COUNTY OF SACRAMENTO
EMERGENCY MEDICAL SERVICES AGENCY

Program Document: **Sepsis/Septic Shock**
Policy Number: 8067.07

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Signature on File
EMS Medical Director

Signature on File
EMS Administrator

Purpose:

A. To establish the treatment standard for treating patients with signs and symptoms of Sepsis.

Authority:

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

Definitions:

A. **Sepsis:** Sepsis can be a rapidly progressing, life-threatening condition due to SIRS (systemic infection). Sepsis must be recognized early and treated aggressively to prevent progression to shock and death. The most important pre-hospital interventions for Sepsis/SIRS patients include:
   1. Recognition of potential Sepsis/SIRS
   2. Early and aggressive fluid resuscitation
   3. Pre-arrival "Sepsis Alert" notification to receiving facility.
B. **Systemic Inflammatory Response Syndrome (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 (96.8 F).
   2. Respiratory rate > 20 breaths per minute.
   3. Heart rate > 90 bpm.

Indications:

A. Treatment interventions and pre-arrival notification shall occur for patients meeting BOTH of the following pre-hospital sepsis criteria:
   1. Confirmed or suspected presence of infection:
      a. By history from the patient, family, or care home.
      b. By signs or symptoms of urinary tract infection, respiratory infection, or skin infection.
      c. Older Adults or immune-compromised patients with otherwise unexplained ALOC and no findings to suggest acute STROKE per PD# 8060 – Stroke. **AND**
   2. Any two (2) of the following criteria:
      a. Temperature of >38 °C (100.4 °F) or < 36 °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 beats per minute.
      d. SBP < 90 mmHg
      e. Waveform capnography, if available, with a reading of < 25mmHg

Protocol:

BLS:

1. Supplemental O2 as necessary to maintain Sp02 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.
2. Perform blood glucose determination.
3. Conduct a pre-arrival "Sepsis Alert" notification to the receiving facility.
4. Transport.

ALS:

1. Cardiac Monitoring.
2. Establish vascular access.
3. PRESSURE BAG ALL SALINE BOLUSES
   a. Administer a 500 ml bolus of Normal Saline to **ALL** patients regardless of Systolic Blood Pressure (SBP).
   b. If SBP remains < 90 mmHG, repeat 500 ml bolus of NS until SBP > 90 mmHG. Total amount of fluid not to exceed 2000 ml. Recheck vital signs and lung sounds after every 500 ml bolus.
   c. Give boluses in rapid succession if SBP remains < 90 mmHG.

d. Albuterol if wheezing and SOB per PD# 8026 – Respiratory Distress.

4. If SBP remains < 90 mmHg after four (4) fluid boluses:
   a. **Push Dose Epinephrine** 0.01 mg/ml (10mcg/ml).
      DOSE: 0.5-2 ml (5-20mcg) every 2-5 minutes (5-20mcg) IV/IO
      Titrate to SBP > 90 mmHg
      NOTE: Monitor SBP while administering/titrating.

Cross References:

PD# 8002 – Diabetic Emergency (Hypoglycemia/Hyperglycemia)
PD# 8020 – Respiratory Distress: Airway Management
PD# 8026 – Respiratory Distress
PD# 8038 – Shock
PD# 8060 – Stroke
Paramedic-Initiated CMS Sepsis Core Measure Bundle Prior to Hospital Arrival: A Stepwise Approach - PubMed (nih.gov)

Prehospital Antibiotics Improve Morbidity and Mortality of Emergency Medical Service Patients with Sepsis (hcahealthcare.com)