Improving Maternal Morbidity and Mortality One Bundle at a Time

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*Baptist Memorial Hospital for Women*
Purpose/Goal(s) of this Education Activity
The purpose of this activity is to gain information on enhancement of the obstetrical bundles for hemorrhage, hypertension, and VTE.

1.0 Contact Hour
This continuing nursing education activity was approved by the Northeast Multistate Division, an accredited approver by the American Nurses Credentialing Center’s Commission on Accreditation.
Disclosures & Successful Completion

- There is no commercial support being received for this activity.
- No individuals in a position to control content for this activity has any relevant financial relationships to declare.
- There will be no discussion of off-label usage of any products.
- To successfully complete this activity and receive 1.0 Contact Hour/1.0 AMA PRA Category 1 Credit™ you must attend/watch the program and submit the completed post-test/evaluation to NPIC.
1.0 AMA PRA Category 1 Credit™

CME credit is provided for select programs through a partnership with Women & Infants Hospital of Rhode Island (WIHRI).

This activity fulfills core competencies for Continuing Medical Education credit.

Women & Infants Hospital is accredited by the Rhode Island Medical Society to sponsor intrastate continuing education for physicians. Women & Infants Hospital designates this online educational activity for a maximum of 1.0 AMA PRA Category 1 Credit™. Physicians should only claim credit commensurate with the extent of their participation in the activity.
Objectives

- Identify standard evidence-based practice guidelines for prophylaxis and treatment of VTE during the antepartum, intrapartum, and postpartum period

- Recognize the steps for implementation of the obstetric hemorrhage bundle through preparation, recognition, and response to excessive blood loss utilizing best-practice guidelines

- Recognize early warning signs, diagnostic and clinic practice guidelines for treatment, and appropriate discharge follow-up recommendations of the severe hypertension practice bundle during pregnancy and postpartum to improve maternal morbidity and mortality
Baptist Memorial Hospital for Women

Improving Maternal Morbidity and Mortality One Bundle at a Time
VTE and Maternal Mortality

Maternal Mortality Is Rising in the U.S. As It Declines Elsewhere

Deaths per 100,000 live births

- U.S.A. (26.4)


Note: The cause of death is unknown for 6.5% of all pregnancy-related deaths.

Source: The Lancet
Credit: Rob Weychert/ProPublica
VTE in Obstetrics

Pregnant women have a five fold increased risk of venous thromboembolism (VTE) compared to non-pregnant women due to hypercoagulability, stasis, and endothelial injury.

VTE was the leading cause of maternal mortality, causing 20% of all pregnancy related deaths.

The majority of pulmonary embolisms occur postpartum and post C/S.

The majority of DVT’s occur in the left lower extremity.

In 2004, BMHW had VTE occurrence rates that were slightly above published norms.

Plan for reduction of maternal mortality and morbidity from VTE --Aggressive investigation and treatment of DVT or PE --Identification and prophylaxis for those with increased VTE risks.
Institute for Healthcare Improvement
Peri-operative Safety Collaborative

Focused populations: (March-December 2004)
  Abdominal and vaginal hysterectomy
  Cesarean Section

Goals: To reduce peri-operative harm by 50%
  VTE one of four focus targeted peri-operative complications

Key changes implemented:
  Developed VTE screening tool and intervention order set
   based upon risk assessment for the GYN and OB population
   (The Obstetric order set was not approved by the Medical Staff due to insufficient evidence-based data for treatment)
  Pneumatic intermittent compression devices were standardized
   for all major surgeries, including C-sections
BMHW Obstetric Intervention

DVT and PE Prevention for Obstetrics:
July 2007 through December 2007

Focused population:
All BMHW obstetrical patients

Goals:
Identify all BMHW OB patients at risk for DVT and provide applicable prophylactic interventions

