Decreasing Triage to Antibiotic Time for Suspected Sepsis Patients

Strong Memorial Hospital
Strong Memorial Hospital

- University of Rochester Medicine
- Upstate New York
- Tertiary/quaternary care center
- 830 beds
Hospital Sepsis Team

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- Donna Derck, RN, ED – Nurse Manager
- Judith Gerstner, RN, Critical Care
- Christine Groth, Pharmacist, Critical Care
- Rosemarie Kolker, Office of Clinical Practice Evaluation, Analyst
- John Lanphere, Operations Excellence – Coach
- David Lent, RN, Critical Care, Senior Nurse Manager
- Robert Loflin, MD, Critical Care
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- Vicki Vandewalle, Clinical Labs, Director of PI
- Justin Weis, MD, Critical Care
- Jaclyn Wilmarth, RN, ED Safety Nurse
Hospital Sepsis Team
Decreasing Triage to ABX Time for Suspected Sepsis Patients

Wouldn’t it be great if we could administer antibiotics to suspected septic patients within one hour of arrival to the Emergency Department (ED) triage?

The primary aim is to decrease the triage to initial antibiotic time through increased educational efforts and awareness in the ED while maintaining appropriate antibiotic stewardship.
Does this Patient Need Urgent Antibiotics?
*applies to patients > 18 yrs old*

In an effort to improve care for patients with severe sepsis, consider sepsis in patients with the following criteria:

- Suspected or known infection
- Systolic ≤ 90 mmHg
- RR ≥ 24/minute
- New unexplained Altered Mental Status

If a pt fulfills the above criteria, consider possible sepsis as a cause their symptoms and order the appropriate initial work up (blood cultures, lactate, IV fluid etc), in addition to an INITIAL DOSE of appropriate antibiotics.

Institutional goal time for antibiotic administration is within 60 minutes. (State standard is within 3 hours)

Call Charge x 51958 and triage x51940 to communicate a likelihood for sepsis and the pt will need to be roomed with antibiotics hung urgently.

- Rather than waiting for confirmed diagnosis, suspicion of potential sepsis should trigger an initial dose of antibiotics
- If nursing identifies pts meeting this criteria at the time of triage, notify a provider that this patient may need urgent initial work up and treatment including antibiotics
- Blood cultures, lactate and, if needed, UA / culture should be ordered but antibiotic administration should not be delayed if difficulty obtaining these
Project Implementation

- November 2016 – first meeting
- January 2017 – “SuperSIRS” checklist introduced for use at ED triage to identify patients at high risk for severe sepsis
- May 2017 – Standardized process with monthly data review to monitor process and identify additional improvements
Tools & Resources

Critical Care Bay
Main ED

ED Sepsis to Antibiotic Process v02

- **Patient arrives in ED** (via EMS, walk-in)
- **Registration**
- **Triage** - RN/APP
- **Rapid Intake**
  - MD
  - RN
- **Critical III on arrival** -> CCB
  - Room / Registration
  - Resident Eval (15 min)
  - Emergent procedures
  - Urgent procedures (central line)
- **Order Labs / Imaging**
- **Undress patient. Place on monitor**
  - IV placement (5 min - 30 min)
- **IVF**
- **Antibiotics ordered**
  - ABX Order
  - ABX Order recognized
  - Abx Retrieval from Pyxis (from RN, Pharmacy)
- **Treatment orders**
  - EKG
- **Labs / Blood**
  - Receive Results
- **Elapsed Time Range?**
- **Patient arrives in ED** (walk-in, EMS)
  - Order therapeutics, imaging
  - **Registration**
  - **Check V/S**
  - **EKG**
  - **Labs / Blood**
  - **Order Labs**
  - **Order EKG**
- **Patient Disposition**
  - Very ill Patient Waiting Room
  - (may be Prioritized) Roomed
  - V/S Checked Hourly
  - RI Avail?
  - Draw Labs, Insert IV, etc
- **ABX Delivered**
- **Labs / Blood**
- **Transfer of Accountability** - Who’s patient is it?
- **By time sepsis team engage, might be too late**
- **Elapsed Time Range?**
- **Suspect Sepsis**

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**Metrics**
- CBB Volume & Acuity
- Procedural challenges
- Antibiotic Stewardship
- Clarity in case of Sepsis
- ED Volume & Acuity
- Provider Availability
- Delays carrying out orders
- Staff not as used to overrides
- Late recognition of sepsis
- Critical lab results calls / retesting
- Lab results take too long
- Nursing Availability
- Vitals on post-it note?
- Delay to transport to Room
- PT in imaging Bed availability
- Waiting to go to RI
- Provider Availability
- Nursing Availability
Successful Strategies & Tips

- Multidisciplinary participation in the improvement process allows for a more robust solutions and buy-in to change
- Engaging process improvement facilitators brought a different perspective and focus on the workflow
- Pilots are essential to realizing the actual barriers and opportunities
- Communicate, communicate, communicate
Challenges & Barriers

- Emergency department is busy with many critical areas of focus
- Process improvement requires change and change is hard
Key Lessons Learned

- The problem isn’t always what you think it is
- Standardizing the process around evidence based criteria supported sound clinical judgment and experience
- Listening to the people that work in the environment every day is critical to finding solutions that work for the actual problems they are facing
## Time to Deliver Antibiotics to Patients in ED with Initial Diagnosis of Sepsis

**Score Card Data through 9/30/2017**

<table>
<thead>
<tr>
<th>Triage to ABX</th>
<th>Jan</th>
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<tr>
<td><strong>Total Sepsis</strong></td>
<td><strong>43</strong></td>
<td><strong>38</strong></td>
<td><strong>34</strong></td>
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<td><strong>549</strong></td>
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### Percentage of Patients with Initial Diagnosis of Sepsis Receiving ABX

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<tr>
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Outcomes & Data

% Achieving 3 Hr Target - Triage to ABX Admin Time

- ED Pts with Initial Dx of Sepsis
- % ABX Delivered within 3hr Target

January: 40%
February: 30%
March: 30%
April: 20%
May: 20%
June: 10%
July: 50%
August: 40%
September: 40%

Number of Pts Diagnosed with Sepsis in ED
Steps for Hardwiring & Spread

- Monthly dashboard for ongoing monitoring of the data and investigation of changes in results
- On-going communication to staff in existing forums
- Continued, visible leadership engagement in the process and the results
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