STANDARD OPERATING POLICIES AND PROCEDURES
BEAVER DAM COMMUNITY HOSPITALS, INC.
Beaver Dam, WI 53916

Women's Health
WH-029-19
Severe Hypertension in the Obstetrical Patient

Approved by _____ Administration

Date 6/6/2019

.01 PURPOSE

To define the process in assessing obstetrical patients with hypertension to ensure all patients are provided safe and timely care

.02 DEFINITIONS

Obstetrical Patient – a patient that is currently pregnant or has delivered an infant in the previous six (6) weeks.

Gestational Hypertension – New onset hypertension at >20 weeks gestation

A. Systolic Blood Pressure (BP) of 140 to <160mm/Hg *or*
B. Diastolic BP of 90 to < 110 mm/Hg
C. Absent symptoms consistent with preeclampsia
D. Normal laboratory tests

Severe Hypertension – Systolic blood pressure (BP) greater than or equal to 160 mm/Hg ***AND/OR*** Diastolic BP greater than or equal to 110 mm/Hg and persistent for 15 minutes.

Preeclampsia – Disorder of pregnancy associated with new-onset hypertension, which occurs most often after 20 weeks gestation and frequently near term. Although often accompanied by new-onset proteinuria, hypertension and other signs or symptoms of preeclampsia may present in some women in the absence of proteinuria.

Preeclampsia with Severe Features – Gestational hypertension or preeclampsia *plus <u>any</u> of the following:*

A. Severe hypertension (systolic BP ≥160 mm/Hg or diastolic BP ≥110 mm/HG at least 4 hours apart ***or*** once if treated with IV antihypertensive medications)
B. Persistently severe cerebral symptoms (new onset headaches or visual changes)
C. Persistent severe epigastric pain not responding to medications
D. Thrombocytopenia <100,000/mm^3
E. Elevated liver enzymes >2 times upper limit normal for local laboratory
F. Pulmonary edema
G. Serum creatinine >1.1 mg/dL

Maternal Early Warning Criteria (MEWC) – Predefined criteria to recognize abnormal parameters in the obstetrical patient.

.03 POLICY

A. All patients presenting to Women's Health (WH) or Emergency Department (ED) will be triaged by an RN in a timely manner based upon the severity and acuity of their complaints

B. Maternal Early Warning Criteria (MEWC) will be used for predefined criteria for abnormalities

MEWC (Maternal Early Warning Criteria)	
Systolic BP	<90 OR >160
Diastolic BP	>100
Heart Rate	<50 OR >120
Respiratory Rate	<10 OR >30
Oxygen Saturation (on room air)	<95%
Oliguria (for ≥2 hours)	<35ml/hr

1. The practitioner will be notified of the presence of ANY of the abnormal parameters in MEWC
    a. During VS measurement, patients should be sitting or semi reclining position with the back supported.
    b. Patients should NOT be repositioned to reclining or lateral positioning to obtain a lower BP

2. BP will be monitored every 10 minutes until below threshold of 160/110 mm/Hg. Once below threshold continue to monitor BP
    a. Every 10 minutes for one (1) hour
    b. Every 15 minutes for one (1) hour
    c. Every 30 minutes for one (1) hour
    d. Every 60 minutes for four (4) hours

3. The patient will have prompt face-to-face evaluation by the practitioner if second dose of antihypertensive medication required.
    a. Nursing staff will notify practitioner when 2nd dose of medication administered
    b. Nursing and practitioner will then agree upon a timeline for prompt face to face evaluation, ideally within 60 minutes.

4. In event second dose of antihypertensive agent needed, consider consult with OB/GYN and notification of Pediatrician.
    a. If BP continues to be refractory consider Maternal Fetal Medicine or Critical Care consult.

C. Treatment of severe hypertension with first-line agents (IV Labetalol, IV Hydralazine or oral Nifedipine) should be expeditious and occur within 30-60 minutes of confirmed severe hypertension

1. No need for cardiac telemetry monitoring with antihypertensive medications (per ACOG Committee Opinion No. 767). Pulse oximeter should be applied to monitor heart rate.

D. Implement appropriate checklist
   1. Hypertensive Emergency Checklist (Appendix A)
   2. Eclampsia Checklist (Appendix B)
   3. Postpartum Preeclampsia Checklist (Appendix C)

E. Continuous Fetal Monitoring if ≥24 weeks gestation

F. Anticipate and prepare for Magnesium Sulfate infusion for patients with preeclampsia with severe features for seizure prevention. Anticipate continuation of infusion for at least 24 hours post-delivery and longer when patient remains symptomatic with severe features.

   1. Notify Pediatrician on call when Magnesium Sulfate is initiated with an antepartum patient.

G. Postpartum education to include signs/symptoms of preeclampsia. Discharge instructions to include what to do if signs/symptoms develop following discharge from hospital.

H. Follow up appointment should be within 7-14 days postpartum and will be made with Obstetrical Practitioner prior to discharge from hospital. If discharged when practitioner clinic closed, a request to schedule appointment on next business day will be faxed to the clinic.

I. Post-event debriefs with staff utilized to identify successes and opportunities for improvement.

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Gestational hypertension and preeclampsia. ACOG Practice Bulletin No. 202. American College of Obstetricians and Gynecologists. Obstet Gynecol 2019;133:e1-25.

