The California Partnership for Maternal Safety

Obstetric Hemorrhage

Patient Safety First

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CMQCC Clinical Implementation Lead
Disclosure

• We have no financial conflicts to disclose
Objectives

• Identify common causes of severe maternal morbidity and mortality
• Discuss national efforts to address severe maternal morbidity and mortality
• Define the purpose of the California Partnership for Maternal Safety
• Identify key elements of the OB Hemorrhage Patient Safety bundle
# Assessments of Preventability

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>North Carolina “Preventable”</th>
<th>California “Good or strong chance to alter the outcome”</th>
<th>United Kingdom “Substandard care that had a major contribution”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemorrhage</td>
<td>93%</td>
<td>70%</td>
<td>44%</td>
</tr>
<tr>
<td>Preeclampsia</td>
<td>60%</td>
<td>60%</td>
<td>64%</td>
</tr>
<tr>
<td>Sepsis / Infection</td>
<td>43%</td>
<td>50%</td>
<td>46%</td>
</tr>
<tr>
<td>DVT / VTE</td>
<td>17%</td>
<td>50%</td>
<td>33%</td>
</tr>
<tr>
<td>Cardiomyopathy</td>
<td>22%</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>Amniotic Fluid Embolism</td>
<td>0%</td>
<td>0%</td>
<td>15%</td>
</tr>
</tbody>
</table>
# Maternal Mortality and Severe Morbidity

Approximate distributions, compiled from multiple studies

<table>
<thead>
<tr>
<th>Cause</th>
<th>Mortality (1-2 per 10,000)</th>
<th>ICU Admit (1-2 per 1,000)</th>
<th>Severe Morbid (1-2 per 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTE and AFE</td>
<td>15%</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>Infection</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Hemorrhage</td>
<td>15%</td>
<td>35%</td>
<td>55%</td>
</tr>
<tr>
<td>Preeclampsia</td>
<td>15%</td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Cardiac Disease</td>
<td>25%</td>
<td>15%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Obstetric Hemorrhage: Summary

- Most common **preventable** cause of maternal mortality
- Far and away the most common cause of Severe Maternal Morbidity
- High rates of provider “quality improvement opportunities”

[Diagram: No Denial, No Delay]
Revision of Sentinel Event Definition for Obstetrics: Jan 2015

 Added cases of severe temporary harm and for OB defined as Severe Maternal Morbidity:....
 1. Transfusion of ≥4 units of packed red cells
 2. Admission of the mother to an ICU

• BUT: excluded cases as the result of the natural course of the underlying condition (e.g. transfusions for previas)
• ALL cases should go to a multidisciplinary systems review committee (not peer review) for initial assessment

The Joint Commission. Comprehensive Accreditation Manual for Hospitals, Update 2, January 2015: Sentinel Events: SE-1. Also see the ACOG/TJC clarification. Available at: http://www.jointcommission.org/assets/1/6/CAMH_24_SE_all_CURRENT.pdf
Severe Morbidity & Mortality
Joint Statement

January 28, 2015
Severe Maternal Morbidity: Clarification of the New Joint Commission Sentinel Event Policy

In January 2015, the Joint Commission issued a revised definition for a sentinel event, expanding the concept for all specialties to include “a patient safety event (not primarily related to the natural course of the patient’s illness or underlying condition) that reaches a patient and results in any of the following: death, permanent harm, or severe temporary harm” (1). For obstetrics, the new definition for severe temporary harm focused on severe maternal morbidity defined as receiving 4 or more units of blood products (subsequently revised to 4 or more units of RBCs) and/or ICU admission (2,3). Although this revision brought more clarity and consistency to a general understanding of which cases meet criteria for sentinel events, it unintentionally created confusion about inclusion of all severe maternal morbidities. A number of cases that meet the criteria for severe maternal morbidity will be primarily related to the natural course of the patient’s illness (such as bleeding from a placenta previa) and thus would not reach the level of a sentinel event. Further, some cases meeting the criteria for severe maternal morbidity, which are not primarily related to the natural course of the woman’s illness, may, upon review, also not meet criteria for sentinel event.

