HQIC Community of Practice Call

Building Reliable Sepsis Mortality Prevention Practices: How Does Your Organization Measure Up?

September 21, 2023

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Welcome!

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Center for Clinical Standards and Quality
Centers for Medicare & Medicaid Services
Agenda

• Introduction
• Today’s topic: Building Reliable Sepsis Mortality Prevention Practices: How Does Your Organization Measure Up?
• Presenters:
   Hartford HealthCare
    • Tania Kosmo, Quality Performance Improvement Specialist
   Cynosure Health
    • Kim Werkmeister, Senior Vice President
• Open discussion
• Closing remarks
As You Listen, Ponder...

• What impactful actions can you take as a result of the information shared today?

• How are you able to increase engagement within your facilities to ensure a true change in patient safety?

• Based on what you heard today, what activities do you currently have underway that can leverage immediate action over the next 30, 60 or 90 days?
Meet Your Speakers

Tania Kosmo, MSN, RN, CNL  
Quality Performance Improvement Specialist  
Hartford HealthCare, East Region

Kim Werkmeister, MS, RN, CPHQ, CPPS  
Senior Vice President  
Cynosure Health
Hartford HealthCare
Windham Hospital, Willimantic, CT

September 2023
Windham Hospital
112 Mansfield Avenue, Willimantic, Connecticut
East Region Sepsis Committee

- Interdisciplinary team
- Monthly meetings cover:
  - Celebrations and recognitions
  - Safety story (including ‘Kudos Cases,’ when available)
  - Data review
  - Open forum and discussion of new and in-process improvement project(s)
Road to success

- Education
- *Epic* electronic optimizations
- Sepsis tools
Sepsis education

What is Sepsis?

Sepsis occurs when chemicals released into the bloodstream to fight an infection trigger inflammatory responses throughout the body. This inflammation can trigger a cascade of changes that can damage multiple organ systems, causing them to fail (Mayo Clinic, 2018).

Sepsis is the third leading cause of death in the U.S., behind only heart disease and cancer, and is the number one killer of children worldwide (AACN, 2017).

Sepsis is a time critical emergency. When sepsis drops about 8% every hour, recognition leads to early intervention.

Time is tissue!

RN resident presentation

Sepsis Snips for Sepsis Awareness Month

New hire RN

HealthStream
Sepsis electronic optimizations

Epic

Sepsis order sets

Emergency department BPA

Sepsis clinical view report

Sepsis guidelines and data report
# Sepsis Worksheet

## SIRS
(Systemic Inflammatory Response Syndrome)
Any TWO of the following:
- Temp >100.9°F or <96.8°F
- HR > 90 beats per minute
- Respirations > 20/min
- WBC > 12,000 or < 4000; or > 10% Bands on differential

## Sepsis
POSSIBLE Source of Infection
Previous criteria met plus any ONE of the following:
- Pneumonia
- Urinary Tract Infection
- Skin Infection
- Abscess
- Joint Infection
- Organ Infection

Documented positive Cultures:
- Blood
- Urine
- Other ____________

## Severe Sepsis
Acute (new) organ dysfunction
Sepsis criteria met plus any ONE of the following:
- SBP < 90, or MAP < 65
- Creatinine > 2.0
- UOP less than 0.5ml/kg/h for more than 2 hours despite adequate fluid challenge
- Platelets < 100,000/mm3
- INR > 1.5 or PT/PTT > 60 sec
- Bilirubin > 2mg/dl
- Lactic Acid > 2.0 (needs to be repeated per order)
- Acute Resp Failuure requiring invasive mechanical Vent, CPAP, or BIPAP

## Septic Shock
Shock- Organ Failure
Severe Sepsis criteria met plus any ONE of the following:
- 2 - SBP < 90, MAP <65 noted within the 1 hour after completion of target volume IVF (30ml/kg of LR or NS).
- Lactate 4.0 or greater

