Purpose: To provide guidance to practitioners caring for pregnant women and newborn patients during a disaster

Disclaimer: This guideline are not meant to be all inclusive, replace an existing policy and procedure at a hospital or substitute for clinical judgment. These guidelines may be modified at the discretion of the healthcare provider.

Initial Management of All Obstetrical (OB) Patients

- Stabilize ABCs (Airway, Breathing, Circulation)
- For OB trauma patients, stabilize the patient’s condition and provide treatment according to trauma guidelines before evaluating the fetus. (See pg. 8 for further care). Be aware of the following caveats:
  - Use rapid sequence induction with cricoid pressure and gastric decompression when oral intubation is required
  - Use closed-tube thoracotomy at a higher intercostal space when treating pneumothorax
  - Place patients who are > 20 weeks gestation in the left lateral position, left lateral tilt, right lateral position or right lateral tilt (while maintain spinal precautions as applicable) to maximize venous return
- Triage:
  - Determine:
    - Number of weeks gestation
    - If the presenting complaint due to the pregnancy
    - If the presenting complaint unrelated to the pregnancy but affects the pregnancy
    - If the presenting complaint affects the pregnancy
  - Triage all pregnant women that are >20 weeks gestation based on the level of severity of patient’s complaint related to or that affects the pregnancy to determine level of perinatal services needed:
    - Emergent: (In need of Level III Perinatal Center care ) (background read thru for each perinatal center under each section)
      - Cardio-pulmonary failure/arrest
      - Eclampsia
      - Active hemorrhage/heavy bleeding
      - Fetal parts or foreign bodies protruding from vagina
      - Diabetic coma/DKA
      - Altered level of consciousness
      - Multiple gestation (greater than twins) in active labor
      - Active labor in mothers with <30 weeks gestation
      - Laboring mother with known antenatal fetus defect (i.e. cardiac, pediatric surgery)
      - Pre-eclampsia or Hemolysis, Elevated Liver Enzymes, and Low Platelets (HELLP) syndrome
      - Other life threatening conditions to mother or fetus
    - Urgent: (In need of Level II-E Perinatal Center care)
      - Active labor in mothers with >30 and <35 weeks gestation
      - Multiple gestation (no more than twins) in active labor
      - Decreased fetal movement
      - Abdominal pain
      - Preterm rupture of membranes >30 and <35 weeks gestation
      - Obesity
- Non-urgent: (In need of Level I or Level II Perinatal Center care)
  - Active labor in mothers with >35 weeks gestation
  - Preterm rupture of membranes >35 weeks gestation
  - Rule out rupture of membranes (ROM)
  - Stable gestational hypertension
- Perform a complete assessment of pregnant patient at time of presentation (See Initial Assessment of the Pregnant Patient for checklist)
- For all OB patients:
  - Establish large bore IV access
  - Obtain lab exams (if available): CBC with differential, Type and RH or Type and Screen, and HIV
  - Obtain prenatal care records (if available)
- Consult Pediatric Care Medical Specialist for assistance with care of the acutely and critically ill patient (mother and child); to individualize the care of patient; if patient needs to be transferred; and as needed for further support and consult.
### Management for Common Life Threatening Obstetrical Conditions

**Identifying Preeclampsia and/or Eclampsia**

<table>
<thead>
<tr>
<th>ASSESS</th>
<th>NORMAL</th>
<th>MODERATE</th>
<th>SEVERE/ECLAMPSIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>Alert/Oriented</td>
<td>Agitated, confused, drowsy, difficulty speaking</td>
<td>Unresponsive, seizure activity</td>
</tr>
<tr>
<td>Headache</td>
<td>None</td>
<td>Mild headache, nausea, vomiting</td>
<td>Unrelieved headache</td>
</tr>
<tr>
<td>Vision</td>
<td>None</td>
<td>Blurred or impaired</td>
<td>Temporary blindness</td>
</tr>
<tr>
<td>Systolic BP (mmHg)</td>
<td>100-139</td>
<td>140-159</td>
<td>≥160</td>
</tr>
<tr>
<td>Diastolic BP (mmHg)</td>
<td>50-89</td>
<td>90-105</td>
<td>≥105</td>
</tr>
<tr>
<td>Heart rate</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>SpO2 (%)</td>
<td>≥95</td>
<td>91-94</td>
<td>≤90</td>
</tr>
<tr>
<td>Shortness of breath</td>
<td>None</td>
<td>Present</td>
<td>Present</td>
</tr>
<tr>
<td>Pain (abdomen or chest)</td>
<td>None</td>
<td>Nausea, vomiting, chest pain, abdominal pain</td>
<td>Nausea, vomiting, chest pain, abdominal pain</td>
</tr>
<tr>
<td>Urine output (mL/hr)</td>
<td>≥50</td>
<td>30-49</td>
<td>≤30 (in 2 hours)</td>
</tr>
<tr>
<td>Proteinuria</td>
<td>Trace</td>
<td>+1, +2, ≥300/24 hours</td>
<td>&gt;+3; ≥5gm/24 hours</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>0.9-1.2</td>
<td>&gt;1.2</td>
</tr>
<tr>
<td>Magnesium Sulfate Toxicity</td>
<td>DTR +1; Respirations 16-20</td>
<td>Depression of patellar reflexes</td>
<td>Respirations &lt;12</td>
</tr>
</tbody>
</table>

