MATERNAL911

Imminent Birth

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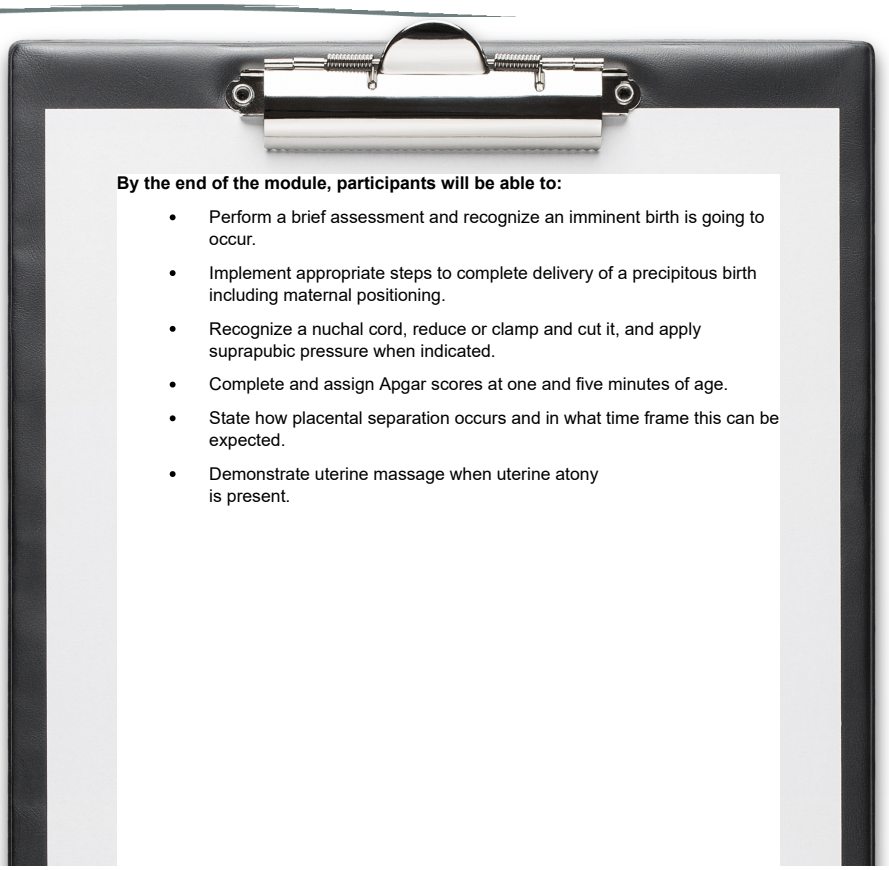
Course Description:

Imminent birth is something that will continue to occur in every facility across the world. This course will explain how to prepare and what to expect. Participants will gain confidence so that when they are faced with these situations in the future, they will be more prepared.

Approximate Time to Complete: 30 minutes

Click here to download a print version of this course.



By the end of the module, participants will be able to:

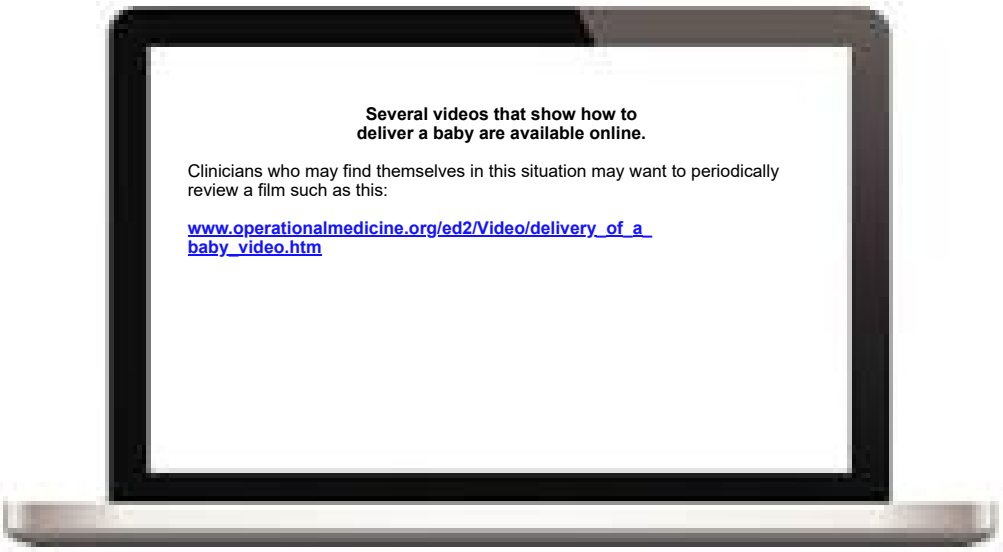
- Perform a brief assessment and recognize an imminent birth is going to occur.
- Implement appropriate steps to complete delivery of a precipitous birth including maternal positioning.
- Recognize a nuchal cord, reduce or clamp and cut it, and apply suprapubic pressure when indicated.
- Complete and assign Apgar scores at one and five minutes of age.
- State how placental separation occurs and in what time frame this can be expected.
- Demonstrate uterine massage when uterine atony is present.

