**NJ Severe Sepsis Data Collection guide- Acute Care – updated July, 2015**

Data Collection Periods

*Baseline Phase*: March, April, May 2015

*Implementation Phase*: June-December 2015

Data will be due by the last day of the following month. For example- May data due by June 30th.


Data Collection Methods

Review and submit a minimum of 5-10 cases per month (review all cases for organizations that have <5 cases per month).

Case review can be completed in two ways, concurrently or retrospectively. For whichever method selected, that approach should be maintained from month-to-month in order to assess the degree of improvement over time accurately.

Concurrent Review: Perform daily review of the Intensive Care Unit is encouraged. This will allow the team to review cases admitted/transferred from all locations within the hospital and allow for real time interventions to take place. For organizations focusing on emergency department treatment, concurrent review can occur in the emergency department.

Retrospective Review: Organizations may choose to review cases with the following ICD-9 discharge codes: 995.92 Severe Sepsis and/or 785.52 Septic Shock plus 038.0-038.9 (septicemia codes). This method does not allow for real time interventions, but can provide an accurate picture of the effect of the quality improvement efforts.

Data Abstraction Tools

Abstracting the cases for bundle compliance and mortality outcomes may be performed electronically or on paper.

**Important**: If using the following options, teams will need to transcribe aggregate monthly results into the NJ Sepsis Learning-Action Collaborative web database found at https://sepsisdata.njha.com.

Electronically: The Surviving Sepsis Campaign (SSC) Database offers free downloadable software that will automatically perform all calculations if data is entered into the required fields. This software also has a report function that allows the user to produce compliance reports.  For purposes of this collaborative, users would enter data into the SSC software for analysis and transcribe aggregate monthly results into the NJ Sepsis Learning-Action Collaborative web tool. The SSC software can be downloaded here: http://www.survivingsepsis.org/Data-Collection/Pages/default.aspx

Teams may also use their quality data vendor tools for sepsis abstraction.

Paper tool: Organizations may choose to utilize a paper abstraction tool. Teams should maintain a spreadsheet to compile individual case results. Aggregate monthly results will be entered into the NJ Sepsis Learning-Action Collaborative web tool.  The SSC paper tool can be downloaded here:

Note 1- In April 2015, the CMS Early Management Bundle, Severe Sepsis/Septic Shock measure was released and includes 6 hour bundle elements that include noninvasive volume status and tissue perfusion measurement options. The 6 hour elements are not required by the NJ sepsis collaborative and the SSC software has not yet been updated to include these options.

## Data Metrics

Required: **3 hour bundle**

- *3 hour bundle compliance (total of bundle components)*
  - ➢ Numerator: Number of cases reviewed that met all eligible components
  - ➢ Denominator: Number of severe sepsis/septic shock cases reviewed for the 3 hour bundle

- *3 hour bundle component compliance (components 1-4)*
- ➢ Received within three hours of **presentation of severe sepsis**:
  1. Initial lactate level measurement (can include lactate results drawn within 6 hours prior to presentation of severe sepsis)
  2. Blood cultures drawn prior to antibiotics (can include blood cultures drawn with 48 hours prior to presentation of severe sepsis)
  3. Broad spectrum or other antibiotics administered (can include IV antibiotics given within 24 hours prior to presentation of severe sepsis)
- ➢ Received within three hours of **presentation of septic shock:**
  4. Resuscitation with 30 ml/kg crystalloid fluids (can include crystalloid fluid bolus infusing at the time of presentation of septic shock)

- *3 hour bundle case survival:*
  - ➢ Numerator: Number of severe sepsis/septic shock patients that were alive at hospital discharge
  - ➢ Denominator: Number of severe sepsis/septic shock cases reviewed for the 3 hour bundle

## Data Inclusions and Exclusions

**Patient Population:** All patients age 18 and over who present with severe sepsis and/or septic shock as defined below

**Numerator Exclusions**: Patients receiving IV antibiotics for more than 24 hours prior to presentation of severe sepsis.

**Denominator Exclusions:**

• Directive for Comfort Care within 3 hours of presentation of severe sepsis

• Directive for Comfort Care within 6 hours of presentation of septic shock

• Administrative contraindication to care

• Length of Stay >120 days

• Transfer in from another acute care facility

• Patients with severe sepsis who expire within 3 hours of presentation

• Patients with septic shock who expire within 6 hours of presentation


Determining Time of Presentation

**Severe Sepsis Presentation**:  Suspected source of clinical infection, 2 or more manifestations of systemic infection (SIRS criteria) and the presence of any one sepsis-induced organ dysfunction.

| SIRS Criteria | Organ Dysfunction Variables |
|---|---|
| Temp  >38.3 C | SBP < 90 |
| Temp < 36.0 C | MAP < 65 |
| HR > 90 | SBP decrease > 40 from known baseline |
| RR > 20 per minute | Cr > 2.0 |
| WBC > 12,000 | Urine output < 0.5 ml/kg/hr for > 2 hours |
| WBC < 4000 | Bilirubin > 2.0 mg/dL |
| > 10% Bandemia | Platelets  < 100,000 |
|  | INR > 1.5 or aPTT > 60 secs |
|  | Lactate > 2 mmol/L (18.0 mg/dL) |

**Septic Shock Presentation**:  Presence of severe sepsis as above AND

- if tissue hypoperfusion persists despite crystalloid fluid resuscitation as evidenced by SBP< 90 or MAP< 65, or SBP decrease > 40 points from known baseline
- OR lactate ≥4

The following may be used to determine Presentation Time:

Provider (MD/PA/NP) documentation of severe sepsis/septic shock.

The time the last sign of severe sepsis/septic shock is noted or last lab value was reported.

For patients entering the ED with severe sepsis/septic shock, the presentation time is the time patient is triaged.

Data Submission

Aggregate monthly bundle compliance and survival data will be entered monthly into the NJ Sepsis Learning-Action Collaborative web tool by the team's data lead at this site https://sepsisdata.njha.com. In addition to monthly bundle compliance and mortality, teams will answer two structural assessments on a quarterly basis.

1. Has your organization implemented a hospital-wide early sepsis recognition screening tool?
2. Has your organization implemented a standardized severe sepsis treatment protocol that can be used in all patient care areas?

On a quarterly basis, NJHA will provide all acute care organizations* a report that will display severe sepsis and septic shock mortality rates for all adult patient populations. This result will also feature mortality rates of the adult patient population excluding palliative coded patients. Additionally, the report will stratify patients by race and ethnicity.

*Reports will be provided for those organizations that submit discharge coded data to New Jersey Hospital Association.

Click here to view the Surviving Sepsis Campaign 3 and 6 hour Bundles

Click here to search and view National Quality Forum Measure 0500 Severe Sepsis and Septic Shock: Management Bundle