A Little Bit of Housekeeping

- Your electronic devices
- Sign in and evaluations
- Lunch and breaks
- Agenda
- Your folders and conference materials
Meeting Objectives

• Provide a high level overview of the nursing components of the maternal hemorrhage, preeclampsia and induction toolkits/bundles
• Provide a forum for participants to share tools and resources and learn from early adopters of various components of the maternal hemorrhage and preeclampsia toolkits
• Provide a platform for attendees to share their improving perinatal and maternal safety success stories and challenges
• Learn how to use improvement tools to drive success
• Leave with plan to get your team energized
Pre-work Assignment

• Identify two things your hospital still needs to do to improve your identification and response to maternal hemorrhage
• Identify two things your hospital still needs to do to improve your identification and response to preeclampsia
• Identify two things your hospital still needs to do to ensure safe induction and augmentation of labor and safe use of Pitocin
Where We Have Been

• Partnership for Patients Hospital Engagement Network kicked off in Missouri May 2012
• OB Harm initiative – Reduce EEDs
• September 2014, EED rate 1.7%, less than the national benchmark of 2%
• Jan. 2014 added two additional initiatives, maternal hemorrhage and preeclampsia
• Goal to get birthing hospitals to adopt recommended best practices in CMQCC toolkits
<table>
<thead>
<tr>
<th>Survey Dec. 2014</th>
<th>MO HEN</th>
<th>Not HEN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey Question</strong></td>
<td>% Yes N=35</td>
<td>% Yes N=19</td>
</tr>
<tr>
<td>Have you implemented standardized OB hemorrhage policies, procedures?</td>
<td>97%</td>
<td>95%</td>
</tr>
<tr>
<td>Have you implemented standardized order sets for general and massive OB hemorrhage?</td>
<td>83%</td>
<td>74%</td>
</tr>
<tr>
<td>Do you have an obstetric hemorrhage rapid response team?</td>
<td>57%</td>
<td>39%</td>
</tr>
<tr>
<td>Do you have an obstetric hemorrhage cart or kit?</td>
<td>97%</td>
<td>68%</td>
</tr>
<tr>
<td>Do your physicians perform a hemorrhage risk assessment prenatally?</td>
<td>54%</td>
<td>42%</td>
</tr>
<tr>
<td>Do you perform a hemorrhage risk assessment upon admission?</td>
<td>77%</td>
<td>58%</td>
</tr>
<tr>
<td>Do you have protocols/checklists/charting tools for on-going objective quantification of actual blood loss?</td>
<td>86%</td>
<td>68%</td>
</tr>
<tr>
<td>Do you have protocols/checklists/charting tools to objectively assess maternal deterioration during and after all births?</td>
<td>83%</td>
<td>72%</td>
</tr>
<tr>
<td>Do you hold regularly scheduled standardized training on formal quantitative measurement of blood loss?</td>
<td>60%</td>
<td>68%</td>
</tr>
<tr>
<td>Do you regularly hold on-site inter-professional hemorrhage drills?</td>
<td>60%</td>
<td>50%</td>
</tr>
<tr>
<td>Do you hold post OB hemorrhage debriefs?</td>
<td>63%</td>
<td>72%</td>
</tr>
<tr>
<td>Do you have standardized definitions and documentation to ensure consistency in coding and reporting of maternal hemorrhage?</td>
<td>69%</td>
<td>63%</td>
</tr>
<tr>
<td>Do you track your progress on maternal hemorrhage reduction with process and outcome measures?</td>
<td>60%</td>
<td>47%</td>
</tr>
<tr>
<td>Survey Question</td>
<td>MO Dec</td>
<td>Not Dec</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Do you use a preeclampsia early recognition tool?</td>
<td>46%</td>
<td>26%</td>
</tr>
<tr>
<td>Have you adopted protocols/checklists for treating severe hypertension including the use of magnesium sulfate?</td>
<td>86%</td>
<td>89%</td>
</tr>
<tr>
<td>Have you adopted order sets for treating severe hypertension?</td>
<td>74%</td>
<td>84%</td>
</tr>
<tr>
<td>Do you track the percentage of mothers who received timely treatment (within 60 minutes) for severe hypertension (Systolic ( \geq ) 160 or Diastolic ( \geq )100)?</td>
<td>31%</td>
<td>16%</td>
</tr>
<tr>
<td>Do you educate patients on signs and symptoms of preeclampsia?</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Have you educated ED staff on signs and symptoms of postpartum preeclampsia?</td>
<td>35%</td>
<td>37%</td>
</tr>
<tr>
<td>Do you track your progress on preeclampsia harm reduction with process and outcome measures?</td>
<td>31%</td>
<td>16%</td>
</tr>
</tbody>
</table>
## OB Manager Survey

<table>
<thead>
<tr>
<th>Percent Rated Important or Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of Preeclampsia Guidelines</td>
</tr>
<tr>
<td>Safe Medication Administration Including Oxytocin and MgSO4</td>
</tr>
<tr>
<td>Electronic Fetal Monitoring</td>
</tr>
<tr>
<td>Safe C/S Including Reduction in Primary C/S</td>
</tr>
<tr>
<td>Implementation of Hemorrhage Guidelines</td>
</tr>
<tr>
<td>Rapid Response for Perinatal Safety</td>
</tr>
</tbody>
</table>
OB Harm Reduction 2015

- Continued adoption of best practices and protocols
  - preeclampsia
  - OB hemorrhage
- Induction Bundles implementation of updated versions
- HEN 2.0-Safety Across the Board
  - early elective deliveries – hold the gain
  - all OB Harm as part of Total Harm
  - Cesarean Section rate

Readiness...Recognition...Response...Reporting
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 (eg 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
First Do No Harm
Evidence-based practices incorporated in the maternal hemorrhage and preeclampsia toolkits are becoming the standard of care.

“We have, in short, somehow become convinced that we need to tackle the whole problem, all at once. But the truth is that we don’t. We only need to find the stickiness Tipping Points.”

Malcolm Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference*
PATIENT SAFETY BUNDLE

Obstetric Hemorrhage

READINESS

Every unit
- Hemorrhage cart with supplies, checklist, and instruction cards for intrauterine balloons and compressions stitches
- Immediate access to hemorrhage medications (kit or equivalent)
- Establish a response team - who to call when help is needed (blood bank, advanced gynecologic surgery, other support and tertiary services)
- Establish massive and emergency release transfusion protocols (type-O negative/uncrossmatched)
- Unit education on protocols, unit-based drills (with post-drill debriefs)

RECOGNITION & PREVENTION

Every patient
- Assessment of hemorrhage risk (prenatal, on admission, and at other appropriate times)
- Measurement of cumulative blood loss (formal, as quantitative as possible)
- Active management of the 3rd stage of labor (department-wide protocol)

RESPONSE

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

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 serious hemorrhages for systems issues
- Monitor outcomes and process metrics in perinatal quality improvement (QI) committee
California Partnership for Maternal Safety

## READINESS

### 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 triaging of pregnant and postpartum women with hypertension including ED and outpatient areas
- Rapid access used for severe hypertension/eclampsia: Medications should be stocked 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 over dosage
  - 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/SYSTEMS LEARNING

### Every unit
- Implementation of a huddle for high risk cases and post-event team debrief
- Review all severe hypertension/eclampsia/ICU cases for systems 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
ACOG - Managing Clinical Emergencies

- Availability of appropriate emergency supplies in a resuscitation cart (crash cart) or kit
- Development of a rapid response team
- Development of protocols that include clinical triggers
- Use of standardized communication tools for huddles and briefs (eg, SBAR)
- Implementation of emergency drills and simulations

Source: ACOG, Committee Opinion, Number 590, March 2014
Leading The First Do No Harm Campaign

Alison R. Williams, R.N., BSN, MBA-HCM
Vice President of Clinical Quality Improvement
Missouri Hospital Association

Readiness...Recognition...Response...Reporting
MHA Quality Division

- Goals and Objectives
  - demonstrate consistent, measureable outcomes
  - identify and share Missouri best practices
  - increase organizational effectiveness and efficiencies
- Organized February 2014
- Clinical quality, emergency preparedness, performance measurement and population health
Strategic Member Support

- Technical Support
  - publications
  - strategy papers
  - toolkits
  - best practice resources
  - immersion/pilot projects
  - webinars
  - seminars/conferences
  - data collection/analysis
Strategic Member Support

- Adaptive Support
  - immersion/pilot projects
  - networking platforms & opportunities
  - regional workshops
  - mentor/mentee organizations
  - coalitions
  - external stakeholder relationships
Foundations for Quality in 2015...& Beyond

- Safety Across the Board-”Total Harm” as a metric
  ➢ Transparency
  ➢ High Reliability Organization principles
  ➢ Building resiliency
  ➢ Patient and family engagement
  ➢ Care coordination
- Financial incentives/payment models
- Hospital Engagement Network 2.0
## 2015 Missouri Outcome Measures

### Community Health
- **Health Outcomes**
  - Mortality
  - Morbidity
- **Health Factors**
  - Behaviors
  - Access
  - Social and Economic Factors
  - Physical Environment

### Care Coordination
- **Manage Chronic Disease**
  - Chronic Obstructive Pulmonary Disease (COPD)
  - Hypertension
  - Diabetes
  - Congestive Heart Failure (CHF)
- **Reduce Readmissions**
  - Hospitalwide
  - Congestive Heart Failure (CHF)
  - Heart Attack (AMI)
  - Pneumonia
  - Chronic Obstructive Pulmonary Disease (COPD)
  - Hip or Knee Replacement