Key changes implemented:
Multidisciplinary Team formed for more aggressive approach to VTE prevention and treatment in the obstetrical patient
(Obstetricians, Maternal-Fetal-Medicine Specialists, Anesthesiology, Pathology, Hematology, Nursing Clinical Experts, Nursing Leadership)
Developed OB DVT screening tool and order sets based on extensive synthesis of literature in absence of established best practice recommendations
Formalized regional anesthesia guidelines when pharmacologic DVT prophylaxis is utilized
VTE Risk Assessment

Pregnancy Hypercoagulable State
Additional Risk Factors Identified
Risk Assessment Developed for the OB Population
### Regional Anesthesia Guidelines for DVT Prophylaxis in OB Patients

**Neuraxial block via Epidural and/or Spinal**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Heparin 5000 Units SQ q 8 h</th>
<th>Enoxaparin 40 mg q 24 h (30 mg - renal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>When to insert neuraxial catheter</td>
<td>Anytime if platelet count is adequate per anesthesia</td>
<td>24 h after last dose</td>
</tr>
<tr>
<td>When to remove neuraxial catheter</td>
<td>2 h after last dose OR 2 h before next dose</td>
<td>24 h after 1st dose</td>
</tr>
<tr>
<td>When to start prophylaxis with continuous neuraxial infusion (via epidural/spinal catheter)</td>
<td>2 h after needle/catheter placement</td>
<td>24 h after C/S or vaginal delivery</td>
</tr>
<tr>
<td>When to start prophylaxis post neuraxial without a catheter in place</td>
<td>2 h after needle/catheter block or after catheter removal</td>
<td>24 h after C/S or vaginal delivery</td>
</tr>
</tbody>
</table>

### Pharmacologic Contraindications
- Active bleeding or high risk for bleeding:
  - Placenta previa
  - Abruptio placentae
  - Postpartum hemorrhage
- Coagulopathy:
  - DIC
  - Thrombocytopenia
- Current anticoagulant therapy
- Other

### Mechanical Contraindications
- Unable to wear device due to size
- Other

### Regional Anesthesia Contraindications
- Traumatic placement of neuraxial blocks (epidural and/or spinal) < 24 hours
- See page 2 for additional guidelines
- Other

### Pharmacologic Contraindications
- Obesity (BMI > 30)
- Age (> 35)
- Multiparity (> 4)
- Immobility/bedrest
- Gross varicose veins
- Major abdominal surgery

### Mechanical Contraindications
- PIH or Preeclampsia
- Infection
- Inflammation
- Other major system illness

### Additional Medical Conditions
- See page 2 for additional risk factor information

### Bleeding/Clotting Disorders:
- Hypercoagulable State
- Factor V Leiden Mutation
- Prothrombin Gene Mutation
- Protein C or S Deficiency
- Antithrombin Deficiency
- Antiphospholipid Syndrome
- Antithrombin Deficiency
- Hyperhomocystinemia

### Additional Risk Factor Information
- Obesity = BMI > 30 pre-pregnant weight
- Immobility/bedrest = > 72 hr, prolonged labor, paralysis
- Inflammation – Inflammatory bowel disease, etc.
- Infection – pyelonephritis, etc.
- Other major system illness of the heart, lung, kidney = atrial fibrillation, diabetes, sickle cell disease, cancer, nephrotic syndrome, lupus, etc.

### VTE Risk Assessment Form

**Addressograph/Label**

**BAPTIST Memorial Hospital**

**DVT/PE OB Risk Factor Assessment and Order Form**

**Physician’s Signature:** ____________________________  **Date/Time:** ____________________________

**Get Better.**
### Obstetric VTE Risk Assessment and Prophylaxis

**Baptist Memorial Hospital for Women**
Memphis, TN

#### Timeline:

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>IHI Peri-operative Safety Initiative</td>
</tr>
<tr>
<td>2006</td>
<td>BMH System Collaborative for VTE Prevention</td>
</tr>
<tr>
<td>2007</td>
<td>VTE Obstetric Initiative - BMHW</td>
</tr>
<tr>
<td>2008</td>
<td></td>
</tr>
</tbody>
</table>