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Preeclampsia Toolkit. (n.d.). Retrieved from https://www.cmqcc.org/resources-tool-kits/toolkits/preeclampsia-toolkit

REVIEWER/AUTHOR: Supervisor of OB/Women's Health

DATE & COMMITTEE OR INDIVIDUAL ENDORSEMENTS: 5/15/19 OB Newborn Clinical Interest Group; NPT 5/23/19; Clinical Care Committee 6/4/19

EFFECTIVE: 4-99

REVIEWED:

REVISED: 8-02, 7-05, 4-2-08, 03-11, 02-14, 1-17, 5-19

REVISED FROM POLICY: WH-029-17 Management of Patient with Hypertension or Gestational Hypertension

DISTRIBUTION: Master Policy Manuals

Appendix A

Hypertensive Emergency Checklist

Hypertensive Emergency: Two severe BP features (≥160/110 mmHg) taken 15-60 minutes apart. Values do not need to be consecutive

- ☐ Call for Assistance
- ☐ Designate:
  - Team Leader_____
  - Checklist Reader/Recorder_____
  - Primary RN_____
- ☐ Ensure side rails are up
- ☐ Ensure medications appropriate given patients history
- ☐ Administer seizure prophylaxis (Magnesium Sulfate first line agent, unless contraindicated)
- ☐ Antihypertensive therapy within one (1) hour for persistent severe range BP
- ☐ Place IV
- ☐ Draw preeclampsia labs (CBC, AST, ALT, BUN, Creatinine, Uric Acid, LDH, Urine Protein to Creatinine Ratio, Type & Screen)
- ☐ Antenatal corticosteroids (if <37 weeks gestation)
- ☐ Re-address VTE prophylaxis requirement
- ☐ Place indwelling urinary catheter
- ☐ Brain imaging if unrelenting headache or neurological symptoms
- ☐ Debrief patient, family, obstetric team

Magnesium Sulfate (with practitioner order)	
Contraindications: Myasthenia gravis; avoid with pulmonary edema; use caution with renal failure	
IV Access	☐ 4-6 grams loading dose over 20 minutes ☐ Label magnesium sulfate; connect to labeled infusion pump ☐ Magnesium sulfate maintenance 1-2 grams/hour
NO IV Access	☐ 10 grams of 50% solution IM (5g in each buttock)

Antihypertensive Medications (with practitioner order)	
For SBP ≥160 or DBP ≥110 mm/Hg	
Labetalol	Initial dose: 20mg IV Avoid IV labetalol with active asthma, heart disease, or congestive heart failure; use caution with history of asthma
Hydralazine	Initial dose: 5mg IV May increase risk of maternal hypotension
Nifedipine	Initial dose: 10 mg Capsules should be administered orally, not punctured or otherwise administered sublingually

Active Asthma: *symptoms at least once/week OR use of an inhaler, corticosteroids for asthma during pregnancy OR any history of intubation or hospitalization for asthma.*

Anticonvulsant Medications (with practitioner order)	
For recurrent seizures or when magnesium sulfate contraindicated	
Lorazepam (Ativan)	☐ 2-4mg IV x1 ☐ May repeat once after 10-15 minutes
Diazepam (Valium)	☐ 5-10mg IV every 5-10 minutes to maximum dose of 30mg

Appendix B

Eclampsia Checklist

☐ Call for Assistance
☐ Designate:
Team Leader_____
Checklist Reader/Recorder_____
Primary RN_____
☐ Ensure side rails are up
☐ Protect airway and improve oxygenation
- Maternal pulse oximetry
- Supplemental Oxygen (100% Non-Rebreather)
  - Lateral decubitis position
  - Bag-mask ventilation available
  - Suction available

☐ Continuous Fetal Monitoring
☐ Place IV
☐ Draw Preeclampsia labs ((CBC, AST, ALT, BUN, Creatinine, Uric Acid, LDH, Random Protein to Creatinine Ratio, Type & Screen)
☐ Ensure medications appropriate given patient history
☐ Administer Magnesium Sulfate
☐ Administer antihypertensive therapy if appropriate
☐ Develop delivery plan, if appropriate
☐ Debrief patient, family, obstetric team

Magnesium Sulfate (with practitioner order)	
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For Persistent Seizures
☐ Neuromuscular blockade and intubate
☐ Obtain radiographic imaging
☐ ICU admission
☐ Consider anticonvulsant medications

Appendix C

Postpartum Preeclampsia Checklist

If patient less than 6 weeks postpartum with:

- **BP ≥ 160/110 OR**
- **BP ≥140/90 with unremitting headache, visual disturbances, epigastric pain**

☐ Call for Assistance
☐ Designate:
Team Leader_____
Checklist Reader/Recorder_____
Primary RN_____
☐ Ensure side rails are up
☐ Call obstetric consult; document call
☐ Place IV
☐ Draw preeclampsia labs (CBC, AST, ALT, BUN, Creatinine, Uric Acid, LDH, Random Protein to Creatinine Ratio, Type & Screen)
☐ Ensure medications appropriate given patient history
☐ Administer seizure prophylaxis
☐ Administer antihypertensive therapy
- Consider consult with MFM or Critical Care for refractory blood pressure

☐ Consider indwelling catheter
- Maintain ***strict*** I&O – patient at risk for pulmonary edema

☐ Brain imaging if unremitting headache or neurological symptoms

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