Sepsis Collaborative Efforts

ANIA DFW 2016

Joni Padden, DNP, CNS, BC-IN, CPHIMS

Texas Health Resources®

Learning Objectives

- Understand the evidence base behind the CMS SEP-1 Core Measure requirements

- Understand the Reliable Care Blueprinting design process to develop best practices

- Discuss how the Dallas-Fort Worth Hospital Council Committee on Sepsis is working to share area best practices to improve sepsis care

- Understand how this is being shared with CMS Sepsis Coalition for measure compliance, development, and reporting

Texas Health Resources®

Evidence Base for Sepsis Care

- Surviving Sepsis Campaign/Society for Critical Care Medicine
  - Updates published every 4 years since 2004
  - Latest update published February, 2016
  - 3 and 6 Hour Bundle recommendations
- CMS SEP-1 Core Measures
  - October 2015
  - Build on SSC bundles and evidence

Texas Health
Resources®

SSC 3 and 6 Hour Bundles

TO BE COMPLETED WITHIN 3 HOURS OF TIME OF PRESENTATION:	TO BE COMPLETED WITHIN 6 HOURS OF TIME OF PRESENTATION:
• Measure lactate level • Obtain blood cultures prior to administration of antibiotics • Administer broad spectrum antibiotics • Administer 30ml/kg crystalloid for hypotension or lactate ≥4mmol/L • Re-measure lactate if initial lactate elevated.	• Apply vasopressors *(for hypotension that does not respond to initial fluid resuscitation)* to maintain a mean arterial pressure (MAP) ≥65mmHg • 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

Texas Health Resources®

CMS SEP-1 Core Measure Numerator

Received within three hours of presentation of **severe sepsis**:

- Initial lactate level measurement
- Broad spectrum or other antibiotics administered
- Blood cultures drawn prior to antibiotics

AND received within six hours of presentation of **severe sepsis**:

- Repeat lactate level measurement only if initial lactate level is elevated

AND ONLY if **Septic Shock** present:

Received within three hours of presentation of **septic shock**:

- Resuscitation with 30 ml/kg crystalloid fluids

AND ONLY IF hypotension persists after fluid administration, received within six hours of presentation of **septic shock**:

- Vasopressors
- Repeat volume status and tissue perfusion assessment consisting of either:

A focused exam including:

- Vital signs, AND
- Cardiopulmonary exam, AND
- Capillary refill evaluation, AND
- Peripheral pulse evaluation, AND
- Skin examination

OR Any two of the following four:

- Central venous pressure measurement
- Central venous oxygen measurement
- Bedside cardiovascular ultrasound
- Passive leg raise or fluid challenge

New Evidence for Sepsis

- Sepsis should be defined as life-threatening organ dysfunction caused by a dysregulated host response to infection.

- Septic shock should be defined as a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities are associated with a greater risk of mortality than with sepsis alone.

- For clinical operationalization, organ dysfunction can be represented by an increase in the Sequential [Sepsis-related] Organ Failure Assessment (SOFA) score of 2 points or more, which is associated with an in-hospital mortality greater than 10%.

- Patients with septic shock can be clinically identified by a vasopressor requirement to maintain a mean arterial pressure of 65 mm Hg or greater and serum lactate level greater than 2 mmol/L (>18 mg/dL) in the absence of hypovolemia.

qSOFA

For clinical operationalization, organ dysfunction can be represented by an increase in the Sequential [Sepsis-related] Organ Failure Assessment (SOFA) score of 2 points or more, which is associated with an in-hospital mortality greater than 10%.

A suspected source of infection with two of the following three

- Respiratory Rate equal to or greater than 22
- Altered mentation/Glasgow Coma Scale equal to or less than 13
- Systolic blood pressure equal to or less than 100

THR Reliable Care Blueprinting

- RCB Initiative Overview
  - High Reliability Organization principles
  - Every Every Every (Patient/Time/Where)
  - Evidence-based care to the bedside

- RCB Sepsis Care Module Goals
  - Use Surviving Sepsis Campaign evidence
  - Meet the CMS SEP-1 Core Measures

Texas Health
Resources®

Sepsis Design Team

- Multi-Disciplinary

- Early Recognition
  - Improved predictive analytic tool coordination

- Early Goal Directed Therapy
  - Discipline specific order sets designed around scope and workflow

- Care Coordination
  - Smart Note template
  - Sepsis navigator activity

Texas Health Resources®

Early Recognition

- ED
  - Sepsis Screen at admission, then within 1 hour and prior to discharge

- Inpatient
  - MEWS ≥ 4 AND SIRS ≥ 2 AND Shock Index ≥ 0.7
  - Triggers Sepsis Screen
  - If Sepsis Screen (≥3) is positive then initiate an Rapid Response Team for sepsis
  - Excludes ICU/Infants/L&D

Texas Health
Resources®

Early Goal Directed Therapy

- New Discipline Specific Order Sets
  - ED Physician (2 sets)
    - Start (3 hour bundle)
    - Continue (6 hour bundle)
  - Inpatient Physician (1 set for both 3 and 6 Hour)
  - ED RN (Labs, Cultures, IV Start, I&O)
  - Inpatient Rapid Response Team (Labs, Cultures, IV Start, I&O)

Texas Health Resources®

Care Coordination

- Sepsis Navigator (available for all disciplines)
  - Orders
  - Labs
  - Vitals
  - I&O
  - Notes – Sepsis specific template
  - Helpful Information/Education section

DFW Hospital Council Sepsis Committee

- Began April 2016, meets monthly

- All Metroplex systems represented

- Houston facilities participating

- Includes Pediatric and Adult hospitals

Texas Health
Resources®

DFW Hospital Council – Sepsis Committee

- DFW presentation in October
- Focused on steps any size hospital can implement to improve outcomes
- Supports the CMS/SSC evidence based recommendations
- Vendor agnostic

Texas Health
Resources®

CMS Coalition Collaboration

- September CMS Coalition presentation of THR work to support SEP-1 measures
- Active involvement in measure feedback and recommendations

Texas Health
Resources®

Questions

?