**2004:**
- **March:** Med/Surg, OB combined VTE assessment protocol developed (OB portion rejected)
- **April:** Bleeding/clotting risk assessment and hx added to OB admission nursing assessment
- **August:** OB Antepartum exercise program developed

**2006:**
- **April-May:** Additional VTE education to all ObGyn staff
- **May-July:** Gyn/Surg VTE risk assessment protocol/form developed and implemented
- **August:** Antepartum orders revised to include heparin and PT consult for or exercise when indicated
- **October:** Medical/nursing staff education done and all processes and forms approved by the medical staff

**2007:**
- **August-September:** Pneumatic compression sleeves standardized for all acutely ill OB and antepartum bedrest patients
- **October-November:** CWISH collaboration for VTE risk assessment/intervention
- **July:** Postpartum orders reflect pneumatic compression sleeves until discharge for C/S
- **November:** Implementation of OB VTE screening tool/order form with the antepartum population

**2008:**
- **April:** VTE reassessment sticker created for inpatients staying > 72h
- **June:** Pneumatic compression sleeves standardized for all C-sections
- **September:** Added VTE risk reassessment every 72h to the form
- **July:** Implementation of OB VTE screening tool/order form with the inpatient OB population
Baptist Memorial Hospital for Women
Memphis, TN
OB VTE Trending

- Postpartum VTE Occurrences
- VTE associated obstetric morbidity
- VTE associated obstetric mortality

![Chart showing OB VTE Trending from 2004 to 2009]

- Morbidity inclusive of patients admitted with existing DVT (ICD--Intermittent Compression Device)
- ICD's standardized for all C/S
- ICD's standardized for acutely ill and ANTP on bedrest
- VTE tool implemented on ANTP
- VTE assessment on all obstetric patients
2014 -- Implementation of EPIC

VTE Risk Assessment included for General Medicine and Surgery Population

No VTE Assessment available in EPIC for Obstetric Population
EPIC Documentation Go-Live in 2014

The Perinatal service-line requested the implementation of an OB-specific VTE Risk Assessment Tool

Clinical Practice Guidelines in EPIC did not support this content

Where is the evidence?
Literature Review

- More studies available now for the obstetric population
- Pregnancy is a hypercoagulable state
- VTE is a leading cause of death among the Obstetric population
- Safe Motherhood Initiative VTE bundle supports the use of standardized assessment tool for OB
## Adult VTE Assessment Tool

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peripheral Neurovascular</td>
<td>VTE Prevention/Management</td>
</tr>
<tr>
<td>VTE Current Status</td>
<td>VTE For Women Only</td>
</tr>
<tr>
<td>VTE For Women Only</td>
<td>VTE Score 8</td>
</tr>
</tbody>
</table>

### Caprini VTE Risk Factor Assessment

| VTE Age                | 1 → age 41-60 years                                                      |
| VTE BMI                | 1 → obesity (BMI greater than 25)                                        |
| VTE History            | 3 → family history of thrombosis                                         |
| VTE Surgery            | 1 → history of prior major surgery                                       |
| VTE For Women Only     | 1 → history of unexplained stillborn infant, recurrent spontaneous       |

### VTE Current Status

- congestive heart failure (within 1 month)
- abnormal pulmonary function (COPD)
- acute myocardial infarction (within 1 month)
- serious lung disease, including pneumonia (within 1 month)
- medical patient currently at bed rest
- sepsis (within 1 month)
- swollen legs (current)
- varicose veins
- other risk factor
- central venous access
- confined to bed (greater than 72 hours)
- immobiling plaster cast (within 1 month)
- malignancy (present or previous)
- elevated antithrombin-3
- elevated serum homocysteine
- heparin-induced thrombocytopenia (HIT)
- positive Factor V Leiden

### VTE Score

- 8
## OB VTE Risk Assessment Tool

### OB VTE Assessment

<table>
<thead>
<tr>
<th>Ob VTE Risk Assessment</th>
<th>Pre-Pregnant BMI (Calculated)</th>
<th>29.4</th>
</tr>
</thead>
<tbody>
<tr>
<td>OB VTE Primary Risk Factors</td>
<td>No risk factors identified</td>
<td></td>
</tr>
<tr>
<td>OB VTE Secondary Risk Factors</td>
<td>No risk factors identified</td>
<td></td>
</tr>
</tbody>
</table>

### OB VTE Primary Risk Factors

- Select Multiple Options: (F5)
  - No risk factors identified
  - Current anticoagulant therapy
  - Pre-pregnancy BMI 40 or >
  - Prior or current DVT/PE
  - Prosthetic heart valve
  - Thrombophilia AND family history of VTE

### OB VTE Secondary Risk Factors

- Select Multiple Options: (F5)
  - No risk factors identified
  - Age > 40
  - C/section/hysterectomy with this hospitalization
  - Gross varicose veins
  - Inflammatory disease (i.e. Crohn's/ulcerative colitis)
  - Immobility/bedrest
  - Major infection (pyelo/sepsis)
  - Multiparity (> 4)
  - Other major system illness (i.e. cancer, SLE, renal disease)
  - Pre-existing diabetes
  - Pre-pregnancy BMI > 30 or equal to or < 39
  - Sickle Cell Disease
  - Smoking
  - Thrombophilia without family history

*Comment (F6)*
VTE Risk Displayed in Header Bar

Hemorrhage Risk: L
OB VTE High Risk: H
Maternal VTE Bundle
Safe Motherhood Initiative Current Recommendations

**Readiness:**
- Standardized thromboembolism risk assessment tool during:
  - Outpatient care
  - Antepartum hospitalization
  - Post vaginal and C-section deliveries
  - Postpartum period up to six weeks

**Recognition/Prevention:**
- Standardized tool to identify need for prophylaxis
- Provide patient education
- Notification of healthcare providers

**Response:**
- Standardized recommendations for mechanical thromboprophylaxis
- Standardized recommendations for pharmacologic management
- Standardized recommendations for dosing with neuraxial anesthesia

**Reporting/Systems Learning:**
- Review all thromboembolism events for system issues and compliance with existing protocols
- Monitor process metrics and outcomes in standarized fashion
- Assess for compliance of pharmacologic recommendations for thromboprophylaxis
Obstetric Hemorrhage and QBL
Tennessee Initiative for Perinatal Quality Care

Following work completed by the CMQCC (California Maternal Quality Care Collaborative) for raising awareness related to postpartum hemorrhage and the quantification of obstetric blood loss, the TIPQC began a statewide initiative for development of a process for quantifying blood loss, and monitoring compliance.
Hemorrhage QBL Initiative

Quality Improvement Project
Standardized Management of Hemorrhage
Reduce Severe Morbidity and Mortality
Accurate Measurement of Cumulative Blood Loss

Our Aim

The number of deliveries and C-sections in which QBL is measured will be increased by 10% each month, with a goal of 80% to be reached by June 30th, 2017

Target Population
All women admitted for birth
Improving Recognition and Response to Maternal Blood Loss at Birth

Standardized Approach to Recognition/Response
-- Definition of postpartum hemorrhage
-- Quantitated measurement of blood loss
-- Accurate documentation of blood loss
-- Standardized management of postpartum hemorrhage

Definition of Postpartum Hemorrhage
Cumulative blood loss of \( \geq 1000\text{ml} \) or blood loss accompanied by signs/symptoms of hypovolemia within 24 hours following the birth process

Challenges to Successful Implementation
-- Physician pushback
-- Lack of engagement by L&D staff
-- Availability of graduated drape
-- Process for amniotic fluid measurement
Process Measures

Vaginal birth with quantitated blood loss
1. ____________________________________________
   Women > 20 weeks, admitted for birth, with vaginal birth

Cesarean birth with quantitated blood loss
2. ____________________________________________
   Women > 20 weeks, admitted for birth, with C/S birth
Process -- Quantitating Blood Loss on Vaginal Deliveries

