



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 0500

Corresponding Measures:

De.2. Measure Title: Severe Sepsis and Septic Shock: Management Bundle

Co.1.1. Measure Steward: Henry Ford Hospital

De.3. Brief Description of Measure: This measure focuses on adults 18 years and older with a diagnosis of severe sepsis or septic shock. Consistent with Surviving Sepsis Campaign guidelines, it assesses measurement of lactate, obtaining blood cultures, administering broad spectrum antibiotics, fluid resuscitation, vasopressor administration, reassessment of volume status and tissue perfusion, and repeat lactate measurement. As reflected in the data elements and their definitions, the first three interventions should occur within three hours of presentation of severe sepsis, while the remaining interventions are expected to occur within six hours of presentation of septic shock.

1b.1. Developer Rationale: Please see the response in 1c.3, which includes the rationale for this all-or-none measure.

S.4. Numerator Statement: Numerator Statement: Patients who received ALL of the following:

Within three hours of presentation of severe sepsis:

- Initial lactate level measurement
- Broad spectrum or other antibiotics administered
- Blood cultures drawn prior to antibiotics

AND received within six hours of presentation of severe sepsis. ONLY if the initial lactate is elevated:

- Repeat lactate level measurement

AND within three hours of initial hypotension:

- Resuscitation with 30 mL/kg crystalloid fluids

OR within three hours of septic shock:

- Resuscitation with 30 mL/kg crystalloid fluids

AND within six hours of septic shock presentation, ONLY if hypotension persists after fluid administration:

- Vasopressors are administered

AND within six hours of septic shock presentation, if hypotension persists after fluid administration or initial lactate ≥ 4 mmol/L:

- Repeat volume status and tissue perfusion assessment is performed

S.6. Denominator Statement: Inpatients age 18 and over with an ICD-10-CM Principal or Other Diagnosis Code of Sepsis, Severe Sepsis, or Septic Shock and not equal to U07.1 (COVID-19).

S.8. Denominator Exclusions: The following patients are excluded from the denominator:

- Patients with an ICD-10-CM Principal or Other Diagnosis Code of U07.1 (COVID-19)
- Directive for Comfort Care or Palliative Care within six hours of presentation of severe sepsis
- Directive for Comfort Care or Palliative Care within six hours of presentation of septic shock
- Administrative contraindication to care within six hours of presentation of severe sepsis
- Administrative contraindication to care within six hours of presentation of septic shock
- Length of Stay >120 days
- Transfer in from another acute care facility
- Patients enrolled in a clinical trial for sepsis, severe sepsis or septic shock treatment or intervention
- Patients with severe sepsis who are discharged within six hours of presentation
- Patients with septic shock who are discharged within six hours of presentation
- Patients receiving IV antibiotics for more than 24 hours prior to presentation of severe sepsis

De.1. Measure Type: Composite

S.17. Data Source: [Electronic Health Data, Paper Medical Records](#)

S.20. Level of Analysis: [Facility](#)

IF Endorsement Maintenance – Original Endorsement Date: [Jun 07, 2012](#) Most Recent Endorsement Date: [Jul 13, 2017](#)

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? [N/A. This is not a paired measure.](#)

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. ***Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.***

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[0500_Evidence_Composite_Updated_03-10-17-637387173649592841.docx](#), [0500_Evidence_Composite_toNQF_20210409.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

[Yes](#)

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

[Please see the response in 1c.3, which includes the rationale for this all-or-none measure.](#)

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. (*This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.*) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

[Below, we include distribution information on performance rates calculated for two quarters, from Q3 2018 to Q4 2018.](#)

[There is a wide range in performance scores in each of the quarters, indicating opportunities for improvement.](#)

[Q3 2018 Analysis Provider Level](#)

[Date: July 1, 2018 – September 30, 2018](#)

[Source: Data submitted to the CMS Clinical Data Warehouse as part of the Hospital Inpatient Quality Reporting Program 3,222 hospitals, 114,827 cases after exclusions](#)

[Mean: 58%](#)

[Standard Deviation: 22%](#)

[Min: 0%](#)

[Max: 100.0%](#)

[Interquartile range: 29%](#)

[5th percentile: 17%](#)

[10th percentile: 29%](#)

25th percentile: 44%
Median: 59%
75th percentile: 73%
90th percentile: 85%
95th percentile: 91%

Q4 2018 Analysis Provider Level

Date: October 1, 2018 – December 31, 2018

3,235 hospitals, 118,925 cases after exclusions

Source: Data submitted to the CMS Clinical Data Warehouse as part of the Hospital Inpatient Quality Reporting Program

Mean: 58%

Standard Deviation: 23%

Min: 0%

Max: 100.0%

Interquartile range: 29%

5th percentile: 13%

10th percentile: 29%

25th percentile: 45%

Median: 60%

75th percentile: 74%

90th percentile: 85%

95th percentile: 91%

Overall (Q3 and Q4 2018) Analysis Provider Level

3,302 hospitals, 233,752 cases after exclusions

Source: Data submitted to the CMS Clinical Data Warehouse as part of the Hospital Inpatient Quality Reporting Program

Mean: 57%

Standard Deviation: 21%

Min: 0%

Max 100.0%

Interquartile range: 26%

5th percentile: 19%

10th percentile: 30%

25th percentile: 45%

Median: 60%

75th percentile: 71%

90th percentile: 82%

95th percentile: 88%

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

N/A

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (*This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.*) For measures that show high levels of performance, i.e., “topped out”, disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

We assessed disparities in measure performance for each quarter and both quarters together using an ANOVA test.

