Core Measures
SEPSIS UPDATES

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Severe Sepsis and Septic Shock

Based on Our Understanding of the New Core Measures
Severe Sepsis and Septic Shock Criteria We Have Created a Process Map and Disease Continuum
Adult Sepsis Screening Tool

Complete Adult Screens for ALL pts ≥18y/o
Nursing Sepsis Protocol

For adults with normal renal function:
1) Measure lactate level.
2) Obtain blood cultures x 2 prior to administration of antibiotics.
3) Administer broad spectrum antibiotics within one (1) hour of sepsis presentation or positive sepsis screen.
4) Administer 30 mL/kg crystalloid for hypotension and/or lactate 36 mg/dL.

Surviving Sepsis Campaign

- **Vital Signs**
  - Maintain Mean Arterial Pressure (MAP) > 65 mmHg
    - Routine, Until discontinued starting Today at 1630 Until Specified

- **Nursing**
  - Antibiotics must be administered within 1 hour of sepsis identification and after cultures have been obtained.
    - Routine, Until discontinued starting Today at 1630 Until Specified
    - Antibiotics must be administered within 1-hour of sepsis identification.

- **Labs**
  - Now Labs
    - Lactate
      - STAT, Once First occurrence Today at 1630
      - New collection
      - Redraw Lactate 3 hours after 1st lactate level if first lab result is >18 mg/dl
        - STAT, Once First occurrence Today at 1630
  - Microbiology
    - Blood Cultures x 2 from different sites:
      - Blood cultures x 2 at separate sites:
        - Blood culture #1
          - STAT, Once First occurrence Today at 1630
        - Blood culture #2
          - STAT, Once First occurrence Today at 1630
Update to Care Connect Physician Order Set

### IV Fluids

- **IV Fluids**
  - sodium chloride 0.9% IV soln
  - lactated ringers IV soln

- **IV Fluid Bolus**
  - IV fluid should be at least 30 mL/kg to achieve fluid resuscitation to be completed within the first 6 hours. If unable to maintain SBP >90 after initial fluid resuscitation, consider vasopressor therapy.
    - sodium chloride 0.9% bolus
      - 30 mL/kg, Intravenous, Aa needed for, until SBP >90, x*** (doses).
    - lactated ringers bolus
      - 30 mL/kg, Intravenous, Aa needed for, until SBP >90, x*** (doses).

### Medications

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UCLA Health System
Sepsis Core Measures are Coming

October 1, 2015

**Sepsis Core Measures effective 10/01/2015**

**Pt meets criteria for severe Sepsis and/or Septic Shock Time of Presentation or TOP**

**COMPLETE WITHIN 1 HOUR (max)**
Following initial time of presentation (TOP)

- **Initial Lactate Level** (per nursing protocol, no co-sign required)
  - If initial lactate >18mg/dL
    - **REPEAT** serum Lactate level per nursing protocol if most recent lactate level >18mg/dL

- **Blood Cultures X 2 sets** (per nursing protocol, no co-sign required)
  - *NOTE: 4 bottles total; minimum of 8-10mL per bottle
  - *RN to contact MD/NP to request orders for IV Abx & fluid bolus*

- **+3 HOURS**

- **Initiate VASOPRESSORS (contact MD for orders)**
  - Vasopressors to be initiated for hypotension unresponsive to fluid bolus of 30mL/kg

- **COMPLETE WITHIN 6 HOURS (max)**
Following initial time of presentation (TOP)

- **Administer IV broad spectrum antibiotic or other approved combination of antibiotics** (RN to contact MD to request orders for Abx)
  - If hypotension persists within 1 hour of completing 30mL/kg fluid bolus, continue interventions. If pt no longer hypotensive after 30mL/kg, STOP!

- **If SBP <90 or >40 below baseline or MAP <65**
  - **Initial Lactate level >2.6mg/dL**
    - Total bolus minimum of 30mL/kg must complete in <3hrs from TOP; Administer only 0.9% NS or LR fluids

- **If INITIAL Lactate is 2.35mg/dl, must perform repeat volume & tissue perfusion assessment**

**AND**

**Repeat volume & tissue perfusion assessment including (ALL must be documented by physician/NP):**
- Complete Vital Signs, AND
- Cardiopulmonary exam, AND
- Capillary refill evaluation, AND
- Peripheral pulse evaluation, AND
- Skin exam
- OR-

**Any two of the following:**
- Central venous pressure (CVP) measurement
- Central venous oxygen (scVO2) measurement
- Bedside cardiovascular ultrasound
- Passive leg raise fluid challenge <500mL NS/LR fluids
SEPSIS: Defining a Disease Continuum

**SIRS**
ANY ≥ 2 of the following
- Temp >38.3°C (101°F) or <36°C (96.9°F)
- HR > 90/minute
- RR > 20/minute
- WBC > 12,000 or <4,000 or >10% bands

**SEPSIS**
≥2 SIRS (+) suspected or confirmed infection (i.e.-UTI, PNA, wound etc.)

**Severe Sepsis**
Sepsis (+) NEW or ACUTE onset organ dysfunction &/or failure OR provider documentation of severe sepsis

**Septic Shock**
Severe Sepsis (+) hypotension (SBP ≤90 or ↓ ≥40mm/Hg) OR lactate ≥36mg/dL OR provider documentation of septic shock

*Initiate Severe Sepsis/Septic Shock: Early Management Bundle as soon as patient meets criteria for Severe Sepsis &/or Septic Shock*
Core Measures Bundle Elements

- (*) **Severe Sepsis – Implement bundle within 3 hours of TOP**
  - Draw lactate
  - Draw Blood Cultures x 2 sets (4 bottles) before abx
  - Administer broad spectrum IV abx

- (**) **Septic Shock – Implement bundle within hour of TOP**
  - Initiate all elements required for Severe Sepsis plus:
    - Administer IVF bolus of 0.9% NS or LR 30ml/kg (complete within 3 hours of TOP)
    - If hypotension persists within 1 hour of completion of IVF bolus, administer vasopressors
    - and perform volume and tissue perfusion assessment.
    - If initial lactate > 18, repeat lactate within 3 hours after initial lactate
    - If initial lactate ≥ 36, repeat lactate within 3 hours after initial lactate AND perform
    - volume and tissue perfusion assessment.

- For additional details, see Process Map of Severe Sepsis & Septic Shock: Early Management Bundle
NEW BUNDLES AND CMS “CORE MEASURES” TO BEGIN OCTOBER 2015

• To be completed within **three hours** of time of presentation*:
  • Measure lactate level
  • Obtain blood cultures prior to administration of antibiotics
  • Administer broad spectrum or approved combination of antibiotics
  • Administer 30ml/kg crystalloid for hypotension or lactate ≥4mmol/L or ≥ 36

* “Time of presentation” is defined as the time of earliest chart annotation consistent with all elements severe sepsis or septic shock ascertained through chart review.
To be completed within **six hours** of time of presentation:

- Administer vasopressors (for hypotension that does not respond to initial fluid resuscitation) to maintain a mean arterial pressure (MAP) ≥65mmHg

- In the event of persistent hypotension after initial fluid administration (MAP < 65 mm Hg) or if initial lactate was ≥4 mmol/L, re-assess volume status and tissue perfusion and document findings according to Table 1

- Re-measure lactate if initial lactate elevated > 2 OR >18
Document reassessment of volume status and tissue perfusion with either:

• Repeat focused exam (after initial fluid resuscitation) by licensed independent practitioner MD/PA/NP including vital signs, cardiopulmonary, capillary refill, pulse and skin findings
  • Or
    • Two of the following: Measure CVP
    • Measure ScvO2
    • Bedside cardiovascular ultrasound
    • Dynamic assessment of fluid responsiveness with passive leg raise or fluid challenge
Time Zero

• Will always be when the chart annotation suggests signs and symptoms are all present

• May be from nursing charts, lab flow sheets, physician documentation, anything with a time stamp

• Will equal triage time if all signs and symptoms are present at triage
Two Clocks

• Severe Sepsis: **Three** hour and **six** hour Counters

• Septic Shock: **Three** hour and **six** hour Counters

• Clinical example follows
A patient developed severe sepsis at 3 p.m. but did not become hypotensive and fail to respond to fluids until 5 p.m.

Does the shock clock start at 5 p.m.?

If so, then does the six hour window to complete the physical exam requirement begin at 5 p.m. with the shock clock at 3 p.m. when severe sepsis was first noted?
Two Clocks cont.

• The **severe sepsis clock** would start with the presentation of severe sepsis (**3 p.m.**).

• The **septic shock clock** would start with presentation of septic shock (**5 p.m.**).

  • The presentation of severe sepsis at **3 p.m.** will trigger the following counters with the start time being **3 p.m.**:
    - **Sepsis Three Hour Counter** would require the following be completed by **6 p.m.**:
      - Initial lactate level measurement
      - Antibiotic administration
      - Blood cultures drawn prior to antibiotics
    - **Sepsis Six Hour Counter** would require the following to be completed by **9 p.m.**:
      - Repeat lactate if initial lactate is >2 or > 18
• The presentation of **septic shock** at **5 p.m.** will trigger the following counters with the start time being at **5 p.m.**
  
  • The **Shock Three Hour Counter** would require the following be completed by **8 p.m.**: Resuscitation with 30 mL/kg of crystalloid fluids

  • The **Shock Six Hour Counter, ONLY** if hypotension persists, would require the following be completed by **11 p.m.**: Vasopressor administration

  • Repeating the volume status and tissue perfusion assessment
Questions ?