### Clinical Excellence
- **Reduce Infections**
  - Post-operative Sepsis
  - Catheter-associated UTI
  - Central line-Associated Blood Stream Infection
  - *Clostridium difficile* (C-diff)
  - Methicillin-resistant Staphylococcus Aureus (MRSA)
  - Surgical Site Infections – Colon
  - Surgical Site Infections – Abdominal Hysterectomy
- **Reduce Harm**
  - Falls
  - Venous Thromboembolism
  - Mortality
  - Pressure Ulcers
### Value-Based Purchasing – FFY 2017

**Clinical Care Process – 5%**

- AMI-7a – Fibrinolytic therapy received within 30 minutes of hospital arrival
- IMM-2 – Influenza immunization
- PC-01 – Elective delivery prior to 39 completed weeks gestation

**Clinical Care Outcomes – 25%**

- AMI 30 Day Mortality
- HF 30 Day Mortality
- Pneumonia 30 day mortality

**Patient and Caregiver Centered Experience – 25%**

- Communication With Nurses
- Communication With Doctors
- Responsiveness
- Pain Management
- Communication About Medicines
- Clean and Quiet
- Discharge Info
- Overall Rating
- Consistency Score

**Safety – 20%**

- Patient Safety Indicator - 90
- Central Line-Associated Blood Stream Infections (CLABSI)
- Catheter-Associated Urinary Tract Infection (CAUTI)
- Surgical Site Infection – Colon and Abdominal Hysterectomy
- Clostridium difficile Infection (C diff)

**Efficiency and Cost Reduction – 25%**

- Medicare Spending Per Beneficiary

*New for FFY 2017 (October 1, 2016 – September 30, 2017)*
Maternal Mortality

- The World Health Organization estimates the US maternal mortality ratio (MMR) increased 136%, from 12 deaths per 100,000 live births in 1990 to 28 deaths per 100,000 live births in 2013.\textsuperscript{18}
- Other estimates of US MMR are more conservative, but also show an increase in contrast to decreasing MMRs in the majority of developed and developing nations.\textsuperscript{19}
- Maternal mortality is rare, but the consequences are devastating and believed to be highly preventable
HEN 2.0

- OB harm reduction is a major component
- Mix of abstracted and AHRQ data conferral
- If Quality Works client, can also pull PC-01
- Data submission will be through one of two options
  - access HIDI’s quality collections portal
  - submit excel spreadsheet to quality collections portal
- Monthly data submission is expected
- Pay-for-performance model is proposed by MHA
- Consideration of all-cause OB harm
Outcome and Process Measures*

- Early Elective Delivery (PC-01, OB-40)
  - EED hard stop policy implementation
- OB hemorrhage
  - total OB blood transfusions (OB-117)
  - hemorrhage risk assessment on admit rate (OB-116)
- OB trauma:
  - with instrument (PSI-18)
  - without instrument (PSI-19)

*measures are tentative pending HEN 2.0 contract award
Outcome and Process Measures*

- OB preeclampsia
  - ICU utilization during birth hospitalization (OB-120)
  - Implementation of treatment protocols/checklists for acute onset severe HTN and safe/effective magnesium sulfate use (OB-119)

*measures are tentative pending HEN 2.0 contract award
Immersion Project

- Rapid-process improvement model
- Quarterly guided participant calls
- Quarterly guided deliverables
- Ability to network across group participants
- End-of-project report out
- BHAG
Which topic would your organization like to work on as the immersion project for OB harm?

A. EED
B. OB hemorrhage
C. OB trauma
D. OB preeclampsia
Obstetrical Hemorrhage

Priyanka Singh, MD
Christine Selby, BSN, RNC
Case Study # 1

• 34yo G5P2022 at 36 1/7 presenting to SLH with vaginal bleeding
• Known placenta previa, possible accreta and fetal cardiac anomaly
• Maternal iron-deficiency anemia (last Hgb. 9.4 s/p Venofer x 3) Anti Kell antibody s/p blood transfusion after D&C
• Term c/s x 2
• Molar pregnancy x1 with D&C
• Ectopic x1
• Asthma
• Absent left maternal kidney
Plan of Care

- Type and cross blood to hold, recheck CBC
- Notify Main OR of need for planned cesarean / possible hysterectomy if patient remains stable overnight
- Cell saver available
• Cesarean section in Main OR with spinal anesthesia
• Delivery of living infant with Apgars of 6 and 8
• No attempt was made to deliver the placenta, cord clamped and placed back in uterus
• Anesthesia notified of decision to proceed with hysterectomy, patient was placed under general anesthesia
• Uterus was closed with 0 vicryl
Surgery

- Right ureter involved in right wall of uterus.
- Bladder was dissected off anterior uterine wall.
- Bladder was backfilled with saline. Cystoscopy at conclusion noted intact bladder and good efflux from single right ureteral orifice
- Left uterine artery was clamped and cut
- Uterus and cervix were removed via amputation.
- Additional placenta tissue found in broad ligament that was removed
Complications

• Patient developed hypovolemic shock during surgery
• EBL 4 L
• Phenylephrine given during the procedure
• Transfused with 6 units PRCs, 3 units FFP, 500 Albumin and 4L crystalloid
• Received an additional 2 gms Ancef due to length of surgery
• Patient was awakened, extubated and returned to recovery room in stable condition
Patient’s baby transferred to CMH for Cardiac care
Post transfusion Hgb was 7.4
Patient met all discharge criteria and discharged on POD #4
Risk factor for accreta

• Placenta previa with history of:
  1. Previous cesarean section x 1= risk is 11%, prev c/s x2=40%; c/s x3=60%
  2. Myomectomy
  3. Uterine curettage
  4. Endometrial ablation
Images

- Ultrasound image
- Diagram showing layers of the placenta:
  - Percreta
  - Increta
  - Accreta
- Comparison images of normal placenta and marginal placenta
- Comparison images of partial placenta previa and placenta previa
Case study #2

• 39yr old G2P1001 at 40 5/7
• Previous low transfer cesarean section, desires TOLAC
• Presents in labor; 1cm dilated, 75% effaced, -3station at 0731
• AMA, normal free prenatal DNA screen, quad screen and normal level II ultrasound.
Labor

• 12:58 amniotomy with clear fluid. Cervix was 3 cm, 80% effaced and -1 station
• Labor epidural placed per patient request
• 18:08, cervix was 4-5cm and IUPC placed
• 20:06, 8cm (20 hours 4 minutes 1\textsuperscript{st} stage)
• 22:04 10cm; after 27 minute 2\textsuperscript{nd} stage spontaneous delivery of liveborn female with Apgars of 8 and 9
• Placenta failed to deliver after 24 minutes, and manual extraction performed. 800 mcg cytotec given rectally
• 2\textsuperscript{nd} degree episiotomy repaired
• 500 EBL with delivery, over next 2 hours, 500 additional EBL
• 01:36: Hgb was 7.8 blood was type and crossed
• 04:34: Additional EBL of 255, 800mcg of cytotec repeated
• Vaginal bleeding continued. Patient counseled for possibility of retained placenta, or placenta accreta
Exam under anesthesia

- Extraction of retained placenta fragments removed with ultrasound guide.
- Bakri balloon inserted
- Patient received 2 units PRBCs and 1 unit FFP
- POD #2 the hemoglobin was 9.1
- Bakri removed and patient was initiated on oral Methergine
Estimating Blood Loss

- Soiled sanitary towel: 30ml
- Saturated small swab (10x10cm): 60ml
- Saturated sanitary towel: 100ml
- Incontinence pad: 250ml
- Full kidney dish: 500ml
- Saturated swab (45x45cm): 350ml
- Blood spilling on bed: 1000ml
- Floor spill (100cm diameter): 500ml
- Blood spilling to floor: 2000ml
Risk Factors for Postpartum Hemorrhage

- Prolonged labor
- Augmented labor
- Rapid labor
- History of postpartum hemorrhage
- Episiotomy, especially mediolateral
- Preeclampsia
- Overdistended uterus (macrosomia, twins, hydramnios)
- Operative delivery
- Asian or Hispanic ethnicity
- Chorioamnionitis

ACOG Guidelines: Etiology of Postpartum Hemorrhage

**Primary:**
- Uterine atony
- Retained placenta—especially placenta accreta
- Defects in coagulation
- Uterine inversion

**Secondary:**
- Subinvolution of placental site
- Retained products of conception
- Infection
- Inherited coagulation defects

# ACOG Guidelines for Medical Management of Postpartum Hemorrhage

<table>
<thead>
<tr>
<th>Drug</th>
<th>Route and Dosage</th>
<th>Frequency</th>
<th>Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxytocin (Pitocin)</td>
<td>IV: 10–40 units in 1 liter normal saline or lactated Ringer's solution IM: 10 units</td>
<td>Continuous</td>
<td>Avoid undiluted rapid IV infusion, which causes hypotension.</td>
</tr>
<tr>
<td>Methylergonovine (Methergine)</td>
<td>IM: 0.2 mg</td>
<td>Every 2–4 h</td>
<td>Avoid if patient is hypertensive.</td>
</tr>
<tr>
<td>15-methyl PGF$_{2a}$ (Carboprost) (Hemabate)</td>
<td>IM: 0.25 mg</td>
<td>Every 15–90 min, 8 doses maximum</td>
<td>Avoid in asthmatic patients; relative contraindication if hepatic, renal, and cardiac disease. Diarrhea, fever, tachycardia can occur.</td>
</tr>
<tr>
<td>Dinoprostone (Prostin E$_2$)</td>
<td>Suppository: vaginal or rectal 20 mg</td>
<td>Every 2 h</td>
<td>Avoid if patient is hypotensive. Fever is common. Stored frozen, it must be thawed to room temperature.</td>
</tr>
<tr>
<td>Misoprostol (Cytotec, PGE$_{1}$)</td>
<td>800–1,000 mcg rectally</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ACOG Guidelines for Surgical Management of Postpartum Hemorrhage

<table>
<thead>
<tr>
<th>Uterine Curettage</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Uterine Artery Ligation</td>
<td>Bilateral; also can ligate uteroovarian vessels</td>
</tr>
<tr>
<td>B-Lynch suture</td>
<td></td>
</tr>
<tr>
<td>Hypogastric artery ligation</td>
<td>Less successful than earlier thought; difficult technique; generally reserved for practitioners experienced in the procedure</td>
</tr>
<tr>
<td>Repair of rupture</td>
<td></td>
</tr>
<tr>
<td>Hysterectomy</td>
<td></td>
</tr>
</tbody>
</table>
## ACOG Guidelines Tamponade Techniques for Postpartum Hemorrhage

<table>
<thead>
<tr>
<th>Technique</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uterine tamponade</td>
<td></td>
</tr>
<tr>
<td>—Packing</td>
<td>—4-inch gauze; can soak with 5,000 units of thrombin in 5 mL of sterile saline</td>
</tr>
<tr>
<td>—Foley catheter</td>
<td>—Insert one or more bulbs; instill 60–80 mL of saline</td>
</tr>
<tr>
<td>—Sengstaken–Blakemore tube</td>
<td></td>
</tr>
<tr>
<td>—SOS Bakri tamponade balloon</td>
<td>—Insert balloon; instill 300–500 mL of saline</td>
</tr>
</tbody>
</table>
## ACOG Guidelines for Blood Component Therapy

### Table 4. Blood Component Therapy

<table>
<thead>
<tr>
<th>Product</th>
<th>Volume (mL)</th>
<th>Contents</th>
<th>Effect (per unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packed red cells</td>
<td>240</td>
<td>Red blood cells, white blood cells, plasma</td>
<td>Increase hematocrit 3 percentage points, hemoglobin by 1 g/dL</td>
</tr>
<tr>
<td>Platelets</td>
<td>50</td>
<td>Platelets, red blood cells, white blood cells, plasma</td>
<td>Increase platelet count 5,000–10,000/mm³ per unit</td>
</tr>
<tr>
<td>Fresh frozen plasma</td>
<td>250</td>
<td>Fibrinogen, antithrombin III, factors V and VIII</td>
<td>Increase fibrinogen by 10 mg/dL</td>
</tr>
<tr>
<td>Cryoprecipitate</td>
<td>40</td>
<td>Fibrinogen, factors VIII and XIII, von Willebrand factor</td>
<td>Increase fibrinogen by 10 mg/dL</td>
</tr>
</tbody>
</table>

Thank You!
Induction/Augmentation Bundles
Overview and Buzz Session

Alison Williams
V.P. of Clinical Quality Improvement
Key Components

- Understand the goal
- Utilize a checklist
- Appropriate patient selection
  - Bishop score
  - Medical necessity
- Standardized language and criteria
- Management of tachysystole
- Staffing requirements
Successful Induction Definition

• Vaginal delivery within 24 to 48 hours of induction of labor

Other considerations:
• Suspected fetal macrosomia (EFW > 4000 grams) in and of itself is not an indication for induction
• Inductions should not be based on patient or provider preference – at any gestation
• Induction is indicated when the risk of continuing the pregnancy – for the mother or fetus – exceeds the risk of inducing labor and delivery
• Consider evidence-based alternatives to induction
Factors Affecting Induction Success

- Bishop score
- Parity
- BMI >30
- Maternal Age >35
- EFW >4000 grams
- Diabetes
- Anecdotally:
  - CPD
  - malpresentation
Post-Dates Induction

- Women should be offered induction of labor between 41+0 and 42+0 weeks as this intervention may reduce perinatal mortality and meconium aspiration syndrome without increasing the Cesarean section rate.

- Women who choose to delay induction > 41+0 weeks should undergo twice-weekly assessment for fetal well-being.
Utilize a Standardized Checklist

- The use of a checklist is highly recommended when administering oxytocin. Checklists provide prerequisites at the point of patient care to safely initiate oxytocin and help to identify situations that require its discontinuation.
- Review of medical malpractice claims reveals that oxytocin use is involved in more than 50% of the situations leading to birth trauma.
Sample Scheduling Form

Form 1: Scheduling

BEST MEDICAL CENTER
SAMPLE SCHEDULING FORM FOR INDUCTIONS AND CESAREAN SECTIONS
Call (XXX) XXX-XXXX or Fax (XXX) XXX-XXXX

Name: ____________________________
CB Provider: G.P: ____________
Type of Delivery Planned: [ ] Induction; [ ] C/S; [ ] Desired Date/Time: ____________________________

DATING
Expected Date of Induction or C/S: ____________________________ (week/day)
Based on: [ ] US 10-20 weeks; [ ] Doppler FHT > 33 weeks; [ ] d+CC for 36 weeks
[ ] Other dating criteria: ____________________________ (date/ies)

If SGOO (gestational age) should be 20 weeks or less before inducing an elective cesarean delivery, ICAG should state that a reason for induction was noted in the absence of clinical indications not considered an indication for induction.

Fetal Lung Maturity test result: ____________________________ Date: ____________________________

INDICATION
Obstetric and Medical Conditions (OK if < 39 weeks) Scheduled C/S (< 39 wks)

[ ] Preterm (prior to 37 weeks)
[ ] Other: ____________________________

Perinatology consult obtained and agreed with plan.

Prior C/S
[ ] Prior classical C/S
[ ] Prior myomectomy

Effective Induction (< 39 wks)
[ ] Patient choice (social)
[ ] Macrosomia
[ ] Distance
[ ] Other: ____________________________

CERVICAL EXAM (for induction)
Date of Exam: ____________________________ (within 7 days of date of induction)
Bishop Score: circle each item of the exam below and add total score

Score: Dilation Consistency Position
0: Closed 0-30% -3 Firm Persistent
1: 1-2 40-50% -2 Medium Midsuction
2: 3-4 60-72% -1 Soft Anion
3: 5-6 83% +1,2 Normal

This section is used only by those hospitals using cervical exams alone for scheduling inductions.

SCHEDULING OFFICE USE
Procedure NOT Scheduled: [ ]
Scheduled: [ ]
Confirmed Date/Time: ____________________________
Referred to Dept Chair: [ ]
Premature Record present; L.D.: [ ] Yes

Elimination of Non-medically Indicated (Elective)
Deliveries Before 39 Weeks Gestational Age 27
marchohio.com
CMOCG.org
Induction/Augmentation Bundles

- Reliable design reduces unintended variation and perinatal harm
- Bundles themselves do not improve outcomes
  - the ability of the team to reliably implement every bundle element for all patients, unless medically contraindicated, advances care to achieve the improved outcomes
- The most important idea underlying bundles is the all-or-none concept
- Measuring compliance with each bundle element, as well as all-or-none compliance, is the first step in building a reliable system
What changes can we make for improved patient safety?

- Implement ACOG criteria for accurate determination of GA as the organizational standard
- Require verification criteria are met prior to every booking of an elective delivery or scheduled cesarean
- Use a checklist of GA determination criteria
- Use standardized guidelines supported by the medical staff, with a clear escalation policy when recognition reveals gestation dating is not accurate.
- Engage prenatal office staff in the process
- Review all cases of deliveries occurring prior to 39 weeks of gestation
- Engage patients in the process early in the pregnancy to establish confirmation of the estimated due date
- Educate staff and new OB providers regarding indications and criteria during their initial training, as well as during ongoing educational programs
- Collect data transparently on all deliveries occurring in the GA group of 37.0 through 38.6 weeks and provide this data to the medical staff
- Consider collecting data on all inductions/augmentations for appropriate selection
The goal of using a standard terminology to describe fetal heart rate monitoring and then developing an agreed upon action plan to ensure compliance with this bundle element.
NICHD Criteria Use

- Use multidisciplinary education and a structured algorithm in order to train staff to *identify* or recognize failures in oxytocin administration
- Adopt a standardized, mandatory fetal monitoring educational program for both medical and nursing staff, and develop credentialing standards to be supported by the organization
- Provide ongoing education in the form of fetal monitoring case reviews that are multidisciplinary in focus
- Incorporate NICHD terminology in all documentation and communication of fetal heart rate status
- Adopt fetal heart rate management algorithms based on the three-tiered NICHD Fetal Heart Rate Status Categories, with clear action plans to guide the multidisciplinary team to respond appropriately for each category.
How Do You Communicate?
- is it standardized?
- does everyone have the same definitions?
- does everyone understand the intervention algorithm?
- what is your escalation plan?
Bishop Scoring

- Model variation
  - objective vs. subjective measurement
    - transvaginal ultrasound for cervical length vs. cervical exam, fetal fibronectin
  - traditional vs. modified vs. simplified
- Should be documented prior to scheduling and starting induction
- Score variation: 6 or 8 or greater has been established as indicative of induction success
  - initially based on multiparous, uncomplicated pregnancies at term (40 weeks), then later to include nulliparous
  - scores of 4-6 showed significant increase in C/S rate

