

## Critical Pediatric Airway Cases

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 Physician-in-Chief, Renown Children's Hospital

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## DISCLOSURES



**Renown**  
 CHILDREN'S HOSPITAL

None

I do have many employers:



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## Renown PICU Contact Info

- Renown PICU: (775) 982-4911
- Renown Transfer and Operations Center (RTOC)  
 (775) 982-2227
- My email: [kdeeter@renown.org](mailto:kdeeter@renown.org)

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## Level II Peds Trauma Accreditation



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Keep Calm  
Carry on

- ▶ Assess
- ▶ Categorize
- ▶ Decide
- ▶ Act

### Approach to Pediatric Assessment



At any point → life-threatening problem → life-saving interventions

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## ASSESS



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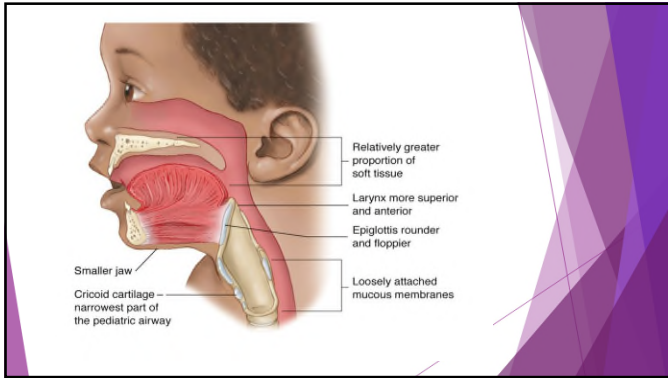
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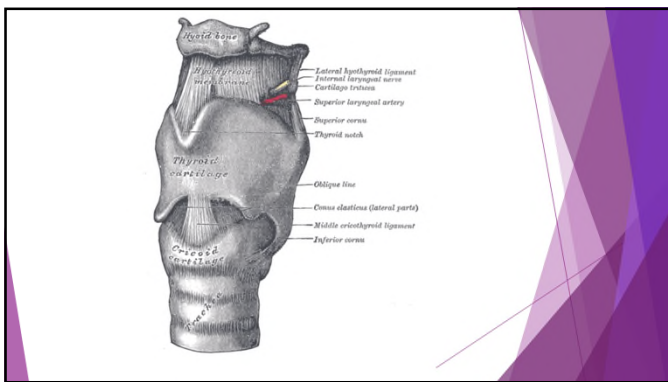
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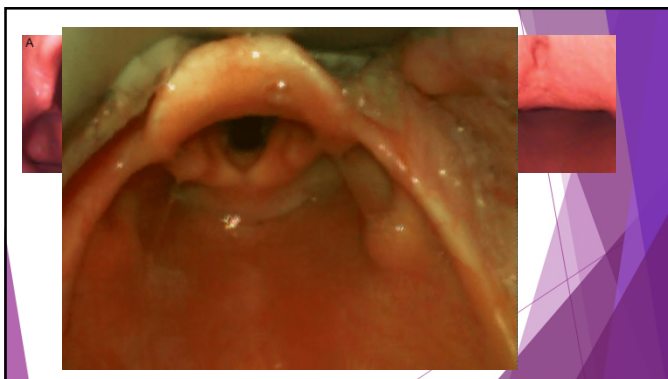
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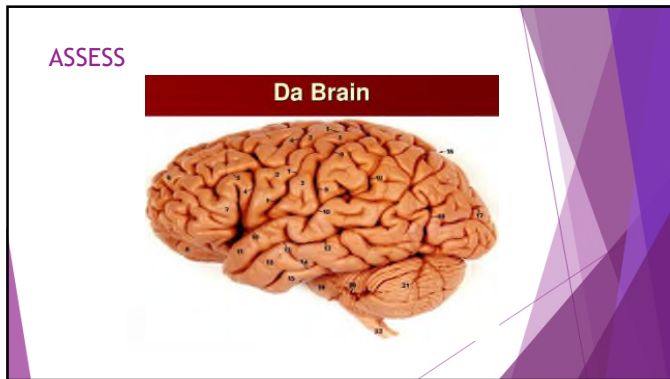
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INFANT		
<b>Eyes Opening</b>	<b>Best Verbal Response</b>	<b>Best Motor Response</b>
Spontaneous - 4	Coos, babbles - 5	Obeys command - 6
To command - 3	Irritable cries - 4	Localizes pain - 5
To Pain - 2	Cries to pain - 3	Withdraws from pain - 4
None - 1	Moans, grunts - 2	Flexion (decorticate) - 3
	No Response - 1	Extension (decerebrate) - 2
		No response - 1
CHILD / ADULT		
<b>Eyes Opening</b>	<b>Best Verbal Response</b>	<b>Best Motor Response</b>
Spontaneous - 4	Orientated - 5	Obeys command - 6
To command - 3	Confused - 4	Localizes pain - 5
To Pain - 2	Inappropriate words - 3	Withdraws from pain - 4
None - 1	Incomprehensible - 2	Flexion (decorticate) - 3
	No Response - 1	Extension (decerebrate) - 2
		No response - 1

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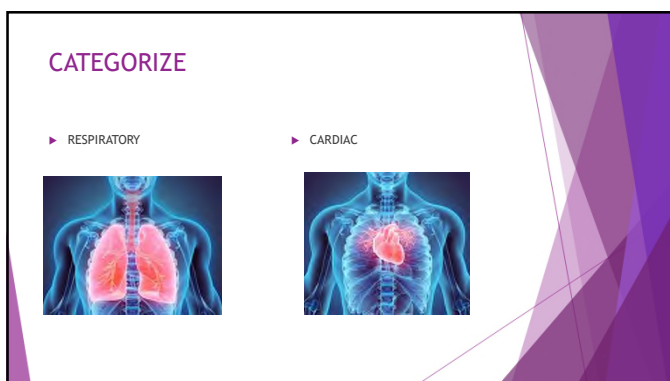
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### DECIDE: Respiratory

- ▶ UPPER
- ▶ LOWER
- ▶ LUNG TISSUE
- ▶ DISORDERED CONTROL OF BREATHING

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### Upper

- ▶ 3yo at daycare wakes up from a nap with respiratory distress

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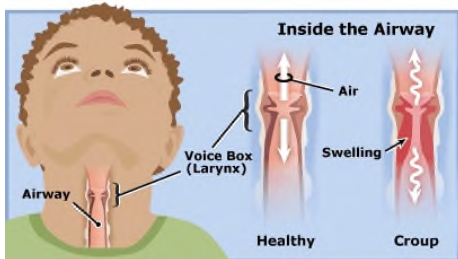
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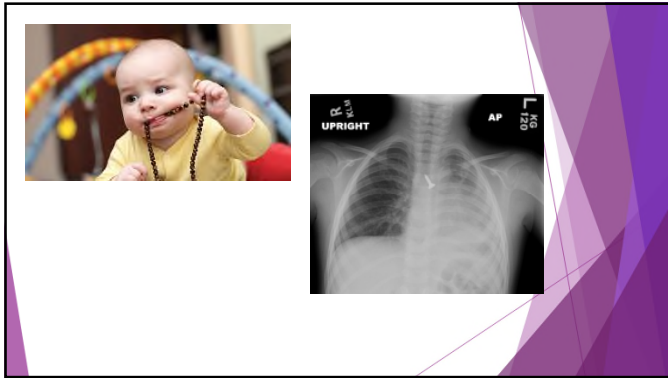
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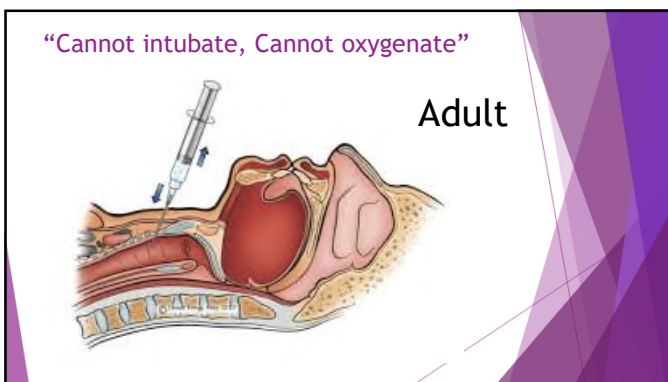
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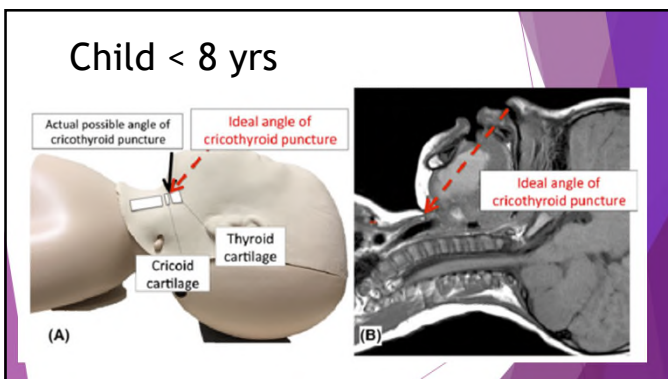
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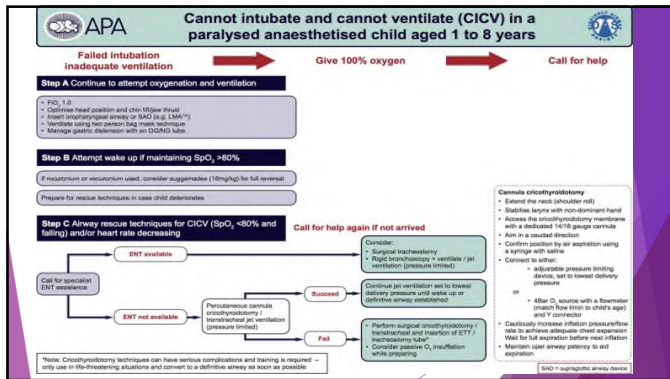
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Lower

