

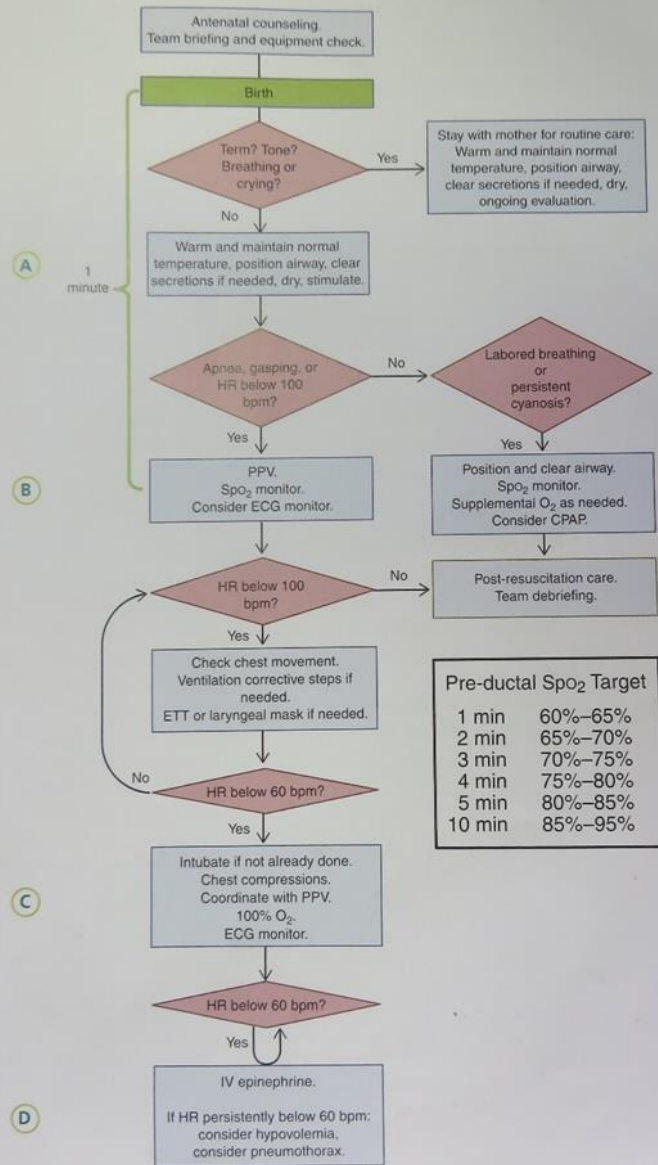
NRP

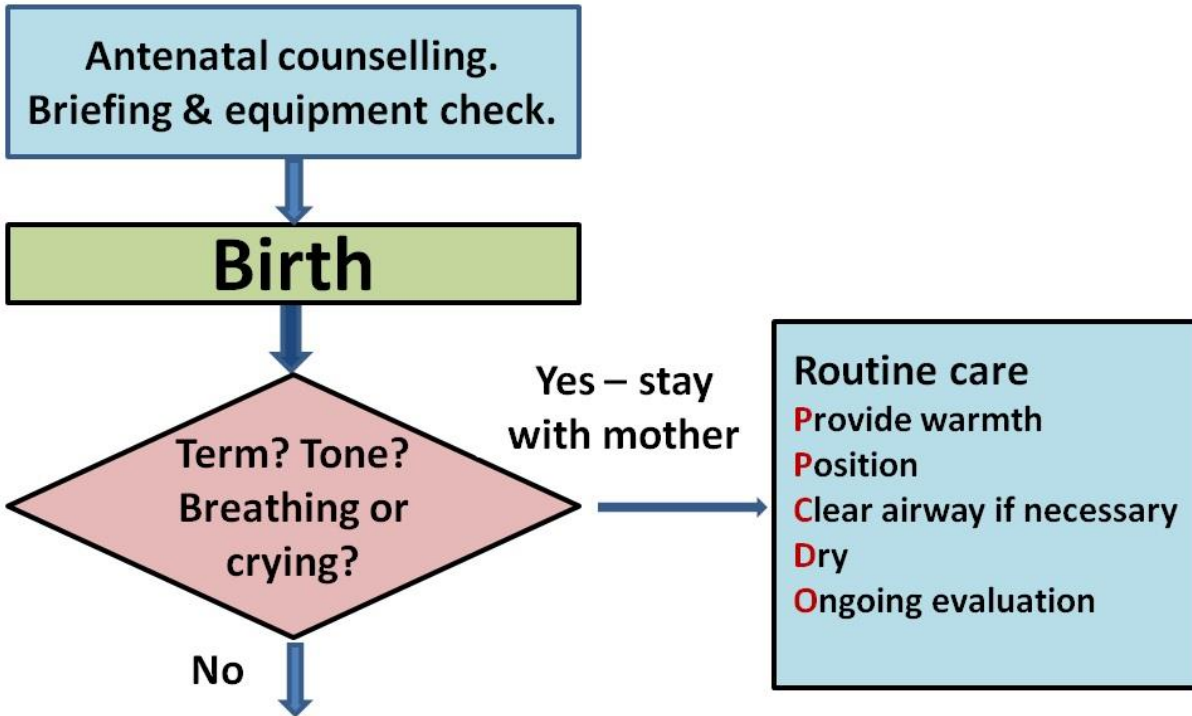
Dr. mehrdad rezaei

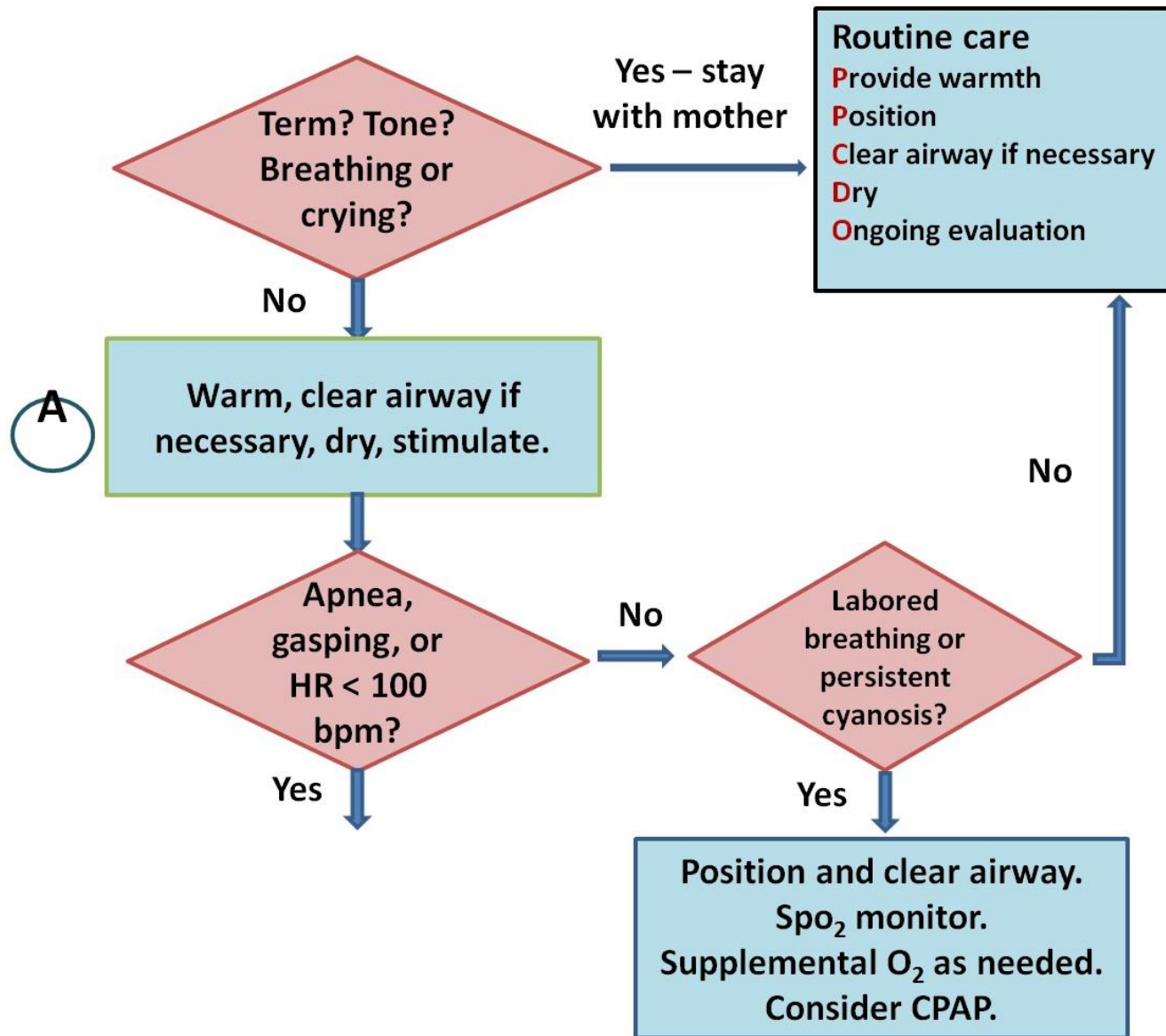
SUMS

1398

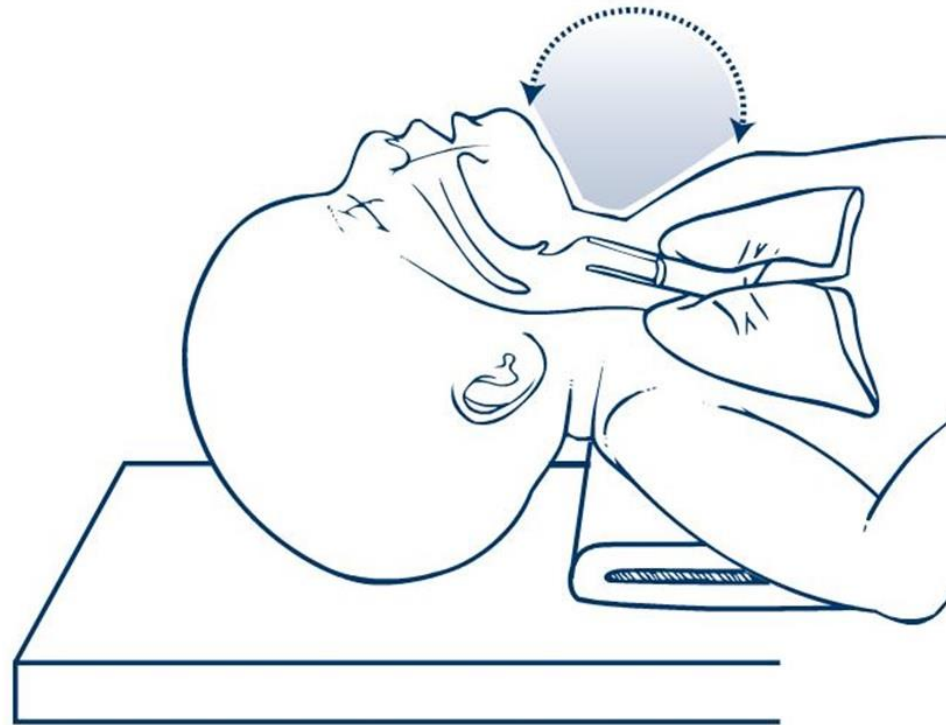