PSI-18

Obstetrical Trauma Rate-Vaginal Delivery with Instrument

Fiscal Year To Date

- Obstetric Trauma Rate-Vaginal Delivery with Instrument
- Expected Rate
- 2010 National Benchmark
PSI-19

Fiscal Year to Date

FY 2014

FY 2015

Obstetric Trauma Rate-Vaginal Delivery without Instrument
Expected Rate
2010 National Benchmark
ACOG Definition: Tachysystole

- American Congress of Obstetricians and Gynecologists describes uterine activity:
  - **Normal:** Five contractions or less in ten minutes averaged over a 30-minute window
  - **Tachysystole:** More than five contractions in a 10-minute window and averaged over 30 minutes
    - with FHR changes (hyperstimulation)
    - without FHR changes (hypertonus/hypercontractility)

Tachysystole Management

- Must be identified using a standard definition and documented
- Characteristics of uterine contractions:
  - Tachysystole should always be qualified as to the presence or absence of associated FHR decelerations
  - Tachysystole applies to both spontaneous and stimulated labor
Tachysystole Management

- Multidisciplinary adoption of the NICHD/ACOG definition for tachysystole
- Standardize the recognition and management of tachysystole by developing algorithms and a standard order set
- Staff/provider education
- Provide informed consent to the patient regarding the risks and benefits of the use of the drug oxytocin for induction of labor
- Develop an escalation policy to standardize the provider response
- Standardize protocols for administering oxytocin to a minimum of one low dose protocol and one high dose protocol that are linked to the documentation system
- Provide case reviews and real-time feedback to nursing and providers on compliance rates: bundle compliance/tachysystole management
- Collect data on the use of terbutaline and emergency cesareans performed as a result of the overuse of oxytocin.
Staffing Requirements

- 1:2 during induction/augmentation with oxytocin
- 1:1 with high risk and active labor management
- RN must be able to clinically evaluate the effects of oxytocin at least every 15 minutes
- The oxytocin infusion should be discontinued if this level of RN staffing cannot be provided for patient safety.
- A provider who has privileges to perform a c-section should be “readily available”

AAP and ACOG Guidelines for Perinatal Care, 2007.
ACOG Resources

- Induction Toolkit
  http://www.acog.org/-/media/Districts/District-II/PDFs/OxytocinForInduction.pdf

- Hemorrhage Toolkit
BUZZ Session

1. Under what situations does induction improve or worsen outcomes for mother and baby?
2. What can we do to get staff and physicians to adhere to recommended safe practices for labor induction?
3. What can we do decrease the pressure from physicians and mothers to “speed things along” during labor and inductions?
Improving Health Care
Response to Preeclampsia:
California Maternal Quality Care Collaborative

Slides and or information in this presentation were acquired or adapted from the California Maternal Quality Care Collaborative toolkit, online resources or from the Council on Patient Safety in Women’ Health Care online resources and the Premier Improving Outcomes in Hypertensive Disorders of Pregnancy Webinar May 8, 2015.

Maternal Morbidity and Mortality Preeclampsia

About 8 Preeclampsia Related Mortalities/2007 in CA

Near Misses: 380/year (ICU admissions)

40-50x

Serious Morbidity: 3400/year (prolonged postpartum length of stay)

400-500x

Source: 2007 All-California Rapid Cycle Maternal/Infant Database for CA Births: CMQCC
Blood Pressure Associated Major Morbidity

- Stroke
- Placental Abruption
- Eclampsia
- Cerebral Edema/PRES
- Retinal Detachment
- Liver Hematoma/Rupture

- Renal Failure
- Hemorrhage/DIC
- Pulmonary Edema
- Ascites/pleural effusion
Major Causes of Death in Preeclampsia Cases

- Stroke - 64%
- Liver Failure – 16%
- Cardiac Failure – 8%
- Other – 12%
  (hemorrhage/DIC, MOF, ARDS)

39% of all pregnancy-related deaths had HTN!
Factors Contributing to Maternal Death in Preeclampsia

- Healthcare Professionals
  - delay in diagnosis - 92%
  - use of ineffective treatment - 79%
  - misdiagnosis - 54%

- Patients
  - delay or failure to seek care – 63%
  - lack of understanding of the importance – 56%
Preeclampsia Awareness
2014 Survey Results Show:

High overall awareness of preeclampsia among expectant and new mothers*

83% had heard of preeclampsia

Yet despite high overall awareness, there is less knowledge of the symptoms

More than half of respondents did not associate many known symptoms with preeclampsia

Most are also aware that this serious condition related to high blood pressure requires immediate medical evaluation

99% knew preeclampsia is serious, even life-threatening, for mother and baby

88% knew high blood pressure is a sign of preeclampsia

96% would call their doctor or midwife if they experienced symptoms

Other important aspects of preeclampsia are also less known

44% didn’t know that preeclampsia can occur up to six weeks after delivery

46% didn’t know that women with preeclampsia are at greater risk for future health problems

*Survey conducted among visitors to the BabyCenter website from January 17 to January 20, 2014. Total of 1,591 respondents completed the survey; qualified respondents defined as female U.S. residents, 18 years or older, who are pregnant or have at least one child three years of age or younger.

Survey by BabyCenter®

Design by rEVO Biologics Inc.
Patient Education

- Both oral and written
- Use “teach back” to confirm understanding with open ended questions
- Education must be consistent, persistent and redundant
- Use proven tools such as cards, magnets, videos

www.preeclampsia.org/store
Key Clinical Pearls

• Early maternal recognition and reporting of signs and symptoms improves patient outcomes
• Providers and staff also need to really look and listen
• Patients presenting with vague symptoms of:
  ➢ headache
  ➢ abdominal pain
  ➢ shortness of breath
  ➢ generalized swelling
  ➢ complaints of “I just don’t feel right”
should be evaluated for atypical presentations of preeclampsia or “severe features”

Key Clinical Pearl

“...efforts should be directed to the education of the healthcare providers and patients regarding the importance of prompt reporting and evaluation of symptoms of preeclampsia during the postpartum period.”

- 29% of deaths due to eclampsia occurred postpartum
- 55% > 48 hours postpartum
- Half had normal BP but all had a headache or visual complaints
- 91% had at least 1 prodromal symptom
- 52% had more than one prodromal symptom
- Only 33% sought care for their symptoms

Am J Obstet Gynecol Sep 163(3):1049-1054;
Key Clinical Pearls

- Early post-discharge follow-up recommended for all patients diagnosed with preeclampsia/eclampsia
- Toolkit recommends post-discharge follow-up:
  - within 3-7 days if medication was used during labor and delivery or postpartum
  - within 7-14 days if no medication was used
- Postpartum patients presenting to the ED with hypertension, preeclampsia or eclampsia should either be assessed by or admitted to an obstetrical service
- Discharge instructions should always include preeclampsia symptoms
OBSTETRICS / GYNECOLOGY DISCHARGE INSTRUCTIONS

DISCHARGE DATE:

FOLLOW-UP APPOINTMENT:

☐ Parrish Obstetrics: Phone #: 269-8565
☐ Call office for staple removal appointment
☐ CLINIC: Brevard County Health Department Phone #: 637-7300

MEDICATIONS:

Per Prescription
Motrin
Percocet
Pre-Natal Vitamins
FeSO4
Tylenol #3
Other: Over the Counter

SPECIAL INSTRUCTIONS:

• You must remember that you delivered a baby/had surgery and must give special care to yourself.
• No douching, tampons, or intercourse for 6 weeks. NOTHING inside the vagina. Vaginal stitches will dissolve within 7 to 10 days.
• You may shower/tub bathe.
• If you are a smoker, you are advised to stop smoking as it can be harmful to your health.
• You may ride in an automobile, however, DO NOT DRIVE for ______ weeks.
• Diabetes teaching as applicable.

DIET:

Eat a variety of healthy foods as desired. Breastfeeding moms should not harshly restrict their diets fearing colic in their babies. Most babies do fine even when mom eats spicy and gas producing foods. If baby seems sensitive to a certain food, eliminate it for one week to see if there is improvement. Consult your baby’s pediatrician or lactation consultant as needed.

ACTIVITY:

Do not assume full household duties for ______ weeks. Gradually increase activities, do not over exert yourself. Rest both morning and afternoon. Do not lift anything heavier than your baby.

SYMPTOMS TO CALL MD:

Report any excessive bleeding or temperature over 101. You may expect vaginal bleeding and discharge for 3 – 6 weeks, gradually becoming lighter in color.

BOTTLE FEEDING:

If bottle feeding, continue to use a well fitting bra (sports bras are excellent) at all times for two weeks. May use ice packs to breasts if engorged as needed.

DISCHARGE DIAGNOSIS: DISCHARGE H&H

REVIEW WITH PATIENT:

FOR SURGERY PATIENTS: Bring staple remover and steri strips to office on: ______ day of week

Symptoms to report: Call your doctor if unusual pain, fever, redness, swelling or drainage

PHYSICIAN SIGNATURE:

RN SIGNATURE:

DATE & TIME:

I have read the above, understand it, and acknowledge receipt of a copy. I will arrange for follow-up as instructed.

Patient’s or Responsible Person’s Signature:

Important Phone Numbers:

OB Department: 268-6790
Nursery: 268-6724
Case Management: 268-6153
Lactation Consultant: 268-6682

PATIENT LABEL

PARRISH MEDICAL CENTER

Revised: 2/2014

White – Patient
Canary – Chart
Pink - Physician
How often do you record the BP while the patient is supine or in the left lateral position?

