• Not-for-profit, community-based

• One of few campuses home to adult and children’s hospitals

• Extensive residency training programs in Internal Medicine, Family Medicine, Orthopedics, General Surgery and Podiatry

• 462 beds

• Centers of excellence
  • MemorialCare Heart & Vascular Institute
  • Todd Cancer Institute
  • Joint Replacement Center
  • MemorialCare Center for Rehabilitation

• Los Angeles County’s paramedic base station & Stemi Receiving Center

• Disease Specific Certification Stroke and Advanced Diabetes
Why We’re Glad to be Here!

• Long Beach Memorial’s Not So Unique Challenges: In Sepsis Management

• Prior to 2008:
  – No consistent approach to sepsis care
  – No focus on high sepsis mortality rate
  – No active PI projects for sepsis
• What baseline data showed us

  – Sepsis unrecognized as significant portion of overall mortality rate
  – No consistent process for sepsis recognition, treatment and care
Sepsis
Areas for Improvement

• How we decided where to focus our efforts
  – Change came from the top 2009
    • Through work with IHI trigger tool and support from clinicians, we did a drill down on mortality and found 50% of the overall mortality rate was directly attributable to sepsis.
    • VP Patient Safety and supportive clinicians moved to put sepsis at the top of the priority list.
• 2009 Established a Sepsis PI Committee

• Brought together all stakeholders to break out of ‘silos’ mentality and establish partnerships for improved patient care
• Increase knowledge base for physicians, RNs and ancillary staff about sepsis treatment and care

  – Goal to incorporate guidelines of Surviving Sepsis Campaign
Developed multi-faceted audit tool for ICU patients and StAR (Rapid Response Team) RN’s to provide data for analysis on then current approach to sepsis care
Developed 3 question screening tool for ED

2010 originally paper, 2013 electronic in EPIC
• **Triage is staffed with a physician** from 08:00 to 02:00 and is covered by nursing for the interim hours

• **Developed Sepsis stat path** (abbreviated order set that covers labs and an initial fluid bolus) for faster diagnostic evaluation
### Order Sets

**SIRS ED PHYSICIAN (LMR)**

**IV FLUIDS**
- **Saline Lock, Insert / Maintain**
  - Routine, EFFICTIVE NOW for 1 occurrence, ContactPhysician if SBP < 100
- **Normal saline (BOLUS) 0.9 % injection**
  - For 30 Minutes, Intravenous, ONCE

**MEDICATIONS**
- **Medications**
  - Acetaminophen (TYLENOL) tablet or suppository

**DIAGNOSTIC TESTING**
- **Labs**
  - Comprehensive Metabolic Panel
    - STAT, ONCE First occurrence Today at 1345
  - CBC-Standard
    - STAT, ONCE First occurrence Today at 1345
  - Culture, Blood X2
    - STAT, ONCE First occurrence Today at 1345
  - Culture, Blood #1
    - STAT, ONCE First occurrence Today at 1345
  - Culture, Blood #2
    - STAT, ONCE First occurrence Today at 1345
  - Lactate
    - P STAT, ONCE First occurrence Today at 1345
  - Xtra Blue-DrawnHold
    - STAT, ONCE First occurrence Today at 1345
  - Xtra Red-DrawnHold
    - STAT, ONCE First occurrence Today at 1345
  - Xtra Pink-DrawnHold
    - STAT, ONCE First occurrence Today at 1345

**STATPATH RN SIRS ED (LMR)**

**CLINICAL ASSESSMENT**
- **Vital Signs and Clinical Assessment For Unit Standard**
  - Routine, PER UNIT STANDARD First occurrence Today at 1400
- **Cardiac monitoring**
  - Routine
- **Nursing to apply and monitor pulse oximetry**
  - Routine

**IV FLUIDS**
- **Saline Lock, Insert / Maintain**
  - Routine, PRN, Contact Physician if SBP < 100
- **NS IV solution**
  - Intravenous, CONTINUOUS

