

Neonatal Resuscitation Program 9th Edition

| Table 4-2. Initial Settings for Ventilation |                                                                                                                                        |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Oxygen concentration (Fio <sub>2</sub> )    | ≥ 35 weeks' gestation = 21%<br>32-34 weeks' gestation = 21%-30%<br>< 32 weeks' gestation ≥ 30%                                         |
| Gas flow                                    | 10 L/minute                                                                                                                            |
| Rate                                        | 30-60 breaths/minute                                                                                                                   |
| PIP                                         | 25 cm H <sub>2</sub> O<br>Range:<br>25-30 cm H <sub>2</sub> O ≥ 32 weeks' gestation<br>20-25 cm H <sub>2</sub> O < 32 weeks' gestation |
| PEEP                                        | 5 cm H <sub>2</sub> O                                                                                                                  |

Table 5-1. Endotracheal Tube and Suction Catheter Size for Newborn Infants of Various Weights and Gestational Ages

| Weight (grams) | Gestational Age (weeks) | Endotracheal Tube Size (mm ID) | Suction Catheter (F) |
|----------------|-------------------------|--------------------------------|----------------------|
| < 800          | 22-25                   | 2.5*                           | 5                    |
| 800-1,200      | 26-28                   | 2.5                            | 5 or 6               |
| 1,201-2,200    | 29-34                   | 3.0                            | 6 or 8               |
| > 2,200        | > 34                    | 3.5                            | 8                    |

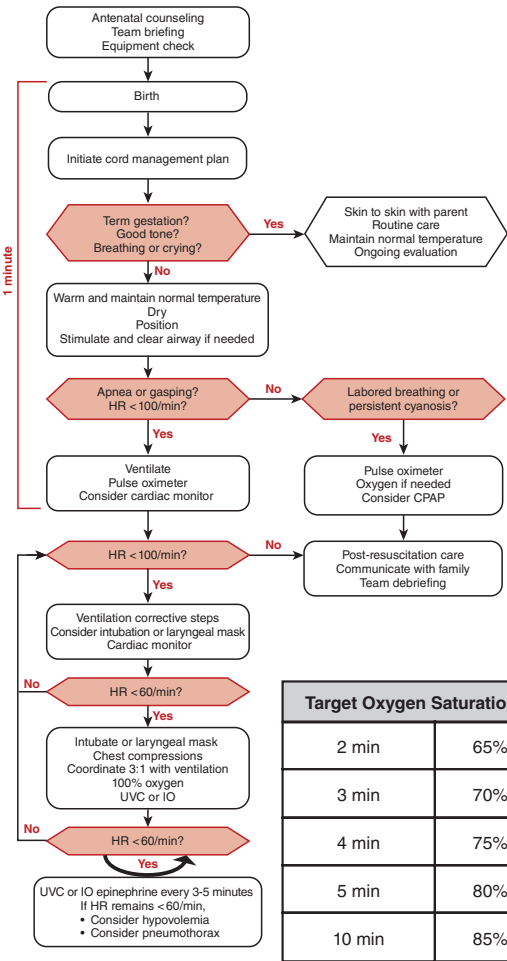
\*A 2.0 mm ID endotracheal tube (optional) may be considered.

Table 5-3. Initial Endotracheal Tube Insertion Depth ("Tip to Gum") for Orotracheal Intubation

| Gestation   | Insertion Depth at Gum | Infant's Weight |
|-------------|------------------------|-----------------|
| < 23 weeks  | 5.0-5.5 cm             | < 500 grams     |
| 23-24 weeks | 5.5 cm                 | 500-600 g       |
| 25-26 weeks | 6.0 cm                 | 700-800 g       |
| 27-29 weeks | 6.5 cm                 | 900-1,000 g     |
| 30-32 weeks | 7.0 cm                 | 1,100-1,400 g   |
| 33-34 weeks | 7.5 cm                 | 1,500-1,800 g   |
| 35-37 weeks | 8.0 cm                 | 1,900-2,400 g   |
| 38-40 weeks | 8.5 cm                 | 2,500-3,100 g   |
| 41-43 weeks | 9.0 cm                 | 3,200-4,200 g   |

Laryngoscope blades (straight Miller)\*

- a. No. 1 (term newborn infant)
- b. No. 0 (preterm infant)
- c. No. 00 (optional for extremely preterm infant)



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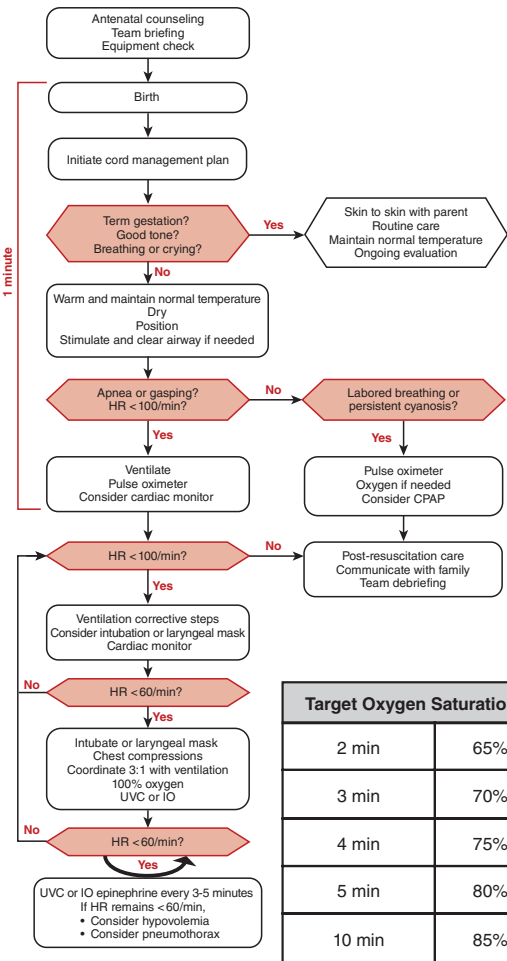
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Neonatal Code Medications

