

**Sample Practice Scenario:**

Bronchiolitis and Respiratory Failure

Goals:

- 1) Identify respiratory distress in an infant
- 2) Review diagnosis of bronchiolitis (and distinguish from asthma)
- 3) Initiate supportive care with supplemental oxygen and fluids
- 4) Recognize treatment failure and prepare for intubation

Scenario:

Parents present to the emergency department at the recommendation of the on call provider with their 5 month old daughter, Zelda. Their older child just started preschool, and has had a runny nose for about a week. Four days ago, Zelda started to have a runny nose that progressed to a cough. Yesterday, she did not nurse as well as usual, and this morning her parents noticed that her breathing was “noisy.”

She had a normal stool and urine diaper last night, but her parents have not had to change her diaper yet today.

PMH: Born at 34 weeks via NSVD, no prior hospitalizations

FH: no history of asthma/atopy, sibling is healthy

Allergies/Imm: NKDA, up to date on vaccines

VS: Temp: 38.5C HR:180 RR: 60 SpO2 88% on room air weight: 7.5kg

Critical Performance Steps Checklist: (with instructor answers in pink)

- Perform initial assessment
  - Cap refill is 4 sec centrally, 5 seconds peripherally
  - Nasal flaring, grunting
  - Suprasternal/intercostal/subcostal retractions
  - Remainder of exam is unremarkable
- Apply oxygen
  - Oxygen saturation increases to 90%
- Suction nares
  - no apparent improvement in work of breathing
- (+/- albuterol/duo neb trial)
  - no change in work of breathing
- IV access, give fluid bolus
  - HR decreases to 140
- Call respiratory for High Flow
  - mild improvement in work of breathing
  - Infant has apneic episode
  - Saturations drop to 70%
- Identify apnea
- Call for more help
  - review department process, resources
- Prepare for intubation
  - review equipment, medications

- Intubate patient                      patient stabilizes after intubation

\*end scenario\*

#### Instructor Debrief

- Compare and contrast respiratory failure with a more typical presentation of bronchiolitis.
- Review which treatments for bronchiolitis are evidenced-based.
- Discuss strategies for distinguishing bronchiolitis from asthma.
- Ensure participants have methods to select drug doses and equipment sizes safely.