

## 2019 Sepsis Measure Specifications: Pediatric Time Zero Severe/Shock

**1-Hour Bundle: The percentage of discharges in calendar year 2019 for which all components of the 1-hour bundle were satisfied by the hospital.**

Criteria	Relevant Data Dictionary Elements
<b>Denominator</b>	
<i>Inclusions</i>	
<ul style="list-style-type: none"> <li>All cases except cases removed by the exceptions</li> </ul>	<p>Exceptions:</p> <ul style="list-style-type: none"> <li>Same PCN but different MRN or UPI</li> <li>Same MRN but different UPI or DOB</li> <li>Duplicated or Overlapped Visits</li> <li>Incorrect Date or Datetime(wrong datetime format or discharge time before or on admission time)</li> </ul>
<i>Exclusions</i>	
<ul style="list-style-type: none"> <li>Discharges for patients whose age <math>\geq</math> 18</li> <li>1-hour exclusions: Discharges where patient was excluded from protocol within 1 hour of time zero                             <ul style="list-style-type: none"> <li>Earliest of severe sepsis/septic shock is used to determine time.</li> </ul> </li> <li>1-hour expired exclusions: Discharges where patient died within 1 hour of time zero                             <ul style="list-style-type: none"> <li>Earliest of severe sepsis/septic shock is used to determine time.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Admission Datetime – Date of Birth <math>\geq</math> 18 yrs</li> <li>(Severe Sepsis Time Not Null -OR- Septic Shock Time Not Null) -AND- Excluded Time Not Null -AND- time interval between Excluded Time and the minimum of Severe Sepsis Time and Septic Shock Time not greater than 1 hr (Excluded Time – min(Severe Sepsis Time, Septic Shock Time) <math>\leq</math> 1 hr)</li> <li>(Severe Sepsis Time Not Null -OR- Septic Shock Time Not Null) -AND- Discharge Time Not Null -AND- Discharge Status = 20 -AND- time interval between Discharge Time and the minimum of Severe Sepsis Time and Septic Shock Time not greater than 1 hr (Discharge Time – min(Severe Sepsis Time, Septic Shock Time) <math>\leq</math> 1 hr)</li> </ul>
<b>Denominator/Exclusion/Numerator</b>	
<p>Denominator:</p> <ul style="list-style-type: none"> <li>Antibiotic Administration</li> <li>Blood Culture Collection</li> <li>Crystalloid Fluid Administration</li> </ul>	<ul style="list-style-type: none"> <li>All cases except cases dropped by <b>1-Hour Exclusions</b></li> </ul>

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<p>Numerator:</p> <ul style="list-style-type: none"> <li>• Antibiotic Administration within 1 hour of time zero</li> <li>• Earliest of severe sepsis/septic shock is used to determine time.</li> </ul>	<ul style="list-style-type: none"> <li>• All cases except cases dropped by <b>1-Hour Exclusions</b></li> <li>• <b>-AND-</b></li> <li>• Antibiotic Administration = 1 -AND- Antibiotic Administration Time Not Null</li> <li>• <b>-AND-</b></li> <li>• (</li> <li>• (Severe Sepsis Time Not Null -OR- Septic Shock Time Not Null) -AND- time interval between Antibiotic Administration Time and the minimum of Severe Sepsis Time and Septic Shock Time not more than 24 hr before and not greater than 1 hr (<math>-24 \text{ hr} \leq \text{Antibiotic Administration Time} - \min(\text{Severe Sepsis Time}, \text{Septic Shock Time}) \leq 1 \text{ hr}</math>)</li> <li>• )</li> </ul>
<p>Numerator:</p> <ul style="list-style-type: none"> <li>• Blood Culture Collection prior to antibiotics and within 1 hour of time zero</li> <li>• Earliest of severe sepsis/septic shock is used to determine time.</li> <li>• This allows for antibiotic to be before blood culture if there is a blood culture acceptable delay.</li> <li>• This allows if antibiotic never done but blood culture was done within 1 hour.</li> </ul>	<ul style="list-style-type: none"> <li>• All cases except cases dropped by <b>1-Hour Exclusions</b></li> <li>• <b>-AND-</b></li> <li>• Blood Culture Collection = 1 -AND- Blood Culture Collection Time Not Null -AND- {[Antibiotic Administration Time Not Null -AND- (time interval between Antibiotic Administration Time and Blood Culture Collection Time not less than 0 (Antibiotic Administration Time – Blood Culture Collection Time <math>\geq 0</math>)] -OR- (time interval between Antibiotic Administration Time and Blood Culture Collection Time less than 0 (Antibiotic Administration Time - Blood Culture Collection Time <math>&lt; 0</math>)) -AND- Blood Culture Acceptable Delay = 1}}]</li> <li>• -OR- (Antibiotic Administration = 2 -AND- Blood Culture Collection = 1 )} -AND-</li> <li>• (</li> <li>• (Severe Sepsis Time Not Null -OR- Septic Shock Time Not Null) -AND- time interval between Blood Culture Collection Time and the minimum of Severe Sepsis Time and Septic Shock Time not more than 48 hours before and not greater than 1 hr</li> </ul>

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<p>Numerator:</p> <ul style="list-style-type: none"> <li>• Crystalloid Fluid Administration within 1 hour of time zero</li> <li>• Earliest of severe sepsis/septic shock is used to determine time.</li> </ul>	<p>( <b>-48 hr</b> ≤ Blood Culture Collection Time – min(Severe Sepsis Time, Septic Shock Time) ≤ 1 hr)</p> <ul style="list-style-type: none"> <li>• )</li> <li>• All cases except cases dropped by <b>1-Hour Exclusions</b></li> <li>• <b>-AND-</b></li> <li>• Pediatric Crystalloid Fluid Administration = 1 -AND- Crystalloid Fluid Administration Time Not Null <b>-AND-</b></li> <li>• (Severe Sepsis Time Not Null -OR- Septic Shock Time Not Null)-AND- time interval between Crystalloid Fluid Administration Time and the minimum of Severe Sepsis Time and Septic Shock Time <b>not more than 6 hr before</b> and not greater than 1 hr (<b>-6 hr</b> ≤ Crystalloid Fluid Administration Time – min(Severe Sepsis Time, Septic Shock Time) ≤ 1 hr)</li> <li>• )</li> </ul>
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