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An Adult Sepsis Identification and Resuscitation Pathway Innovative Tactics Beyond the Traditional Bundle

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An Adult Sepsis Identification and Resuscitation Pathway: Innovative Tactics Beyond the Traditional Bundle

Lehigh Valley Health Network, Allentown, PA

Purpose

This poster details an adult sepsis identification and resuscitation pathway in an academic, tertiary care Magnet® hospital, designed to comply with the 2016 Centers for Medicare & Medicaid Services Core Measures for Sepsis.

Evidence

Sepsis is the leading cause of death in hospitalized patients, with estimated mortality between 25-50 percent. Evidence shows that reducing mortality due to severe sepsis requires an organized process that guarantees the early recognition of severe sepsis, along with standard and consistent application of sepsis resuscitation algorithms. A seminal study in an acute, tertiary teaching facility focused initially on sepsis recognition and treatment in emergency departments (EDs), reducing overall sepsis mortality by approximately 50 percent in a six-year period (2008-2013).

References:

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- 2. Hunter C. Use End-tidal Carbon Dioxide to Diagnose Sepsis. *JEMS*.2014;March 3. http://www.jems.com/articles/print/volume-39/issue-3/features/use-end-tidal-carbon-dioxide-to-diagnose-sepsis.

Adult LVHN Sepsis Resuscitation Pathway NITIATE treatment <mark>– O</mark>NE TIME Community acquired **Hospital acquired**: cefepim *lonpurulent:* ceftriaxone x dysfunction **CNS:** ceftriaxone & vancomyci Announce - SEPSIS ALERT Announce overhead in ED – CODE SEPSIS (add ampicillin if >60y/o, Announce – SEPSIS ALERT Group page & Fax sheet – CODE SEPSIS mmunocompromised or 30 cc/kg NSS over 90 min pregnant; add acyclovir fo IO or Central line if necessary 30 cc/kg NSS over 90 min concern for HSV encephalitis 30 cc/kg NSS over 90 min **Blood Culture Unknown source:** cetepime† { Pressors as indicated If known or recent colonization/infection with ESBL or CRE), consultation wit ID should be considered fo additional antibiotic recommendations. £ Replace cefepime with aztreonam for severe PCN or cephalosporin allergy. Note: aztreonam does not provide gram positive coverage. † Replace cefepime with aztreonam + ciprofloxacin for 90 min post resuscitatio severe PCN or cephalosporin 90 min post resuscitatio 90 min post resuscitation disposition decision Transfer Ctr call to ICU Triage D Admit to Hospital Med ransfer Ctr call to ICU Triag Sepsis transition Dr & Hospitalist ‡ Replace cefepime with SmartText ICU Resident responds to ED aztreonam + levofloxacin for Determine ICU or HM Transition at Bedside Sepsis transition SmartText severe PCN or cephalosporing

Workflow

Innovations

- Use of end-tidal CO₂ as a triage tool for early identification of sepsis
 - Evidence End-tidal CO_2 less than 25 is indicative of a serum lactate level greater than 4, suggestive of severe sepsis
- Inclusion of the pre-hospital, emergency medical system community to facilitate early recognition and treatment of sepsis
- Aggressive and early fluid resuscitation in the pre-hospital setting and ED
- Designated bundled actions within 90 minutes compared to core measure 3 hour metrics
- 4-way disposition conference call including a bed management triage nurse and ED, intensive care and hospital medicine providers

Outcomes



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