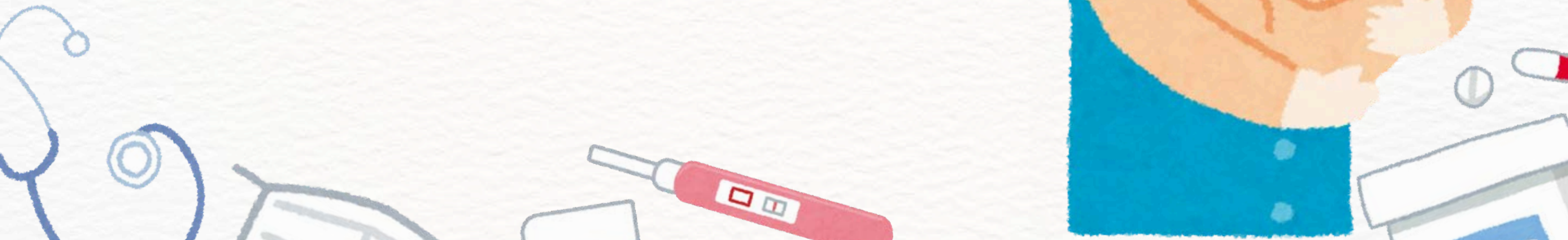




# Pediatric & Obstetric Emergencies



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# What is a Pediatric Patient?

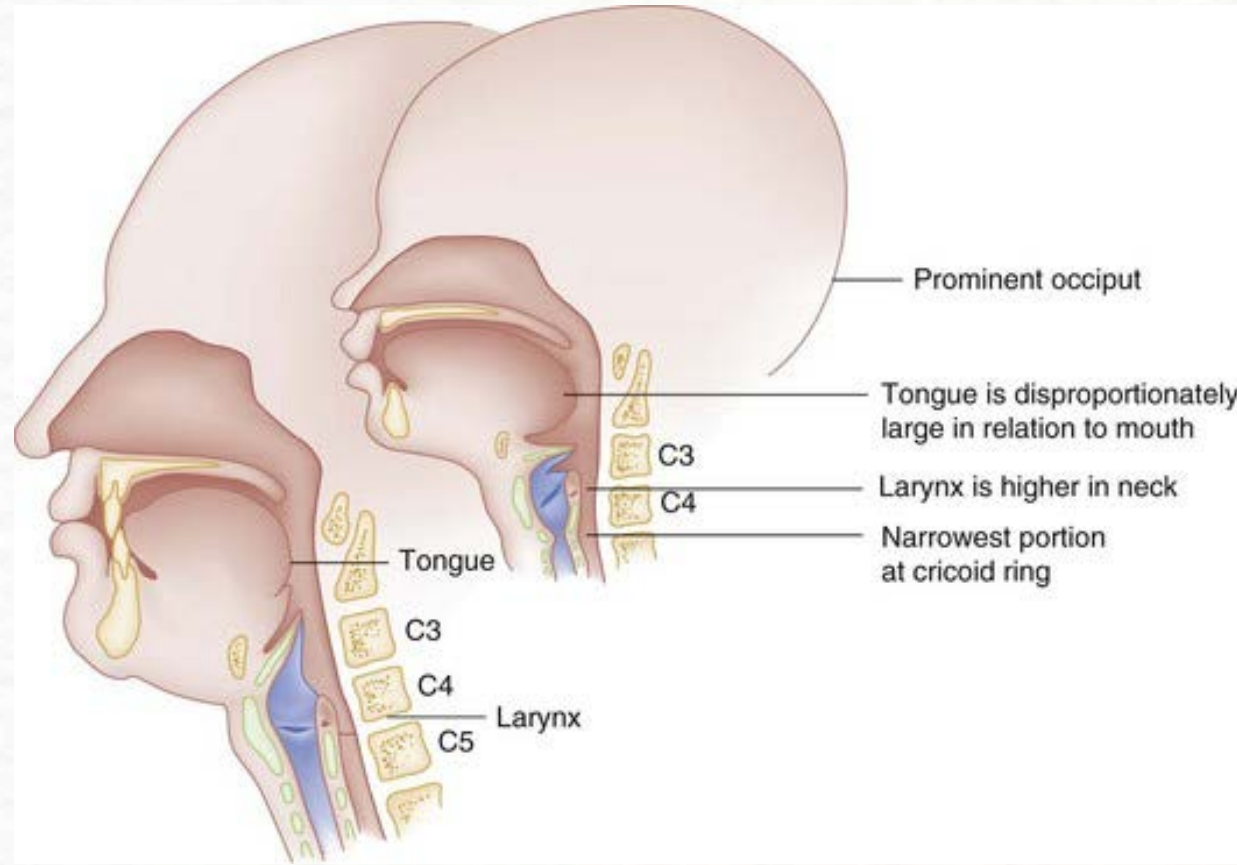
In Alameda county...

a pediatric patient is a patient age 0 to 14

\*Upon visual assesment a patient can require “adult” treatment if they are showing signs of puberty (ie: breast tissue, facial hair etc.)



# Anatomical and Physiological Differences



- proportionally large tongue
- easily blocks airway
- proportionally large head
- nose breathers

