

	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8067.01
	PROGRAM DOCUMENT: Sepsis/Septic Shock	Draft Date:	07/26/16
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 EMS Medical Director

 EMS Administrator

Purpose:

- A. To serve as the treatment standard for EMT's and Paramedics in treating patients who meet pre-hospital sepsis criteria and to facilitate:
 - 1. Initiation of pre-hospital fluid resuscitation.
 - 2. "Sepsis Alert" pre-arrival notification for receiving hospitals to expedite patient care upon arrival to the Emergency Department (ED).

Authority:

- A. California Health and Safety Code, Division 2.5
- B. California Code of Regulations, Title 22, Division 9

Definitions:

- A. **Systemic Inflammatory Response Syndrom (SIRS):**
 A generalized inflammatory response to a non-specific injury and includes at least 2 of the following criteria;
 - 1. Body temperature of >38 C (100.4 F) or <36 C (96.8F).
 - 2. Respiratory rate >20 breaths per minute.
 - 3. Heart rate >90 bpm.
- B. **Sepsis:**
 A life threatening condition that typically progresses rapidly due to severe infection of possibly multiple organ systems leading to shock, organ failure and death if not promptly recognized and treated. Simply, sepsis is SIRS with a known infection.
- C. **Severe Sepsis:**
 Sepsis with organ dysfunction, hypoxia, decreased organ perfusion, hypotension, elevated serum lactate levels (metabolic acidosis) and consequently low EtCO2 levels.
- D. **Septic Shock:**
 Sepsis-induced hypotension despite fluid resuscitation and evidence of hypoperfusion.

Policy:

- A. Treatment interventions below and pre-arrival notification shall occur for patients meeting the following pre-hospital sepsis criteria:
 - 1. Confirmed or suspected presence of infection:
 - a. By history from patient, family or care home.
 - b. By signs or symptoms of urinary tract infection, respiratory infection, or skin infection.
 - c. Elderly Older Adults or immune compromised patients with otherwise unexplained ALOC and no findings to suggest acute STROKE (see stroke protocol), and;

2. Any two of the following SIRS criteria:
 - a. Temperature of $>38^{\circ}\text{C}$ (100.4°F) or $<36^{\circ}\text{C}$ (96.8°F) (Acquired by EMS or if reported by patient, family, or care home).
 - b. Respiratory rate >20 breaths per minute.
 - c. Heart rate >90 bpm.
 - d. SBP <90 .

If a patient does not meet Sepsis Criteria, continue assessment, care and transport appropriate for presenting complaint and assessment.

Protocol:

BLS TREATMENT

Supplemental O₂ as necessary to maintain SpO₂ $> 94\%$. Use the lowest concentration and flow rate of O₂ as possible.
Notify receiving facility.
Transport.

ALS TREATMENT

Initiate large bore IV or IO.

- Administer 500 cc **ml** bolus of NS repeat x 3 if needed, until SBP **mmHg** >90 , while rechecking vital signs and lung sounds after every 500 cc **ml** bolus.
- Total amount of fluid should not exceed 2000 cc **ml**
- Given boluses in rapid succession if SBP **mmHG** remains <90

Early Sepsis Notification to receiving ED

If SBP remains <90 after 4 fluid boluses, contact base for **Dopamine**.

Transport.

Cross Reference: Shock, PD# 8038
Decreased Sensorium PD# 8061