Take a moment to familiarize yourself with the layout of the NRP Flow Diagram.





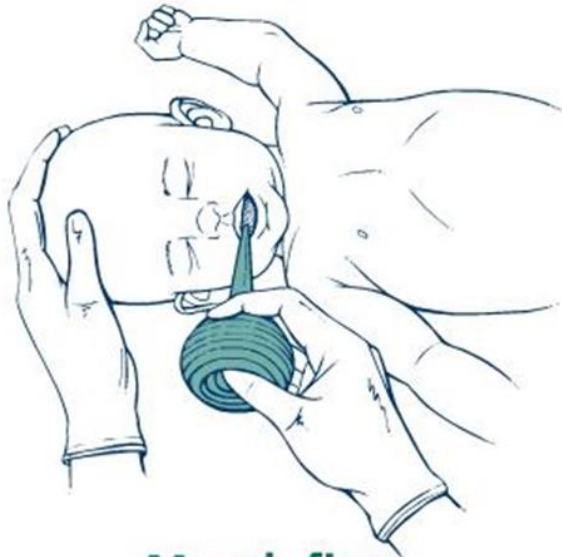


Position the Head and Neck



Correct

Clear Secretions



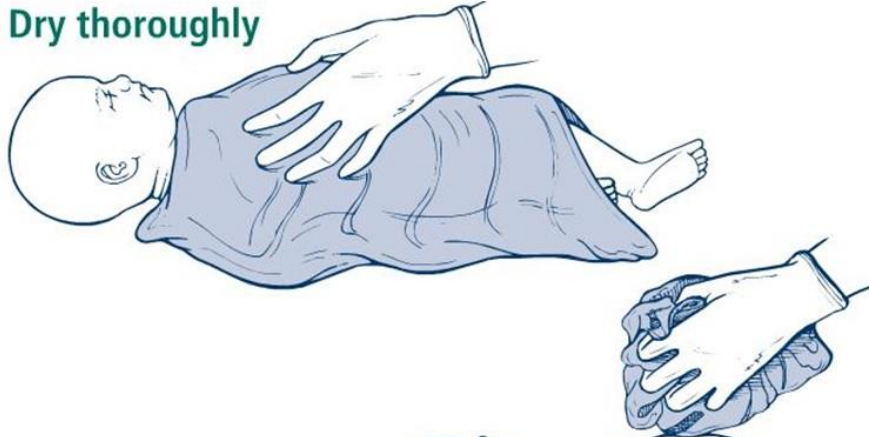
Mouth first...



