New Jersey Hospital Association Institute for Quality & Patient Safety

New Jersey 2015 Sepsis Learning - Action Collaborative

PREVENT SEVERE SEPSIS AND SEPTIC SHOCK THROUGH EARLY RECOGNITION AND STANDARDIZED TREATMENT PROTOCOLS

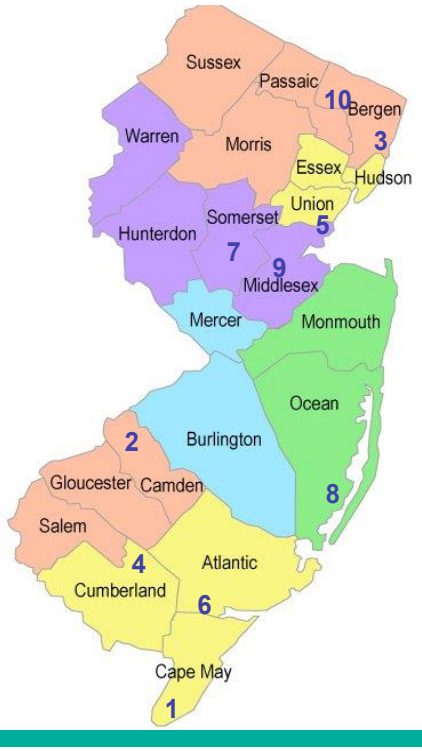
BOLD AIMS:

> **Implement** early recognition sepsis screening and treatment protocols in **all** N.J. hospitals by December 2015.

> **Reduce severe sepsis mortality rates** by **20%** in N.J. by December 2015.

SURVIVING SEPSIS CAMPAIGN

10 East Coast collaborative sites across New Jersey lead this effort



Current National Mortality Rates[1]

SEPSIS: 10% to 20%
SEVERE SEPSIS: 20% to 50%
SEPTIC SHOCK: 40% to 80%

2013 New Jersey Mortality Rates[2]

SEPSIS: 6%
SEVERE SEPSIS: 29%
SEPTIC SHOCK: 38%

1,214

Potential Number of Lives Saved
in N.J. with a 20% Reduction in Severe Sepsis

1. Cape Regional Medical Center
2. Cooper University Hospital
3. Holy Name Medical Center
4. Inspira Health Network
5. RWJ University Hospital at Rahway
6. Shore Medical Center
7. RWJ University Hospital - Somerset
8. Southern Ocean Medical Center
9. Saint Peter's University Hospital
10. The Valley Hospital

CURRENT NEW JERSEY, REGIONAL AND NATIONAL SEPSIS EFFORTS: *(not all inclusive)*

- Surviving Sepsis Campaign East Coast Collaborative
- Joint Commission Center for Transforming Healthcare Reducing Sepsis Mortality Project - Newton Medical Center and Chilton Medical Center
- Sepsis Collaborative - Hospital Association of New York State
- STOP *(Strengthening Treatment and Outcomes for Patients)* Sepsis Collaborative - Greater New York Hospital Association
- Leading Edge Advanced Practice Topic: Severe Sepsis and Septic Shock - Partnership for Patients
- Sepsis: How to Improve - Institute for Healthcare Improvement

[1]*Martin GS. Sepsis, severe sepsis and septic shock: changes in incidence, pathogens and outcomes. Expert Rev Anti Infect Ther. 2012 Jun;10(6):701-6. PMCID PMC3488423.*
[2]*New Jersey Hospital Association CY2013 hospital administrative data set.*

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PREVENT SEVERE SEPSIS AND SEPTIC SHOCK

SURVIVING SEPSIS CAMPAIGN BUNDLE

3- and 6-Hour Bundles

Processes to be completed:

WITHIN 3 HOURS:

- Measure lactate level.
- Obtain blood cultures prior to administration of antibiotics.
- Administer broad spectrum antibiotics.
- Administer 30 ml/kg crystalloid for hypotension or lactate ≥4mmol/L.

WITHIN 6 HOURS:

- Apply vasopressors (for hypotension that does not respond to initial fluid resuscitation) to maintain a mean arterial pressure (MAP) ≥65 mm Hg.
- In the event of persistent arterial hypotension despite volume resuscitation (septic shock) or initial lactate ≥4 mmol/L (36 mg/dL):
  - Measure central venous pressure (CVP).
  - Measure central venous oxygen saturation (ScvO2).
- Re-measure lactate if initial lactate was elevated.

NQF MEASURE 0500: SEVERE SEPSIS AND SEPTIC SHOCK MANAGEMENT BUNDLE

Measurement Description

This measure will focus on patients aged 18 years and older who present with symptoms of severe sepsis or septic shock. These patients will be eligible for the 3-hour (severe sepsis) and/or 6-hour (septic shock) early management bundle.

A. Measure lactate level.

B. Obtain blood cultures prior to administration of antibiotics.

C. Administer broad spectrum antibiotics.

D. Administer 30 ml/kg crystalloid for hypotension or lactate ≥4mmol/L.

E. Apply vasopressors (for hypotension that does not respond to initial fluid resuscitation to maintain a mean arterial pressure (MAP) ≥65 mm Hg).

F. In the event of persistent arterial hypotension despite volume resuscitation (septic shock) or initial lactate ≥4 mmol/L (36 mg/dL): measure central venous pressure and central venous oxygen saturation. *

G. Re-measure lactate if initial lactate was elevated.

NUMERATOR STATEMENT:

Patients from the denominator who received A, B **AND** C within 3 hours of time of presentation† **AND IF** septic shock is present (defined as either hypotension^ or lactate ≥4mmol/L) who also received D, E, F **AND** G within 6 hours of time of presentation.

† "Time of presentation" is defined as the time of triage in the ED or, if presenting from another care venue, from the earliest chart annotation consistent with all elements severe sepsis or septic shock ascertained through chart review.

^ "Hypotension" is defined as systolic blood pressure (SBP) <90 mm HG or mean arterial pressure (MAP) <70 mm Hg or a SBP decrease >40 mm Hg or <2 SD below normal for age or known baseline.

* Element "F" currently under review by the NQF.

DENOMINATOR STATEMENT:

Number of patients presenting with severe sepsis or septic shock.

Exclusions:

- Patients with advanced directives for comfort care are excluded.
- Clinical conditions that preclude total measure completion should be excluded.
- Patients for whom a central line is clinically contraindicated (e.g. coagulopathy that cannot be corrected, inadequate internal jugular or subclavian central venous access due to repeated cannulations).
- Patients for whom a central line was attempted but could not be successfully inserted.
- Patient or surrogate decision maker declined or was unwilling to consent to such therapies or central line placement.
- Patients transferred to an acute care facility from another acute care facility.