The purpose of reviewing adverse outcomes is not to be punitive; it is to learn and ultimately improve outcomes. A culture of learning from adverse events, rather than a culture of blame and punishment, is critical to improving patient outcomes. We strongly encourage that all cases of severe maternal morbidity, whether sentinel events or not, undergo a thorough and credible multidisciplinary comprehensive review (4,5) and analysis, resulting in an action plan for improvement, when appropriate. There will certainly be opportunities to learn and improve from multidisciplinary review of these cases, even if they do not meet the criteria for a Joint Commission sentinel event. Sentinel event review process should be reserved for those cases of severe maternal morbidity that are deemed to meet the Joint Commission definition.
Improving Health Care Response to Obstetric Hemorrhage Version 2.0

Audrey Lyndon, PhD, RNC, FAAN; David Lagrew, MD; Larry Shields, MD; Elliott Main, MD; Valerie Cape, Editors.

University of California, San Francisco; Memorial Care Health Systems; Dignity Health; California Pacific Medical Center; California Maternal Quality Care Collaborative

www.CMQCC.org

Will implementation of a bundle change outcomes?
## Comprehensive Maternal Hemorrhage Protocols Reduce the Use of Blood Products

<table>
<thead>
<tr>
<th></th>
<th>BEFORE Intro. (2 mos)</th>
<th>5 mos AFTER Intro. (2 mos)</th>
<th>10 mos AFTER Intro. (2 mos)</th>
<th>Difference (BEFORE vs. 10mos AFTER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Deliveries</td>
<td>10,433</td>
<td>10,457</td>
<td>11,169</td>
<td>+7%</td>
</tr>
<tr>
<td>Stage II Hemorrhage</td>
<td>7.0</td>
<td>9.5</td>
<td>9.6</td>
<td>+37%</td>
</tr>
<tr>
<td>(per 1,000 births)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage III Hemorrhage</td>
<td>2.7</td>
<td>3.1</td>
<td>4.8</td>
<td>+77%</td>
</tr>
<tr>
<td>(per 1,000 births)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRBC (N)</td>
<td>232</td>
<td>189</td>
<td>197</td>
<td>-15% (p=0.02)</td>
</tr>
<tr>
<td>Total Blood Prod</td>
<td>375</td>
<td>354</td>
<td>297</td>
<td>-25% (p&lt;0.01)</td>
</tr>
<tr>
<td>(includes coags) (N)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBP per 1,000 births</td>
<td>35.9</td>
<td>33.9</td>
<td>26.6</td>
<td>-27% (p&lt;0.01)</td>
</tr>
</tbody>
</table>

Shields et al AJOG 2014 (29 hospitals, Dignity Health)
Importance of Protocols and Checklists

The American College of Obstetricians and Gynecologists
COMMITTEE OPINION
Number 526 • May 2012
Committee on Patient Safety and Quality Improvement
This document reflects emerging concepts on patient safety and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed.

Standardization of Practice to Improve Outcomes

ABSTRACT: Protocols and checklists have been shown to improve patient safety through standardization and communication. Standardization of practice to improve quality outcomes is an important tool in achieving the shared vision of patients and their health care providers.
Importance of Drills and Debriefs

Committee Opinion

The American College of Obstetricians and Gynecologists

Committee on Patient Safety and Quality Improvement

This document reflects emerging concepts on patient safety and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed.