| Drug                          | Dose*                 | 0.5 kg              | 1 kg                | 2 kg                | 3 kg                | 4 kg                | Administration                                                                         |
|-------------------------------|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------------------------------------------------------------------------|
| Epinephrine IV/IO             | 0.02 mg/kg            | IV Dose:<br>0.01 mg | IV Dose:<br>0.02 mg | IV Dose:<br>0.04 mg | IV Dose:<br>0.06 mg | IV Dose:<br>0.08 mg | IV/IO rapid push.<br>Flush with 3 mL NS.                                               |
| Concentration:<br>0.1 mg/mL   | Equal to<br>0.2 mL/kg | Volume:<br>0.1 mL   | Volume:<br>0.2 mL   | Volume:<br>0.4 mL   | Volume:<br>0.6 mL   | Volume:<br>0.8 mL   | Repeat every 3-5 minutes if heart rate<br>less than 60 bpm.                            |
| Epinephrine ETT               | 0.1 mg/kg             | ET Dose:<br>0.05 mg | ET Dose:<br>0.1 mg  | ET Dose:<br>0.2 mg  | ET Dose:<br>0.3 mg  | ET Dose:<br>0.4 mg  | May administer while vascular access<br>is being established.                          |
| Concentration:<br>0.1 mg/mL   | Equal to<br>1 mL/kg   | Volume:<br>0.5 mL   | Volume:<br>1 mL     | Volume:<br>2 mL     | Volume:<br>3 mL     | Volume:<br>4 mL     | ETT rapid push.<br>No need for flush. Provide PPV breaths<br>to distribute into lungs. |
| Normal Saline IV<br>0.9% NaCl | 10 mL/kg              | 5 mL IV             | 10 mL IV            | 20 mL IV            | 30 mL IV            | 40 mL IV            | Give over 5-10 min.                                                                    |

\*The recommended dose range for intravenous or intraosseous administration is 0.01 to 0.03 mg/kg (equal to 0.1 to 0.3 mL/kg).  
The recommended dose range for endotracheal administration is 0.05 to 0.1 mg/kg (equal to 0.5 to 1 mL/kg).

These suggested epinephrine doses are based on a desire to simplify dosing for educational efficiency and do not endorse any particular dose within the recommended dosing range.  
Additional research is needed to ascertain the ideal epinephrine dose.

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| Epinephrine ETT               | 0.1 mg/kg             | ET Dose:<br>0.05 mg | ET Dose:<br>0.1 mg  | ET Dose:<br>0.2 mg  | ET Dose:<br>0.3 mg  | ET Dose:<br>0.4 mg  | May administer while vascular access<br>is being established.                          |
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Table 6-1. Neonatal Chest Compressions

|                                          |                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------|
| Compressor position                      | Head of bed                                                                              |
| Thumb position on the sternum            | Two thumbs positioned in the midline just below the nipples. Avoid the ribs and xiphoid. |
| Depth                                    | One-third anterior-posterior chest diameter                                              |
| Rate                                     | 90 compressions per minute coordinated with 30 breaths per minute                        |
| Rhythm                                   | One-and-Two-and-Three-and-Breathe                                                        |
| Oxygen concentration (Fio <sub>2</sub> ) | 100% until heart rate ≥ 60 bpm and reliable signal on pulse oximeter                     |
| Response check                           | 60 seconds after starting coordinated compressions and ventilations                      |
| Stop compressions                        | Heart rate ≥ 60 bpm                                                                      |

Table 4-3. The MR SOPA Ventilation Corrective Steps

| Corrective Step |                               | Actions                                                                                                                                                                     |
|-----------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M               | Mask adjustment.              | Reapply the mask and lift the jaw forward. Consider the 2-hand hold.                                                                                                        |
| R               | Reposition the head and neck. | Place head neutral or slightly extended.                                                                                                                                    |
| S               | Suction the mouth and nose.   | Use a bulb syringe.                                                                                                                                                         |
| O               | Open the mouth.               | Use a finger to gently open the mouth.                                                                                                                                      |
| P               | Pressure increase.            | Increase in 5–cm H <sub>2</sub> O increments until you achieve chest movement. Maximum recommended pressure is 40 cm H <sub>2</sub> O term, 30 cm H <sub>2</sub> O preterm. |
| A               | Alternative airway.           | Insert a laryngeal mask or an endotracheal tube.                                                                                                                            |

Table 5-4. Sudden Deterioration After Intubation (DOPE)

|   |                              |
|---|------------------------------|
| D | Displaced endotracheal tube  |
| O | Obstructed endotracheal tube |
| P | Pneumothorax                 |
| E | Equipment failure            |

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