A. Always
B. Sometimes
C. Never
### Steps for Obtaining Accurate Blood Pressure Measurements

#### Step 1: Prepare the equipment

- a. Mercury sphygmomanometer is a gold standard, can use validated equivalent automated equipment
- b. Check cuff for any defaults
- c. Obtain correct size cuff: width of bladder 40% of circumference and encircle 80% of arm

#### Step 2: Prepare the patient

- a. Use a sitting or semi-reclining position with back supported and arm at heart level
- b. Patient to sit quietly for 5 minutes prior to measurement
- c. Bare upper arm of any restrictive clothing
- d. Patient’s feet should be flat, not dangling from examination table or bed, and legs uncrossed.
- e. Assess any recent (within previous 30 minutes) consumption of caffeine or nicotine. If blood pressures are at the level that requires treatment, consumption of nicotine or caffeine should not lead to delays in instituting appropriate anti-hypertensive therapies.

- a. Support patients arm at heart level, seated in semi-Fowlers position
- b. For auscultatory measurement: use first audible sound (Kortokoff I) as systolic pressure and use disappearance of sound (Kortokoff V) as diastolic pressure
Key Clinical Pearl

Controlling blood pressure is the optimal intervention to prevent deaths due to stroke in women with preeclampsia.
Key Clinical Pearl

A trigger tool to identify “clinical signs,” of high concern or triggers can aid clinicians to recognize and respond in a more timely manner and avoid delays in diagnosis and treatment.
# Preeclampsia Early Recognition Tool

<table>
<thead>
<tr>
<th>ASSESS</th>
<th>NORMAL (GREEN)</th>
<th>WORRISOME (YELLOW)</th>
<th>SEVERE (RED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>Alert/oriented</td>
<td>• Agitated/confused</td>
<td>• Unresponsive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Drowsy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Difficulty speaking</td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>None</td>
<td>• Mild headache</td>
<td>• Unrelieved headache</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Nausea, vomiting</td>
<td></td>
</tr>
<tr>
<td>Vision</td>
<td>None</td>
<td>• Blurred or impaired</td>
<td>• Temporary blindness</td>
</tr>
<tr>
<td>Systolic BP (mm Hg)</td>
<td>100-139</td>
<td>140-159</td>
<td>≥160</td>
</tr>
<tr>
<td>Diastolic BP (mm Hg)</td>
<td>50-89</td>
<td>90-105</td>
<td>≥105</td>
</tr>
<tr>
<td>HR</td>
<td>61-110</td>
<td>111-129</td>
<td>≥130</td>
</tr>
<tr>
<td>Respiration</td>
<td>11-24</td>
<td>25-30</td>
<td>&lt;10 or &gt;30</td>
</tr>
<tr>
<td>SOB</td>
<td>Absent</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>O2 Sat (%)</td>
<td>≥95</td>
<td>91-94</td>
<td>≤90</td>
</tr>
<tr>
<td>Pain: Abdomen or Chest</td>
<td>None</td>
<td>• Nausea, vomiting</td>
<td>• Nausea, vomiting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Chest pain</td>
<td>• Chest pain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Abdominal pain</td>
<td>• Abdominal pain</td>
</tr>
<tr>
<td>Fetal Signs</td>
<td>• Category I</td>
<td>• Category II</td>
<td>• Category III</td>
</tr>
<tr>
<td></td>
<td>• Reactive NST</td>
<td>• IUGR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Non-reactive NST</td>
<td></td>
</tr>
<tr>
<td>Urine Output (mL/hr)</td>
<td>≥50</td>
<td>30-49</td>
<td>≤30 (in 2 hrs)</td>
</tr>
<tr>
<td>Proteinuria (Level of proteinuria is not an accurate predictor of pregnancy outcome)</td>
<td>Trace</td>
<td>• &gt; +1**</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ≥300mg/24 hours</td>
<td></td>
</tr>
<tr>
<td>Platelets</td>
<td>&gt;100</td>
<td>50-100</td>
<td>&lt;50</td>
</tr>
<tr>
<td>AST/ALT</td>
<td>&lt;70</td>
<td>&gt;70</td>
<td>&gt;70</td>
</tr>
<tr>
<td>Creatinine</td>
<td>&lt;0.8</td>
<td>0.9-1.1</td>
<td>&gt;1.2</td>
</tr>
<tr>
<td>Magnesium Sulfate Toxidity</td>
<td>• DTR +1</td>
<td>• Depression of patellar reflexes</td>
<td>• Respiration &lt;12</td>
</tr>
</tbody>
</table>
Clinical Signs to Watch For

**YELLOW = WORRISOME**
Increase assessment frequency

<table>
<thead>
<tr>
<th># Triggers</th>
<th>TO DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Notify provider</td>
</tr>
<tr>
<td>≥2</td>
<td>Notify charge RN, In-person evaluation, Order labs/tests, Anesthesia consult, Consider magnesium sulfate, Supplemental oxygen</td>
</tr>
</tbody>
</table>

**GREEN = NORMAL**
Proceed with protocol

**RED = SEVERE**
Trigger: 1 of any type listed below

<table>
<thead>
<tr>
<th>TO DO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate evaluation</td>
</tr>
<tr>
<td>Transfer to higher acuity level</td>
</tr>
<tr>
<td>1:1 staff ratio</td>
</tr>
<tr>
<td>Consider Neurology consult</td>
</tr>
<tr>
<td>CT Scan</td>
</tr>
<tr>
<td>R/O SAH/intracranial hemorrhage</td>
</tr>
<tr>
<td>Labetalol/hydralazine in 30 min</td>
</tr>
<tr>
<td>In-person evaluation</td>
</tr>
<tr>
<td>Magnesium sulfate loading or maintenance infusion</td>
</tr>
<tr>
<td>Consider CT angiogram</td>
</tr>
<tr>
<td>O2 at 10 L per rebreather mask</td>
</tr>
<tr>
<td>R/O pulmonary edema</td>
</tr>
<tr>
<td>Chest x-ray</td>
</tr>
</tbody>
</table>

*Level of proteinuria is not an accurate predictor of pregnancy outcome*

**Physician should be made aware of worsening or new-onset proteinuria**
How often does your hospital treat a sustained BP $\geq 160/110$ mmHg within 60 minutes?

A. < 25%
B. 25 - 50%
C. 51 - 75%
D. 76 - 100%
Key Clinical Pearl

- Administer anti-hypertensive medications within 60 minutes of documentation of persistent (retested within 15 minutes) BP ≥160 systolic, and/or >105-110 diastolic.
- Use a “preeclampsia box” to facilitate rapid treatment.
### Emergency Medication Box for Severe Preeclampsia and Eclampsia

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dose and Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium 20 grams/500 ml bag</td>
<td>IV (Use Magnesium Sulfate Continuous Infusion under L&amp;D protocol in Alaris Pump Library):</td>
</tr>
<tr>
<td></td>
<td><em>Initial (Loading Dose):</em> 4-6 g (100 ml – 150 ml) over 20 minutes</td>
</tr>
<tr>
<td></td>
<td><em>Maintenance Dose:</em> 1-2 g/hour (25 ml/hr – 50 ml/hr) continuous infusion</td>
</tr>
<tr>
<td>Labetalol 100mg/20ml vial</td>
<td><em>Initial: Draw 4 ml from the vial.</em></td>
</tr>
<tr>
<td></td>
<td>20 mg (4 ml) IV bolus followed by 40 mg (8 ml) if not effective within 10 minutes, then 80 mg (16 ml) every 10 minutes (maximum total dose of 300 mg/60ml)</td>
</tr>
<tr>
<td>Hydralazine 20mg/ml vial</td>
<td><em>Initial: Draw 0.25 ml from the vial.</em></td>
</tr>
<tr>
<td></td>
<td>5-10 mg (0.25-0.5 ml) doses IV every 15-20 minutes</td>
</tr>
<tr>
<td>Esmolol 100mg/10ml vial (By Anesthesiologists ONLY)</td>
<td>1-2 mg/kg (0.1-0.2 ml/kg) IV over 1 minute</td>
</tr>
<tr>
<td>Propofol 10mg/ml, 20ml vial (By Anesthesiologists ONLY)</td>
<td>30-40 mg (3-4 ml) IV bolus</td>
</tr>
<tr>
<td>Calcium gluconate 1000 mg/10ml vial</td>
<td>1000 mg/10 ml IV over 2-5 minutes</td>
</tr>
<tr>
<td>Labetalol 200 mg tablets</td>
<td>200 mg PO and repeated in 30 minutes if needed</td>
</tr>
<tr>
<td>Nifedipine 10 mg PO</td>
<td>10 mg PO and repeated in 30 minutes if needed</td>
</tr>
<tr>
<td>Supply contents</td>
<td>3 ml, 10 ml, and 20 ml syringes, appropriate needles and appropriate tubing sets</td>
</tr>
</tbody>
</table>

*Kindly used with permission of Stanford University Medical Center and Gillian Hilton, MD 2013*
Key Clinical Pearl

Algorithms for acute treatment hypertension and eclampsia should be readily available or preferably posted in all clinical areas that may encounter pregnant women.