Preventing for Clinical Emergencies in Obstetrics and Gynecology

Abstract: Patient care emergencies may occur at any time in any setting, particularly the inpatient setting. It is important to obstetrician-gynecologists prepare themselves by assessing potential emergencies, establishing early warning systems, designating specialized first responders, conducting emergency drills, and debriefing staff after actual events to identify strengths and opportunities for improvement. Having such systems in place may reduce or prevent the severity of medical emergencies.
Perspective: 4 Key Steps for Emergencies

• Have a “Safety Bundle”
• “Standard Work”—Check list for putting the bundle into action
• Practice (drills)
• Feedback and tweaking (debriefs and formal case reviews)
National Partnership for Maternal Safety

Overview
The Council on Patient Safety in Women’s Health Care (the Council) proposes to support the further development and implementation of Patient Safety Bundles for obstetric hemorrhage, severe hypertension in pregnancy, and venous thromboembolism prevention in pregnancy.

Find out more about the National Partnership for Maternal Safety

Severe Maternal Morbidity
Learn the process for reviewing severe maternal morbidity events, including information about who should review the event, when to review and how to review. Download easy-to-use forms to expedite your reporting processes.

Download the SMM reporting forms

Hemorrhage Bundle
Find out how to be prepared to handle obstetric hemorrhage events by reviewing the Hemorrhage Bundle. Learn about readiness steps, recognition and prevention, response strategies and more

Download the Hemorrhage Bundle

California Partnership for Maternal Safety
National Council on Patient Safety in Women’s Health Care

Includes senior leaders from:

- ACOG
- AWHONN
- ACNM
- SMFM
- AAFP
- SOAP, ASA,
- AHA, VHA (Hospitals)
- AABC (Birthing Centers)
- The Joint Commission
- AAFP
- MCHB, CMMI, CMS (federal agencies)
THE California Partnership for Maternal Safety

- Multi-year, multi-stakeholder project
- California focus is implementation of national patient safety bundles for obstetric hemorrhage and severe hypertension/preeclampsia
- Focus on a standardized approach for the emergent patient occurrences
- CPMS is funded by Merck for Mothers
  - Global and national initiative that focuses on improving health and well-being of mothers during pregnancy and childbirth
What’s the difference?

OB Hemorrhage and Preeclampsia Collaboratives
- IHI collaborative model
- In person meetings
- CMQCC central sponsor
- Monthly web based meetings
- Data reporting

California Partnership for Maternal Safety
- Mentor based model
- No in person meetings
- CMQCC provides framework
  - Mentor groups provide “mini-collaborative”
  - More individual attention
- Monthly web based mentor/team meetings
- Decreased data reporting burden
CPMS Objective

Our goal is to ensure that **100% of hospitals with maternity services in California** are ready to respond to the two most common obstetric emergencies by implementing patient safety bundles for **obstetric hemorrhage** and **preeclampsia**.
Scope of the project

- 260 hospitals
- 58 counties
- 163,696 square miles
  - *England has 50,346 sq. miles*
Mentors: Physician, RN

Hospital Implementation Teams
Make up of Hospital Teams

- Physician champion
- Nursing – CNS, Manager LD & PP
- Ancillary/Other Blood bank, pharmacy, lab, ED, ICU

Improved Maternity Care

CMQCC: Transforming Maternity Care
California Partnership for Maternal Safety

Merck for mothers
Committed to Saving Lives

WHY THIS ISSUE

No woman should die giving life.

Every two minutes, a woman dies from complications related to pregnancy and childbirth. That’s 800 women a day, the vast majority of them in developing countries.

Our Vision

Can you imagine a world where no mother dies giving birth? We can. That’s the promise of Merck for Mothers. Working together with...
Patient Safety Bundles are the **foundation** for the California Partnership for Maternal Safety.

- Readiness
- Recognition & Prevention
- Reporting
- Response

California Partnership for Maternal Safety
The name of the game

**implementation**

/ˌɪmpləˈmɛnətʃ(ə)nt/

*noun*

the process of putting a decision or plan into effect; execution.
"she was responsible for the implementation of the plan"
What’s the difference?