Source: Data submitted to the CMS Clinical Data Warehouse as part of the Hospital Inpatient Quality Reporting Program

-2018 Q3: 114,827 encounters for 3,222 hospitals submitting data from July, 1 2018 – September 30, 2018

-2018 Q4: 118,925 encounters for 3,235 hospitals submitting data from October 1, 2018 – December 31, 2018

We identified statistically significant differences in performance by age group ($p < 0.001$) for 2018 Q3 and 2018 Q4.

-Age 18-35: (2018 Q3: 60.5%, 2018 Q4: 62.2%)

-Age 36-64: (2018 Q3: 58.3%, 2018 Q4: 59.3%)

-Age 65 and older: (2018 Q3: 58.7%, 2018 Q4: 59.2%)

We identified statistically significant differences in performance by gender for 2018 Q3 ($p < 0.01$), but not in 2018 Q4 ($p = 0.166$).

- Unknown gender (2018 Q3: 80%, 2018 Q4: 72.7%)

-Male: (2018 Q3: 59.6%, 2018 Q4: 60.0%)

-Female: (2018 Q3: 57.6%, 2018 Q4: 58.8%)

We identified statistically significant differences in performance by race for 2018 Q3 ($p < 0.05$), but not for 2018 Q4 ($p = 0.132$).

-Black or African American: (2018 Q3: 55.3%, 2018 Q4: 56.3%)

-White: (2018 Q3: 59.1%, 2018 Q4: 60.0%)

-Other: (2018 Q3: 62.0%, 2018 Q4: 62.2%)

-Unknown: (2018 Q3: 58.6%, 2018 Q4: 58.0%)

We identified statistically significant differences in performance by ethnicity for 2018 Q3 ($p < 0.01$), 2018 Q4 ($p < 0.05$).

-Hispanic: (2018 Q3: 58.3%, 2018 Q4: 58.7%)

-Non-Hispanic : (2018 Q3: 58.7%, 2018 Q4: 59.5%)

We identified statistically significant differences in performance by payer for 2018 Q3 ($p < 0.05$) and 2018 Q4 ($p < 0.001$).

-Medicare: (2018 Q3: 58.5%, 2018 Q4: 59.3%)

-Non-Medicare : (2018 Q3: 58.9%, 2018 Q4: 59.7%)

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

N/A

1c. Composite Quality Construct and Rationale

1c.1. A composite performance measure is a combination of two or more component measures, each of which individually reflects quality of care, into a single performance measure with a single score.

For purposes of NQF measure submission, evaluation, and endorsement, the following will be considered composites:

- Measures with two or more individual performance measure scores combined into one score for an accountable entity.
- Measures with two or more individual component measures assessed separately for each patient and then aggregated into one score for an accountable entity:
 - all-or-none measures (e.g., all essential care processes received, or outcomes experienced, by each patient);

1c.1. Please identify the composite measure construction: *all-or-none measures (e.g., all essential care processes received, or outcomes experienced, by each patient)*

1c.2. Describe the quality construct, including:

- the overall area of quality
- included component measures and
- the relationship of the component measures to the overall composite and to each other.

The overall area of quality under consideration is care of patients with severe sepsis or septic shock. The components are clearly articulated in field S.4. Numerator Statement and include measurement of lactate, obtaining blood cultures, administering broad spectrum antibiotics, fluid resuscitation, vasopressor administration, reassessment of volume status and tissue perfusion, and repeat lactate measurement. The relationship of the component measures to the overall composite is such that all individual cases must meet all eligible components or the individual case fails.

1c.3. Describe the rationale for constructing a composite measure, including how the composite provides a distinctive or additive value over the component measures individually.

The evidence cited for all components of this measure is directly related to decreases in organ failure, overall reductions in hospital mortality, length of stay, and costs of care.

A principle of sepsis care is that clinicians must rapidly treat patients with an unknown causative organism and unknown antibiotic susceptibility. Since patients with severe sepsis have little margin for error regarding antimicrobial therapy, initial treatment should be broad spectrum to cover all likely pathogens. As soon as the causative organism is identified, based on subsequent culture and susceptibility testing, de-escalation is encouraged by selecting the most appropriate antimicrobial therapy to cover the identified pathogen, safely and cost effectively (Dellinger, 2012).

