DESERT REGIONAL MEDICAL CENTER

The Hospital You Trust To Care For Those You Love

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Sepsis Nursing Protocol

PURPOSE:

To provide a mechanism for implementation of rapid assessment and initiation of treatment for Sepsis outpatients and inpatients as recommended in the Guideline: Sepsis Identification and Management in Adults.

DEFINITIONS:

A. "Time Zero" is the time at which the clock starts for purposes of tracking the 3-hour and 6-hour Intervention Bundles as described below.

1. Emergency Department: Time Zero is defined as the First Net arrival time in the emergency department, not the triage time.

2. Other locations: Time Zero is defined as the time of the first positive screen for either severe sepsis, severe sepsis with hypoperfusion, or septic shock.

B. Systemic Inflamatory Response Syndrome (SIRS) Criteria

1. Heart rate greater than 90 beats per minute

2. Hyperthermia, fever greater than 38 degrees Centigrade or Hypothermia, temperature less than 36 degrees Centigrade

3. Tachypnea, respiratory rate greater than 20 respirations per minute

4. Leukocytosis, White Blood Count greater than 12,000 uL. Leukopenia, White Blood Count less than 4,000 uL

5. Elevated C-reactive protein (CRP)

6. Altered mental status

7. Hyperglycemia, glucose greater than 140 mg/dL in the absence of diabetes

C. Sepsis Definitions: SIRS screening results

1. Sepsis: suspicion or documentation of infection PLUS two or more SIRS criteria

2. Severe Sepsis: Sepsis PLUS one or more organ dysfunctions

3. Severe Sepsis with hypoperfusion: Severe Sepsis in the presence of hypoperfusion: systolic blood pressure less than 90, Mean Arterial Pressure less than 65, systolic blood pressure decrease of greater than 40 mmHG AND/OR lactate greater than 4.

4. Septic Shock: Severe Sepsis with hypoperfusion that requires vasopressors after initial fluid resuscitation of at least 30 ml/kg to maintain blood pressure and signs of improved perfusion.

D. Three-hour Sepsis Bundle

1. STAT Lactate level.

2. Obtain blood cultures times 2 - before the first dose of any antibiotic and not to be drawn via indwelling vascular catheter.

3. Insert 2 large bore peripheral IV catheters to adequately administer fluid resuscitation.

4. Administer STAT fluid resuscitation: a minimum of 30 ml/kg of Normal Saline or Lactated Ringers to be completed in one hour, at a rate of 500cc per 15 minutes via two peripheral lines; if any of the following apply: systolic blood pressure less than 90, Mean Arterial Pressure less than 65, systolic blood pressure decrease of greater than 40 mmHg from baseline, or Lactate greater than 4.

5. Obtain provider order and administer broad spectrum antibiotics.

E. Six-Hour Sepsis Bundle

1. Monitor central venous pressure.

2. Apply vasopressors to maintain Mean Arterial Pressure greater 65 mmHg.

3. Re-assess volume status and tissue perfusion (if hypotension persists after initial fluid bolus or if initial lactate was greater than or equal to 4 mmol/L.) Obtain provider order for further fluid resuscitation.

4. Re-measure lactate level if initial lactate was elevated greater than 4. Recheck lactate level every 4-6 hours until within normal limits to monitor progress. Notify provider.

5. Repeat volume status and tissue perfusion assessment consisting of:

a. Vital signs, and cardiopulmonary exam and capillary refill evaluaton and peripheral pulse examination and skin exam or

b. Two of the following four: Central venous pressure measurement, central venous oxygen measurement, bedside cardiovascular ultrasound, or passive leg raise - fluid challenge.

6. Dynamic assessment of fluid responsiveness with passive leg raise or fluid challenge.

PROCESS:

A. This Protocol will apply only to adult patients (18 years and older) being cared for in the emergency department, observation unit, or inpatient environment EXCEPT for the following: Acute Rehabilitation, Skilled Nursing, and Obstetrical Units.

B. All Adult inpatients with confirmed or suspected infection will be screened for severe sepsis through the application of criteria for Systemic Inflammatory Response Syndrome (SIRS).

C. The Sepsis Nursing Protocol will be implemented by the Registered Nurse when a patient meets at least two of the SIRS criteria when screened upon admission to the emergency department, observation unit or inpatient environment, each shift and as needed if the patient's condition changes.

PROTOCOL:

A. Emergency Department

1. Triage Nurse will initiate SIRS Screen and if positive:

a. Obtain Point-of-care Lactate level, and if results greater than 2, then

b. Notidy ED Physician to fire Sepis Power Plan. Notify attending Physican regarding admission.

c. Begin resuscitation efforts of 3-hour Sepsis treatment bundle to be completed in the ED prior to admission.

e. Continue resuscitation efforts to include the 6-hour Sepsis treatment bundle, to be completed within 6 hours of Time Zero, for patients determined to be in septic shock.

f. Disposition: patients with Severe Sepsis with hypoperfusion or Septic Shock should have treatment continued in an intensive care or progressive care unit until their condition stabilizes.

g. Time Zero: This is the First Net arrival time to the ED. However, if the first sepsis screen is negative, Time Zero begins when the sepsis screen becomes positive.

B. Intensive Care Units

1. Nurse will initiate SIRS Screen upon admission and every shift (q12 hrs) and if positive:

a. Obtain a Stat Lactate level,, if result greater than 2, estabiish Time Zero.

b. Notify Intensivist to fire Sepsis Power Plan. Notify attending physician.

c. Immediately begin resuscitation 3-hour Sepsis treatment bundle, to be completed within 3 hours of Time Zero.

d. Continue resuscitation efforts to include the 6-hour Sepsis treatment bundle, to be completed within 6 hours of Time Zero for patients determined to be in septic shock.

C. Inpatient/Observation Units

1. Nurse will initiate SIRS Screen upon admission and every shift (q12 hrs) and if positive:

a. Obtain STAT Lactate Level, and if result greater than 2,

b. Call a Code Sepsis and this time becomes Time Zero.

c. Intensivist (Code Sepsis team) to fire Sepsis Power Plan, and immediately begin resuscitation 3-hour Sepsis treatment bundle, to be completed within 3 hours of Time Zero.

e. Notify attending physician.

f. Continue resuscitation efforts to include the 6-hour Sepsis treatment bundle, to be completed within 6 hours of Time Zero for patients determined to be in septic shock

g. Ongoing monitoring and regular re-assessments of volume status and perfusion should be conducted and documented.

h. Disposition: patients with Severe Sepsis with hypoperfusion or Septic Shock should have treatment continued in an intensive care or progressive care unit until their condition has stabilized

REFERENCES:

Surviving Sepsis Campaign www.survivingsepsis.org

Tenet kNOw Sepsis Campaign https://sharepoint.etenet.com/sites/ClinicalQlty/Sepsis/SitePages/Home.aspx

All revision dates: 7/16/2015

Attachments:

Sepsis Identificaton and Management in Adults Guidleline

Committee	Approver	Date
Document Control Committee	Clinical Quality Improvement Director [PD]	7/16/2015
Medical Executive Committee	Medical Staff Services Director [PD]	7/16/2015
Medical Care Policy	Assistant, Medical Care Policy [PD]	7/16/2015
Governing Board	Chief Executive Officer [PD]	7/16/2015