Antihypertensive therapy (with either hydralazine or labetalol) should be used for treatment of diastolic BP levels of 105 -110 or higher
Severe Hypertension Treatment Algorithm

SBP ≥ 155 and/or DBP ≥ 105
Provider Notified

IV Anti-Hypertension Meds
First Line Medications

Blood Pressure Triggers
SBP ≥ 160 and/or DBP ≥ 110
Repeat in 15 minutes.
Notify Provider and Proceed

IV Access
FHR monitoring
Labs per PIH Order Set
Pulse Oximeter

Seizure Prophylaxis
Magnesium Sulfate

Bolus Dose: 4gm over 20 minutes
Maintenance Dose: 2gm per hour

PO Nifedipine
If no IV access
Initial Dose: 10 mg
May repeat dose at 20 minute intervals for a maximum of 5 doses.

IV Labetalol
20 mg (over 2 min)
Repeat BP in 10 min
If elevated, administer
IV Labetalol 40 mg
Repeat BP in 10-15 min
If elevated, administer
IV Labetalol 80 mg
Repeat BP in 20 min
If elevated, administer
IV Hydralazine
pre algorithm anesthesia consult

IV Hydralazine
5 or 10mg (over 1-2 min)
Per physician’s order
Repeat BP in 20 min
If elevated, administer
IV Hydralazine 10 mg
Repeat BP in 20 min
If elevated, administer
IV Hydralazine 10 mg
Repeat BP in 20 min
If elevated, IV
Labetalol 20 mg
pre algorithm anesthesia consult

Magnesium sulfate should be used to:

A. Prevent seizures
B. Prevent abruption
C. Lower BP
D. A and B
E. All of the above
Key Clinical Pearl

- Magnesium sulfate therapy for seizure prophylaxis should be administered to any patients with:
  - severe preeclampsia
  - preeclampsia with “severe features” i.e., subjective neurological symptoms (headache or blurry vision), abdominal pain, epigastric pain AND
  - should be considered in patients with mild preeclampsia (preeclampsia without severe features)
Key Clinical Pearl

Use of preeclampsia-specific checklists, team training and communication strategies, drills and simulations will likely reduce hypertensive related morbidity.
The 4 “R’s”

Improve **Readiness**

- Make diagnostic and treatment protocols for severe hypertension handy and easy to implement (i.e. order sets, algorithms posted everywhere)
- Establish process in ED and clinics for timely triage of pregnant and postpartum women with hypertension
- Provide rapid access to medications for severe hypertension/eclampsia along with administration and dosage guide in all applicable areas (readily available medication kit and dosing guide)
- Establish system-wide plan for escalation, consultation and maternal transport
The 4 “R’s”

Improve *Recognition* and Prevention

- Adopt standard process for assessment and triage of BP and urine protein for all pregnant and PP women
- Educate staff on BP assessment and response
- Adopt early warning tool such as MEOWS and standard response to warning criteria
- Provide comprehensive, standardized patient education and post discharge planning
- Schedule early postpartum follow-up if diagnosis of hypertension
The 4 “R’s”

Improve *Response*

- Adopt standardized severe hypertension and eclampsia management plans with checklists for IP and OP presentation
- Notify physician of BP>155/105 mmHg for two measurements within 15 minutes apart
- Ensure treatment for hypertension within 1 hour
- Establish a support program for patients, families and staff for all ICU admissions
- Provide regular ongoing team education reinforced with drills
The 4 “R’s”

Improve *Reporting*

- Establish “Huddles” for high risk patients and post-event team debriefs
- Review all severe hypertension/ICU cases for systems issues
- Track compliance with hypertensive treatment within one hour
- Monitor outcomes and process metrics in Perinatal QI committee
Does your hospital have a standardized protocol for severe hypertension with algorithms or checklists?

A. Yes  
B. No  
C. Don’t know
Does your hospital use early warning criteria such as MEOWS to identify patients that need immediate bedside evaluation?

A. Yes
B. No
C. Don’t know
Does your hospital provide comprehensive education for hypertensive patients prior to discharge and schedule early postpartum follow-up?

A. Yes
B. No
C. Don’t know
Does your hospital review all severe hypertension, preeclampsia and eclampsia cases for systems issues such as timely notification or treatment?

A. Yes
B. No
C. Don’t know

0% 0% 0%
Questions and Team Discussion

What can we do to improve patient education and discharge follow-up for hypertensive patients?

What can we do to ensure early recognition and prompt and proper treatment of patients with hypertension, preeclampsia and eclampsia?
Resources

- **CMQCC**
  - [www.cmqcc.org/preeclampsia_toolkit](http://www.cmqcc.org/preeclampsia_toolkit)
    - California hypertension in pregnancy toolkit

- **Preeclampsia Foundation**
  - [www.preeclampsia.org/store](http://www.preeclampsia.org/store)
    - Patient education materials

- **Council of Patient Safety**
  - [www.safehealthcareforeverywoman.org](http://www.safehealthcareforeverywoman.org)
    - Hypertension in pregnancy bundle and resources

- **Missouri Hospital Association**
Preeclampsia Educational Opportunities

- June 26, 12 p.m. Hypertension Patient Safety Bundle Webinar presented by the Council on Patient Safety in Women’s Health Care. To register go to: https://docs.google.com/forms/d/1K1oPfn3rqCqG7m6GGQ8uYjsI56ntoAfxTjsJdAYbwOc/viewform?c=0&w=1

Teamwork Session - Process Improvement Methodology

Be Safe, Be Reliable, Use Your Tools, Rely on Your People
High Reliability Organizations

HRO is not a process improvement program...it is an organizational culture designed to reduce the frequency and severity of catastrophic events.

“The study of ‘high reliability’—or consistent performance at high levels of safety over long periods of time—began with investigations of organizations that manage extreme hazards with exemplary safety records, far better than those in health care today.” Chassin & Loeb, Health Affairs, April 2011

Three requirements for achieving high reliability:

- Leadership
- Safety Culture
- Robust Process Improvement
A One, Two Punch...

Find & Fix System Problems
That Make It Difficult for Our People to Perform Effectively

Reinforce & Build Accountability
For Compliance With Performance Expectations
FIGURE 1
Anatomy of an Obstetric Safety Event

LATENT FAILURES

Every step in the care delivery process has the potential for failure, to some degree, whether individual or team error.

DEFENSES

For a catastrophic error to occur, the holes need to align for each step in the process allowing all defenses to be defeated and resulting in an error.

Examples

- Care bundles
- Checklists
- Intervention Protocols and Algorithms
- Modified Early Obstetric Warning System (MEOWS)
- Obstetric Vital Sign Alert (OBVSA)
- Waste reduction efforts

- Provider/Staff Accountability (Just Culture algorithm)
- Standardized communication pathways
- Drills
- Gemba Leadership
- Standardized management work
CONSIDER

Are there steps where....

- people must rely on memory to complete any portion of the step (no reference, tool, etc.)?
- a distraction or interruption during the step would likely lead to failure of the step?
- are there >10 things a person must do at this step?
- a new or untrained person is much more likely to encounter error or failure with the step?
Typical Improvement Curve

- **Situational Awareness**: Apparent increase due to healthier event/problem reporting culture.
- **Significant performance improvement** as a result of prevention activities.
- **DRIFT**: Actual increase due to complacency or reverting to old habits.
- **Safety Across the Board**: Long-term improvement, sustained prevention.

**TRIPLE AIM**
Be Strategically Transparent

• **Visuals**
  - post-its/easel pads to track progress
  - stand-ups/huddles—**STAFF LED**
  - medical staff meetings/board meetings
  - non-traditional methods

• **Storytelling**
Take-Away

As we learn from others today and start to strategize next steps for improvement focus areas, consider how you/your organization/your staff can integrate HRO concepts and utilize process improvement tools in the day-to-day operations of providing safe and reliable patient care to. We must create urgency and devise ways to achieve rapid-process improvements and identify the ROI.
Designing a Process Improvement Project

Tabletop Action Planning
Management by Improving Process

- Pick a process/focus area
- Compare baseline rates to current rates
- Flowchart process as designed vs. reality
Step One-Plan

- Make a list of process changes you would like to make
  
  Example: We want to implement the induction bundle checklists, we want all providers following the same process, we want to ensure seamless receipt of blood products...
Step Two-Prioritize

- Prioritize and rank your list, identify your top 3
- Of these 3, identify your #1 process change need
  ➤ Now consider the “gaps”
    - no collaboration with providers
    - lack of buy-in
    - too many steps
    - lack of staff experience
Step Three — Plan

• What is your AIM?
  ➢ set the scope and boundaries
    – timeframe?
    – location — LDRP, Nursery, OR??
    – how/what will you measure?
    – outcome and process measures?
Step Four — Plan

• Who are your stakeholders?

• Build your team
  ➢ who is on your lead team, lead physician, day-to-day leader, C-suite champion(s), non-clinical
  ➢ how will you communicate the change initiative?

• Data
  ➢ how to gather, who will gather, where to report, how often will it be gathered
  ➢ be transparent and post for those doing the process changes to review
Step Five — Do (Anticipate)

• Carry out the test
• Consider you are implementing the change(s):
  ➢ What problems might arise? — solicit, document and solve
    – don’t forget to include the patient observations
  ➢ display — how will you display the results to your staff? Who/how/when will they be reviewed?
  ➢ clear — think about how you will clear any issues and ask for feedback; huddles? when? where?
  ➢ acknowledge — think about how you will recognize the direction of the project as the change is on-going
Step Seven — Study (Anticipate)

- Imagine your data isn’t trending to support your hypothesis. How will you act? What will you change and why?
- What if your change project was implementing a policy and the steps aren’t getting carried out as planned? (quality and quantity)
Step Eight — Act

- Did your change show an improvement?
  - Yes; the test was conducted as planned, data collection went smoothly, and the data show improvement
  - No; the test was conducted as planned, the data collection went smoothly but the data do NOT show improvement
  - Unsure
    - The test did not go as planned
    - There was a problem with data collection

- How will you plan to decrease variation across units/physicians/patient populations?
- How will you expand your scope?
- Are you ready for implementation?
Wrap Up

- Volunteers willing to share their project?
Perinatal Levels of Care and Maternal Regionalization of Care

JOHN YEAST, M.D.
VICE PRESIDENT OF MEDICAL EDUCATION AND RESEARCH
SAINT LUKE’S HOSPITAL OF KANSAS CITY,
VICE-CHAIR, DEPARTMENT OF OBGYN
UMKC SCHOOL OF MEDICINE
TIOP: Regional Development of Perinatal Health Services 1975

- **Level I**
  - Uncomplicated maternity and neonatal care
  - Emergency management of unexpect. complications
  - Identification of (and transfer for) high risk patients
  - Preventive and social services

- **Level II**
  - All Level I services
  - 24 hour in-house anesthesia service
  - 24 hour clinical laboratory and radiology services
  - Stabilization and transfer of complicated obstetric patients, incl threatened PTD < 34 wks GA
Level III
- All Level I and II services
- Complete maternity and neonatal care
- Intrapartum and neonatal intensive care
- Transport services
- Outreach education services
- Perinatal data collection and analysis, evaluation of new technologies
Level I Centers---Less than 1,000 del/yr

Level III Centers--- Greater than 2,000 del/yr
  ○ NICU with adequate staffing
  ○ NICU daily census of $\geq 10$

Level II Centers---Able to provide services $\geq 34$ weeks GA
Right Place

Very Preterm Babies more than 8 weeks premature are 55%* more likely to die if Born in a Hospital WITHOUT a Neonatal Intensive Care Unit.

Very Low Birth Weight Babies under 3.5 lbs. are 62%* more likely to die if Born in a Hospital WITHOUT a Neonatal Intensive Care Unit.

Extremely Low Birth Weight Babies under 2.2 lbs. are 80%* more likely to die if Born in a Hospital WITHOUT a Neonatal Intensive Care Unit.

*(Source: Lasswell et al. 2010)
### Missouri Facilities Providing OB Care—1980’s---2000’s

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td># Hospitals Delivering</td>
<td>120</td>
<td>98</td>
<td>73</td>
</tr>
<tr>
<td>Level I</td>
<td>90 (75.0%)</td>
<td>56 (57.1%)</td>
<td>33 (46.1%)</td>
</tr>
<tr>
<td>Level II</td>
<td>26 (21.7%)</td>
<td>31 (31.6%)</td>
<td>23 (31.6%)</td>
</tr>
<tr>
<td>Level III</td>
<td>4 (3.3%)</td>
<td>11 (11.1%)</td>
<td>17 (23.2%)</td>
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</tbody>
</table>
## Number and Location of Deliveries in Missouri

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<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>No. Deliveries</td>
<td>~382,000</td>
<td>~392,700</td>
<td>~380,000 **</td>
</tr>
<tr>
<td>Level I</td>
<td>110,000 (29%)</td>
<td>50,000 (13%)</td>
<td>76,000 (20%)</td>
</tr>
<tr>
<td>Level II</td>
<td>232,000 (61%)</td>
<td>212,700 (54%)</td>
<td>106,400 (28%)</td>
</tr>
<tr>
<td>Level III</td>
<td>40,000 (10%)</td>
<td>130,000 (33%)</td>
<td>197,600 (52%)</td>
</tr>
<tr>
<td>Level IV</td>
<td>XXXXX</td>
<td>XXXX</td>
<td>118</td>
</tr>
</tbody>
</table>
Why The Change in Perinatal Levels of Care?

- Population re-distribution??
- Growing commitment to better perinatal outcomes??
- Financial incentives??
- System formations??
- Marketing?
- Competition?
- Lack of familiarity with guidelines?
## Distribution of LBW Infants

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><strong>VLBW (&lt;1500 gm)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>519/4369 (11.9%)</td>
<td>167/5182 (3.2%)</td>
</tr>
<tr>
<td>II</td>
<td>2068/4369 (47.3%)</td>
<td>546/5182 (10.5%)</td>
</tr>
<tr>
<td>III</td>
<td>1782/4369 (40.8%)</td>
<td>4469/5182 (86.3%)</td>
</tr>
<tr>
<td><strong>ELBW (&lt;1000 gm)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>229/1848 (12.4%)</td>
<td>77/2240 (3.4%)</td>
</tr>
<tr>
<td>II</td>
<td>868/1848 (47.0%)</td>
<td>224/2240 (10.0%)</td>
</tr>
<tr>
<td>III</td>
<td>751/1848 (40.6%)</td>
<td>1939/2240 (86.6%)</td>
</tr>
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</table>
## BW Specific NNM by Delivery Site, 1990-1994
(per 1000 live births)

<table>
<thead>
<tr>
<th>Weight Range</th>
<th>Level I</th>
<th>Level II</th>
<th>Level III</th>
</tr>
</thead>
<tbody>
<tr>
<td>1250-1499 gm</td>
<td>71.4</td>
<td>45.7</td>
<td>53.4</td>
</tr>
<tr>
<td>1000-1249 gm</td>
<td>205.9</td>
<td>204.1</td>
<td>55.0</td>
</tr>
<tr>
<td>750-999 gm</td>
<td>410.3</td>
<td>290.6</td>
<td>173.5</td>
</tr>
<tr>
<td>500-749 gm</td>
<td>921.1</td>
<td>747.7</td>
<td>486.6</td>
</tr>
</tbody>
</table>
**BW Specific NNM by Corrected* Delivery Site, 1990-1994 (per 1000 live births)**

- **Corrected—**
  - I—Less than 1000 deliveries/year
  - III—→2000 deliveries/year, NICU, NICU average daily census ≥ 10
  - II—All others

<table>
<thead>
<tr>
<th></th>
<th>VLBW (500-1499 gm)</th>
<th>ELBW (500-999 gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>371.3</td>
<td>662.3</td>
</tr>
<tr>
<td>II</td>
<td>278.4</td>
<td>508.9</td>
</tr>
<tr>
<td>III</td>
<td>168.8</td>
<td>318.2</td>
</tr>
</tbody>
</table>
Current Delivery Volume by Self-Defined Level

- **Level III Centers**
  - > 2000 deliveries per year  9/17
  - 1000-2000 deliveries per year  6/17
  - < 1000 deliveries per year 2/17

- **Level II Centers**
  - > 2000 deliveries per year  1/23
  - 1000-2000 deliveries per year 8/23
  - 500-1000 deliveries per year 9/23
  - < 500 deliveries per year  5/23

- **Level I Centers**
  - Range from 24-1405 deliveries per year
In The Know

The basics:

- Perinatal Regionalization is a formal system of assessing a facility’s ability to deliver specialized care to both pregnant moms and newborns.
- It establishes a clear network for appropriate referrals based on hospital assessments, with the goal of ensuring moms and babies receive the right care at the right time at the right place.
- A regionalized system does NOT mandate how referrals are made, NOR does it outline penalties.
- Among all providers, maternal and neonatal centers, the common goal of Perinatal Regionalization is to reduce infant and maternal morbidity and mortality and improve birth outcomes.
Regionalization is Not New
21 States have Statutes

States with Perinatal Regionalization in Statute:
Alabama, California, Florida, Georgia, Illinois, Iowa, Louisiana, Maryland, Massachusetts, Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, South Carolina, Tennessee, Texas, Vermont, Virginia & Washington

States with Informal Perinatal Regionalization:
Alaska, Arizona, Arkansas, Colorado, Hawaii, Idaho, Indiana, Kentucky, Maine, Minnesota, Oregon, Pennsylvania, Rhode Island, Utah, West Virginia, & Wisconsin
Obstetric Care Consensus

- Consensus Conferences ACOG, SMFM, ACNM in 2014, 2015
- Released in January 2015, published in American Journal of OBGYN (gray journal) and OBGYN (green journal) in February and March.
Objectives

- Introduce uniform designations for levels of maternal care (complimentary but distinct from Neonatal Levels)
- Reduce maternal morbidity & mortality
- Develop standardized definitions and nomenclature for facilities that provide care
- Provide consistent guidelines according to level of care for use in quality improvement & health promotion
- Foster equitable geographic distribution of maternal care facilities & systems that promote proactive integration of maternal services
<table>
<thead>
<tr>
<th>State</th>
<th>State Maternal Mortality Ranking</th>
<th>State</th>
<th>State Maternal Mortality Ranking</th>
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<tbody>
<tr>
<td>Maine</td>
<td>1</td>
<td>New Hampshire</td>
<td>26</td>
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<tr>
<td>Vermont</td>
<td>2</td>
<td>Missouri</td>
<td>28</td>
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<tr>
<td>Massachusetts</td>
<td>3</td>
<td>Montana</td>
<td>28</td>
</tr>
<tr>
<td>Indiana</td>
<td>4</td>
<td>North Dakota</td>
<td>30</td>
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<td>Minnesota</td>
<td>5</td>
<td>Colorado</td>
<td>31</td>
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<tr>
<td>Hawaii</td>
<td>6</td>
<td>Idaho</td>
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<tr>
<td>Alaska</td>
<td>7</td>
<td>South Carolina</td>
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<td>Connecticut</td>
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<td>West Virginia</td>
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<tr>
<td>Kansas</td>
<td>9</td>
<td>California</td>
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<tr>
<td>Oregon</td>
<td>10</td>
<td>New Jersey</td>
<td>35</td>
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<tr>
<td>South Dakota</td>
<td>10</td>
<td>North Carolina</td>
<td>37</td>
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<tr>
<td>Iowa</td>
<td>12</td>
<td>Tennessee</td>
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<td>Arizona</td>
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<td>Oklahoma</td>
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<td>Wisconsin</td>
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<td>Nebraska</td>
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<td>Washington</td>
<td>15</td>
<td>Florida</td>
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<td>Wyoming</td>
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<td>Delaware</td>
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<td>Ohio</td>
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<td>Pennsylvania</td>
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<td>Utah</td>
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<td>New York</td>
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<td>Kentucky</td>
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<td>Illinois</td>
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<td>Alabama</td>
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<tr>
<td>Nevada</td>
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</table>
Levels of Maternal Care

