Important Terms to Know

- **Fetus**
  - Unborn infant growing in the uterus
- **Uterus (womb)**
  - Muscular organ where fetus grows
- **Birth canal**
  - Cervix ("neck" of the uterus) & vagina
- **Mucous plug**
  - Seals uterine opening
  - Protects against infection
Important Terms to Know - 2

- **Bloody “Show”**
  - Release of the mucous plug
  - Often the beginning of the first stage of labor

- **Perineum**
  - Area of skin between the vagina and anus

- **Placenta (“after birth”)**
  - Body which attaches to the inner lining of the uterus – the source of fetal nourishment

Important Terms to Know - 3

- **Umbilical cord**
  - Connects the mother and fetus through the placenta
    - Has two arteries and one vein
    - Vein carries oxygenated blood to the fetal heart
    - Arteries carry blood away from the fetal heart
    - $O_2$ and nutrients from mother through the vein
    - $CO_2$ and wastes back to mother
  - **Mother’s and fetal blood never mix**
Important Terms to Know - 4

- Amniotic sac ("Bag of waters")
  - 500 – 1000ml of amniotic fluid
  - Fetus develops in this fluid
  - Provides cushioning
  - Usually released in a gush at the onset of labor

- Full Term
  - 36 – 40 weeks from LMP

- Premature
  - < 36 weeks from LMP
Labor – 3 stages

- **Stage one**
  - End with complete dilation of the cervix
  - Takes an average of 16 hours for *first* child
  - Time becomes progressively shorter with each delivery
- **Stage two**
  - Ends with the delivery of the baby
  - *Decision time!*
- **Stage three**
  - Ends with delivery of the placenta

Pre-delivery emergencies

- Ectopic pregnancy
- Preeclampsia
- Eclampsia
- Supine hypotensive syndrome
- Abruptio placenta
- Placenta previa
Ectopic pregnancy

- Fetus develops outside the uterus
  - Usually in the fallopian tubes
- In early weeks of pregnancy
  - *Patient may not even know they are*
- **Major risk:**
  - Death due to internal bleeding from rupture

**Ectopic pregnancy**

- **Signs/Symptoms**
  - Sudden stabbing pain in lower abdomen
  - *Sometimes* referred pain to right shoulder
  - *Sometimes* vaginal bleeding
- **Treatment**
  - ABCs
  - Treat for shock PRN
  - Rapid transport
Ectopic pregnancy

Any female of child-bearing age with lower abdominal pain is assumed to have an ectopic pregnancy until ruled out

Preeclampsia

- AKA “pregnancy induced hypertension”
- Usually > 20 weeks
- S/S include
  - Headache
  - Visual disturbances
    - Seeing spots
  - Edema of the hands and feet
  - Anxiety
  - Hypertension
Eclampsia

- Preeclampsia **and seizures**
  - AKA Pregnancy induced hypertension and seizures
- Treat with:
  - ABCs
  - **Call for ALS**
    - To treat the seizures
  - Transport promptly

Supine hypotensive syndrome

- Hypotension caused by a large uterus leaning on the inferior vena cava
- Diminishes blood flow returning to heart
- Simple treatment!
- Place patient on her left side
  - Use a folded blanket under right hip
- Oxygen
Abruptio placenta

- Placenta prematurely separates from uterine wall causing...
- **Loss of oxygen and nutrients to fetus**
- **Major internal bleeding**
  - May or may not see any vaginal bleeding
- **A true emergency!**
Placenta previa

- Placenta develops over and covers the cervix
- May or may not see any vaginal bleeding
- **A true emergency!**
Vaginal bleeding during pregnancy

- *Any* vaginal bleeding at any time during pregnancy is considered abnormal and must be transported
- Treat with:
  - ABCs
  - Treat for shock PRN
  - Position on left side
  - Transport promptly

- Emergency childbirth and resuscitation
- Stabilization of the newborn

- **Notes:**
  - For imminent delivery, request ALS
  - Do not wait for ALS
  - **NEVER** delay or restrain delivery under normal circumstances
Childbirth – general approach

- Assure that mother’s ABC’s are OK!
- Assess and treat for shock PRN
- Obtain a quick history to determine if mother’s in labor:
  - Length of term
  - Number of previous pregnancies
  - Number of prior births
  - Frequency & duration of uterine contractions
  - Recent vaginal discharge or bleeding
  - Presence of urgency to move bowels
- Do not allow mother to go to the bathroom!

