**Sepsis Core Measure Checklist**

**Date of Admission:** __________ (Time Zero= Time at which infection is identified/documentated + 2 SIRS present with 6 hours of one another)

<table>
<thead>
<tr>
<th>ED Team</th>
<th>ED Team</th>
<th>ED Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpt Team</td>
<td>Inpt Team</td>
<td>Inpt Team</td>
</tr>
</tbody>
</table>

- □ Infection identified/documentated in ED with relevant Sepsis orders initiated.
- □ Lactate Result (not order) IF >2.0 mmol/l
- □ Documentation calling this Severe Sepsis
- □ Repeat Lactate result (order 2 hrs after prior draw time through "Infection" Order Set)

- □ Blood Cultures drawn (not ordered) prior to ATB
- □ Broad Spectrum (IV) ATB initiated (not ordered) within 3 hrs of Time Zero, *Selection from Empiric Broad Spectrum ATB List (on Green Sheet)*

- □ SIRS Template used in note: □ SIRS criteria indicated, □ Suspected Site(s) Indicated, □ In-hospital concurrent diagnosis indicated, □ Culture indicated, □ 30mL/kg Target documented, □ ATB/Medications indicated

- □ Assessment secondary to Organ Dysfunction indicating Severe Sepsis (*Lactate >2.0 mmol/l, INR >1.5, PTT > 60 sec, Platelet <100,000, Bilirubin >2, Creatinine >2, Urine output < 0.5 mL/kg/hr for 2 hrs, SBP <90, MAP <65, SBP decrease by 40 from previous "normal")-but not when chronic or due to medications

**IF Severe Sepsis:** □ Consider 30 mL/kg Crystalloid Fluid Bolus (0.9% NS or LR), □ Repeat Lactate result (order 2 hrs after prior draw time through "Infection" Order Set) which will order 2 additional Lactates.

**IF Septic Shock:** Lactate ≥ 4.0 and/or Sepsis induced hypotension (SBP < 90 mmHg, MAP < 65 mmHg, or SBP decrease by 40 from previous "normal")-but not when chronic or due to medications

- □ Documentation calling this "Septic Shock with Severe Sepsis"
- □ 30 mL/kg Crystalloid Fluid Bolus (0.9% NS or LR) for hypotension or Lactate ≥ 4.0 ≥ 125 mL hr,
- □ 30 mL/kg Target Achieved within 6 hrs of Time Zero of Lactate ≥ 4.0 and/or Sepsis induced hypotension

- □ Vasopressors (Norepinephrine 1st choice unless compelling reason for alternative)
- □ Within 6 hrs of Time Zero of Lactate > 4.0 and/or Sepsis Induced hypotension
- □ Repeat Volume Status and Tissue Perfusion Assessment Note consisting of including Vital Signs, Cardiopulmonary, Capillary Refill, Pulse and Skin findings (*you may write the note after 6 hrs so long as you document the time you examined the patient which must be > 6 hrs*)
- □ Examination within 6 hrs of Time Zero of Lactate ≥ 4.0 and/or Sepsis Induced hypotension

**Top Issues of Focus**

| □ Broad Spectrum ATB AND Delivered within 3 hrs. | □ ED Provider not thinking/documenting/acting upon Sepsis treatment plan. |
| □ Infection/Sepsis Screen not suspected while in ED. | □ 30 mL/kg ordered as one target volume based upon weight rather than small repeated boluses. |
| □ Inpatient delay in timing of ATB administration from time ordered in latic. | □ Communication from Inpatient provider to ED team on additional Sepsis orders on admission. |
| □ Blood Cultures within 3 hrs. | □ Lack of 6 hr Repeat Assessment note. |

**Reviewer Signature** ____________________________ **Date** __________ **Time** __________

**Reviewed With Signature** ____________________________ **Date** __________ **Time** __________
**INFECTION-SEPSIS SPECTRUM (ISS) CHECKLIST**

AS DEFINED BY JOHNSON MEMORIAL HOSPITAL SEPSIS COMMITTEE:

**Time Zero** = Time at which Infection is suspected/diagnosed + 2 or more SIRS present within 6 hours of one another

**SEPSIS** = Suspicion/diagnosis of infection + 2 or more SIRS (that cannot be excluded as due to the infection)

**SEVERE SEPSIS** = Suspicion/diagnosis of infection + 2 or more SIRS + organ dysfunction (including Lactate >2.0)

**Date:________________________ TIME ZERO: ____________________________**

<table>
<thead>
<tr>
<th>All of the following within (3) Hours of Time Zero</th>
<th>Draw Time:</th>
<th>Result Time:</th>
<th>Result:</th>
<th>Print Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Lactate result (not order)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐ Blood Cultures drawn (prior to ATB) (not ordered)</td>
<td></td>
<td>1st Set Time:</td>
<td>2nd Set Time:</td>
<td>Print Name</td>
</tr>
<tr>
<td>☐ IV Antibiotic (ATB) initiated (not ordered)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AND within (3) Hours of Time Zero**