Graduated Drape for QBL following delivery of infant

Weigh Laps following Vaginal Delivery—Add to Loss in Drape

Weigh perineal pads in Recovery and on PP floor if > 500 ml
Process -- Quantitating Blood Loss on C-sections

Measurement of Blood Loss following Suction of Amniotic Fluid

Weigh perineal pads in PACU; continue on MBU if > 1,000 ml

Laps and Stackers are weighed in OR—
dry weights subtracted
Outcome Measures

Total number of units of RBC’s
1. _______________________________________
   All women giving birth > 20 weeks gestation

Total number of massive transfusions
2. _______________________________________
   All women giving birth > 20 weeks gestation
Obstetric Hemorrhage Bundle
Safe Motherhood Initiative

Readiness
- Hemorrhage Cart with Supplies, Checklist, and instruction cards for intrauterine balloons and compression stitches
- Immediate access to hemorrhage medications
- Establishment of a response team
- Massive and emergency release transfusion protocols
- Unit education on protocols, unit-based drills, and post-drill debriefs

Recognition and Prevention
- Assessment of Hemorrhage Risk (prenatal, on admission, at delivery)
- Measurement of cumulative blood loss
- Active management of the third stage of labor

Response
- Unit standard, stage-based, obstetric hemorrhage emergency management plan
- Support program for patients, families, and staff for all significant hemorrhages

Reporting/Systems Learning
- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multi-disciplinary review of serious hemorrhages for system issues
- Monitor outcomes and process metrics in Perinatal Quality Improvement Committee
Readiness

1. Hemorrhage cart
2. Immediate access to hemorrhage medications
3. Response Team
4. Massive Transfusion protocols-MTP
5. Unit education based drills and post event debriefs
Orders – Massive Transfusion Protocol

Login to EPIC – select patient -- go to orders

Go to Order sets – OB/GYN Massive Transfusion Protocol

Open order set – Select products (PRBC, FFP, Cryoprecipitate, Platelets)

Open order for each product type – defaults to 4 PRBC—4 FFP—1 bag Cryoprecipitate—1 platelet apheresis pack

Indication defaults to: ACTIVE BLEEDING

Select “Accept” – Sign Order

Notify Blood Bank – Initiation of MTP– request Blood Bank (79143) to notify lab director AND pathologist on call

Information to Blood Bank: Patient name, Med Rec #, surgeon, location, phone # of location, contact person in the OR

Take sticker of the patient to blood bank for retrieval of the cooler

All communication between ONE blood bank personnel and ONE contact nurse
MTP – ALL Selected

**Blood Administration**

- **blood warmer**
  - Routine, Once First occurrence Today at 1630
  - Blood warmer and rapid infusion device for fluids.

- **Packed Red Blood Cells (PRBC) – Actively Bleeding or High Risk of Hemorrhage**
  - Prepare RBC
    - Routine
    - STAT First occurrence Today at 1631
  - Transfuse RBC 4 Units
    - STAT, Transfuse 4 units, Starting Today at 1630
    - Transfuse: Now

- **Fresh Frozen Plasma**
  - Prepare fresh frozen plasma
    - Routine
    - STAT First occurrence Today at 1631
  - Transfuse fresh frozen plasma 4 Units
    - STAT, Transfuse 4 units, Starting Today at 1630
    - Transfuse: Now

- **Platelets (PLT)**
  - Prepare platelet apheresis (1 unit = 6 buttons)
    - Routine
    - STAT First occurrence Today at 1631
  - Transfuse platelets apheresed 1 Unit
    - STAT, Transfuse 1 unit, Starting Today at 1630
    - Transfuse: Now

- **Cryoprecipitate [Do NOT use at: AT, JK, LK, YZ]**
  - Prepare cryoprecipitate
    - STAT
    - STAT First occurrence Today at 1631
  - Transfuse cryoprecipitate 1 bag (1 to 5 units)
    - STAT, Transfuse 1 bag (1 to 5 units), Starting Today at 1630
    - Transfuse: Now