Childbirth – general approach

- Determine if mother is having contractions
  - Perform a visual inspection looking for bulging of the perineum or crowning
  - If contractions are 2 – 3 minutes apart lasting 60-90 seconds and/or
  - Crowning of the head the size of a half dollar is present between contractions then...
  - Prepare for immediate delivery...
Prepare for delivery

- Inform the mother of the need for immediate delivery
- Secure a private/sanitary environment
- Position and drape the mother
- Place the OB kit within easy reach
- Warm several towels, if possible
Support the infant’s head with one hand while gently guiding it out – to prevent an explosive delivery

Use second hand in with sterile dressing to prevent tearing of the perineum

Attempt to prevent the head from touching fecal material

If the amniotic sac has not yet ruptured:
- Puncture it with a gloved hand or umbilical clamp
- Move the head away from the gushing fluid
- Suction PRN
Uncomplicated delivery - 2

As soon as the head delivers:
- Continue to support the head with one hand
- Tell the mother to stop pushing
- **Inspect the infant for an umbilical cord wrapped around its neck**
  - If wrapped loosely, *gently* slip it over the infant’s neck
  - If wrapped tightly:
    - Immediately clamp the umbilical cord with two clamps and cut in-between
Uncomplicated delivery - 3

- Suction the oropharynx first
  - Insert a compressed bulb syringe 1 – 1.5” into the infant’s mouth
  - Suction the infant’s oropharynx while controlling the release of the bulb
  - Repeat suctioning PRN

Uncomplicated delivery - 4

- Suction the infant’s nostrils:
  - Insert a compressed bulb syringe at most 0.5” into the infant’s nose
  - Suction the infant’s nostrils while controlling the release of the bulb
  - Repeat suctioning PRN
  - Tell the mother to push during contractions
Uncomplicated delivery - 5

- Once the head delivers, guide the shoulders out... remainder of delivery will generally proceed quickly
- **Dry the infant quickly** – note that the infant will be very slippery!
- **Place on a warm towel in a face up position with feet higher than the head**
- **Keep the infant at the mother’s vaginal evel until the umbilical cord is cut**
- Repeat suctioning PRN

Uncomplicated delivery - 6

- **Quickly assess the newborn’s respiratory status, pulse and general condition**
Normal post-delivery - 1

- Infant is breathing spontaneously; crying vigorously with pulse > 100/min
- Clamp the cord
  - First clamp 8-10” from the baby
  - Second clamp 3” closer to the mother
  - Cut in-between carefully
  - Cover the scalp with a warm covering
  - Wrap the infant in a warm blanket and a layer of foil
    - Do NOT use foil alone
    - Infant “swaddler”
- Keep the infant warm and free of drafts.
Normal post-delivery - 2

- Reassess/Treat mother for shock
- Once delivery is complete and infant is stabilized, **initiate transport**
  - Do not wait for placenta to deliver
  - Keep infant warm and free from drafts
  - Pre-warm ambulance to 80 – 90 degrees
  - Repeat vital signs on all patients
Abnormal post-delivery - 1

- Spontaneous respirations should begin within 30 seconds
- **If infant is not breathing spontaneously and crying vigorously:**
  - If respirations < 30/minute, stimulate
    - Rub the infant’s lower back gently
    - Gently snap the bottom of the infant’s feet with the index finger

Abnormal post-delivery - 2

- If despite stimulation, respirations remain depressed or absent or infant is cyanotic:
  - Suction
If despite stimulation suctioning and oxygen, respirations remain depressed or absent or infant is cyanotic:

- Insert an OPA
- Ventilate with BVM 40 – 60 breaths/min
  - Assure that chest rises every time

Monitor the pulse continuously!
- If pulse rate drops below 100/min
  - **BVM @ 40 – 60 breaths/min**
- If pulse rate drops below 60/minute or **does not increase above 60/minute after 30 seconds of BVM ventilation**:
  - Perform chest compressions using AHA guidelines
  - **TRANSPORT IMMEDIATELY, repeating vital signs enroute!**
  - **Do not wait for the placenta to deliver**
Complete the task

- If the placenta delivers, take it to the hospital
- To minimize “post-partum” bleeding:
  - Massage the uterine area
  - Allow the mother to nurse after the cord is cut
Complicated childbirth

- Breech birth
- Prolapsed umbilical cord
- Multiple births

Breech birth

- **Buttocks present first**
  - Hi-con oxygen to mother
  - *Maintain an open path in the birth canal to the infant’s mouth with sterile gloved fingers in a “V” position*
    - Keeps the head off the cord
  - **Transport mother immediately in the face-up position with hips elevated while maintaining an open path to the infant’s mouth**
Breech birth - 2

- **Limb presents first**
  - Hi-con oxygen to mother
  - Transport mother immediately in the face-up position with hips elevated
Prolapsed umbilical cord

- Hi-con oxygen to mother
- Place mother in face-up position with the hips elevated
- Using sterile gloves, push the infant back into the uterus an inch or two to take the pressure off the cord until you are relieved by ER staff.
- DO NOT insert the cord into the uterus
- Wrap the exposed cord with sterile dressings
  - Must be kept warm
- Transport immediately
Multiple births

- Not really a complication!
- Get additional help!
- Deliver each infant according to protocols
- Clamp and cut cord between births
- If the anticipated second birth does not occur after ten minutes, transport immediately