then nose

Dry, Stimulate to Breathe, Reposition

Dry thoroughly



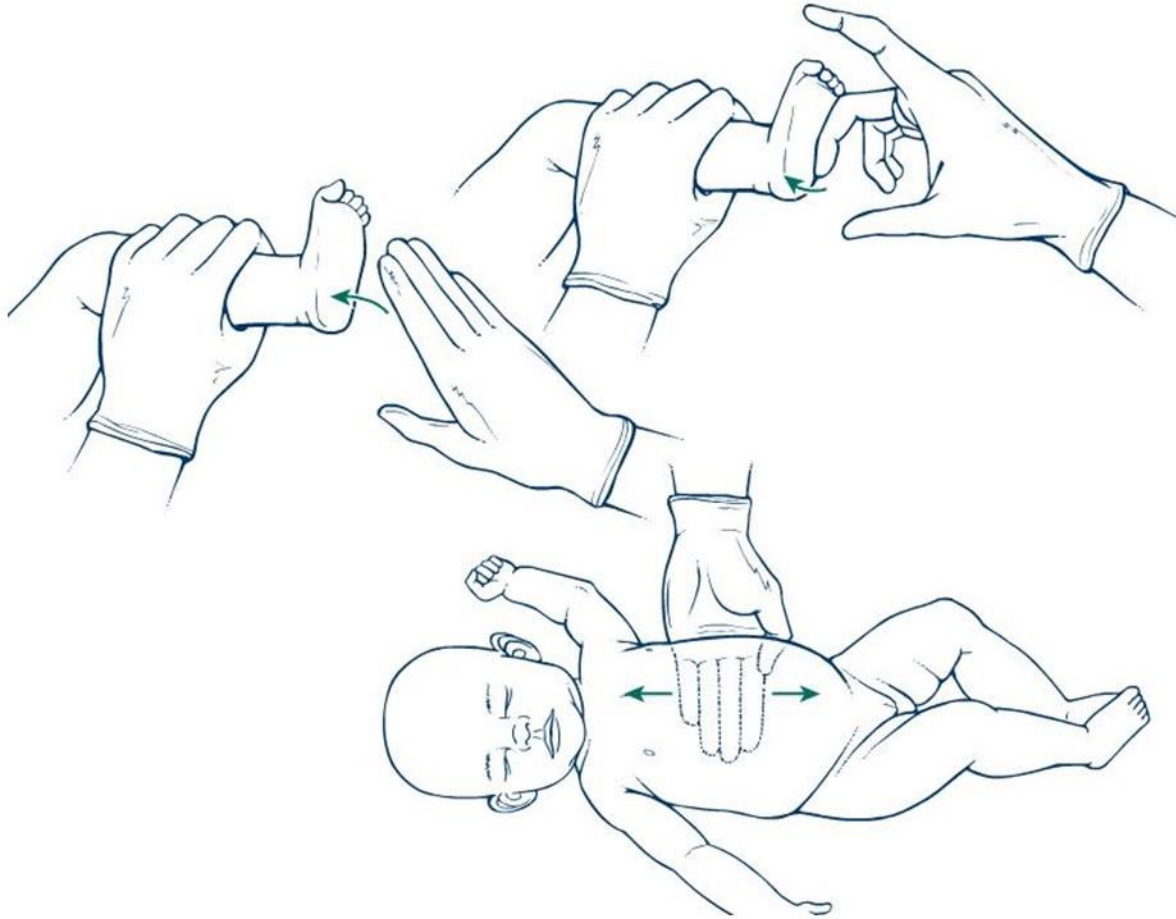
Remove wet linen



Reposition the head



Tactile Stimulation



Assessment of the Newborn's Response to the Initial Steps

Decisions and actions during newborn resuscitation are based on:

- **Respirations**
- **Heart rate**
- **Color/oximetry**

Assessment should not take more than additional 30 sec.

Evaluate Respiration, and Heart Rate



a



Figure 2.12. Determining heart rate by palpating base of cord and listening with a stethoscope

