Journey to Reduced Morbidity and Mortality from Obstetric Hemorrhage and Preeclampsia

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Director of Women's and Children's Services
And
Jamie Vincent, MSN, RNC-OB, C-EFM
Perinatal Clinical Nurse Specialist
John Muir Health – Walnut Creek Campus
History

• 1930 – Concord Community Hospital Opens
• 1965 – John Muir Memorial Hospital Opens
• 1996 – Formation of John Muir Physician Network
• 1997 – Two hospitals merge forming what is now John Muir Health
• 2016 – John Muir Health remains independent, not-for-profit health system
Our Mission:
We are dedicated to improving the health of the communities we serve with quality and compassion.

Core Values
• Excellence
• Honesty and Integrity
• Mutual Respect and Teamwork
• Caring and Compassion
• Commitment to Patient Safety
• Continuous Improvement
• Stewardship of Resources
• Access to Care
Brand Promise

• We listen
• We explain
• We work together as a team
Patient Safety Focus
CMQCC OB Hemorrhage Collaborative

A California Toolkit to Transform Maternity Care

Improving Health Care Response to Obstetric Hemorrhage

THIS COLLABORATIVE PROJECT WAS DEVELOPED BY:
THE OBSTETRIC HEMORRHAGE TASK FORCE
THE MATERNAL QUALITY IMPROVEMENT PANEL
CALIFORNIA MATERNAL QUALITY CARE COLLABORATIVE
MATERNAL, CHILD AND ADOLESCENT HEALTH DIVISION; CENTER FOR FAMILY HEALTH
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
### CMQCC OB Hemorrhage Collaborative

#### OB Hemorrhage Cart Inventory List

<table>
<thead>
<tr>
<th>Item</th>
<th>PAI</th>
<th>Removed</th>
<th>Replaced</th>
</tr>
</thead>
<tbody>
<tr>
<td>V Start Kit</td>
<td>4</td>
<td>Bakri Balloon</td>
<td>2</td>
</tr>
<tr>
<td>Venous IV Tubing</td>
<td>4</td>
<td>N2 500 ml IV bag (mark “For Bakri”)</td>
<td>1</td>
</tr>
<tr>
<td>V Extension Tubing</td>
<td>2</td>
<td>Sterile Vaginal Packing (2” x 15”)</td>
<td>6</td>
</tr>
<tr>
<td>V Start Kit</td>
<td>4</td>
<td>Peripads</td>
<td>10</td>
</tr>
<tr>
<td>Vv cuff pack</td>
<td>2</td>
<td>Chux packs</td>
<td>2</td>
</tr>
<tr>
<td>Foley IV catheter (LATEX)</td>
<td>4</td>
<td>14Fr straight cath (clear)</td>
<td>1</td>
</tr>
<tr>
<td>“Free” Foley catheter (LATEX)</td>
<td>4</td>
<td>Chux packs</td>
<td>2</td>
</tr>
<tr>
<td>mli syringes with #21 1” needle</td>
<td>8</td>
<td>16Fr straight cath (latex free)</td>
<td>1</td>
</tr>
<tr>
<td>mli syringes with #22 1.5” needle</td>
<td>4</td>
<td>12” Suction tubing</td>
<td>1</td>
</tr>
<tr>
<td>mli syringes with #25/8” needle</td>
<td>4</td>
<td>14Fr suction</td>
<td>1</td>
</tr>
<tr>
<td>d5 W/ filter needle</td>
<td>4</td>
<td>Sterile Gloves (6, 6½, 7, 7½, 8)</td>
<td>4 ea</td>
</tr>
<tr>
<td>aine flush syringes 10 ml</td>
<td>5</td>
<td>Lactated Ringers IV bag 1000ml</td>
<td>2</td>
</tr>
<tr>
<td>alcohol swab</td>
<td>5</td>
<td>Normal Saine IV bag 1000ml</td>
<td>2</td>
</tr>
<tr>
<td>blood tubing with pump</td>
<td>3</td>
<td>Hanger from IV pole</td>
<td>1</td>
</tr>
</tbody>
</table>