Multicenter efforts to promote bundles of care for severe sepsis and septic shock were associated with improved guideline compliance and lower hospital mortality (Ferrer, 2008 and Rhodes, 2015). Even with compliance rates of less than 30%, absolute reductions in mortality of 4-6% have been noted (Levy, 2010 and Ferrer, 2008). Absolute reductions in mortality of over 20% have been seen with compliance rates of 52% (Levy, 2010). Coba et al. has shown that when all bundle elements are completed and compared to patients who do not have bundle completion, the mortality difference is 14% (2011). Thus, there is a direct association between bundle compliance and improved mortality. Without a continuous quality initiative (CQI), even these compliance rates will not improve and will decrease over time (Ferrer, 2008). Multiple studies have shown that, for patients with severe sepsis, standardized order sets, enhanced bedside monitor display, telemedicine, and comprehensive CQI feedback is feasible, modifies clinician behavior, and is associated with decreased hospital mortality (Thiel, 2009; Micek, 2006; Winterbottom, 2011; Schramm, 2011; Nguyen, 2007; Loyola, 2011).

A composite measure was developed given the clinical dependencies the components have on one another. In addition, the components of the measure must be applied within specific time frames; the first three interventions should occur within three hours of presentation of severe sepsis, while the remaining interventions are expected to occur within six hours of presentation of septic shock. The sequencing of the measure is such that the components could not stand alone unless certain preceding conditions had been met. In this way, treating the elements as a composite ensured assessment of a concerted strategy aimed at reducing mortality. The composite is more powerful than any individual application of the components in isolation from each other.

1c.4. Describe how the aggregation and weighting of the component measures are consistent with the stated quality construct and rationale.

The component measures are aggregated by time with 3- and 6-hour elements for severe sepsis and for septic shock. In addition to being time based, proceeding with the next component is dependent on certain qualifying features creating dependencies within the composite framework. There is no weighting of one component as more important than another. This structure is consistent with the stated quality construct of providing measurement an orderly standard operating procedure in the management of patients with severe sepsis and septic shock.

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. ***Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.***

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

Critical Care, Infectious Diseases (ID), Infectious Diseases (ID) : Pneumonia and respiratory infections, Respiratory, Respiratory : Pneumonia

De.6. Non-Condition Specific(check all the areas that apply):

Disparities Sensitive, Safety, Safety : Healthcare Associated Infections

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

Elderly

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

https://www.qualitynet.org/files/5eebdf8229d0f10023cb9234?filename=HIQR_SpecsMan_v5.9.zip

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: [Appendix-A1_v5.9.xls](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

Not an instrument-based measure

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

Yes

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

Since last submission in 2017 (manual v5.2), the measure developer and leads, in collaboration with CMS, have continued to refine the specifications and data element definitions to increase clarity and reduce burden for abstractors. The measure has undergone several rounds of updates since the last endorsement, in alignment with published IQR Specification Manual and data dictionary.

Below we describe changes that affect the numerator, denominator, exclusions, algorithm, and data element list. Please see the release notes (found at this link: <https://qualitynet.cms.gov/inpatient/specifications-manuals>) for in-depth descriptions of changes to the data dictionary and to the medication tables which aimed to provide additional guidance to abstractors, reduce abstractor burden, or improve readability and consistency across the manual.

Measure name:

- Version 5.8 (Discharges 07-01-20 through 12-31-20)
- o Changed from: Early Management Bundle, Severe Sepsis/Septic Shock, to: Severe Sepsis and Septic Shock: Management Bundle (Composite Measure) for consistency across measure maintenance materials

Numerator:

- Version 5.3 (Discharges 01-01-18 through 06-30-18)
- o Numerator statement was edited to clarify that Crystalloid Fluid Administration needed to be initiated within 3 hours of Initial Hypotension or within 3 hours of Septic Shock.
- o The last bullet of the numerator was shortened to "Repeat Volume Status and Tissue Perfusion" to simplify the numerator statement.

Denominator, exclusions, algorithm, and initial population:

- Version 5.3 (Discharges 01-01-18 through 06-30-18)
- o Denominator exclusions were updated to exclude patients who were part of a Clinical Trial related to sepsis care and management because these patients may be exposed to treatments outside of the scope of the measure.
- o The algorithm was updated to place the Blood Culture Collection section earlier in the algorithm flow which allows for case exclusion based on antibiotic timing earlier and decreases abstraction burden.

- o The time frame for documentation of comfort measures only or palliative care changed from prior to or within three hours to six hours of Severe Sepsis Presentation to better reflect the time frame measure requirements need to be completed.
- Version 5.7 (Discharges 01-01-20 through 06-30-20)
- o Removed an algorithm re-check of the Initial Lactate Level Result decision point to simplify the algorithm and ensure all cases that received crystalloid fluids proceed in the algorithm to the Repeat Volume Status and Tissue Perfusion Assessment Performed data element.
- Version 5.9 (Discharges 01-01-21 through 06-30-21)
- o Added exclusion to initial population for cases with an ICD-10-CM principal or other diagnosis code equal to U07.1 (COVID-19) based on recommendations from literature and clinical feedback.