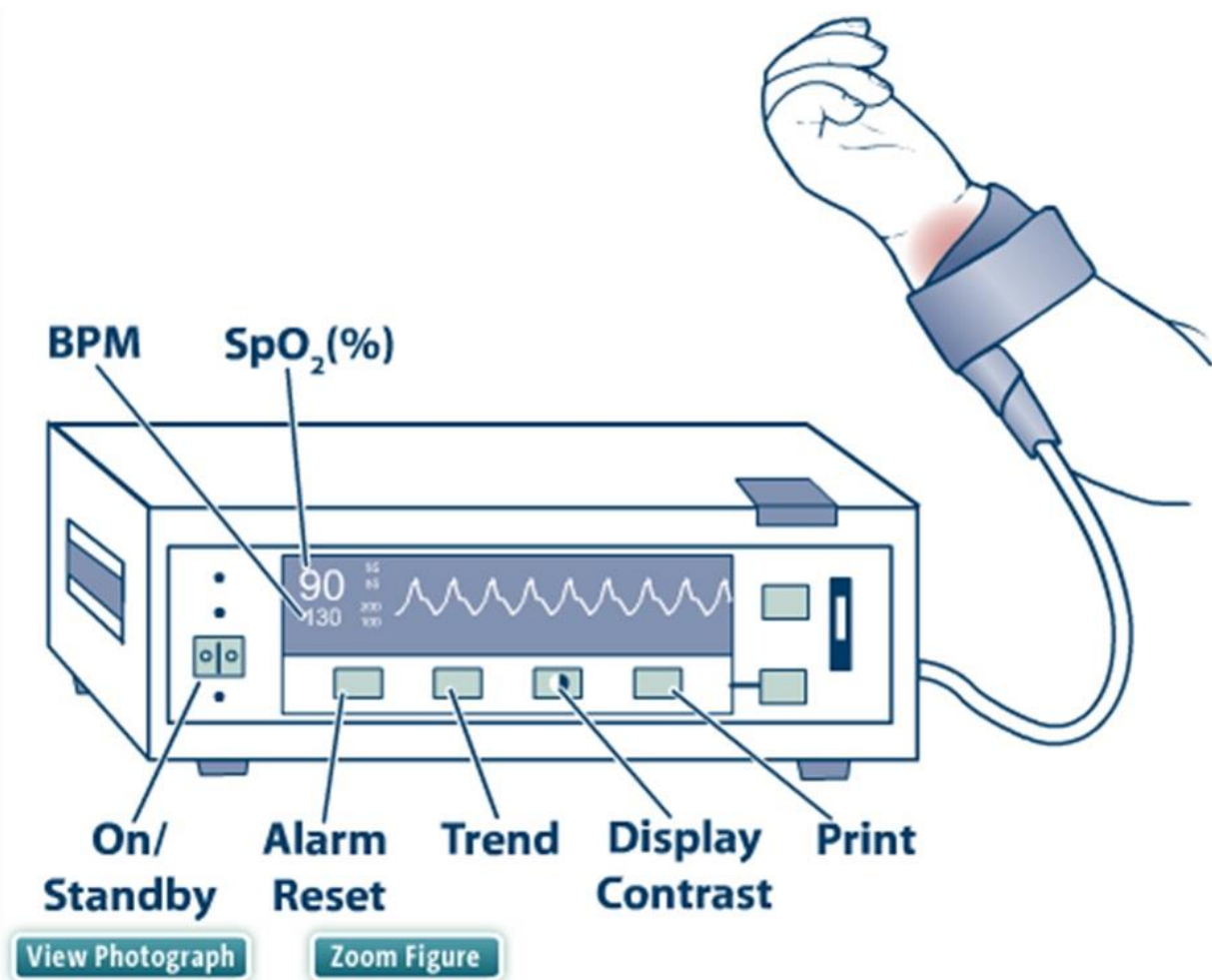
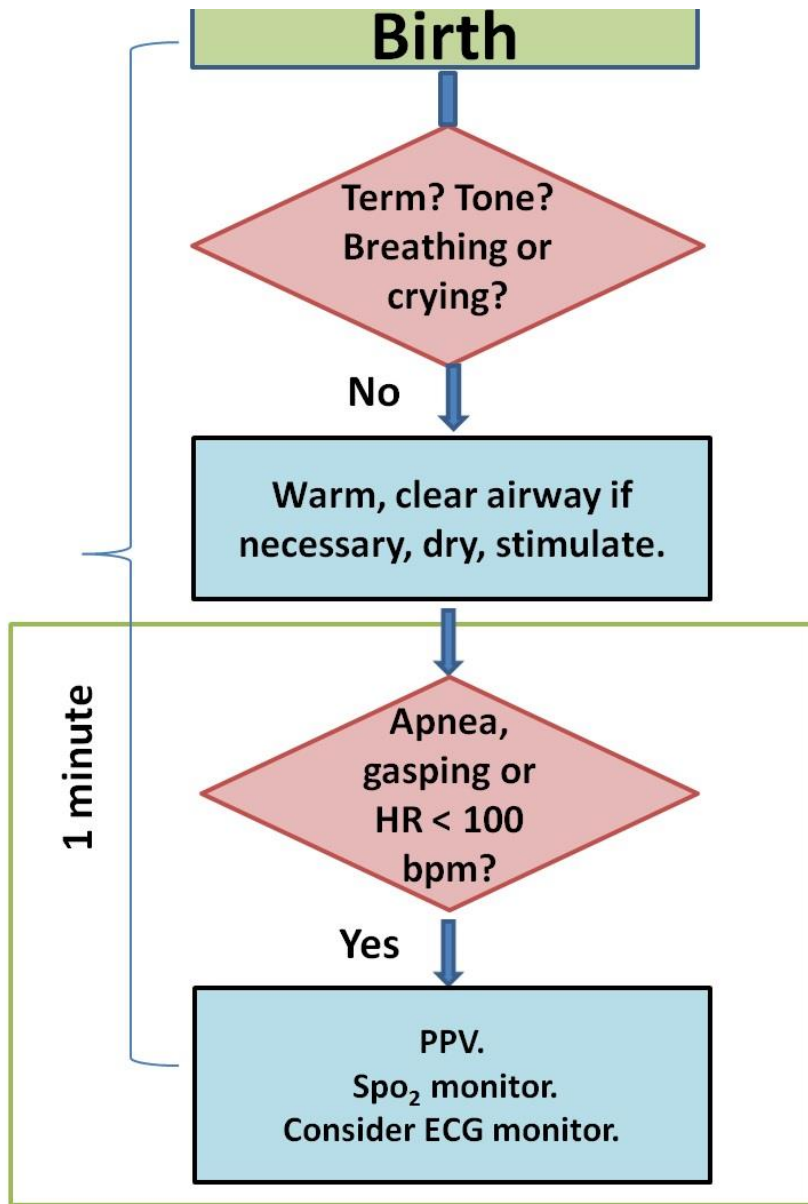
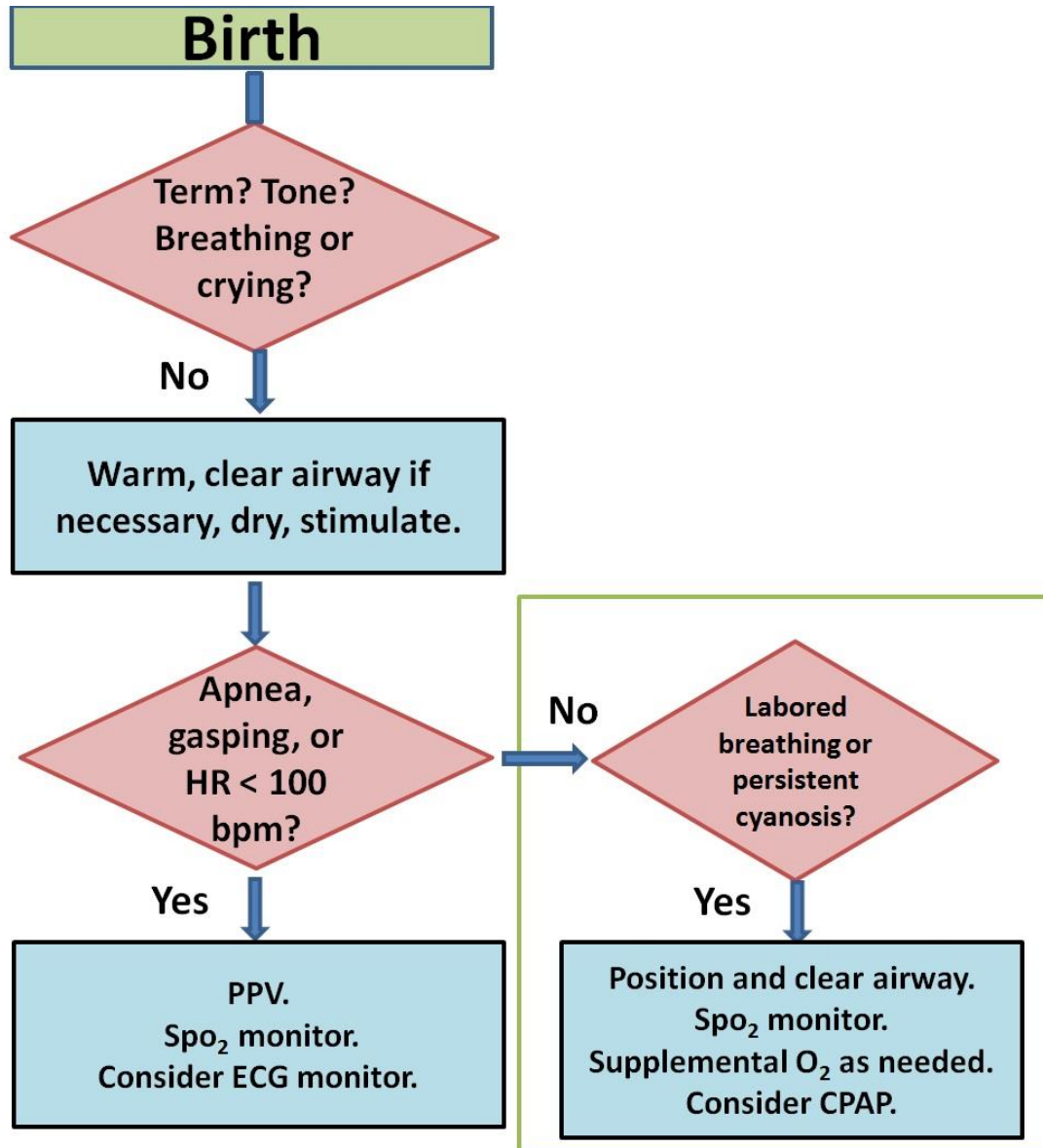