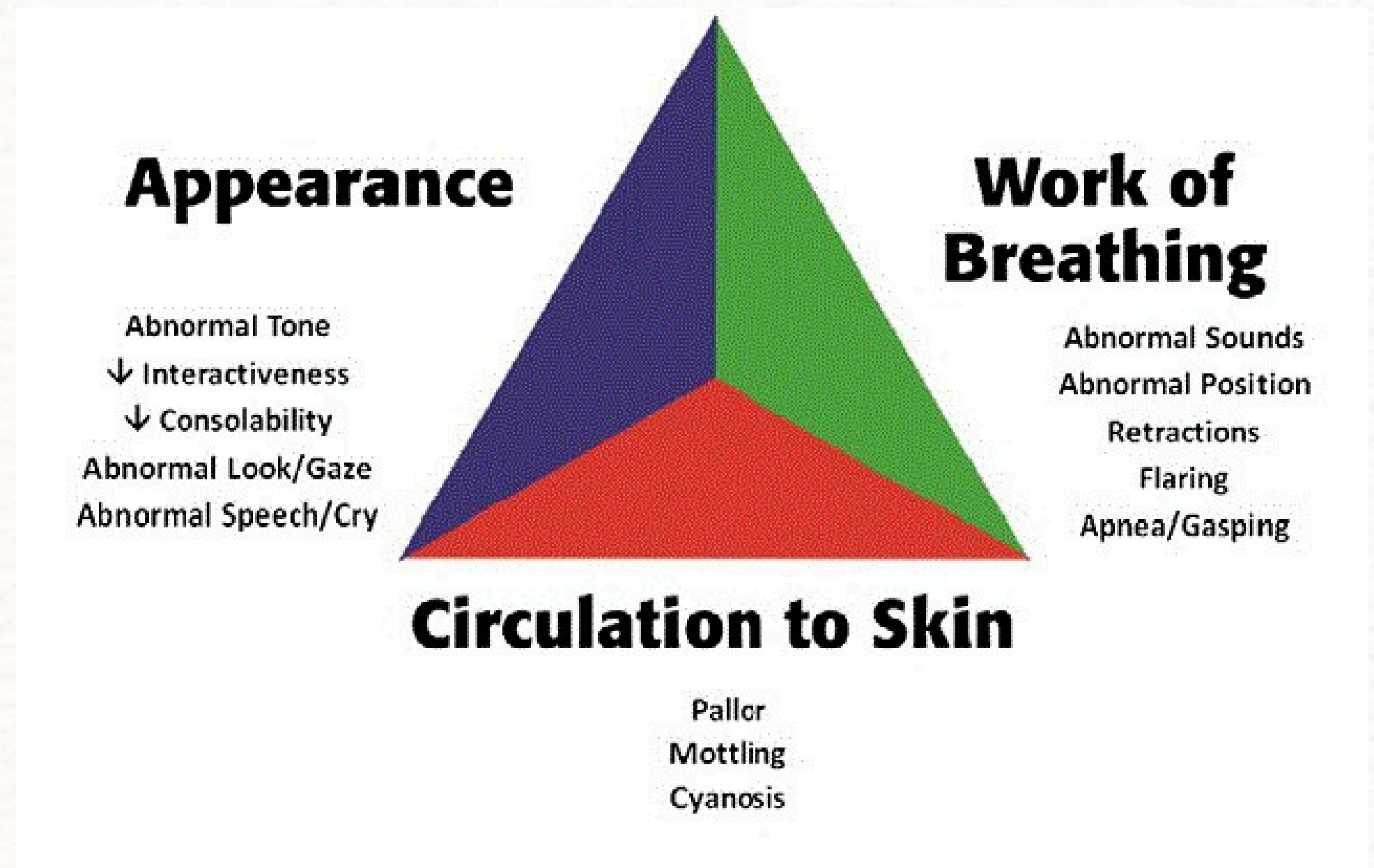
- bones are more flexible (greenstick fractures)
- chest cavities are very cartilaginous
- skull is not fully fused

- Heart rate is 100-160 bpm due to a more stiff heart
- 25-60 breaths per minute due to overcompensating for small airway systems
- Systolic blood pressure lowered to 60-70 mmHg due to compliant blood vessels
- Not as good at temperature regulation due to less surface area

# The Pediatric Triangle

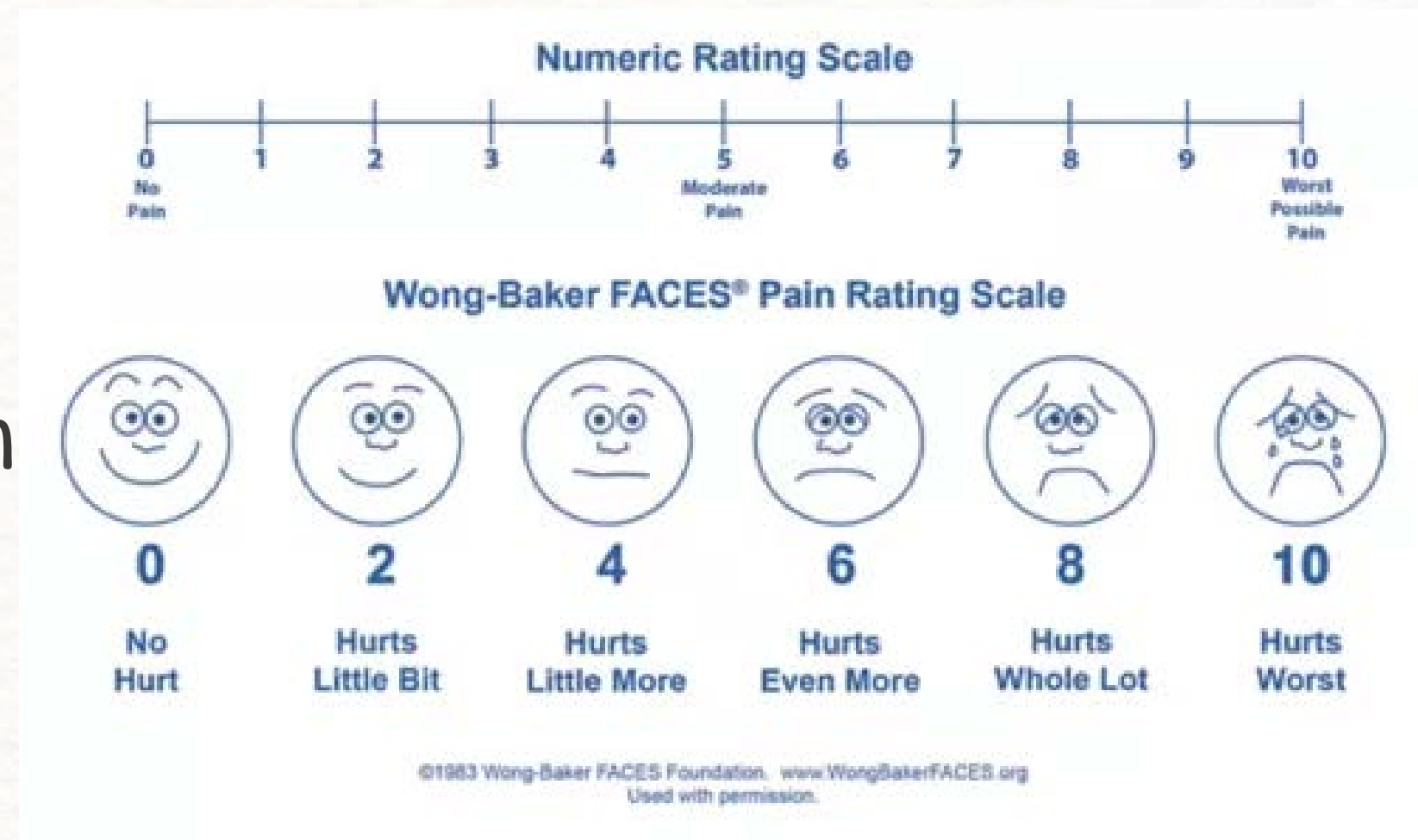
An emergency tool to help EMT assess pediatric patients in under 60 seconds

