



**NATIONWIDE  
CHILDREN'S**

*When your child needs a hospital, everything matters.*

# Obstetric Hypertensive Emergency

Emergency Department & Inpatient

**Center for  
Clinical Excellence**

## Inclusion Criteria:

Patients  $\geq 20$  weeks  
gestation through 6 weeks  
postpartum  
& **Severe Range (SR)**  
**hypertension** (BP  $\geq 160$  mm  
Hg systolic or  $\geq 110$  mmHg  
diastolic—or both)

## Management of Obstetric Hypertensive Emergencies

BP  $\geq 160$  mmHg systolic or  $\geq 110$  mmHg diastolic (or both)

- Initiate immediate transfer to adult facility
- Establish IV access

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

## Clinical alarm findings:

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

No

SR BP sustained  
for 15 minutes?

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**  
1<sup>st</sup> dose: 20 mg IV  
2<sup>nd</sup> dose: 40 mg IV  
3<sup>rd</sup> 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**  
1<sup>st</sup> dose: 5-10 mg IV  
2<sup>nd</sup> 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**  
1<sup>st</sup> dose: 10 mg PO  
2<sup>nd</sup> dose: 20 mg PO  
3<sup>rd</sup> dose: 20 mg PO

No

BP remains  
in SR after  
3 doses?

Yes

**Hydralazine 10 mg  
IVP over 2 minutes**

No

BP remains  
in SR after  
2 doses?

Yes

**Labetalol IVP over 2  
minutes**  
1<sup>st</sup> dose: 20 mg  
2<sup>nd</sup> dose: 40 mg

No

BP remains  
in SR after  
3 doses?

Yes

**Labetalol 40 mg IVP  
over 2 minutes**

BP remains  
in SR?

No

Yes

**Transfer patient to  
accepting facility as soon  
as transport is available  
and patient appropriate  
for transport**

### 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  $\geq$  20 weeks gestational age through 6 weeks postpartum & Severe Range (SR) hypertension

## **Exclusion Criteria**

- Hypertension not related to pregnancy or postpartum condition

[Return to Algorithm](#)

# Definition & Clinical Signs

## **Severe Range Hypertension**

- BP  $\geq$  160 mmHg systolic or  $\geq$  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

[Return to Algorithm](#)

# 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

[Return to Algorithm](#)

# 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

[Return to Algorithm](#)

# 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

[Return to Algorithm](#)

# Key References

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- ACOG Committee Opinion No. 767: Emergent Therapy for Acute-Onset, Severe Hypertension During Pregnancy and the Postpartum Period. *Obstet Gynecol*. 2019 Feb;133(2):e174-e180. doi: 10.1097/AOG.0000000000003075. PMID: 30575639.
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[Return to Algorithm](#)

# 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

[Return to Algorithm](#)



# Clinical Support Tools

- Epic Order Set: ED Obstetric Hypertensive Emergency Clinical Pathway
- Epic Code/Rapid Response Code Narrator

[Return to Algorithm](#)

