MHA/KHC
Sepsis Core Measure – SEP1 Bundle – Clinical and Abstraction Tips
Core Measure – SEP1 Bundle
Clinical and Abstraction Tips

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Objectives

- Review the SEP-1 Sepsis Core Measures
- Sep-3 definitions
- Discuss update to SEP-1 for July
- Discuss common issues/questions related to interpretation of the measures
  - Time zero
  - Documentation of suspected infection
  - Timing of antibiotics
  - Blood cultures
  - Fluid bolus
  - Reassessment
  - Redraw Lactate
- Open discussion about what facilities are doing to improve compliance with core measures
Severe Sepsis: A Significant Healthcare Challenge

- Hospitalizations have doubled 2000-2008**
- Most costly reason for hospitalization in 2009**
  - 15.4 billion in aggregate hospital cost
- 1 out of 23 patients in hospital had septicemia**
- Major cause of morbidity and mortality worldwide
  - Leading cause of death in noncoronary ICU (US)\textsuperscript{1}
  - 10th leading cause of death overall (US)\textsuperscript{2*}
- In the US, more than 500 patients die of severe sepsis daily

*Based on data for septicemia
†Reflects hospital-wide cases of severe sepsis as defined by infection in the presence of organ dysfunction

**AHRQ Healthcare cost & Utilization Project October 2011
### Table 2. Ten conditions with the most all-cause, 30-day readmissions for Medicare patients (aged 65 years and older), listed by total number of readmissions in descending order, 2011

<table>
<thead>
<tr>
<th>Principal diagnosis for index hospital stay*</th>
<th>Number of readmissions</th>
<th>Readmissions as a percentage of total Medicare readmissions</th>
<th>Total cost of all-cause, 30-day readmissions (in millions), $</th>
<th>Readmission total cost as a percentage of total costs of Medicare readmissions</th>
<th>Readmission rate (per 100 admissions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestive heart failure; nonhypertensive</td>
<td>134,500</td>
<td>7.3</td>
<td>1,747</td>
<td>7.3</td>
<td>24.5</td>
</tr>
<tr>
<td>Septicemia (except in labor)</td>
<td>92,900</td>
<td>5.1</td>
<td>1,410</td>
<td>5.9</td>
<td>21.3</td>
</tr>
<tr>
<td>Pneumonia (except that caused by tuberculosis or sexually transmitted disease)</td>
<td>88,800</td>
<td>4.8</td>
<td>1,148</td>
<td>4.8</td>
<td>17.9</td>
</tr>
<tr>
<td>Chronic obstructive pulmonary disease and bronchiectasis</td>
<td>77,900</td>
<td>4.2</td>
<td>924</td>
<td>3.8</td>
<td>21.5</td>
</tr>
<tr>
<td>Cardiac dysrhythmias</td>
<td>69,400</td>
<td>3.8</td>
<td>835</td>
<td>3.5</td>
<td>16.2</td>
</tr>
<tr>
<td>Urinary tract infections</td>
<td>56,900</td>
<td>3.1</td>
<td>621</td>
<td>2.6</td>
<td>18.1</td>
</tr>
<tr>
<td>Acute and unspecified renal failure</td>
<td>53,500</td>
<td>2.9</td>
<td>683</td>
<td>2.8</td>
<td>21.8</td>
</tr>
<tr>
<td>Acute myocardial infarction</td>
<td>51,300</td>
<td>2.8</td>
<td>693</td>
<td>2.9</td>
<td>19.8</td>
</tr>
<tr>
<td>Complication of device; implant or graft</td>
<td>47,200</td>
<td>2.6</td>
<td>742</td>
<td>3.1</td>
<td>19.0</td>
</tr>
<tr>
<td>Acute cerebrovascular disease</td>
<td>45,800</td>
<td>2.5</td>
<td>568</td>
<td>2.4</td>
<td>14.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>718,100</strong></td>
<td><strong>39.1</strong></td>
<td><strong>9,371</strong></td>
<td><strong>39.0</strong></td>
<td><strong>19.6</strong></td>
</tr>
</tbody>
</table>

