Prehospital Childbirth

Prehospital Childbirth is included in this California-based EMT program as it is required for skills verification for California Registration. It is not required for National NREMT registration.

Under most circumstances, the EMT's role in emergency childbirth is one of transportation of the woman in labor to the nearest appropriate facility. However, consider delivery at the scene when the delivery is imminent (within a few minutes) or when a natural disaster, inclement weather of other environmental factor makes it impossible to reach the hospital. Your first step is to determine whether you can initiate transport, or must prepare for an emergency delivery.

1. Assess for likelihood of imminent birth:
   - Are you having contractions? How far apart are they? When did they begin? (+ if 4 min or less)
   - Has your water broken? (+ if yes)
   - Do you feel as if you need to have a bowel movement? (+ if yes)
   - Do you feel the need to push? (+ if yes)

2. Observe for crowning. If the previous questions indicate birth is likely to be imminent, observe for crowning (the top of the baby's head at the vaginal opening), if crowning is present prepare for immediate delivery. If crowning is not present, consider transport unless other signs point to immediacy, but prepare to need to stop the ambulance to deliver en route.

3. Ask questions to anticipate and prepare for any potential complications:
   - "Are you under a doctor's care?"
   - "Does your doctor expect any problems with this delivery?"
   - "Is this your first vaginal delivery?"

4. Position the patient. If necessary, help the woman to move to a firm, flat surface, sitting or lying back with knees up. Make sure she is as comfortable as possible - place pillows or towels or a rolled up blanket under her hips. Remove clothing from the waist down, and use blankets or sheets to retain warmth and protect the patient's privacy.

5. Reassess PPE. Double glove (put on two sets of gloves one over the other with a sterile pair inside if available), and don additional PPE such as face shield/goggles or gown if available.

6. Prepare the delivery space.
   1. Open and lay out the OB kit
2. Tuck an absorbent pad or sheet under the mother's hips (often called Chux pads), and lay out gauze pads for easy reach.
3. Lay out the materials for managing the baby: blanket, cap, bulb syringe, umbilical clamps and scissors.
7. Cleanse the vaginal area. Wipe the vaginal opening with an obstetrical towelette from top to bottom, working outward laterally.
8. Remove and discard the top pair of gloves using proper technique.
9. Prevent an explosive birth. With a clean gloved hand apply gentle diffuse pressure with one hand to the baby's head to prevent sudden expulsion and to guide the head gently out. (May use a 4x4 pad). Ask the mother to only push gently with contractions. **In childbirth, the attendant is there to guide baby out: Do not pull on the baby's head or body, or push hard against the baby's head.** Let the baby and labor contractions do the work.
10. Prevent or minimize tearing. During head delivery, apply gentle downward pressure with two fingers on the perineum directly below the vaginal opening with the other hand.
11. Manage the cord. When the baby's head is out, the child's body will naturally rotate to one side or the other, support the head and examine for presence of an umbilical cord around the neck. If present, attempt to loosen, or slip the cord over the baby's head or shoulders before the remainder of the body is delivered. If this is not possible, place 2 umbilical clamps on the cord and cut the cord between the clamps.
12. Clear the airway. If fluid is present in the baby's nose and mouth, use 4x4 to swab the mouth clean. If copious amounts of fluid are present, suction first the mouth and then the nose with the bulb syringe.
13. Deliver the upper shoulder. Supporting the head and neck, apply gentle downward pressure to the head to release the upper shoulder.
14. Deliver the lower shoulder. Continuing to support the head and neck, apply gentle upward pressure on the head to release the lower shoulder.
15. Support the body. Once the shoulders are free, the rest of the body should follow rapidly. Hold the baby securely with a firm gentle grip, drying the baby and wrapping in a clean blanket, cover the head and hold the baby below the level of the mother's hips until the umbilical cord stops pulsating.
16. Manage the airway. Stimulate the baby with a foot rub if it has not spontaneously started breathing with delivery. Repeat suction steps as above if fluid is still present, or the child is gurgling or showing signs of respiratory distress.
17. Clamp the cord. When the cord has stopped pulsing, place the first umbilical clamp 6 inches (15 cm) from the newborn's body, and a second clamp 2-4 in (5 to 10 cm) further along the cord. Some county protocols have EMS personnel cut the cord with sterile scissors or scalpel between the two clamps, others specify clamping only with transportation of the placenta to the hospital still attached. Follow your local protocols.
18. Give mom the baby. Supporting the head and neck, place the baby on the mother's abdomen if the mother is willing/able to receive the baby. It is essential to keep the baby warm and skin to skin contact helps the baby stay warm and may improve perfusion. Place the baby with the baby's head slightly lower than its body to facilitate draining of mucus.
19. Assess the baby's 1 minute **APGAR score** and note in the Patient Record along with time of birth (you now have 2 patients!). If the heart rate is less than 60, or the baby is gasping
or apneic, provide Neonatal CPR and monitor SpO2.

