

Sepsis Cost Measure Field Test Report

Name of Clinician Group
Taxpayer Identification Number (TIN): #####
Measurement Period: January 1, 2019 – December 31, 2019

1 OVERVIEW AND RESULTS

This report details your performance on the Sepsis measure for field testing. Field testing is a voluntary opportunity for clinicians and other stakeholders to provide feedback on the draft specifications for cost measures currently under development. For more information about field testing, reference materials are available on the [MACRA Feedback Page](#).¹

We are collecting stakeholder feedback from **August 17 to September 18, 2020**. To provide feedback on the draft measure specifications and field test report content and format, please navigate to the [2020 Cost Measures Field Testing Survey](#):
<https://www.surveymonkey.com/r/2020-cost-measures-field-testing>.

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The measure score, and the information contained in this report are for field testing only. The information in this report does not affect any scoring or payment adjustments in the Merit-based Incentive Payment System (MIPS). The information in this report is believed to be accurate at the time of production. The information may be subject to change at the discretion of the Centers for Medicare & Medicare Services (CMS), including but not limited to circumstances in which an error is discovered. Only clinicians (identified by their unique Taxpayer Identification Number [TIN] and National Provider Identifier [NPI] combination, or TIN-NPI) and clinician groups (identified by their TIN) with at least 10 episodes during the measurement period have received a field test report.

¹ CMS, MACRA Feedback Page, <https://www.cms.gov/Medicare/Quality-Payment-Program/Quality-Payment-Program/Give-Feedback>.

What is the Sepsis Measure?

Episode-based cost measures represent the cost to Medicare for the items and services provided to a patient during an episode of care (“episode”). In this report, “cost” generally means the Medicare allowed amount.² All episode-based cost measures are payment standardized to account for payment factors that are unrelated to the care provided (such as add-on payments for medical education and geographic variation in Medicare payment amounts).³

The Sepsis cost measure evaluates a clinician group’s risk-adjusted cost to Medicare for patients who receive inpatient medical treatment for sepsis. The measure score is a clinician group’s average risk-adjusted cost across all attributed episodes for the episode group. This acute inpatient medical condition measure includes services that are clinically related and under the reasonable influence of the attributed clinician group managing care during each episode, which extends from the date of admission which opens or “triggers” the episode through 45 days after the date of admission. Medicare beneficiaries enrolled in Medicare Parts A and B during the performance period are eligible for the measure. More information about the specifications for this measure is included in the “[What Are the Specifications for the Measure?](#)” section.⁴

Your Cost Measure Performance

Table 1 provides high-level results for your cost measure performance for field testing. **Your TIN’s Cost Measure Score** is the average risk-adjusted cost to Medicare for the Sepsis measure (calculated as the average ratio of observed cost to expected cost, as predicted through a risk adjustment model, multiplied by the national average observed episode cost). The **national average cost measure score** is the average risk-adjusted cost across all clinician groups nationally. **Your TIN’s cost measure score percentile** provides the percentile for your performance on the score among all clinician groups nationally; higher percentile values indicate that your episodes are relatively more expensive than episodes attributed to other clinician groups.

Table 1: Your Cost Measure Score Performance (Glossary: [Table 10](#))

	Sepsis Measure
Number of Episodes	80
Your TIN’s Cost Measure Score	\$17,141
National Average Cost Measure Score	\$19,187
Your TIN’s Cost Measure Score Percentile	38

² The Medicare allowed amount on Medicare claims data includes both Medicare and trust fund payments and any applicable patient deductible and coinsurance amounts. Medicare Parts A, B, and D claims data are used to construct the episode-based cost measures used in the Field Test Reports. More detailed information on the Part D payment standardization methodology and the Part D rebate adjustment methodology is available on the MACRA Feedback Page.

³ For more information, please refer to the “CMS Part A and Part B Price (Payment) Standardization - Basics (05/2020)” and “CMS Part A and Part B Price (Payment) Standardization - Detailed Methods (05/2020)” documents posted on ResDAC: <https://www.resdac.org/articles/cms-price-payment-standardization-overview>.

⁴ Additionally, more detailed information on the measure can be found in the Draft Measure Methodology document and the Draft Measure Codes List, which are both available on the MACRA Feedback Page.

Note: All metric descriptions are provided in the [Glossary](#). For quick navigation between a table in the report and its corresponding table in the glossary, click on the table number provided in parentheses in the table title.

This report provides various breakdowns of the costs and episodes counted toward your measure score, and Table 2 below lists certain clinical themes, if any, where your TIN's average clinical theme cost was higher than the national average. Clinical themes are clinical categorizations that organize all assigned services into broader categories. They are mutually exclusive and exhaustive of all service assignment rules, which were developed with input from the Sepsis Clinician Expert Workgroup. To see which items fall within each clinical theme, please see the Draft Measure Codes List file.

