

Appendix K: Sample Nursing Management Policy and Procedure

Note: This is a SAMPLE developed by a particular facility and the content is NOT specifically endorsed by the HDP Task Force. The sample is provided as an example to work from. You may need to adjust based on the individual circumstances of your facility.

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Purpose

To outline the nursing management of inpatients who have preeclampsia including special considerations for management of patients on magnesium sulfate, patients on antihypertensive medications and management of eclampsia.

Background

Preeclampsia is a hypertensive disorder of pregnancy characterized by vasospasm and endothelial damage, which may impact the cardiovascular, renal, hematological, neurologic, and hepatic systems as well as the uteroplacental unit. It is of unknown etiology. Preeclampsia is characterized by new-onset of hypertension and proteinuria after 20 weeks of gestation in a previously normotensive woman.

- ▶ Hypertension: two blood pressure readings of ≥ 140 systolic OR ≥ 90 diastolic taken at least four hours apart
- ▶ Proteinuria: 0.3 gm of protein in a 24-hour urine collection

Reportable conditions

Notify provider for:

- ▶ Repeated blood pressure ≥ 160 mm Hg systolic OR ≥ 110 mm Hg diastolic (taken at least 15 minutes apart)
- ▶ New or worsening complaint of any of the following:
 - Headache
 - Visual changes
 - Right Upper Quadrant (RUQ) or epigastric pain
- ▶ Abnormal lab values.

Admission assessment

- ▶ Assess for absence or presence of:
 - Headache

- Visual changes
 - Right upper quadrant or epigastric pain
 - Nausea/vomiting
 - General malaise
- ▶ Assess upper or lower deep tendon reflexes.
 - ▶ Auscultate for lung sounds, noting any presence of rales, rhonchi, wheezing, etc.
 - ▶ Assess for generalized edema and significant, rapid weight gain.
 - ▶ Assess blood pressure using an appropriately sized blood pressure cuff with patient sitting or in the upright position with the patient's arm at the level of the heart. Do not reposition the patient to her left side and retake blood pressure. It will give a false lower reading.
 - ▶ Apply external fetal monitor (if viable fetus). Follow institutional guidelines.
 - ▶ Prepare to obtain IV access as ordered by provider.
 - ▶ Prepare to administer medications to lower blood pressure and prevent seizure activity.
 - ▶ Prepare to monitor intake and output.
 - ▶ Maintain activity as ordered by provider. If on bedrest, maintain side-lying position as much as possible, avoiding supine position, and change position every two hours or more often as needed.
 - ▶ Provide emotional support and opportunity for patient family to verbalize questions, concerns and/or fears.
 - ▶ Assess maternal vital signs including: blood pressure as described above, respiratory rate, heart rate, temperature, and oxygen saturation.
 - ▶ Prepare to assess lab values as ordered.
 - ▶ Ensure oxygen and suction equipment are present and functioning.
 - ▶ Implement measures to decrease stress level, such as provision of a quiet environment and low lighting.
 - ▶ Monitor temperature per department protocol.
 - ▶ If fluid overload or oligouria is suspected the use of a Foley catheter should be used with frequent assessment of urinary output, i.e. hourly.

Antepartum ongoing assessment

Goals of patient management

- ▶ Early recognition of severe or worsening preeclampsia with severe features or development of eclampsia.

- ▶ Prolongation of pregnancy to optimize fetal maturation must be weighed against risks of pregnancy continuation.

Preeclampsia without severe features (formerly called “mild,” a term now discouraged from use):

- ▶ Obtain blood pressure, pulse, respirations, and oxygen saturation every 4 hours [awake] and 8 hours [sleeping].
- ▶ Assess lung sounds every 4-8 hours.
- ▶ Assess deep tendon reflexes (DTRs), Clonus, edema, level of consciousness (LOC), headache (HA) visual disturbances, epigastric pain every 4-8 hours depending on patient condition.
- ▶ Obtain Non Stress Test (NST) or monitor Fetal Heart Rate (FHR) with uterine activity for 30 minutes every shift or as condition warrants.
- ▶ Assess fetal movement every shift.