#### OB Hemorrhage Measuring Blood Loss Worksheet

<table>
<thead>
<tr>
<th>Item</th>
<th>Approx Dry Weight (grams)</th>
<th>Total per Category</th>
<th>Total Dry Weight of Category</th>
<th>Enter Total Weight of “Wet” items: gms (subtract dry weight for each category)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue Chux</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peripads</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large Blue Underpad</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mesh Underpants (Large)</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green towel</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaginal Packing (2 in x 15 ft)</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 x 4 Sponge</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ice-filled baby diaper (newborn with 12 oz ice chips)</td>
<td>230</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dry lap sponge (Large)</td>
<td>20</td>
<td>“Soaked” lap = 60 ml/lap</td>
<td>“Partially wet” lap = 30 ml/lap</td>
<td>(Add est blood in laps)</td>
</tr>
<tr>
<td>Graduated Container/Suction Canister volume</td>
<td></td>
<td>Est. amniotic fluid volume ml</td>
<td>Container #1 ml</td>
<td>(Add est. catheter volume)</td>
</tr>
<tr>
<td>Irrigation fluid volume ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non Blood Sub Total ml</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TOTAL ESTIMATED BLOOD LOSS (ml)
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Massive Transfusion Protocol

- OB Population at risk for massive hemorrhage
- Access to massive transfusion products must be available
- Education of OB staff, providers and Blood Bank regarding initiation of MTP
- OBH Drills
- OBH Simulation during skills days
- Practice, practice, practice!
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OBH Quarterly Report: Women who received Any Blood Product
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Measure A1: % Women Transfused Run Chart for John Muir Med Center
OBH: Sustaining Improvement

- Continue to measure
- Simulation/Skills Day
- Drills
- Debrief to identify opportunities for improvement
CMQCC Preeclampsia Collaborative

A California Toolkit to Transform Maternity Care

Improving Health Care Response to Preeclampsia:
A California Quality Improvement Toolkit

THIS COLLABORATIVE PROJECT WAS DEVELOPED BY:
THE PREECLAMPSIA TASK FORCE
CALIFORNIA MATERNAL QUALITY CARE COLLABORATIVE
MATERNAL, CHILD AND ADOLESCENT HEALTH DIVISION, CENTER FOR FAMILY HEALTH
CALIFORNIA DEPARTMENT OF PUBLIC HEALTH
CMQCC Preeclampsia Collaborative

![Graph showing data related to preeclampsia collaborative over the months from July 2012 to January 2013. The graph indicates the percentage of cases falling into different time categories: Within 30m, 30-60 minutes, 60-90 minutes, Greater than 90m, and Unmedicated.]
CMQCC Preeclampsia Collaborative
CMQCC Preeclampsia Collaborative

• Improved availability of IV push meds
• Policy Changes:
  – Cardiac telemetry changed to continuous pulse ox. for IVP Labetalol
  – Added ACOG Hypertension definitions to policy
• Educated all RN staff to Collaborative goals, P&P revisions, and correct BP measurement and validation
• Discharge Educational Materials
  – incorporate into EPIC
• Discharge F/U (meds versus no meds)
• Debrief (facilitate improvement efforts)
• BP Competency- Skills Day
CMQCC Preeclampsia Collaborative

Timely Care for Patients with Severe Preeclampsia/Hypertension
Catherine Arcangelo, MSN, RN
University of San Francisco

**Problem Statement**

- Maternal mortality is caused by pre-term birth, hypertension, pre-existing conditions, and pregnancy-induced hypertension also known as preeclampsia/eclampsia (California Department of Public Health, 2011, World Health Organization, 2013).
- 80% women die in the United States each year as a result of pregnancy or delivery complications (CDC, 2013).
- A retrospective assessment of a labor and delivery unit revealed a knowledge deficit among physicians and nurses regarding the timely and appropriate care of patients with severe preeclampsia/ hypertension.