Data elements:

- Version 5.3 (Discharges 01-01-18 through 06-30-18)
- o Added exception to the Crystalloid Fluid Administration data element that allows for use of ideal body weight to determine target fluid volume for patients with clinician documentation indicating the patient is obese (defined as a BMI greater than 30) to address concerns over high fluid volumes for these patients if actual body weight is used.
- Version 5.4 (Discharges 07-01-18 through 12-31-18)
- o Removed 30 data elements associated with the Repeat Volume Status and Tissue Perfusion assessment and incorporated concepts from these data elements into three new data elements: Repeat Volume Status and Tissue Perfusion Assessment, Repeat Volume Status and Tissue Perfusion Assessment Date, and Repeat Volume Status and Tissue Perfusion Assessment Time. The goal of this change was to reduce abstractor burden and simplify the measure specifications.
- o Added the Initial Hypotension Date and Initial Hypotension Time data elements to clarify and confirm the timing relationship between Initial Hypotension and Crystalloid Fluid Administration in the algorithm.
- Version 5.5 (Discharges 01-01-19 through 06-30-19)
- o Removed the Documentation of Septic Shock data element to reduce abstractor burden because the data element was no longer needed in the algorithm as a trigger for the crystalloid fluid administration section of the algorithm.
- Version 5.7 (Discharges 01-01-20 through 06-30-20)
- o Updated the Repeat Volume and Tissue Perfusion Assessment data element to look at the earliest date of the attestation performed rather than the last date of the attestation performed to reduce provider abstractor burden.
- Version 5.8 (Discharges 07-01-20 through 12-31-20)
- o Added guidance to the Severe Sepsis Present data element that allows for exclusion of cases if there is physician/APN/PA documentation that coronavirus or COVID-19 is suspected or present, to address variations in care for COVID-19 that may result in cases not meeting measure requirements.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) **DO NOT** include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Numerator Statement: Patients who received ALL of the following:

Within three hours of presentation of severe sepsis:

- Initial lactate level measurement
- Broad spectrum or other antibiotics administered
- Blood cultures drawn prior to antibiotics

AND received within six hours of presentation of severe sepsis. ONLY if the initial lactate is elevated:

- Repeat lactate level measurement

AND within three hours of initial hypotension:

- Resuscitation with 30 mL/kg crystalloid fluids

OR within three hours of septic shock:

- Resuscitation with 30 mL/kg crystalloid fluids

AND within six hours of septic shock presentation, ONLY if hypotension persists after fluid administration:

- Vasopressors are administered

AND within six hours of septic shock presentation, if hypotension persists after fluid administration or initial lactate ≥ 4 mmol/L:

- Repeat volume status and tissue perfusion assessment is performed

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target

process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

The following variables are used to calculate the numerator:

- Blood Culture Collection
- Blood Culture Collection Acceptable Delay
- Blood Culture Collection Date
- Blood Culture Collection Time
- Broad Spectrum or Other Antibiotic Administration
- Broad Spectrum or Other Antibiotic Administration Date
- Broad Spectrum or Other Antibiotic Administration Selection
- Broad Spectrum or Other Antibiotic Administration Time
- Crystalloid Fluid Administration
- Crystalloid Fluid Administration Date
- Crystalloid Fluid Administration Time
- Initial Hypotension
- Initial Hypotension Date
- Initial Hypotension Time
- Initial Lactate Level Collection
- Initial Lactate Level Date
- Initial Lactate Level Result
- Initial Lactate Level Time
- Persistent Hypotension
- Repeat Lactate Level Collection
- Repeat Lactate Level Date
- Repeat Lactate Level Time
- Repeat Volume Status and Tissue Perfusion Assessment Performed
- Repeat Volume Status and Tissue Perfusion Assessment Performed Date
- Repeat Volume Status and Tissue Perfusion Assessment Performed Time
- Septic Shock Present
- Septic Shock Presentation Date
- Septic Shock Presentation Time
- Severe Sepsis Present
- Severe Sepsis Presentation Date
- Severe Sepsis Presentation Time
- Vasopressor Administration
- Vasopressor Administration Date
- Vasopressor Administration Time

S.6. Denominator Statement (Brief, narrative description of the target population being measured)

Inpatients age 18 and over with an ICD-10-CM Principal or Other Diagnosis Code of Sepsis, Severe Sepsis, or Septic Shock and not equal to U07.1 (COVID-19).

S.7. Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Discharges age 18 and over with an ICD-10-CM Principal or Other Diagnosis Code of Sepsis, Severe Sepsis, or Septic Shock as defined in the table below:

ICD-10-CM Code Code Description

A021	Salmonella sepsis
A227	Anthrax sepsis
A267	Erysipelothrix sepsis
A327	Listerial sepsis
A400	Sepsis due to streptococcus, group A
A401	Sepsis due to streptococcus, group B
A403	Sepsis due to Streptococcus pneumoniae
A408	Other streptococcal sepsis
A409	Streptococcal sepsis, unspecified
A4101	Sepsis due to Methicillin susceptible Staphylococcus aureus
A4102	Sepsis due to Methicillin resistant Staphylococcus aureus
A411	Sepsis due to other specified staphylococcus
A412	Sepsis due to unspecified staphylococcus
A413	Sepsis due to Hemophilus influenzae
A414	Sepsis due to anaerobes
A4150	Gram-negative sepsis, unspecified
A4151	Sepsis due to Escherichia coli [E. coli]
A4152	Sepsis due to Pseudomonas
A4153	Sepsis due to Serratia
A4159	Other Gram-negative sepsis
A4181	Sepsis due to Enterococcus
A4189	Other specified sepsis
A419	Sepsis, unspecified organism
A427	Actinomycotic sepsis
A5486	Gonococcal sepsis
R6520	Severe sepsis without septic shock
R6521	Severe sepsis with septic shock

Data elements required to calculate the denominator (in alphabetical order):

- Administrative Contraindication to Care, Septic Shock
- Administrative Contraindication to Care, Severe Sepsis
- Admission Date
- Birthdate
- Clinical Trial
- Directive for Comfort Care or Palliative Care, Septic Shock
- Directive for Comfort Care or Palliative Care, Severe Sepsis
- Discharge Date
- Discharge Disposition
- Discharge Time
- Transfer From Another Hospital or ASC

S.8. Denominator Exclusions *(Brief narrative description of exclusions from the target population)*

The following patients are excluded from the denominator:

- Patients with an ICD-10-CM Principal or Other Diagnosis Code of U07.1 (COVID-19)
- Directive for Comfort Care or Palliative Care within six hours of presentation of severe sepsis
- Directive for Comfort Care or Palliative Care within six hours of presentation of septic shock
- Administrative contraindication to care within six hours of presentation of severe sepsis
- Administrative contraindication to care within six hours of presentation of septic shock
- Length of Stay >120 days
- Transfer in from another acute care facility
- Patients enrolled in a clinical trial for sepsis, severe sepsis or septic shock treatment or intervention
- Patients with severe sepsis who are discharged within six hours of presentation
- Patients with septic shock who are discharged within six hours of presentation
- Patients receiving IV antibiotics for more than 24 hours prior to presentation of severe sepsis

S.9. Denominator Exclusion Details (All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

The following data elements are used to determine the denominator exclusions:

- Administrative Contraindication to Care, Septic Shock
- Administrative Contraindication to Care, Severe Sepsis
- Admission Date
- Birthdate
- Clinical Trial
- Directive for Comfort Care or Palliative Care, Septic Shock
- Directive for Comfort Care or Palliative Care, Severe Sepsis
- Discharge Date
- Discharge Disposition
- Discharge Time
- Transfer From Another Hospital or ASC

To determine the length of stay, the admission date and discharge date are used. If the result of the calculation subtracting the admission date from the discharge date is greater than 120 days, the patient is excluded from the measure.

S.10. Stratification Information (Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)

N/A. This measure is not stratified.

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Higher score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

The detailed measure algorithm for SEP-1 is available in the Measure Information Form (file named 2b SEP-1(508)1) in the measure specifications (found at the link referenced in S.1). Below is a high-level summary of the measure logic:

1. Identify the target population by checking whether cases have the appropriate ICD-10 CM Principal or Other Diagnosis Codes on table 4.01 of the manual (see attached code book), are 18 years or older, and have a length of stay of less than or equal to 120 days, and does not have the COVID-19 code.

2. Of the patients who meet the initial target population criteria, find the patients who qualify for the denominator by assessing for initial exclusions (Transfer From Another Hospital or ASC, Clinical Trial, Severe Sepsis not Present, Administrative Contraindication to Care, Severe Sepsis, Directive for Comfort Care or Palliative Care, Severe Sepsis, Discharge within 6 hours of Severe Sepsis Presentation).

3. Assess for completion of the following actions within 3 hours of presentation of severe sepsis:

a. Broad Spectrum or Other Antibiotic Administration within 3 hours after Severe Sepsis Presentation Date and Time (Cases for which Broad Spectrum Antibiotic Timing is more than 24 hours before Severe Sepsis Presentation Date and Time are excluded from

the measure).

b. Blood Culture Collection Date and Time within 48 hours before to 3 hours after Severe Sepsis Presentation Date and Time and before the Broad Spectrum Administration Date and Time or Blood Culture Collection Acceptable Delay = 1

c. Initial Lactate Level Collection in the time frame between 6 hours before to 3 hours after Severe Sepsis Presentation Date and Time.

4. If the Initial Lactate Level Result is elevated (> 2 mmol/L), assess for Repeat Lactate Level Collection within 6 hours of Severe Sepsis Presentation Date and Time.