* Clinical Classifications Software (CCS) label

[HCUP (AHRQ) April 2014](https://www.hcup-us.ahrq.gov/reports/statbriefs/sb172-Conditions-Readmissions-Payer.pdf)
SEP-1: Sepsis Core Measures

- Began with October, 2015 discharges
- Additional guidelines for abstraction came out February, 2016 that should be applied to cases back to October
  - Left up to the facility if they reabstract charts from October
- July changes now in effect for patients discharged after July 1st.
SEP-1

TO BE COMPLETED WITHIN 3 HOURS OF TIME OF PRESENTATION †:

1. Measure lactate level
2. Obtain blood cultures prior to administration of antibiotics
3. Administer broad spectrum antibiotics
4. Administer 30ml/kg crystalloid for hypotension or lactate ≥4mmol/L

† “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 6 HOURS OF TIME OF PRESENTATION:

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

6. 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.

7. Re-measure lactate if initial lactate elevated.
TABLE 1

DOCUMENT REASSESSMENT OF VOLUME STATUS AND TISSUE PERFUSION WITH:

Either
- Repeat focused exam (after initial fluid resuscitation) by licensed independent practitioner 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
Old Definitions
(But will still be used for Sep-1)

- **Sepsis**: presence of infection (suspected or confirmed) with systemic manifestations of infection
- **Severe Sepsis**: Sepsis-induced tissue hypoperfusion or organ dysfunction
- **Septic Shock**: Hypotension that persists despite adequate fluid resuscitation

*CMS has stated that they have no plans to change to the new definition for the SEP-1 core measures*
Sepsis is: ‘life-threatening organ dysfunction caused by a dysregulated host response to infection’

Sepsis-3 does away with:
- SIRS criteria (sepsis is pro- and anti-inflammatory)
- Severe sepsis (sepsis = the old severe sepsis)
- Antiquated concepts: sepsis syndrome; septicemia

Sepsis-3 codifies the quantification of organ dysfunction through the SOFA score (Sequential Organ Failure Assessment)

Septic shock: vasopressor-dependent hypotension + lactate >2

Sepsis-3 includes clinical criteria to predict life-threatening disease

Sepsis 3: Singer et al, JAMA 2016. PMID: 26903338
Sepsis-3 Workflow

Singer et al, JAMA 2016. PMID: 26903338

New Definitions: Sep 3

- **Infection**: Invasion of a sterile host by a microorganism without organ dysfunction.

- **Sepsis** is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection.
  - (qSOFA >2 (non-ICU); SOFA >2 (ICU))

- **Septic shock** is defined as a subset of sepsis in which underlying circulatory and cellular metabolism abnormalities are profound enough to substantially increase mortality.
  - Require vasopressor to maintain MAP >65 and lactate >2

**Q SOFA**
- Respiratory rate >22/min
- Altered mentation
- Systolic blood pressure <100mmHg

**SO WHAT DO WE DO NOW?**
Keep doing what you are doing and consider measuring q-SOFA and SOFA scores in addition to current practice to assess high risk of death until CMS changes or large prospective studies are performed.

Singer M et al. JAMA, 2016;315(8):801-810
SEP-1 CHANGES AS OF JULY 1ST
1. **Current-**
   Administrative Contraindication to Care- Documentation of refusal of blood draw, fluid administration, or antibiotic administration. No time frame.

2. **New-**
   Administrative Contraindication to Care, Severe Sepsis-Documentation of refusal of blood draw, fluid administration, or antibiotic administration prior to or within 6 hours following presentation of severe sepsis.

3. **New-**
   Administrative Contraindication to Care, Septic Shock-Documentation of refusal of blood draw, fluid administration, or vasopressor administration prior to or within 6 hours following presentation of septic shock.
SEP-1 changes V 5.1
Apply to 7/1/16 discharges

2. Current-
   Directive for Comfort Care, Severe Sepsis-Physician/APN/PA documentation of comfort measures only was prior to or within 3 hours of the presentation of severe sepsis

New-
   Directive for Comfort Care or Palliative Care, Severe Sepsis-Physician/APN/PA documentation of comfort measures only or palliative care was prior to or within 3 hours of the presentation of severe sepsis.

