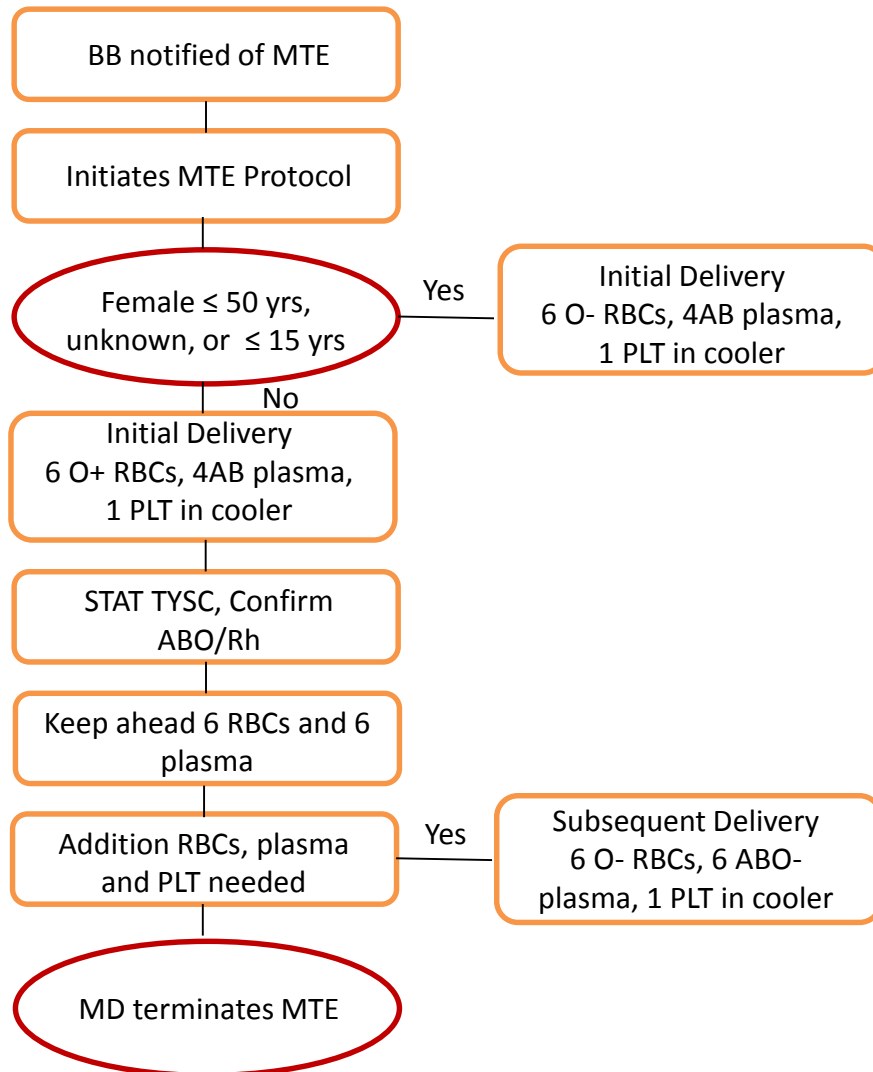
Packed RBC's

Fresh Frozen Platelets

Plasma



# Readiness – Massive Transfusion Protocol





# Readiness – Practice

Simulation Drills

Debriefing



# Readiness – Summary



**ALLIANCE FOR INNOVATION**  
ON MATERNAL HEALTH **A I M**



Readiness

Questions?