**Toolkit**
- Compilation of resources in various areas of recognized best practices in clinical situations
  - OB Hemorrhage
  - Preeclampsia
  - Cardiovascular disease

**Bundle**
- Recognized best practice elements to achieve optimal outcomes
  - Use resources in toolkits to achieve elements of the bundle
OB Hemorrhage Bundle

California Partnership for Maternal Safety

**READINESS**
- Every unit
  - Hemorrhage cart with supplies, checklist, instruction cards and posters
  - Immediate access to hemorrhage medications (kit or equivalent)
  - Establish a response team – who to call when help is needed
  - Establish massive and emergency release transfusion protocols/policies (type O negative/uncrossmatched)
  - Unit education on processes, unit-based drills (with post-drill debriefs)

**RECOGNITION & PREVENTION**
- Every patient
  - Assessment of hemorrhage risk (prenatal, on admission, prior to delivery and post birth)
  - Measurement of cumulative blood loss (formal, as quantitative as possible)
  - Active management of 3rd stage of labor

**RESPONSE**
- Every hemorrhage
  - Unit-standard, stage-based on OBI, obstetric hemorrhage emergency management plan with checklists
  - Support program for patients, families, and staff for all significant hemorrhages

**REPORTING/SYSTEMS LEARNING**
- Every unit
  - Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
  - Multidisciplinary review of significant hemorrhages for systems issues
  - Monitor outcomes and process metrics in perinatal quality improvement committee

This bundle was developed by the Council On Patient Safety in Women’s Health Care, National Partnership for Maternal Safety 2014
Every unit

OB Hemorrhage - Readiness

- Hemorrhage cart with supplies, checklist, instruction cards and posters
- Immediate access to hemorrhage medications
- Establish a response team – who to call when help is needed
- Establish massive and emergency release transfusion protocol/policies
- Unit education on processes, unit-based drills (with debriefs)
CHECKLIST: CARTS, KITS, TRAYS

**OB Hemorrhage Cart: Recommended Instruments**
- Set of vaginal retractors (long right angle); long weighted speculum
- Sponge forceps (minimum: 2)
- Sutures (for cervical laceration repair and B-Lynch)
- Vaginal Packs
- Uterine balloon
- Banjo curettes, several sizes
- Long needle holder
- Uterine forceps
- Bright task light on wheels; behind ultrasound machine
- Diagrams depicting various procedures (e.g. B-Lynch, uterine artery ligation, Balloon placement)

**OB Hemorrhage Medication Kit: Available in L&D and Postpartum Floor**

**PYXIS/refrigerator**
- Pitocin 10-40 units per 500-1000 mL NS 1 bag
- Hemabate 250 mcg/mL 1 ampule
- Cytotec 200 mcg tablets 5 tabs
- Methergine 0.2 mg/mL 1 ampule

**OB Hemorrhage Tray: Available on Postpartum Floor**
- IV start kit
- 16 gauge angiocath
- 1 liter bag lactated Ringers
- IV tubing
- Sterile Speculum
- Urinary catheter kit with urimeter
- Flash light
- Lubricating Jelly
- Assorted sizes sterile gloves
- Lab tubes: red top, blue top, tiger top

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Toolkit resource

OB
Hemorrhage
Emergency
Medication Kit

- Methergine
- Hemabate
- Misoprostol

Can be the biggest reason for delay in treatment

Work with pharmacy to determine what will work best for your facility
Toolkit resource

- Toolkit has variety of materials r/t development of OB Hemorrhage drills
  - Consider insitu drills for systems issues
OB Hemorrhage
Recognition & Prevention

• Assessment of hemorrhage risk (prenatal, on admission, prior to birth and post birth)
• Measurement of cumulative blood loss (formal, as quantitative as possible)
• Active management of 3rd stage of labor
## Toolkit resource