- Appearance = Mental status
- Work of Breathing = Oxygenation/Ventilation
- Circulation to Skin = Perfusion



# When Assessing Peds...

- Make sure you stay a 100% honest with them!
- Talk to them in a language they can understand!
- Always use the least invasive approach
- If trusted adult is there make sure to interact with them to build trust
- Let the child sit with their trusted adult so that they feel more comfortable



# Common Peds Emergencies

## Epiglottitis: inflammation of the epiglottis

- S&S: Sore throat, high fever, drooling, muffled voice
- Tx (EMT scope): Position of Comfort, O2 if needed,

## Choking: airway blockage

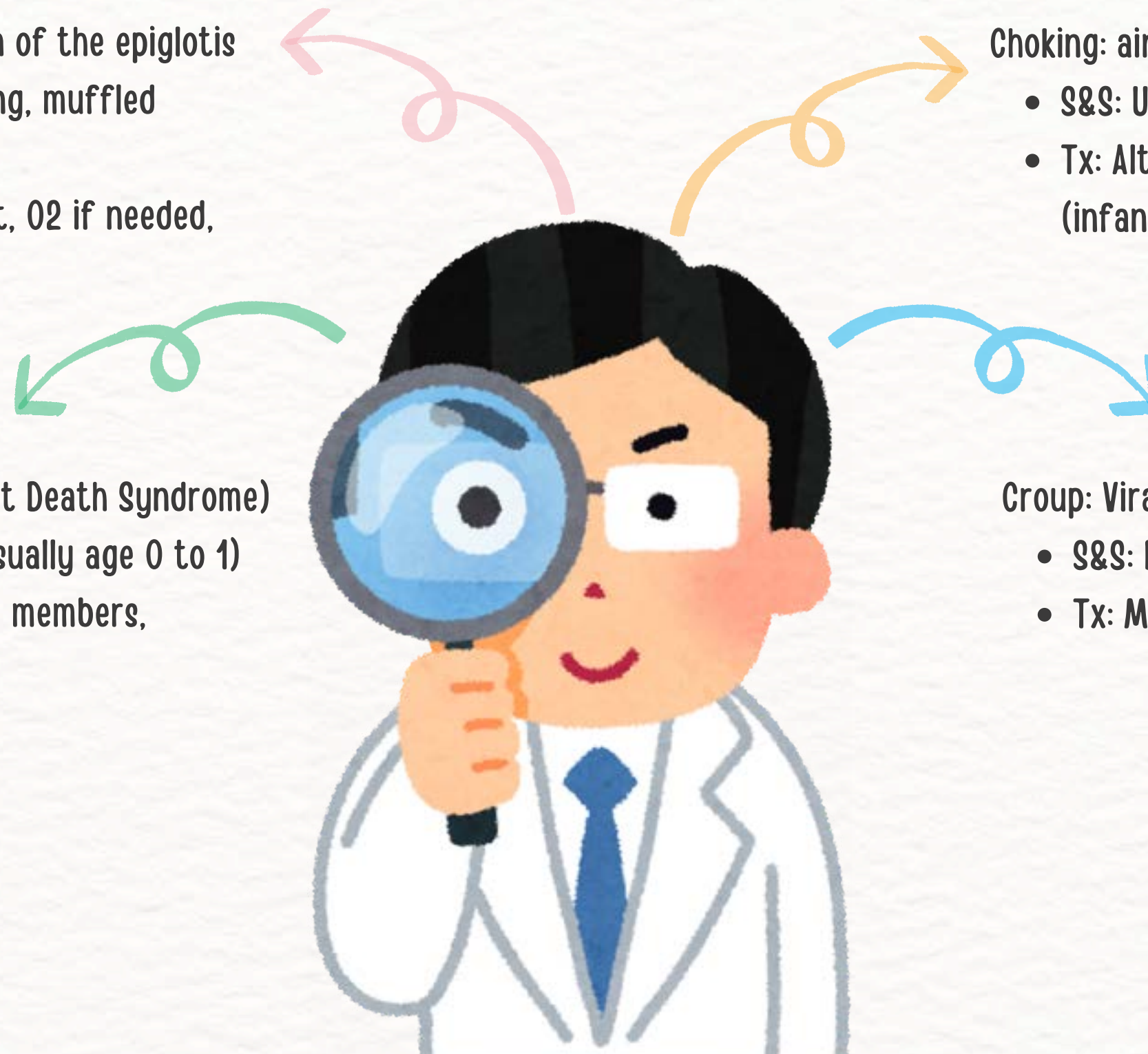
- S&S: Unable to make sounds, Face or lips turn blue
- Tx: Alternating 5 chest thrusts and 5 back slaps (infant). Abdominal thrusts if big enough.

## SIDS (Sudden Infant Death Syndrome)

- The unexpected death of a child (usually age 0 to 1)
- Tx (EMT Scope): CPR, Console family members,

## Croup: Viral infection that causes a “seal bark cough”

- S&S: Barking cough, Fever, Stridor
- Tx: Maintain Airway, O2 if needed





## Scenario 2: Child Actively Seizing



What was your field impression?