Figure 2.15. Oximeter with oximeter probe attached to the baby's right wrist.

Targeted Pre-ductal Sp_o₂ 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%





Free-flow Oxygen Delivery Devices

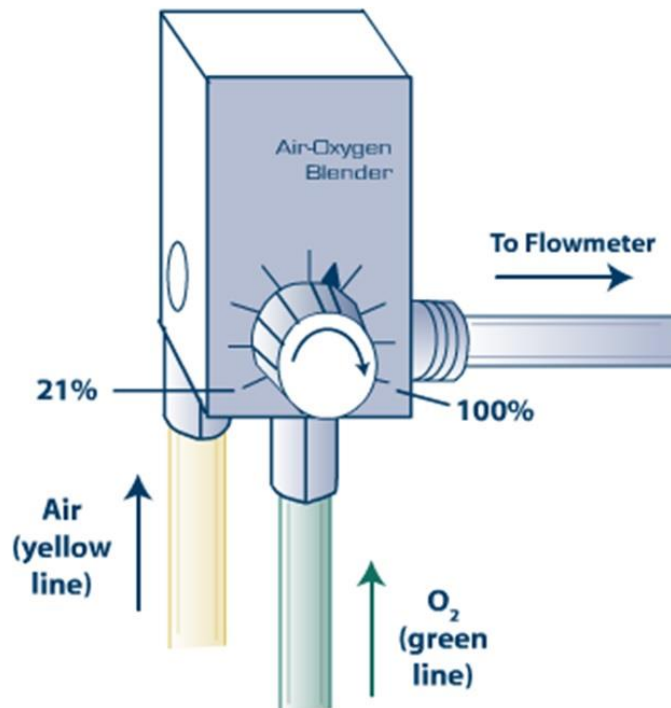
- Oxygen tubing (cupped hand)
- Oxygen mask
- Flow-inflating bag and mask
- T-piece resuscitator and mask
- Open reservoir (“tail”) on a self-inflating bag

Heated and humidified if given for longer than few minutes.

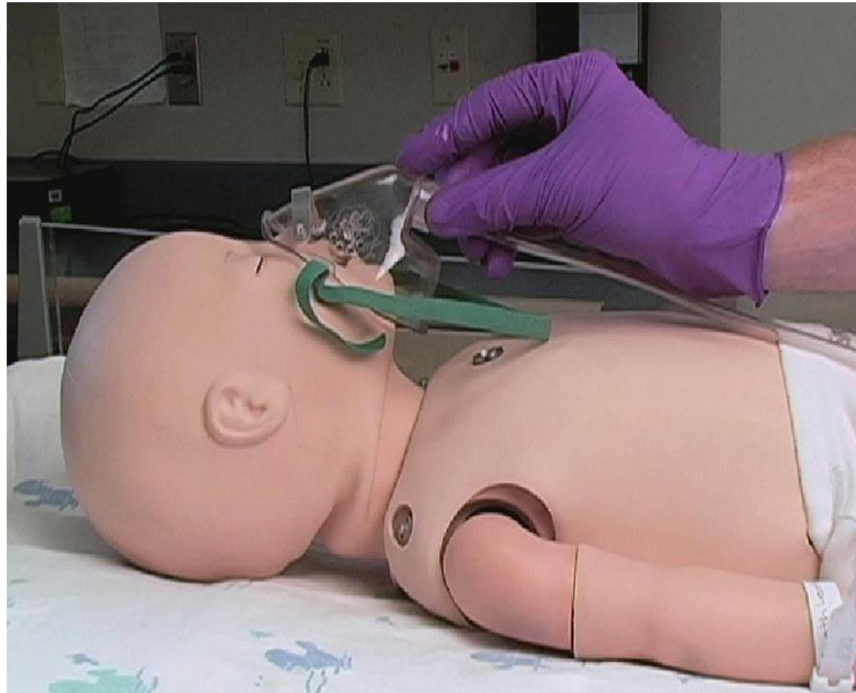
Free-flow Oxygen Delivery Devices

- For free-flow oxygen delivery, adjust the flowmeter to 10 L/min.
- Start free-flow oxygen with the blender set to 30% oxygen. Adjust the O₂ concentration as needed to achieve the oxygen saturation target.