<table>
<thead>
<tr>
<th>☐ 30 mL/kg Crystalloid Fluid Bolus (0.9% NS or LR) for Hypotension or Lactate ≥4 (consider for Severe Sepsis)</th>
<th>Total volume given over 4-5 hours</th>
<th>Target time to complete 30mL/kg:</th>
<th>Amount infused in ED:</th>
<th>Print Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight kg _______ X 30 = __________________________ mL predicted</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**AND within (6) Hours of Time Zero**

<table>
<thead>
<tr>
<th>☐ Repeat Lactate result if initial is &gt; 2.0 mmol/L (order 2hrs after prior draw time)</th>
<th>Draw Time:</th>
<th>Result Time:</th>
<th>Result:</th>
<th>Print Name</th>
</tr>
</thead>
</table>

**SEVERE SEPSIS WITH SEPTIC SHOCK CHECKLIST**

(all of the above measures plus the following)

**SEPTIC SHOCK** = Lactate ≥ 4.0 and/or Sepsis-induced hypotension (SBP less than 90 mmHg, MAP less than 65 mmHg, or SBP decrease greater than 40 mmHg from baseline) in the hour after fluid resuscitation (30mL/kg) for ≥ 2 consecutive BP readings

**Date:________________________ SEPTIC SHOCK CLOCK: ____________________________**

<table>
<thead>
<tr>
<th>Within (6) Hours of Septic Shock Clock</th>
<th>Time:</th>
<th>Print Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Vaspressors</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<tr>
<th>Within (6) Hours of Septic Shock Clock</th>
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<th>Print Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Repeat Volume Status and Tissue Perfusion Assessment Note (written by NP/PA/MD/DO) consisting of including vital signs, cardiopulmonary, capillary refill, pulse, and skin findings</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This form to remain in front of patient’s chart until after six hour beyond time zero, and then forward it to Gina Croxford in the Quality Department. Not a part of the permanent medical record, DO NOT SCAN.
Sepsis: Empiric Antibiotic Selection Pathway

Early initiation of appropriate therapy is associated with improved outcomes in severe sepsis and septic shock and these guidelines are intended for use in patients with these syndromes only. All patients with suspected sepsis should have appropriate cultures obtained, although antimicrobial therapy should not be unduly delayed for this. Delays in initiating active therapy have been associated with worsened clinical outcomes and so antimicrobial therapy should be initiated as rapidly as possible. The addition of a second antimicrobial agent can expand the empiric coverage for resistant Gram-negative pathogens. This combination therapy has been advocated by international consensus guidelines (Surviving Sepsis Campaign) in critically ill patients in severe sepsis or septic shock. The goal of active therapy in this situation has been associated with an increased mortality. Despite the clear mortality benefits of initially active therapy in critically ill patients, combination therapy remains controversial. The addition of a second agent has not been definitively associated with improved outcomes and depending on the severity of illness and patient population may be associated with worsened outcomes. Therefore, the addition of a second agent (e.g., tobramycin added to anti-pseudomonal beta-lactam) should be based on patient severity of illness, the likelihood of isolating resistant Gram-negative pathogens, and the potential adverse effects of additional therapy. Antibiotic therapy should be narrowed to target the specific pathogen when culture results become available. Patients who have milder forms of infection may be more appropriately treated with narrow spectrum agents and antibiotic choices in these patients should be based upon current guidelines and clinical judgment. De-escalation to a single active agent is strongly recommended when culture and susceptibility results return.

**BIAT:** extended interval antimicrobial dosing panel

**+** denotes that the drug is optimal and use should be based on assessment of severity of infection and likelihood of resistance or isolation of the pathogen for the agent targets.

<table>
<thead>
<tr>
<th>Suspected Source of Infection</th>
<th>Suggested Antibiotics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown (includes catheter related blood stream infection)</td>
<td>Piperacillin/tazobactam 4.5g IV q8h, infused over 4 hours OR Cefepime 1 gm IV q8h <strong>PLUS</strong> Vancomycin IV per pharmacy consult (initial 25mg/kg loading dose) <strong>+/-</strong> Tobramycin 7 mg/kg IV EIAD</td>
</tr>
<tr>
<td>Urinary Tract</td>
<td>Not at risk for multi-drug resistant pathogens. Ceftriaxone 1g IV q24h (2 grams if &gt; 80 kg) <strong>+/-</strong> Gentamicin 7 mg/kg EIAD</td>
</tr>
</tbody>
</table>

Patients should be assessed for risk of multi-drug resistant pathogens. Suggested risk factors for resistant pathogens:

1. Residence in long-term care facility (LTCF)
2. Recent receipt of broad spectrum antibiotics
3. History of MDU, urinary pathogen
4. History of recent UTI
5. Nosocomial UTI

**Skin/Soft Tissue:**

Piperacillin/tazobactam 4.5g IV q8h infused over 4 hours **PLUS** Vancomycin IV per pharmacy consult (initial 25mg/kg loading dose) **+/-** Gentamicin 900mg IV Q24H

**Necrotizing Skin/Soft Tissue:**

Gas Gangrene or Necrotizing Fasciitis

Add Clindamycin if Streptococcal suspected or evidence of toxic shock syndrome present

<table>
<thead>
<tr>
<th><strong>Suggested Skin/Soft Tissue</strong></th>
<th><strong>Suggested Antibiotics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plus</strong></td>
<td><strong>Vancomycin</strong> preferred (initial loading dose of 25mg/kg OR Daptomycin 6 mg/kg IV) <strong>+/-</strong> Clindamycin 900mg IV Q24H</td>
</tr>
<tr>
<td>Severe beta-lactam allergy (anaphylaxis, hives):</td>
<td><strong>PLUS</strong> Aztreonam 2 gm IV q8h</td>
</tr>
<tr>
<td>Vancomycin IV per pharmacy consult (initial 25mg/kg loading dose) <strong>+/-</strong> Clindamycin 900mg IV Q24H</td>
<td></td>
</tr>
</tbody>
</table>

**Intra-abdominal Source**

Piperacillin/tazobactam 4.5g IV q8h infused over 4 hours **PLUS** Cefepime 1 gm IV q8h **PLUS** Metronidazole 500 mg IV q8h **PLUS** Gentamicin OR Tobramycin 7 mg/kg IV EIAD **PLUS** Vancomycin IV per pharmacy consult (initial 25mg/kg loading dose) **+/-** Severe beta-lactam allergy (anaphylaxis, hives): **PLUS** Aztreonam 2 gm IV q8h **PLUS** Metronidazole 500 mg IV q8h **PLUS** Vancomycin IV per pharmacy consult (initial 25mg/kg loading dose) **+/-** Gentamicin OR Tobramycin 7 mg/kg IV EIAD

**Community Acquired Pneumonia**

Plasma X 1 gram (2 grams if > 80 kg) IV q24h **PLUS** Azithromycin 500 mg IV q24h

Severe beta-lactam allergy (anaphylaxis, hives): **PLUS** Levofloxacin 750 mg IV q24h

**Community Acquired Pneumonia – Pseudomonas Risk Factors**

Excludes nursing home patients.

<table>
<thead>
<tr>
<th><strong>Suggested Antibiotics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceftriaxone 1 gm IV q6h <strong>PLUS</strong> Piperacillin/tazobactam 4.5g IV q8h infused over 4 hours <strong>PLUS</strong> Tobramycin 7 mg/kg IV EIAD</td>
</tr>
<tr>
<td>Azithromycin 500 mg IV q24h <strong>PLUS</strong> Levofloxacin 750 mg IV q24h</td>
</tr>
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</table>
INFECTION-SEPSIS SPECTRUM (ISS) CHECKLIST
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SEVERE SEPSIS = Suspected/diagnosis of infection + 2 or more SIRS + organ dysfunction (including Lactate >2.0)

Date: ____________

ALL of the following within (3) Hours of Time Zero

☐ Lactate result (not order)

☐ Blood Cultures drawn (prior to ATB) (not ordered)

☐ IV Antibiotic (ATB) initiated (not ordered)

AND within (3) Hours of Time Zero

☐ 30 mL/Kg Crystalloid Fluid Bolus (0.9% NS or LR) for Hypotension or Lactate 24 (consider for Severe Sepsis)

Total volume given over 4-6 hours
Target time to complete 30mL/Kg:

Weight kg X 30 = mL predicted

Amount infused in ED:

AND within (6) Hours of Time Zero

☐ Repeat Lactate result if initial is > 2.0 mmol/L (order 2hrs after prior draw time)

SEVERE SEPSIS WITH SEPTIC SHOCK CHECKLIST
(all of the above measures plus the following)

SEPTIC SHOCK = Lactate > 4.0 and/or Sepsis-induced hypotension (SBP less than 90 mmHg, MAP less than 55 mmHg, or MAP decrease greater than 40 mmHg from baseline) in the hour after fluid resuscitation (30mL/Kg) for 2 consecutive BP readings

Date: ____________

SEPTIC SHOCK CLOCK: Within (6) Hours of Septic Shock Clock

☐ Vasopressors

Time: ____________

Within (6) Hours of Septic Shock Clock

☐ Repeat Volume Status and Tissue Perfusion Assessment Note (written by NP/PA/MD/DO) consisting of including vital signs, cardiopulmonary, capillary refill, pulse, and skin findings

This form to remain in front of patient’s chart until after six hour beyond time zero, and then forward to it
Gina Crawford in the Quality Department. Not a part of the permanent medical record, DO NOT SCAN.
**Sepsis: Empiric Antibiotic Selection Pathway**

1. **Severe Hypotension**
   - No specific guidelines provided.