**Correct answer:**

**Febrile Seizure**



# What is A Febrile Seizure?

Convulsions in young children (usually 6 months to 5 years) caused by a fever, often 100.4 F or higher, typically triggered by viral infections

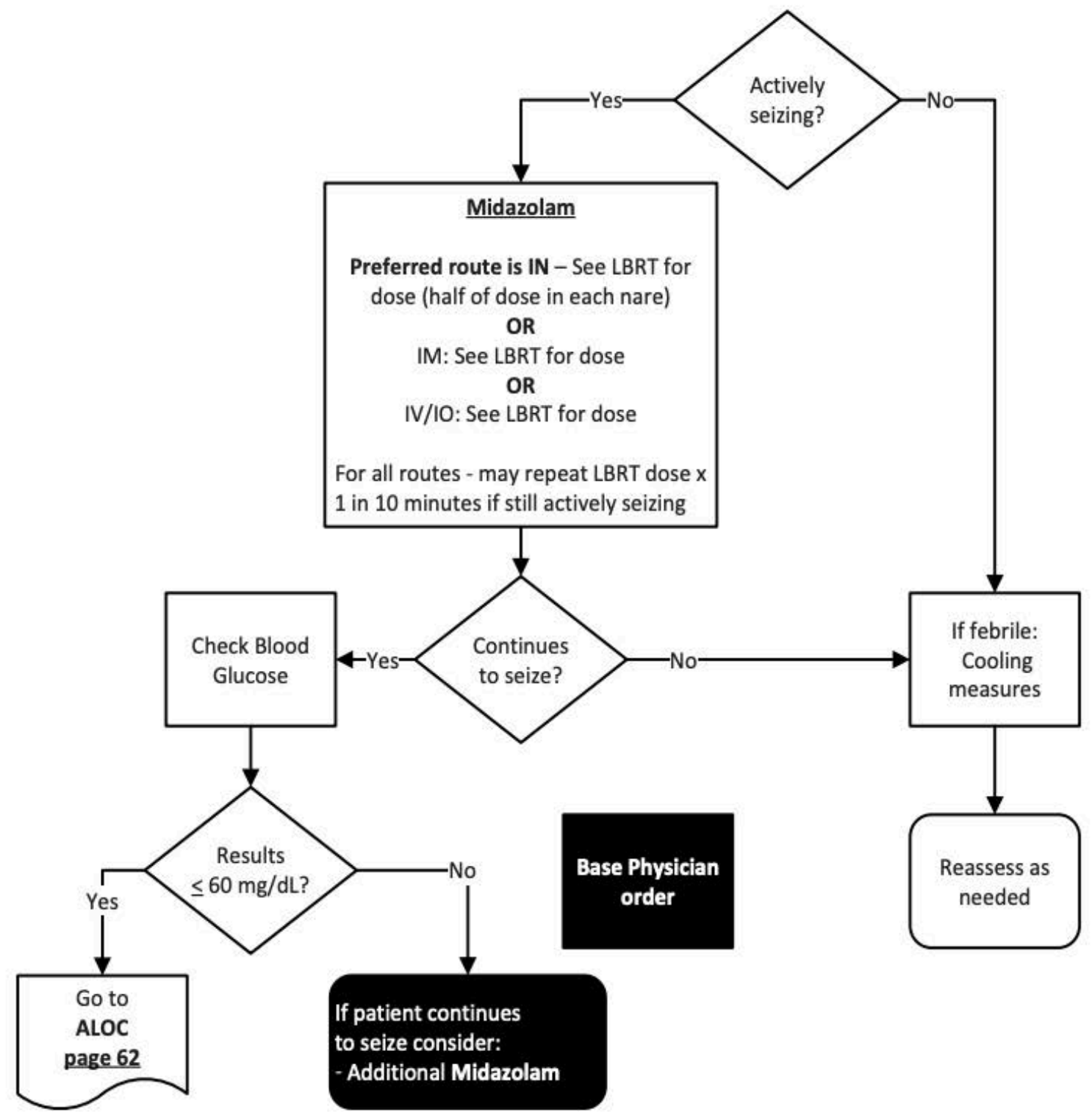
- S&S: fever, loss of consciousness, convulsions, Stiffening of limbs or body, Rhythmic jerking or twitching, Rolling eyes back, Red or blue face/lips, Foaming at the mouth
- Tx (EMT Scope): Maintain airway, Blow-by O2 if needed, maintain patient safety, Recovery Position

Scenario Specific:

- Patient found bundled is lots of layers...TAKE THEM OFF!
- The E(events leading up to) in SAMPLE is very important to determine the origin of seizures
- Postictal Phase: the recovery period directly following a seizure, characterized by temporary confusion, fatigue, headache, and cognitive impairment as the brain recovers
- Status Epilepticus: Prolonged Seizing lasting longer than 5 min or consecutive seizures with out recovering consciousness (need ALS)

### SEIZURE

- **Pediatric Routine Medical Care**
- Midazolam should not be given unless the patient is actively seizing - 3 or more seizures in  $\leq 5$  minutes or any seizure lasting  $> 5$  minutes
- **Cooling Measures:** Loosen clothing and/or remove outer clothing/blankets
- **Use an LBRT to determine pediatric medication dosages** - (Shown underlined on the algorithm)





## **Scenario 3: 5-year-old Female with Difficulty Breathing**

What was your feild impression?





**Correct answer:**

**Pertussis**



# What is Pertussis?

## AKA: Whooping cough

- a highly contagious respiratory infection caused by *Bordetella pertussis* bacteria
- S&S: high-pitched “whoop” sound during cough, extreme fatigue, fever, vomiting other flu like symptoms
- Tx (EMT Scope): Maintain airway, O2 if needed, PPE is VERY important