Table 2: Clinical Themes with Higher Than Average Clinical Theme Costs

Clinical Themes with Higher Than Average Clinical Theme Costs
Other Post-Acute Care; Recurrent Kidney and Urinary Tract Infection, Complication, or Subsequent Care; Acute Renal Failure and Medication Complications

Supplemental CSV File with Episode-Level Data

In addition to this report, you have received an episode-level data file in Comma Separated Value (CSV) format for this measure. This file provides detailed information for each episode used to calculate your measure score, which includes observed cost, risk-adjusted cost, facilities and clinicians rendering care, the share of cost by service setting, the patient relationship code (PRC) on the trigger claim line, and more. In addition, there is a data dictionary CSV file (i.e., "2020-08-episode-level-data-dictionary-acute.csv") that was attached within the same ZIP file as this report.

2 COMPARISON OF YOUR SCORE TO THE NATIONAL DISTRIBUTION

This section provides information on the distribution of cost measure scores for the Sepsis measure. Figure 1 below displays a histogram of the national distribution across all clinician groups. Table 3 below includes the distribution of risk-adjusted cost of your episodes along with the distribution for all episodes across all clinician groups.

Figure 1: National Distribution of Measure Scores

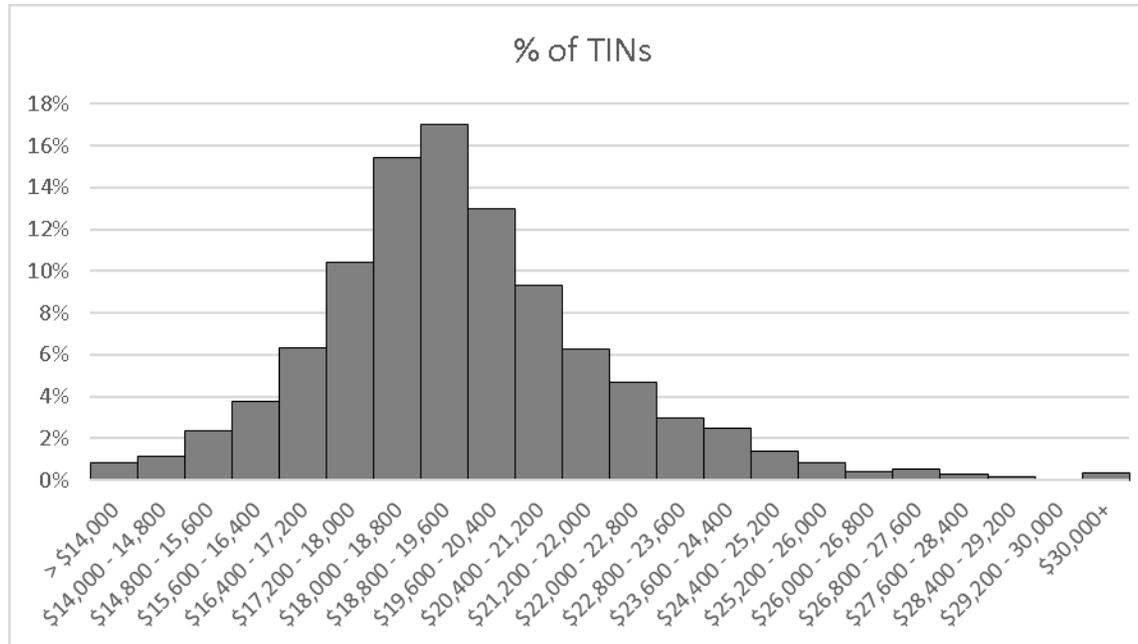


Table 3: Cost Distribution for Your Clinician Group's (TIN) Episodes and Episodes across All Clinician Groups

	Risk-Adjusted Cost					
	Mean	Cost Percentiles				
		5 th (Least Expensive)	25 th	50 th (Median)	75 th	95 th (Most Expensive)
Your TIN's Episodes	\$17,141	\$10,269	\$12,357	\$13,633	\$18,917	\$37,444
Episodes across all Clinician Groups	\$19,201	\$9,978	\$12,817	\$15,405	\$23,403	\$38,798

3 BREAKDOWN OF COST MEASURE PERFORMANCE

This section provides breakdowns of your cost measure performance based on the current measure specifications.

Episode Sub-Groups

Episode sub-groups are mutually exclusive and exhaustive stratifications of a cost measure, and they enable meaningful clinical comparisons. The sub-groups for this measure were developed based on clinical input from members of the Sepsis Clinician Expert Workgroup.⁵ Table 4 presents your count and share of episodes as well as your performance on the mean ratio of observed to expected cost by episode sub-group alongside the national average (i.e., across all clinician groups nationally).

