

Severe Sepsis Quality Indicators

Quality Indicator #1	Definition of Indicator	Specifications
Blood cultures collected before broad-spectrum antibiotic administration for severe sepsis and/or septic shock over the first 6 hours following the time of presentation	The percent of patients who had blood cultures collected prior to broad-spectrum antibiotic administration for severe sepsis and/or septic shock over the first 6 hours following the time of presentation	<p><i>Numerator:</i> the number of patients who had blood cultures collected before broad-spectrum antibiotic administration for severe sepsis and/or septic shock over the first 6 hours following the time of presentation</p> <p><i>Denominator:</i> the number of patients presenting with severe sepsis and/or septic shock</p>

Quality Indicator #2	Definition of Indicator	Specifications
Median time in minutes to broad-spectrum antibiotic(s) administration for severe sepsis and/or septic shock following the time of presentation	Median time in minutes to administration of broad-spectrum antibiotic(s) for severe sepsis and/or septic shock following the time of presentation	<p>The median time in minutes to broad-spectrum antibiotic(s) administration for severe sepsis and/or septic shock following the time of presentation</p> <p>Note: For this indicator, time of presentation is determined as follows:</p> <ul style="list-style-type: none"> (i) If the patient presented to the ED with severe sepsis and/or septic shock, the time of presentation is the ED triage time. (ii) If the management of severe sepsis and/or septic shock is annotated in the chart as beginning on a unit transferring the patient to the ICU, the annotated time and date of the initiation of the resuscitation on the transferring unit is the time of presentation. (iii) If the management of severe sepsis and/or septic shock is NOT annotated as beginning on a unit transferring the patient to the ICU, the ICU admission time is the default value for the time of presentation. (iv) If the patient is newly treated for severe sepsis and/or septic shock while in the ICU longer than 24 hours after admission to the ICU for another diagnosis, the annotated time and date of the initiation of resuscitation for the management of severe sepsis and/or septic shock is the time of presentation.

Quality Indicator #3	Definition of Indicator	Specifications
Central venous pressure (CVP) of ≥ 8 mmHg achieved for septic shock or severe sepsis with lactate > 4 mmol/L (36 mg/dl) over the first 6 hours following the time of presentation	The percent of patients for whom a goal CVP of ≥ 8 mmHg was achieved for septic shock or lactate > 4 mmol/L (36 mg/dl) over the first 6 hours following the time of presentation	<p><i>Numerator:</i> the number of patients for whom a goal CVP of ≥ 8 mmHg was achieved for septic shock or lactate > 4 mmol/L (36 mg/dl) over the first 6 hours following the time of presentation</p> <p><i>Denominator:</i> the number of patients with septic shock or severe sepsis with lactate > 4 mmol/L (36 mg/dl)</p> <p><i>Exclusion:</i> patients with non-severe sepsis or severe sepsis with lactate ≤ 4 mmol/L (36 mg/dl)</p>

Quality Indicator #4	Definition of Indicator	Specifications
<p>Central venous oxygen saturation (ScvO₂)* ≥ 70% achieved for septic shock or severe sepsis with lactate > 4 mmol/L (36 mg/dl) over the first 6 hours following the time of presentation</p> <p>*mixed venous oxygen saturation (SvO₂) ≥ 65% may be substituted</p>	<p>The percent of patients for whom a goal ScvO₂ ≥ 70% (or SvO₂ ≥ 65%) was achieved for septic shock or lactate > 4 mmol/L (36 mg/dl) over the first 6 hours following the time of presentation</p>	<p><i>Numerator:</i> the number of patients for whom a goal ScvO₂ ≥ 70% (or SvO₂ ≥ 65%) was achieved for septic shock or lactate > 4 mmol/L (36 mg/dl) over the first 6 hours following the time of presentation</p> <p><i>Denominator:</i> the number of patients with septic shock or severe sepsis with lactate > 4 mmol/L (36 mg/dl)</p> <p><i>Exclusion:</i> patients with non-severe sepsis or severe sepsis with lactate ≤ 4 mmol/L (36 mg/dl)</p>

Quality Indicator #5	Definition of Indicator	Specifications
<p>Administration of low-dose* glucocorticoids for septic shock determined in accordance with a standardized ICU policy over the first 24 hours following the time of presentation</p>	<p>The percent of patients for whom administration of low-dose glucocorticoids for septic shock was determined in accordance with a standardized ICU policy over the first 24 hours following the time of presentation</p>	<p><i>Numerator:</i> number of patients for whom administration of low-dose glucocorticoids for septic shock was determined in accordance with a standardized ICU policy over the first 24 hours following the time of presentation</p> <p><i>Denominator:</i> total number of patients with septic shock</p> <p>*Low-dose glucocorticoids refer to a daily dose of 200–300 mg of hydrocortisone or equivalent</p>