**Labs**

- **Comprehensive Metabolic Panel**
  - STAT First occurrence Today at 1632

- **CBC without Differential**
  - STAT First occurrence Today at 1632

- **Protime–INR**
  - STAT First occurrence Today at 1632

- **APTt**
  - STAT First occurrence Today at 1632

- **Fibrinogen**
  - STAT First occurrence Today at 1632

**Orders for Blood and Lab are pre-checked**
Additional Products

• Following the administration of each MTP blood product pack, there will be a pause, and the need for additional products will be determined via collaboration between the surgeon, anesthesia, and the pathologist.

• The designated nurse will call the designated blood bank representative and notify of the need for an additional MTP blood product pack.

• The nurse will place another order for a MTP blood product pack in EPIC and proceed with identified process.
Important Points

• The MTP blood product pack (4/4/1/1) will likely not ALL be dispersed at the same time due to thawing of FFP and cryoprecipitate
• PRBC’s and FFP are the ONLY products to be placed in the cooler
• Products in the cooler must have a paper towel placed on top, and ice placed over the paper towel. The product must not come in direct contact with the ice to prevent destruction of product elements.
• Blood products should not be removed from the cooler or checked with another RN or MD until ready to infuse
• Cryoprecipitate and platelets are kept at room temperature
• All blood products must be returned within 4 hours from pick-up time
• There is ONE person communicating with the blood bank and ONE runner to and from the blood bank
• The blood runner (RN) will keep a running total of intake and output during the transfusion process to prevent circulatory overload (TACO)
Simulation training and debriefing

Unit-based Simulations

Debriefing sessions following simulations
# Hemorrhage Risk Assessment

## Admission Hemorrhage Risk

### Low Risk for Hemorrhage
1. No Prior Uterine Incision
2. No Bleeding Disorder
3. Less than 5 prior vaginal births
4. Singleton pregnancy
5. No history of postpartum hemorrhage

### Moderate Risk for Hemorrhage
1. Prior Cesarean or uterine surgery
2. Multiple gestation
3. Multiparity with > 4 vaginal births
4. History of prior postpartum hemorrhage
5. Large fibroids/myomas
6. Macrosomia/polyhydramnios
7. Obesity (BMI > 40)
8. Hematocrit 26% to 30%
9. Platelet Count 70,000 to 100,000
10. Complete/partial previa without bleeding

## Intrapartum Hemorrhage Risk

### Moderate Risk for Hemorrhage
1. Retained placenta > 30 minutes
2. Cervical lacerations
3. Magnesium Sulfate
4. Chorioamnionitis
5. Mid to late second trimester loss
6. Prolonged oxytocin use > 24 hours

### High Risk for Hemorrhage
1. Laceration of Uterine Vessels
2. Uterine Rupture
3. Abruptio Placentae
4. Placenta Accreta
5. EBL > 500 ml / vaginal delivery; 1000ml / C-section
6. Uterine Inversion
7. General Anesthesia
8. 2 or more moderate risk factors
9. Suspected placenta accreta
10. Complete/partial previa with active bleeding
11. Hematocrit < 26%
12. Moderate vaginal bleeding on admission
13. Known coagulopathy/anticoagulation therapy
14. Platelet count < 70,000
15. 2 or more moderate risk factors
Recognition

1-Assessment of hemorrhage risk (prenatally on admission and update with status changes)

2-Measurement of cumulative blood loss

3-Active Management of Third Stage (AMSTL)
Uterine Atony: Treatment

Pharmacological therapy
Pitocin: 10-40 units in 500-1000cc
Methergine: 0.2 MG IM (not IV) Q2-4 hours.
Prostaglandins - (Hemabate 250mcg IM q15-90 minutes- max 8 doses/24 hours)
Misoprostol (600-800 mcg oral or sublingual one time)

Surgical intervention
Interventional radiology
Uterine Atony: Surgical Interventions