## Scenario Specific:

P: provocation/progression

A: Associated chest pain

S: Sputum

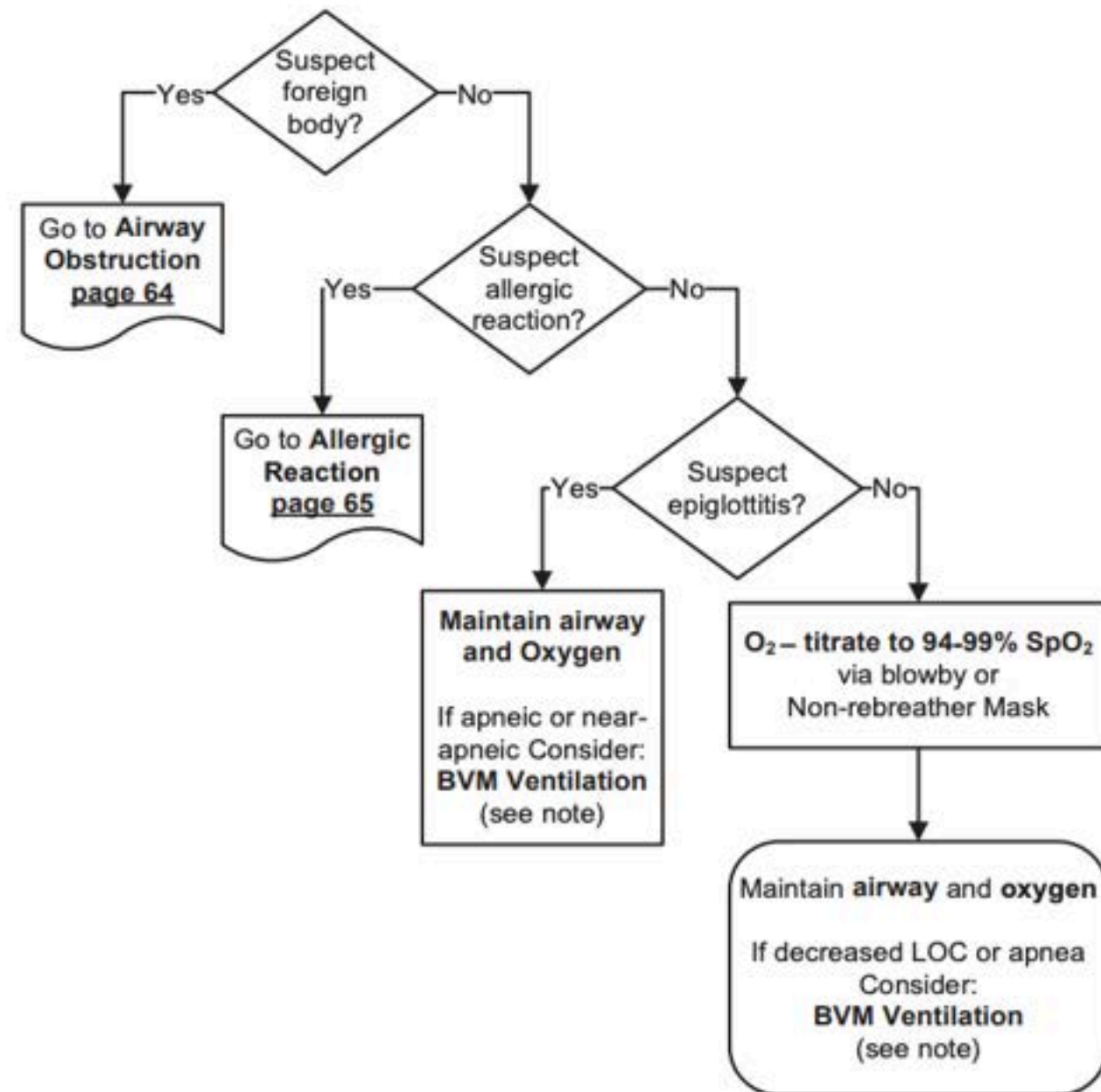
T: Talking/tiredness

E: Exacerbation

- Ask About Vaccination History
- Make sure to talk to guardians!!
- It is likely that the most of your info will come from the guardian however make sure you're also interacting with the patient directly

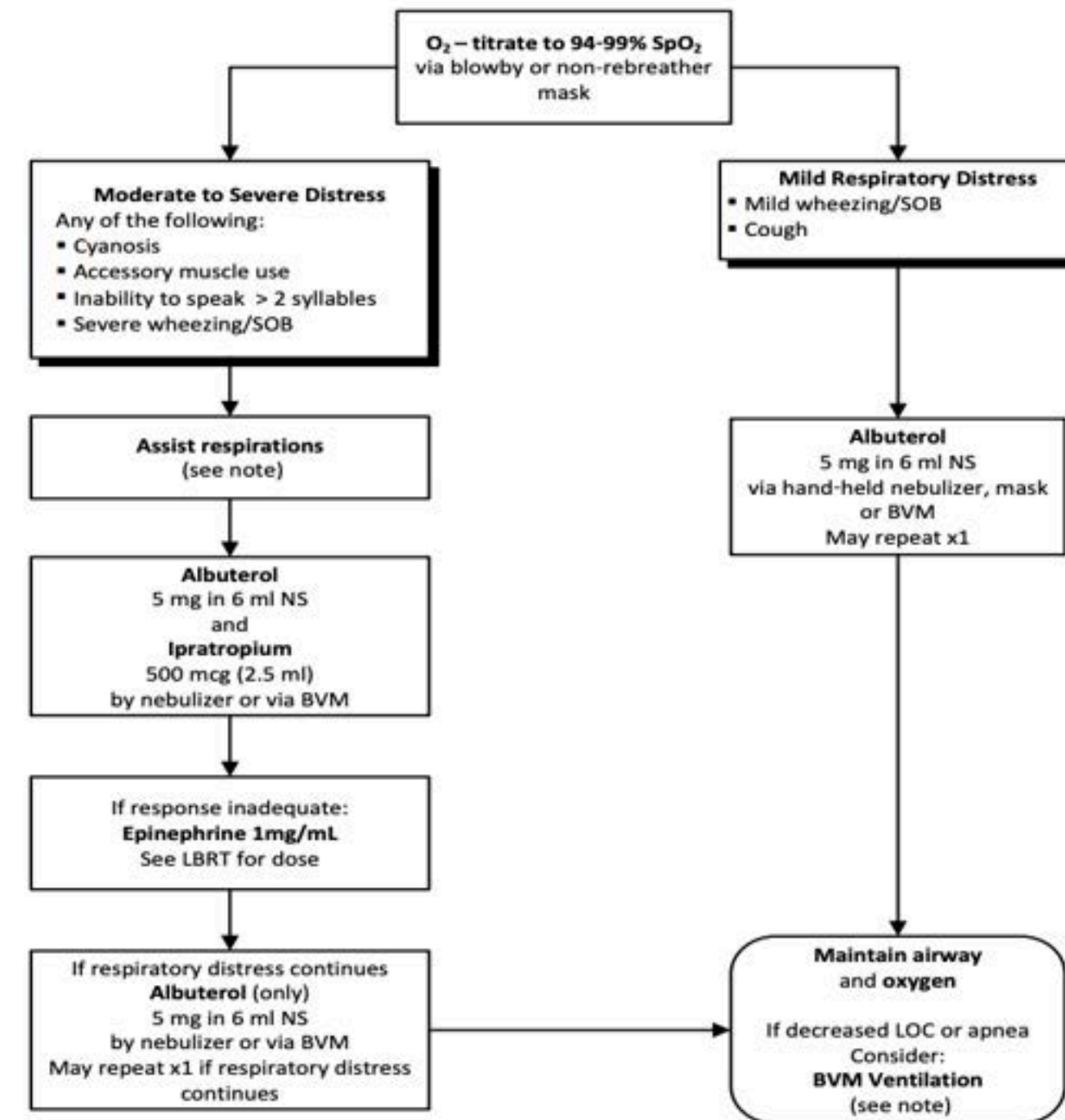
**RESPIRATORY DISTRESS (STRIDOR) – UPPER AIRWAY**

- Pediatric Routine Medical Care
- **CROUP/EPIGLOTTITIS:**
  - If the patient deteriorates, or becomes completely obstructed, positive pressure ventilation via bag-valve-mask should be attempted
  - Do not attempt to visualize the throat or insert anything into the mouth if epiglottitis suspected
  - Allow a parent to hold the child or the O<sub>2</sub> mask if the presence of the parent calms the child
  - Minimize outside stimulation. Keep the patient calm
  - Position of comfort
- Use an **LBRT** to determine pediatric medication dosages - (Shown underlined on the algorithm)
- **Note:** Manage the patient's airway with proper airway positioning, simple airway adjuncts, suctioning, and BVM ventilation as necessary. Consider Advanced Airway Management (page 112) if BVM ventilation is not adequate.

