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Use It or Lose It: Impact of Sepsis Order Set Utilization on the Severe Sepsis and Septic Shock Management Bundle Compliance



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Background

The advent of the Surviving Sepsis Guidelines has led to the widespread use of quality measures known as sepsis bundles.

The Centers for Medicare and Medicaid Services (CMS) reimburses hospitals based on performance measures of the Severe Sepsis and Septic Shock Management Bundle (SEP-1 bundle), comprised of 7 metrics that must all be met to be considered compliant. Facilities frequently utilize sepsis order sets to strive towards improved SEP-1 compliance.

Overall sepsis order set use and compliance at Covenant Medical Center is low, which may correlate with our facility's high SEP-1 fallout rate of ~60% in 2022.

Purpose

To identify if sepsis order set utilization reduces SEP-1 fallout rates at Covenant Medical Center in Lubbock, TX.

Clinical Questions

- Is sepsis order set utilization correlated with SEP-1 bundle compliance at Covenant Medical Center?
- Is sepsis order set utilization correlated with compliance to the individual elements of the SEP-1 bundle at Covenant Medical Center?
- **Hypothesis:** Greater sepsis order set utilization correlates with increased SEP-1 bundle compliance.

Measure initial lactate within 3 hours and repeat within 6 hours if >2 mmol/L

If septic shock or lactate >4 mmol/L, repeat volume status and tissue perfusion assessments within 6 hours of septic shock

Obtain blood cultures prior to administration of antibiotic therapy

Initiate vasopressors for persistent hypotension

Administer broad-spectrum antibiotics within 3 hours

Administer 30mL/kg IV crystalloid within 3 hours if hypotensive

Methods

Project Design:

- Retrospective cohort

Study Period:

- July 2022 – September 2022

Study Groups:

- Group 1: sepsis order set used
- Group 2: sepsis order set not used
- Patient charts will be reviewed to determine if sepsis order set use increases SEP-1 compliance

Statistical Analysis:

- Chi-squared test will be used to compare order set utilization to SEP-1 compliance

Inclusion Criteria:

- Age \geq 18 years old to < 90 years old
- Admitted to Covenant Medical Center
- Diagnosed with severe sepsis or septic shock

Exclusion Criteria:

- Patients transferred from another facility with a primary diagnosis of sepsis
- Contraindication to care
- Enrollment in a clinical trial
- COVID positive during admission

Results

Preliminary July data suggests that order set use and compliance is low at Covenant Medical Center.

For references and additional information, please use the QR code above to view the electronic poster online.