5. Assess for Septic Shock (as determined by Initial Hypotension or Initial Lactate Level Result of 4 mmol/L or higher or documentation as described by the Septic Shock Present data element). For patients with Septic Shock Present, assess for exclusions including Administrative Contraindication to Care, Septic Shock; Directive for Comfort Care or Palliative Care, Septic Shock; or Discharge Date and Time within 6 hours of Septic Shock Presentation Date and Time.

a. For patients with Septic Shock, assess for Crystalloid Fluid Administration within 3 hours after the triggering event (Initial Hypotension Date and Time or Septic Shock Presentation Date and Time).

b. For patients with Persistent Hypotension after fluids have been completely infused, assess for Vasopressor Administration within six hours of Septic Shock Presentation Date and Time and Repeat Volume Status and Tissue Perfusion Assessment Performed within 6 hours of Septic Shock Presentation Date and Time

c. For patients without Persistent Hypotension after fluids have been completely infused, assess for Repeat Volume Status and Tissue Perfusion Assessment Performed within 6 hours of Septic Shock Presentation Date and Time

Cases must comply with all of the above numerator components (as applicable) in order to meet the numerator criteria.

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

The approach outlined below can also be found in the Measure Information Form (file name 2a-SEP-List(508).pdf) (found at the link referenced in S.1)

Sampling:

Hospitals have the option to sample from their population, or submit their entire population. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter/month for the measure cannot sample.

Population and Sampling:

Hospitals that choose to sample have the option of sampling quarterly or sampling monthly. A hospital may choose to use a larger sample size than is required. Hospitals whose Initial Patient Population size is less than the minimum number of cases per quarter/month cannot sample. Hospitals that have five or fewer sepsis discharges for the entire measure set (both Medicare and non-Medicare combined) in a quarter are not required but are encouraged to submit sepsis patient level data to the CMS Clinical Warehouse.

Regardless of the option used, hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. Due to exclusions, hospitals selecting sample cases MUST submit AT LEAST the minimum required sample size.

Quarterly Sampling:

Hospitals selecting sample cases for the sepsis measure must ensure that the population and quarterly sample size meets the following conditions:

- If average quarterly initial patient population size “N” ≥ 301 , then the minimum required sample size is 60.
- If average quarterly initial patient population size “N” is 151-300, then the minimum required sample size is 20% of the initial patient population size.
- If average quarterly initial patient population size “N” is 30-150, then the minimum required sample size is 30.
- If average quarterly initial patient population size “N” is 6-29, then there is no sampling; 100% of the initial patient population is required.
- If there are 0-5 cases, then submission of patient level data is encouraged but not required. If submission occurs, 1 – 5 cases of the Initial Patient Population may be submitted

Monthly Sampling:

Hospitals selecting sample cases for the sepsis measure must ensure that the population and monthly sample size meets the following conditions:

- If average quarterly initial patient population size “N” ≥ 101 , then the minimum required sample size is 20.
- If average quarterly initial patient population size “N” is 51-100, then the minimum required sample size is 20% of the initial patient population size.
- If average quarterly initial patient population size “N” is 10-50, then the minimum required sample size is 10.
- If average quarterly initial patient population size “N” is <10 , then there is no sampling; 100% of the initial patient population is required.

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

N/A. The measure does not use survey or patient reported data.

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Electronic Health Data, Paper Medical Records

S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

If instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

Electronic data collection software are available for purchase or under contract from vendors. Alternatively, facilities can download the free CMS Abstraction & Reporting Tool (CART). Paper tools for manual abstraction, which are posted on www.QualityNet.org, are also available for the CART tool. These tools are posted on www.QualityNet.org at this URL: <https://qualitynet.cms.gov/inpatient/data-management/cart>.

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No data collection instrument provided

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Facility

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Inpatient/Hospital

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

N/A. This measure has one set of specifications and does not have separate calculations of individual performance measures.

2. Validity – See attached Measure Testing Submission Form

0500_Testing_Composite_Updated_03-10-17-637387173659124404.docx, SEP-1_TestingAttachment_Final_2021_v2.docx

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

Yes

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

Yes

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1, 2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

No - This measure is not risk-adjusted

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

Abstracted from a record by someone other than person obtaining original information (e.g., chart abstraction for quality measure or registry)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for maintenance of endorsement.

Some data elements are in defined fields in electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For maintenance of endorsement, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

Currently, all documentation required to report the SEP-1 (NQF 0500) measure cannot be captured electronically in discrete fields. While efforts are being made by hospitals to develop templates and workflows to facilitate the capture of electronic clinical data within the clinical workflow, gaps remain in the ability to electronically capture all of the required data in discrete fields. The SEP-1 (NQF 0500) measure is complex and to collect the data necessary for reporting the measure requires data abstractors to review documentation in various formats including narrative free-text and identify the specific information necessary to report the measure.

Preliminary efforts to convert the SEP-1 (NQF 0500) measure to an eCQM within the current HQMF/QDM frameworks showed that the transition is not feasible. As noted above, there is wide variability in the ability of hospitals to collect the data necessary for the

measure in discrete electronic fields. For this reason, there are no immediate plans to develop an eCQM.

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

Missing data is not a concern for this measure because the algorithm rejects cases and does not allow submission in instances where there is missing data for a data element. CMS regularly receives feedback and questions from hospital abstractors about specifications and data collection through the QualityNet portal, from educational webinars, and interviews with abstractors. The measure stewards, CMS, and the support contractor take this feedback into consideration during the bi-annual manual revision cycles where the team reviews the specifications to identify ways to clarify and simplify abstraction guidance, and decrease data collection and clinical documentation burden.

