

2017 Sepsis Measure Specifications: Pediatric Time Zero Severe/Shock

1-Hour Bundle: The percentage of discharges in calendar year 2017 for which all components of the 1-hour bundle were satisfied by the hospital.

Criteria	Relevant Data Dictionary Elements
Denominator	
<i>Inclusions</i>	
<ul style="list-style-type: none"> All cases except cases removed by the exceptions 	<p>Exceptions:</p> <ul style="list-style-type: none"> Same PCN but different MRN or UPI Same MRN but different UPI or DOB Duplicated or Overlapped Visits Incorrect Date or Datetime(wrong datetime format or discharge time before or on admission time)
<i>Exclusions</i>	
<ul style="list-style-type: none"> Discharges for patients whose age ≥ 18 1-hour exclusions: Discharges where patient was excluded from protocol within 1 hour of time zero <ul style="list-style-type: none"> Earliest of severe sepsis/septic shock is used to determine time. 1-hour expired exclusions: Discharges where patient died within 1 hour of time zero <ul style="list-style-type: none"> Earliest of severe sepsis/septic shock is used to determine time. 	<ul style="list-style-type: none"> Admission Datetime – Date of Birth ≥ 18 yrs (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) ≤ 1 hr) (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) ≤ 1 hr)
Denominator/Exclusion/Numerator	
<p>Denominator:</p> <ul style="list-style-type: none"> Antibiotic Administration Blood Culture Collection Crystalloid Fluid Administration 	<ul style="list-style-type: none"> All cases except cases dropped by 1-Hour Exclusions

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<p>Numerator:</p> <ul style="list-style-type: none"> • Antibiotic Administration within 1 hour of time zero • Earliest of severe sepsis/septic shock is used to determine time. <p>Numerator:</p> <ul style="list-style-type: none"> • Blood Culture Collection prior to antibiotics and within 1 hour of time zero • Earliest of severe sepsis/septic shock is used to determine time. • This allows if antibiotic never done but blood culture was done within 1 hour. <p>Numerator:</p> <ul style="list-style-type: none"> • Crystalloid Fluid Administration within 1 hour of time zero • Earliest of severe sepsis/septic shock is used to determine time. 	<ul style="list-style-type: none"> • Antibiotic Administration = 1 -AND- Antibiotic Administration Time Not Null -AND- • (• (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 ($-24 \text{ hr} \leq \text{Antibiotic Administration Time} - \min(\text{Severe Sepsis Time}, \text{Septic Shock Time}) \leq 1 \text{ hr}$) •) <ul style="list-style-type: none"> • 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 ≥ 0)] -OR- (Antibiotic Administration = 2 -AND- Blood Culture Collection = 1)} -AND- • (• (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 greater than 1 hr ($\text{Blood Culture Collection Time} - \min(\text{Severe Sepsis Time}, \text{Septic Shock Time}) \leq 1 \text{ hr}$) •) <ul style="list-style-type: none"> • Pediatric Crystalloid Fluid Administration = 1 -AND- Crystalloid Fluid Administration Time Not Null -AND- • (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
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<p><u>Additional Measure (not in 1-hour bundle):</u></p> <p>Denominator:</p> <ul style="list-style-type: none"> • Crystalloid Fluid Administration • First exclude all 1-hour exclusions. • After exclusions, select cases that are crystalloid fluid required as denominator. <ul style="list-style-type: none"> ○ Septic shock <p>Numerator:</p> <ul style="list-style-type: none"> • Crystalloid Fluid Administration within 1 hour of septic shock • This captures all cases where fluid administration datetime is present AND the correct volume was administered. Fluids cannot be more than 6 hours prior to earliest time. 	<p>Time and Septic Shock Time not greater than 1 hr (Crystalloid Fluid Administration Time – min(Severe Sepsis Time, Septic Shock Time) ≤ 1 hr) -AND-</p> <ul style="list-style-type: none"> • Earliest Time Not Null -AND- time interval between Fluid Administration Time and Earliest Time not more than 6 hr before (Fluid Administration Time – Earliest Time ≥ -6 hr) •) <ul style="list-style-type: none"> • All cases except cases dropped by 1-Hour Exclusions -AND- • Septic Shock Present = 1 <ul style="list-style-type: none"> • Septic Shock Present = 1 -AND- Pediatric Crystalloid Fluid Administration = 1 -AND- Crystalloid Fluid Administration Time Not Null -AND- • Septic Shock Time Not Null -AND- time interval between Crystalloid Fluid Administration Time and Septic Shock Time not greater than 1 hr (Crystalloid Fluid Administration Time – Septic Shock Time ≤ 1 hr) -AND- • Earliest Time Not Null -AND- time interval between Fluid Administration Time and Earliest Time not more than 6 hr before (Fluid Administration Time – Earliest Time ≥ -6 hr)
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