Improving Sepsis Care

Collaborations improving the delivery of care for patients across the continuum

- Healthcentric Advisors Qlarant
- Kentucky Hospital Association
 Q3 Health Innovation Partners
- Superior Health Quality Alliance

The Opportunity to Improve Sepsis Care

- What was the issue/problem?
 - Blood culture collection prior to antibiotic administration
 - Fluid resuscitation, adequate bolus and reperfusion assessment
- Why was it important?
 - 3 and 6-hour bundle compliance
- Describe what patients and staff were experiencing
 - Providers and staff confusion regarding recognition and differentiating levels of sepsis
- Explain the impact on them (burnout, patient safety, near misses, etc.)
 - Near misses—failure to initiate and meet the bundle requirements

What did you do:

- Summarize your project steps: (Walk through the process)
 - Collecting and using data
 - Multidisciplinary bi-weekly workgroup meeting
 - Daily email review of all sepsis patients and "ones to watch" that include ED and hospitalist providers, nursing leaders, lab, QRM and CNO sent by clinical abstractor
 - Quality tools used
 - Gap Analysis
 - PDCA cycle
 - Intervention or change implemented
 - Lab notification to nursing after blood culture collection—draw simultaneously
 - Multiple revisions of sepsis checklist
 - Scenario-based education for providers, lab, nursing & pharmacy
 - Provider documentation updated to include tissue reperfusion assessment
 - Developed Learning Opportunity Letter for nurses and providers
 - Sepsis Alert implemented



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Daily Email Review Example

- "John Doe" (Severe Sepsis)
- ER MD: "Smith"
- ER RN: "Smith"
- · Hospitalist: "Smith"
- Floor Nurse: "Smith"
- A: Source: ERMD- COPD/sepsis/UTI @ 2321<<< TIME ZERO
- B: SIRS: 2046 HR- 134, RR- 38, temp- 103.2
- C: Organ Dysfunction: 2101 PLT- 98

3hr bundle:

- ✓ Lactic order: 2046 drawn: 2047 resulted: 2115 result: 3.9
- repeat lactic: 8/21 0125 resulted: 8/21 0148 result: 1.1
- ✓ Blood Cultures: 2127
- ✓ Abx: 2151 ceftriaxone 1G
- Fluids: 3000ml LR (2100- 8/21 0000)

6hr bundle:

- Vasopressor: N
- MD perfusion assessment: NA
- ✓ ERMD order set: Y

- "John Doe" (Severe Sepsis)
- ER MD: "Smith"
- ER RN: "Smith"
- Hospitalist: "Smith"
- Floor Nurse: "Smith"
- A: Source: 1946 ERMD- PNA <<< TIME ZERO
- B: SIRS: 1457 HR- 104; 1534 RR- 21; 1517 WBC- 13.87
- C: Organ Dysfunction: 1800 BP- 86/48

3hr bundle:

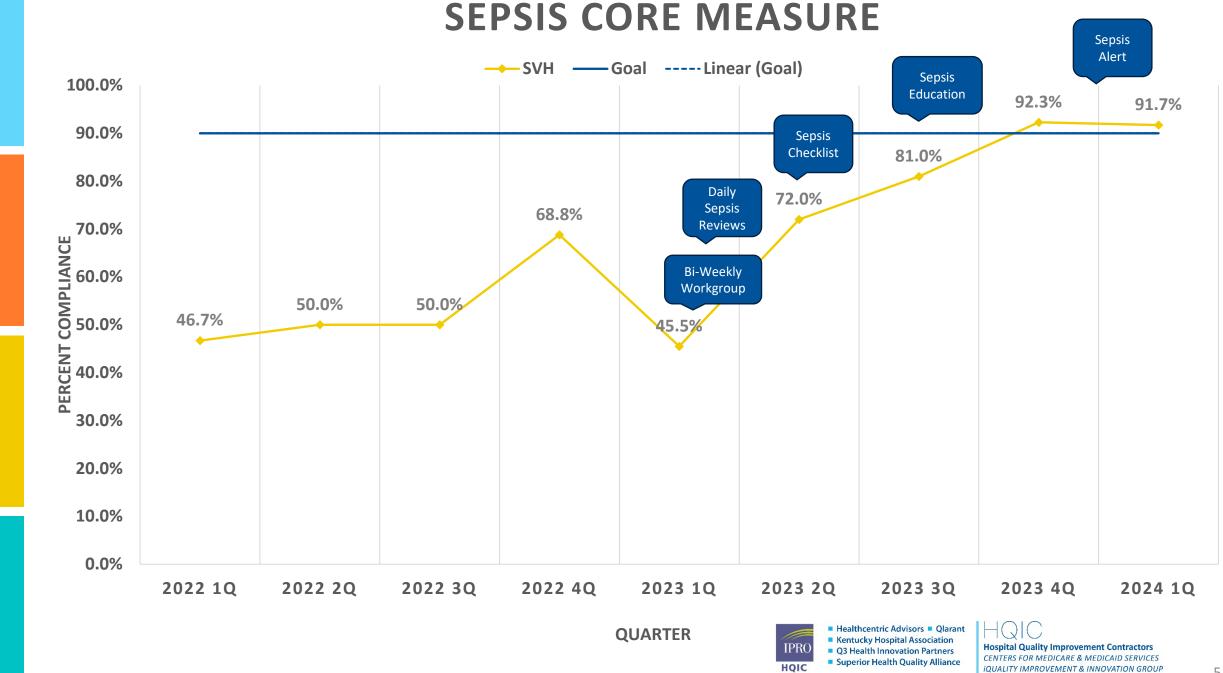
- ✓ Lactic order: 1453 drawn: 1510 resulted: 1537 result: 0.9
- ◆ Blood Cultures: 1459
- Abx: 1722 Rocephin 1G
- Kernel Fluids: 90.9kg, 500NS (1807-1837) LR at 150/hr (needed 2727ml)

6hr bundle:

- Vasopressor: N
- MD perfusion assessment: Not done
- ✓ ERMD order set: Y



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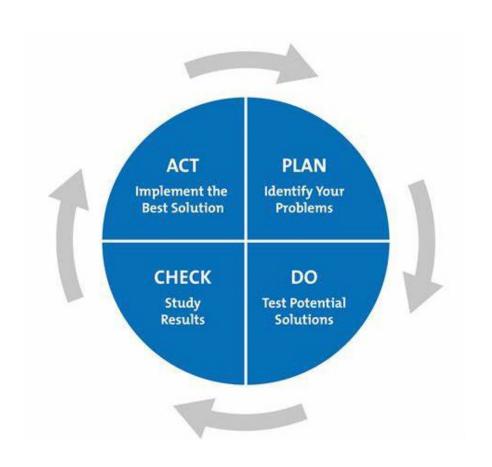


Your Results: How you made a Difference

- How did the intervention(s) change/improve processes?
 - Real time review and follow-up
- Describe the staff experience. (Firsthand accounts when possible)
 - Scenario-based education provided a better understanding of sepsis and bundle compliance
- What is your plan to sustain improvement over time?
 - Continue daily reviews and real-time feedback
 - Ongoing education/competencies
 - Sepsis Escape Room
 - Mock Sepsis Drills

Key Takeaways: Lessons learned

- Provider champion early in the process
- PDCA Process
- Proactive vs. Reactive feedback
- Multidisciplinary approach
- Learning Opportunity Letter





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ADULT Sepsis Alert Checklist/Handoff

This checklist should go with the patient when admitted and discussed during handoff. Highlighted information should be documented in the EMR if applicable.

Severe Sepsis and SEPTIC SHOCK are a MEDICAL EMERGENCY! ***SEPTIC SHOCK requires ICU admission*** ≥ 2 SIRS Criteria Suspected or Organ dysfunction ≥1 Met all 3 Confirmed criteria NON-PREGNANT 20 WKS-DAY 3 Post-Delivery Infection NON-PREGNANT 20 WKS-DAY 3 Post-Delivery within 6 -PTT>60 or INR > 1.5 TT>60 or INR >1.5 Temp > 100.9F or < 96.8F -Temp >100.4F or <96.8F YES Infection: -SBP<90, MAP<65 or ↓>40 -S8P<85, MAP<65 or ↓>40 hrs of each -HR >90 -HR >110 -U/O<0.5mL/kg/hr x 2 in a row -U/O<0.5mL/kg/hr x 2 in a row other -RR >20 -RR >24 -New CPAP, BiPAP, Vent New CPAP, BiPAP, Vent -WBC >12K or <4K or -WBC >15K or <4K or YES 10% immature bands >10% immature bands -Cr>2 Cr>1.2 -Lactate>2 -Lactate>2 (not active labor) Total Bilirubin > 2 Positive NO -Total Bilirubin >2 NO Severe Sepsi NO Negative Screen Negative Screen Time Zero: Negative Screen Time Goals INTERVENTIONS **RN Initials** Notify MD of Positive Sepsis Screen, Call SEPSIS ALERT! Consider Sepsis Nurse Driven Protocol if MD is not readily available. (ED RN only) Sepsis Order Set: (Time) Draw STAT Lactate: (Time) HOUR-3 (Result) BUNDLE If INITIAL Lactate > 2, verify order for 4 hour repeat lactate required in HOUR-6 BUNDLE If INITIAL Lactate ≥ 4 = SEPTIC SHOCK Draw STAT Blood Cultures x2: (Time) prior to antibiotic administration Start IV Antibiotics: (Time) Give BROAD-SPECTRUM first! If Vancomycin ordered, give 2nd due to ↑ infusion time. DO NOT DELAY ANTIBIOTICS more than 45 minutes to obtain Blood Cultures. Notify MD. Document blood culture collection attempt in EMR. In the presence of hypotension or SEPTIC SHOCK (SBP<90 or MAP<65 or INITIAL Lactate ≥4, notify MD to obtain order for RAPID 30mL/kg fluid bolus. Total fluid volume is infused within 6 hours prior through 3 Weight: Total IV Fluid Required: Start: (Time) Total IV Fluid Received: Stop: (Time) Don't DELAY IV fluids! If no c-line, start 2nd IV line or administer antibiotics on separate pump. If hypotensive DURING fluid resuscitation, notify MD to obtain Vasopressor order to maintain MAP≥ 65 hours after identifying trigger of initial hypotension or SEPTIC SHOCK. Obtain 2 BPs and 2 MAPs within 1 hour after completion of IVF bolus: (Time) MAP: (If hypotensive, SBP <90 or MAP <65 = SEPTIC SHOCK MAP: (HOUR-6 If INITIAL Lactate > 2, draw REPEAT Lactate: (Time) BUNDLE If persistent hypotension after 30mL/kg IVF bolus or INITIAL Lactate ≥ 4 =SEPTIC SHOCK. MD order for vasopressors for persistent hypotension. Start Vasopressor: (Time) MD repeat volume status and tissue perfusion assessment performed: (Time) NOT PART OF MEDICAL RECORD, PLACE COMPLETED FORM IN DIRECTOR MAILBOX. Patient Sticker 05/2024



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Hospital Quality Improvement Contractors

CENTERS FOR MEDICARE & MEDICAID SERVICES **IQUALITY IMPROVEMENT & INNOVATION GROUP**

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