March 15, 2016

Adult Patient Sepsis Talking Points:

Goal for the UNC Sepsis Program
Early suspicion followed by *effective confirmation* of sepsis by a clinician leading to clinically appropriate, evidence-based sepsis treatment.

Although screening tools, EHR Best Practice Alerts, and early warning systems may be helpful in identifying at-risk patients, these tools are not diagnostic and the evidence-based sepsis bundle therapies require clinician assessment for confirmation of sepsis. These tools are complimentary to a much larger program of standardized evidence-based protocols, training in sepsis diagnosis and care, hands on practice/simulation, and antibiotic stewardship.

Evidence Based Diagnosis and Treatment of Sepsis

- In 2001, Rivers et al (NEJM) described an Early Goal Directed Therapy (EGDT) protocol for severe sepsis and septic shock patients that showed a significant decrease in mortality.
- However, in 2014-2015 three randomized control trials (ProMISe, ProCESS, ARISE) showed no improvement in outcomes for patients with septic shock receiving the 2001 protocol-driven EGDT.
- In 2016, new international consensus definitions for sepsis were released that focus on suspected or proven infection associated with organ dysfunction instead of SIRS criteria. "Severe sepsis" eliminated as a separate entity.
- All current evidence shows that significant improvements in mortality are achieved through (1) *early detection* of sepsis along with (2) *antibiotics,* (3) *fluid resuscitation, and* (4) *vasoactive agent support for persistent hypotension*

The current CMS Sepsis Core Measure released October 2015 includes the pre-2016 sepsis definitions and focuses on early sepsis recognition and treatment, in addition to many of the EGDT elements found not to improve outcomes.

It is possible to meet the CMS core measure while adhering to the current evidence-based therapies, which requires concentration on the following elements in **bold** that overlap both CMS core measure and evidence-based practice.

Initiation of Sepsis Bundle (i.e. lactate, blood cultures, fluid resuscitation, antibiotics) targeted by UNC Sepsis Program that meets initial CMS criteria
AND
Repeat lactate within 6 hours of the first if initial lactate $\geq$ 2
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A repeat clinical examination by a provider (not RN) including specific wording regarding capillary refill and peripheral pulses documented in chart within 6 hours of initial onset of septic shock.

OR 2 of the following

- Central Line placement measure CVP [recent trials do not support including this in protocols]
- Central Line placement measure SVO2 [recent trials do not support including this in protocols]
- Passive Leg Raise documented
- Cardiac Ultrasound

The UNC Sepsis Program is working with Epic@UNC team to comply with the CMS Core Measures We will create an EPIC smart phrase for repeat clinical exam. We are working on an automated system for repeating lactates only for sepsis patients with initial lactate $\geq$ 2.

For more information: http://news.unchealthcare.org/empnews/code-sepsis