**Rationale**

Receiving an IV antihypertensive medication within one hour of recognition of severe preeclampsia is a critical initial step in decreasing morbidity and mortality in women with severe preeclampsia (Demco, Shields, Peterson, Cape, 2013)

**Project Methodology**

Create a Severe Preeclampsia/Hypertension Algorithm for nurses based on review of:
- Antepartum Medications Administration for Severe Hypertension policy and procedure and
- “Severe Hypertension” order set.
- “Algorithm to assess treatment of severe hypertension and eclampsia should be readily available or promptly posted in all labor and delivery units” (Demco, Shields, Peterson, Cape, 2013, p. 11).
- Based on root cause analysis create evidence-based severe preeclampsia algorithm.
- Survey nurses regarding algorithm placement on the unit.
- Based on survey results, place algorithm on all Labor and Delivery unit computers.
- Educate nurses and physicians about algorithm including proper blood pressure technique, when to contact providers, when to intervene, medication specific, how often to monitor blood pressure, how to use medication/laboration of algorithm.
- Evaluate knowledge gained by nurses about algorithm information through post-surveys.
- Chart analysis: Realtime use of algorithm with IV antihypertensive medication for patients with severe preeclampsia/hypertension after implementation of algorithm (in the future)

**Results**

- 92 out of 92 (100%) of the labor and delivery nurses were educated about the new algorithm.
- One hundred percent of the nurses responded they knew where to access the algorithm on the labor and delivery unit, which is a success in itself.
- Several proposed revisions from root cause analysis were addressed, including IV locating for phlebotomy.
- Case Study Analysis: Algorithm was utilized for preeclampsia and nurse team in developing a plan for a patient with severe preeclampsia.
- Algorithm was utilized successfully and IV/IV was definitively administered after 12 minutes.
- SBP stabilized univally, and would have been given within the ideal timeframe of 15 minutes

**Sustainability**

- Algorithm will remain on a workstation on the desktop of all L&D computers
- Clinical Nurse Specialist will educate all remaining nurses about the algorithm, updated algorithm as needed, and continue to monitor timely use of IV antihypertensive treatment data.
- New policy and procedure and order set will be released to compliant algorithm.
- SBP had no reference guide before, algorithm will continue to serve as a reference after CNL is gone
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RN Survey Results: Main Barriers to Timely IV Antihypertensive Medication Administration

- No IV Access
- Issues Getting Meds From Pharmacy
- Difficulty Getting Order from MD
- Difficulty Accessing Emergency Meds
- Lack of Support From Teammates
- Staff Unfamiliar with Meds
- Insufficient/Unfamiliar with P&P
- No Standing Order Set
- Other

0 1 2 3 4 5 6 7 8 9
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[Chart showing data over time with different color categories for different time intervals and labels.

Legend:
- Green: Within 30m
- Light Green: 30-60 minutes
- Light Yellow: 60-90 minutes
- Orange: Greater than 90m
- Red: Unmedicated]
Proposed Preeclampsia Order Set

ALLERGIES □ NKA □ Allergy/Reaction

Monitoring:
□ Continuous Fetal Monitoring if undelivered and fetus viable
□ Continuous SpO2 monitoring for IV push Labetalol

Vital Signs:
□ BP q 10 minutes during IV push Antihypertensive medication administration and until BP threshold of 150/100 is achieved. Then, BP every 15 minutes for 2 hour, then every 30 minutes for 1 hour, and then every hour for 4 hours
□ Hourly I&O, contact provider if urinary output is < 30 ml/hr x 2 hours

IV fluids:
□ 1% Lidocaine 0.2 ml subcutaneously, may be used for local anesthesia when starting IV (administer with 30 gauge needle)
□ Place IV with #18 g angiocath
□ Lactated Ringers IV solution, total IV fluids not to exceed 100 ml/hr

