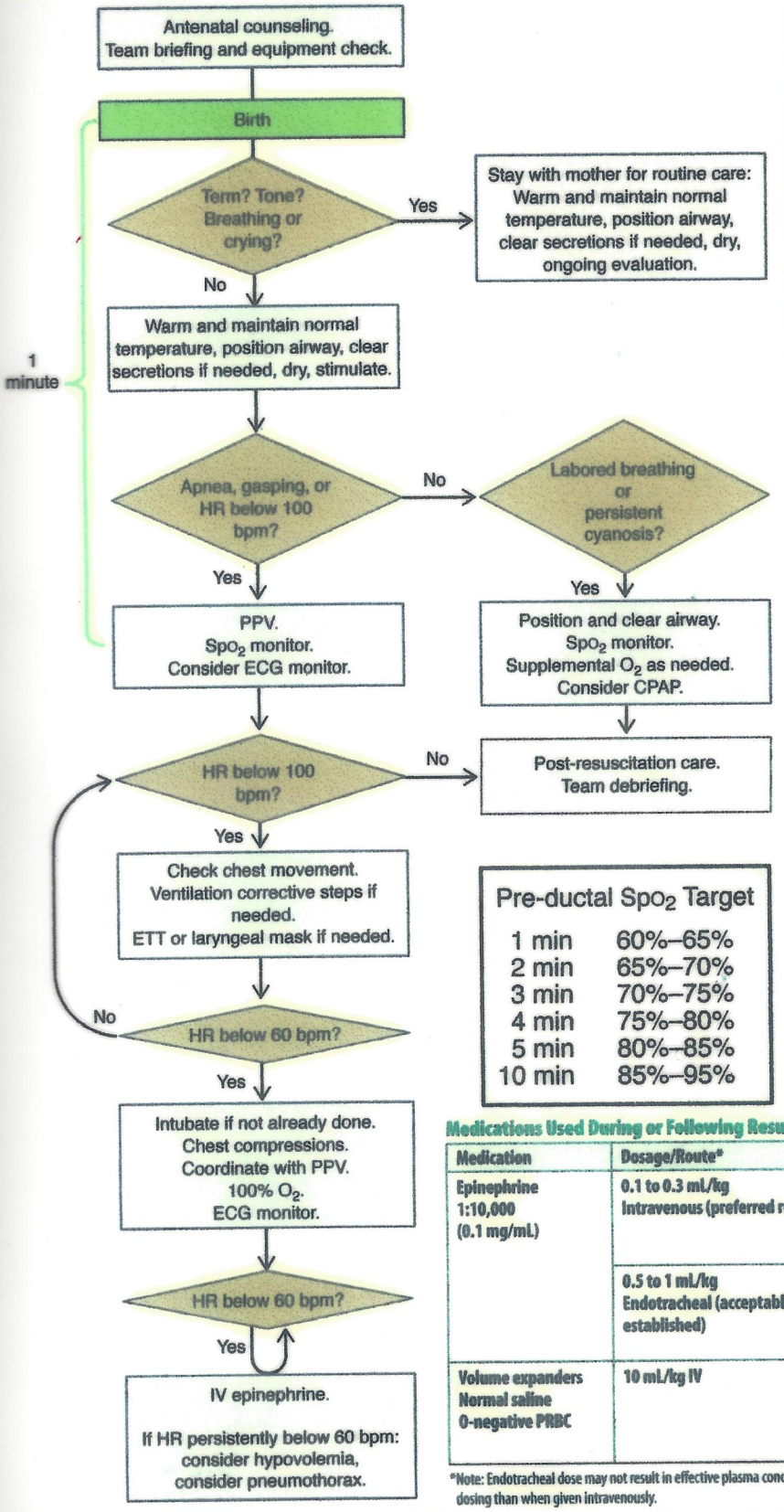
Neonatal Resuscitation Program® - Reference Chart

The most important and effective action in neonatal resuscitation is ventilation of the baby's lungs.



A Airway

- Place head in "sniffing" position.
- Suction mouth, then nose.

B Breathing

- If apneic, gasping, or HR <100 bpm, give PPV at 40–60 breaths/min.
- Listen for rising heart rate for first 15 seconds of PPV.
- If HR not rising and chest not moving with PPV, do MR. SOPA until chest moves with PPV for 30 seconds.
- Attach pulse oximeter; consider cardiac monitor.
- Intubate or place laryngeal mask and give PPV for 30 seconds prior to starting compressions.
- Use CO_2 detector after intubation or insertion of laryngeal mask.

C Circulation

- Start compressions if HR is <60 bpm after 30 seconds of PPV with chest movement. Check HR every 60 seconds.
- Cardiac monitor is preferred method for assessing HR during CPR.
- Give 3 compressions: 1 breath every 2 seconds. Use 100% oxygen.
- Compress one-third of the anterior-posterior diameter of the chest.

D Drugs

- Give epinephrine if HR is <60 bpm after 60 seconds of CPR.
- Caution: epinephrine dosage is different for ET and IV routes.

MR. SOPA Corrective Steps

M and R	Mask adjustment, reposition airway
S and O	Suction mouth and nose, open mouth
P	Pressure increase
A	Alternative airway (ET tube or laryngeal mask)

Pre-ductal Spo_2 Target

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

Endotracheal Intubation

Gestational Age (weeks)	Depth of Insertion at Lips (cm)	Weight (g)	ET Tube Size (ID, mm)
23–24	5.5	500–600	Size 2.5 <1,000 g or <28 weeks
25–26	6.0	700–800	
27–29	6.5	900–1,000	Size 3.0 1,000–2,000 g or 28–34 weeks
30–32	7.0	1,100–1,400	
33–34	7.5	1,500–1,800	Size 3.5 >2,000 g or >34 weeks
35–37	8.0	1,900–2,400	
38–40	8.5	2,500–3,100	
41–43	9.0	3,200–4,200	3.5–4.0

Shaded table adapted from Kempley ST, Moreira JW, Petrone FL. Endoracheal tube length for neonatal intubation. *Resuscitation*. 2008;77(3):369–373.

Medications Used During or Following Resuscitation of the Newborn

Medication	Dosage/Route*	Wt (kg)	Total Volume (mL)	Precautions
Epinephrine 1:10,000 (0.1 mg/mL)	0.1 to 0.3 mL/kg Intravenous (preferred route)	1 2 3 4	0.1–0.3 0.2–0.6 0.3–0.9 0.4–1.2	Give rapidly; follow IV dose with 0.5–1 mL normal saline flush. Repeat every 3 to 5 minutes if HR <60 with chest compressions.
	0.5 to 1 mL/kg Endotracheal (acceptable until IV established)	1 2 3 4	0.5–1 1–2 1.5–3 2–4	After ET dose, may give IV epinephrine as soon as IV route is established.
Volume expanders Normal saline O-negative PRBC	10 mL/kg IV	1 2 3 4	10 20 30 40	Not responding to steps of resuscitation and has signs of shock or history of acute blood loss. Give over 5 to 10 minutes.

*Note: Endotracheal dose may not result in effective plasma concentration of drug, so vascular access should be established as soon as possible. Drugs given endotracheally require higher dosing than when given intravenously.

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The recommendations in this publication do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.