### Risk Assessment

<table>
<thead>
<tr>
<th>Low (Clot only)</th>
<th>Medium (Type and Screen)</th>
<th>High (Type and Crossmatch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No previous uterine incision</td>
<td>Prior cesarean birth(s) or uterine surgery</td>
<td>Placenta previa, low lying placenta</td>
</tr>
<tr>
<td>Singleton pregnancy</td>
<td>Multiple gestation</td>
<td>Suspected placenta accreta, percreta, increta</td>
</tr>
<tr>
<td>≤ 4 previous vaginal births</td>
<td>&gt; 4 previous vaginal births</td>
<td>Hematocrit &lt; 30 AND other risk factors</td>
</tr>
<tr>
<td>No known bleeding disorder</td>
<td>Chorioamnionitis</td>
<td>Platelets &lt; 100,000</td>
</tr>
<tr>
<td>No history of post partum hemorrhage</td>
<td>History of previous post partum hemorrhage</td>
<td>Active bleeding (greater than show) on admit</td>
</tr>
<tr>
<td></td>
<td>Large uterine fibroids</td>
<td>Known coagulopathy</td>
</tr>
</tbody>
</table>
 Toolkit resource

- Quantification of blood loss
  - Not perfect – but more accurate
OB Hemorrhage Response

- Unit-standard, stage-based (see hemorrhage algorithm) on QBL, obstetric hemorrhage emergency management plan with checklists
- Support program for patients, families, and staff for all significant hemorrhages
**Toolkit and resources**

- **OB Hemorrhage Emergency Management Plan: Checklist format**

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**Obstetric Hemorrhage Emergency Management Plan: Checklist Format**

**Stage 0: All Births – Prevention & Recognition of OB Hemorrhage**

**Prenatal Assessment & Planning**

- Identify and prepare for patients with special considerations: Placenta Previa/Acreta, Bleeding Disorder, or those who Decline Blood Products
- Screen and aggressively treat severe anemia: if oral iron fails, initiate IV Iron Sucrose Protocol to reach desired Hgb/Hct, especially for at-risk mothers.

**Admission Assessment & Planning**

- Verify Type & Antibody Screen from prenatal record
  - If not available,
    - Order Type & Screen (lab will notify if 2nd specimen needed for confirmation)
- If prenatal or current antibody screen positive (if not low level anti-D from Rho-GAM),
  - Type & Crossmatch 2 units PRBCs
- All other patients,
  - Send specimen to blood bank

**Ongoing Risk Assessment**

- Evaluate for development of additional risk factors in labor:
  - Prolonged 2nd 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
  - Monitor women postpartum for increased bleeding

**Admission Hemorrhage Risk Factor Evaluation**

<table>
<thead>
<tr>
<th>Low (Clot only)</th>
<th>Medium (Type and Screen)</th>
<th>High (Type and Crossmatch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No previous uterine incision</td>
<td>Prior cesarean birth(s) or uterine surgery</td>
<td>Placenta previa, low-lying placenta</td>
</tr>
<tr>
<td>Singleton pregnancy</td>
<td>Multiple gestation</td>
<td>Suspected Placenta accreta or percreta</td>
</tr>
<tr>
<td>No known bleeding disorder</td>
<td>&gt; 4 previous vaginal births</td>
<td>Hematocrit &lt; 30 AND other risk factors</td>
</tr>
<tr>
<td>No history of PPH</td>
<td>History of previous PPH</td>
<td>Thrombocytopenia</td>
</tr>
<tr>
<td>Large uterine fibroids</td>
<td></td>
<td>Platelets &lt; 100,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Active bleeding (greater than show) on admit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Known coagulopathy</td>
</tr>
</tbody>
</table>

**All Births – Prophylactic Oxytocin, Quantitative Evaluation of Blood Loss, & Close Monitoring**

- Active Management of Third Stage
  - Oxytocin infusion: 10-40 units oxytocin/1000 mL solution titerate infusion rate to uterine tone; or 10 units IM; do not give oxytocin as IV push
- Ongoing Quantitative Evaluation of Blood Loss
  - Using formal methods, such as graduated containers, visual comparisons and weight of blood soaked materials (1 gm = 1 mL)
- Ongoing Evaluation of Vital Signs

