6A NORMAL LABOR and DELIVERY

PATIENT CARE GOALS

- Provide appropriate assessment to determine the current stage of labor and identify complications of labor and delivery.
- If progression of labor dictates, temporarily delay transport to safely deliver the infant.
- Maintain adequate oxygenation, ventilation, and perfusion of the infant; provide warmth, and other supportive care.
- Provide physiologic and emotional support of the mother.

EMT

1. Assess the mother and provide initial care, including oxygen and vascular access, as per **1B General Assessment and Care**. Obtain gestational history and perform a focused physical exam to determine if delivery is imminent.[1,2,3]
2. **If delivery is not imminent:**
    a. Transport the mother on her left side. Position the middle stretcher strap low on the pelvic girdle and below the abdomen to avoid indirect trauma to the fetus.
    b. Provide gentle transport. Minimize linear acceleration and deceleration forces as much as possible (e.g., ambulance starting and stopping).
    c. Continue monitoring contractions and other indicators of labor.
3. **If delivery appears imminent:**
    a. If there are no apparent complications indicating the need for immediate transport, set up equipment and supplies (bulb syringe, two cord clamps, scalpel or sharp scissors, towels and blankets) and prepare for delivery at the scene.[4] Wear sterile gloves, mask, and gown, and drape the field for delivery.
    b. Place the mother in a comfortable position. The most common position for a normal delivery is supine, with knees and hips flexed upwards towards the mother's chest.
    c. As the infant's head appears, provide gentle pressure against the head with one palm to avoid explosive delivery. Apply pressure to the perineum with the other hand.
    d. After delivery of the head, coach the mother to stop pushing briefly and check to ensure that the cord is not wrapped around the infant's neck (nuchal cord) or compressed in the birth canal.
        - If the cord is loose, attempt to free it by carefully lifting it over the infant's shoulder or head.
        - If the cord is tight and cannot be freed manually, clamp and cut the cord.
    e. Do not suction the baby's mouth**.** Await full delivery and perform suction only if unable to ventilate.
    f. If necessary, assist delivery of the anterior shoulder by gently guiding the head downward. If there is difficulty, apply pressure on the mother's abdomen just above the pubic bone (McRoberts maneuver) to help. Then, assist the delivery of the posterior shoulder with a gentle upward lift.

g. The remainder of the body usually follows without difficulty. Allow the mother to push the infant out of the birth canal. Never exert traction or attempt to pull the infant. Be prepared to support the infant's body as it emerges (the baby will be very slippery).

h. Hold the infant at or slightly below the level of the vagina for 60 seconds prior to clamping the cord. Do not "milk" the cord.

i. Using clean towels, dry the baby. Stimulate the baby by rubbing its back gently but vigorously with clean towels. The baby should begin to breathe on its own or cry (refer to **6C Neonatal Resuscitation** if the baby does not begin breathing on its own).

j. Cover the infant, including the head, as soon as possible to prevent heat loss. If needed, carefully warm the infant.[5]

k. Secure the two sterile umbilical clamps 2 inches apart at 6 to 8 inches from the infant, and then cut between them using a sterile blade or sterile scissors.

l. Assess the infant's breathing, heart rate, and skin color, and provide further care of the infant, if needed, as per **6C Neonatal Resuscitation**. After delivery and initial care of a neonate who appears pink and vigorous, the infant may be placed at the mother's breast.

- If the mother wishes to breast feed the baby, she may do so. This will help release hormones to slow and stop contractions and bleeding.

m. Document an APGAR score one minute and five minutes after delivery, unless obtaining the score will interfere with resuscitation.[6]

n. Monitor the mother for excessive postpartum bleeding. If hemorrhage is severe, ensure placement of at least two large-bore IVs.

o. The placenta normally delivers spontaneously 10 to 30 minutes after the birth. Never exert traction on the cord to pull the placenta from the uterus. As the placenta is delivered, gently lift it away with both hands, place it in a plastic bag, and transport it to the receiving hospital for examination.

p. After placental delivery, palpate the uterus and observe the lochial flow from the vagina. If the uterus is soft and "boggy" (uterine atony) and there is significant flow of blood, provide uterine massage by supporting the lower uterus with one hand just above the symphysis pubis and massaging the uterine fundus with the other hand.

4. Provide gentle transport of the mother and infant. If there are not obvious complications during an otherwise normal progression of labor and delivery, transport with lights and siren is not indicated.

PARAMEDIC

5. Manage nausea during labor as per **1C Pain and Nausea Management**.[7]

DOCUMENTATION KEY POINTS

- Gestational history.
- Frequency, location, duration, regularity, and strength of contractions.
- Time of membrane rupture and color and character of amniotic fluid.

- Estimate of blood loss from the mother.
- Fetal presentation and delivery progression and procedures.
- Time of delivery of the infant.
- Placental delivery and appearance.
- Estimate of the infant's weight.
- One and five minute APGAR scores.
- Separate patient care reports for the mother and infant.
- 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 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 placenta, 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, 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] **Imminent delivery:** Whenever possible, avoid delivery during transport. Factors to consider include gravidity and parity of the mother; history of rapidly progressing labor during previous pregnancies; frequency, location, intensity, duration, and regularity of contractions; rupture of membranes (dribble or gush of water); maternal urge to push or move her bowels; and presence of perineal bulging or crowning during contractions. For interfacility transport, cervical dilation and effacement should also be considered.

[3] **Inter-facility transports:** In general, patients with active labor should not be transported if contractions are less than 5 minutes apart and cervical dilation is greater than or equal to 6 cm.

[4] **Complications** indicating need for immediate transport from the field include prolonged rupture of membranes (greater than 24 hours), breech or limb presentation, prolapsed umbilical cord, and severe vaginal hemorrhage. Transport immediately if delivery does not occur after 20 minutes and contractions are 2 to 3 minutes apart.

[5] **Temperature**: Maintain the infant's temperature at 36.5 to 37.5 degrees Celsius (97.7 to 99.5 degrees Fahrenheit), if possible.

[6] The following chart may be used to help calculate 1 and 5 minute **APGAR scores**:

APGAR Score:	**0**	**1**	**2**
Color	Blue or pale	Body pink, extremities blue	Completely pink
Heart rate	Absent	Slow (less than 100/minute)	Greater than or equal to 100/minute
Irritability	No response	Grimace	Cough, cry
Muscle tone	No response	Some flexion	Active motion
Respirations	Absent	Slow, irregular	Good, crying

APGAR reflex irritability is assessed by tactile stimulation or by inserting a catheter in the nares. The total APGAR score ranges from 0 to 10. If the 5-minute score is less than 7, assign additional scores every 5 minutes for up to 20 minutes.

[7] **Narcotics and benzodiazepines** are contraindicated for the patient in labor.