

## Educational Focus

### Scenario Outline

This scenario presents the resuscitation of a newborn at 34 weeks' gestation. The learner is expected to prepare for the birth by asking the 4 pre-birth questions, assembling the team based on assessment of perinatal risk, choosing a leader, delegating tasks, and performing the equipment check. This newborn requires CPAP and pulse oximetry to guide administration of supplemental oxygen. Learners must be familiar with a device that provides CPAP (T-piece resuscitator and/or flow-inflating bag).

### Learning Objectives

Upon completion of the simulation, the learners will be able to:

- Demonstrate correct technique for performing initial steps at the radiant warmer
- Demonstrate accuracy when counting a newborn's heart rate
- Demonstrate correct placement of the oximeter sensor, interpretation of oxygen saturation using the target oxygen saturation table, and administration of free-flow oxygen
- Demonstrate use of the appropriate oxygen concentration when administering supplemental oxygen to a newborn less than 35 weeks' gestation
- Identify indications for CPAP in the delivery room and demonstrate correct technique for administering CPAP
- Demonstrate correct technique for inserting an orogastric (OG) tube

### Debriefing Points

Points for discussion during debriefing could include:

- Preparation for a preterm birth
- Additional risks for preterm babies compared to term babies
- How to assist ventilation when a preterm baby has difficulty breathing
- Use of NRP Key Behavioral Skills

### Reference Materials

*Textbook of Neonatal Resuscitation, 8th edition, Lesson 3: Initial Steps of Newborn Care*

*Textbook of Neonatal Resuscitation, 8th edition, Lesson 4: Positive-Pressure Ventilation*

*Textbook of Neonatal Resuscitation, 8th edition, Lesson 8: Resuscitation and Stabilization of Babies Born Preterm*

## Setup & Simulation

### Equipment

#### For setup:

- Damp, lightly blood- and meconium-stained blanket or towel
- Segment of simulated umbilical cord
- Simulated amniotic fluid or water
- Simulated blood
- Simulated vernix

#### For use during simulation:

- All items included in the NRP Quick Equipment Checklist
- Umbilical cord clamps

### Setup & Preparation

- Setting: Delivery room.
- Moisten the simulator's skin with simulated amniotic fluid, blood and vernix, and insert the umbilical cord segment into the abdomen.
- Wrap the simulator in a damp, lightly blood-stained blanket or towel, without a diaper, and place it under a blanket or towel on the mother's abdomen.

### Learner Brief

Provide this information to the participants as they enter the simulation:

You have been asked to attend a vaginal birth of a late preterm newborn. The obstetric provider is present, and the baby is coming soon. Please prepare for the birth.

### Additional Information

Provide this information to the participants, if asked during simulation:

Gestational age:	34 weeks' gestation
Amniotic fluid:	Clear
Additional risk factors:	Spontaneous labor began with ruptured membranes at 34 weeks' gestation for unknown reasons. No antenatal steroids
Estimated fetal weight:	2500 g (5 lb 8 oz).
Umbilical cord management plan:	Plan to delay cord clamping for 30-60 seconds if baby is crying

# Scenario Progression

## Before delivery

Vaginal birth • 34 weeks gestation • Clear amniotic fluid  
 • Spontaneous labor began with ruptured membranes at 34 weeks' gestation for unknown reasons. No antenatal steroids • Estimated birth weight 2500 g • Plan to delay cord clamping for 30-60 seconds

## CRITICAL PERFORMANCE STEPS

- Ask the 4 pre-birth questions to assess perinatal risk:**
  - What is the expected gestational age?
  - Is the amniotic fluid clear?
  - Are there additional risk factors?
  - What is our umbilical cord management plan?
- Conduct pre-birth team briefing:**
  - Assemble team based on perinatal risk
  - Identify leader
  - Assign tasks
- Perform equipment check.**
- Apply gloves and personal protective equipment**

- Ask the 3 rapid evaluation questions:**
  - Term?
  - Good muscle tone?
  - Breathing or crying?
- Delay cord clamping for 30-60 seconds.**
- Move infant to radiant warmer**
- Perform initial steps of newborn care:**
  - Provide warmth, dry (and remove wet linen), put hat on baby's head, and stimulate. May place temperature sensor on infant and change radiant warmer to servo mode (optional)
  - Position head and neck in sniffing position
  - Clear secretions from mouth and nose with bulb syringe (if secretions are copious or impeding breathing)

- Provide ongoing evaluation of respirations, heart rate, tone, activity and color**
- By age 2-3 minutes, place pulse oximeter on right hand or wrist to evaluate perceived persistent cyanosis**
- Identify target oxygen range for age in minutes by using the target oxygen saturation table**
- Request cardiac monitor (optional)**
- Administer CPAP at 5 cm H<sub>2</sub>O pressure via flow-inflating bag or T-piece resuscitator for grunting respirations**
- Adjust oxygen concentration per target oxygen saturation table**

- Insert orogastric tube to decompress the stomach during CPAP**
- Continue to monitor respirations, heart rate, tone, activity and color**
- Adjust supplemental oxygen according to target oxygen saturation table**
- Continue CPAP due to persistent grunting respirations**
- Continue to monitor respirations, HR, oxygen saturation, tone, activity, and temperature**
- Plan appropriate post-resuscitation care**
- Communicate effectively with the medical team and mother**
- Perform post-resuscitation debriefing**

## The baby has been born