- **Uterine packing (tamponade)**
  - Useful while awaiting other therapies
  - May be successful alone in 40%-50% of cases
  - Bakri Balloon or other various techniques or devices

- **Uterine artery ligation**
  - As successful as hypogastric artery ligation
  - Requires less surgical disruption

- **B-lynch stitch**
  - May be used prior to more definitive techniques

- **Hysterectomy**
**Stage 0/I** -- less than 1000 cc; ~10-15%

**Stage II** -- 1,000-1,500 cc; ~15-25%

**Stage III** -- 1,500-2,000 cc; ~25-35%

**Stage IV** -- greater than 2000 cc ~40%

What interventions have been implemented?
Is the patient still actively bleeding?
What was the admission/last hematocrit?
Has the cause of the hemorrhage been addressed?

With 1,000ml blood loss, the patient status is assessed and it is determined whether the OB Postpartum Hemorrhage orderset should be initiated.

With 1,500 ml blood loss, the patient status is assessed, and it is determined if the MTP should be initiated.
Reporting/Systems Learning

Huddles and post-event debriefs
Multi-disciplinary review of serious hemorrhages
Monitor Outcomes
President’s Quality Award

Quantification of Blood Loss to Raise Awareness for the Improvement of Maternal Morbidity and Mortality
SEVERE HYPERTENSION IN PREGNANCY/POSTPARTUM
S.H.I.P.P.
Hypertension Bundle – Safe Motherhood Initiative
In 2017, Tennessee established a Maternal Mortality Review to measure all maternal deaths in the state.

This Review cited factors contributing to maternal death regarding cardiovascular conditions and found there was a lack of continuity in the care patients received.

The Review also cited the method of measuring blood pressures were not consistent or correct, and discharge education protocols were inadequate. Providers were noted to lack knowledge of the latest protocols.

Our State Quality Collaborative TIPQC has great information & ACOG’s Patient Safety Bundle has all the tools for implementing a comprehensive S.H.I.P.P. initiative.
Our Hospital Has A Vulnerable Population

Baptist Women’s Hospital is located in an area with many chronic co-morbidities
Using the TIPQC and AIM bundles, we launched our “SHIPP” initiative in January 2019.

- Baptist Memorial Hospital is nestled in between Arkansas, Mississippi: Ranked #1 and #3 in Obesity, a leading cause of high blood pressure.
- Tennessee is ranked #14 in the nation for obesity.
Opportunities

• Our hospital wide readmission rate is less than 2%: However, over 80% of those readmissions are related to hypertension.

• We needed Standardized ordersets to recognize and treat women with hypertension

• We needed standardized education to nurses and patients about the disease and symptoms to report
BAPTIST MEMORIAL HOSPITAL FOR WOMAN: OUR CRUISE TO THE SHIPP INITIATIVE
THE INITIATIVE INCLUDED:
FIVE PHASES

- Ordersets:
- Education to nurses:
- Identifying SHIPP patients:
- Responding to patients:
- Education to Patients:
• The perinatal quality committee and physician champion used the AIM bundle to develop evidence based ordersets in the EMR. (EPIC)

• This was a long and tedious process.
EDUCATION TO NURSES

October 2018 – November 2018
A mandatory class was held for over 200 nurses describing the SHIPP initiative. All nurses in the Perinatal service line reviewed hypertension in pregnancy back to the cellular level to bring a broader understanding of the disease and facilitate critical thinking. Before our cruise began, we RE-Taught all the nurses how to take a Blood Pressure. We spent several days reviewing, measuring arms and selecting the proper size cuff for the patients. The proper size cuff follows the patient until discharge.
How can we cruise without Captains?

The initiative was “launched” on January 15, 2019. The *bon voyage* party included food and small gifts for the doctors and all staff.

We involved nursing leadership, the CEO, CNO and physician champions.