- Birth Center
- Level I (Basic Care)
- Level II (Specialty Care)
- Level III (Subspecialty Care)
- Level IV (Regional PHC)
Birth Center

- “Care of low-risk women with uncomplicated singleton term pregnancies with vertex presentation who are expected to have an uncomplicated birth”
- Capable to provide emergency transfer to meet unexpected needs of woman/newborn
- Data collection, storage & retrieval
- QI programs
- Medical consultation available at all times.
- CNMs, CMs, CPMs, FPs, OBGYNs
Level I (Basic Care)

- Care of uncomplicated pregnancies with the ability to detect, stabilize, & initiate management of unanticipated M/F or neonatal problems until patient can be transferred to a facility where specialty care is available.
- Ability to perform timely Cesarean Section
- Support services: Ob sono, lab, blood bank “at all times”
- Protocols: Massive Transfusion, Emergent release of blood products
- Formal transfer plans to higher level facility
Level I (Basic Care)

- Continuous availability of adequate number of RNs with competence in Level I care criteria
- Nursing Leadership has expertise in Perinatal Nursing
- Obstetric provider with privileges to perform Emergent Cesarean
- Anesthesia services available to provide labor analgesia & surgical anesthesia
Level I (Examples)

- Any patient appropriate for BC plus:
- Term Twin gestation
- TOLAC
- Uncomplicated Cesarean
- Preeclampsia without severe features at term
Level II (Specialty Care)

- Level I capabilities and,
- CT and MRI imaging available
- Ultrasonographic assessment for maternal and fetal services
- Bariatric patient care equipment
- Continuous availability of RNs with Level II competence
- Nursing Leadership & staff: Formal training & experience in perinatal nursing
- OBGYN availability 24/7
- OBGYN director: BC OBGYN with “special interest & experience in OB”
- MFM availability: 24/7 in person, phone, or telemedicine as needed
- Anesthesia availability: 24/7
- BC Anesthesia with special training or experience in OB anesthesia
- Med/Surg consultants available
Level II examples

- **Appropriate patients:**
  - Severe preeclampsia
  - Placenta Previa with no prior uterine surgery
Level III (Subspecialty Care)

- Level II facility plus care of more complex maternal medical conditions, Ob complications, and fetal conditions
- Advanced imaging available 24/7
- Assist Level I/II centers with QI/Safety
- Provide perinatal system leadership if acting as Level IV in areas where L IV not available
- Critical Care / ICU availability
- Appropriate equipment & personnel onsite to ventilate & monitor women in labor until they can be safely transferred to ICU
Level III (Subspecialty Care)

- Nursing Leaders & RNs with competence in L III care criteria & ability to transfer/stabilize HR women/newborns who exceed L III care; have special education/experience in L III care
- OBGYN 24/7
- MFM 24/7 (onsite, phone, or telemed)
- OB director: BC OBGYN
- Anesthesia services 24/7: on site
- BC Anesthesiologist with special interest/education
- Full complement of subspecialists available for IP consultation
Level III (Subspecialty Care)

- Full complement: CC, Gen Surg, ID, Heme, Cardiology, Nephrology, Neuro & Neonatology >> IP consultations
- Imaging: Basic interventional radiology, maternal echo, CT, MRI, Nuc med >> interpretation at all times
- OB US with fetal assessment (UAD)
Level III examples

- Level II plus:
- Suspected placenta accreta; or Previa with prior uterine surgery
- Suspected percreta
- ARDS
- Expectant management of early severe preeclampsia < 34 weeks
Level IV (Regional PHC)

- Level III plus on-site med/surg care of the most complex maternal conditions and critically ill pregnant women & fetuses
- On site ICU care for OB patients
- On site Med/Surg care of complex case with ICU availability
- Perinatal system leadership: facilitate transfers, outreach education, analysis/evaluation of regional data including complications, outcomes & QI
Level IV (Regional PHC)

- MFM care team able to care for critically ill perinatal patient or have complex condition. Led by BC MFM with CC experience.
- Anesthesia: 24/7 onsite
- BC Anesthesiologist in charge of OB Anes
- Adult Med/Surg specialty/subspec availability onsite 24/7
Level IV examples

- Any Level III plus:
- Severe Maternal Cardiac Conditions
- Severe Pulmonary Hypertension or Liver Failure
- Pregnant women needing Neuro- or Cardiac surgery
- Pregnant women in unstable condition and in need of organ transplant
Right Care, Right Place for All Missouri Moms and Babies
Conclusions—Pending Complete 2010’s Data

- Declining number of delivery locations—especially Level I
- No evidence of adverse outcome patterns in Level I facilities
- 85% of LBW infants deliver in Level II/III units
- ? If all self-designated II/III units meet AAP and ACOG criteria
- “Loose” regionalization of care
- Development of complementary maternal guidelines to begin
Closing Remarks and Wrap-Up
Today, health care leaders are navigating the transformation of payment and health care delivery driven by provisions in the Affordable Care Act, signed into law March 23, 2010. The shift from volume- and fee-based payments to payments based on outcomes requires significant changes in the coordination, communication and delivery of care. The goal of every hospital is to maximize patient-centered, efficient quality of care, while reducing financial costs and penalties. This “Triple Aim” approach has the goals of improving the individual experience of care, improving the health of populations and reducing the per capita costs of care for populations.

Health care systems and providers must transition from episodic treatment of primarily chronic diseases among an aging population to a coordinated system of prevention, primary, acute, long-term and end-of-life care services. MHA, recognizing the challenges and opportunities of this new paradigm, is strategically positioned to help Missouri hospitals and health systems. The transformative changes in health care today are challenging, yet Missouri’s hospitals are poised to build on the success of the hospital engagement network. The work continues. A focused strategy to reduce variation and improve care is underway. MHA and Missouri hospital leaders and providers are poised to lead the efforts in every Missouri community for better health, better care, and lower costs. Contact us anytime.

Join the conversation on LinkedIn.
Join MHA on LinkedIn

LinkedIn: MHA Strategic Quality
Quality Transparency and Data Measurement Resources

Specialty Services & Hospital QUALITY REPORTING GUIDE
Quality Transparency and Data Measurement Resources

Specialty Services & Hospital QUALITY REPORTING GUIDE
Issue Brief

Bedside Whiteboard Communication: Power in Simplicity

Engaging patients and families in improving health care outcomes means creating effective communication between those who provide care and those who receive it. Patients, families and their advocates increasingly understand the importance of patient-centered communication. Easy-to-understand tools and checklists that enhance communication and improve patient and family involvement and understanding in care are essential.

At a time when technology has taken center stage, a tool as simple as a whiteboard can be easily overlooked or underestimated. Yet, there’s power in that simplicity. It requires little training to use and can be viewed by patients at their convenience. When everyone understands and agrees on how it should be used and by whom, it can quickly close communication gaps between providers and their patients and families.

Chances are that every bed in your hospital has a whiteboard nearby. According to one hospitalist researcher, physicians and nurses aren’t realizing the full potential of whiteboards to improve communications with patients. At the University of California, San Francisco, hospitalist Niraj L. Sehgal, M.D., M.P.H., surveyed his nursing and hospitalist colleagues to identify the barriers preventing more effective whiteboard use. He realized that fixing the No. 1 complaint — the fact that dry-erase pens disappear — was simple, but figuring out how to solve other problems wasn’t. For instance, providers didn’t know what to write when there was no template guiding them. There was confusion about who should keep whiteboard information up-to-date, and even concerns about patient privacy.

Survey results confirmed a fundamental lack of understanding about the kind of communication for which the whiteboards should be used. The most compelling argument in favor of the conscientious use of bedside whiteboards is the potential to enhance patients’ involvement in their own care. Whiteboards should focus on what patients want to know and need to know, and less about what physicians and nurses want to communicate with each other. Whiteboards should allow patients and families to easily record a question, a reminder, or the family’s location. Staff should introduce patients and families to the whiteboard upon arrival to the room and invite them to use it.
Next Steps

- HEN end-of-project report
- Issue Brief series: Readmissions and Care Coordination
- Continued Issue Brief series: Patient and Family Engagement
- HEN 2.0 project and resource planning
  - OB Harm Immersion Project
- Quality assessments evaluation
- eCQM and ICD-10 implications
- IPPS FY 2016 quality strategy implications
Thank You for Your Support

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  Judy Wilson-Griffin, RNC, MSN, PNCNS, Section Chair
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