**MEDICATIONS**
- **Medications**
  - Acetaminophen (TYLENOL) tablet or suppository

**DIAGNOSTIC TESTING**
- **Labs**
  - Comprehensive Metabolic Panel
    - P STAT, ONCE First occurrence Today at 1400
  - CBC-Standard
    - STAT, ONCE First occurrence Today at 1400
  - Culture, Blood X2
    - STAT, ONCE First occurrence Today at 1400
  - Culture, Blood #1
    - STAT, ONCE First occurrence Today at 1400
  - Culture, Blood #2
    - STAT, ONCE First occurrence Today at 1400
  - Lactate
    - P STAT, ONCE First occurrence Today at 1400
  - Xtra Blue-DrawnHold
    - STAT, ONCE First occurrence Today at 1400
  - Xtra Red-DrawnHold
    - STAT, ONCE First occurrence Today at 1400
• **Instituted daily feedback** mechanism to ED personnel (physicians and nurses) from audited sepsis resuscitations
# Audit of ED Management of Sepsis Patients

**Sepsis Program, LBMMC**

<table>
<thead>
<tr>
<th>Auditor:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pt. Name:</td>
<td>Gender/Age:</td>
</tr>
<tr>
<td>CC:</td>
<td>Hrs in ED:</td>
</tr>
<tr>
<td>ED Dx:</td>
<td>Resident/NP/PA:</td>
</tr>
</tbody>
</table>

**1. Date & Time Arrival in ED:**

**2. Date & Time Departure from ED:**

**3. Disposition:**

**Severe Sepsis Criteria:** (2 or more SIRS criteria from infection and S/S of organ dysfunction)

**Septic Shock Criteria:** (Severe sepsis and persistent hypotension despite adequate fluid resuscitation necessitating use of vasopressor)

<table>
<thead>
<tr>
<th>WBC's:</th>
<th>Bands:</th>
<th>Lactate: #1</th>
<th>#2</th>
<th>#3</th>
<th>SOS Used: Y / N</th>
</tr>
</thead>
</table>

**4. Criteria:**

<table>
<thead>
<tr>
<th>Time:</th>
<th>RN:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a)</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td></td>
</tr>
<tr>
<td>c)</td>
<td></td>
</tr>
<tr>
<td>d)</td>
<td></td>
</tr>
</tbody>
</table>

**Comments:**

**5. BC's drawn prior to Abx:** Y / N

**Time:**

**Time Difference (if any):**

**6. Sepsis recognition time:**

**Wt.:** (20cc)

**7. Time Abx ordered:**

**8. Time Abx administered:**

**9. Fluid Resuscitation (30ml/kg crystalloid in first 3 hours)**

**10. Other volume expander**

**11. CVC Needed:** Y / N

**Location:**

**12. CVC:** Y / N

**If Yes, Time inserted:**

**13. Measured CVP:**

13a. CVP >8/12 IN 6 HRS

**Y / N**

**14. Persistent hypotension**

**Y / N**

**15. MAP >65 IN 6 HRS**

**Y / N**

**16. SCV02:**

Scv02 >70 in 6 hrs.

**Y / N**

**17. Hgb:**

<table>
<thead>
<tr>
<th>a) Volume resuscitation:</th>
<th>Yes / No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>e) Volume resus. done to target CVP 8-12mmHg:</td>
<td>Yes / No</td>
<td>N/A</td>
</tr>
<tr>
<td>b) BC prior to Abx:</td>
<td>Yes / No</td>
<td>N/A</td>
</tr>
<tr>
<td>f) Vasopressor started in 6 hrs if MAP &lt; 65 after f/uids:</td>
<td>Yes / No</td>
<td>N/A</td>
</tr>
<tr>
<td>c) Abx within 1 hr of recognition:</td>
<td>Yes / No</td>
<td>N/A</td>
</tr>
<tr>
<td>g) Initial lactate and q2 hrs.</td>
<td>Yes / No</td>
<td>N/A</td>
</tr>
<tr>
<td>d) CVP measured in 6 hrs if MAP &lt;65 after vol. resus:</td>
<td>Yes / No</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**18. Suspected source of infection:**

**19. 6-hr Bundle Compliance:**

<table>
<thead>
<tr>
<th>20. Coded Dx:</th>
<th>99592</th>
<th>78552</th>
</tr>
</thead>
</table>

**MemorialCare Health System**

Excellence in Health Care
## Audit of ED Management of Sepsis Patients

### Sepsis Program, LBMMC

### Date: 8/22/14

<table>
<thead>
<tr>
<th>Pt. N</th>
<th>der/Age</th>
<th>Aud</th>
<th>1/19</th>
<th>JNR/AND</th>
<th>ED Physician:</th>
<th>11/4</th>
<th>DNR/AND</th>
</tr>
</thead>
<tbody>
<tr>
<td>CC:</td>
<td>DIFF BREATHING, ALC</td>
<td></td>
<td>D B</td>
<td>BURDEN S</td>
<td>Hrs in ED:</td>
<td>RME Physician:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SEPTIC SHOCK, UNDER ETIO</td>
<td></td>
<td>4/05</td>
<td>3/01</td>
<td>Resident/NP/PA:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1: Date &amp; Time Arrival in ED:</td>
<td>8/20/14 08:29</td>
<td>2: Date &amp; Time Departure from ED:</td>
<td>8/20/14 12:37</td>
<td>Disposition: MTSW - ICU</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Severe Sepsis Criteria: (2 or more SIRS criteria from infection and S/S of organ dysfunction)</td>
<td>Room: 736A</td>
<td></td>
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<tr>
<td></td>
<td>Septic Shock Criteria: (Severe sepsis and persistent hypotension despite adequate fluid resuscitation necessitating use of vasopressor)</td>
<td></td>
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<tr>
<td></td>
<td>WBC's: 2.6</td>
<td>Bands: 735</td>
<td>Lactate:</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Ordered:</td>
<td>12.2</td>
<td>#1</td>
<td>1030</td>
<td>#2</td>
<td>11.8</td>
<td>#3</td>
</tr>
<tr>
<td></td>
<td>4. Criteria: Time:</td>
<td>RN: CHAMBERS A</td>
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</tr>
<tr>
<td></td>
<td>a) HR 120 SBP &lt; 90 (79/49)</td>
<td>0835</td>
<td>RN:</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) MAP &lt; 65 (59)</td>
<td>PR 29</td>
<td>RN:</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>c) TBili (28) TAST (84)</td>
<td>0928</td>
<td>Fall Out: Yes / No</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>d) Resp CX+ K Pneumoniae WBCx 49 c 0908</td>
<td>Perfect Care</td>
<td></td>
<td></td>
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<tr>
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<td>Comments: Resp CX+ K Pneumoniae WBCx 49 c 0908</td>
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</tr>
<tr>
<td></td>
<td>5. BCs drawn prior to Abx: Y / N</td>
<td>Time:</td>
<td>X2</td>
<td>Time Difference (if any):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Sepsis recognition time:</td>
<td>0918</td>
<td>C0955 103c</td>
<td>0912</td>
<td>MAX PTIME</td>
<td>260c</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wt. = 110 Kg =</td>
<td>2320 (20cc)</td>
<td></td>
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<tr>
<td></td>
<td>7. Time Abx ordered:</td>
<td>0912</td>
<td>MAX PTIME</td>
<td>260c</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Time Abx administered:</td>
<td>0918</td>
<td>-ROCEPH/IV</td>
<td>0954 - VANCO</td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>9. Fluid Resuscitation (30ml/kg crystalloid in first 3 hours)</td>
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<td></td>
<td>0838 - 3,480 N5 c 1034 3450c</td>
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<td></td>
<td>10. Other volume expander</td>
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<tr>
<td></td>
<td>11. CVC Needed: Y / N</td>
<td>Location:</td>
<td></td>
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<tr>
<td></td>
<td>If Yes, Time inserted:</td>
<td>8/20</td>
<td></td>
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<tr>
<td></td>
<td>12. CVC Y / N</td>
<td>13a. CVP &gt;8/12 IN 6 HRS Y N</td>
<td></td>
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<tr>
<td></td>
<td>13b. MAP &gt;65 IN 6 HRS Y N</td>
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<tr>
<td></td>
<td>14. Persistent hypotension Y N</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>15. MAP &gt;65 IN 6 HRS Y N</td>
<td></td>
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<tr>
<td></td>
<td>18. Suspected source of infection: UNCLEAR / LUNGS</td>
<td></td>
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<tr>
<td></td>
<td>19. 6-hr Bundle Compliance:</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>a) Volume resuscitation: Yes / No N/A</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) BC prior to Abx: Yes / No N/A</td>
<td></td>
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<tr>
<td></td>
<td>c) Abx within 1 hr of recognition: Yes / No N/A</td>
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<tr>
<td></td>
<td>d) CVP measured in 6 hrs if MAP &lt;65 after vol. resus: Yes / No N/A</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20. Coded Dx:</td>
<td>99592 78552</td>
<td></td>
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</tr>
</tbody>
</table>

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MemorialCare Health System
Excellence in Health Care
Sepsis Process Changes

• 2012 Created the Sepsis Coordinator position to consolidate the efforts of several other positions and enable closer oversight and coordination

  • Facility wide monitoring and auditing of sepsis resuscitations with real time feedback to physician champions
  • Manage data, maintain database, follow trends and report analysis at monthly committee meetings
  • Providing resource and education for sepsis management house wide
• 2012 Sponsored the first ever LEAN event around a disease process
  – Adapted sepsis combo system to facilitate lab response for difficult sticks and refined Code Sepsis to facilitate the implementation of the advanced bundle elements
  – Established a protocol algorithm based on SSC guidelines
Sepsis Treatment Algorithm

**SIRS Criteria**
- T <96.8°F or >100.4°F
- HR >90
- RR >20
- WBC <4 or >12 or >10% bands

**SIRS + Suspected Infection**
Triage Time = Time Zero

- **Sepsis Combo** (Call Sepracor MD)
- Complete SIRS Order Set or SIRS Stat Path

**SBP <90 or MAP <65 mmHg**
- Yes
  - 1. Room or ST.
  - 2. 20mg/kg bolus within 30 min (MD order)
  - 3. Antibiotics if indicated
- No
  - Place in room or ST if no room available

**Repeat SBP <90 or MAP =<65 mmHg**
- Yes
  - Recognition Time
  - 1. Call Code Sepsis
  - 2. Open BPT Sepsis ED First 6 Hours order set
  - 3. If lactate >4 give total of 20mg/kg if not already done
  - 4. If still hypotensive then give 2mg Bolus 10-30cc/kg IV within 30 minutes
  - 5. Repeat Lactate after bolus
  - 6. Antibiotics within 1 hour
  - 7. Document Severe Sepsis
  - 8. Physician discretion to start EGD

**SBP <90 and/or MAP <65 and/or lactate clearance <10%**
- Admit
- No
  - Insert CVC

**Sepsis Combo**
- Sepsis RN notified for patient evaluation
- SIRS Order Set or Stat Path started

**Code Sepsis**
- Lactate ≥4
- SBP ≤90 after 30 ml/kg
- Open BPT Sepsis ED First 6 Hours Order Set

**ICU**
- CVP >8
- MAP >80
- So2 >70

- Yes
  - 1. If Hb >7 transfuse PRBC
  - 2. If Hb 7-6 consider transfusion
  - 3. So2 <75
  - 4. Start Dobutamine

- No
  - Start Norephinephrine
  - S20 – 1000ml Fluid boluses q 30 min

- No
  - Start Fluids
• Established a 24/7 sepsis resource nurse role

  – If positive screen, then “S” symbol beside patient name in EPIC indicating this is a sepsis patient for visual cue (Kanban)
  – Monitors all sepsis patients to ensure that the bundle elements are being implemented timely
  – Assists primary nurse with bundle implementation patient care
  – Initiates Sepsis Handoff Report form
Sepsis Process Changes

- Evaluated the workflow of the ED and streamlined sepsis screening (screening tool placed into EPIC)

- Created new work flow
  - Sepsis screening moved from “Roomed” to Triage

- Created sepsis specific flow sheet
### Sepsis Process Changes

#### Doc Flowsheet

<table>
<thead>
<tr>
<th>MD Notification</th>
<th>1600</th>
<th>1630</th>
<th>1700</th>
<th>1730</th>
<th>1800</th>
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<tbody>
<tr>
<td><strong>Vitals</strong></td>
<td></td>
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<td>Temp</td>
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<tr>
<td>Temp Source</td>
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<td>Temp #2 Source</td>
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<td>104/62</td>
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<td>71</td>
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<td>BP Location</td>
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<td>12</td>
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<td>13</td>
<td>16</td>
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#### Vital Signs

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<th>1600</th>
<th>1630</th>
<th>1700</th>
<th>1730</th>
<th>1800</th>
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</thead>
<tbody>
<tr>
<td>Pulse Oximetry</td>
<td>97</td>
<td>100</td>
<td>99</td>
<td>99</td>
<td>99</td>
</tr>
<tr>
<td>Flow (L/Min)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen Concentration (%)</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O2 Device</td>
<td></td>
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</tr>
</tbody>
</table>

#### Additional Documentation

- MD Notification
- Critical Test Results - Notification
- Vital Signs
- Respiratory
  - Pulse Oximetry
  - Flow (L/Min)
  - Oxygen Concentration (%)
Sepsis

Process Changes

- Sepsis Handoff Report form
  - ED personnel changes
  - ED to ICU
• Minor adjustments that also needed attention

  – 2010 Line carts created and stocked in ED

  – Most frequently used ABX placed in Pyxis® for immediate availability
• 2012 Lab provides Lactic Acid results with a 30 minute or less turn around time

• 2014 turn around time is averaging 21 minutes
  – Easiest point of intervention compared to training 250 RN’s on new equipment
How we Implemented the Changes

• Key Individuals (Who)
  – Physician champions
    • 2008 Directors of ED, ICU
    • 2013 Now includes active ED staff physicians and ICU Intensivists
  – Lead Team member(s)
    • ICU CNS, PI Coordinator, Lab, Pharmacy, Respiratory, Epidemiology, Floor leaders
  – Executive Support
    • VP Patient Safety
    • VP Critical Care
    • ED Executive Director
How we Implemented the Changes

• Key Strategies (What and How)
  – Test of Change: A 6 year journey
    • Initial testing done with bundle elements individually
    • Each test period ranged from 3 weeks to 2 months
    • Trigger tool, availability of ABX, Lactate frequency
    • Formed Best Practice Team for sepsis
  – Refined
    • Each proposal was tested in turn, and changed if results warranted now have ED pharmacist 16hr/day
    • Literature review eventually led to development of Best Practice based order set
How we Implemented the Changes

• Then implemented
  – Sepsis order set was implemented with approval from Best Practice Team
  – Showing the data results from the testing helped to motivate changes in behaviors
  – Monthly data analyzed and presented at meetings. New PI projects developed from findings.
How we Implemented the Changes

Antimicrobial Therapy

Warning: Intravenous antibiotic therapy should be started within the first hour of recognition of severe sepsis, after appropriate cultures have been obtained.

Antimicrobials for:
- Community Acquired Pneumonia
- Healthcare Associated Pneumonia
- Suspected Urinary Tract Infection
- Suspected intra-abdominal infection
- Fever Neutropenia
- Suspected skin and skin structure infections
- Unknown source

IV Fluids
- NS 30 mL/kg initial bolus, then 10 mL/kg additional boluses as needed.

Volume Resuscitation Initial Boluses

Best Practice Element
- Normal saline (BOLUS) 1.77 mL/kg for 30 minutes, intravenous, STAT, 1 dose today at 1215.

Volume Resuscitation Repeat Boluses

Best Practice Element
- Normal saline (BOLUS) 0.83 mL/kg injection Saline 390 mL, for 15 minutes, intravenous, every 15 minutes. PM, 3 doses starting today at 1201. Unintended discontinuation as needed. Central venous pressure less than 8 or respiratory acidosis or systolic blood pressure less than 90 or lactate clearance less than 20%.

Volume Resuscitation
- NS 10 mL/kg bolus %,
  - for 30 minutes, intravenous, STAT, starting 1441.

IV Infusion
- NS 1,000 mL SQ T.D.S.
  - Intravenous infusion, CONTINUOUS.

Vasopressors

Vasopressor should not be used until fluid resuscitation has achieved a CVP of 8 mmHg (or 12 mmHg in ventilated patient) unless the patient is severely hypotensive, in which case vasopressors should be instituted simultaneously with fluid boluses.