- 5yo at home, parents call 911 because his breathing is fast, he looks tired, and he is turning blue

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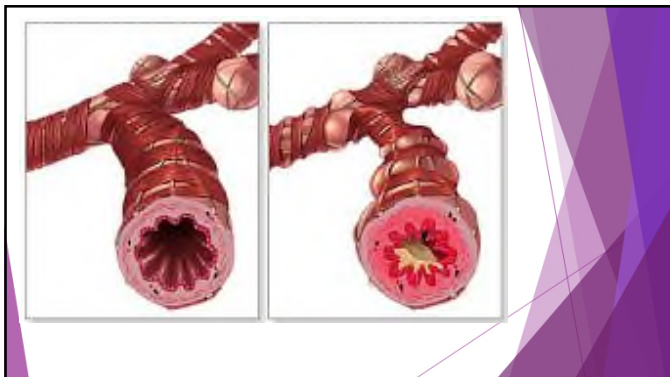
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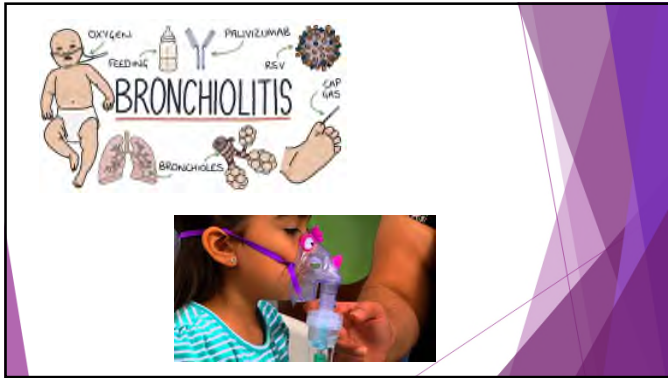
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### Lung Tissue

- 5yo at home, parents call 911 because his breathing is fast, he looks tired, and he is turning blue

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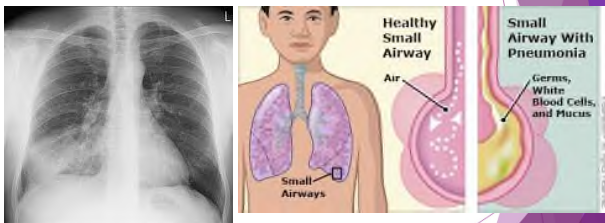
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### Pneumonia



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## Disordered Control

- ▶ 6 month old breathing very slowly, lethargic, occasional apnea

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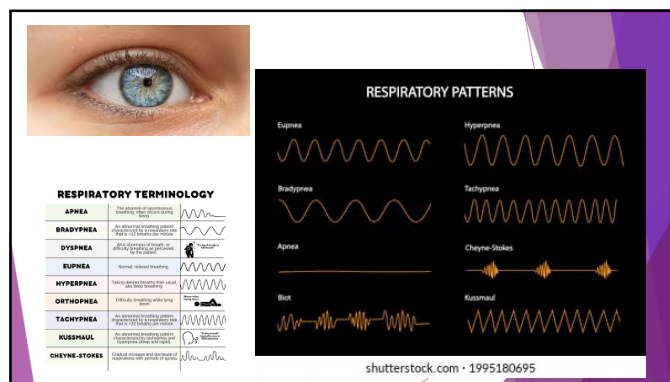
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**RESPIRATORY TERMINOLOGY**

<b>APNEA</b>	The absence of breathing during sleep	
<b>BRADYPNEA</b>	An abnormal breathing pattern characterized by a slow rate of breathing	
<b>DYSPNEA</b>	Difficulty breathing or shortness of breath	
<b>EUPNEA</b>	Normal, relaxed breathing	
<b>HYPERPNEA</b>	Abnormal breathing pattern characterized by a rapid rate of breathing	
<b>ORTHOPNEA</b>	Difficulty breathing while lying down	
<b>TACHYPNEA</b>	An abnormal breathing pattern characterized by a rapid rate of breathing	
<b>KUSSMAUL</b>	An abnormal breathing pattern characterized by a rapid rate of breathing and a deep depth of breathing	
<b>CHEYNE-STOKES</b>	Cyclic changes and periods of apnea in breathing pattern	

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Asphyxia =

Hypoxia, hypercarbia,  
and acidosis =

Cardiac arrest due to  
global ischemia

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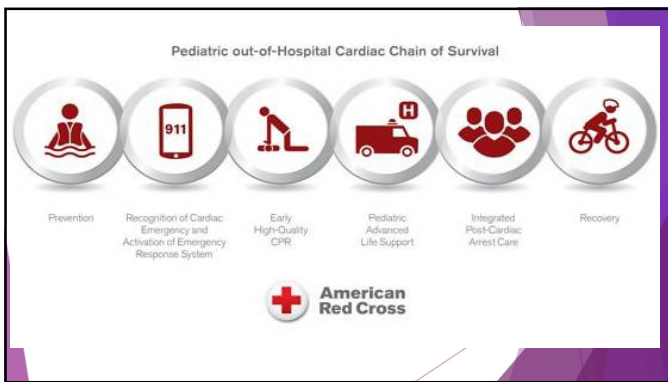
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**THE SAD TRUTH**

**Unchanged pediatric out-of-hospital cardiac arrest incidence and survival rates with regional variation in North America**

**Survival Trends in Pediatric In-Hospital Cardiac Arrests**

**Pediatric In Hospital Cardiac Arrest**

**Pediatric Traumatic Cardiac Arrest**

**Traumatic Cardiac Arrest in Pediatric Patients: An Analysis of the National Trauma Database 2007-2016**

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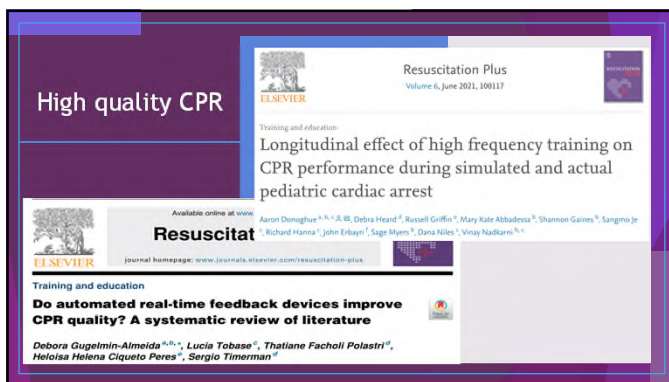
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And then this happened

► 4yo in a rural county was out on playing in his driveway when his grandpa came out to back the truck and horse trailer out to the street...

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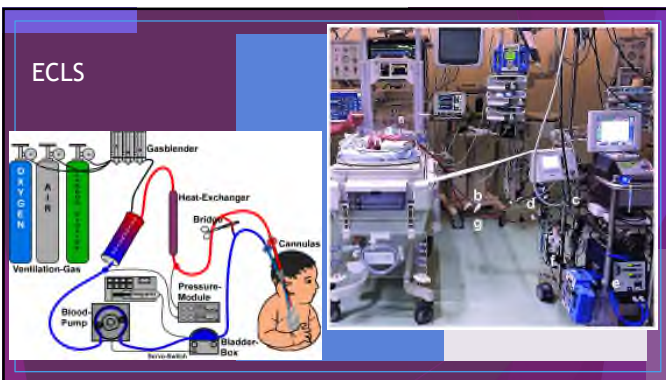
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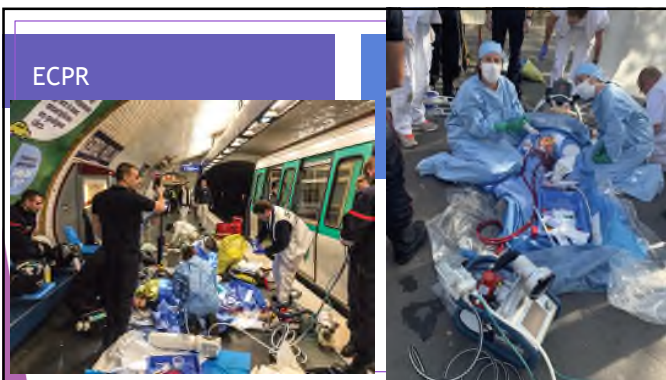
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