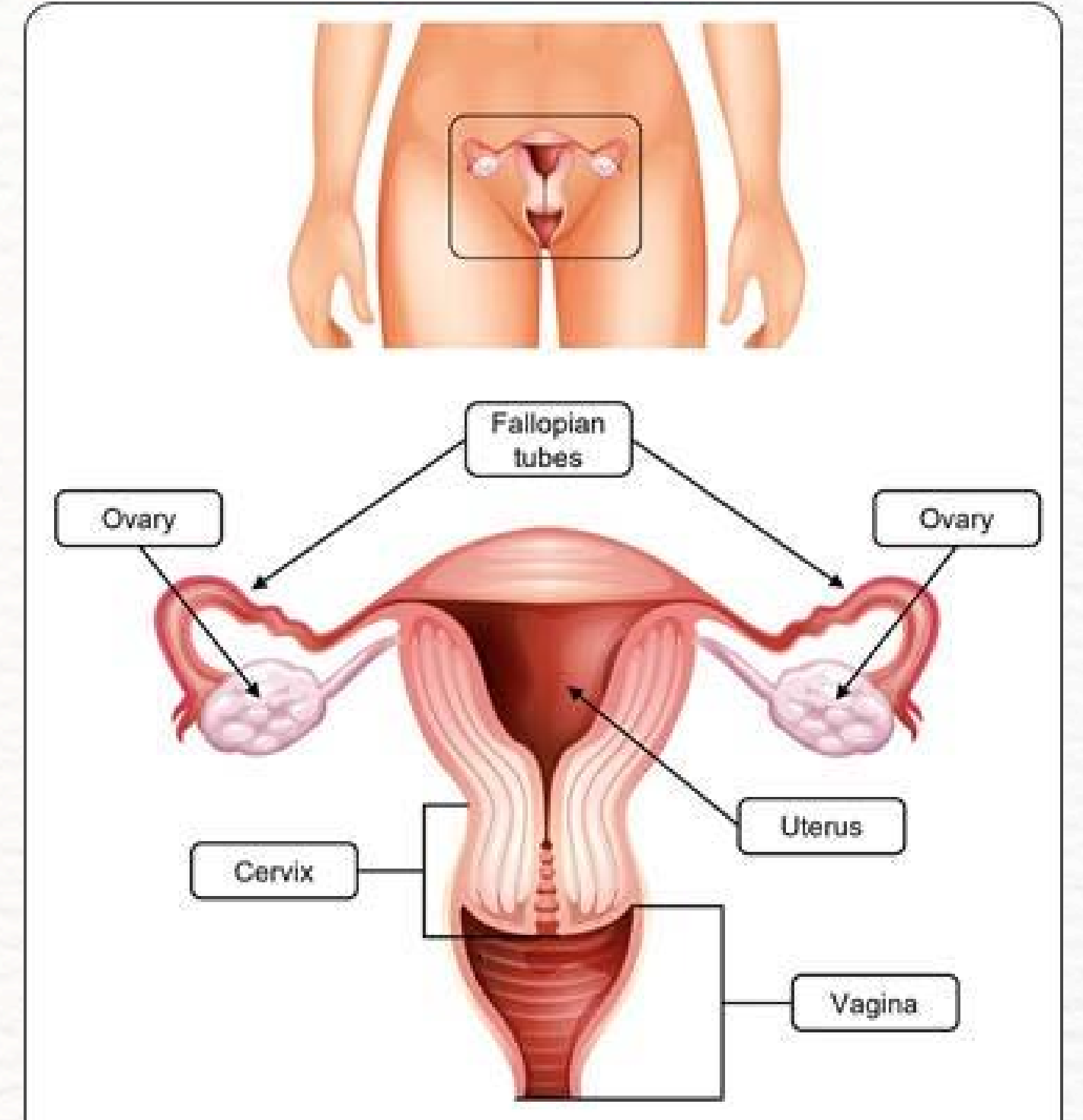
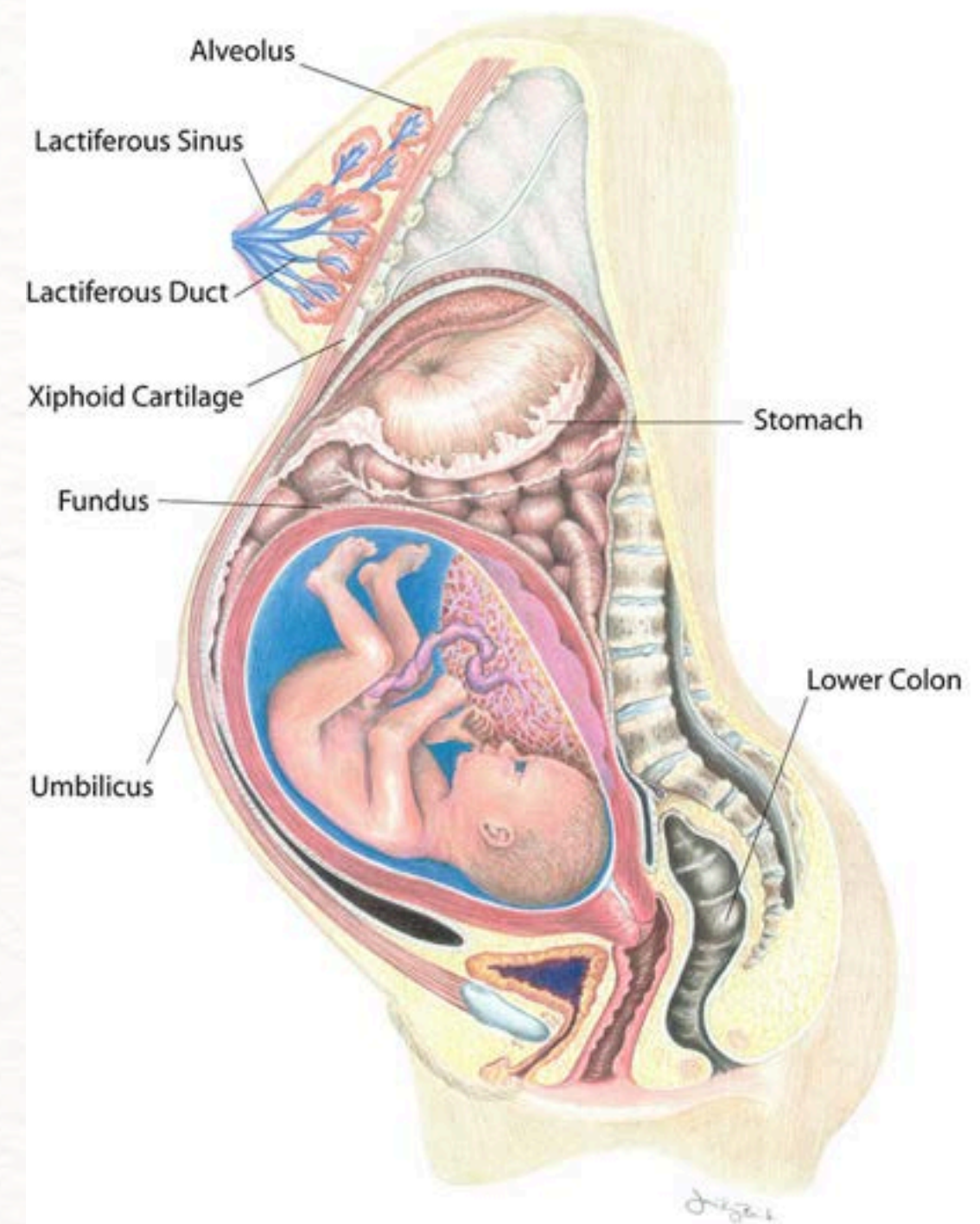


