

Society of Critical Care Medicine



The Intensive Care Professionals



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Pediatric ICU Quick Reference Guide

sccm.org/50years

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Characteristic	Croup	Epiglottitis	Bacterial Tracheitis	Retropharyngeal Abscess
Onset	Gradual, viral prodrome, 1-7 days	Rapid onset, 6-12 hours	Viral prodrome followed by rapid deterioration	Viral prodrome followed by rapid deterioration
Typical age at onset	6 months - 4 years	2-8 years	6 months - 8 years	< 5 years
Seasonal occurrence	Late fall/winter	Throughout the year	Fall/winter	Throughout the year
Causative agents	Parainfluenza, respiratory syncytial virus, influenza A	<i>Haemophilus influenzae</i> type B (classically), <i>Streptococcus pneumoniae</i> , GABHS	<i>Staphylococcus aureus</i> (classically), GABHS, <i>Streptococcus pneumoniae</i>	Anaerobic bacteria, GABHS, <i>Staphylococcus aureus</i>
Pathology	Subglottic edema	Inflammatory edema of supraglottis	Thick, mucopurulent, membranous tracheal secretions	Abscess formation in deep cervical fascia
Fever	Low-grade	High	High	High
Cough	Barking or seal-like	None	Usually absent	Usually absent
Sore throat	None	Severe	None	Severe
Drooling	None	Frequent	None	Frequent
Posture	Any	Sitting forward, mouth open, neck extended (tripod position)	Any	Sitting forward, mouth open, neck extended (tripod position)
Voice	Normal or hoarse	Muffled	Normal or hoarse	Muffled
Appearance	Nontoxic	Toxic	Toxic	Toxic

Abbreviation: GABHS, group A β -hemolytic streptococci.

Common Infectious Causes of Upper Airway Obstruction

Pediatric Fundamental Critical Care Support

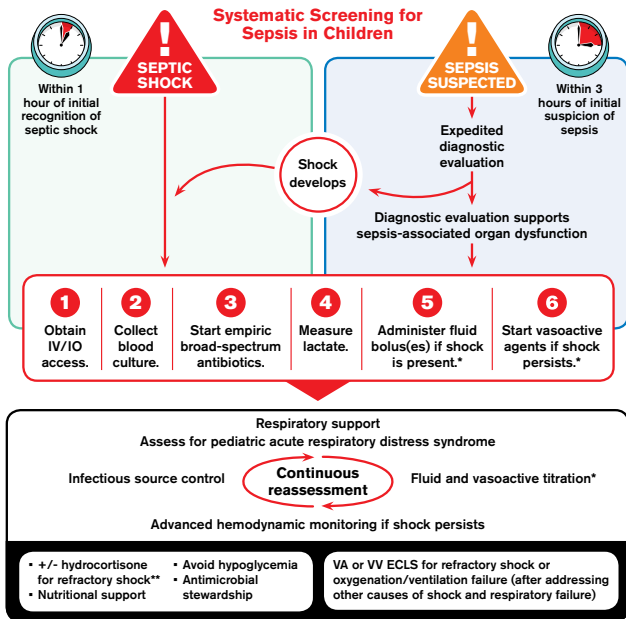
Site of Injury	Unintentional Injury	Abusive Injury
Head	<ul style="list-style-type: none"> • Focal injuries at site of impact • Clear history of causative incident • Simple, linear skull fracture • Absence of other injuries 	<ul style="list-style-type: none"> • Global/widespread injuries • Inconsistent description of injury • Diastatic, depressed skull fractures from reported short falls • Injuries to other body sites
Skeletal	<ul style="list-style-type: none"> • Mid-shaft clavicular • Diaphysis of long bones in ambulatory children 	<ul style="list-style-type: none"> • Posterior ribs • Metaphyses of long bones in nonambulatory children • Vertebral body • Multiple sites • Injuries of varying ages
Cutaneous	<ul style="list-style-type: none"> • Bruises over bony prominences in ambulatory children • Burns with splash appearance 	<ul style="list-style-type: none"> • Bruises to face or head in nonambulatory children • Bruises over padded areas, ears, neck, genitalia • Patterned injuries and bites • Burns with well-demarcated edges • Bruises or burns involving genitalia

^aNo pattern of injury is diagnostic of either unintentional or abusive injury without consideration of the supporting history and developmental stage of the child.