Table 4: Cost Measure Performance by Episode Sub-Group (Glossary: [Table 11](#))

Episode Sub-Group	Your Episode Count	Share of Episodes		Mean Ratio of Observed to Expected Cost	
		Your TIN	National Average	Your TIN	National Average
Sepsis	80	100.0%	100.0%	0.90	0.99
Sepsis with Septic Shock	6	7.5%	14.5%	0.87	0.97
Sepsis without Septic Shock	74	92.5%	85.5%	0.90	1.00

Sources of Infection

It is valuable to understand costs for episodes with certain sources of infection. Even though they are not sub-groups, the risk adjustment model includes these common sources of infection. The episodes included in Table 5 are neither mutually exclusive nor exhaustive, so the numbers for each row should be evaluated in isolation. These patient cohorts identify episodes with a diagnosis for common sources of infection on the triggering inpatient claim and were based on input from the Sepsis Clinician Expert Workgroup. Table 5 presents your count and share of episodes as well as your performance on the mean ratio of observed to expected cost by source of infection alongside the national average (i.e., across all clinician groups nationally).

⁵ More detailed information on episode sub-groups can be found in the Draft Measure Methodology document and the Draft Measure Codes List, which are both available on the MACRA Feedback Page.

Table 5: Cost Measure Performance by Source of Infection (Glossary: [Table 12](#))

Source of Infection	Your Episode Count	Share of Episodes		Mean Ratio of Observed to Expected Cost	
		Your TIN	National Average	Your TIN	National Average
Sepsis	80	100.0%	100.0%	0.90	0.99
Respiratory Infection*	35	43.8%	49.7%	0.88	0.99
Non-Hepatobiliary Gastrointestinal Infection*	0	0.0%	23.1%	0.00	0.97
Kidney and Urinary Tract Infection*	32	40.0%	58.6%	0.97	1.00
Cellulitis Infection*	12	15.0%	23.4%	0.74	1.01
Other Infection^	24	30.0%	30.7%	0.91	1.03

*Indicates that this characteristic is used in the risk adjustment model.

^This patient cohort identifies episodes where there is no diagnosis for any of the 4 common sources of infection listed above, indicating a different type of infection (or where the source is unspecified).

Other Sources of Cost

This section provides additional breakdowns of your cost measure performance by various sources of cost. For the tables in this section, your performance is presented alongside the national average and for clinician groups (i.e., TINs) in your risk bracket. Risk brackets were constructed to provide a more informative comparison for clinician groups, as clinician groups within the same risk bracket are likely to have a similar patient case-mix. The risk score of each episode is the ratio of expected cost (as predicted through a risk adjustment model) to the average of the observed cost across all episodes for all TINs. A clinician group’s risk bracket is determined by assigning the TIN to a decile based on where their average episode risk score falls in the national distribution of average episode risk scores.

Table 6 provides a breakdown of cost and use by Medicare setting and service category (Berenson-Eggers Type of Service); the definitions of the various categories of services presented in this table can be found on page 48, Table C.2 of the [Detailed Methods of the 2015 Supplemental Quality and Resource Use Reports \(QRURs\)](#) document. You may compare your average cost of services per episode and share of episodes with certain services for the settings and service categories to identify sources that are contributing to your cost measure performance. The share of episodes with a certain service shows the percentage of episodes with at least 1 service from the given setting/category.

Table 6: Cost and Use by Medicare Setting and Service Category (Glossary: [Table 13](#))