Current-
   Directive for Comfort Care, Septic Shock-Physician/APN/PA documentation of comfort measures only was prior to or within 6 hours of the presentation of septic shock.

New-
   Directive for Comfort Care or Palliative Care, Septic Shock-Physician/APN/PA documentation of comfort measures only or palliative care was prior to or within 6 hours of the presentation of septic shock.
SEP-1 changes V 5.1
Apply to 7/1/16 discharges

3. Current-
Discharge Disposition-Only asks for discharge time for expired patients and excluded if < or = 3 hours.

New-
Discharge Disposition-Now asks for discharge time for everyone. If time is < or = 3hours, it will be excluded.

4. Current-N/A

New-
Initial Hypotension-Was initial hypotension present 6 hours prior to or within 6 hours following Severe Sepsis? Requires 1 low reading. If Yes, go to Crystalloid Fluids. If No, go to Documentation of Septic Shock.
SEP-1 changes V 5.1
Apply to 7/1/16 discharges

5. **Current-N/A New--**Documentation of Septic Shock-Was physician/APN/PA documentation of septic shock within 6 hours following the presentation of severe sepsis present in the medical record? If there was physician/APN/PA documentation of confirmed, suspected, or possible septic shock within 6 hours of Severe Sepsis Presentation Date and Time, select Yes and go to Crystalloid Fluid, then Septic Shock Present. If No, abstraction finished, this will Pass and be in Numerator.

6. Blood Culture-attempts to collect in time frame of 48 hours prior to or 3 hours will get credit.

7. Broad Spectrum or Other Antibiotic Selection-If abx from table not started within 3 hours of severe sepsis but there is lab report or physician documentation with causative organism and susceptibility, and that abx was given within 3 hours, choose Value 1. There is no time frame for this documentation.
SEP-1 changes V 5.1
Apply to 7/1/16 discharges

8. Exception for C.Diff-If causative organism is identified as C.Diff, susceptibility testing is not required, and if the patient is receiving oral vancomycin with or without oral or IV Flagyl, choose Value 1-this will pass.

9. Crystalloid Fluid Administration- Added Plasmalyte or Normosol to acceptable list of .9NS Sodium Chloride, NS and LR. These fluids with electrolytes added will also count. Bolus or Wide Open may replace the infusion rate or infusion duration. If there is documentation the infusion was stopped prior to 30ml/kg being completely infused, select Value 2.

10. Crystalloid Fluid Administration- Round the weight in kilograms to nearest whole number. 66.5kg=67, 66.4=66.

11. Severe Sepsis- If there is physician documentation that SIRS or sign of organ dysfunction is normal for that pt, is due to a chronic condition, due to an acute condition that is not an infection, or is due to a medication, it should not be used. Inferences should not be made, physician documentation is required. No time frame for this documentation.
12. Persistent Hypotension- If there are 2 consecutive low blood pressure readings, followed by 1 or more normal readings, select value 2 which is No. More chances to say No to persistent hypotension. (low is SBP < 90 or MAP < 65)

13. For Severe Sepsis Present-If an infection is documented as present, suspected, or possible but within 6 hours following the initial documentation of the infection, there is physician/APN/PA documentation indicating the infection is not present, disregard the documentation of the infection.

14. For Severe Sepsis Present-If there is documentation of clinical criteria being met or physician/APN/PA documentation of severe sepsis and within 6 hours there is additional physician/APN/PA documentation indicating the patient does not have severe sepsis, choose Value 2 which is No.

15. Septic Shock Present-If there is documentation of clinical criteria being met or physician/APN/PA documentation of septic shock and within 6 hours there is additional physician/APN/PA documentation indicating the patient does not have septic shock, choose Value 2 which is No.

16. Vasopressor administration-intraosseous (IO) route also acceptable.
SEP-1  Time Zero

• Will always be when the chart annotation suggests signs and symptoms are all present (all within 6 hrs).

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

• Will = triage time if all signs and symptoms are present at triage.
SEP-1 Two Clocks

- Severe Sepsis: 3 Hour and 6 Hour Counters
- Septic Shock: 3 Hour and 6 Hour Counters
- Clinical Example follows
SEP-1 Two Clocks

• A patient developed severe sepsis at 3:00 pm but did not become hypotensive and fail to respond to fluids until 5:00 pm, does the “shock clock” start at 5 pm?