Use a Blender to Give Different Concentrations of Oxygen



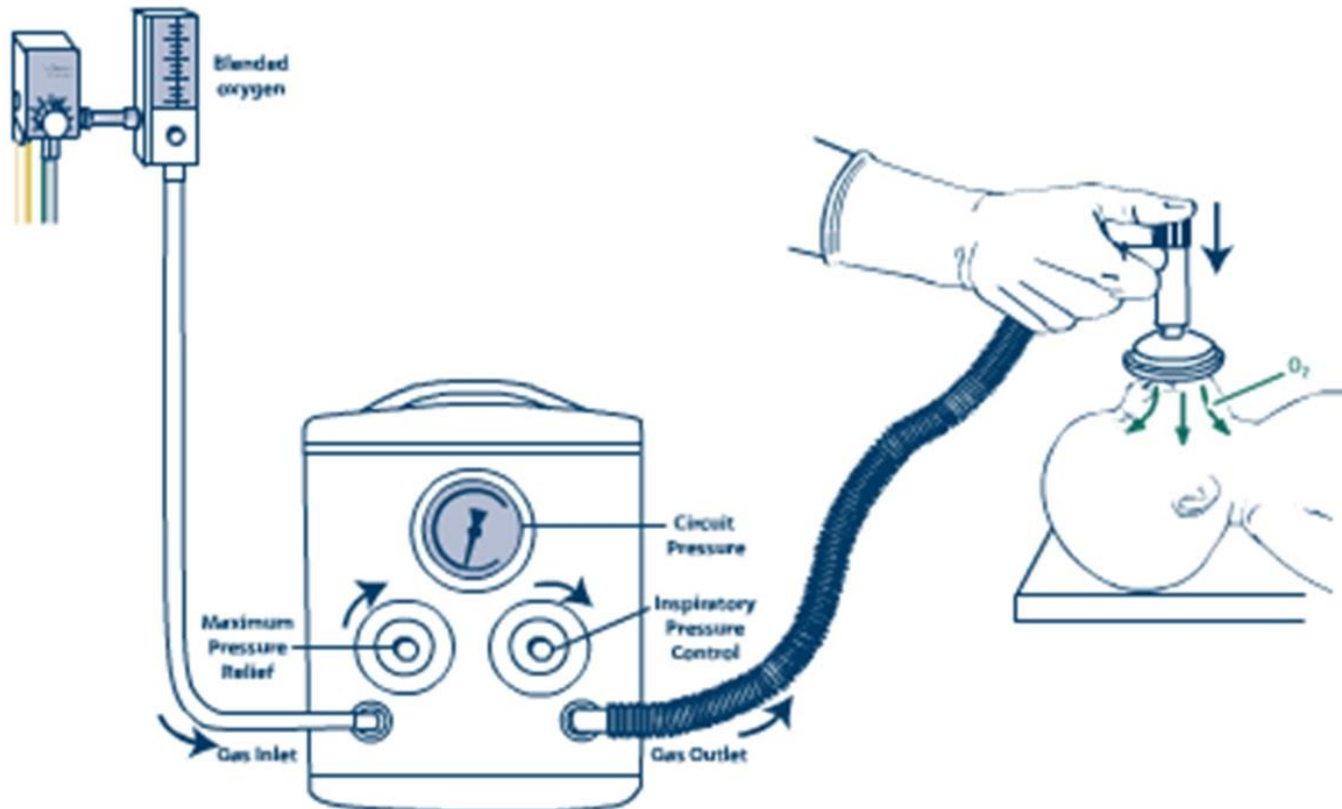
Free-flow Oxygen Given Via Oxygen Mask



Free-flow Oxygen Given Via Oxygen Tubing



Free-flow Oxygen Given By T-piece Resuscitator



Meconium Present-Newborn is Not Vigorous

Newborn is not vigorous



Clear upper airway, Dry, Stimulate

No Chest Movement



PPV with mask

No Chest Movement



PPV via ETT/ meconium aspirator

No Chest Movement



ETT Suction

Indications for PPV

Apnea or gasping

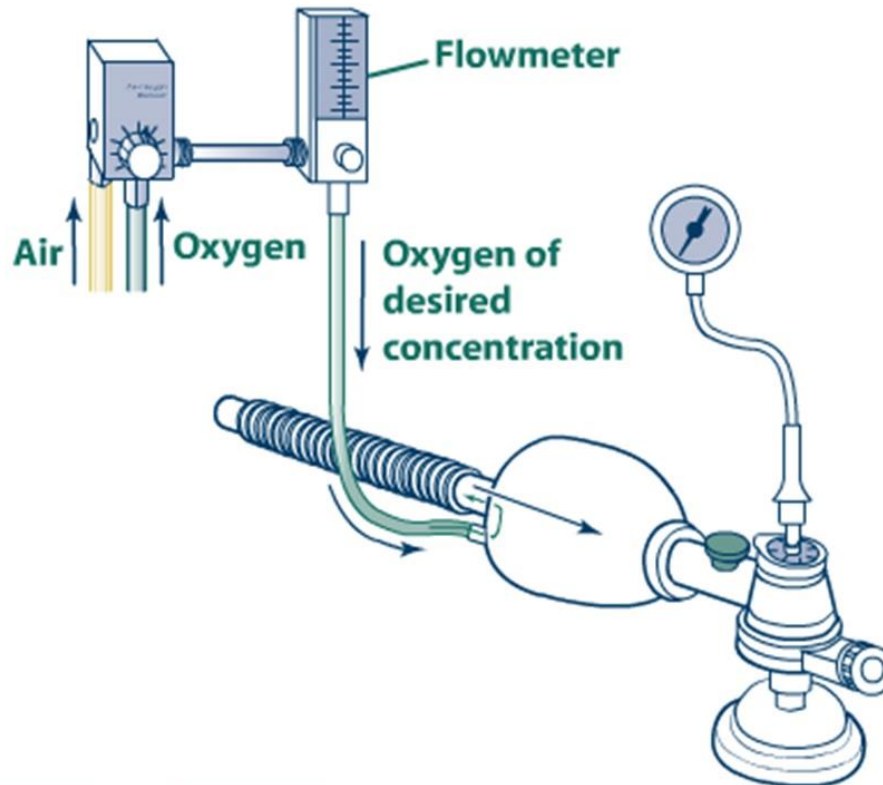