Explore the full range of Pediatric Fundamental Critical Care Support products at sccm.org/pfccc.



Initial Resuscitation Algorithm for Children



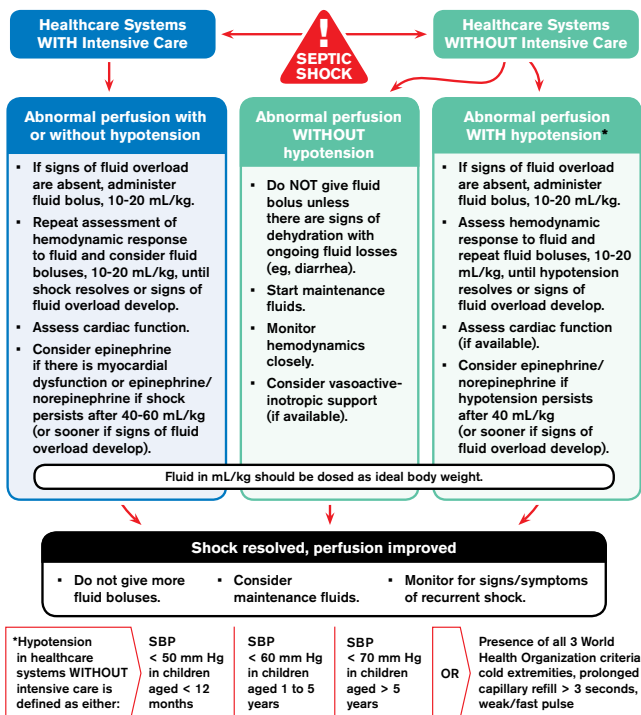
Abbreviations: ECLS, extracorporeal life support; VA, venoarterial; VV, venovenous.

*See fluid and vasoactive algorithm. Note: Fluid bolus should be omitted from bundle if a) fluid overload is present or b) it is a low-resource setting without hypotension. Fluid in mL/kg should be dosed as ideal body weight.

**Hydrocortisone may produce benefit or harm.

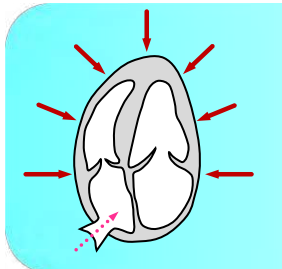
Explore the full range of children's sepsis resources at sccm.org/survivingsepsis

Fluid and Vasoactive-Inotrope Management Algorithm For Children



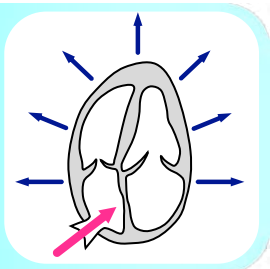
Respiratory Variation in Inferior Vena Cava Diameter

**Increased
Intrathoracic Pressure**



Decreased Venous Return

**Decreased
Intrathoracic Pressure**



Increased Venous Return

- Because inferior vena cava (IVC) drainage to the right atrium is reduced during a positive pressure breath there is a corresponding increase in IVC diameter during inspiration.
- Positive pressure ventilation transmits pressure to the right atrium during inspiration, thus reducing the pressure gradient between the abdominal IVC and the right atrium.

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Ultrasound: Pediatric and Neonatal products
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Respiratory Variation in Peak Aortic Velocity

The phasic variation in the stroke volume over the respiratory cycle is exaggerated in patients with preload recruitable cardiac output.