Medicare Setting and Service Category	Average Cost of Services Per Episode (Conditional)			Share of Episodes with Certain Service		
	Your TIN	National Average	TINs in Your Risk Bracket	Your TIN	National Average	TINs in Your Risk Bracket
All Services	\$16,372	\$19,295	\$17,833	100.0%	100.0%	100.0%
Outpatient Evaluation and Management Services, Procedures, and Therapy (excluding Emergency Department)	\$319	\$595	\$599	77.5%	73.0%	71.5%
Outpatient Evaluation & Management Services	\$327	\$548	\$545	73.8%	72.0%	70.5%
Major Procedures	\$0	\$422	\$476	0.0%	8.9%	4.9%
Ambulatory/Minor Procedures	\$73	\$412	\$467	8.8%	19.6%	14.3%
Outpatient Physical, Occupational, or Speech and Language Pathology Therapy	\$81	\$295	\$312	5.0%	5.9%	2.3%
Ancillary Services	\$103	\$131	\$125	71.3%	75.9%	74.2%
Laboratory, Pathology, and Other Tests	\$47	\$56	\$53	58.8%	60.6%	57.7%
Imaging Services	\$89	\$117	\$116	43.9%	53.0%	49.8%
Durable Medical Equipment and Supplies	\$39	\$221	\$196	7.5%	16.9%	13.0%
Hospital Inpatient Services	\$12,125	\$13,497	\$12,593	100.0%	100.0%	100.0%
Inpatient Hospital: Trigger	\$9,786	\$10,415	\$9,897	100.0%	100.0%	100.0%
Inpatient Hospital: Non-Trigger	\$10,735	\$11,284	\$10,706	12.5%	26.9%	20.7%
Physician Services During Hospitalization	\$1,269	\$1,806	\$1,571	88.8%	86.5%	83.9%
Emergency Room Services	\$293	\$356	\$343	83.8%	87.9%	87.0%
Emergency Evaluation & Management Services	\$260	\$312	\$304	81.3%	84.6%	83.1%
Procedures	\$182	\$215	\$206	3.8%	20.0%	13.8%
Laboratory, Pathology, and Other Tests	\$10	\$10	\$10	45.0%	52.6%	47.6%
Imaging Services	\$55	\$55	\$55	38.8%	67.0%	63.2%
Post-Acute Services	\$11,142	\$9,602	\$8,750	30.0%	59.2%	53.8%
Home Health	\$1,661	\$1,945	\$1,980	21.3%	37.6%	35.5%
Skilled Nursing Facility	\$16,147	\$12,716	\$12,589	20.0%	42.8%	34.7%
Inpatient Rehabilitation or Long-Term Care Hospital	\$0	\$33,318	\$29,964	0.0%	12.0%	6.1%
Part D Services	\$85	\$130	\$117	82.5%*	54.5%	51.5%
All Other Services	\$402	\$563	\$520	100.0%	86.6%	84.5%
Ambulance Services	\$515	\$650	\$616	63.8%	66.1%	60.1%
Anesthesia Services	\$197	\$150	\$150	3.8%	23.6%	17.6%
Chemotherapy and Other Part B-Covered Drugs	\$0	\$465	\$536	0.0%	13.3%	9.3%
Dialysis	\$0	\$404	\$386	0.0%	17.3%	11.4%
All Other Services Not Otherwise Classified	\$27	\$69	\$74	11.3%	14.8%	11.1%

Note: Asterisk (*): Values for which you were more than one standard deviation above the average for clinician groups in your risk bracket. Caret (^): Values for which you were more than 2 standard deviations above the average for clinician groups in your risk bracket.

Table 7 provides a breakdown of cost and use by clinical themes. Clinical themes are clinical categorizations that organize all assigned services into broader categories. They are mutually exclusive and exhaustive of all service assignment rules, which were developed with input from the Sepsis Clinician Expert Workgroup. To see which service assignment rules fall within each clinical theme, you may review the Draft Measure Codes List file for the measure.

Table 7: Cost and Use by Clinical Theme (Glossary: [Table 14](#))

Clinical Theme	Average Cost Per Episode (<i>Conditional</i>)			Share of Episodes with Any Cost From Given Clinical Theme		
	Your TIN	National Average	TINs in Your Risk Bracket	Your TIN	National Average	TINs in Your Risk Bracket
(1) Initial Sepsis Admission	\$11,311	\$12,348	\$11,624	100.0%	100.0%	100.0%
(2) Recurrent Sepsis	\$235	\$5,097	\$4,111	18.8%	37.2%	32.8%
(3) Home Health, Physical Therapy, Occupational Therapy, and Speech Language Pathology	\$1,414	\$1,858	\$1,904	22.5%	39.2%	36.9%
(4) Other Post-Acute Care	\$16,411	\$13,522	\$13,314	18.8%	41.7%	34.0%
(5) Recurrent Respiratory Infection, Complication, or Subsequent Care	\$250	\$4,524	\$3,126	18.8%	28.4%	25.5%
(6) Recurrent Non-Hepatobiliary Gastrointestinal Infection, Complication, or Subsequent Care	\$0	\$5,558	\$5,129	0.0%	10.4%	5.3%
(7) Recurrent Skin and Soft Tissue Infection, Complication, or Subsequent Care	\$119	\$1,935	\$1,773	8.8%	11.8%	7.4%
(8) Recurrent Kidney and Urinary Tract Infection, Complication, or Subsequent Care	\$9,408 [^]	\$2,761	\$2,509	11.3%	20.4%	15.2%
(9) Cardiac and Central Nervous System Complications (including arrhythmia, syncope, and encephalopathy)	\$175	\$1,279	\$1,231	7.5%	16.6%	12.8%
(10) Acute Renal Failure and Medication Complications	\$8,817 [*]	\$2,418	\$2,121	3.8%	14.1%	9.4%
(11) Outpatient Follow-Up and Lab Work	\$134	\$150	\$154	71.3%	67.2%	65.8%
(12) Part B Antibiotics and Infusion Supplies	\$10	\$690	\$871	3.8%	16.8%	11.7%
(13) Follow-Up Imaging	\$72	\$90	\$84	88.8%	92.0%	91.2%
(14) Part D Intravenous Antibiotics	\$451	\$786	\$789	7.5%	16.6%	11.1%
(15) Part D Oral Antibiotics	\$40	\$43	\$43	78.8% [*]	51.9%	49.0%

Note: Asterisk (*): Values for which you were more than one standard deviation above the average for clinician groups in your risk bracket. Caret (^): Values for which you were more than 2 standard deviations above the average for clinician groups in your risk bracket.

