

SEPSIS: ADULT

[ABC's]
Treat/Secure as needed

[Assessment]
Vital Signs
Past/Present History
Time of Onset
Physical Exam

[Oxygen]
{As needed}
Nasal Cannula 2-6 LPM
Non-Rebreather 12-15 LPM
Bag Valve Mask 15-25 LPM



[Maintain SPO2 & ETCO2]
{As needed}
90% Medical | ETCO2
95% Trauma | 36-45 mm/hg

SEPSIS: EMR / EMT

[EMR]

[Transport]

- Prepare patient for transport
- Place in position of comfort
- Detailed physical exam
- Contact incoming EMS unit

**** INITIATE SEPSIS ALERT ****

[EMT]

- Apply Cardiac Monitor (as directed)
- Obtain 6 second strip

[Transport]

- Place in position of comfort
- Detailed physical exam
- Transport to appropriate facility
- Contact receiving facility

**** INITIATE SEPSIS ALERT ****

AEMT / PARAMEDIC

[AEMT]

- Apply Cardiac Monitor (as needed and document)

- Consider IV fluids
- Follow your Sepsis protocol

[Transport]

- Place in position of comfort
- Detailed physical exam
- Transport to appropriate facility
- Contact receiving facility

**** INITIATE SEPSIS ALERT ****

[PARAMEDIC]

- Apply Cardiac Monitor (as needed and document)

- Consider IV fluids
- Consider Pressors
- Follow your Sepsis protocol

[Transport]

- Place in position of comfort
- Detailed physical exam
- Transport to appropriate facility
- Contact receiving facility

**** INITIATE SEPSIS ALERT ****

SEPSIS ALERT CRITERIA: Emergency Medical Services

Activate a Sepsis Alert if the patient is positive for SIRS, hypotensive and at least "Yes" to one of the infection criteria.

1. **SIRS (Systemic Inflammatory Response Syndrome):** SIRS positive if meets ≥ 2 criteria listed below.
 - Temperature $> 100.4F$ or $< 96.8F$
 - Pulse > 90 beats/minute
 - Respiratory rate > 20 breaths/minute
2. **Hypoperfusion:** ≥ 1 of the following:
 - Systolic BP < 90
 - MAP < 65
 - Altered mental status
3. **Infection:** ≥ 1 of the following:
 - **Infections (documented or suspected):** Pneumonia, UTI, Wound Infection, Cellulitis, Decubitus Ulcers
 - **High Risk Criteria:** Nursing home, recent surgery, immuno-compromised, indwelling device, currently on antibiotics
 - **Symptoms/Exam:** cough; shortness of breath; purulent wound drainage; urinary pain/frequency; abdominal pain, distention, or firmness; stiff neck

**** INITIATE SEPSIS ALERT ****







State *"we suspect Sepsis"* and provide:

- Age of patient
- Chief complaint
- Glasgow Coma Score (GCS)
- SIRS and infection criteria
- Time of onset
- Estimated time of arrival (ETA)

PEDIATRIC SEPTIC SHOCK

SEPSIS: SPOT THE SIGNS

** INITIATE A SEPSIS ALERT IF: **									
Known or suspected infection and the patient meets ≥ 3 or more of the 8 clinical criteria (vital signs and exam abnormalities)									
OR									
Known or suspected infection and the patient meets the high-risk criteria and meets ≥ 2 of the 8 clinical criteria (vital signs and exam abnormalities)									
VITAL SIGNS									
	< 1 month	≥ 1 to 3 months	≥ 3 to 12 months	≥ 1 to 2 years	≥ 2 to 4 years	≥ 4 to 6 years	≥ 6 to 10 years	$\geq 10 - 13$ years	> 13 years
Heart Rate	> 205	> 205	> 190	> 190	> 140	> 140	> 140	> 100	> 100
Respiratory Rate	> 60	> 60	> 60	> 40	> 40	> 34	> 30	> 30	> 16
Systolic BP	< 60	< 70	< 70	< 70+ (age in years x 2)	< 70+ (age in years x 2)	< 70+ (age in years x 2)	< 70+ (age in years x 2)	< 90	< 90
Temperature	< 96.8F or > 100.4F		< 96.8F or > 101.3F						
EXAM ABNORMALITIES									
	COLD SHOCK		WARM SHOCK			NON-SPECIFIC			
Pulses (central vs. peripheral)	Decreased or weak		Bounding						
Capillary refill (central vs. peripheral)	≥ 3 seconds		Flash (< 1 second)						
Skin	Mottled, cool		Flushed, ruddy, erythroderma (other than face)			Petechiae below the nipple, any purpura			
Mental Status						Decreased mental status, irritability, confusion, <u>inappropriate</u> crying or drowsiness, poor interaction with parents, lethargy, diminished arousability, obtunded			
HIGH RISK CONDITIONS									
High Risk Conditions	Malignancy, asplenia (including sickle cell disease), bone marrow transplant, central or indwelling line/catheter, solid organ transplant, severe developmental disability, cerebral palsy, immunodeficiency, immunocompromised or immunosuppression								

Confusion or disorientation 	Fever, shivering or feeling cold 
Shortness of breath 	Fast heart rate 
Extreme pain or discomfort 	Clammy or sweaty skin 

[Criteria/Definitions]
SIRS (Systemic Inflammatory Response Syndrome): two or more of the following:

- Temperature >100.4 F or <96.8 F
- Heart rate >90 beats per minute
- Respiratory rate >20 breaths per minute
- White blood cell count: >12000/mm³ or <4000/mm³ or 10% immature bands

Sepsis: \geq two or more SIRS criteria plus a suspected or confirmed infection

Severe sepsis: sepsis plus organ dysfunction and/or organ failure

Septic shock: a subset of sepsis in which particularly profound circulatory, cellular and metabolic abnormalities are associated with a greater risk of mortality than with sepsis alone.

Sources:
 1. Davis et al. (2017). American College of Critical Care Medicine Clinical Practice Parameters for Hemodynamic Support of Pediatric and Neonatal Septic Shock. Critical Care Medicine, 45, 1061-1093. doi: 10.1097/CCM.0000000000002425
 2. Singer et al. (2016). The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). JAMA, 315(8), 801-810. doi: 10.1001/jama.2016.0287