• If so, then does the physical exam requirement “between hours 3-6” begin at 5 pm with the shock clock or at 3 pm when severe sepsis was first noted?
SEP-1 Two Clocks

- The severe sepsis clock would start with the presentation of severe sepsis (3:00 pm) and the septic shock clock would start with presentation of septic shock (5:00 pm).
- The presentation of severe sepsis at 3:00 pm will trigger the following counters with the start time being 3:00 pm:
  - "Sepsis Three Hour Counter" would require the following be completed by 6:00 pm:
    - Initial lactate level measurement
    - Antibiotic Administration
    - Blood Cultures prior to antibiotics
  - "Sepsis Six Hour Counter" would require the following be completed by 9:00 pm:
    - Repeat lactate if initial lactate is > 2
SEP-1 Two Clocks

- The presentation of Septic Shock at 5:00 will trigger the following counters with the start time being at 5:00 pm:
  - "Shock Three Hour Counter" would require the following be completed by 8:00 pm:
    - Resuscitation with 30 mL/kg of crystalloid fluids
  - "Shock Six Hour Counter" ONLY If hypotension persists would require the following be completed by 11:00 pm:
    - Vasopressor administration
    - Repeating the volume status and tissue perfusion assessment (item F)
## Severe Sepsis / Septic Shock Clinical Pathway

### Patient with severe sepsis

#### Initial Lactic Acid
- **Yes**
  - Recheck lactic acid, additional labs ordered by physician
  - Serum lactic acid drawn

#### Blood Culture
- **Yes**
  - Blood cultures X 2
  - Time 1: __________
  - Time 2: __________

#### Establish IV Access
- **Yes**

#### Broad Spectrum Antibiotic
- **Yes**
- Administer antibiotic regimen

#### Source Control
- **Yes**
- If lactic acid greater than or equal to 4 mEq/L or SBP less than 90 mmHg or MAP less than baseline or MAP less than 85 mmHg, administer:
  - 30mL/kg fluid bolus over 1 hour or as fast as possible, unless urine output less than 0.5mL/kg/hr active treatment for heart failure or previous consent for fluid challenge for speed of bolus
  - Monitor heart rate and immediate follow-up with echocardiogram

#### Proceed to decision grid.

### Decision Grid

#### Initial Lactic Acid
- **Yes**
  - Yes: Patient with hypotension
  - **NO**
    - Initial 30 mL/kg fluid bolus and/or lactic acid greater than 4 mEq/L

#### Blood Culture
- **Yes**
  - Blood cultures X 2
  - Time 1: __________
  - Time 2: __________

#### Establish IV Access
- **Yes**

#### Broad Spectrum Antibiotic
- **Yes**
  - Administer antibiotic regimen

#### Source Control
- **Yes**
  - If lactic acid greater than or equal to 4 mEq/L or SBP less than 90 mmHg or MAP less than baseline or MAP less than 85 mmHg, administer:
    - 30mL/kg fluid bolus over 1 hour or as fast as possible, unless urine output less than 0.5mL/kg/hr active treatment for heart failure or previous consent for fluid challenge for speed of bolus
  - Monitor heart rate and immediate follow-up with echocardiogram

### Septic Shock Bundle

- **Yes**
  - Apply vasopressor immediately for hypotension after fluid bolus

### 0-6 Hours

- **Yes**
  - Measure lactic acid and initial lactic acid in greater than 2mEq/L, within 4 hours of meeting severe sepsis criteria
  - Continue screening

### Continue Screening

- **Yes**
  - Repeat lactic acid and/or SBP less than 90 mmHg, within 4 hours of meeting severe sepsis criteria

### 0-24 Hours

- **Yes**
  - Reassess for volume status and urine output at least every 4 hours
  - Consider additional vasopressors as necessary
  - Repeat lactic acid every 4 hours or until normalized (less than or equal to 2mEq/L)
  - Ensure adequate source control
  - Assess for risk factors for abdominal compartment syndrome:
    - Fluid resuscitation greater than 5 L
    - 24 hours of care