Preeclampsia with severe features

- ▶ Obtain blood pressure, pulse, respirations, and oxygen saturation hourly.
- ▶ Assess lung sounds every 2 hours.
- ▶ Assess deep tendon reflexes (DTRs), clonus, edema, level of consciousness (LOC), headache (HA), visual disturbances, epigastric pain every 4 hours or more frequently depending on patient condition.
- ▶ Monitor FHR and uterine activity continuously.

Intrapartum ongoing assessment

Preeclampsia without severe features (formerly called “mild,” a term now discouraged from use):

- ▶ Obtain blood pressure, pulse, respirations, and oxygen saturation hourly.
- ▶ Assess lung sounds every 4 hours.
- ▶ Assess deep tendon reflexes (DTRs), clonus, edema, level of consciousness (LOC), headache (HA), visual disturbances, epigastric pain every 4 hours.
- ▶ Monitor FHR and uterine activity continuously.

Preeclampsia with severe features

- Obtain blood pressure, pulse, respirations, and oxygen saturation every 30 minutes.
- Assess lung sounds every 2 hours.
- Assess Deep Tendon Reflexes (DTRs), clonus, edema, level of consciousness (LOC), headache (HA), visual disturbances, epigastric pain every 4 hours.
- Monitor FHR and uterine activity continuously.

Postpartum to discharge ongoing assessment

Preeclampsia without severe features (formerly called “mild,” a term now discouraged from use):

- ▶ Obtain blood pressure, pulse, respirations, and oxygen saturation every 4 hours.
- ▶ Assess lung sounds every 4 hours.
- ▶ Assess deep tendon reflexes (DTRs), clonus, edema, level of consciousness (LOC), headache (HA), visual disturbances, epigastric pain every 8 hours.

Preeclampsia with severe features

- ▶ Obtain blood pressure, pulse, respirations, and oxygen saturation hourly for first 24 hours after delivery then every 4 hours.
- ▶ Assess lung sounds every 2 hours for first 24 hours after delivery then every 4 hours.
- ▶ Assess deep tendon reflexes (DTRs), clonus, edema, level of consciousness (LOC), headache (HA), visual disturbances, epigastric pain every 4 hours.

Prevention and management of eclamptic seizures

Magnesium sulfate is administered as a first line drug to prevent maternal eclamptic seizures. (See Section: Preventing and Managing Eclamptic Seizures on page 126)

Antihypertensives

Background

- ▶ A persistent systolic blood pressure ≥ 160 mm Hg OR ≥ 110 mm Hg diastolic persisting for 15 minutes or more, is treated with IV antihypertensive medication to protect the patient from cerebral vascular accident.*
- ▶ The goal of blood pressure treatment is **130-150/80-100 mm Hg** to maintain perfusion.
- ▶ Labetalol is a combined alpha and beta-blocker, resulting in decreased peripheral vascular resistance without altering heart rate or cardiac output. Its use is contraindicated in patients with bronchial asthma, heart block and severe bradycardia.
- ▶ Hydralazine is a vasodilator and results in vasodilation of vascular smooth muscle.
- ▶ Nifedipine is a calcium channel blocker that acts to relax the smooth muscle of the heart and blood vessels.

Administration

- ▶ Ensure presence of mainline IV infusion.
- ▶ Monitor the fetal heart rate continuously if a viable fetus is present.
- ▶ Maintain bedrest during and for 3 hours following medication administration. Assess for postural hypotension prior to ambulation.

- ▶ If unable to control blood pressure, contact physician regarding consideration of other medications and/or transfer to a higher level of care.
- ▶ If the patient’s BP thresholds remain below between 130-150/80-100 mm Hg then see “Nursing assessment after antihypertensive medication administration” on page 221.
- ▶ Consult with maternal-fetal medicine, internal medicine, anesthesia, or critical care subspecialists.
- ▶ Hydralazine: (If used as the first-line medication)
 - Administer initial dose IV push over 1-2 minutes (Usual dose range is 5-10 mg).
 - Repeat BP in 20 minutes after initial dose.
 - If still above BP threshold, give 10 mg hydralazine IVP over 2 minutes. Repeat BP in 20 minutes.
 - If either BP threshold is still over, switch to labetalol 20 mg IVP over 2 minutes. Repeat BP in 10 minutes.
 - If either BP threshold is still over, give a second dose of labetalol 40 mg IVP over 2 minutes.
- ▶ Labetalol: (If used as the first-line medication; maximum dose is 300 mg/24 hours)

