APPENDIX U: SAMPLE NURSING MANAGEMENT POLICY AND PROCEDURE
Nursing Management of Preeclampsia
Sample Policy and Procedure

Brenda Chagolla, RN, MSN, CNS, University of California Davis Medical Center
Ocean Berg, RN, MSN, CNS, Nurse Family Partnership Program, San Francisco
Kristi Gabel, RNC-OB, C-EFM, MSN, CNS, Sutter Roseville Medical Center

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 gestation in a previously normotensive woman.

- Hypertension: two blood pressure reading of > 140 systolic OR > 90 diastolic taken at least six hours apart
- Proteinuria: 0.3 gm of protein in a 24 hour urine collection

REPORTABLE CONDITIONS:
Notify provider for:

1. Repeated blood pressure greater than 160 systolic OR greater than 105-110 diastolic (taken at least 15 minutes apart).
2. New or worsening complaint of any of the following:
   a. Headache
   b. Visual changes
   c. Right Upper Quadrant (RUQ) or epigastric pain
3. Abnormal lab values

ADMISSION:

1. Assess for absence or presence of:
   a. Headache
   b. Visual changes
   c. Right upper quadrant or epigastric pain
   d. Nausea/vomiting
   e. General malaise.
2. Assess upper or lower deep tendon reflexes.
3. Auscultate for lung sounds, noting any presence of rales, rhonchi, wheezing, etc.
4. Assess for generalized edema and significant, rapid weight gain.
5. 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.
6. Apply external fetal monitor (if viable fetus).
7. Prepare to obtain IV access as ordered by provider.
8. Prepare to administer medications to lower blood pressure and prevent seizure activity.
9. Prepare to monitor intake and output.
10. 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.
11. Provide emotional support and opportunity for patient family to verbalize questions, concerns and/or fears.
12. Assess maternal vital signs including: blood pressure as described above, respiratory rate, heart rate, temperature, and oxygen saturation.
13. Prepare to assess lab values as ordered.
14. Ensure oxygen and suction equipment are present and functioning.
15. Implement measures to decrease stress level, such as provision of a quiet environment and low lighting.
16. Monitor temperature per department protocol.
17. Assess intake and output (I&O) every 1 hour.

ANTEPARTUM ONGOING ASSESSMENT:

Goals of patient management are:

1. Early recognition of severe or worsening preeclampsia or development of eclampsia.
2. Prolongation of pregnancy to optimize fetal maturation must be weighed against risks of pregnancy continuation.

Preeclampsia without severe features (mild):

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

Severe Preeclampsia:

1. Obtain blood pressure, pulse, respirations, and oxygen saturation hourly.
2. Assess lung sounds every 2 hours.
3. Assess deep tendon reflexes (DTR's), Clonus, edema, level of consciousness (LOC), Headache (HA) visual disturbances, epigastric pain every 4 hours.
4. Monitor FHR and uterine activity continuously.

INTRAPARTUM ONGOING ASSESSMENT:

Preeclampsia without severe features (mild):

1. Obtain blood pressure, pulse, respirations, and oxygen saturation every 60 minutes.
2. Assess lung sounds every 4 hours.
3. Assess deep tendon reflexes (DTRs), clonus, edema, level of consciousness (LOC), headache (HA) visual disturbances, epigastric pain every 8 hours.
4. Monitor FHR and uterine activity continuously.

Severe Preeclampsia:

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

POSTPARTUM TO DISCHARGE ONGOING ASSESSMENT:

Preeclampsia without severe features (mild):

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

Severe Preeclampsia:

1. Obtain blood pressure, pulse, respirations, and oxygen saturation every 60 minutes for first 24 hours after delivery then every 4 hours.
2. Assess lung sounds every 2 hours for first 24 hours after delivery then every 4 hours.
3. Assess deep tendon reflexes (DTRs), clonus, edema, level of consciousness (LOC), headache (HA) visual disturbances, epigastric pain every 4 hours.

MAGNESIUM SULFATE:

Magnesium sulfate is administered as a first line drug to prevent maternal eclamptic seizures. (See Magnesium Sulfate chapter, pg. 50)

ANTIHYPERTENSIVES:

Background:

1. A sustained systolic blood pressure greater than 160 mm Hg OR greater than 105-110 mm Hg diastolic is treated with IV antihypertensive medication to protect the patient from cerebral vascular accident.
2. The goal is a diastolic pressure of 90-100 mm Hg to maintain perfusion.
3. 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.
4. Hydralazine is a vasodilator and results in vasodilation of vascular smooth muscle.

Administration:

1. Ensure presence of mainline IV infusion.
2. Monitor the fetal heart rate continuously if a viable fetus is present.
3. Maintain bedrest during and for 3 hours following medication administration. Assess for postural hypotension prior to ambulation.
4. If unable to control blood pressure, contact physician regarding consideration of other medications and/or transfer to a higher level of care.
5. Hydralazine (Apresoline):
   a. Administer initial dose IV push over 1-2 minutes. (Usual dose range is 5-10 mg.)
   b. May repeat dose at 20-minute intervals until desired blood pressure is achieved or a cumulative dose of 30-40 mg is reached.
6. Labetalol:
   a. *IV Push:*
      i. Administer initial dose IV push over 2 minutes. (Usual dose is 10-20 mg.)
      ii. Repeat doses may be given at 10-minute intervals.
   b. *Continuous IV:*
      i. Consider collaborative care with intensive care unit.
      ii. Initiation of continuous cardiac monitoring.
      iii Infuse a continuous labetalol infusion pump until diastolic pressure is 90-100 mm Hg.
   c. Maximum dose is 300 mg/24 hours.

Reportable Conditions:

1. Notify provider for:
   a. Diastolic blood pressure less than 80 or greater than 105-110 following medication administration.
   b. Category II or III fetal heart rate tracing following antihypertensive administration.
   c. 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.
- Best treatment for baby is maternal stabilization.

MANAGEMENT:

1. Notify charge nurse, attending provider, and anesthesiologist/CRNA immediately. Initiate emergency pager (if institution has instituted).
2. Position patient on side.
3. Protect from injury.
4. Prepare to administer magnesium sulfate.
5. Anticipate obtaining lab tests (magnesium level, blood for liver enzymes, kidney function, etc.).
6. Following seizure:
   a. Suction mouth.
   b. Give oxygen by non-rebreather mask at 10 liters per minute.
   c. Provide ventilatory support as needed.
   d. Assess blood pressure, pulse, and respirations every 5 minutes.
   e. Assess oxygen saturation and level of consciousness every 15 minutes until stable for a minimum of one hour.
   f. Monitor fetal heart rate and uterine activity continuously if viable fetus is present.
   g. Observe for signs and symptoms of placental abruption or impending delivery.
   h. Obtain order for indwelling catheter.