Obstetric Hypertensive Emergency

Emergency Department & Inpatient

Nationwide Children's — When your child needs a hospital, everything matters.

Center for Clinical Excellence

Inclusion Criteria:
Patients ≥ 20 weeks gestation through 6 weeks postpartum
& ***Severe Range (SR) hypertension*** (BP ≥ 160 mm Hg systolic or ≥ 110 mmHg diastolic—or both)

Management of Obstetric Hypertensive Emergencies
BP ≥ 160 mmHg systolic or ≥ 110 mmHg diastolic (or both)

Goal: antihypertensive agent administered within 60 minutes from initial Severe Range Blood Pressure

- Initiate immediate transfer to adult facility
- Establish IV access

Clinical alarm findings:
- Persistent or severe headache
- Visual abnormalities
- Upper abdominal, retrosternal or epigastric pain
- Altered mental status
- New dyspnea, orthopnea

SR BP sustained for 15 minutes?

No → **Transfer patient to accepting facility as soon as transport is available and patient appropriate for transport**

Yes

Start Magnesium Sulfate 4 grams IV over 20 minutes
AND
Select Antihypertensive Agent

Labetalol IVP
Avoid if:
- Asthma
- Maternal HR < 60 bpm
- Congestive heart failure
- AV heart block

Check BP every 10 minutes and administer next dose if BP still SR
1st dose: 20 mg IV
2nd dose: 40 mg IV
3rd dose: 80 mg IV

Hydralazine IVP
Avoid if:
- Maternal HR >100 bpm
- Recent stroke
- Severe mitral valve disease

Check BP every 20 minutes and administer next dose if BP still SR
1st dose: 5-10 mg IV
2nd dose: 10 mg IV

Nifedipine PO
Avoid if:
- Maternal HR > 100 bpm
- Severe aortic stenosis
- Recent MI
- Cardiogenic shock

Check BP every 20 minutes and administer next dose if BP still SR
1st dose: 10 mg PO
2nd dose: 20 mg PO
3rd dose: 20 mg PO

BP remains in SR after 3 doses? (Labetalol IVP) — No → BP remains in SR after 2 doses? (Hydralazine IVP) — No → BP remains in SR after 3 doses? (Nifedipine PO) — No → Transfer patient to accepting facility as soon as transport is available and patient appropriate for transport

Yes → **Hydralazine 10 mg IVP over 2 minutes**

Yes → **Labetalol IVP over 2 minutes**
1st dose: 20 mg
2nd dose: 40 mg

Yes → **Labetalol 40 mg IVP over 2 minutes**

BP remains in SR?

No → **Transfer patient to accepting facility as soon as transport is available and patient appropriate for transport**

Yes → **Nicardipine Drip**
- Start at 2.5-5 mg/hr, titrate to effect, max 15 mg/hr
- Collaborate with OBGYN/accepting facility

Inclusion & Exclusion Criteria

Inclusion Criteria

- Patients ≥ 20 weeks gestational age through 6 weeks postpartum & Severe Range (SR) hypertension

Exclusion Criteria

- Hypertension not related to pregnancy or postpartum condition

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Definition & Clinical Signs

Severe Range Hypertension

- BP ≥ 160 mmHg systolic or ≥ 110 mmHg diastolic, or both

Clinical Alarm Findings

- Persistent or severe headache
- Visual Abnormalities
- Upper abdominal, retrosternal or epigastric pain
- Altered mental status
- New dyspnea, orthopnea

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Severity Assessment

- Initiate treatment if SR BP persistent for 15 minutes
- Continue with plans for immediate transfer to adult facility even if BP not in SR for 15 minutes

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Escalation of Care & Transfer

- Seizure
  - Antihypertensive medication
  - Magnesium sulfate is the antiseizure medication of choice
  - Contact NCH OBGYN service and / or discuss with receiving adult facility
- Transfer
  - Transfer to accepting facility **as soon as** transport is available and patient ready for transport

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Goals

- Timely recognition of severe range BP in pregnant and postpartum females and initiation of appropriate treatment
- Goal = antihypertensive agent administered within 60 minutes from initial severe range blood pressure

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Key References

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Quality Measures

- Time from recognition of sustained SR hypertension to administration of antihypertensive medication
- Time from recognition of SR hypertension to transport to adult facility

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Clinical Pathway Development

This clinical pathway was developed using the process described in the NCH Clinical Pathway Development Manual Version 6, 2022. Clinical Pathways at Nationwide Children's Hospital (NCH) are standards which provide general guidance to clinicians. Patient choice, clinician judgment, and other relevant factors in diagnosing and treating patients remain central to the selection of diagnostic tests and therapy. The ordering provider assumes all risks associates with care decisions. NCH assumes no responsibility for any adverse consequences, errors, or omissions that may arise from the use or reliance on these guidelines. NCH's clinical pathways are reviewed periodically for consistency with new evidence; however, new developments may not be represented, and NCH makes no guarantees, representations, or warranties with respect to the information provided in this clinical pathway.

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