**Normal:**
Monitor patient for changes in condition as per hospital protocol

**Moderate:**
Consult Pediatric Care Medical Specialist to assist with arranging transfer of patient to higher level perinatal center

<table>
<thead>
<tr>
<th>Positive Trigger</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 of any type</td>
<td>Increase assessment frequency</td>
</tr>
<tr>
<td></td>
<td>Notify provider</td>
</tr>
<tr>
<td>≥2 of any type</td>
<td>Order labs/tests</td>
</tr>
<tr>
<td></td>
<td>Consider Magnesium Sulfate</td>
</tr>
<tr>
<td></td>
<td>Provide supplemental O2</td>
</tr>
</tbody>
</table>

**Severe/Eclampsia:**

- Central imaging is not necessary for the diagnosis and management of most with eclampsia but is indicated in patients with focal neurologic deficits or prolonged coma.
- Eclampsia can occur during the antepartum, intrapartum and postpartum period.
- Consult Pediatric Care Medical Specialist to assist with arranging transfer of patient to higher level perinatal center.
- See next page for Treatment
Treatment of Severe Preeclampsia and/or Eclampsia

Identify Severe Preeclampsia and/or Eclampsia

Prevent maternal injury and support ABCs
Implement monitoring: 1:1 staff ratio

Seizure treatment/prophylaxis
Magnesium sulfate bolus (6g) IV/IO over 15-20 minutes followed by magnesium sulfate infusion (1-2g/hr) IV/IO. Monitor for respirator depression and maintain urine output ≥100mL/3 hours.
Recurrent seizures: Magnesium sulfate 2gm IV/IO; check magnesium level

Respiratory:
O₂ 10L via NRB mask
Chest x-ray r/o pulmonary edema

Fetal Monitoring
Monitor fetal heart rate
Consider ultrasound

Fluid balance:
IVF maintenance rate of 83mL/hr
Place a urinary catheter to monitor urine output hourly

Seizure treatment/prophylaxis
Magnesium sulfate bolus (6g) IV/IO over 15-20 minutes followed by magnesium sulfate infusion (1-2g/hr) IV/IO. Monitor for respirator depression and maintain urine output ≥100mL/3 hours.
Recurrent seizures: Magnesium sulfate 2gm IV/IO; check magnesium level

Hypertension
Target BP= 140-150/80-90
Treat when SBP ≥160 and/or DBP ≥110
Labetalol:
Contraindications: asthma, COPD, Bradycardia, and/or heart block.
20 mg IV/IO bolus. If no improvement after 15 minutes, give 40mg IV/IO. If no improvement after 15 minutes give 80mg IV/IO. If no improvement after 15 minutes, repeat 80mg IV/IO. Max is 300mg in 24 hours AND/OR
Hydralazine:
5mg IV/IO Bolus over 2-4 minutes. If no improvement, repeat in 20 minutes. If no improvement, 10mg IV/IO every 20 minutes for a MAXIMUM dose of 40mg in a 24 hour period. Monitor vital signs immediately after and every 5 minutes during administration.

