Initial Date: 11/21/2023
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Childbirth and Related Obstetrical Emergencies

Purpose: To provide the process for the assessment and management of the mother for childbirth and childbirth related emergencies. Assessment and care of newborns and infants under 30 days old, see **Newborn/Neonatal Assessment and Resuscitation-Treatment Protocol**.

1. Follow **General Pre-hospital Care-Treatment Protocol**

2. Assessment Information
   A. Past Medical History: previous births, previous complications, history of preeclampsia/eclampsia.
   B. Current History: duration of gestation (weeks), whether single or multiple births are expected, or any prior pregnancy complications.
   C. Specific Objective Findings: vital signs, assess contractions (duration, frequency).
   D. In the presence of licensed health care providers (e.g., physician, licensed midwife), contact Medical Control for care not consistent with protocols.
   E. Determine whether to transport or remain at scene due to imminent delivery. Indications of impending, imminent delivery may include:
      a. Multiple pregnancy, strong regular contractions, every 2 minutes or less, ruptured membrane, bloody show, need to push or bear down, crowning
   F. Obtain vascular access if time permits per **Vascular Access and IV Fluid Therapy Procedure Protocol**

3. Management of Normal Delivery
   A. If signs of newborn delivery are imminent, and there is no time to transport, prepare for delivery.
   B. Have oxygen and suction readily available for care of the newborn.
   C. Try to find a place for maximum privacy, cleanliness, and warmth.
   D. Allow safe birth position of choice.
   E. Monitor patient for signs of hypotension. If signs develop, position patient so weight of uterus is to patient's left side.
   F. Drape if possible, using clean sheets.
   G. Encourage mother to relax and take slow deep breaths through her mouth. H. Reassure her throughout process.
   I. As baby's head begins to emerge from vagina, support it gently with hand and towel to assist in delivery.
      a. Do not pull baby's head or neck once head is delivered.

J. After head is delivered look and feel to see if cord is wrapped around baby's neck (see Nuchal Cord management below).
K. As the shoulders deliver, carefully hold, and support the head and shoulders as the body delivers, may be suddenly – and the baby is very slippery! Use a sterile towel if available to help support the baby.
L. Note the time of delivery.
M. Begin newborn assessment per **Newborn/Neonatal Assessment and Resuscitation-Treatment Protocol.**
N. After 1 minute, clamp cord about 5–6 inches from the abdomen with two clamps; cut the cord between the clamps.
   a. While cord is attached, take care to ensure the baby is not significantly higher positioned than the mother to prevent blood from flowing backwards from baby to placenta.
   b. If resuscitation is needed baby can still benefit from a 1- minute delay in cord clamping but start resuscitation immediately see **Newborn/Neonatal Assessment and Resuscitation-Treatment Protocol**
O. Place the baby skin to skin on the mother's abdomen on its side with head lower than the body. (Suction with a bulb syringe should be reserved for infants with obvious obstruction)
P. Prevent heat loss
   a. Gently dry baby off and remove all wet linen
   b. Ensure the environment is warm.
   c. Place infant cap on baby
Q. For near/at term vigorous newborns, with conscious stable mothers, allow infant to remain on mother's chest during assessment and cover both baby and the mother with warm dry blankets until transport. Refer to **Safe Transport of Children in Ambulances-Treatment Protocol.**

4. Management of mother post-delivery.
   A. Obtain vital signs.
   B. Assess for signs of preeclampsia/eclampsia.
   C. Assess for signs of postpartum hemorrhage.
   a. If blood loss is significant, place IV and administer **NS** or **LR** fluid bolus of 1 liter wide open.
      i. Monitor for pulmonary edema.
      ii. If pulmonary edema presents, stop fluids and contact Medical Control for direction.
   b. Administer oxygen NRB at 15 LPMN (if not already)
   c. Contact Medical Control for severe hemorrhage for consideration of **TXA** per **Hemorrhagic Shock-Treatment Protocol**

i. Fundal massage should take place concurrently.

D. Placenta delivery
a. Generally, takes place within 20 minutes of delivery.
b. Place placenta in basin or plastic bag and transport with mother.
c. Following placental delivery, massage the uterus to aid in contraction of the uterus.
d. Continue to assess the mother's uterus and bleeding in route to the hospital to assure the uterus is contracted and blood loss is minimal. Report blood loss upon arrival at the hospital.

5. Management of Abnormal Deliveries

A. Apply high flow oxygen to mother.

B. Contact Medical Control as soon as appropriate.

C. **Nuchal Cord** (cord wrapped around neck)
a. If the cord is around the neck and loose, slide gently – over the head DO NOT TUG.
b. If the loop is too tight to slip over the head, attempt to slip the cord over the shoulders and deliver the body through the loop.
c. If the cord is around neck and snug, clamp the cord with 2 clamps and cut between the clamps.
d. Wait for the next contraction for completion of delivery of the body. DO NOT PULL on the baby.

D. **Shoulder Dystocia**
a. If delivery fails to progress after head delivers, quickly attempt the following:
i. Hyperflex mother's hips to severe supine knee-chest position (i.e., McRoberts' maneuver).
ii. Apply firm suprapubic pressure to attempt to dislodge shoulder. This often requires two EMS clinicians to perform and allows for delivery in up to 75% of cases.
iii. Attempt to angle baby's head as posteriorly as possible but NEVER pull.
iv. Continue with delivery as normal once the anterior shoulder is delivered. D.

