Shock / Sepsis (Adult)

CFR AND ALL PROVIDER LEVELS

1. ABCs and vital signs, including blood pressure.
2. Airway management.
3. Administer oxygen.
4. Control external bleeding. See the Bleeding / Hemorrhage Control / Impaled Object (Adult and Pediatric) protocol.
5. Elevate the legs.
6. Maintain body temperature.
7. Treat injuries as appropriate.

CFR STOP

EMT

8. Request ALS assistance.
9. Obtain a blood glucose level.
10. Transport.

EMT STOP

Paramedic

11. If the patient is demonstrating signs of inadequate ventilation:
    a. Perform Advanced Airway Management.
    b. For conscious patients, use procedural sedation options.
12. For suspected tension pneumothorax, follow Appendix O (Needle Decompression of Tension Pneumothorax).
13. Intravascular access.
14. Crystalloid fluid:
    a. For non-cardiogenic shock: Administer up to 3 liters, via a macro-drip.
    b. For cardiogenic shock: Administer a 250 ml bolus.
        i. A 250 ml bolus may be repeated once for a total of 500 ml of crystalloid fluid.
15. Begin cardiac monitoring.
16. Perform, record & evaluate a 12 Lead EKG.
17. For patients who remain in shock after the administration of a crystalloid bolus, either by clinical symptoms, or by persistent hypotension (systolic BP < 90 mmHg or mean arterial pressure < 65 mmHg). Administer ONE of the following, titrated to a systolic BP greater than 90 mmHg or mean arterial pressure (MAP) greater than 65 mmHg:
    a. Epinephrine 10 mcg IV bolus, slowly over 1 minute. Repeat epinephrine 10 mcg IV every 5 minutes as needed.
    OR
    b. Norepinephrine 2 mcg/min IV infusion. Titrate as needed to a maximum dose of 20 mcg/min IV.
    OR
    c. Dopamine 5 mcg/kg/min IV infusion. Titrate as needed to a maximum dose of 20 mcg/kg/min IV.
18. Monitor vital signs every 2-3 minutes.

19. *For patients with illness of a presumed infectious source meeting Sepsis Criteria. (Refer to Key Points/Considerations):*
    a. Accurate documentation of pre-arrival fluid administration is required.
    b. Measure and record lactate level (if available).
    c. Measure and record oral temperature (if available), also consider using last temperature obtained at patient's facility (if available).

Paramedic STOP

Medical Control Options

1. Administer any of the above Standing Orders.

Key Points / Considerations

1. Prepare push-dose epinephrine by mixing 1 ml of epinephrine 1:10,000 with 9 ml of Normal Saline. Concentration will then be 1:100,000, and the 10 mcg dose will be 1 ml of this mixed solution.
2. An unstable dysrhythmia must be treated prior to initiation of a 12 lead EKG.
3. Vasopressor infusions must be administered using an IV flow regulating device. These infusions should be administered preferably via an 18 gauge or larger IV catheter, or an IO. Standard IV administration sets are not considered IV flow regulating devices.
4. Check lung sounds after each bolus of crystalloid. Stop IV fluid if patient develops rales or other signs of pulmonary edema.

CRITERIA FOR SEVERE SEPSIS / SEPTIC SHOCK

5. SBP < 90 mmHg OR MAP < 65 mmHg OR unexplained altered mental status
6. At least two (2) of the following must be present, without evidence of shock from cardiac or traumatic etiologies:
    a. Respiratory rate > 20 OR $PaCO_2$ < 32 mmHg
    b. HR > 110/min
    c. Temperature
        i. Skin: Tactile fever/hypothermia
        OR
        ii. Temperature > 100.4°F (38°C), if thermometer is available
    d. Point of care lactate > 4 mmol/L
    e. White blood count > 12,000 or < 4,000 cells/mm^3 or > 10% bands, if available.