Medications:
□ Administer antihypertensive in the sequence as numbered below (1st dose administered within 30 minutes of the identification of a confirmed elevated BP). If patient is allergic, eliminate that medication from sequence. (Indicate which medication will be administered 1st and then 2nd; If patient has chronic asthma, use Hydralazine hydrochloride as 1st antihypertensive in sequence and use Labetalol with caution if BP remains above threshold.) Notify provider if full sequence of antihypertensive given and BP remains above threshold.
□ Medicate in the following order:
  □ Hydralazine hydrochloride 10 mg IV push over 2 minutes. If BP threshold not achieved, may repeat every 20 minutes up to maximum of 30 mg/24 hours
  □ Labetalol 20 mg IV push over 2 minutes (use with caution if patient has chronic asthma)
    If BP threshold not achieved in 10 minutes, give Labetalol 40 mg IV push over 2 minutes, then
    If BP threshold not achieved in 10 minutes, give Labetalol 80 mg IV push over 2 minutes, may
    repeat every 10 minutes x 2 additional doses to maximum of 300 mg/24 hours
□ If IV access cannot be established, give Nifedipine 10 mg orally. Repeat Nifedipine 10 mg orally
  every 30 minutes until BP threshold or IV access is achieved to maximum of 180 mg/24 hours
□ Initiate Magnesium Sulfate orders with 4 gm loading dose and then 2 gm/hr

Laboratory:
□ CBC with auto differential
□ Type and Screen
□ PT □ INR □ Fibrinogen
□ LDH □ AST □ ALT □ Comprehensive Metabolic panel □ Uric Acid
□ Urine dipstick for protein □ 24 hour urine for protein & creatinine clearance

Radiologic Studies:
□ Ultrasound for AFI, fetal presentation when BP below threshold

Date: ______________________  Time: ______________________  Physician Signature: ______________________

John Muir Health – proprietary and confidential
Treatment for Severe Preeclampsia Algorithm

- Systolic BP ≥ 160 mmHg and/or Diastolic BP ≥ 110 mmHg (validated w/in 15 minutes of initial high reading)

- Inform attending physician: request bedside evaluation and orders
- Inform in-house OB
- Inform in-house anesthesiologist

- Complete the following simultaneously with assistance from second RN:

  **IV Access:**
  - 2 lines
  - Monitor FHT
  - Send labs (see Severe Hypertension order set)

  **IV Antihypertensive Medication**
  - Primary RN: First dose with 30 minutes of first severe BP recognition. Start with one med, work through entire order, then move to the other med if needed. Use med order sets once time each in 24 hours
  - No IV access:
    - Nifedipine 10 mg orally q 20 minutes until BP ≤ 150/100 or IV access obtained
    - Max 140 mg/24 hours (10 doses)

  **Labetalol**
  - Use first for patients with chronic asthma
  - Hydralazine 10 mg IV push over 2 minutes
  - Repeat BP in 20 minutes; BP ≥ 150/100: Hydralazine 10 mg IV push over 2 minutes
  - Repeat BP in 20 minutes; BP ≥ 150/100: Hydralazine 10 mg IV push over 2 minutes
  - Stop Max Dose: 30 mg/24 hours. If BP still ≥ 150/100 initiate Labetalol

  **Hydralazine**
  - Initiate continuous SpO2 monitoring
  - Use caution in patients with chronic asthma
  - Labetalol 20 mg IV push over 2 minutes
  - Repeat BP in 10 minutes; BP ≥ 150/100: Labetalol 40 mg IV push over 2 minutes
  - Repeat BP in 10 minutes; BP ≥ 150/100: Labetalol 80 mg IV push over 2 minutes
  - Repeat BP in 10 minutes; BP ≥ 150/100: Labetalol 30 mg IV push over 2 minutes
  - Stop Max Dose: 200 mg/24 hours. If BP still ≥ 150/100 initiate Hydralazine

  **Seizure Prophylaxis**
  - Secondary RN to initiate
  - Magnesium Sulfate infusion 2 gm/hour
  - Refer to Magnesium Sulfate order set
  - Magnesium Sulfate 4 gm bolus
    - Followed by Magnesium Sulfate infusion 2 gm/hour
  - Hourly I&O
  - Contact physician if urinary output < 30 ml/hr x 2 hours
  - Lactated Ringer’s IV solution not to exceed 100 ml/hr

Revision: 7/22/2015
CMQCC California Partnership for Maternal Safety (CPMS) Bundles

**Readiness**
- Every unit
  - Hemorrhage cart with supplies, checklist, and instruction cards for intratocentria
  - Immediate access to hemorrhage medications (kit or equivalent)
  - Establish a response team - who to call when the need is included (blood bank, advanced anesthesia, etc.)
  - Establishing intrathoracic and endotracheal intubation protocols (type 0 negative/uncircumstantiated)
  - Unit education on protocols, unit-based drills with post-drill debriefs

**Recognition & Prevention**
- Every patient
  - Assessment of hemorrhage risk (pregnancy, on admission, and at other appropriate times)
  - Measurement of cumulative blood loss (if possible)
  - Active management of the 3rd stage of labor (department-wide protocol)

**Response**
- Every hemorrhage
  - Unit-standard, step-based, obstetric hemorrhage emergency management protocol with checklists
  - Support program for patients, families, and staff for all significant hemorrhages

**Reporting/Systems Learning**
- Every unit
  - Establish a culture of learning for high risk patients and post-event debriefs to identify successes and opportunities
  - Multi-disciplinary review of serious hemorrhage cases
  - Monitor outcomes and process metrics in periodical and quality improvement (PQI) committees

This bundle was developed by the Council On Patient Safety in Women's Health Care, California Partnership for Maternal Safety, 2014.
## OBH Bundle: Gap Analysis

<table>
<thead>
<tr>
<th>Readiness: Every Unit</th>
<th>Gap Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemorrhage cart with supplies, checklist, instruction cards and posters</td>
<td>In place</td>
</tr>
<tr>
<td>Immediate access to hemorrhage medications (kit or equivalent)</td>
<td>In place</td>
</tr>
<tr>
<td>Establish a response team - who to call when help in needed</td>
<td>Code Pink can be called, but not specific to hemorrhage; May need &quot;Code Crimson&quot; or something similar</td>
</tr>
<tr>
<td>Establish massive and emergency release transfusion protocols/policies (type O negative/uncrossmatched)</td>
<td>In place</td>
</tr>
<tr>
<td>Unit education on processes, unit-based drills (with post-drill debriefs)</td>
<td>In place</td>
</tr>
<tr>
<td><strong>Recognition: Every Patient</strong></td>
<td></td>
</tr>
<tr>
<td>Assessment of hemorrhage risk (prenatal, on admission, prior to delivery and post birth)</td>
<td>Inconsistent, suggest adding hemorrhage risk screening to EPIC</td>
</tr>
<tr>
<td>Measurement of cumulative blood loss ( formal, as quantitative as possible)</td>
<td>In place</td>
</tr>
<tr>
<td>Active management of 3rd stage of labor</td>
<td>In place</td>
</tr>
<tr>
<td><strong>Response:</strong></td>
<td></td>
</tr>
<tr>
<td>Unit-standard, state-based on QBL, obstetric hemorrhage emergency management plan with checklists</td>
<td>In place</td>
</tr>
<tr>
<td>Support program for patients, families, and staff for all significant hemorrhages</td>
<td>Social services, pastoral services referrals, in place</td>
</tr>
<tr>
<td><strong>Reporting/Systems Learning: Every Unit</strong></td>
<td></td>
</tr>
<tr>
<td>Establish a culture of a huddle for high risk patients and post-event debriefs to identify successes and opportunities</td>
<td>Debriefs not consistent</td>
</tr>
<tr>
<td>Multidisciplinary review of all significant hemorrhages for systems issues</td>
<td>Suggest adding as an agenda item to Perinatal Quality and Safety Committee</td>
</tr>
<tr>
<td>Monitor outcomes and process metrics in perinatal quality improvement committee</td>
<td>In place</td>
</tr>
</tbody>
</table>
# Preeclampsia Bundle: Gap Analysis

**Readiness: Every Unit**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gap Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt standard diagnostic criteria, monitoring and treatment for severe preeclampsia/eclampsia to include order sets and algorithms</td>
<td>In place</td>
</tr>
<tr>
<td>Unit team education, reinforced by regular unit-based drills</td>
<td>In place</td>
</tr>
<tr>
<td>Process for timely triaging of pregnant and postpartum women with hypertension including ED and outpatient areas</td>
<td>In place</td>
</tr>
<tr>
<td>Rapid access used for severe hypertension/eclampsia: Medications should be stocked and readily available on L&amp;D and in other areas where patients may be treated with brief guide for administration and dosage</td>
<td>Need to increase par level in Pyxis for Labetalol to encompass first three doses (7 - 20 mg vials)</td>
</tr>
<tr>
<td>System plan for escalation, obtaining appropriate consultation and maternal transport, as needed</td>
<td>In place</td>
</tr>
</tbody>
</table>

**Recognition: Every Patient**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gap Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adoption of a standard process for the measurement and assessment of BP and urine protein for all pregnant and postpartum women</td>
<td>In place</td>
</tr>
<tr>
<td>Implementation of standard response to maternal early warning criteria</td>
<td>Evaluate if this can be put into EPIC</td>
</tr>
<tr>
<td>Implementation of facility-wide standards for educating women on signs and symptoms of preeclampsia and hypertension - prenatal and postpartum</td>
<td>In place</td>
</tr>
</tbody>
</table>

**Response: All severe hypertension/preeclampsia**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gap Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility-wide standard processes with checklists for management and treatment of: Severe Hypertension; Eclampsia, seizure prophylaxis, and magnesium over dosage; Postpartum, emergency department and outpatient presentation of severe hypertension/preeclampsia</td>
<td>Algorithm and order sets in place</td>
</tr>
<tr>
<td>Support plan for patients, families and staff for ICU admissions and serious complications of severe hypertension</td>
<td>Social services, pastoral services referrals</td>
</tr>
</tbody>
</table>

**Reporting/Systems Learning: Every Unit**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Gap Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of a huddle for high risk cases and post-event team debrief</td>
<td>Debriefs not consistent</td>
</tr>
<tr>
<td>Review all severe hypertension/eclampsia/ICU cases for systems issues</td>
<td>In place</td>
</tr>
<tr>
<td>Monitor outcomes and process metrics</td>
<td>In place</td>
</tr>
<tr>
<td>Documentation of education of pregnant and postpartum women about symptoms of preeclampsia</td>
<td>In place</td>
</tr>
</tbody>
</table>
OBH Data: Women receiving $\geq 4$ units RBC

Massive transfusions ($\geq 4$ RBC units) per 1000 mothers

- Q1 2015: 5 per 1000
- Q2 2015: 6 per 1000
- Q3 2015: 4 per 1000
- Q4 2015: 3 per 1000