Thromboembolism
Apply compression stockings
Consider heparin

Plan for delivery:
Route: Vaginal preferred over cesarean
Plan for transfer to Level III Perinatal Center
### Maternal Hemorrhage: Recognition and Treatment

<table>
<thead>
<tr>
<th>Class I</th>
<th>Class II</th>
<th>Class III</th>
<th>Class IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Est. Blood Loss (EBL)*</td>
<td>~ 900 mL</td>
<td>~ 1200-1500 mL</td>
<td>~ 1800-2100 mL</td>
</tr>
<tr>
<td>Pulse</td>
<td>&lt;100</td>
<td>&gt; 100</td>
<td>&gt; 120</td>
</tr>
<tr>
<td>Respiration</td>
<td>14-20</td>
<td>20-30</td>
<td>30-40</td>
</tr>
<tr>
<td>Blood Pressure</td>
<td>Normal</td>
<td>Orthostatic changes</td>
<td>Overt hypotension</td>
</tr>
<tr>
<td>Mental Status</td>
<td>Anxious</td>
<td>Anxious and Confused</td>
<td>Confused and Lethargic</td>
</tr>
<tr>
<td>Urine Output</td>
<td>≥ 30 mL/hr</td>
<td>20-30 mL/hr</td>
<td>5-15 mL/hr</td>
</tr>
<tr>
<td>Cap Refill</td>
<td>Normal</td>
<td>&gt;2 seconds</td>
<td>&gt;2 seconds Cold &amp; clammy</td>
</tr>
<tr>
<td>Fluid Replacement (3:1 Rule)</td>
<td>Crystalloids</td>
<td>Crystalloids</td>
<td>Crystalloids &amp; blood</td>
</tr>
<tr>
<td>Labs</td>
<td>CBC; PT/PTT; Fibrinogen; T&amp;S versus T&amp;C; FDP; Platlets; D-dimer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product Replacement</td>
<td>Crystalloids → Transfuse PRBCs → Transfuse other (FFP, Cryo, Plts)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bleeding Abatement</td>
<td>Massage → Uterotonic → Surgery → Packing/Tamponade/Embolization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Estimating Blood Loss (EBL): Guide to objective measurement of blood loss*

1 cup = 250 mL
   = 5 cm clot (orange)
   = 1 unit of PRBCs
12 oz soda can = 355 mL
2 cups = ~500 mL
   = 10 cm clot (softball)
   = 2 units of PRBCs

Floor spills:
- 20” (50 cm) = 500 mL
- 30” (75 cm) = 1000 mL
- 40” (100 cm) = 1500 mL

Ideal method is weighing:
   1g of blood = 1 mL
Placenta Abruption

Term/Near Term

Fetus alive

Reassuring fetal status
Stable mother

Transfer to hospital with OB services
Vaginal delivery

Contraindications to vaginal delivery:
Non-reassuring fetal status
Unstable mother

Emergent delivery necessary via Cesarean delivery

Fetus dead

Vaginal delivery

Failure to progress
Unstable mother

Cesarean delivery

Fetus dead

Contraindications to vaginal delivery

Preterm

Fetus alive <24 weeks

Assess

Unstable mother

Emergent delivery necessary

Stable mother

Manage conservatively

Fetus alive >24 weeks

Assess

Non-reassuring fetal status
Unstable mother

Emergent delivery necessary

Reassuring fetal status
Stable mother

Manage conservatively and transport to hospital with OB services

Fetus dead

Deliver

Ensure proper documentation
Debrief staff
Provide emotional support to parents

In all cases:
- Check CBC and coagulation indices
- Replace blood volume (refer to pg. 5 for Maternal Hemorrhage)
- Correct coagulopathies
- Monitor I & O’s and renal function
Trauma

Prenatal Trauma Management (ACEP)