Table 8 provides a list of clinicians that contributed the most to your Part B Physician/Supplier episode costs for the Sepsis measure. Specifically, this table lists the top 5 clinicians (identified by their NPI) from within and outside your clinician group (i.e., TIN) that represented the most cost for your episodes.

Table 8: Top 5 Clinicians Within and Outside Your TIN Contributing to Your Part B Physician/Supplier Episode Costs (Glossary: [Table 15](#))

NPIs Within Your TIN	NPIs Outside Your TIN
(1) Name of Clinician - #####	(1) Name of Clinician - #####
(2) Name of Clinician - #####	(2) Name of Clinician - #####
(3) Name of Clinician - #####	(3) Name of Clinician - #####
(4) Name of Clinician - #####	(4) Name of Clinician - #####
(5) Name of Clinician - #####	(5) Name of Clinician - #####

Table 9 provides a breakdown of episode cost by 2 periods relative to the trigger event: (i) trigger stay, and (ii) post-trigger period.

Table 9: Episode Cost by Trigger Stay and Post-Trigger Period (Glossary: [Table 16](#))

Periods Relative to Trigger	Average Cost of Services Per Episode			Average Share of Episode Cost		
	Your TIN	National Average	TINs in Your Risk Bracket	Your TIN	National Average	TINs in Your Risk Bracket
Trigger Stay	\$12,568	\$14,963	\$13,830	83.2%	83.8%	84.3%
Post-Trigger Period	\$3,798	\$4,332	\$4,002	16.8%	16.2%	15.7%

Note: Asterisk (*): Values for which you were more than one standard deviation above the average for clinician groups in your risk bracket. Caret (^): Values for which you were more than 2 standard deviations above the average for clinician groups in your risk bracket.

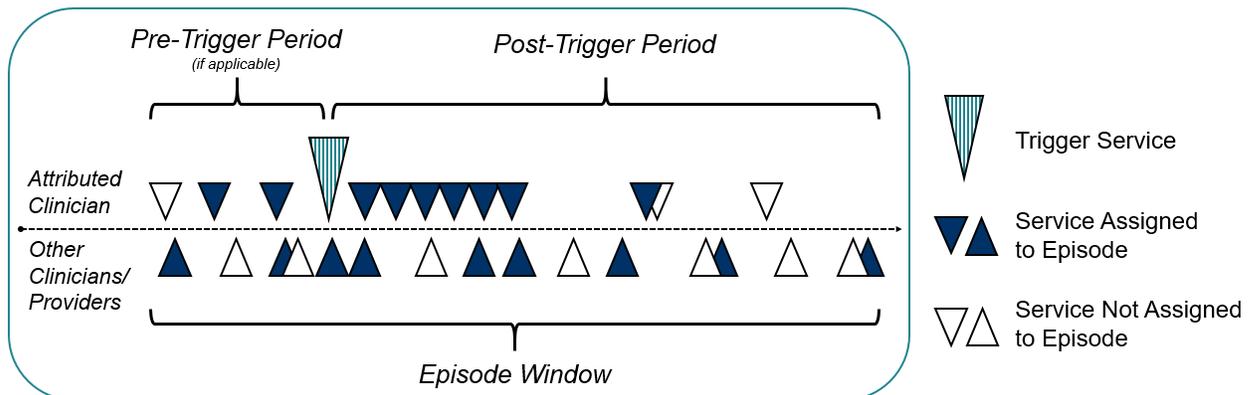
4 ADDITIONAL INFORMATION

What is the Methodology for Calculating Cost Measure Scores?

A cost measure score is calculated through the following steps:

1. **Trigger and define an episode:** Episodes are defined by billing codes that open, or “trigger,” an episode. The episode window starts on the admission of the trigger inpatient stay and ends 45 days after the trigger admission date. To enable meaningful clinical comparisons, episodes are placed into more granular, mutually exclusive and exhaustive sub-groups based on clinical criteria. Some episodes may also be excluded based on other information available at the time of the trigger.
2. **Attribute the episode to a clinician:** For this acute inpatient medical condition episode group, an attributed clinician is any clinician who bills Part B Physician/Supplier (Carrier) claims for inpatient evaluation and management (E&M) service(s) provided during the trigger inpatient stay.
3. **Assign costs to the episode and calculate the episode observed cost:** Clinically related services occurring during the episode window are assigned to the episode. The cost of the assigned services is summed to determine each episode’s standardized observed cost. Figure 2 below depicts how an episode is constructed.