**If: Cumulative Blood Loss > 500 mL vaginal birth or > 1000 mL C/S with continued bleeding**

- Vital signs > 15% change or HR > 110, BP > 85/45, O2 sat < 95%
- Increased bleeding during recovery or postpartum,**
  - Proceed to STAGE 1
# Emotional and Family Support

## TABLE 1: INFORMATIONAL, EMOTIONAL & PHYSICAL HEALTH NEEDS AMONG WOMEN WHO EXPERIENCE MATERNAL HEMORRHAGE

<table>
<thead>
<tr>
<th>Information needs</th>
<th>PRENATAL/ before critical event</th>
<th>INTRAPARTUM/ during critical event</th>
<th>POSTPARTUM/ in hospital recovery</th>
<th>DISCHARGE</th>
<th>POSTPARTUM/ at HOME</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>What is normal bleeding postpartum</td>
<td>What is happening</td>
<td>Factual data:</td>
<td>Read the chart! Know the facts before you talk to her (i.e. don’t talk about birth control if she has had hysterectomy)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>When to seek medical care and where to go</td>
<td>What is being done</td>
<td>Orient to hemorrhage as emergent event</td>
<td>Sensitively and empathetically provide information about what has happened and her current condition</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IF HIGH RISK: Develop a plan and include information about blood donation ahead of time</td>
<td></td>
<td></td>
<td>Keep focused on patient needs; avoid personal or social conversations with colleagues</td>
<td></td>
</tr>
<tr>
<td><strong>Partner, Family, Support team</strong></td>
<td>Same as above</td>
<td>Same as above, and Assign support to Partner</td>
<td>Same as above, and Assign support to Partner</td>
<td>Same as above</td>
<td>Same as above</td>
</tr>
</tbody>
</table>
OB Hemorrhage
Debriefing Forms/Triggers

- 1,000 (1,500) ml blood loss – Stage 2 (3) hemorrhage (will depend on the frequency of events at your hospital, to be determined by your own institution)
- Administration of second dose of any uterotonic medication (methergine, hemabate, misoprostol)
- Use of uterine tamponade balloon or B-lynch suture
- Administration of blood products

CMQCC - California Partnership for Maternal Safety

OBSTETRIC HEMORRHAGE DEBRIEF FORM

The debrief form provides an opportunity for obstetric service teams to review the sequence of events, successes and barriers to a swift and coordinated response to obstetric hemorrhage.

Goal: Debrief all obstetric hemorrhages (up to five) per month that include the following triggers:
- 1000 (1500) ml blood loss – Stage 2 (3) hemorrhage (will depend on the frequency of events at your hospital, to be determined by your own institution)
- Administration of second dose of any uterotonic medication (methergine, hemabate, misoprostol)
- Use of uterine tamponade balloon or B-lynch suture
- Administration of blood products

Instructions: Complete debrief form as soon as possible after event as described above. During debrief, obtain input from as many participants as possible.

Date:________ Time:________ Submitted by:________

RECOGNITION

- Was patient assigned a hemorrhage risk?
  - Low □ Medium □ High □ Not done
  - Volume of Blood Lost: □ Formal quantification □ Visual estimation □ Both

RESPONSE

- Supplies/cart: Identify opportunities for improvement:
  - □ Appropriate supplies available
  - □ Equipment
  - □ Medications
  - □ Blood products
  - □ Procedure
  - □ Device(s) working properly? □ Yes □ No
  - □ Other issues?