Quality Indicator #6	Definition of Indicator	Specifications
<p>Administration of drotrecogin alfa (activated) for severe sepsis and/or septic shock in accordance with a standardized ICU policy over the first 24 hours following the time of presentation</p>	<p>The percent of patients for whom administration of drotrecogin alfa (activated) for severe sepsis and/or septic shock was determined in accordance with a standardized ICU policy over the first 24 hours following the time of presentation</p>	<p><i>Numerator:</i> number of patients for whom administration of drotrecogin alfa (activated) for severe sepsis and/or septic shock was determined in accordance with a standardized ICU policy over the first 24 hours following the time of presentation</p> <p><i>Denominator:</i> total number of patients presenting with severe sepsis and/or septic shock</p> <p><i>Exclusion:</i> non-severe sepsis</p>

Quality Indicator #7	Definition of Indicator	Specifications
<p>Glucose values maintained greater than the lower limit of normal and with a median value < 150 mg/dl (8.3 mmol/L) for severe sepsis and/or septic shock over the period 6 hours to 24 hours following the time of presentation</p>	<p>The percent of patients for whom glucose values were maintained greater than the lower limit of normal and with a median value < 150 mg/dl (8.3 mmol/L) for severe sepsis and/or septic shock over the period 6 hours to 24 hours following the time of presentation</p>	<p><i>Numerator:</i> number of patients for whom glucose values were maintained greater than the lower limit of normal and with a median value < 150 mg/dl (8.3 mmol/L) for severe sepsis and/or septic shock over the period 6 hours to 24 hours following the time of presentation</p> <p><i>Denominator:</i> number of patients presenting with severe sepsis and/or septic shock</p>

Quality Indicator #8	Definition of Indicator	Specifications
Median inspiratory plateau pressures maintained < 30 cm H ₂ O for mechanically ventilated patients with severe sepsis and/or septic shock over the first 24 hours following the time of presentation	The percent of mechanically ventilated patients with median inspiratory plateau pressures maintained < 30 cm H ₂ O for severe sepsis and/or septic shock over the first 24 hours following the time of presentation	<p><i>Numerator:</i> number of mechanically ventilated patients with median inspiratory plateau pressures maintained < 30 cm H₂O for severe sepsis and/or septic shock over the first 24 hours following the time of presentation</p> <p><i>Denominator:</i> number of mechanically ventilated patients presenting with severe sepsis and/or septic shock</p> <p><i>Exclusion:</i> Patients who were not mechanically ventilated</p>

Quality Indicator #9	Definition of Measure	Specifications
Reliability of compliance with all elements of the severe sepsis resuscitation bundle	The percent of cases of severe sepsis and/or septic shock that completed all applicable severe sepsis resuscitation bundle elements	<p><i>Numerator:</i> the number of cases of severe sepsis and/or septic shock that completed all applicable severe sepsis resuscitation bundle elements.</p> <p><i>Denominator:</i> number of patients with severe sepsis and/or septic shock</p> <p><i>Exclusion:</i> non-severe sepsis</p>

Quality Indicator #10	Definition of Measure	Specifications
Reliability of compliance with all elements of the severe sepsis management bundle	The percent of cases of severe sepsis and/or septic shock that completed all applicable severe sepsis management bundle elements	<p><i>Numerator:</i> the number of cases of severe sepsis and/or septic shock that completed all applicable severe sepsis management bundle elements</p> <p><i>Denominator:</i> number of patients with severe sepsis and/or septic shock</p> <p><i>Exclusion:</i> non-severe sepsis</p>

Quality Indicator #11	Definition of Measure	Specifications
Mortality due to severe sepsis and/or septic shock during hospital admission	The percent of cases of death due to severe sepsis and/or septic shock during hospital admission	<p><i>Numerator:</i> the number of cases of death due to severe sepsis and/or septic shock during hospital admission</p> <p><i>Denominator:</i> total number of patients with severe sepsis and/or septic shock</p> <p><i>Exclusion:</i> non-severe sepsis</p>

Note:

1. *Monthly reporting of results is recommended for all indicators.*
2. *The definition of severe sepsis, for purposes of the severe sepsis quality indicators, follows the algorithm used in the Evaluation for Severe Sepsis Screening Tool.*
3. *The definition of septic shock, for purposes of the severe sepsis quality indicators, assumes failure to maintain MAP > 65 despite compliance with and completion of all elements in the Severe Sepsis Resuscitation Bundle.*