Per the 2012 Surviving Sepsis Campaign guidelines, norepinephrine is the first choice vasopressor, second line therapy would be epinephrine and/or vasopressin, which may be ordered outside of the order set in line item order entry.
Barriers

• Overcome
  – Lessons learned
    • Early identification of sepsis patients anywhere on spectrum is imperative
    • Moving lab draw up on the priority list
    • Sharing experiences through Sepsis “Blog”
    • Utilization of huddles to disseminate information
Barriers

• Overcome

  – **Successful strategies**

    • Moving Sepsis screening to triage for all patients 18 years and older
    • Positive screening results in Sepsis Combo being called brings Sepsis RN and lab into picture
• Persistent Trouble Spots
  – Lessons still learning!
    • Poor documentation in chart
    • Inconsistent usage of correct terminology
    • Transfer of knowledge between nurses within unit and across units
    • Getting in sufficient fluids in first three hours
    • Adjusting from sepsis recognition time to arrival time to start clock
• What we’ve tried so far
  – Seminars on proper terminology for coding
  – Cue cards
  – Huddle updates on challenging areas, e.g. I & O charting
  – Hand off report for severe sepsis and septic shock

**Definitions:**
- **Bacteremia:** Presence of bacteria in the blood
- **Septicemia:** Presence of any pathogenic microorganism or its toxins in the blood.
- **Sepsis:** Clinical condition of **proven or suspected infection plus SIRS**
- **SIRS:** Systemic Inflammatory Response Syndrome is defined by the presence of at least 2 of the following in a “Sick” Patient:
  - Fever (>101 F) Hypothermia (< 96 F)
  - Tachypnea (>24 breaths/min)
  - Tachycardia (>90 beats/min)
  - Leukocytosis (>12K) or WBC (<4K) or 10% bands
- **Severe Sepsis:** Is Sepsis PLUS > 1 sign of **Organ Dysfunction**
- **Septic Shock:** Sepsis with hypotension
  - Arterial BP, 90mmHg or 40mmHg less than pts normal BP for at least 1 hour despite adequate fluid resuscitation – OR –
  - The need for vasopressors to maintain SBP >90mmHg or MAP > 70

**NO UROSEPSIS**—this codes to simple “UTI”
It is either “UTI” or “Sepsis secondary to UTI”

**Positive Blood cultures are NOT necessary for a Sepsis Diagnosis**
• Ah Ha’s!

– New ED staff physician champions and New ICU director finally put the right people together to initiate change

– Bringing onto the committee nursing front line positions in ED and ICU

– ED Sepsis RN efforts to get BCX before ABX resulted in 6 mos. of perfect care in core measures for PNA
• New Ideas
  – Sepsis blog
  – Utilize simulation program for all new hires and Critical Care orientees
  – Change outlook on incoming patients to presumed sepsis until proven otherwise. Need to include in differential on common cases where sepsis might get overlooked, e.g., MI, de-compensated CHF/COPD
• **How you made data collection “doable”**
  
  – 2008 Implemented EPIC EMR system
  – 2009 ICU created audit tool (paper)
  – 2011 Created daily reports of suspected ED sepsis cases for auditing monitored by PI personnel
  – 2012 Created position of sepsis coordinator with duties that include daily audits and feedback to physicians and nurses in ED
  – 2012 ED Created audit tool (paper)
  – 2014 Created Super Database with Sepsis Datamart report including 60+ metrics
  – 2015?? Datamart report in real time
• **What you discovered in the process**
  
  – Portions of chart aren’t searchable e.g. MAR
  
  – The right report (Datamart) shortens time for auditing
The Value of Participating in this PSF Collaborative

• How showing your data internally helped drive success
  – Putting the data front and center and helped to create concrete goals

• Statistical Results-
  – From baseline data (37.01%) in Dec. 2008 challenged to reduce mortality from sepsis 25% by 2010.
  – Latest Bold Goal (July 2014) reduce sepsis mortalities by 45% to reach 20.4% mortality rate by June 2015. Must have two consecutive quarterly reports to achieve goal
  – July mortality rate 19%
  – Year-to-date mortality rate 22%
• Conclusions-
  – Education is an ongoing active process with short directed learning exercises to focus attention on opportunities for improvement
  – Capturing data related to mortality helps keep attention focused on goal of mortality reduction
  – Consistent PI project implementation helps improve outcomes
The Value of Participating in this PSF Collaborative

QUESTIONS?
The Value of Participating in this PSF Collaborative

Thank You!