Breech position
a. Place mother supine, allow the buttocks, feet, and trunk to deliver spontaneously, then support the body while the head is delivered.
b. When delivering breech, you may need to rotate the baby's trunk clockwise; or sweep the legs from the vagina.
c. Once the legs are delivered support the body to avoid hyperextension of the head; keep the fetus elevated off the umbilical cord.

d. If needed, put the mother in a prone kneeling position which may assist in the delivery of the newborn
e. Assess for presence of prolapsed cord and treat as below.
f. If head fails to deliver, place gloved hand into vagina with fingers between infant's face and uterine wall to create an open airway. Place your index and ring fingers on the baby's cheeks forming a "V" taking care not to block the mouth and allowing the chin to be tilted toward the chest flexing the neck.
g. NEVER pull on the body, especially a preterm or previable baby. Support the baby's body while mother pushes when she feels the urge.

E. **Prolapsed Cord**
a. Place mother in a supine position with hips supported on a pillow.
b. Place gloved hand into vagina and gently lift head/body off the cord. c. Assess for pulsations in cord, if no pulses are felt, lift the presenting part off the cord
d. Wrap the prolapsed cord in moist sterile gauze.
e. Maintain until relieved by hospital staff.
f. If previous techniques are not successful, mother should be placed in prone knee chest position or extreme Trendelenburg with hips elevated.
g. DO NOT ATTEMPT TO PUSH CORD BACK INTO THE PATIENT!

F. **Arm or limb presentation** – Life threatening condition.
a. Immediate transportation in prone knee chest position or extreme Trendelenburg with hips elevated.
b. Delivery should not be attempted outside the hospital.

G. **Multiple births**
a. Immediate transportation
b. Multiple birth infants are typically small birth weight and will need careful management to maintain body heat.
c. For imminent delivery proceed with procedures of normal delivery as above including clamping of cord and skin to skin.
d. Prepare additional supplies for subsequent births.
e. There may be time to transport between births.

6. Management of Preeclampsia or Eclampsia
A. Management of Preeclampsia or Eclampsia include women 20 weeks gestation up to 6 weeks post childbirth.
a. **Magnesium sulfate** can be administered prior, during, or post childbirth. b. Be prepared to support respirations for infants born post **magnesium sulfate** administration.

B. Signs of eclampsia
a. Seizure **-** Any pregnant patient who is seizing should be assumed to have eclampsia and treated as such until arrival at the hospital.

C. Treatment of eclampsia – (actively seizing)
  a. High flow oxygen
  b. Establish IV access per **Vascular Access and IV Therapy-Procedure Protocol**
    i. Administer **magnesium sulfate** 4 gm over 10 minutes IV/IO until seizure stops**.** Administration of **magnesium sulfate** is best accomplished by adding **magnesium sulfate** 4gm to 100 or 250 ml of **NS** and infusing over approximately 10 minutes.
    ii. If eclamptic seizure does not stop after **magnesium sulfate**, then refer to **Seizure-Treatment Protocol**

D. Signs of severe preeclampsia
  a. BP systolic greater than 160 mmHG or diastolic greater than 110 mmHG with one or more of the associated symptoms below
    i. Headache
    ii. Confusion/altered mental status
    iii. Vision changes including blurred vision, spots/floaters, loss of vision these symptoms are often a precursor to seizure)
    iv. Right upper quadrant or epigastric pain
    v. Shortness of breath/Pulmonary edema
    vi. Ecchymosis suggestive of low platelets (bruising, petechiae)
    vii. Vaginal bleeding suggestive of placental abruption
    viii. Focal neurologic deficits suggesting hemorrhagic or thromboembolic stroke
    ix. Marked peripheral edema
  b. Prophylaxis treatment for severe preeclampsia
    i. High flow oxygen
    ii. IV access per **Vascular Access and IV Therapy-Procedure Protocol**
    iii. Administer magnesium sulfate (per MCA selection)

☑ Pre radio **magnesium sulfate** administration (without Medical Control contact)
☐ Post radio **magnesium sulfate** administration (contact Medical Control) prior to administration.

    iv. Administer **magnesium sulfate** 4gm IV/IO. Administration of **magnesium sulfate** is best accomplished by adding **magnesium sulfate** 4gm to 100 or 250 ml of **NS** and infusing over approximately

10 minutes.

c. Immediate transport

D. Management of Early Pregnancy Loss (delivery prior to 20 weeks)

A. Administer oxygen for patients with SPO2 below 94%.
B. Look for evidence of heavy vaginal bleeding.
C. Establish an IV in all patients who have abdominal pain and vaginal bleeding.
D. If the patient is hypotensive or showing signs of hemorrhagic shock,administer a bolus of normal saline (NS).
E. Reassess vital signs and patients condition
F. No signs of improvement; contact medical control prior to administering an additional fluid bolus.
G. When appropriate, see chart for an APGAR score.
H. Document time of delivery.
I. Bring any passed tissue to the hospital for evaluation

NOTES:

1. Hyperextension means head back,
2. Hyperflexion means head to chest.
3. There are two patients to assess, manage, and transport during childbirth – request resources as appropriate.

Medication Protocols
Magnesium Sulfate

Protocol Source/Reference: Michigan 4.2 Childbirth and OB Emergencies; Version 5/26/23.