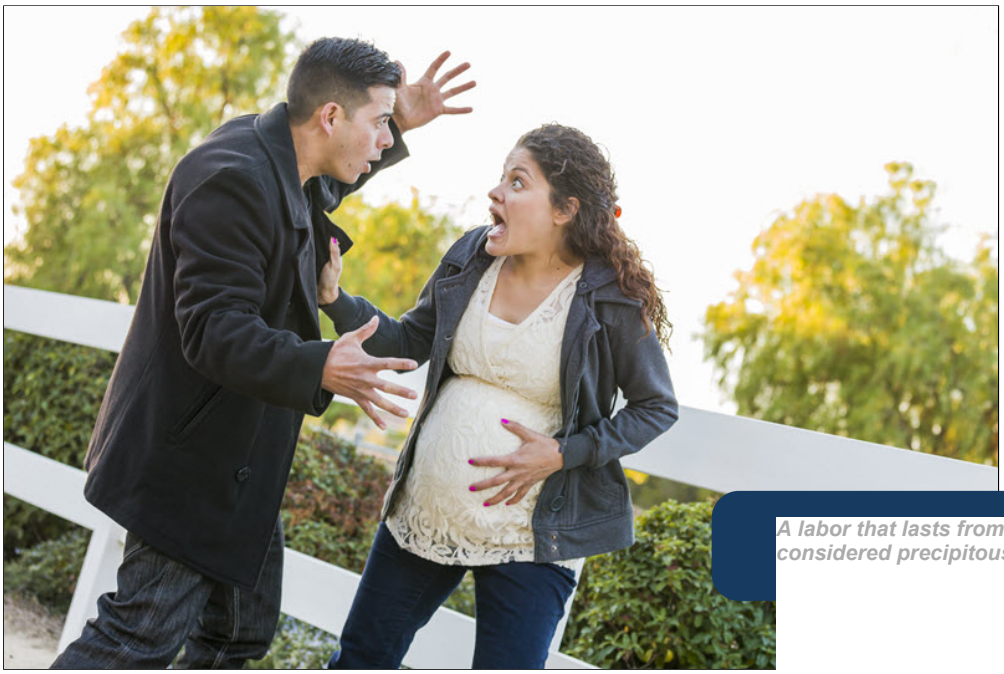
Precipitate or Precipitous Labor

Labor that lasts no more than three hours from onset of regular contractions to delivery.

- Each year, hundreds of deliveries in the United States occur precipitously in emergency departments and medical and surgical hospital rooms, as well as outside of the hospital setting in homes and cars.

- Fortunately, normal labor and delivery results in good outcomes in the absence of intervention in most cases.
- This topic will review the key points for assisting women during an imminent delivery of a fetus in cephalic position.
- It is intended for health care providers who do not perform obstetrical deliveries as part of their usual practice, as a refresher for those who do perform and for the new team member of a labor and delivery unit.

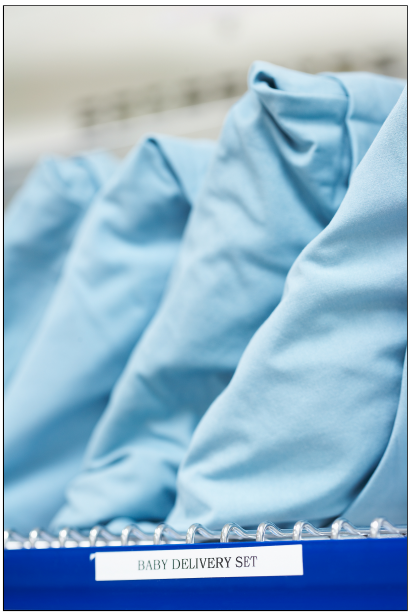

Several videos that show how to
deliver a baby are available online.
Clinicians who may find themselves in this situation may want to periodically review a film such as this:
www.operationalmedicine.org/ed2/Video/delivery_of_a_baby_video.htm



A labor that lasts from onset to delivery in 3 hours is considered precipitous [1].