Figure 2: Diagram Showing an Example of a Constructed Episode



4. **Exclude episodes:** Exclusions remove unique groups of patients from cost measure calculation in cases where it may be impractical and unfair to compare the costs of caring for these patients to the costs of caring for the cohort at large.
5. **Calculate expected costs for risk adjustment:** Risk adjustment aims to isolate variation in clinician costs to only costs clinicians can reasonably influence (e.g., accounting for patient age, comorbidities, and other factors). A regression analysis is run using the risk adjustment variables as covariates to estimate the expected cost of each episode. Then, statistical techniques are applied to reduce the effect of extreme outliers on measure scores.
6. **Calculate the measure score:** For each episode, the ratio of standardized total observed cost (from step 3) to risk-adjusted expected cost (from step 5) is calculated and averaged across all of a clinician or clinician group’s attributed episodes to obtain

the average episode cost ratio. The average episode cost ratio is multiplied by the national average observed episode cost to generate a dollar figure for the cost measure score.

A more detailed description of the methodology is in the Draft Cost Measure Methodology, which is available on the MACRA Feedback Page.

What Are the Specifications for the Measure?

This section provides a quick, at-a-glance reference for the Sepsis episode-based cost measure specifications. More details on each component can be found in the Draft Cost Measure Methodology, and the full list of codes and logic used to define each component can be found in the Draft Measure Codes List file; these documents are available on the MACRA Feedback Page.

Episode Window: During what time period are costs measured?

- Pre-Trigger Period: 0 Days
- Post-Trigger Period: 45 Days

Triggers: Patients receiving what medical care are included in the measure?

- Medicare Severity Diagnosis-Related Group (MS-DRG) code for sepsis (870-872), OR
- MS-DRG indicating other infectious disease (respiratory, non-hepatobiliary gastrointestinal, cellulitis, kidney and urinary tract infections) when also accompanied by a 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) diagnosis code for sepsis

Sub-Groups: What are the mutually exclusive types of episodes?

- Sepsis with Septic Shock
- Sepsis without Septic Shock

Service Assignment: Which clinically related costs are included in the measure?

Assigned services fall within the following 15 clinical themes:

- Initial sepsis admission; recurrent sepsis
- Recurrent respiratory infection, complication, or subsequent care; recurrent non-hepatobiliary gastrointestinal infection, complication, or subsequent care; recurrent skin and soft tissue infection, complication, or subsequent care; recurrent kidney and urinary tract infection, complication, or subsequent care
- Cardiac and central nervous system complications (e.g., arrhythmia, syncope, encephalopathy); acute renal failure and medication complications
- Outpatient follow-up and lab work; Part B antibiotics and infusion supplies; follow-up imaging; home health services, physical therapy, occupational therapy, and speech language pathology; other post-acute care; Part D oral antibiotics; and Part D intravenous antibiotics

Risk Adjustment: Which risk factors are accounted for in the risk adjustment model?

- Standard risk adjustors, including comorbidities captured by 79 Hierarchical Condition Category (HCC) codes that map with over 9,500 ICD-10-CM codes, interaction variables

accounting for a range of comorbidities, beneficiary age category, beneficiary disability status, beneficiary end-stage renal disease (ESRD) status, Part D enrollment status, and recent use of institutional long-term care.

- Measure-specific risk adjustors including source of infection (e.g., bacteremia, central nervous system, endocarditis, respiratory, non-hepatobiliary gastrointestinal, cellulitis, and kidney and urinary tract infections) and whether the patient was transferred from another hospital or care facility.
- For the full list of standard and measure-specific risk adjustment variables, please reference the “RA” and “RA_Details” tabs of the Draft Measure Codes List file.

Exclusions: Which populations are excluded from measure calculation?

- Standard exclusions to ensure data completeness:
 - The patient has a primary payer other than Medicare for any time overlapping the episode window or 120-day lookback period prior to the trigger day.
 - The patient was not enrolled in Medicare Parts A and B for the entirety of the lookback period plus episode window, or was enrolled in Part C for any part of the lookback plus episode window.
 - No TIN is attributed the episode.
 - The patient’s date of birth is missing.
 - The patient’s death date occurred before the episode ended.
 - The trigger inpatient (IP) stay has the same admission date as another IP stay.
 - The IP facility is not a short-term stay acute hospital as defined by subsection (d).
- Measure-specific exclusions including neutropenic patients, patients requiring extracorporeal membrane oxygenation (ECMO) during the hospitalization, patients on a clinical trial, and transplant patients. For the full list of measure-specific exclusions, please reference the “Exclusions” and “Exclusions_Details” tabs of the Draft Measure Codes List file.

Where Can I Find More Information?

For more information on the Sepsis measure or field testing, please visit the [MACRA Feedback Page](#),⁶ which contains field testing resources such as a Fact Sheet, a Frequently Asked Questions (FAQ) document, an overview of the measure development process, and measure-specific resources such as the Draft Measure Methodology and Draft Measure Codes List file.

If you have further questions, please call 1-866-288-8292 (TTY 1-877-715-6222), Monday through Friday, 8:00 a.m. - 8:00 p.m. Eastern Time or email QPP@cms.hhs.gov.