<table>
<thead>
<tr>
<th>Consideration</th>
<th>Treatment</th>
</tr>
</thead>
</table>
| General concepts            | • Medications, tests, treatments and procedures required to stabilize the mother should not be withheld because of pregnancy.  
• Evaluate for possible pregnancy –related causes for an accident (i.e. seizure secondary to eclampsia)  
• Maternal physiologic changes may delay signs of shock  
  o Monitor urine output and fetal heart tracing patterns to provide early warning signs instead of only the mother’s pulse and BP  
• Consult Pediatric Care Medical Specialist for assistance with care of the acutely and critically ill patient, to individualize the care of patient, if patient needs to be transferred and as needed for further support and consult.  |
| Positioning                 | • Place any pregnant patient >24 weeks gestation in left lateral decubitus position to avoid hypotension. Right lateral decubitus position is also acceptable.  
• If patient is on a backboard, tilt it toward the left or place a wedge under right side  
• If patient’s BP is unstable or concerns exist regarding cervical spine injury, patient should be log-rolled with her neck being stabilized  |
| Hypotension                 | • Administer IV fluids and consider blood transfusion  |
| Hypertension                | • Criteria for definition: >140 systolic and > 90 diastolic;  
• Treat >160 systolic and >110 diastolic with labetalol 10-20mg IV bolus  |
| Fetal/Uterine Monitoring    | • Initiate fetal monitoring for viable fetus as soon as mother is stabilized (if available and trained personnel available to stay with patient)  
• If fetal monitoring unavailable, check fetal heart tones via doppler  
• A viable fetus should be placed on continuous monitoring until under the care of the obstetrician.  
• Electronic fetal heart and uterine monitoring in pregnant trauma patients > 20 weeks gestation may detect placental abruption  
• Continuous monitoring can be discontinued after 4 hours if there are no fetal heart rate abnormalities, uterine contractions, bleeding or uterine tenderness  |
| Vaginal Bleeding            | • Treat heavy vaginal bleeding the same as hypovolemic shock  
• Massive continual vaginal bleeding may require emergency cesarean delivery  
• Obtain OB consultation  
• Administer RhiG to Rh negative patients  |
| Lab tests                   | • CBC (monitor hemoglobin/platelet count)  
• Type and Screen (monitor for Rh negative)  
• Kleihauer-Betke  
• Coagulation panel (INR, PTT, fibrin degradation, fibrinogen, i-COOMBS)  |
| Diagnostics                 | • Diagnostic procedures to evaluate potentially serious traumatic injuries should not be withheld for fetal concerns. Order exams  |
| Treatments: IV Fluids | for the same indications as non-pregnant trauma patients
| | o A complete trauma exam with CT scanning will not approach radiation levels that adversely affect the fetus.
| | • Consider ultrasound to replace x-ray when possible
| | • Shield abdomen, pelvis and neck when possible
| Treatments: Intubations and RSI | • Larger fluid requirements when hypotensive
| | • Avoid administering large amounts of IVF containing Dextrose which can cause glucose regulation difficulties in neonates if delivery is imminent
| Treatments: Medications | • Same as non-pregnant patients
| Analgesia: | • Acute trauma pain control with narcotics can be given in any trimester as needed
| | • Inform OB of doses and times if fetal delivery is imminent
| Antibiotics: | • Ceftriaxone or clindamycin
| Antiemetics: | • Metoclopramide or Zofran
| Treatments: Oxygen | Provide high concentrated $O_2$
| Treatments: Rh negative patients | RhIG 1 ampule (300g) IM
| Treatments: Seizures | • Eclamptic: magnesium sulfate 6g IV/IO load over 15-20 minutes
| | • Non-eclamptic: lorazepam 1-2mg/min IV/IO
| Treatments: Tetanus | Safe in pregnancy
| Treatments: Transfusions | CMV antibody negative; Leukocyte reduced
| CPR/ACLS | Left lateral decubitus; no response after 4 minutes of CPR, consider cesarean for viable fetus
| Maternal Death | Consider immediate cesarean delivery for a viable fetus in any patient who cannot be resuscitated
| | Consider immediate cesarean delivery in cases of brain death in mother with intact cardiovascular system if fetal compromise is present
| | Consider maintaining life support management until fetus is at an acceptable level of maturity for delivery
**Prolapsed Cord**

- Risk factors for cord prolapse:
  - PROM* Breach position
  - Multiple gestation Long umbilical cord
  - Spontaneous labor with high head and increased amniotic fluid
  - Every vaginal exam (VE), check for and exclude presentation/ prolapsed cord

- Notify (if available at hospital):
  - Anesthesiologist
  - Neonatologist
  - Obstetrician
  - On-call surgeon

- Contact the Pediatric Care Medical Specialist for OB and Neonatal consultation if services unavailable at hospital and to assist with transfer to NICU after delivery

- Cord visible, seen with speculum or felt during VE

- PROM* or PPROM** with risk factors for cord prolapse
  - PROM or PPROM with abnormal fetal heart monitoring

- Plan of action:
  - Mode of delivery is what is safest for mother
  - Non-urgent (as long as no maternal complication and mother is stable)
  - Provide counseling to parents

- Fetus dead
  - Confirm fetal death by ultrasound if available

- Fetus alive
  - Determine if fetus is alive:
    - Cord pulsations
    - Fetal stethoscope
    - Hand held Doppler
    - Ultrasound
    - Fetal heart monitors

