

September 8, 2016

Dear Colleague,

Northwest Community Hospital is a participating hospital in the Illinois Perinatal Quality Collaborative Maternal Hypertension Initiative aiming to reduce maternal morbidity associated with severe hypertension by 20%. Severe hypertension is defined as a systolic BP greater than or equal to 160 and/or a diastolic BP greater than or equal to 110, sustained for 15 minutes. This includes both pregnant and post-partum patients evaluated in L&D, Antepartum, Postpartum, and the Emergency Department.

When these patients present, it is imperative they be identified, assessed and treated in a timely manner. The American College of Obstetricians and Gynecologists Committee Opinion number 623, Feb 2015 addresses the emergent treatment of acute onset of severe hypertension during the pregnancy and postpartum period.

I am part of this Maternal Hypertension Initiative. Please let me know if you have any questions.

Thank you,

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OB/GYN Hospitalist

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WHO: Pregnant patients; postpartum patients up to and including 6 weeks.

WHERE: L&D; Antepartum; Postpartum; Emergency Department.

WHAT: Acute onset severe hypertension: SYS \geq 160 and/or DIA \geq 110 that persists for 15 min.

WHY: ILPQC Maternal Hypertension Initiative Aim-to reduce the rate of maternal morbidities associated with severe hypertension by 20% by December 2017.

HOW: Anti-hypertensive medications: IV Labetolol;IV Hydralazine;PO Procardia.

WHEN: Ideally within 30-60 minutes.

WITH: Collaboration from OB/GYN Attending Physician and/or OB/GYN Hospitalist.

In our department, CNM must refer these patients to a physician for total management. I feel mid-level providers in the Emergency Department should do the same.

Key Clinical Pearl

- **The** critical initial step in decreasing maternal morbidity and mortality is to administer **anti-hypertensive** medications within 30-60 minutes of documentation of persistent (retested within 15 minutes) BP \geq 160 systolic, and/or \geq 105-110 diastolic.
- Ideally, IV anti-hypertensive medications should be administered as soon as possible, and availability of a “preeclampsia box” will facilitate rapid treatment.
- In Martin et al., stroke occurred in:
 - 23/24 (95.8%) women with systolic BP \geq 160mm Hg
 - **24/24 (100%) had a BP \geq 155 mm Hg**
 - 3/24 (12.5%) women with diastolic BP \geq 110mm Hg
 - **5/28 (20.8%) women with diastolic BP \geq 105mm Hg**

Martin JN, Thigpen BD, Moore RC, Rose CH, Cushman J, May. Stroke and Severe Preeclampsia

and Eclampsia: A Paradigm Shift Focusing on Systolic Blood Pressure, Obstet Gynecol 2005;105-246.

Postpartum Preeclampsia Checklist

EXAMPLE
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IF PATIENT < 6 WEEKS POSTPARTUM WITH:

- BP \geq 160/110 or
- BP \geq 140/90 with unremitting headache, visual disturbances, epigastric pain

- Call for Assistance
- Designate:
 - Team leader
 - Checklist reader/recorder
 - Primary RN

- Ensure side rails up
- Call obstetric consult; Document call
- Place IV; Draw preeclampsia labs
 - CBC
 - Chemistry Panel
 - PT
 - Uric Acid
 - PTT
 - Hepatic Function
 - Fibrinogen
 - Type and Screen
- Administer seizure prophylaxis
- Administer antihypertensive therapy
 - Contact MFM or Critical Care for refractory blood pressure
- Consider indwelling urinary catheter
 - Maintain strict I&O - patient at risk for pulmonary edema
- Brain imaging if unremitting headache or neurological symptoms

MAGNESIUM SULFATE

Contraindications: pulmonary edema, renal failure, myasthenia gravis

- IV access:
- Load 4-6 grams 10% magnesium sulfate in 100 mL solution over 20 min
 - Label magnesium sulfate; Connect to labeled infusion pump
 - Magnesium sulfate maintenance 1-2 grams/hour
- No IV access:
- 10 grams of 50% solution IM (5 g in each buttock)

ANTIHYPERTENSIVE MEDICATIONS

For SBP \geq 160 or DBP \geq 110

- Labetalol (20 mg, 40, 80 N* over 2 min, escalating doses, repeat q 10 min); Avoid in asthma or heart failure
- Hydralazine (5-10 mg IV* over 2 min, repeat q 20 min until target BP reached)
- Oral Nifedipine (10, 20, 40 mg capsules; repeat BP q 20 min until target BP reached); Capsules should be administered orally, not punctured or otherwise administered sublingually

* Maximum cumulative IV-administered doses should not exceed 220 mg labetalol or 25 mg hydralazine in 24 hours

Note: If first line agents unsuccessful, emergency consult with specialist (MFM, Internal medicine, OB anesthesiology, critical care) is recommended

ANTICONVULSANT MEDICATIONS

For recurrent seizures or when magnesium sulfate contraindicated

- Lorazepam (Ativan): 2-4 mg IV x 1, may repeat once after 10-15 min
- Diazepam (Valium): 5-10 mg IV q 5-10 min

- ✓ Call for assistance
- ✓ Designate team leader, checklist reader, primary RN
- ✓ Ensure side rails up
- ✓ Call OB consult; Document call
- ✓ Place IV; Draw PEC labs
- ✓ Administer seizure prophylaxis
- ✓ Administer antihypertensive therapy
- ✓ Consider indwelling urinary catheter. Maintain strict I&O
- ✓ Brain imaging if unremitting headache or neurological symptoms

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THE AMERICAN COLLEGE OF OBSTETRICIANS
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EMERGENCY