IV Push:

 - Administer initial dose IV push over 2 minutes (Usual dose is 10-20 mg).
 - Repeat BP in 10 minutes after initial dose.
 - If still above BP threshold, give 40 mg labetalol IVP over 2 minutes. Repeat BP in 10 minutes.
 - If either BP threshold is still over, switch to hydralazine 10 mg IVP over 2 minutes. Repeat BP in 20 minutes.
 - If either BP threshold is still over, consult with maternal-fetal medicine, internal medicine, anesthesia, or critical care subspecialists.
- ▶ Nifedipine (Immediate Release): (If used as the first-line medication; maximum dose is 50 mg)
 - Administer initial dose PO (Usual dose is 10 mg).
 - Repeat BP in 20 minutes after initial dose.
 - If still above BP threshold, give 20 mg nifedipine PO. Repeat BP in 20 minutes.
 - If still above BP threshold, give another 20 mg nifedipine PO. Repeat BP in 20 minutes.
 - If either BP threshold is still over, give labetalol 20mg and consult with maternal-fetal medicine, internal medicine, anesthesia, or critical care subspecialists.

Nursing assessment after antihypertensive medication administration

- ▶ Every 10-20 minutes based on medication administered until stable, then BP every 10 minutes x 1 hour, every 15 minutes x 1 hour, every 30 minutes x 1 hour and every one hour x 4 hours. (ACOG Practice Bulletin 222)
- ▶ Additional BP monitoring should be done per provider order or as needed.

Reportable conditions to notify provider

- ▶ Systolic blood pressure greater than or equal to 160 mm Hg. Diastolic blood pressure less than 80 mm Hg or greater than or equal to 110 mm Hg following medication administration.
- ▶ Category II or III fetal heart rate tracing following antihypertensive administration.
- ▶ Sustained maternal heart rate less than 50 bpm or greater than 120 bpm during or within 30 minutes following medication administration.

Eclampsia management

Background

- ▶ Eclampsia is characterized by convulsions and loss of consciousness, which can occur without warning during the antepartum, intrapartum or postpartum period.
- ▶ The eclamptic patient is at risk for aspiration and cerebral hemorrhage.
- ▶ Fetal bradycardia frequently occurs during and following an eclamptic seizure due to tetanic contractions or maternal hypoventilation.
- ▶ Best treatment for baby is maternal stabilization.

Management

- ▶ Notify charge nurse, attending provider, and anesthesiologist/CRNA immediately. Initiate emergency pager (if institution has instituted).
- ▶ Position patient on side.
- ▶ Protect from injury.
- ▶ Prepare to administer magnesium sulfate.
- ▶ Anticipate obtaining lab tests (magnesium level, blood for liver enzymes, serum creatinine, etc.).
- ▶ Following seizure:
 - Suction mouth with Yankauer PRN
 - Give oxygen by non-rebreather mask at 10 liters per minute.
 - Provide ventilatory support as needed

- Assess blood pressure, pulse, and respirations every 5 minutes.
- Assess oxygen saturation and level of consciousness every 15 minutes until stable for a minimum of one hour.
- Monitor fetal heart rate and uterine activity continuously if viable fetus is present.
- Observe for signs and symptoms of placental abruption or impending delivery.
- Obtain order for indwelling catheter.

*Clinicians may consider antihypertensive therapy at 155/105 mm Hg given the association with increased maternal morbidities at this threshold in several studies as discussed in Section: Borderline Severe-Range Blood Pressures: A Clinical Conundrum on page 35.

This sample was adapted from the Improving Health Care Response to Preeclampsia: A California Quality Improvement Toolkit, funded by the California Department of Public Health, 2014; supported by Title V funds.