*PROM=premature rupture of membranes (term fetus)
**PPROM= Preterm premature rupture of membranes)
Fetus alive

Cervix not fully dilated

Relieve compression and prevent vasospasm of cord
- Head low (Trendelenburg, knee-chest or left lateral position with pelvis elevated
- O₂ via face mask at 8L/min
- Place gloved fingers into vagina between pubic bone and presenting part with the cord in between two fingers and exert counter pressure on presenting part and maintain pressure until baby can be delivered
- Do not push cord back into vagina
- Cover exposed cord with moist dressing and keep warm

Transfer to operating room, maintaining relief of cord compression

Reconfirm fetus is alive (Ultrasound scan if possible)

Emergency cesarean section
Empty bladder before entering peritoneal cavity
Prepare for neonatal resuscitation and transfer to Level III Perinatal Center after delivery

Cervix fully dilated

Vacuum delivery
Forceps delivery
Assisted breech delivery
Breech extraction

Ensure proper documentation
Debrief staff
Provide counseling to parents about treatment options
Provide emotional support to parents
Breech Birth

Gravida in labor with fetus in breech position

Assess for contributing factors:
- Preterm labor
- Placenta Previa
- Fetal anomalies
- Multiple gestation
- Uterine malformation
- Leomyomata uteri

Reasons against vaginal breech delivery?
- Macrosomic
- Premature or small for dates fetus
- Macrocephaly
- Pre-term labor
- Fetal tumors
- Contracted or distorted pelvis
- Unavailable skilled, experienced practitioner

NO

Signs of adverse details of breech presentation?
- Posterior sacral position
- Incomplete breech presentation
- Extended fetal head

Optimal candidate for breech delivery with no adverse risk factors

Determine labor status

Not in labor

Await active labor

Vaginal vertex delivery

**Monitor for head entrapment (cervix clamping around neck as body is delivered). This is an emergent situation. Contact OB experts for assistance.**

Labor in progress

Early labor with intact membranes

Await active labor

Follow progression pattern in active phase

Protrusion or arrest pattern or 1 foot/leg is presenting part

Vaginal delivery contraindicated

Cesarean delivery

Normal cervical dilatation and fetal descent** and frank breech

Vaginal breech delivery
Shoulder Dystocia

Shoulder dystocia:
Anterior shoulder of the baby becomes impacted against the symphysis pubis preventing the shoulders from descending through the pelvis.

Possible Risk Factors:

**Antenatal**
- Previous shoulder dystocia
- Fetal macrosomia
- Maternal diabetes
- Maternal obesity
- Postdate pregnancy
- Short stature

**Intrapartum**
- Prolonged first stage
- Prolonged second stage
- Labor augmentation
- Instrumental delivery
- Precipitate birth
- Uterine hyperstimulation

**Maternal**
- Ruptured uterus
- Postpartum hemorrhage
- Perineal tears
- Emotional trauma

**Neonatal**
- Brachial plexus injury
- Fractured clavicle
- Birth asphyxia
- Neonatal death

Complications:

**Maternal**
- Ruptured uterus
- Postpartum hemorrhage
- Perineal tears
- Emotional trauma

**Neonatal**
- Brachial plexus injury
- Fractured clavicle
- Birth asphyxia
- Neonatal death

Identify shoulder dystocia

Turtle sign (chin retracts and depresses the perineum)
Head when delivered may be tightly applied to vulva
Anterior shoulder fails to deliver with routine traction

Failure of fetal head to restitute
Failure of shoulders to descend

Notify (if available at hospital):
- Anesthesiologist
- Neonatologist
- Obstetrician
- On-call surgeon
Contact the Pediatric Care Medical Specialist for OB and Neonatal consultation if services unavailable at hospital and to assist with transfer to NICU after delivery

Discourage pushing

McRoberts Maneuver (abduct and hyper flex legs against abdomen)

Suprapubic pressure (apply pressure in a downward, lateral direction just above the maternal symphysis pubis to push the posterior aspect of the shoulder towards fetal chest)

Consider episiotomy if it will make internal maneuvers easier

Try either maneuver first, depending on clinical circumstances and clinician experience

Deliver posterior arm

Internal rotation maneuvers:

If all above maneuvers fail to release the impacted shoulder, consider placing patient in all fours position or repeat the above.

Secondary Maneuvers:
- **Cleidiotomy**: deliberate fracture of clavicle
- **Zavanelli Maneuver**: restoring fetus into uterus and performing a cesarean section (contraindicated if a nuchal cord has been previously clamped and cut)
- **Symphysiotomy**: contact Pediatric Care Medical Specialist

Ensure proper documentation
Debrief staff
Provide counseling to parents on treatment options
Provide emotional support to parents

Illinois EMSC

www.luhs.org/emsc
Group B Streptococcus (GBS): a gram-positive organism, known to colonize the lower GI tract, with the potential for secondary spread to the genitourinary tract and subsequent transmission to the fetus during delivery. GBS is a leading cause of serious neonatal infection with case-fatality rate reported to be as high as 20% in newborns.

Inquire about GBS status during initial assessment of all laboring patients that present to hospital. Complete a vaginal and rectal GBS screening cultures at 35 – 37 weeks’ gestation for ALL pregnant women [unless patient had GBS bacteriuria during the current pregnancy or a previous infant with invasive GBS disease]

**INTRAPARTUM PROPHYLAXIS INDICATED**
- Previous infant with invasive GBS disease
- GBS bacteriuria during current pregnancy
- Positive GBS screening culture during current pregnancy (unless a planned cesarean delivery, in the absence of labor or amniotic membrane rupture, is performed)
- Unknown GBS status (culture not done, incomplete or results unknown) and any of the following:
  - Delivery at <37 weeks’ gestation*
  - Amniotic membrane rupture >18 hours
  - Intrapartum temperature >100.4°F/38.0°C

**INTRAPARTUM PROPHYLAXIS NOT INDICATED**
- Previous pregnancy with a positive GBS screening culture (unless a culture was also positive during the current pregnancy)
- Planned cesarean delivery performed in the absence of labor or membrane rupture (Regardless of maternal GBS culture status)
- Negative vaginal and rectal GBS screening culture in late gestation during the current pregnancy, regardless of intrapartum risk factors

*If onset of labor or rupture of amniotic membranes occurs at <37 weeks’ gestation and there is a significant risk for preterm delivery (as assessed by the clinician), follow the algorithm below for GBS prophylaxis management.

No GBS Culture
- Obtain vaginal & rectal GBS culture and initiate Penicillin (PCN) IV
- If no growth at 48hrs, stop PCN IV

GBS Positive
- PCN IV for ≥ 48 hrs (during tocolysis)
- Intrapartum antibiotic prophylaxis

GBS Negative
- No GBS Prophylaxis
- If undelivered in 6+ weeks repeat culture

**RECOMMENDED REGIMENS FOR INTRAPARTAL ANTIMICROBIAL PROPHYLAXIS FOR GBS PREVENTION**

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Penicillin G, 5 million units IV initial dose, then 2.5-3.0 million units every 4 hrs until delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative</td>
<td>Ampicillin 2 grams IV initial dose, then 1 gram every 4 hrs until delivery</td>
</tr>
</tbody>
</table>

**IF PENICILLIN ALLERGIC**

<table>
<thead>
<tr>
<th>Low Risk for Anaphylaxis</th>
<th>Cefazolin 2 grams IV initial dose, and then 1 gram every 8 hrs until delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Risk for Anaphylaxis</td>
<td>GBS susceptible to clindamycin or erythromycin: Clindamycin 900 milligrams every 8 hrs until delivery GBS resistant to clindamycin or erythromycin or susceptibility unknown: Vancomycin** 1 gram every 12 hours until delivery</td>
</tr>
</tbody>
</table>
Maternal Cardiopulmonary Arrest
If the mother suffers from cardiopulmonary arrest, follow Advance Cardiac Life Support guidelines. The following are additional guidelines for care of pregnant women in cardiopulmonary arrest:

- Displace the uterus either manually or by placing a hip roll under the patient’s right hip. Left tilt is preferable, however, either side would benefit the patient if left tilt is not possible.
- If present, remove fetal monitors before defibrillation or cardioversion. This also includes removing internal monitors.
- Do not give Amiodarone before the baby is delivered as it will cause severe hypothyroidism in an already compromised infant. Lidocaine is the antiarrhythmic of choice before delivery.
- Delivery by post mortem emergent cesarean section should be accomplished within the first 5 minutes of the maternal code.

Management of Other Common Delivery Complications
For additional common delivery complications, consult the Pediatric Care Medical Specialist for assistance and guidance with both obstetrical and pediatric care.