20. Consider initiating transport especially if either the baby or the mother are in acute distress. As previously noted, you have two patients, mother and newborn. Initiate having a second ambulance respond if it is determined early on that the mother and/or newborn is in critical distress in order to adequately provide care for each of them.

21. Observe for delivery of the placenta. Don't cut or pull on the umbilical cord - the placenta will likely deliver itself within 30 minutes. Wrap in a plastic bag, and transport with the patients.

22. Assess the perineum for bleeding, and place an absorbent pad on the perineum (do not insert anything into the vagina).

23. If bleeding is continuing, encourage the mother to start breastfeeding if she has not already as this can stimulate the uterus to contract, and feel for the fundus of the uterus (which should feel like a firm grapefruit sized mass in the lower abdomen) and massage it using firm circular motions approximately every five minutes, or as needed, to keep it firm and minimize bleeding.

24. Transport should be initiated at this point if not undertaken before.

25. Assess the baby's 5 minute APGAR Score, continue to manage the airway, stimulate as required, and keep the baby warm and dry and in contact with the mother.

26. Continue to monitor the mother for bleeding, changes in vital signs. Administer oxygen if bleeding continues, or mother shows signs of deterioration.

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Emergencies requiring immediate transport

Breech, limb or cord presentation in which any portion of the baby but the head appears at the vaginal opening should prompt immediate transport. This baby cannot be delivered safely in the prehospital setting, and time is of the essence in getting the mother and baby to definitive care.

Documentation

Documentation of childbirth should be included in the Patient Care Report (PCR) in the form:

- REMEMBER the neonate is also a patient. A separate PCR with associated vital signs and narrative is required. Age may be charted at gestational age (e.g. a 34 weeks gestational age neonate). The 1 and 5 minute APGAR scores must be present on the baby's PCR.
Include the mother's gravida/para status. There are additions to this status that may be included but are generally not needed for EMS day to day operation. Also make sure to include the gestational age for the baby.

Example: "Patient is a 36 yo Female who is 39 weeks pregnant, G2P1, with a CC of abdominal discomfort similar to her last delivery. Patient is receiving prenatal care; no difficulties or congenital defects are expected with this pregnancy. Patient assessment reveals no obvious trauma; crowning of baby's head noted. Delivery assisted with no difficulties and no postpartum hemorrhage. ALS arrives on scene; patient turnover given and patient care transferred."

Self Assessment

- Practice the workflow with the Prehospital Childbirth Skills lab.
- Test your knowledge with this quiz

Tips and Tricks

1. Many health issues may come from issues during pregnancy. These include but are not limited to gestational diabetes, pre-eclampsia and eclampsia, anaphylactoid syndrome of pregnancy, and HELLP syndrome. Although treatment is often not possible for an EMT in the field, foreknowledge of common obstetrical issues allows for more streamlined decision making and transport considerations.

2. Delivery may be precipitated by stressful situations if the baby is far enough along in its development. Be ready for the small possibility that your 37 weeks pregnant massive trauma patient may go into labor.

3. If measuring pulse oximetry on the newborn, pre-ductal and post-ductal SPO2 monitoring allows for the determination of whether or not the newborn still has a patent ductus arteriosus (PDA). The ductus arteriosus should close soon after birth when the patient begins breathing, in fact oxygen is a drug EMTs can administer that should close a PDA.

Additional Resources

TBD - extra videos to watch, links to other pages for more reading

References

TBD - Footnotes, references, standards