



Neonatal Resuscitation

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Need for Resuscitation of Newborn

- About 10% of newborns require some assistance to begin breathing at birth.
- Less than 1% of newborns require extensive resuscitative measures.

Anticipate Need for Resuscitation

- Maternal diabetes, HTN, preeclampsia, substance abuse
- Pre or postterm birth
- Multiple gestation
- No prenatal care
- Trauma
- Mother older than 35 years

3 Questions

1. Term gestation?
2. Neonate crying or breathing?
3. Neonate with good muscle tone?

If answer to all three Q's is “yes”, then the baby does not need resuscitation

3 Questions

If answer to any of the three Q's is “no”, then the baby should receive one or more of the following:

1. Warm, clear airway if needed, dry, stimulate
2. Ventilation
3. Chest compressions
4. Epi/volume expansion (paramedics only!)

“Golden Minute”

- You have approximately 60 seconds to complete the initial steps, reevaluate, and begin ventilation if required.
- “initial steps” = warm, clear airway, dry, stimulate

Warm the Neonate

- Warm the environment = turn up the heat!
- Prewarmed blankets
- Covering newborn in plastic wrapping (yes, Saran wrap!)

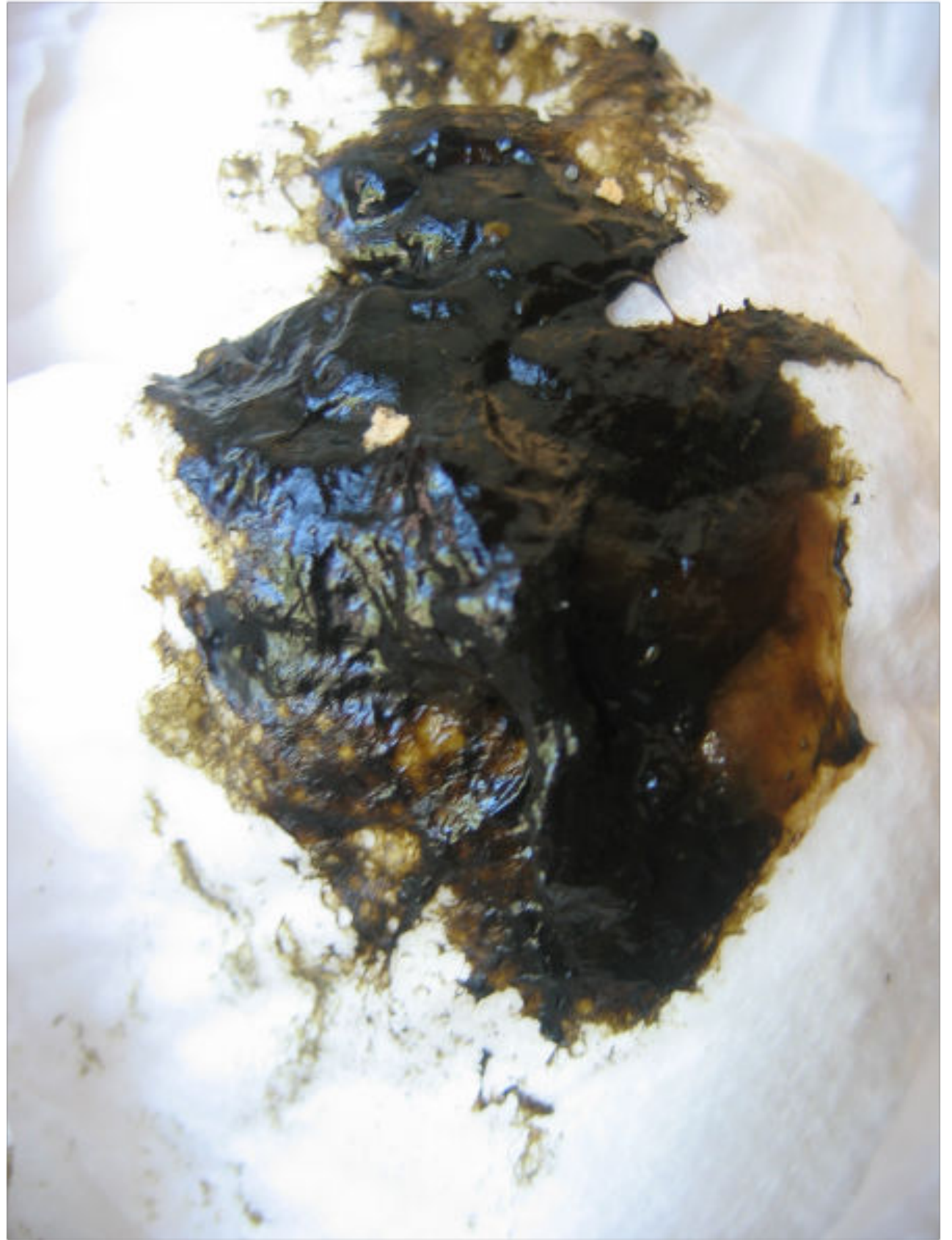


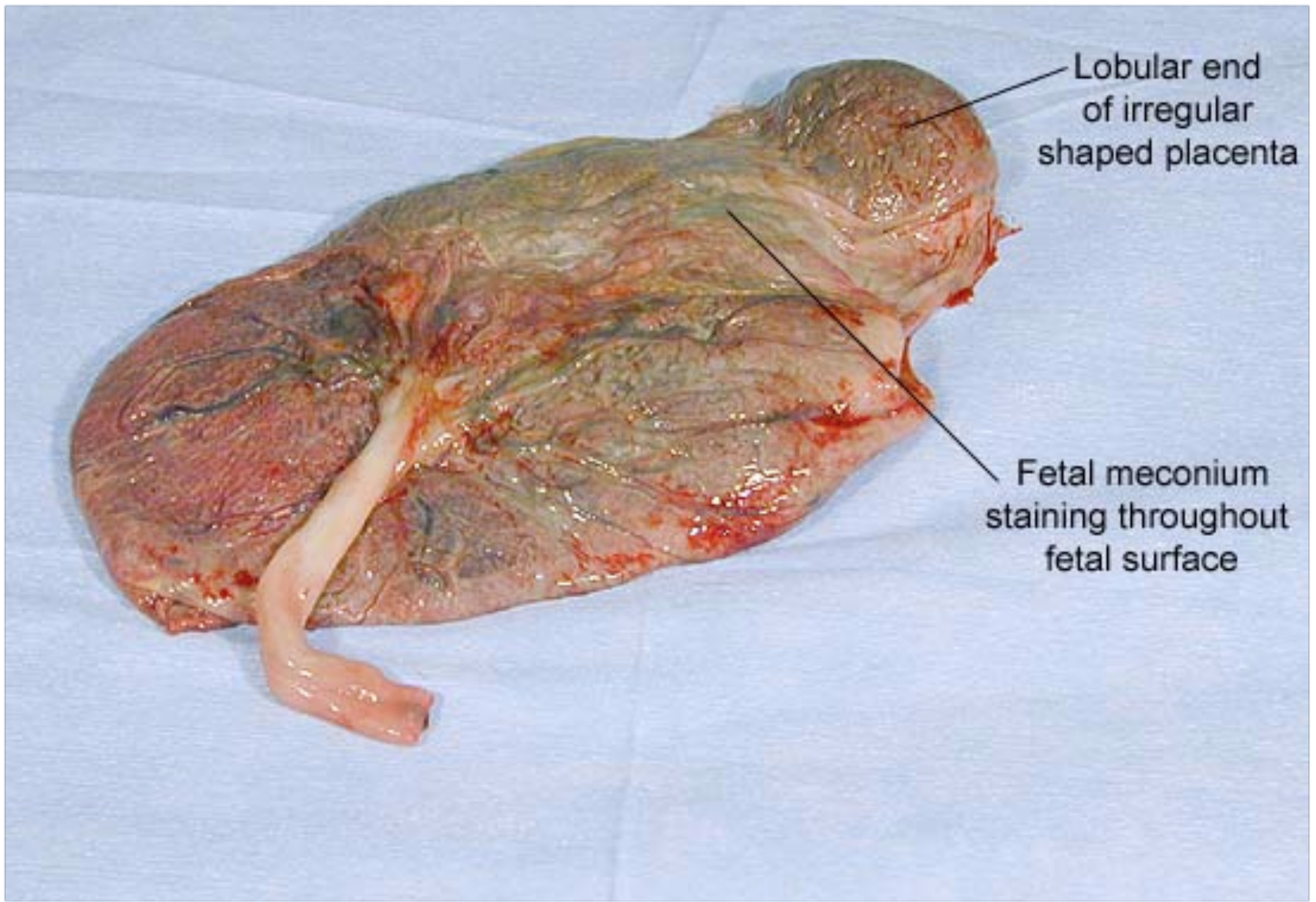
Clear the Airway

- AHA says that we should NOT suction every neonate at birth.
 - no need to suction when head first delivered
- Suction only those neonates who:
 - have obvious obstruction to spontaneous breathing
 - require PPV

Meconium

- Poop





Lobular end
of irregular
shaped placenta

Fetal meconium
staining throughout
fetal surface

Meconium Present?

- Only suction those neonates that are “nonvigorous”.
- Per AHA, neonates with meconium who are “vigorous” do NOT require suctioning.

