Quality improvement in sepsis care – Making a difference

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First, some history…

Surviving Sepsis Campaign

STOPPING SEPSIS
Saving Lives in Pennsylvania

Pennsylvania DEPARTMENT OF HEALTH
The Campaign agenda

To reduce mortality from sepsis via a 7-point agenda

• Building **AWARENESS** of sepsis
• Improving **DIAGNOSIS**
• Increasing the use of appropriate **TREATMENT**
• **EDUCATING** healthcare professionals
• Improving **POST-ICU CARE**
• Developing **GUIDELINES** of care
• Implementing a **PERFORMANCE IMPROVEMENT** program

From http://www.survivingsepsis.org/
Care bundles

- Identify and organize multiple care processes that improve care and outcomes together better than if implemented individually
- Simplify complex care processes, like sepsis care

<table>
<thead>
<tr>
<th>Within 3 hours</th>
<th>Within 6 hours</th>
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<tbody>
<tr>
<td><strong>Lactate</strong> measurement</td>
<td><strong>Vasopressors</strong> if hypotensive</td>
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<tr>
<td><strong>Blood cultures</strong> before antibiotics</td>
<td>Reassess <strong>volume status</strong></td>
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<tr>
<td>Broad spectrum <strong>antibiotics</strong></td>
<td>Re-measure <strong>lactate</strong></td>
</tr>
<tr>
<td><strong>IV fluid resuscitation</strong> for shock</td>
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From www.survivingsepsis.org
Protocols improve patient care


Guidelines for the Early Management of Patients With Acute Ischemic Stroke
A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association

O’Gara PT Circulation 2012
Jauch EC Stroke 2013
How do protocols make a difference?
How do protocols make a difference?
How do protocols make a difference?

- **OPERATIONALIZES**
- **RAISES AWARENESS**
- **PROTOCOL**
How do protocols make a difference?

Protocol

- RAISES AWARENESS
- OPERATIONALIZES
- GATHERS
How do protocols make a difference?

- Protocol educates
- Protocol raises awareness
- Protocol operationalizes
- Protocol gathers
How do protocols make a difference?

- RAISES AWARENESS
- OPERATIONALIZES
- EDUCATES
- CUSTOMIZES
- GATHERS
Unintended consequences of protocols

- Cookbook medicine
  - inhibition of individual thinking and practice innovation

- De-skilling practitioners
  - reduced ability to deal with patient variability

- Depersonalization
  - treatment of patients interchangeably

- Overutilization
  - application of protocols too broadly

STOPPING SEPSIS
Saving Lives in Pennsylvania
Next comes the evidence

Guidelines published

“Bundles” come on the scene
Next comes the evidence

Guidelines published
“Bundles” come on the scene

Levy et al published results of international QI programs in 165 hospitals

Ferrer et al published results of multicenter sepsis QI program in 59 hospitals in Spain
Improved adherence to bundle

Levy, MM. Intensive Care Med 2010
Reduction in mortality

Ferrer, R. JAMA 2008

STOPPING SEPSIS
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Department of Health
More support of QI programs for sepsis

STOP Sepsis Collaborative
GNYHA
- Launched 2009
- 57 member hospitals as of 2013
- Reduction in sepsis mortality of 23% within four years

IHI - North Shore-LIJ Health System
- Launched 2009
- 12 hospitals
- Reduction in sepsis mortality from 31% to 15% in four years

New Jersey Sepsis Learning Action Collaborative
- Launched 2014
- 73 healthcare organizations
- Reduction in sepsis mortality by 10.8%
Changing health policy

2002: Guidelines published
2004: “Bundles” come on the scene
2006: Levy et al. published results of international QI programs in 165 hospitals
2008: Ferrer et al. Published results of multicenter sepsis QI program in 59 hospitals in Spain
2010: Measure 0500 Severe Sepsis and Septic Shock: Management Bundle

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Changing health policy

- **2002**: Surviving Sepsis Campaign
- **2004**: Guidelines published
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CMS SEP-1

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2012
CMS SEP-1

2014
Gabby’s Law passed (Illinois)

2016
Legislation in NJ under development

Surviving Sepsis Campaign

National Quality Forum
Measure 0500
Severe Sepsis and Septic Shock: Management Bundle

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