



Suspected Sepsis

History

- Duration and severity of fever
- Past medical history
- Medications/ Recent antibiotics
- Immunocompromised (transplant, HIV, diabetes, cancer)
- Indwelling medical device
- Last acetaminophen or ibuprofen
- Recent Hospital/ healthcare facility
- Bedridden or immobile
- Elderly and very young – at risk
- Prosthetic device / indwelling device

Signs and Symptoms

- Warm
- Flushed
- Sweaty
- Chills/ Rigors
- Delayed cap refill
- Mental status changes

Associated Symptoms (Helpful to localize source)

- myalgias, cough, chest pain, headache, dysuria, abdominal pain, rash

Differential

- Infections: UTI, Pneumonia, skin/ wound
- Cancer/ Tumors/ Lymphomas
- Medication or drug reaction
- Connective tissue disease: Arthritis, Vasculitis
- Hyperthyroidism
- Heat Stroke
- Meningitis
- Hypoglycemia/hypothermia
- MI/ CVA

Consider: Contact, Droplet, and Airborne Precautions	
Temperature Measurement Procedure <i>if available</i>	
	Fever/ Infection Control Protocol UP 10 <i>if needed</i>
	Altered Mental Status Protocol UP 4 <i>if needed</i>
B	12 Lead ECG Procedure
	IV or IO Access Protocol UP 6 <i>If indicated</i>
P	Cardiac Monitor

Age Specific Blood Pressure indicating possible shock

Age 0 – 28 days: SBP < 60
 Ages ≥ 1 month: SBP < 70
 Age 1 – 9: SBP < 70 + (2x Age)

Ages 10 – 64: SBP < 90
 Ages ≥ 65: SBP < 110

All ages Shock Index:
 HR > SBP

Exit to
 Age Appropriate
 Condition Appropriate
 Protocol(s)

Sepsis Screen Positive

SEPSIS ALERT
 Notify Receiving Facility Immediately

MAP
 (Mean Arterial Pressure)

SBP + 2(DBP)
 3

Monitor usually calculates this value on screen

Adult SIRS Criteria
 Temperature
 ≥ 100.4° F (38° C)
 Or
 ≤ 96.8° F (36° C)
AND
 Any 1 of the following:
 HR > 90
 RR > 20
 EtCO < 25 mmHg

Adult qSOFA Criteria
 SBP ≤ 100 mmHG
 RR ≥ 22
 AMS or new mental status change

Pediatrics SIRS Criteria
 Temperature
 Same as adult

AND
 Heart Rate
 1 month – 1 year > 180
 2 – 5 years > 140
 6 – 12 years > 130
 13 – 18 years > 120

A

Venous Access Blood Draw
if applicable

Normal Saline 500 mL Bolus
 Repeat as needed
 Titrate SPB ≥ 90 mmHg
 MAP > 65 mmHg
Maximum 2 L

Peds: 20 mL/kg IV / IO
 Repeat to titrate
 Age Appropriate
 SBP ≥ 70 + 2 x Age
Maximum 60 mL/kg

Draw Blood Cultures if equipped/
 trained

Rocephin 1g IV/IO x 1
 Peds: 50mg/kg IV/IO up to 1gm
 over 10 minutes
 See Page 2 **

Age Appropriate
 Hypotension/ Shock
 Protocol AM 5/ PM 3

Notify Destination or Contact Medical Control



Suspected Sepsis

** Organizations may utilize Zosyn 3.375g or 4.5g IV OR Cefepime 2g IV as an alternative for Sepsis also **

One Antibiotic is required

Rocephin may be used for patients with mild allergy to penicillin.

Avoid in severe allergies and anaphylaxis - Avoid when allergic to Cephalosporins - Keflex, Omnicef, Cefdinir, Cefuroxime

If less than age 18 - Rocephin dosage 50mg/kg - Max 1g over 10 minutes (May slow push adults)

Blood Cultures using Steripath is highly recommended but not required for nonhospital agencies.

If transporting to CarolinaEast – use Pulsara to activate a Sepsis Alert

Pearls

- **Recommended Exam: Mental Status, Skin, HEENT, Neck, Heart, Lungs, Abdomen, Back, Extremities, Neuro**
- **Recommended Exam Pediatrics: In childhood, physical assessment reveals important clues for sepsis. Look for mental status abnormalities such as anxiety, restlessness, agitation, irritability, confusion, or lethargy. Cardiovascular findings to look for include cool distal extremities, capillary refill >3 seconds, or mottled skin.**
- **Sepsis is a life threatening condition where the body's immune response to infection injures its own tissues and organs.**
- **Severe sepsis is a suspected infection with 2 or more SIRS criteria (or qSOFA) along with organ dysfunction, such as AMS, hypotension, or hypoxia.**
- **Septic shock is severe sepsis and poor perfusion unimproved after fluid bolus.**
- **Agencies administering antibiotics should inquire about drug allergies specific to antibiotics or family of antibiotics.**
- **Following each fluid bolus, assess for pulmonary edema. Consider administration of agency specific vasopressor.**
- **Supplemental oxygen should be given and titrated to oxygenation saturation $\geq 92\%$.**
- **EKG should be obtained with suspected sepsis, but should not delay care in order to obtain.**
- **Abnormally low temperatures increase mortality and are found often in geriatric patients.**
- Quantitative waveform capnography can be a reliable surrogate for lactate monitoring in detecting metabolic distress in sepsis patients. EtCO₂ < 25 mm Hg are associated with serum lactate levels > 4 mmol/L.
- Patients with a history of liver failure should not receive acetaminophen.
- **Droplet precautions** include standard PPE plus a standard surgical mask for providers who accompany patients in the back of the ambulance and a surgical mask or NRB O2 mask for the patient. This level of precaution should be utilized when influenza, meningitis, mumps, streptococcal pharyngitis, and other illnesses spread via large particle droplets are suspected. A patient with a potentially infectious rash should be treated with droplet precautions.
- **Airborne precautions** include standard PPE plus utilization of a gown, change of gloves after every patient contact, and strict hand washing precautions. This level of precaution is utilized when multi-drug resistant organisms (e.g. MRSA), scabies, or zoster (shingles), or other illnesses spread by contact are suspected.
- **All-hazards precautions** include standard PPE plus airborne precautions plus contact precautions. This level of precaution is utilized during the initial phases of an outbreak when the etiology of the infection is unknown or when the causative agent is found to be highly contagious (e.g. **SARS, SARS-CoV-2, COVID-19, MERS, Monkeypox**).
- Allergies to NSAIDs (non-steroidal anti-inflammatory medications) are a contraindication to Ibuprofen.
- Agency Medical Director may require contact of medical control prior to EMT / MR administering any medication.
- **Sepsis Screen:**
 - Agencies may use Adult / Pediatric Systemic Inflammatory Response Syndrome (SIRS) criteria or quickSOFA (qSOFA) criteria.
 - Receiving facility should be involved in determining Sepsis Screen utilized by EMS.