We wanted to make this a fun, interactive day for the staff!
BEFORE YOU “EMBARK” ON THE JOURNEY, YOU NEED A...
After a SHIPP patient is identified, a “Boarding Pass” is given to the patient. The provider and patient sticker is placed on the front.
LET’S MAKE THINGS UNFORGETTABLE!

As a patient with severe hypertension in pregnancy/postpartum, (S.H.I.P.P.), you are at risk for complications with your pregnancy or problems after giving birth. Our goal is to provide exceptional care and monitoring to help you experience a safe journey throughout your pregnancy and delivery. We will continuously monitor your progress and share our “Points of Information” guidelines to help you recognize the signs and symptoms of hypertension during and after your pregnancy. We will also provide post-partum information on how to stay healthy and remain at home with your newborn to avoid readmission to the hospital.

ARRIVAL DATE

FOLLOW-UP APPOINTMENT
DATE TIME

NOTE: You should follow up with your doctor within 7-10 days after you are discharged from the hospital.
THE PASSPORT
As a patient with severe hypertension in pregnancy/postpartum (S.H.I.P.P.), you are at risk for complications that may result in readmission to the hospital after giving birth.

What is hypertension?
Blood pressure is the pressure of the blood against the blood vessel walls each time the heart contracts (squeezes) to pump the blood through your body. High blood pressure also is called hypertension. Hypertension can lead to health problems. During pregnancy, severe or uncontrolled hypertension can cause complications for you and your fetus.

Discharge instructions:
Please report any of the following symptoms to your nurse while you’re in the hospital, or to your provider’s office after you’re discharged from the hospital:

- Sustained headache
- Dizziness, blurred vision or if you see “spots”
- Pain in the upper right side of your abdomen
- Extreme weight gain or swelling in your hands, face, legs, or feet
- Fatigue
- Numbness in your face, arms, legs, and feet
- Slurred speech
- Nausea or vomiting
- Seizures

Points of Information:
Your nurse will be providing you with important education and guidelines on the topics below during your stay in the hospital. Your passport will be stamped for each completion.

- Risks and Symptoms
- Medications
- Discharge readiness
- Follow up appointments

We can’t direct the wind, but we can adjust the sail.

— Thomas S. Monson

Get Better.
The Patient Understands that Before Discharge, all 4 points of interest must be stamped (initialied)
A SHIPP SIGN IS PLACED ON THE DOOR TO ALERT ALL STAFF AND PROVIDERS
Nurse Leader Rounding

By the time a SHIPP patient is discharged, the patient is able to repeat the signs and symptoms of hypertension and pre-eclampsia and to return to their provider in 7-10 days for a blood pressure check.

Before she is discharged, the postpartum nurses confirm that the patient has a follow up appointment made.
How are we doing?

Since January 15, 2019:

We have identified 121 women with hypertension, gestational hypertension and severe range hypertension and pre-eclampsia.

*We are targeting all women that have an increased chance of readmission with education on SHIPP
Small Steps

• We have had several readmissions for hypertension, but upon reviewing the chart, they did not have severe range or even elevated pressures on her first visit.
Review

• All the charts are reviewed for bundle compliance.

• Only ONE patient has been readmitted that had been identified as a SHIPP on her delivery visit.
Outcome Metrics

Severe Hypertension in Pregnancy/Postpartum (SHIPP)

- # of SHIPPs
- # of readmissions

Readmission Rates prior to SHIPP Initiative

- 4th quarter 2017: 78%
- 1st quarter 2018: 60%
- 2nd quarter 2018: 80%
- 3rd quarter 2018: 79%
Questions & Comments

Participants are encouraged to ask questions and share comments.

- Please submit any questions or comments via the chat box in the lower left corner of your screen

- Questions and comments are visible only to presenters

- Questions will be answered in the order they are received
REMINDER: DO NOT CLOSE YOUR BROWSER WINDOW

- Post-test and evaluation will automatically appear once the webinar has ended.
- Please complete the post-test and evaluation within 24 hours.
- Certificates of attendance and completion will be emailed within 14 business days.