⁶ CMS, MACRA Feedback Page, <https://www.cms.gov/Medicare/Quality-Payment-Program/Quality-Payment-Program/Give-Feedback>.

Appendix A – Glossary

Table 10: Definitions for Your Cost Measure Score Performance (Report: [Table 1](#))

Term	Description
Number of Episodes	The number of episodes attributed to your TIN within the measurement period.
Your TIN's Cost Measure Score	Your TIN's average risk-adjusted cost for the measure. <u>Method of calculation:</u> The average ratio of observed cost to expected cost (as predicted through a risk adjustment model) across all your episodes, multiplied by the national average observed episode cost.
National Average Cost Measure Score	Average risk-adjusted cost across all clinician groups nationally for this episode-based cost measure. <u>Method of calculation:</u> The mean ratio of observed cost to expected cost (as predicted through a risk adjustment model) across all clinician groups nationally, multiplied by the national average observed episode cost. The mean ratio is calculated by taking the mean observed to expected ratio for each clinician group and then calculating the average of these ratios across all clinician groups.
Your TIN's Cost Measure Score Percentile	The percentile for your TIN's cost measure score among all cost measure scores for all clinician groups nationally. <u>Interpretation:</u> Higher values indicate that your episodes are relatively more expensive than episodes attributed to other clinician groups (and the inverse for lower values). <u>Example:</u> If your cost measure score percentile is in the 40 th percentile, then that means your cost measure score was higher than the scores for 40% of all clinician groups nationally and lower than the scores for 60% of all clinician groups.

Table 11: Definitions for Cost Measure Performance by Episode Sub-Group (Report: [Table 4](#))

Term	Description
Episode Sub-Group	The name of the measure or the episode sub-group. Episode sub-groups are divisions, or stratifications, for a measure that define more homogenous patient cohorts to ensure clinical comparability (i.e., the cost measure fairly compares like patients).
Your Episode Count	The number of episodes attributed to your TIN within the measurement period for each sub-group (or the measure as a whole).
Share of Episodes	<u>Your TIN:</u> Share of episodes (across all episodes for your TIN) by sub-group. <u>National Average:</u> Average share of episodes (for all clinician groups nationally) by sub-group.
Mean Ratio of Observed to Expected Cost	<u>Your TIN:</u> Your mean ratio of observed to expected cost (as predicted through a risk adjustment model) across your episodes for each sub-group (and for the measure as a whole). As a note, your cost measure score is the product of the mean ratio for the measure as a whole and the national average observed episode cost. <u>National Average:</u> The mean ratio of observed to expected cost (as predicted through a risk adjustment model) across all clinician groups nationally for each sub-group (and for the measure as a whole). This is calculated by taking the mean observed to expected ratio for each clinician group and then calculating the average of these ratios across all clinician groups.

Table 12: Definitions for Cost Measure Performance by Source of Infection (Report: [Table 5](#))

Term	Description
Source of Infection	The name of the common source of infection (or the measure as a whole). The episodes for the sources of infection listed in this table are neither mutually exclusive nor exhaustive, so the numbers for each row should be evaluated in isolation. These patient cohorts identify episodes with a diagnosis for common sources of infection on the triggering inpatient claim; they focus on common sources of infection leading to sepsis and were identified based on input from the Sepsis Clinician Expert Workgroup. The “Other Infection” patient cohort identifies episodes where there is no diagnosis for any of the 4 common sources of infection.
Your Episode Count	The number of episodes attributed to your TIN within the measurement period for each source of infection (or the measure as a whole).
Share of Episodes	<u>Your TIN</u> : Share of episodes (across all episodes for your TIN) by source of infection (or the measure as a whole). <u>National Average</u> : Average share of episodes (for all clinician groups nationally) by source of infection (or the measure as a whole).
Mean Ratio of Observed to Expected Cost	<u>Your TIN</u> : Your mean ratio of observed to expected cost (as predicted through a risk adjustment model) across your episodes for each source of infection (and the measure as a whole). <u>National Average</u> : The mean ratio of observed to expected cost (as predicted through a risk adjustment model) across all clinician groups nationally for each source of infection (and the measure as a whole). This is calculated by taking the mean observed to expected ratio for each clinician group and then calculating the average of these ratios across all clinician groups.