John Muir Medical Center
## OBH Dashboard

<table>
<thead>
<tr>
<th>Measure</th>
<th>Benchmark</th>
<th>Q1 2015</th>
<th>Q2 2015</th>
<th>Q3 2015</th>
<th>Q4 2015</th>
<th>Q1 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # Patients Transfused/1000</td>
<td>Not Available</td>
<td>12.15</td>
<td>10.8</td>
<td>8.2</td>
<td>4.5</td>
<td>11.4</td>
</tr>
<tr>
<td>Total # units blood products/Del &gt;20wks</td>
<td>40-60/1000</td>
<td>67.0</td>
<td>106.0</td>
<td>31.3</td>
<td>8.9</td>
<td>0.0</td>
</tr>
<tr>
<td>Total # Patients Rcd ≥ 4 units/Del &gt;20wks</td>
<td>2-4/1000</td>
<td>4.6</td>
<td>5.4</td>
<td>4.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>
Preeclampsia: Timely Treatment

![Graph showing timely treatment of preeclampsia from Q1 2015 to Q4 2015. The graph indicates fluctuations in treatment timelines across different quarters.](image)
Preeclampsia Safety Bundle

John Muir Medical Center
Journey to Improvement
HRO Roadmap: Leadership

Months 1 – 6  
“We Listen”

<table>
<thead>
<tr>
<th>Leader-Cascaded “Small Bites” Booster Modules (every 8 weeks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTI</td>
</tr>
</tbody>
</table>

Months 7 – 12  
“We Explain”

<table>
<thead>
<tr>
<th>ARCC</th>
<th>SBAR</th>
<th>Numeric/Phonetic Clarifying ?s</th>
<th>Repeat Back / Read Back</th>
<th>Stop &amp; Resolve Validate &amp; Verify</th>
<th>STAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team member checking</td>
<td>Team member coaching</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Months 13 – 18  
“We Work Together as a Team”

<table>
<thead>
<tr>
<th>Patient Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quietness of Environment</td>
</tr>
</tbody>
</table>

Revised 11.1.15

John Muir Health  – proprietary and confidential
RN/Provider Safety Survey
HRO Error Prevention: ARCC

ARCC is an assertion and escalation technique that, when used correctly, allows us to protect in a manner of mutual respect. Here's how:

Use the lightest touch possible...

**Ask a question**

Request a **Change**

Voice a **Concern**

If no success, invoke a...

**Chain of Command**

Use the Safety Phrase

“I have a concern…”
HRO

• “Please Heal Me”
• “Please Don’t Hurt Me”
• “Please Be Nice to Me”
“Please Heal Me”

<table>
<thead>
<tr>
<th>Please Heal Me/Quality</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>VBAC Success</td>
<td>9/9</td>
<td>100%/Jan 2016</td>
</tr>
<tr>
<td>VBAC consent process</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboring C/S Rate</td>
<td>6.9%</td>
<td>Jan 2016</td>
</tr>
<tr>
<td>Antenatal Steroids (PC3)</td>
<td>100%</td>
<td>Q4 2015</td>
</tr>
<tr>
<td>Exclusive Breastfeeding (PC5)</td>
<td>73%</td>
<td>Jan 2016</td>
</tr>
<tr>
<td>VTE prophylaxis</td>
<td></td>
<td></td>
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<tr>
<td>Pertussis Vaccine while pregnant</td>
<td></td>
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<tr>
<td>Timely admin antihypertensive</td>
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</tr>
</tbody>
</table>
“Please Don’t Hurt Me”

Please Don’t Hurt Me/Safety

- < 39 wk IOL (PC1) 0% (Jan 2016)/1.587% (2015)
- NTSV (PC2) 25%/(Jan 2016); 23% (2015)
- NB blood infections (PC4) 0% (Jan 2016)/7.2% (2015)
- GBS screen done 99%/(Jan 2016; 200/202)
- GBS correct abx administered 100%/(Jan 2016; 11/11)
- Sponge Count compliance 95%/(Q4 2015; 463/486)
- Hand hygiene
- Blood products use
- 3/4th degree lacs
“Please Be Nice to Me”

Please be nice to me / Experience
On time C/s starts (respect my time)
Unattended deliveries (don’t miss my delivery)
IOL cancellation/delay/successful getting in
Patient calls day prior to c/s or IOL
Journey to Improvement: Continuing to Climb