Examples of updates based on feedback:

- 1) Version 5.3 (Discharges 01-01-18 through 06-30-18): We received feedback from abstractors that some cases were excluded due to antibiotic timing, but the placement of the data elements resulted in abstraction of unnecessary data elements downstream in the algorithm. We updated the algorithm to place the Blood Culture Collection exclusion earlier in the algorithm flow, which eliminated the need to collect the additional data for these cases and decreased abstraction burden.
- 2) Version 5.7 (Discharges 01-01-20 through 06-30-20): We received feedback that was more time consuming for abstractors to review medical records to identify the last date and time as opposed by the first date and time that an attestation was performed for the Repeat Volume and Tissue Perfusion Assessment data element. We revised the abstraction guidance for the data element to ask abstractors to look at the earliest date and time of the attestation performed rather than the last date and time of the attestation performed to reduce provider abstractor burden, while still retaining the intent of the data element.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

All measures which are part of CMS reporting programs are required to allow its users to not incur any costs or meet any requirements to use any aspect of the measure. All programs and tools used for the measure are required to be Open Source and free to use.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)
Regulatory and Accreditation Programs	<p>Public Reporting</p> <p>Hospital IQR: Timely and Effective Care – Care Compare https://data.cms.gov/provider-data/dataset/yv7e-xc69</p> <p>Payment Program Hospital IQR https://qualitynet.cms.gov/inpatient/iqr</p>

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

Name of program and sponsor: Hospital Inpatient Quality Reporting Program, sponsored by Centers for Medicare & Medicaid Services

- Purpose: The Hospital Inpatient Quality Reporting (IQR) Program is a pay for quality data reporting program implemented by CMS for inpatient hospital services. In addition to providing hospitals with a financial incentive to report their quality of care measure data, the Hospital IQR Program provides CMS with data to help Medicare beneficiaries make more informed decisions about their health care. Hospital quality of care information gathered through the Hospital IQR Program is publicly available on the Care Compare website.
- Geographic area and number and percentage of accountable entities and patients included:
- The publicly reported values (on Care Compare) are calculated for facilities nationwide in the United States that meet minimum case count requirements (> 10 cases). There were 3,084 hospitals nation-wide with available SEP-1 data, on the Timely and Effective Care hospital-level file (<https://data.cms.gov/provider-data/dataset/yv7e-xc69>) on Care Compare. Approximately 95% of hospitals eligible for the Hospital IQR program report this measure.
- Level of measurement and setting: Acute care hospital facility level

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

N/A. SEP-1 is currently in the CMS Inpatient Quality Reporting Program and is publicly reported on the Care Compare website.

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

NA. SEP-1 is currently in the CMS Inpatient Quality Reporting Program and is publicly reported on the Care Compare website.

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

The most recent data available on Care Compare, which includes data from 2019, indicates that there were 3,084 hospitals with available SEP-1 data on the Timely and Effective Care hospital-level form on Care Compare.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

CMS publicly reports SEP-1 results on the Care Compare website. Eligible hospitals are provided a facility specific preview report prior to each quarterly data refresh on Care Compare which allows them to compare their facility measure performance results to their state rate, the national rate and the national top 10% performing hospitals. Guides for downloading and interpreting the

preview reports are available on [QualityNet](#).

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

As described in 3c.1, we receive and address feedback on measure specifications and implementation in the clinical setting. Feedback from facilities about their measure performance is sent to and addressed by the team that produces and disseminates the facility level measure performance reports.

4a2.2.2. Summarize the feedback obtained from those being measured.

As described in 3c.1, abstractors request clarification of abstraction guidance related to data elements through the [QualityNet](#) portal and questions and answers on the National Provider Calls.

4a2.2.3. Summarize the feedback obtained from other users

We received input from about measure specifications, for example about medication lists and about severe sepsis presentation time, from an expert work group and from professional societies.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

The measure stewards and measure developers take feedback from abstractors along with findings from literature and feedback from expert work groups and professional societies into account during biannual measure updates. Please see section 3c.1 for examples of changes made to reduce abstractor burden and section S.3.2. for descriptions of changes made to clarify the measure specifications.

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

Based on our testing data from 2018, the mean performance score on SEP-1 increased from 41.9% in 2016 Q2 to 58% in 2018 Q4 (using data from the CMS Clinical Data Warehouse for 3,235 hospitals nation-wide, 118,925 cases after exclusions) Performance was constant between 2018 Q3 (using data from the CMS Clinical Data Warehouse for 3,222 hospitals nation-wide, 114,827 cases after exclusions) and 2018 Q4 at 58%, but there was variation (from 0% to 100%, interquartile range of 29% for Q3 and interquartile range of 26% for Q4) across hospitals for each of the quarters, indicating opportunities for continued improvement.

Data published on the Care Compare Timely and Effective Care National file (<https://data.cms.gov/provider-data/dataset/isrn-hqyy>), indicates improvement in the overall measure score over time from 50% in 2017, to 60% in 2019 for hospitals with available SEP-1 data nationwide.