Table 13: Definitions for Cost and Use by Medicare Setting and Service Category (Report: Table 6)

Term	Description
Medicare Setting and Service Category	The settings and service categories available from the claims data based on the Berenson-Eggers Type of Service Codes. ⁷
Average Cost of Services Per Episode (Conditional)	<p><u>Your TIN</u>: The average cost of services from a setting/category across all episodes for your TIN. Note that this average is calculated out of all your TIN's episodes that include at least 1 service from the given setting/category (i.e., it is conditional).</p> <p><u>National Average</u>: The average cost of services for a setting/category across all episodes for all clinician groups nationally. Note that this average is calculated out of all episodes that include at least 1 service from the given setting/category (i.e., it is conditional).</p> <p><u>TINs in Your Risk Bracket</u>: The average cost of services for a setting/category across all episodes for clinician groups in your risk bracket. Note that this average is calculated out of all episodes that include at least 1 service from the given setting/category (i.e., it is conditional).</p>
Share of Episodes with Certain Service	<p><u>Your TIN</u>: The share of episodes with a certain service from a setting/category across all episodes for your TIN.</p> <p><u>National Average</u>: The average share of episodes with a certain service from a setting/category across all clinician groups nationally.</p> <p><u>TINs in Your Risk Bracket</u>: The share of episodes with a certain service from a setting/category across all clinician groups in your risk bracket.</p>

Table 14: Definitions for Cost and Use by Clinical Theme (Report: Table 7)

Term	Description
Clinical Theme	Clinical themes are clinical categorizations that organize all assigned services into broader categories. They are mutually exclusive and exhaustive of all service assignment rules, which were developed with input from the Sepsis Clinician Expert Workgroup. To see which service assignment rules fall within each clinical theme, you may review the Draft Measure Codes List file for the measure.
Average Cost Per Episode (Conditional)	<p><u>Your TIN</u>: The average cost calculated per episode for the clinical theme (i.e., for all billed items within that clinical theme). Note that this average is calculated out of all your episodes that include at least 1 service from the given clinical theme, meaning it is conditional.</p> <p><u>National Average</u>: The average cost calculated per episode for the clinical theme out of all episodes for all clinician groups nationally (calculated only for episodes that include at least 1 service from the given clinical theme).</p> <p><u>TINs in Your Risk Bracket</u>: The average cost calculated per episode for the clinical theme out of all episodes for TINs in your risk bracket (calculated only for episodes that include at least 1 service from the given clinical theme).</p>

⁷ Definitions of the various categories of services presented in this table can be found on page 48, Table C.2 of the [Detailed Methods of the 2015 Supplemental Quality and Resource Use Reports \(QRURs\)](https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2015-SQRUR-Detailed-Methods.pdf) document (<https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/PhysicianFeedbackProgram/Downloads/2015-SQRUR-Detailed-Methods.pdf>)

Term	Description
Share of Episodes with Any Cost From Given Clinical Theme	<p><u>Your TIN</u>: The share of episodes with any cost from a given clinical theme across all episodes for your TIN.</p> <p><u>National Average</u>: The average share of episodes with any cost from a given clinical theme across all clinician groups nationally.</p> <p><u>TINs in Your Risk Bracket</u>: The average share of episodes with any cost from a given clinical theme across all clinician groups in your risk bracket.</p>

Table 15: Definitions for Top 5 Clinicians Within and Outside Your TIN Contributing to Your Part B Physician/Supplier Episode Costs (Report: [Table 8](#))

Term	Description
NPIs Within Your TIN	List of the top 5 clinicians (i.e., NPIs) within your TIN that contributed the most Part B Physician/Supplier costs to your episodes.
NPIs Outside Your TIN	List of the top 5 clinicians (i.e., NPIs) outside your TIN that contributed the most Part B Physician/Supplier costs to your episodes.

Table 16: Definitions for Episode Cost by Trigger Stay and Post-Trigger Period (Report: [Table 9](#))

Term	Description
Trigger Stay	The duration of the triggering inpatient stay for the episode; this may span more than a day because it captures the entire triggering inpatient stay.
Post-Trigger Period	The time period that captures assigned services that occur between the end of the trigger event (i.e., trigger inpatient stay) and the end of the episode window. For this measure, the post-trigger period extends 45 days after the start of the trigger event. In this table, the row for “post-trigger period” captures cost of assigned services from the end of the trigger event (i.e., trigger inpatient stay) to 45 days after the start of the trigger event (not inclusive of the trigger stay itself to ensure that the post-trigger period cost displayed here does not overlap with the trigger stay cost).
Average Cost of Services Per Episode	<p><u>Your TIN</u>: The average cost of services for the given period relative to the trigger (e.g., post-trigger period) across all episodes for your TIN.</p> <p><u>National Average</u>: The average cost of services for the given period relative to the trigger (e.g., post-trigger period) out of all episodes for all clinician groups nationally.</p> <p><u>TINs in Your Risk Bracket</u>: The average cost of services for the given period relative to the trigger (e.g., post-trigger period) out of all episodes for all clinician groups in your risk bracket.</p>
Average Share of Episode Cost	<p><u>Your TIN</u>: The average share of episode cost for a given period relative to the trigger (e.g., post-trigger period) across all episodes for your TIN.</p> <p><u>National Average</u>: The average share of episode cost for a given period relative to the trigger (e.g., post-trigger period) across all clinician groups nationally.</p> <p><u>TINs in Your Risk Bracket</u>: The average share of episode cost for a given period relative to the trigger (e.g., post-trigger period) across all clinician groups in your risk bracket.</p>