“Improving Sepsis Outcomes Through Coordinated Early Recognition, Assessment and Treatment”
Sepsis is everywhere...

Increasing incidence of sepsis in Maryland Hospitals

2003-2012
...and it is killing us...

Considerable disparity between Sepsis & other top APR-DRG's

<table>
<thead>
<tr>
<th>Maryland FY 2011</th>
<th>UM CRMC FY 2011</th>
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<tbody>
<tr>
<td>22.5% Septicemia and Disseminated Infections</td>
<td>35.4% Septicemia and Disseminated Infections</td>
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<tr>
<td>4.6% Pulmonary Edema and Respiratory</td>
<td>7.3% Pulmonary Edema and Respiratory</td>
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<tr>
<td>4.0% Heart Failure</td>
<td>5.5% Major Respiratory Infections</td>
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<tr>
<td>3.3% Respiratory System Diagnosis with Ventilator</td>
<td>5.5% Tracheostomy with long term ventilator</td>
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<tr>
<td>2.9% CVA and Precerebral Occlusion with Infarct</td>
<td>4.9% Heart Failure</td>
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Source: HSCRC Inpatient Database
...and it is costing us!

- ~750,000 US cases annually
  - 2.26 cases per 100 hospital discharges
  - 51.1% received ICU care
  - $16.7B in the US alone
  - ALOS is 19.6 / costs $22,100 per case

- Severe sepsis ~ 40% of ICU expenditures

- ICU septic patient costs 6X more than non-septic patient
**OPTIMAL Coordination of Sepsis Care to achieve OPTIMAL outcomes**

- **Emergency Department**
  - **Assessment**: When sepsis suspected, ED staff calls CODE SEPSIS, assesses patient utilizing **ED SEVERE SEPSIS SCREENING TOOL**.
  - **SEPSIS CRITERIA**: When criteria met, ED SEVERE SEPSIS ORDER SET initiated through CPOE.
  - **RX PRIORITIES**: Implement **ED SEVERE SEPSIS ORDER** with focus on timely:
    - Fluid resuscitation
    - Hemodynamic stability
    - Blood cultures
    - Lactate level
    - Antibiotics
    - Oxygenation/airway management
  - **Disposition**: Consider admission to ICU with elevated Lactate

- **ICU**
  - **Assessment**: SEPSIS patient admitted from ED or transferred from other unit.
  - **SEPSIS CRITERIA**: Nurse confirms criteria met & notifies Physician to obtain orders.
  - **RX PRIORITIES**: Implement **SEVERE SEPSIS ICU ADULT ORDER SET** with focus on timely:
    - Fluid resuscitation
    - Hemodynamic stability & monitoring
    - Blood cultures
    - Lactate level
    - Antibiotics
    - Oxygenation/airway management
    - VTE/DVT & GI Prophylaxis

- **RAPID ASSESSMENT TEAM**
  - **Assessment**: As part of RA Team response, nurse assesses patient for possible sepsis utilizing **RAT SEPSIS SCREENING Tool & Protocol**.
  - **SEPSIS CRITERIA**: When criteria met, RA nurse notifies Physician of positive Sepsis Screening.
  - **RX PRIORITIES**: Implement **Protocol** interventions with focus on timely:
    - Fluid resuscitation
    - Lactate level
    - Transfer to ICU, if appropriate
CODE SEPSIS:
Early Recognition

Early sepsis recognition is achieved by utilizing the Sepsis Screening Tool at the first point of contact [Triage].
CODE SEPSIS: Mobilization
CODE SEPSIS: Evidence based orders

- Cultures & Lactate
- Antibiotics
- IV fluid resuscitation
- Hemodynamic stability & airway management when needed
CODE SEPSIS:
Coordination of Care
Monitor outcomes
CRMC & Maryland APR-DRG 720 Sepsis Survival Rate

- **Sepsis Guidelines Implemented**
- **Code Sepsis Initiated**

**Increase survival**
Next Step

Partners for state-wide implementation

Maryland Patient Safety Center
Maryland Hospital Association
University of Maryland
Important
Saving lives on a larger scale

The future is in our hands!