Vigorous

Strong resp effort

HR > 100/min

Good muscle tone

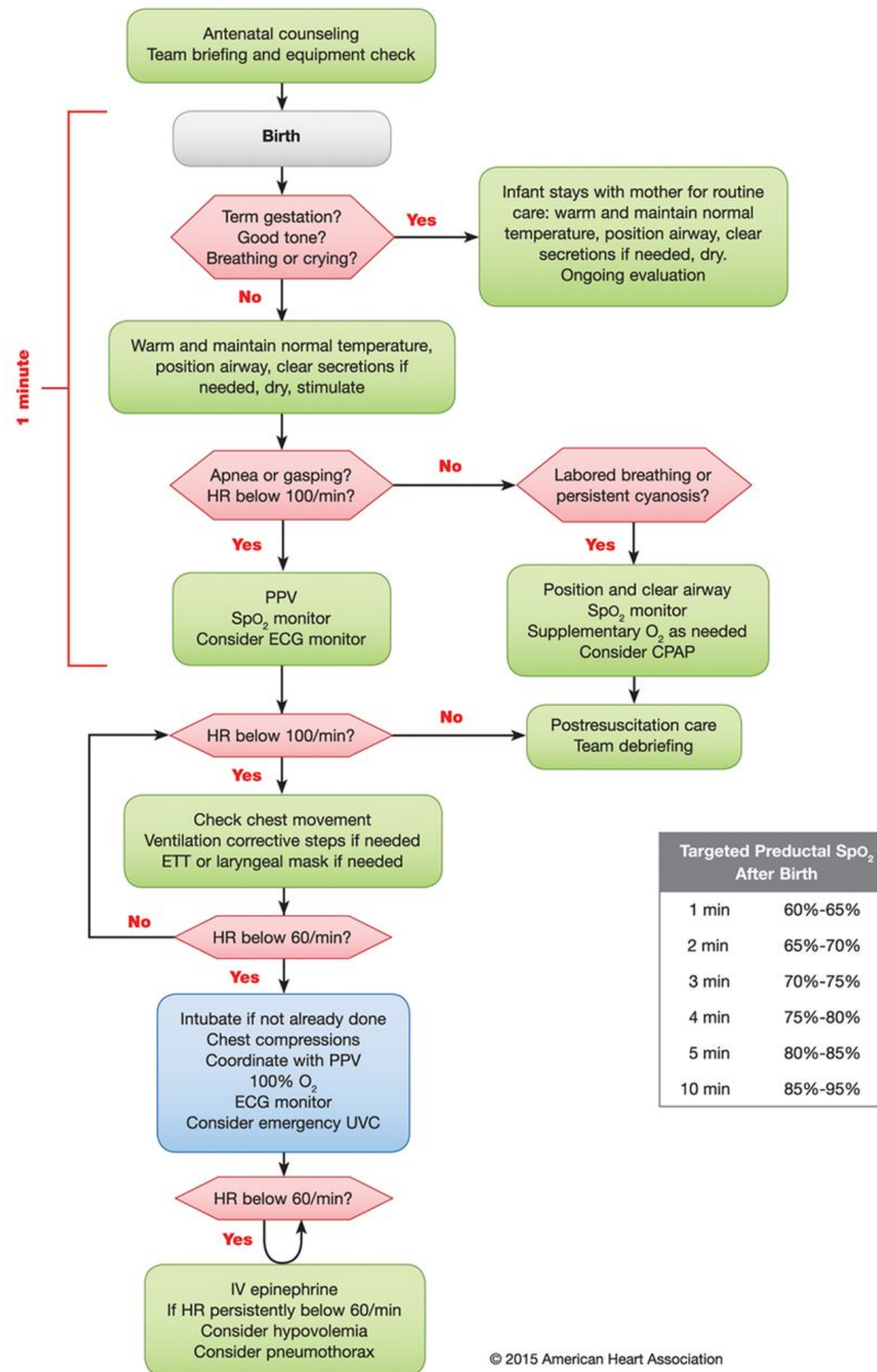
Dry and Stimulate

- Dry the neonate with towels
 - This will take some time!
 - This will also stimulate the neonate!

Quick Reevaluation!

- After warming, clearing the airway, drying, and stimulating, quickly reevaluate the neonate.
- Is he now kicking (good muscle tone) and screaming (good breathing)?
 - yes = good! Wrap in blanket and give to mom.
 - no = not good! Move to prepared resuscitation area.

Neonatal Resuscitation Algorithm—2015 Update



When to Ventilate

- HR is less than 100/min
 - auscultate, brachial, umbilical
- Respirations inadequate = gasping, labored, apnea
- Initiate PPV on room air, no oxygen!
- PPV usually results in rapid improvements in heart rate.

When to Perform CPR

- HR is less than 60/min = CPR
 - CPR = chest compressions & PPV
- Reevaluate every 30 seconds

Administering O₂

- Healthy neonates are born hypoxic
 - Typically do not reach “normal” values until 10 minutes after birth
- Do not want to administer supplemental oxygen to healthy neonates
 - can damage organs
- Also do not want to let a neonate become excessively hypoxic

Administering O₂

- Begin resuscitation on room air
- Place SpO₂ probe on upper right extremity
- usually wrist or palm surface



Administering O₂

- After 90 seconds, begin administering O₂, titrating to SpO₂ values in chart



Targeted Preductal SpO₂ After Birth

1 min	60%-65%
2 min	65%-70%
3 min	70%-75%
4 min	75%-80%
5 min	80%-85%
10 min	85%-95%

APGAR Score

- NOT used to determine need for resuscitation
- Determined at 1 and 5 minutes in healthy neonates!