OR

Heart rate < 100 bpm

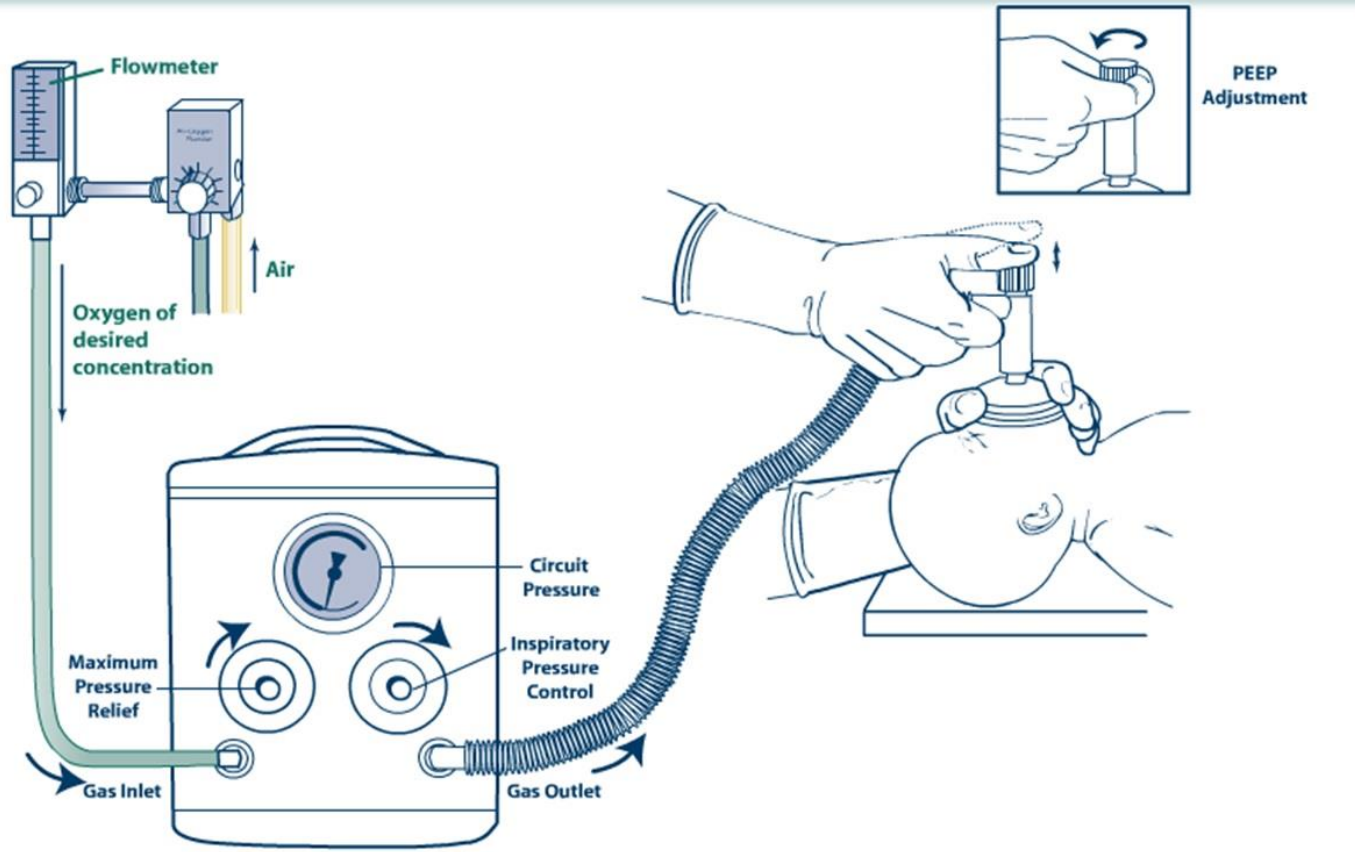
AND/OR

Spo₂ below the target range despite free-flow oxygen or CPAP

Self-inflating Bag



T-piece Resuscitator



**Round
shaped**



**Anatomically
shaped**



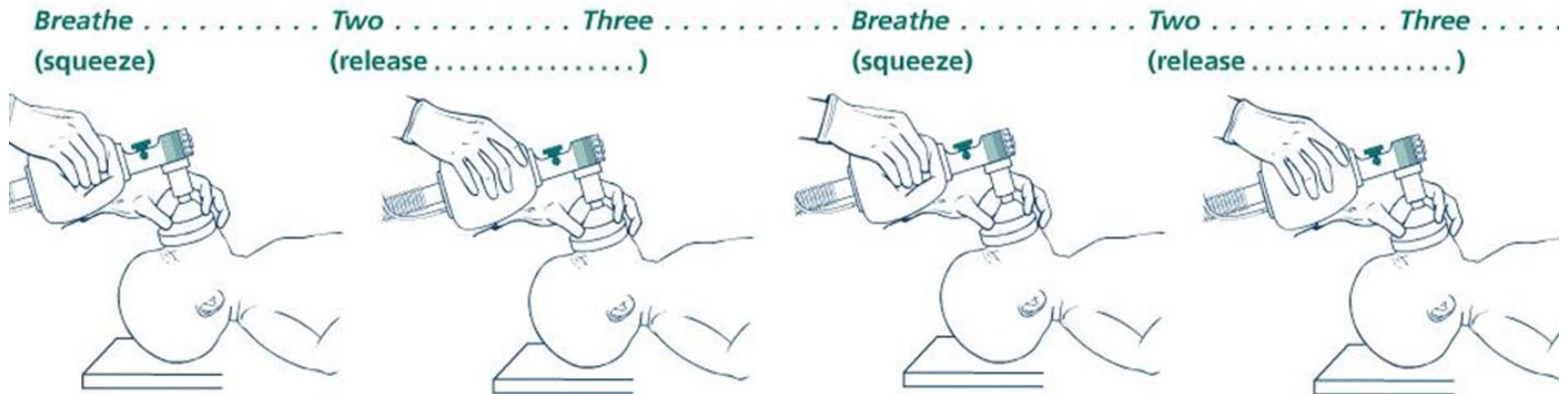
Effective Ventilation

The best indications of effective ventilation are:

- **Rising heart rate**
- **Rising SpO₂**
- **Audible bilateral breath sounds**
- **Chest movement with each ventilation ?**
(not necessarily in preterm babies)

