

EQUAL Benchmarking Activity: CMS Sep-1 Preliminary Data Benchmarking Guide

The following definition and instructions are to be used for data submission for the Emergency Quality Network (E-QUAL) **CMS SEP-1 Preliminary Data Benchmarking**. Note these definitions and processes are consistent with those used by the Centers for Medicare and Medicaid Services (CMS) for the national reported metric SEP -1, *Early Management Bundle, Severe Sepsis/Septic Shock*.

Step 1: Obtain your hospital's SEP-1 Preliminary Data

Most hospital quality departments collect preliminary or draft data for the SEP-1 metric each month or each quarter. You will need to identify the hospital quality professionals responsible for data collection and ask for preliminary or draft data for submission to the EQUAL portal. Please note, no patient identifiers or protected health information (PHI) is disclosed and all benchmarking reports are confidential and de-identified to protect the identity of your institution.

Step 2: Manually abstract numerator elements from each patient chart

All data element labels and definitions are identical to the [CMS SEP-1 Measure Specification Manual](#)

Data Element	Definition	SEP-1 Flowchart Measure Element Location
Severe Sepsis Denominator	Inpatients age 18 and over with an ICD-10-CM Principal or Other Diagnosis Code of Severe Sepsis as defined in Appendix A, Table 4.01 of Hospital IQR Manual Version 5.2a. This denominator is defined AFTER exclusion of patients with administrative contraindication to care (i.e transfer) and directive for comfort care (SEP-1B)	SEP-1-H
Initial lactate	Initial lactate level measurement within 3 hours of severe sepsis	SEP 1-I
Broad Spectrum or other antibiotics administered	Broad spectrum antibiotics administered within 3 hours of severe sepsis blood cultures drawn	SEP-1 J
Blood Cultures drawn prior to antibiotics	Blood cultures drawn prior to antibiotics within 3 hours of severe sepsis	SEP-1 K
Repeat Lactate	Repeat lactate level measured within 6 hours of presentation of severe sepsis ONLY IF initial lactate level is elevated (>2mmol/L)	SEP-1 L
Septic Shock Denominator	Subset of Severe Sepsis patients with hypotension or an initial lactate value ≥ 4 mmol/L	SEP-1 E
Resuscitation with 30 ml/kg crystalloid fluids	Resuscitation with 30 ml/kg crystalloid fluids received within 3 hours of presentation of septic shock	SEP-1 M

Septic Shock with persistent hypotension Denominator	Subset of Septic Shock Denominator with hypotension ONLY IF 30 ml/kg fluid resuscitation already complete within 3 hours	SEP-1 N
Vasopressor initiated	Vasopressors received within six hours of presentation of septic shock	SEP-1 O
Septic Shock with persistent hypotension or hyperlactemia Denominator	Among patients that received fluid resuscitation, those with persistent hypotension or an initial lactate value ≥ 4 mmol/L	SEP-1 P
Repeat volume status assessment	Repeat volume status assessment can be performed in two ways within 6 hours of septic shock determination. This value is the sum of the two following assessment forms: focused exam OR 2 alternative methods.	N/A
By a focused exam	All five elements of a focused exam must be documented: vital signs AND cardiopulmonary exam AND capillary refill AND peripheral pulse exam AND skin exam.	SEP-1 W
By 2 assessment methods	Any two of the following assessment methods must be completed within 6 hours of septic shock determination: Central venous pressure measurement OR central venous oxygen saturation OR bedside cardiovascular ultrasound OR passive leg raise.	SEP-1 W
Numerator (bundle completed)	<p>Patients who received ALL of the following interventions appropriate to denominator population in the time required:</p> <p>Received within three hours of presentation of severe sepsis:</p> <ul style="list-style-type: none"> • Initial lactate level measurement • Broad spectrum or other antibiotics administered • Blood cultures drawn prior to antibiotics <p>AND received within six hours of presentation of severe sepsis:</p> <ul style="list-style-type: none"> • Repeat lactate level measurement only if initial lactate level is elevated <p>AND ONLY if Septic Shock present:</p> <p>Received within three hours of presentation of septic shock:</p> <ul style="list-style-type: none"> • Resuscitation with 30 ml/kg crystalloid fluids <p>AND ONLY IF hypotension persists after fluid administration, received within six hours of presentation of septic shock:</p> <ul style="list-style-type: none"> • Vasopressors • Repeat volume status and tissue perfusion assessment consisting of either: <ul style="list-style-type: none"> • A focused exam including: <ul style="list-style-type: none"> • Vital signs, AND • Cardiopulmonary exam, AND • Capillary refill evaluation, AND • Peripheral pulse evaluation, AND • Skin examination 	SEP-1 W (sum)

	<p>OR</p> <ul style="list-style-type: none">• Any two of the following four:<ul style="list-style-type: none">• Central venous pressure measurement• Central venous oxygen measurement• Bedside cardiovascular ultrasound• Passive leg raise or fluid challenge	
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Step 3: Use “Add New Month/Quarter” to add next row of data

Step 4: Click “Complete this activity” to submit all results for benchmarking report generation