### SEPSIS CARE FIRST SIX HOURS

#### INITIAL ORDERS

- Place patient on cardiac, BP and O2 saturation monitors
- Supplemental O2 to keep saturation greater than or equal to 93% per oxygen administration protocol
- Initiate 1-2 peripheral IV's and obtain lab samples per Sepsis studies (see below)

#### LAB AND RADIOLOGY STUDIES

- **INITIAL SEPSIS STUDIES**
  - ABG (with Lactate if available)
  - CBC, CMP, PT/INR, PTT, Blood cultures x 2, UA and culture if indicated
  - Lactate- venous or arterial
  - Portable CXR: Clinical indication: ____________________________

- **Additional Studies**:
  - EKG
  - LDH
  - Cardiac enzymes/CPK/Troponin
  - D-Dimer
  - Pro BNP
  - Type and Screen
  - Culture: Sputum, Stool, Wound

- **CT**: Clinical Indication: ____________________________
- **US**: Clinical Indication: ____________________________
- **Other**: ____________________________________________
- **Other**: ____________________________________________

#### SEVERITY DESIGNATION AND TREATMENT

- **SEPSIS** (infection plus 2 or more SIRS Criteria)
  - IV 0.9 NS ______mL/hr; Infuse ______ L then re-evaluate
  - If lactate is greater than 2, but less than 4, (even if not currently hypotensive) **advance to severe sepsis below**

- **SEVERE SEPSIS** (Sepsis plus organ dysfunction or hypoperfusion)
  - IV 0.9 NS 2L bolus (infuse in less than 30 min)
    - OR-
  - IV 0.9 NS ______ L bolus (infuse in less than 30 min)
  - If lactate is greater than 4, or if hypotension persists after fluid resuscitation, **advance to septic shock below**

- **SEPTIC SHOCK** (If lactate is greater than 4.0 or if hypotension persists after fluid resuscitation)
  - IV 0.9 NS 2L bolus (infuse in less than 30 min)
  - MD to insert central line for CVP/ScvO2 monitoring
    - Monitor CVP (goal: maintain 8-12 mmHg non-intubated or maintain 12-15 mmHg if intubated)
    - Draw Venous Blood Gas from Central Line or continuously monitor ScvO2 if sepsis catheter in place (goal: greater than 70%)
  - Continue IV NS 1L bolus every 30 min x 3 to achieve CVP goals; if no CVP line or goal not reached notify Physician after 3rd bolus

#### ADDITIONAL ORDERS

- Insert indwelling urinary catheter with urometer and monitor urine output hourly for severe sepsis and septic shock with goal of urine output greater than or equal to 0.5 ml/kg/hr

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**Date:** ____________  **Time:** ____________  **Physician Signature:** ____________________________

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**Sutter Health**
Sacramento Sierra Region

- SAFH
- SAH
- SDH
- SMCS
- SRMC
- SSMC

**Sepsis Orders**
### ANTIBIOTIC THERAPY

#### SEVERE Sepsis, Pneumonia, UTI

**With Pseudomonas Risk/MRSA**
- Levofloxacin 750 mg IV now then per pharmacy dosing
  - AND - Imipenem/Cilastatin (Primaxin) 500 mg IV now then per pharmacy dosing
  - AND - Vancomycin 20 mg/kg (up to 2 gm) IV now then per pharmacy dosing
- OR
  - Levofloxacin 750 mg IV now then per pharmacy dosing
  - AND - Cefepime 2 gm IV now then per pharmacy dosing
  - AND - Vancomycin 20 mg/kg (up to 2 gm) IV now then per pharmacy dosing
- OR
  - Substitute Linezolid 600 mg IV Q 12 h for vancomycin in above regimen

#### Sepsis, Pneumonia

**Without Pseudomonas/MRSA Risks**
- Ceftriaxone 1 gm IV Q 24 h
  - AND - Azithromycin 500 mg IV Q 24 h

#### UTI
- Ceftriaxone 1 gm IV Q 24 h
- OR
  - Levofloxacin 750 mg IV now then per pharmacy dosing

#### Abdominal Source
- Piperacillin/Tazobactam (Zosyn) 4.5 gm IV now then per pharmacy dosing
- OR
  - Imipenem/Cilastatin (Primaxin) 500 mg IV now then per pharmacy dosing

#### Oral or Soft Tissue Source
- Vancomycin 20 mg/kg (up to 2 gm) IV now then per pharmacy dosing
  - AND - Piperacillin/Tazobactam (Zosyn) 4.5 gm IV now then per pharmacy dosing

#### Central Nervous System
- Ceftriaxone 2 gm IV Q 12 h
  - AND - Vancomycin 20 mg/kg (up to 2 gm) IV now then per pharmacy dosing
  - AND - For age above 50 Ampicillin 2 gm IV now then per pharmacy dosing

#### For Beta-lactam allergy
- Aztreonam 2 gm IV now then per pharmacy dosing
  - AND - Levofloxacin 750 mg IV now then per pharmacy dosing
- Add Vancomycin 20 mg/kg (up to 2 gm) IV now then per pharmacy dosing to above regimen
- Add Linezolid 600 mg IV Q 12 h to above regimen
- Add Flagyl 500 mg IV Q 8 hours for abdominal or soft tissue source

### VASOPRESSOR AND INOTROPE THERAPY

- **Norepinephrine IV**
  - Start at 2 mcg/min for MAP less than 65 mmHg to a goal of MAP 65-70 mmHg.
  - If MAP sustained greater than 70 mmHg, titrate drug off. Notify physician for dose greater than 10 mcg/min.

- **DOPAmine IV**
  - Start at 5 mcg/kg/min if MAP less than 55 mmHg to a goal MAP 65-70 mmHg.
  - If MAP sustained greater than 70, titrate off drug. Notify MD for dose greater than or equal to 15 mcg/kg/min.

- **Vasopressin IV**
  - After 6 liters fluids add Vasopressin 0.03 units/ min if Norepinephrine dose greater than or equal to 5 mcg/min or DOPAmine dose greater than or equal to 7.5 mcg/kg/min. (do not titrate vasopressin)
  - If Map greater than 70 mmHg and off Norepinephrine and/or DOPAmine- wean Vasopressin off.

- **DOBUTamine IV**
  - Start at 2 mcg/kg/min and titrate to a goal ScVO2 greater than 70%, Max Dose: 20 mcg/kg/min or Max HR: 120.

**Date:_______  Time:_______  Physician Signature:______________________________**

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*Patient Identification*

- [ ] SAFH
- [ ] SAH
- [ ] SDH
- [ ] SMCS
- [ ] SRMC
- [ ] SSMC

*Sepsis Orders*
ONGOING SEPSIS ORDERS

☐ Diagnosis: Simple Sepsis, Source: ________________________________
  Admit to inpatient status:  ☐ Telemetry  ☐ Medical  ☐ Medical/Surgical
  Continue antibiotic therapy per first six hour order set
  See separate orders – Do NOT continue orders below.

☐ Diagnosis: Severe Sepsis/Septic Shock, Source: ________________________________
  Admit to inpatient status: ICU
  Continue Severe Sepsis Orders below.
  
Date: ___________ Time: ___________ Physician Signature: ________________________________

Severe Sepsis Orders:
✓ Continue First Six Hours orders, including antibiotic therapy and vasopressor/inotrope therapy.
✓ VS including CVP hourly or per unit protocol.
✓ Monitor and record urine output hourly.

Labs and Tests:
Every 6 hours X 24 hours
✓ CBC, CMP, PT, PTT, Lactate
✓ Venous blood gas from central line (ScvO2) now and every 6 H and PRN if no continuous readout available
Additional Labs and tests
✓ ABG PRN
☐ Spot urine for sodium and creatinine
☐ CK/ MB/ Troponin I Q 6 hours x 3 if initial values elevated
☐ Pro BNP
✓ Notify physician or eICU upon arrival to ICU and upon receipt of 6 hour and 12 hour lab results and include the following: Hemodynamic values, vasopressor use, fluid volume status, ventilator status, abnormal labs.

☐ Central line insertion: Prepare for central line insertion if not already inserted.

Fluid Orders:
✓ Continuous Maintenance Fluid: -PLUS- ✓ Bolus Fluid:
  0.9 Normal Saline continuously, titrate for CVP:
  250 mL/hr for CVP less than 12
  150 mL/hr for CVP 12-15
  60 mL/hr for CVP 16-20
  TKO for CVP greater than 20
  0.9 Normal Saline 1 liter every 20-30 minutes until:
    CVP greater than 8 for non vented patient
    CVP greater than 12 for vented patient
-OR-
  10 Liters has been administered
  Call MD for further orders if 10 liters of bolus fluid has been administered without correction of CVP.

Medications:
☐ Hydrocortisone: Start 50 mg IV every 6 hr. Discontinue Hydrocortisone after 48 hrs.
  Consider Drotrecogin Alfa (activated) (Xigris) for patients with an APACHE II score more than 25 or multi-organ failure.
☐ Screen for Drotrecogin Alfa (activated) (Xigris) per institutional protocol

Protocols:
☐ Glucose Management: See glucose management/insulin orders
☐ Sedation-Analgesia per hospital protocol
☐ Initiate mechanical ventilation protocol for intubated patients

Other: _________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________

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Other: _________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________

Date: ___________ Time: ___________ Physician Signature: ________________________________

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Sepsis Orders