Ventilation Rate

40-60 breaths per minute

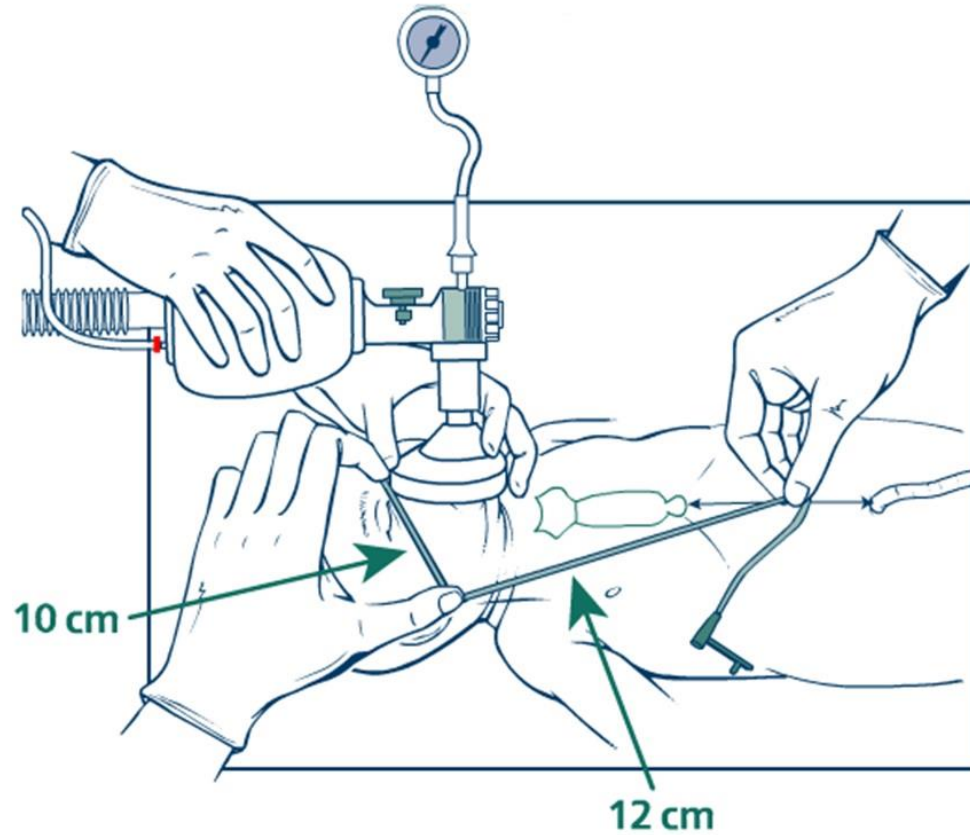


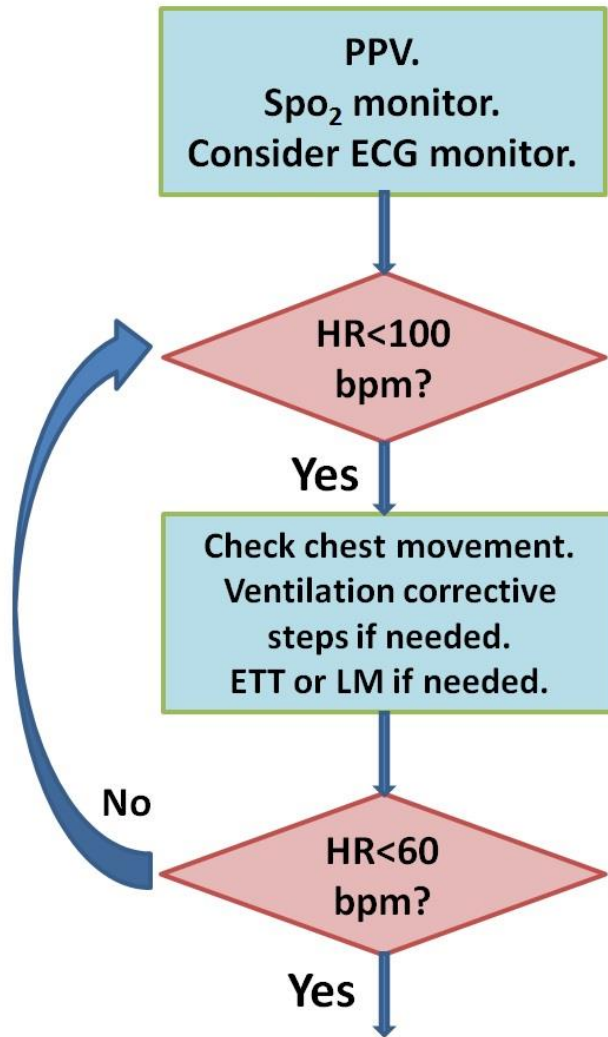
The 6 Ventilation Corrective Steps: MR. SOPA

	Corrective Steps	Action
M	Mask adjustment	Reapply the mask. Consider the 2-hand technique.
R.	Reposition airway	Place head neutral or slightly extended (sniffing position).
Try PPV and reassess chest movement.		
S	Suction mouth and nose	Use a bulb syringe or suction catheter.
O	Open mouth.	Open the mouth and lift the jaw forward.
Try PPV and reassess chest movement.		
P	Pressure increase	Increase pressure in 5 to 10 cm H ₂ O increment, max. 40 cm H ₂ O.
Try PPV and reassess chest movement.		
A	Alternative airway	Place an ETT or LM.
Try PPV and assess chest movement and breath sounds.		

Insertion of Orogastric Tube

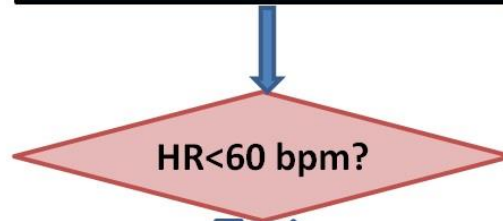
1. Measuring correct length





C

Intubate if not already done.
Chest compressions.
Coordinate with PPV.
100% O₂.
ECG monitor.



Yes

D

IV epinephrine.
If HR persistently < 60 bpm:
consider hypovolemia,
consider pneumothorax.

ETT

Appropriate Size

	TUBE SIZE (mm ID)	WEIGHT	GA
	2.5	< 1000	< 28
	3.0	1000-2000	28-34
	3.5	> 2000	> 34

Epinephrine Summary

Concentration

1:10,000 epinephrine (0.1 mg/mL)

Route

Intravenous (preferred) or intraosseous

Option: Endotracheal only while IV or IO access is being obtained

Preparation

Intravenous or Intraosseous = 1-mL syringe labeled "Epinephrine-IV"

Endotracheal = 3 to 5 mL syringe labeled "Epinephrine-ET only"

Dose

Intravenous or Intraosseous = 0.1 to 0.3 mL/kg

Endotracheal = 0.5 to 1 mL/kg

Administration

Rapidly - as quickly as possible

IV or IO: **Flush with 0.5 to 1 mL normal saline**

Endotracheal: PPV breaths to distribute into lungs

Repeat every 3 to 5 minutes if HR remains < 60 bpm

UV Catheter

- Insert catheter 2 to 4 cm.