**RESPIRATORY DISTRESS (WHEEZING) – LOWER AIRWAY**

- Pediatric Routine Medical Care
- Position of comfort
- Use an **LBRT** to determine pediatric medication doses - (Shown underlined on the algorithm)
- **Note:** Manage the patient's airway with proper airway positioning, simple airway adjuncts, suctioning, and BVM ventilation as necessary. Consider Advanced Airway Management (page 112) if BVM ventilation is not adequate



# OB: Female Anatomy



# OB Assessment

## Questions You Should Ask

1. IS DELIVERY IMMINENT? (do you feel like you need to push? do you feel like you need to poop?)
2. When is your due date?
3. How far apart and how long are your contractions?
4. Has your water broke and if it has did you observe the color or smell?
  - a. Look for meconium which is a bright yellow with green chunks amniotic fluid indicating fetal distress!
5. How many times have you been pregnant?(Gravida)
6. How many time have you given birth?(Para)
7. Any previous pregnancy complications or things your doctor warned you about?
8. Is there vaginal discharge or bleeding?
9. Normal SAMPLE



# Common OB Emergencies

**Placenta Previa:** When the placenta is blocking the cervix (usually during second or third trimester)

**S&S:** Bright red vaginal bleeding, not a lot of pain

- Tx (EMT scope): Shock treatment (No supine position), control bleeding (DO NOT PACK VAGINA)

**Breech Delivery:** When baby is positioned feet first towards the vaginal canal

- S&S: high and hard pressure on lower abdomen, presenting butt/feet during labor
- Tx (EMT Scope): Allow delivery to continue passively until waist appears, then rotate to face down, if head does not deliver relieve pressure off cord

**Nuchal Cord/Prolapsed Cord:** umbilical cord around babies neck/cord is presenting before baby's head

- Tx Nuchal Cord: Once head delivers, remove cord from neck or clamp and cut if necessary.
- Tx Prolapsed Cord: Place patient with head lower than hips, gently push baby off of cord, insert hand in "V" shape to create airway for baby, cover cord with moist sterile dressing. DO NOT MOVE OR TUG ON CORD

**Eclampsia and Preeclampsia:** High blood pressure caused by pregnancy that can worsen into seizures and organ damage

- S&S: high bp, head aches, low urine output, vision changes, abdominal pain, seizures
- Tx: Left lateral position, Seizure prevention





## **Scenario 1: Pregnant female with severe abdominal pain and vaginal bleeding**

What was your feild impression?