### For all patients with MODS (P/F ratio less than 200):

- **Yes**
  - Patient on mechanical ventilation
  - Is the tidal volume equal to ideal body weight in the first 24 hours
  - Is the static or plateau inspiratory pressures less than 30 cmH2O in the first 24 hours

### 24-72 Hours

- **Yes**
  - Reassess need for broad spectrum antibiotics and IV fluids based on culture reports
  - Re-evaluate need for inotropic agents and IV fluids
  - Resume screening after 72 hours

### Nurse

<table>
<thead>
<tr>
<th>Nurse</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurse</td>
<td>Time</td>
</tr>
<tr>
<td>Physician</td>
<td>Time</td>
</tr>
</tbody>
</table>
Any questions about time zero??
Documenting presence of infection

PROBLEM:
1. If the nurse check yes they suspect and infection but the physician says not infection, it is still abstracted as an infection. CMS takes the positive, even if it is ruled out, if the chart is coded as sepsis, severe sepsis or septic shock—-THIS is now not an issue as of JULY with the changes
2. Also—if ED physician documents severe sepsis or septic shock in the note without a time Then the time at the bottom of the note will be time of presentation

How is everyone dealing with this?
Timing of Antibiotics

- **What are the issues you are facing?**
  - Is there a delay in ordering antibiotic?
  - Is there a delay in hanging the antibiotics?
  - Is the first antibiotic given from Column B of antibiotics for combination therapy or not a broad spectrum?

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminoglycosides</td>
<td>Cephalosporins (1st and 2nd Generation) OR</td>
</tr>
<tr>
<td>OR</td>
<td>Clindamycin IV OR</td>
</tr>
<tr>
<td>Aztreonam OR</td>
<td>Daptomycin OR</td>
</tr>
<tr>
<td>Ciprofloxacin</td>
<td>Glycopeptides OR</td>
</tr>
<tr>
<td></td>
<td>Linzolid OR</td>
</tr>
<tr>
<td></td>
<td>Macrolides OR</td>
</tr>
<tr>
<td></td>
<td>Penicillins</td>
</tr>
</tbody>
</table>

**NOTE:** Metronidazole (Flagyl) is not represented on any table because it is not approved for monotherapy and if given, must be given with 2 other combination antibiotic therapy drugs. Since giving these 2 antibiotic therapy drugs will allow Value “1” to be chosen, the metronidazole administration may be disregarded.
Blood Cultures

- Are there certain infections that blood cultures are not typically drawn for? And then the patient goes into severe sepsis and the antibiotic was already given
- What are other reasons for not doing blood cultures?
- What strategies have you tried to increase compliance?
Fluid Bolus

- Q: I know that crystalloid fluids can be administered prior to, time of or after presentation of septic shock (up to 3 hrs). Is there a beginning time frame to start abstracting fluids prior to?
- A: Currently there is not a time frame for how much time prior to septic shock presentation the fluids can be used. However any fluids given prior to must be given at a rate of greater than 125 mL/hour. Fluids running at a rate slower than this are not acceptable to count toward the 30 mL/kg volume.

How are people dealing with fluid bolus for patients with ESRD or heart failure?
Reassessment

• Table 1: have choice of reassessment or 2 of the following: can be done after fluid bolus before 6 hours
  – Reassessment note: has to include specific elements, including VS with temperature
    • Can you get the items from different notes?
  – 2 of the following:
    • CVP and ScO2: meet with nursing documentation or lab documentation
    • Dynamic fluid responsiveness and Echo require provider documentation

What questions do you have related to this measure?
What strategies are you using to meet this measure?
Redraw Lactate

- Required for any lactate >2 (both severe sepsis and septic shock)

What strategies are people using to improve compliance with this measure?
Resources for CMS SEP-1

- Sepsisgroups Digest
  - [http://lists.sepsisgroups.org/listinfo.cgi/sepsisgroups-sepsisgroups.org](http://lists.sepsisgroups.org/listinfo.cgi/sepsisgroups-sepsisgroups.org)