- Blood products
  - □ Available without delay? □ Yes □ No
  - □ Adequate blood product volume available? □ Yes □ No

TEAMWORK

- Timely Team response? □ Yes □ No
- All roles filled?
  - □ Primary Physician □ Primary Nurse □ Charge Nurse □ Secondary Nurse □ Documentation □ Runner □ Anesthesia
  - □ Role clarity? □ Yes □ No
  - □ Was there a clear leader? □ Yes □ No
  - □ Was there clear communication? □ Yes □ No

Participants (Name, Role):

Issue(s) or Recommendation(s):

California Partnership for Maternal Safety
OB Hemorrhage Reporting/Systems Learning

• Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
• Multidisciplinary review of significant hemorrhages for systems issues
• Monitor outcomes and process metrics in perinatal quality improvement committee
FYI: OB Preeclampsia Bundle

California Partnership for Maternal Safety

- **REACTIVITY**
  - *Every unit*
    - Adopt standard diagnostic criteria, monitoring and treatment for severe preeclampsia/eclampsia to include order sets and algorithms
    - Unit team education, reinforced by regular unit-based drills
    - Process for timely triage of pregnant and postpartum women with hypertension including ED and outpatient areas
    - Rapid access for severe hypertension/eclampsia: Medications should be stock and readily available on L&D and in other areas where patients may be treated with brief guide for administration and dosage
    - System plan for escalation, obtaining appropriate consultation and maternal transport, as needed

- **RECOGNITION & PREVENTION**
  - *Every patient*
    - Adoption of a standard process for the measurement and assessment of BP and urine protein for all pregnant and postpartum women
    - Implementation of standard response to maternal early warning criteria
    - Implementation of facility wide standards for educating women on signs and symptoms of preeclampsia and hypertension – prenatal and postpartum

- **RESPONSE**
  - *All severe hypertension/preeclampsia*
    - Facility wide standard processes with checklists for management and treatment of:
      - Severe hypertension
      - Eclampsia, seizure prophylaxis, and magnesium overdose
      - Postpartum emergency department and outpatient presentation of severe hypertension/preeclampsia
    - Support plan for patients, families, and staff for ICU admissions and serious complications of severe hypertension

- **REPORTING/LEARNING**
  - *Every unit*
    - Implementation of a bundle for high risk cases and post-event team debrief
    - Review all severe hypertension/eclampsia/ICU cases for systemic issues
    - Monitor outcomes and process metrics
    - Documentation of education of pregnant and postpartum women about symptoms of preeclampsia

This bundle was developed by the Council On Patient Safety in Women’s Health Care, National Partnership for Maternal Safety 2014
<table>
<thead>
<tr>
<th>Mentor Teams</th>
<th>Participating Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North</strong></td>
<td></td>
</tr>
<tr>
<td>7 (14 mentors)</td>
<td>43</td>
</tr>
<tr>
<td><strong>South</strong></td>
<td></td>
</tr>
<tr>
<td>6 (12 mentors)</td>
<td>43 (3)*</td>
</tr>
<tr>
<td><strong>Unassigned mentors</strong></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
</tr>
<tr>
<td>13 Teams</td>
<td>35 mentors</td>
</tr>
<tr>
<td></td>
<td>89</td>
</tr>
</tbody>
</table>

Is your hospital a member of the **California Partnership for Maternal Safety**?