**Correct answer:**

**Abruptio Placentae**



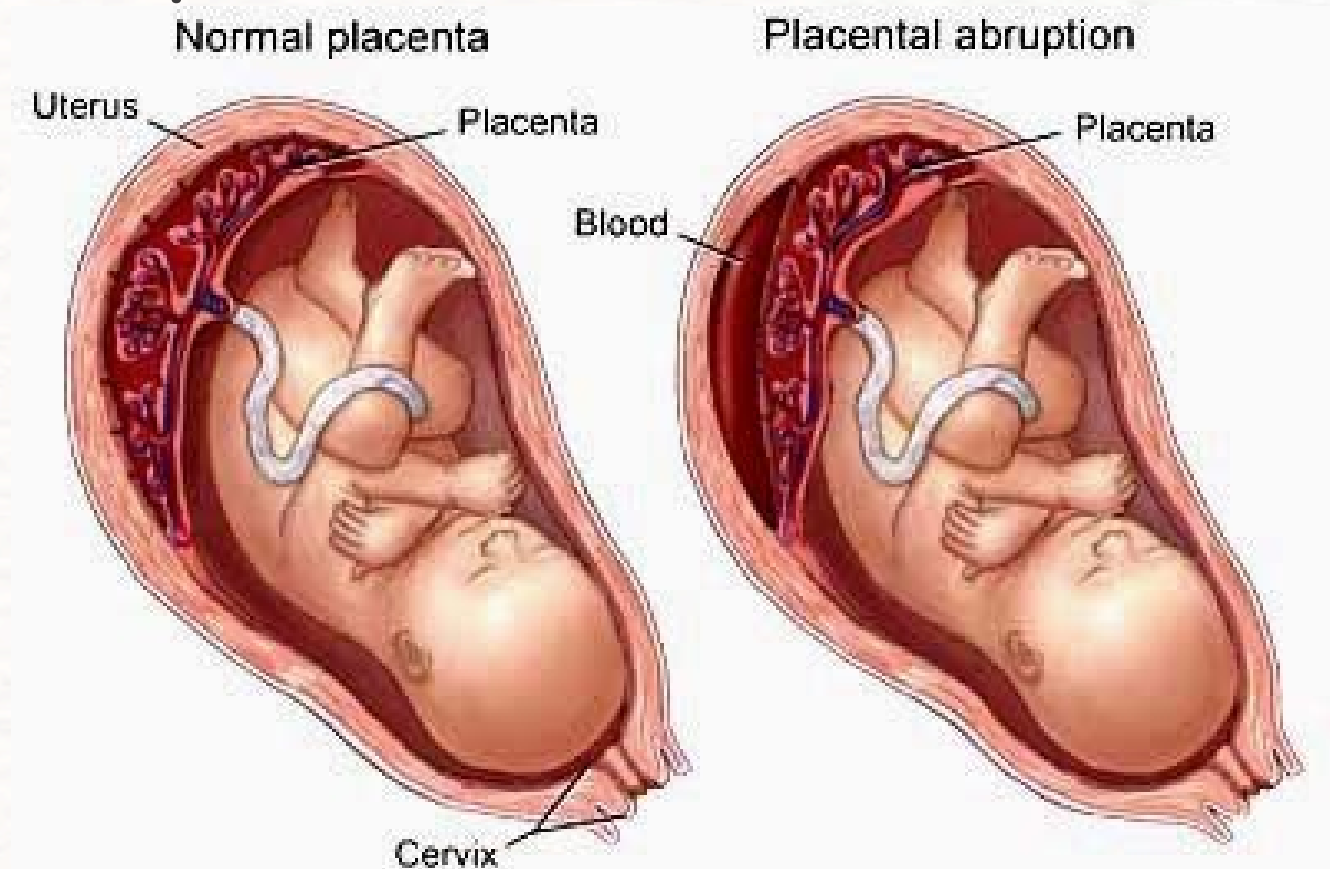
# What is Placental Abruption?

The premature separation of the placenta from the uterus, typically occurring after 20 weeks

- S&S: Sharp sudden pain in abdomen, little to no vaginal bleeding, uterine tenderness, frequent contractions that don't relax, reduced fetal movement
- Tx (EMT Scope): treat for shock, rapid transport, left lateral position, O2 if needed

## Scenario Specific:

- Shock is still a big consideration despite lack of bleeding as blood can pool behind placenta and in uterus,
- NO Vaginal exam: doing so can worsen bleeding and further disrupt the placenta.



**OB/GYN EMERGENCIES**

**•Routine Medical Care**

- Level of distress:
  - Estimate blood loss (if any)
  - Is the patient in shock? If yes, Go to **page 54** "Shock" protocol
- Consider immediate transport or prepare for delivery
- Determine stage (trimester) of pregnancy
- Any patient that is  $\geq 20$  weeks pregnant who has sign(s)/symptom(s) that may be pregnancy related (e.g. ABD pain), should be preferentially triaged to a receiving facility with a Labor and Delivery department.

1. **VAGINAL BLEEDING** (Abnormal bleeding between menses, during pregnancy, postpartum or post operative)
  - 1.1 If postpartum, gently massage the fundus to decrease bleeding
  - 1.2 Monitor vital signs frequently
2. **SPONTANEOUS ABORTION**
  - 2.1 If fetus is  $> 20$  weeks or 500 grams, see neonatal resuscitation protocol (**page 73**). If non-viable, save and transport any tissue or fetal remains
  - 2.2 Have patient place a sanitary napkin or bulky dressing material over vaginal opening - **Do not pack the vagina with anything**
3. **SEVERE PRE-ECLAMPSIA / ECLAMPSIA**
  - 3.1 Attempt to maintain a quiet environment
  - 3.2 Monitor vital signs frequently
  - 3.3 Observe for seizures, hypertension or coma. If seizures occur, go to the appropriate seizure policy

4. **BREECH DELIVERY**

- 4.1 Allow delivery to proceed passively until the baby's waist appears. Gently rotate the baby to a face down position and continue with the delivery
- 4.2 If the head does not readily deliver insert a gloved hand into the vagina to relieve pressure on the cord and create an air passage for the infant. Transport. Monitor vital signs and infant condition frequently

5. **PROLAPSED CORD**

- 5.1 Place the mother supine position with head lower than hips
- 5.2 Insert a gloved hand into the vagina and gently push the presenting part (e.g.: the neonate's head or shoulder off the cord. **DO NOT TUG ON THE CORD**
- 5.3 Place fingers on each side of the neonate's nose and mouth, split fingers into a "V" to create an opening. **Do not** attempt to re-position the cord. **Do not** remove your hand. Cover the exposed cord with saline soaked gauze

6. **LIMB PRESENTATION**

- 6.1 Defined as the presentation of a single limb - arm or leg
- 6.2 It is unlikely that the baby will deliver and immediate transport should be initiated
- 6.3 Place the mother supine position with head lower than hips

# Thank You

Kahoot Link:

<https://create.kahoot.it/share/peds-ob-emergencies/5e4f5238-a3fe-4a39-bc70-c6f23725e899>



# Iminent Delivery

Signaled by crowning (baby's head visible), contractions less than 2 minutes apart, and a strong urge to push or defecate

1) Position the patient on her back with knees bent and feet flat, or in another comfortable, accessible position.

2) Encourage mom to push and support the baby's head as it emerges (DO NOT PULL)

3) As head delivers check for nuchal cord and suction mouth and nose

4) Catch the baby! (after shoulders deliver baby comes out fast)

5) Warm and Stimulate (may need to re-suction if not breathing)

6) Give baby to mom for skin to skin if healthy and do APGAR (1/5 min)



Indicator	0 Points	1 Point	2 Points
<b>A</b> Appearance (skin color)	Blue; Pale	Pink Body; Blue Extremities	Pink
<b>P</b> Pulse	Absent	Below 100 bpm	Over 100 bpm
<b>G</b> Grimace (reflex irritability)	Floppy	Minimal Response to Stimulation	Prompt Response to Stimulation
<b>A</b> Activity (muscle tone)	Absent	Flexed Arms and Legs	Active
<b>R</b> Respiration	Absent	Slow and Irregular	Vigorous Cry