## Notify Provider that the patient meets SIRS criteria
Orders: ~Blood Cultures
- Lactic Acid

## Notify Provider of symptoms and possible Sepsis criteria
Orders: ~Blood Cultures
- Lactic Acid
- IV Antibiotic

## Notify Provider of symptoms and possible Severe Sepsis criteria
Orders: ~Repeat Lactic Acid w/in 6 hr:
- ED: Q2H, IVP: Q6H
- NS or LR @ 30ml/kg:
  - If (2) SBP < 90 or MAP<65
  - Infusion rates must be greater than 125ml/hr.
- *Monitor VS during and within 1 hr after completion at least 2 BPs*
- *ED SBAR/Handoff: .eastSBARsepsis

## Notify Provider of symptoms and possible Septic Shock criteria
*Monitor patient closely & document VS frequently
Orders: ~NS or LR @ 30ml/kg
- Target volume given w/in 3 hr
- Vasopressor if 2 consecutive SBP<90 or MAP<65 w/in 1 hr after IVF

**Focused Exam documented by Provider after 30ml/kg fluids infused
- or use dot phrase .sepsisreeval

11/11/2022
### Sepsis Mousepad

#### Sepsis Worksheet

**SIRS**
- Systemic Inflammatory Response Syndrome
- Any TWO of the following:
  - Temperature > 39°C or < 36°C
  - HR > 90 beats per minute
  - Respirations > 20/min
  - WBC > 12,000 or < 4000; or > 10% Bands on differential

**Severe Sepsis**
- Acute (new) organ dysfunction
- Sepsis criteria met plus any ONE of the following:
  - Pneumonia
  - Urinary Tract Infection
  - Skin Infection
  - Abdominal Infections
  - Bone/joint infection

**Septic Shock**
- Shock Organ Failure
- Severe Sepsis criteria met plus any ONE of the following:
  - SBP < 90, or MAP < 65
  - Creatinine > 2.0
  - UOP < 0.5 ml/kg/hr for more than 2 hours despite adequate fluid challenge
  - Platelets < 100,000/mm³
  - INR > 1.5 or PT > 60 sec
  - Bilirubin > 2 mg/dl
  - Lactic Acid > 2.0 (needs to be repeated per order)
  - Acute Respiration Failure requiring invasive mechanical Vent, CPAP, or BIPAP

**Management**

**3-Hour Bundles**
- Complete w/in 3 Hours
  - C: Blood cultures x 2 (prior to antibiotics)
  - A: Antibiotics (IV) w/in 30 min of order
  - L: Lactic acid + repeat(s) ≥ 2.1
    - 2.0 and lower = provider discretion
  - F: Fluids: NS/LR 30 ml/kg if lactic acid ≥ 4.0 or SBP < 90/MAP < 65 (x2)
    - Frequent vitals during & post fluids

**6-Hour Bundles**
- Complete w/in 6 Hours
  - Repeat lactic acid ≥ 2.1
    - ED: 2 hr, IP: 4 hr
  - Vasopressors if 2x SBP < 90/MAP < 65 after fluids (need ≥ 2 BFs w/in 1st hour fluids complete)
  - Provider sepsis re-eval completed and documented
    - Focused assessment or .sepsisreeval
Sepsis workflow

Assess for Sepsis
≥2 diff. SIRS (within 6 hrs of 6 other): HR>90, RR>20, Temp. >100.9/≤96.8, WBC>12 or <4

- NO → Treat appropriately
- YES → Suspected or dx infection?
- NO → Provider documents “no Inftr/ sepsis” & treats appropriately
- YES → Sepsis

Initiate Sepsis Order Set
- Lactic Acid STAT (if not already done in last 6 hr) + repeat(s)
- Blood cultures x 2 STAT (if not done in last 24 hr)
- Antibiotic therapy started w/in 3 hr

Assess for organ dysfunction*:
- Lactic Acid, Cr, Pt, PTT/INR, Bilirubin, UOP, BP, new Vent/BIPAP/CPAP
- Lactic Acid ≥4:
  - give 30ml/kg bolus
  - ED: Repeat Q2H
  - IP: Repeat Q4H
- Lactic Acid >2.0:
  - ED: Repeat Q2H
  - IP: Repeat Q4H

Severe Sepsis**
IF 2 SBP <90 or MAP <65, give 30ml/kg crystalloid bolus*** (document if IBW used/BMI>30)

Severe sepsis: continue to treat monitor frequently

Assess for persistent hypotension: ≥2 SBP <90 or MAP <65 w/in the 1 hour post-target volume bolus?

- NO → Reassess & Document vitals/BP frequently
- YES → Septic Shock**

* New Cr ≥2, UOP <0.5 ml/hr, Bil ≥2, PLT <100, PTT>60, INR>1.5 - not explained otherwise- needs documentation of exclusion

**Any documentation by provider of possible severe sepsis/septic shock also places patient into bundles even if they don’t meet above criteria

***30 ml/kg bolus: may use IBW if BMI ≥30; may prescribe less with documented allowable exception August 2023

After target volume bolus, need provider reassessment:
- sepsisreassessment chart a reperfusion focused exam
- Vasopressors
Sepsis handoff tool
Quality improvement project

Checklist & Handoff for Septic Patients

Does not get scanned into the chart.

| Epic SBAR for Septic Patients | eastSBARsepsis |

**SEPSIS CARE CHECKLIST**

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Blood Cultures Drawn (before antibiotics)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Lactic Acid Drawn?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV Broad Spectrum Antibiotics Given?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**3-HOUR BUNDLE**

FluList: Lactate 2.8 or Initial Hypotension** **
*MD = Patient needs fluids!
**Initial Hypotension**

Target Volume** Fluids Given (initial Hypotension** or Lactic Acid > 4.0)?

(3-hour goal to add 3 liters within 3 hours)

**6-HOUR BUNDLE**

Repeat Lactic Acid Drawn? (initial 2.3 or greater or per provider order)

Target Volume** Fluids Given (initial Hypotension** or Lactic Acid > 4.0)?

(6-hour goal to add 6 liters within 6 hours)

Provider Notified (and documented) of Target Volume Completion?

Vasopressor Started? (if persistent hypotension** after fluid resuscitation)

Current (revised) version

EQIC
EASTERN US QUALITY IMPROVEMENT COLLABORATIVE

Prior version

Hartford Healthcare
Connect to Healthier Not Region
Where are we now?
Thank you.

Tania Kosmo, MSN, RN, CNL

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Email: tatiana.kosmo@hhchealth.org
Convergence HQIC
Sepsis Honor Roll
The Problem
The Need
The Idea
The Implementation
The WIIFM

- Recognition at virtual event
- Media kit to be shared with Board, Hospital Leadership and Hospital Staff
- Inclusion in online community forum for ongoing collaboration
- Chance to share their stories at September 2023 Sepsis
- The ability to benchmark against other hospitals, and to easily identify new change ideas to test
- IMPROVED OUTCOMES FOR THE PATIENTS THEY SERVE
Hospital Self-Assessment: Four Domains

- Cross-cutting Organizational Strategies
- Identification of Sepsis
- Safety in Handoffs / Transfers / Discharges
- Treatment and Care of Sepsis
Hospital Self-Assessment: Maturity Model
**Hospital Self Assessment**

**2023 SEPSIS SAFE HOSPITAL ASSESSMENT**

**BACKGROUND:**
In the United States, sepsis is a leading cause of death in hospitals and affects over 1.7 million adults and claims nearly 270,000 lives annually. Sepsis deaths cost more than $24 billion (about $74 per person in the US) annually and most are likely preventable through better treatment and timely implementation of targeted interventions to improve outcomes.

To address increasing sepsis rates across America and accelerate hospital progress to reduce sepsis-related deaths, this spine designates select hospitals as Sepsis Safe for the purpose of supporting ongoing quality improvement and recognizing those fighting sepsis mortality. Furthermore, to accelerate improvement and recognize high-performance hospitals, Cynsure will publicly recognize them. To measure sepsis safety, Cynsure Health collaboratively designed the 2023 Sepsis Safe Hospital Self-Assessment, a tool to measure sepsis across 4 domains.

**4 Domains:**
1. Identification of Sepsis
2. Treatment and Care of Sepsis
3. Safety in Handoffs/Transfers/Discharges
4. Consistently Organizing Strategies

**INSTRUCTIONS:**
For each measure, please read through the measure description then select the level that best describes your hospital’s progress. For each hospital, Cynsure recommends completing the 2023 Sepsis Safe Hospital Self-Assessment to assess accuracy and variability in results year over year. Cynsure’s Health recommends hospitals follow a similar process each year.

Time permitting, please share any quality improvement activities you are using for sepsis. Do you have a bright spot you can share? Feel free to have more information about? Cynsure is committed to providing resources to support continued progress to all hospitals in the Hospital Program.

Submit responses and any supporting documents via e-survey at: 2023 Safe Sepsis Hospital Assessment Period: January - March 2023

Questions? Contact Helen Riss, Project Manager, or email at hpvoxcynsurehealth.org

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**2023 SEPSIS SAFE HOSPITAL ASSESSMENT**

**IDENTIFICATION OF SEPSIS**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Level 0 (Def)</th>
<th>Level 1 (Opt)</th>
<th>Level 2 (Opt)</th>
<th>Level 3 (Opt)</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational Infrastructure</td>
<td>Sepsis is not yet a strategic organizational goal</td>
<td>Sepsis is a priority as described in organizational strategic goals</td>
<td>Sepsis lead/coordinator is identified and working with all disciplines</td>
<td>Sepsis committee meets regularly &amp; shares both bundle compliance and mortality data</td>
<td>Physician lead is identified</td>
</tr>
<tr>
<td>Provider Staff Engagement</td>
<td>Education is not provided on a specific schedule</td>
<td>Education provided to bedside staff as needed</td>
<td>New hires, registry and level providers and physicians receive specific training upon hire</td>
<td>Sepsis specific education is ongoing and at regular intervals for all levels of care providers</td>
<td></td>
</tr>
<tr>
<td>Patient Family Engagement</td>
<td>Patients and families are not available for updates</td>
<td>Patients and families are provided ongoing updates regarding sepsis treatment</td>
<td>Patients and families are given an opportunity to co-create patient and family communication content and strategies for patients with sepsis</td>
<td>Sepsis specific education is ongoing and at regular intervals for all levels of care providers</td>
<td></td>
</tr>
<tr>
<td>Community Connection</td>
<td>A community connection has not yet been accomplished</td>
<td>Prehospital Sepsis awareness outreach to EMS providers / ED/H systems are in place</td>
<td>Post-hospitalization (HPD) Cynsure-holding facilitated outreach to enhance sepsis identification and management</td>
<td>Community-Sepsis awareness outreach to community groups to enhance sepsis awareness is in place</td>
<td></td>
</tr>
</tbody>
</table>

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**Cynosure Health** - Together we can go further, faster.
Hospital Self-Assessment: The Results

Four Tiers of Recognition:

1. Foundational (4%)
2. Commendable (65%)
3. Exceptional (26%)
4. Superior (4%)
What Did We Learn?
What Did We Learn?

- 46% report ongoing compliance with sepsis bundle within 3 hours.
- 42% of our hospitals report having a standardized, reliable screening tool that is used in the ED and inpatient areas.
- 48% report ongoing compliance with Hour 1 bundle.
- 90% report the use of an automated alert in the medical record, however 42% have automated that further to include automatic notification to medical emergency or sepsis team.
Participating hospitals with the lowest scores in the self-assessment also reported that sepsis is not yet an organizational strategic goal.
Plan to have highest performing hospital teams share best practices and advice for others during Sepsis Awareness Week to educate and encourage other hospitals to continue their sepsis improvement journeys.
Thank You!
Kim Werkmeister
Convergence HQIC
kwerkmeister@cynosurehealth.org
Discussion

• What impactful actions can you take as a result of the information shared today?
• How are you able to increase engagement within your facilities to ensure a true change in patient safety?
• Based on what you heard today, what activities do you currently have underway that can leverage immediate action over the next 30, 60 or 90 days?
Final Thoughts
Join Us for the Next Community of Practice Call!

Join us for the next Community of Practice Call on October 12, 2023 from 1:00 – 2:00 p.m. ET

We invite you to register at the following link:
https://zoom.us/webinar/register/WN_ASl_l3p_TEyx_VY_YYFFeA

You will receive a confirmation email with login details.
Your opinion is valuable to us. Please take 4 minutes to complete the post assessment.

We will use the information you provide to improve future events.