Section: Adult Medical
Subject: SEPSIS AND SEVERE LIFE-THREATENING INFECTIONS
Section #: 340.30
Issue Date: December 1, 2017
Revision Date:
Approved By: Michael Lozano, Jr., M.D., HCFR Medical Director

1. Initiate standard HCFR assessment protocols with the following required steps:
    a. Establish IV or IO access – at least one site
    b. Continuous cardiac monitoring; including pulse oximetry
    c. Continuous end tidal CO_2 ($ETCO_2$) monitoring

2. Identify the presence of a documented or suspected infection.
    a. This can be either noted on report from a licensed healthcare provider or based upon the paramedic's own clinical assessment.

3. If there is documented or suspected infection perform all of the following steps:
    a. Obtain a measurement of the patient's temperature.
    b. Obtain an end tidal CO_2 ($ETCO_2$) measurement
    c. Administer the Quick Sequential Organ Failure Assessment (qSOFA) Screening Tool.[1] Each positive finding is worth one (1) point:
        i. Altered mentation.
        ii. Systolic blood pressure <100mmHg
        iii. Respiratory Rate > 22/min
            1. Any assisted ventilations with a BVM or more invasive device shall be considered a positive finding for Respiratory Rate

4. Sepsis Alert notification
    a. A "Sepsis Alert" will be called to the receiving hospital for those patients meeting <u>all three</u> of the following criteria:
        i. Presence of a documented or suspected infection;
        ii. qSOFA score $\geq$ 2; <u>and</u>
        iii. $ETCO_2 \leq 25$ mmHg[2]

5. Early Goal Related Treatment
    a. If the patient is demonstrating signs of end organ dysfunction or hypoperfusion (i.e. hypotension, narrow pulse pressure, tachypnea, tachycardia, delayed capillary refill, or mottled skin appearance[3]) - administer Normal Saline (0.9% NaCl) 30 mL/kg IV/IO as a bolus.
        i. Endpoints:
            1. Full 30 mL/kg bolus administered
            2. Development of pulmonary edema
                a. Monitor closely for early signs of acute pulmonary edema or fluid overload.
        ii. If signs of end organ dysfunction persist after the first bolus, additional boluses may be administered as long as the above endpoints have not been reached.

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[1] Finkelsztein, Eli J., et al. "Comparison of qSOFA and SIRS for Predicting Adverse Outcomes of Patients with Suspicion of Sepsis outside the Intensive Care Unit." Critical Care, vol. 21, 26 Mar. 2017, p. 1.

[2] Hunter, Christopher L., et al. "A Prehospital Screening Tool Utilizing End-Tidal Carbon Dioxide Predicts Sepsis and Severe Sepsis." American Journal of Emergency Medicine, vol. 34, 01 May 2016, pp. 813-819.

[3] Herlitz, Johan, et al. "Suspicion and Treatment of Severe Sepsis. An Overview of the Prehospital Chain of Care." Scandinavian Journal of Trauma, Resuscitation & Emergency Medicine, vol. 20, no. 1, Jan. 2012, p. 42.

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b. Documentation requirements:
    i. Document vital sign measurements and at least after every 500 mL of fluid
    ii. With respect to the fluid bolus, document all of the following on the Sepsis Screening Form:
        1. The fluid type (i.e. Normal Saline, 0.9% NaCl)
        2. Time the fluid was started and stopped
        3. Total amount of fluid infused.
    iii. Complete the Sepsis Screening Form in its entirety
        1. Leave the original at the receiving facility
        2. Scan a copy into the ePCR.

6. ALS evaluation/transport criteria:
    a. All patients who meet Sepsis Alert criteria are ALS