- Archived CMS webinars: includes slides, transcripts, FAQ’s

- SEP-1 Fact Sheet on QualityNet
- [https://www.qualitynet.org/dcs/ContentServer?c=Page&pagemanage=QnetPublic%2FPage%2FQnetTier3&cid=1228772869636](https://www.qualitynet.org/dcs/ContentServer?c=Page&pagemanage=QnetPublic%2FPage%2FQnetTier3&cid=1228772869636)

- Hospital Inpatient Questions & Answers Tool on QualityNet
  - [https://cms-ip.custhelp.com/](https://cms-ip.custhelp.com/)
    - Specifications Manual Resources on QualityNet
    - Specifications Manual, Version 5.1
    - Release Notes, Version 5.1
    - Summary of Changes to SEP-1 for Version 5.1
    - Sepsis (SEP-1) Additional Notes for Abstraction Version 5.1

SUMMARY OF SEP-1 CHANGES
MANUAL VERSION 5.1

From SEP-1 Early Management Bundle, Severe Sepsis/Septic Shock: v5.1 Measures Updates
Bob Dickerson; June 29, 2016
<table>
<thead>
<tr>
<th>Data Element(s)</th>
<th>Brief Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Contraindication to Care, Septic Shock, Administrative Contraindication to Care, Severe Sepsis</td>
<td>• Renamed Administrative Contraindication to Care data element to account for administrative contraindication to care related only to severe sepsis</td>
</tr>
<tr>
<td></td>
<td>• Added new data element to account for administrative contraindication to care related only to septic shock</td>
</tr>
<tr>
<td></td>
<td>• Clarified time frame for administrative contraindication is prior to or within 6 hours following presentation</td>
</tr>
<tr>
<td>Broad Spectrum or Other Antibiotic Administration Selection</td>
<td>• Clarified guidance for treating with antibiotics for a known causative organism and susceptibility within 3 hours following presentation of severe sepsis</td>
</tr>
<tr>
<td>Cardiopulmonary Evaluation Performed, Cardiopulmonary Evaluation Date, and Cardiopulmonary Evaluation Time</td>
<td>• Clarified that this be performed and documented by a Physician/APN/PA</td>
</tr>
<tr>
<td>Central Venous Oxygen Measurement</td>
<td>• Clarified guidance for multiple measurements</td>
</tr>
<tr>
<td>Central Venous Oxygen Measurement, Central Venous Oxygen Measurement Date, and Central Venous Oxygen Measurement Time</td>
<td>• Clarified that measurement must be obtained within 6 hours after presentation of septic shock.</td>
</tr>
<tr>
<td></td>
<td>• Clarified acceptable documentation terms (e.g. via “central catheter” or “CVP catheter”)</td>
</tr>
</tbody>
</table>
## Focused Exam

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Brief Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capillary Refill Examination Performed, Capillary Refill Examination Date,</td>
<td>• Clarified that focused exam and reassessment data elements do not need to be performed</td>
</tr>
<tr>
<td>Capillary Refill Examination Time, Passive Leg Raise Exam Performed, Passive</td>
<td>by a physician/APN/PA</td>
</tr>
<tr>
<td>Leg Raise Exam Date, Passive Leg Raise Exam Time, Peripheral Pulse Evaluation</td>
<td>• Clarified that focused exam and reassessment data elements must be documented by a</td>
</tr>
<tr>
<td>Evaluation Performed, Peripheral Pulse Evaluation Date, Peripheral Pulse</td>
<td>physician/APN/PA</td>
</tr>
<tr>
<td>Evaluation Time, Skin Examination Performed, Skin Examination Date, and Skin</td>
<td></td>
</tr>
<tr>
<td>Examination Time</td>
<td></td>
</tr>
</tbody>
</table>
## Crystalloid Fluid Administration

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Brief Summary of Changes</th>
</tr>
</thead>
</table>
| **Crystalloid Fluid Administration** | • Clarified that crystalloid fluids need to be ordered and administered  
• Added PlasmaLyte and Normosol as acceptable fluids  
• Clarified what is required for Physician/APN/PA orders of fluids  
• Clarified that fluids may be a single or multiple orders  
• Clarified that the terms “bolus” and “wide open” are acceptable if equivalent to 30 mL/kg with an IV route  
• Clarified that the infusion cannot be stopped prior to 30 mL/kg being completely infused |
| **Crystalloid Fluid Administration (cont.)** | • Clarified the weight to use for crystalloid fluid order  
• Clarified that the patient’s actual weight should be used and that estimated weight should only be used if actual weight is not available.  
• Clarified that ideal weight should not be used |
| **Crystalloid Fluid Administration Date and Crystalloid Fluid Administration Time** | • Clarified that the date (time) to use for a single order is written for the entire 30 mL/kg volume  
• Clarified the date (time) to use when infusion rate increases from maintenance rate to infusion rate |
## Crystalloid Fluid Administration

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Brief Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalloid Fluid Administration Date and Time</td>
<td>• Clarified the fluids may be ordered in a single order or a series of multiple orders&lt;br&gt;• Clarified the date (time) to use if a single order given over multiple infusions&lt;br&gt;• Clarified the date (time) to use if multiple orders are written</td>
</tr>
<tr>
<td>(cont.)</td>
<td></td>
</tr>
<tr>
<td>Crystalloid Fluid Administration (cont.)</td>
<td>• Clarified the weight to use for crystalloid fluid order&lt;br&gt;• Clarified that the patient’s actual weight should be used and that estimated weight should only be used if actual weight is not available.&lt;br&gt;• Clarified that ideal weight should not be used</td>
</tr>
<tr>
<td>Crystalloid Fluid Administration Date and Time</td>
<td>• Clarified that the date (time) to use for a single order is written for the entire 30 mL/kg volume&lt;br&gt;• Clarified the date (time) to use when infusion rate increases from maintenance rate to infusion rate</td>
</tr>
</tbody>
</table>
### Directive for Comfort or Palliative Care

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Brief Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Directive for Comfort Care or Palliative Care, Severe Sepsis and Directive for Comfort Care or Palliative Care, Septic Shock</em></td>
<td>• Clarified that physician/APN/PA documentation of comfort measure or palliative care is acceptable</td>
</tr>
<tr>
<td></td>
<td>• Added palliative care to data element name and guidance</td>
</tr>
</tbody>
</table>
Hypotension and Lactate Clarification

<table>
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<tbody>
<tr>
<td>Initial Hypotension and Documentation of Septic Shock</td>
<td>• Added new data elements Initial Hypotension and Documentation of Septic Shock to close an algorithm loophole</td>
</tr>
<tr>
<td>Initial Lactate Level Collection, Initial Lactate Level Date, Initial Lactate Level Time, Initial Lactate Level Result, Repeat Lactate Level Collection, Repeat Lactate Level Date, and Repeat Lactate Level Time</td>
<td>• Clarified that lactic acid is acceptable</td>
</tr>
<tr>
<td>Persistent Hypotension</td>
<td>• Clarified that crystalloid fluids must be administered at a volume of 30 mL/kg in the presence of persistent hypotension or new hypotension</td>
</tr>
<tr>
<td>Persistent Hypotension, Septic Shock Present, Septic Shock Presentation Date, Septic Shock Presentation Time, and Severe Sepsis Present</td>
<td>• Clarified the guidance for determining a decrease in SBP by &gt;40 mmHg</td>
</tr>
<tr>
<td>Repeat Lactate Level Collection, Repeat Lactate Level Date, and Repeat Lactate Level Time</td>
<td>• Clarified that a repeat lactate level is drawn only if initial lactate is elevated (&gt;2.0)</td>
</tr>
</tbody>
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Severe Sepsis, vasopressor and VS documentation

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<tr>
<td>Vital Signs Review Performed</td>
<td>• Clarified that actual values are no longer required for this data element</td>
</tr>
<tr>
<td>Severe Sepsis Present</td>
<td>• Clarified that decrease in SBP associated with blood pressure medication should not be used as evidence of organ dysfunction</td>
</tr>
<tr>
<td>Vasopressor Administration, Vasopressor Administration Date, and Vasopressor Administration Time</td>
<td>• Clarified the time fare for intravenous vasopressor administration</td>
</tr>
</tbody>
</table>
Contact

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