- Alameda County
- Alta Bates
- Anaheim Regional
- Arrowhead
- Citrus Valley
- Community Hospital of Monterey Peninsula
- Community Memorial (Ventura)
- Community Regional Fresno
- Contra Costa
- CPMC – St Luke’s
- Desert Valley
- Doctors – Modesto
- Dominican Santa Cruz
- Enloe Medical Center
- Foothill Presbyterian
- Fountain Valley Regional Hospital
- Fremont Medical Center
- Garfield Medical Center
- Good Samaritan – LA
- Hemet Valley
- Huntington Memorial Hospital
- John Muir Medical Center
- Kaiser Anaheim
- Kaiser Antioch
- Kaiser Baldwin Park
- Kaiser Downey
- Kaiser Fontana
- Kaiser Fresno
- Kaiser Harbor City-South Bay
- Kaiser Irvine
- Kaiser Los Angeles
- Kaiser Modesto
- Kaiser Moreno Valley
- Kaiser Oakland
- Kaiser Ontario
- Kaiser Panorama City
- Kaiser Redwood City
- Kaiser Riverside
- Kaiser Roseville
- Kaiser San Diego
- Kaiser San Francisco
- Kaiser San Jose
- Kaiser San Leandro
- Kaiser Santa Clara
- Kaiser Santa Rosa
- Kaiser South Sacramento
- Kaiser Vacaville
- Kaiser Vallejo
- Kaiser Walnut Creek
- Kaiser West Los Angeles
- Kaiser Woodland Hills
- Lodi Memorial Hospital
- Long Beach Memorial
- Lucile Packard
- Children’s Hospital
- Mad River
- Marin General Hospital
- Mendocino Coast Hospital
- Mercy San Juan Hospital
- Methodist Hospital of Southern California
- Northbay Medical Center
- Orange Coast
- Palomar Health
- Pioneer Hospital
- Pomerado Hospital
- Pomona Valley Regional Medical Center
- Redlands Community Hospital
- Saddleback
- Salinas Valley Memorial
- San Antonio Community Hospital
- San Joaquin Bakersfield
- San Joaquin General
- Santa Barbara Cottage
- Santa Paula Memorial Hospital
- Scripps La Jolla
- Sonoma Valley Hospital
- Sonora Regional Medical Center
- St. Helena Clear Lake
- St. Josephs Orange
- St. Rose
- Sutter Sacramento
- Twin Cities Community Hospital
- UC Davis Medical Center
- UC Irvine Medical Center
- UC San Diego Medical Center
- UCLA Medical Center Ronald Regan
- UCLA Olive View
- Ventura County Medical Center
- Whittier
Breakdown of hospitals by delivery volume in California

Based on Annual Births

<table>
<thead>
<tr>
<th>Annual Births Range</th>
<th>Number of Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;100</td>
<td>6</td>
</tr>
<tr>
<td>101-1000</td>
<td>82</td>
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<tr>
<td>1001-2000</td>
<td>70</td>
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<td>2001-3000</td>
<td>49</td>
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<tr>
<td>3001-5000</td>
<td>37</td>
</tr>
<tr>
<td>&gt;5000</td>
<td>10</td>
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</tbody>
</table>

CMQCC: Transforming Maternity Care
Small Hospital Advisory Group

- 82 hospitals in CA with <1000 births per year
  - Rural and urban
- Of those, 11 are members of CPMS
- First advisory group meeting with leadership from 7 small hospitals scheduled in March
  - Each facility asked to present top three challenges they face
Beginning is the best place...
Readiness assessment/checklist

CPMS: OB Hemorrhage

Readiness

Item

Hemorrhage Cart / including instruction cards for intrauterine balloons and compression stitches

STAT Access to hemorrhage medications (kit or equivalent) [including uterotonic]

Hemorrhage Response Team established (Anesthesia, Blood Bank Advanced GYN Surgery and other services)

Massive Transfusion Protocols Established

Emergency Release (O- neg and uncrossmatched) protocol established

Protocol for those who refuse blood products

Unit education to protocols

California Partnership for Maternal Safety

Q1. Does your OB department have experience with quality improvement implementation projects?

- Yes
- No

Q2. What was the last major change you made or tried to make at your facility?

- [ ]

Q3. In your facility's last change project, what worked well?

- [ ]

Q4. In your facility's last change project, if you encountered barriers, what were they?

- RN Staff
- Physicians/Providers
- Administration
- Ancillary Departments
What is the data center?

The California Maternal Data Center (CMDC) is an online tool that generates rapid-cycle performance metrics on maternity care services. The tool is designed to support hospital quality improvement activities and service-line management in a way that is low burden, low cost and high value for participants.
Additional Resources

- [www.cmqcc.org](http://www.cmqcc.org)
- [www.pphproject.org](http://www.pphproject.org)
- [www.safehealthcareforeverywoman.org](http://www.safehealthcareforeverywoman.org)
Questions

Or for more information:

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Valerie Cape
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