6D: COMPLICATIONS of PREGNANCY

PATIENT CARE GOALS

- Identify life-threatening complications of pregnancy; provide appropriate treatment, and early transport to optimize survival of the mother and fetus.
- Maintain adequate oxygenation, ventilation, and perfusion of the mother.

EMT

1. Assess the patient and provide initial care, including oxygen and vascular access, as per **1B General Assessment and Care**. Obtain a gestational history of the pregnancy.[1]
2. Provide additional treatments for specific complications as follows:

Pre-Delivery Vaginal Bleeding [2]

a. For hypotension, start at least 2 large bore IV lines and administer IV fluids to maintain systolic blood pressure greater than 90 mmHg.

b. For situations where the patient with vaginal bleeding is unsure if they have miscarried or delivered, or if uncertain or unaware they are pregnant, investigate the scene to determine if tissue, a fetus, or a viable infant is present.

c. Transport in a left lateral recumbent position.

Miscarriage [3]

a. Retain any large clots, tissue, or fetal remains, and carefully wrap them for transport to the hospital with the mother. Parents who wish to view an aborted fetus should be allowed to do so if the situation allows.

b. If a nonviable fetus remains attached to the umbilical cord and the placenta does not deliver, place umbilical clamps and cut the cord.

c. Administer IV fluids and provide other interventions as needed to treat for hypovolemia and shock.

Preterm Labor [4, 5, 6]

a. Patients with sustained preterm labor should be transported, especially if the membrane has ruptured or if there is any vaginal discharge.

- Whenever the membrane has ruptured, visualize the perineum to assess for crowning, presentation of the fetus or umbilical cord, or abnormal discharge.
- Internal vaginal exams should not be performed by EMT or Paramedic level providers.

b. When on scene delivery seems certain for patients with gestation of between 23 and 34 weeks, contact Medical Control and consider transport to a hospital with NICU capability, if available.

Eclampsia and Pre-eclampsia [7]

a. For patients with known or suspected pre-eclampsia:

- Keep the patient calm and provide dim lighting.
- Place the patient in the left lateral recumbent position.
- Provide early, gentle transport without lights and siren.
- Ensure IV access.

b. For eclamptic seizure activity, EMT-level providers should provide treatment as per **3F Seizures**.

PARAMEDIC

3. Provide additional advanced level treatment for specific complications as follows:

Eclampsia and Pre-eclampsia

a. Treat seizures as per **3F Seizures** and expedite transport.

b. For active seizing that does not respond to benzodiazepines, administer 2 grams **magnesium sulfate** IV over 10 minutes.[8]

c. If seizures continue, administer a second dose 2 grams **magnesium sulfate** diluted with 6 mL normal saline, IV over 5 minutes.

d. Contact medical control for orders to administer **magnesium sulfate** if seizures subside with administration of benzodiazepines.

DOCUMENTATION KEY POINTS

- Gestational history.
- Frequency, location, duration, regularity, and strength of contractions.
- Findings from visual assessment of the vaginal area, including amount and description of bleeding or other vaginal discharge.
- Initial and ongoing assessments, monitoring, interventions, patient response, and complications (if any) encountered.

NOTES

[1] **Gestational history** includes:

- Number of previous pregnancies (gravidity) and number of pregnancies carried to term (parity).
- Length of gestation in weeks, and estimated date of confinement (EDC – the estimated date of delivery).
- Cesarean sections and any medical recommendations from the patient's doctor regarding vaginal birth after cesarean (VBAC).
- Previous obstetric or gynecologic complications, including history of placenta previa, abruptio placentae, or precipitous delivery.
- History of the current pregnancy, including history of premature contractions, syncope, bleeding (spotting or frank bleeding), other vaginal discharges (include color, amount, and durations),

gestational diabetes, and hypertension and other evidence of pre-eclampsia.

- Prenatal care; sonograms or other prenatal examinations (including diagnosis of placenta previa).
- Additional medical history that may affect the pregnancy, including medications, allergies, and abuse of alcohol or drugs.

[2] **Vaginal bleeding** during pregnancy can be due to many causes that are usually difficult to identify in the field. The amount of observed vaginal blood loss may not reliably indicate the total amount of blood loss occurring. For patients in the third trimester of pregnancy, consider the following possible causes of vaginal bleeding:

- **Placenta previa**: partial or complete coverage of the cervical opening by the placenta. It usually presents as painless, bright red vaginal bleeding, which may have been recurring during the pregnancy (painless bleeding in pregnancy should be considered as placenta previa until proven otherwise).
- **Abruptio placentae:** partial or complete premature separation of the placenta from the uterine wall, with tearing pain and a ridged, tender uterus. Contractions are strong and hyperactive. Hemorrhage may be contained within the uterus; amounts of external bleeding can range from little or none to massive.

[3] **Miscarriage:** symptoms may include cramping, abdominal or back pain, and vaginal bleeding that may be accompanied by the passage of clots and fetal tissue.

[4] **Braxton-Hicks contractions**: occasionally called "false labor," are generally painless, irregular abdominal contractions or cramping and are common after the 13th week of gestation. Prehospital treatment is not indicated beyond maternal reassurance and transport if requested by the patient for evaluation by a physician.

[5] **True preterm labor** is characterized by firm, regular, painful contractions that can cause dilation and effacement of the cervix prior to the 37th week of gestation.

[6] Interfacility transport patients in active labor who are considered high-risk for obstetrical complications, or who have known fetal distress or disease, should be transported by specialty team or at a critical care level where contractions and fetal heart tone (FHT) monitoring are available en route.

[7] **Pre-eclampsia** may present with hypertension and high urine protein levels. Additional signs and symptoms may include excessive weight gain, headaches, visual problems, abdominal pain, marked edema, and hyperactive reflexes. It usually does not occur until after 20 weeks of gestation.

[8] **Magnesium sulfate** must be diluted prior to administration. To do this, expel 4 mL normal saline from a saline flush. Then, draw 2 grams (4 mL) of **magnesium sulfate** into the flush. This makes a 20% solution (200 mg/1 mL).