For a standard delivery you will need:

- Antibacterial cleansers to wash your hands and the mother's perineum
- Gauze sponges
- Sterile gloves and gowns
- Bulb syringe to remove fluid and mucus from the infant's mouth and nose
- Two sterile clamps to clamp the umbilical cord
- Sterile scissors or knife to cut the umbilical cord between the clamps
- An appropriate blood tube to collect fetal blood from the placental end of the cut umbilical cord
- Clean blankets to dry and swaddle the infant
- Blankets and gown to keep the mother warm
- Suitable containers for the placenta and wet, bloody clothing and sheets, etc.
- A diaper



1

2

3

Click each number to learn more.

If there is time and equipment is available, check the maternal temperature and blood pressure.

- Fever suggests chorioamnionitis

Maternal hypertension (systolic blood pressure ≥140 mmHg or diastolic blood pressure ≥90 mmHg) is the key finding for preeclampsia.

- Preeclampsia can progress to eclampsia (i.e. seizures) and can be associated with life-threatening complications (e.g. hepatic rupture, pulmonary edema, stroke, renal failure).
- Further discussion occurs under the Severe Preeclampsia module of Maternal 911.

- If the fetus is not visible, delivery is still likely imminent if painful contractions are occurring at least every two minutes, the mother wants to bear down/push, and the perineum distends with contractions.
- The median second stage of labor (full cervical dilation to delivery) is 0.6 hours in nulliparous women and 0.2 hours in multiparous women [2].
- If contractions are several minutes apart, there may be time to transport the mother to Labor and Delivery or to the nearest emergency department for delivery under more controlled conditions.

The fetal heart rate (FHR) should be checked with a Doppler device, by auscultation with stethoscope, or with use of a portable ultrasound unit, if available.

A normal FHR is between 110 and 160 beats per minute [3].

Fetal heart rates have various patterns associated with issues that may compromise a fetus. VEAL-CHOP can help the provider remember that late decelerations are concerning along with persistent variables. The head compression associated with early decelerations are tolerable and accelerations are wonderful, or "okay" as stated.

Click the picture to reveal a helpful acronym.

- Position the mother in a semi-sitting position, with hips flexed and abducted, and knees flexed (lithotomy position).
- In the absence of a birthing bed or table with stirrups, it is easier to deliver a baby if pillows, a stack of towels, or an upside down bedpan placed under the mother's hips and back to raise the perineum above the surface of the bed/stretcher.
- This provides additional room to maneuver when guiding the infant posteriorly to ease his/her shoulder under the symphysis pubis.
- Alternatively, the mother may lie on her side with her leg held up by a support person.

- Insert a large bore intravenous catheter (14 or 16 gauge) into an arm vein and draw a maternal blood sample for blood type and antibody screen.
- This line can be used to administer oxytocin after delivery of the placenta and for volume replacement in case of hemorrhage.

- Instructions to the mother — Before the fetus is visible at the introitus, the mother will want to bear down and push according to her own reflex needs in response to the pain of contractions and the pressure felt from descent of the fetal head.
- Ask her to pant through the peak of her contractions and try to rest and breathe normally between them.
- This helps to keep her from bearing down and delivering before additional help is available.
- If the fetal head is crowning, ask her to pant or make only modest expulsive efforts in an attempt to achieve a controlled delivery, which is less likely to cause maternal or fetal trauma than an uncontrolled delivery.

Click the gray arrows to read through the steps of delivery.

- The newborn's neck should be held in a neutral to slightly extended position to open the airway.
- The nose and mouth are wiped of fluid, blood, and mucus with a clean cloth.
- Newborns are obligate nose breathers, so removing these substances from the nose is thought to facilitate air exchange.
- There is no strong evidence that suctioning with a bulb or catheter is beneficial.

- Hypothermia in the immediate newborn period increases oxygen consumption and metabolic demands and is independently associated with increased mortality; therefore, maintaining body heat is an important initial step in caring for the newborn.
- Low birth weight and preterm infants are particularly prone to rapid loss of body heat because of their large body surface area relative to their mass, thin skin, and decreased subcutaneous fat.

- Drying the newborn is crucial, as it significantly reduces heat loss.
- There are several additional ways to keep the infant warm after drying: swaddling in warm towels/blankets, "skin to skin" contact with mother, placement in a warm (36.5ºC) isolette, raising the environmental (room) temperature, and clothing.