2. **Septic Shock**
   - No specific guidelines provided.

3. **Organ Failure**
   - No specific guidelines provided.

**Suggested Antibiotics**

- **Piperacillin/Tazobactam 4.5 g IV q6h, infused over 2 hours OR Carbenicillin 1.5 g IV q6h**
- **Vancomycin 40 mg/kg IV q12h per pharmacy order (initial 25 mg/kg loading dose)**
- **Tobramycin 7 mg/kg IV q24h**
- **Severe beta-lactam allergy (penicillin, monobactam)**
  - **Adrenocortical** OR **Ceftriaxone 2 g IV q24h**
  - **Vancomycin 40 mg/kg IV q12h (initial 25 mg/kg loading dose)**
  - **Ceftazidime 1 g IV q6h**

**Septic Arthritis**

- **Penicillin G 500 mg IM q6h**
  - **Ceftriaxone 2 g IM q24h**

**Lung Infections**

- **Piperacillin/Tazobactam 4.5 g IV q6h, infused over 2 hours OR Carbenicillin 1.5 g IV q6h**
- **Vancomycin 40 mg/kg IV q12h per pharmacy order (initial 25 mg/kg loading dose)**
- **Tobramycin 7 mg/kg IV q24h**
- **Severe beta-lactam allergy (penicillin, monobactam)**
  - **Adrenocortical** OR **Ceftriaxone 2 g IV q24h**
  - **Vancomycin 40 mg/kg IV q12h (initial 25 mg/kg loading dose)**
  - **Ceftazidime 1 g IV q6h**

**Community-Acquired Pneumonia**

- **Piperacillin/Tazobactam 4.5 g IV q6h, infused over 2 hours OR**
  - **Ceftazidime 1 g IV q6h**
  - **Tobramycin 7 mg/kg IV q24h**
  - **Vancomycin 40 mg/kg IV q12h per pharmacy order (initial 25 mg/kg loading dose)**

**Severe beta-lactam allergy**

- **Adrenocortical** OR **Ceftazidime 1 g IV q6h**
- **Vancomycin 40 mg/kg IV q12h (initial 25 mg/kg loading dose)**
  - **Ceftazidime 1 g IV q6h**

**Endocarditis**

- **Ceftriaxone 2 g IV q24h**
- **Vancomycin 40 mg/kg IV q12h (initial 25 mg/kg loading dose)**
- **Tobramycin 7 mg/kg IV q24h**

**Severe beta-lactam allergy (penicillin, monobactam)**

- **Adrenocortical** OR **Ceftazidime 1 g IV q6h**
- **Vancomycin 40 mg/kg IV q12h (initial 25 mg/kg loading dose)**
  - **Ceftazidime 1 g IV q6h**

**Candidiasis**

- **Amphotericin B 0.5 g IV q12h**

**Invasive Fungal Infections**

- **Flucytosine 100 mg/kg IV q6h**
- **Flucytosine and Amphotericin B**
INFECTION-SEPTEMIC SPECTRUM (ISS) CHECKLIST

1. Collagenase 1 pH 4.0
   - Enterotoxigenic B. cereus
   - Aeromonas
   - Campylobacter
   - Clostridium
   - Pseudomonas aeruginosa
   - Acute diarrhea
   - Severe vomiting
   - Dehydration
   - Fever
   - Shock
   - Hypoxia
   - Rhabdomyolysis
   - Lactic acidemia

2. Pneumonitis
   - Hemophiliac
   - Neutropenic
   - Myelosuppressed
   - Pulmonary edema
   - Respiratory failure
   - Hypoxia
   - Fever
   - Shock
   - Hypotension
   - Rhabdomyolysis
   - Lactic acidemia

3. Necrotizing fasciitis
   - Gas gangrene
   - Myonecrosis
   - Wound infection
   - Necrotic tissue
   - Pain
   - Fever
   - Shock
   - Hypotension
   - Rhabdomyolysis
   - Lactic acidemia

4. Septic shock
   - Hypotension
   - Lactic acidemia
   - ARDS
   - Multiorgan failure

SEVERE SEPTEMS WITH SEPTIC SHOCK CHECKLIST

1. Septic shock
2. Septicemia
3. Septic arthritis
4. Septicemia
5. Septic shock
6. Septicemia
7. Septic arthritis
8. Septicemia
9. Septic shock
10. Septicemia

This form is intended for patients with either an acute or chronic infection, and must be completed within 4 hours after presentation to the hospital.