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

None were reported. We have not found evidence in the published literature that clearly demonstrates unintended consequences from implementation of the measure and will continue to monitor the published literature.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

N/A – None were noted

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

3215 : Adult Inpatient Risk Adjusted Sepsis Mortality

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

New York State Sepsis Improvement Initiative adult composite bundle measure

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

Yes

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

The two measures, NQF 0500 and NQF 3215, have similar populations but are different measure types; NQF 0500 assesses the performance rates of sepsis care processes and NQF 3215 evaluates the impact sepsis care processes have on an outcome, mortality rates. NQF 3215 uses NQF0500 data elements for many of its measure process adherence variables. NQF 3215 collects additional demographic variables (e.g., Source of Admission, Pregnancy Status), the actual lactate value and variables for severity adjustment and morbidity, which are used for risk adjustment. The New York State Sepsis Improvement Initiative adult composite bundle and NQF 0500 include many identical data elements and several similar data elements, which are harmonized with version 5.7 of the SEP-1 measure specifications. Key differences include that the New York State measure requires that hospitals in New York report all cases of severe sepsis and septic shock and does not exclude cases transferred to other hospitals. The New York State measure also requires that hospitals report the actual lactate level numerically rather than categorically as in SEP-1 and has one variation in the types of blood cultures accepted for the Blood Culture Acceptable Delay data element.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

Not applicable; there are no competing measures for evaluation.

Appendix
<p>A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.</p> <p>No appendix Attachment:</p>
Contact Information
<p>Co.1 Measure Steward (Intellectual Property Owner): Henry Ford Hospital</p> <p>Co.2 Point of Contact: Emanuel, Rivers, erivers1@hfhs.org, 313-207-1831-</p> <p>Co.3 Measure Developer if different from Measure Steward: Henry Ford Hospital</p> <p>Co.4 Point of Contact: Emanuel, Rivers, erivers1@hfhs.org, 313-207-1831-</p>
Additional Information
<p>Ad.1 Workgroup/Expert Panel involved in measure development Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.</p> <p>Stewards:</p> <ol style="list-style-type: none"> 1. Emmanuel Rivers, MD, MPH, FACEP, Emergency Medicine and Surgical Critical Care, Henry Ford Hospital, Institute of Medicine Fellow: measure developer, measure steward, review of current evidence, validity, reliability, usability, feasibility, and update of measure 2. Sean R. Townsend, MD, Institute for Healthcare Improvement (IHI), California Pacific Medical Center, San Francisco: review of current evidence, validity, reliability, usability, feasibility, and update of measure <p>Expert Work Group - providing input for maintenance of measures (the below information was accurate at the time the EWG was last convened in March 2019):</p> <ul style="list-style-type: none"> - Ann Ceschin, Co-Chair, National Family Council on Sepsis - Craig Coopersmith, MD, Interim Director, Emory Critical Care Center; Director, Surgical Critical Care Fellowship; Emory University School of Medicine - Anthony Fiore, MD, MPH Chief of the Epidemiology Research and Innovations Branch, Division of Healthcare Quality and Promotion, CDC - Mitchell Levy, MD, Chief of the Division of Critical Care, Pulmonary, and Sleep Medicine; Warren Alpert Medical School, Brown University - Leah Meyer, RN, MBA, System Manager - Clinical Quality Compliance; SSM Health - Paul O'Donnell, PharmD, Associate Professor, Department of Pharmacy Practice, Midwestern University Chicago College of Pharmacy; Critical Care Pharmacist, Rush University Medical Center - Pat Posa, RN, BSN, MSA, System Performance Improvement Leader/ Quality Excellence Leader, St. Joseph Mercy Health System - Emmanuel Rivers, MD, (SEP-1 measure steward), Vice Chairman and Research Director, Department of Emergency Medicine; Henry Ford Hospital - Brian Rodden, PharmD, Clinical Pharmacy Specialist, SSM Health St. Joseph Hospital - Edward Septimus, MD, Clinical Professor of Internal Medicine, Texas A&M College of Medicine; Distinguished Senior Fellow, School of Public Health, George Mason University; Senior Lecturer, Population Medicine, Harvard Medical School - Geneva Tatem, MD, Clinical Associate Professor of Medicine, Henry Ford Hospital - Sean Townsend, MD, (SEP-1 measure steward), Vice President of Quality and Safety at California Pacific Medical Center, San Francisco; Clinical Associate Professor of Medicine, University of California San Francisco
<p>Measure Developer/Steward Updates and Ongoing Maintenance</p> <p>Ad.2 Year the measure was first released: 2008</p> <p>Ad.3 Month and Year of most recent revision: 12, 2020</p> <p>Ad.4 What is your frequency for review/update of this measure? This measure and specifications manual is evaluated and updated bi-annually.</p> <p>Ad.5 When is the next scheduled review/update for this measure? 06, 2021</p>
<p>Ad.6 Copyright statement:</p>

Ad.7 Disclaimers:
Ad.8 Additional Information/Comments: