

## Respiratory Core Case

# Disordered Control of Breathing 4 Choose an item.

Seizure

### Pediatric Advanced Life Support

Scenario Lead- In

1 year(s) 10 Kg/ Purple (10-11 kg)

**Prehospital:** You are dispatched to a home where a 1 yo infant is having a seizure

**ED:** You are asked to see a 1 yo infant who had a seizure at home and was brought in by EMS.

**General Inpatient Unit:** The bedside RN calls to inform you that a 1yo infant is having a seizure

**ICU:** You are admitting a 1 yo infant after a prolonged generalized tonic-clonic seizure.

EVALUATE – Initial Impression	IDENTIFY	INTERVENE
<p><i>Consciousness</i></p> <ul style="list-style-type: none"> <li>• Obtunded, eyes closed, no response to environment</li> </ul> <p><i>Breathing</i></p> <ul style="list-style-type: none"> <li>• Decreased rate and effort, audible snoring</li> </ul> <p><i>Color</i></p> <ul style="list-style-type: none"> <li>• Pink</li> </ul> <p><i>Pulses</i></p> <ul style="list-style-type: none"> <li>• Present</li> </ul>	<ul style="list-style-type: none"> <li>• Respiratory failure</li> </ul>	<ul style="list-style-type: none"> <li>• Activate emergency response system, if appropriate.</li> <li>• <b>Directs assessment of airway, breathing, disability, and exposure, including vital signs</b></li> <li>• <b>Directs assisted ventilations with administration of 100% oxygen</b></li> <li>• <b>Directs placement of pads/leads and activation of monitor.</b></li> <li>• <b>Directs placement of pulse oximeter</b></li> </ul>
EVALUATE – Primary Assessment	IDENTIFY	INTERVENE
<ul style="list-style-type: none"> <li>• Airway - Snoring noises</li> <li>• Breathing – RR- 12breaths/min, decreased respiratory effort, Breath sounds - Coarse, SpO<sub>2</sub> - 80% after supplemental oxygen application</li> <li>• Circulation – HR- 90 beats/min (peds NSR), BP 90/60 mm Hg , Peripheral pulses - Normal , Central pulses - Normal, Cap Refill - about 2 seconds, Skin -Pink, warm, dry</li> <li>• Disability - Obtunded, not interactive</li> <li>• Exposure - Temp - 39.7 C, no rash</li> </ul>	<ul style="list-style-type: none"> <li>• Respiratory failure</li> <li>• Disordered control of breathing</li> </ul>	<ul style="list-style-type: none"> <li>• Suction nasopharynx</li> <li>• Assist ventilation with 100% FiO<sub>2</sub> and evaluate response/effectiveness</li> <li>• Analyze cardiac rhythm (sinus tachycardia)</li> <li>• <b>Recognizes signs and symptoms of disordered control of breathing</b></li> <li>• <b>Categorizes as respiratory failure</b></li> </ul>
EVALUATE – Secondary Assessment	IDENTIFY	INTERVENE
<p><b>SAMPLE history</b></p> <ul style="list-style-type: none"> <li>• Signs and symptoms: fever and URI symptoms x 1 day</li> <li>• Allergies: History of rash with prior amoxicillin</li> <li>• Medications: Tylenol, Rectal diazepam</li> <li>• Past medical history: none</li> <li>• Last meal: apple juice one hour prior</li> <li>• Events (onset): fever all day, abrupt onset of generalized tonic-clonic seizure activity, stopped with diazepam</li> </ul> <p><b>Physical Examination</b></p> <ul style="list-style-type: none"> <li>• Repeat vital signs with assisted ventilation with 100% oxygen: HR - 120 beats/min (adult S Tach), RR - 14 breaths/min, SpO<sub>2</sub> .97% with bag-mask ventilations with 100% oxygen, BP – 100/60 mm Hg</li> <li>• Head, eyes, ears, nose and throat/neck: Normal</li> <li>• Heart and lungs: Normal</li> <li>• Abdomen: <b>Nondistended, nontender, no masses, normal bowel sounds</b></li> <li>• Extremities: No edema, no rash, cool skin, peripheral pulses +2, caillary refill 4 seconds</li> </ul>	<ul style="list-style-type: none"> <li>• Respiratory failure</li> <li>• Disordered control of breathing</li> </ul>	<ul style="list-style-type: none"> <li>• Position patient to facilitate respiration and treatment.</li> <li>• Consider specific interventions for disordered control of breathing (eg, reversal agents). Note: In patients with seizure disorder reversal of benzodiazepine is contraindicated.</li> <li>• Prepare for bag-mask ventilation and endotracheal intubation</li> <li>• <b>Directs IV/IO access</b> Vascular access not applicable (med given rectally)</li> <li>• Obtain labs and imaging studies as appropriate.</li> <li>• <b>Directs reassessment of patient in response to treatment</b></li> <li>• <b>Ensures that bag-mask</b></li> </ul>

<ul style="list-style-type: none"> <li>• Back: Normal</li> <li>• Neurologic: Reacts minimally to pain, pupils equal and reactive</li> </ul>		<ul style="list-style-type: none"> <li>• ventilations are effective</li> <li>• Summarizes specific treatments for disordered control of breathing</li> <li>• If within scope: Verbalizes indications for endotracheal intubation and, if appropriate, special considerations when intubation is anticipated</li> </ul>
<b>EVALUATE – Diagnostic Tests</b> (Perform throughout the evaluation of the patient as appropriate)	<b>IDENTIFY/INTERVENE</b>	
Lab data (as appropriate) <ul style="list-style-type: none"> <li>• Glucose</li> <li>• Electrolytes, CBC w diff, blood gas</li> </ul> Imaging <ul style="list-style-type: none"> <li>• None</li> </ul>	<ul style="list-style-type: none"> <li>• Bedside glucose: 115; All other lab tests pending - focus is on immediate situation.</li> </ul>	
<b>Re-evaluate-identify-intervene after each intervention.</b>		

<b>Debriefing Tool</b>	
<b>Scenario: Disordered Control of Breathing (increased ICP)</b>	
<b>Instructions</b>	
<ul style="list-style-type: none"> <li>• Debriefings are 10 minutes long.</li> <li>• Use the table below and the Team Dynamics Debriefing Tool to guide your debriefing.</li> </ul>	
<b>Scenario Specific Learning Objectives</b>	<b>Critical Performance Steps</b>
<ul style="list-style-type: none"> <li>• Differentiates between respiratory distress and respiratory failure</li> <li>• Summarizes signs and symptoms of disordered control of breathing</li> <li>• Recalls causes of disordered control of breathing (drugs, increased intracranial pressure, seizure, neuromuscular disease)</li> <li>• Demonstrates correct interventions for disordered control of breathing</li> <li>• Summarizes indications for endotracheal intubation/ventilation of noninvasive ventilation</li> </ul>	<ul style="list-style-type: none"> <li>• Directs assessment of ABCDE and vital signs</li> <li>• Identifies as respiratory distress or failure</li> <li>• Administers 100% oxygen</li> <li>• Recognizes signs and symptoms of disordered control of breathing</li> <li>• Applies monitor leads and pulse oximetry</li> <li>• Assists ventilation and ensures bag-mask ventilation is effective</li> <li>• Directs IV or IO access</li> <li>• Directs reassessment of patient in response to interventions</li> <li>• Summarizes specific interventions for disordered control of breathing</li> <li>• Verbalizes indications for endotracheal intubation or noninvasive ventilation</li> </ul>

