CLINICAL HOUSE WIDE PROTOCOL

**Lactic Acid Protocol**

<table>
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<tr>
<th>Applicable Campus: Salem Hospital</th>
<th>Department Name: Critical Care - Sepsis Affinity</th>
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<tr>
<td><strong>Final Approval:</strong> December 2015</td>
<td><strong>Effective:</strong> December 2015</td>
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<td><strong>Next Review Date:</strong> December 2018</td>
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List all stakeholder(s) and date of approval:

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Date</th>
<th>Reviewed</th>
<th>Revised</th>
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<tr>
<td>MEC</td>
<td>12/2015</td>
<td>X</td>
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<tr>
<td>Clinical Operations</td>
<td>12/2015</td>
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Describe the most recent revision made to this policy, procedure or protocol & why:
A new protocol for lactic acid testing.

Definitions:
- See Appendix A for Severe Sepsis and/or Septic Shock Indicators*

**POLICY**

It is the policy of Salem Hospital to provide the health care team with standing orders for in-patient laboratory testing of serum lactate under the specific circumstances outlined in Surviving Sepsis Campaign. When a Lactic Acid Protocol order is checked and activated by the provider the following procedures take place.

**PROTOCOL**

**Steps / Key Points in Lactic Acid Protocol:**

1. Determine if a lactic acid has been drawn, note time of draw and note lactic acid.
2. If not yet done, obtain a lactic acid STAT.
3. Evaluate lactic acid level: if greater than 2 mmol/L, obtain a second lactic acid at 5 hours after the first lactic acid level.

Appendix A. Typical Clinical Indicators for Progression of Sepsis to Severe Sepsis and/or Septic Shock in the presence of a suspected or documented infection

1) **GENERAL VARIABLES**
   - Fever (>38.3C)
   - Hypothermia (core temp <36C)
   - Heart rate >90/min or more than two SD above the normal value for age
     - Tachypnea > 20
   - Altered mental status
   - Significant edema or positive fluid balance (>20ml/kg over 24 hr)
   - Hyperglycemia (plasma glucose > 140mg/dL, or 7.7 mmol/L) in the absence of diabetes

2) **INFLAMMATORY VARIABLES**
   - WBC count > 12,000uL
   - WBC COUNT < 4000uL
   - Normal WBC count with greater than 10% immature forms
   - Plasma C-reactive protein more than two SD above the normal value

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Plasma Procalcitonin *more than two SD above the normal value (See SH Lab policy titled Procalcitonin on the Vidas attached)

3) HEMODYNAMIC VARIABLES
   - Arterial hypotension (SBP <90mm/Hg, MAP <70mg/Hg, or an SBP decrease > 40 mm/Hg in adults or less than two SD below normal for age)

4) ORGAN DYSFUNCTION VARIABLES
   - Arterial hypoxemia (PaO2/FiO2<300)
   - Acute oliguria (urine output< 0.5mL/kg/hr for at least 2 hrs despite adequate fluid resuscitation)
   - Creatinine increase >0.5mg/dL or 44.2 umol/L
   - INR >1.5 or PTT>60s
   - Illeus
   - Thrombocytopenia Platelet count < 100,000 uL
   - Hyperbilirubinemia plasma total bilirubin > 4mg/dL or 70 umol/L

5) TISSUE PERFUSION VARIABLES
   - Hyperlactatemia >2.0 mmol/L (SH) New International Guidelines > 1.0 mmol/L
   - Decreased capillary refill or mottling

Equipment/Supplies: N/A

Form Name & Number or Attachment Name: N/A

Author Position: Sepsis Affinity Team, Critical Care CNS, Sepsis Coordinator

Review/Revision Authority: Critical Care Nursing Director

Expert Consultant(s): Salem Pulmonary Associates, Emergency Department Physicians, Patient Safety

References:


Is there a Regulatory Requirement: Yes ☒ No ☐
If yes, insert requirement information here: CMS Core Measures for Sepsis

Review History (No Changes):

Revision History:
New 12/15

Policy, Procedure or Protocol Cross Reference Information: