



Hospital Inpatient Quality Reporting (IQR) Program

Inpatient Value, Incentives, and Quality Reporting (VIQR) Outreach and Education Support Contractor

Sepsis Measure Information Form and Algorithm Overview

Presentation Transcript

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Candace Jackson: Hello and thank you for tuning into the *Sepsis Measure Information Form and Algorithm Overview On Demand* webinar. My name is Candace Jackson, and I am the Hospital Inpatient Quality Reporting Program Lead for the Inpatient Value, Incentives, and Quality Reporting Outreach and Education Support Contractor. I will be your virtual host and speaker for the webinar.

This presentation will provide an overview of the Sepsis Measure Information Form, also known as the MIF, and the algorithm.

At the conclusion of today's event, participants will be able to understand the sepsis initial patient population, denominator, numerator, and exclusions. Participants will be able to walk through the SEP-1 algorithm, understand the measure feedback messages, and will be able to understand the sepsis bundles.

This slide lists the acronyms that we will use throughout the presentation.

As stated in the slide, if you have questions that did not get addressed during this presentation, please submit your question to the QualityNet Inpatient Question and Answer Tool at the link provided in the slide.

So, let's get started by talking about the Sepsis Measure Information Form and algorithm.

The selection of cases included in the sepsis initial patient population are those with an ICD-10 principal or other diagnosis code of sepsis, which is defined in Appendix A Table 4.01, and those that do not have a principal or other diagnosis code of COVID-19. Those that are greater than or equal to 18 years of age and that have a length of stay less than or equal to 120 days are also included. Those cases that have a length of stay greater than 120 days are excluded from the initial patient population due to the risk of cases crossing over different versions of the specifications manual where there could be abstraction guidance and/or algorithm changes. Any case that is included in the sepsis initial patient population is eligible to be sampled, abstracted, and submitted to CMS.

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Now that you have determined your sepsis initial patient population, you can start abstracting your cases. If the case has a principal or other diagnosis code of sepsis, does not have a principal or other diagnosis code of COVID-19, and is greater than or equal to 18 years of age, the case will be included in the SEP-1 measure denominator. Those cases that are included in the denominator only, that are not in the numerator, will result in a measure outcome of “D,” which means the case failed or did not meet the intent of the measure.

There are certain scenarios that could occur during the course of the patient stay that could affect the patient care. These scenarios are referred to as measure exclusions. These cases are removed from the denominator as they could inadvertently fail or pass the measure. For example, if the patient is receiving comfort care only, then they are probably not going to receive all of the treatment required to pass the sepsis measure. However, it is important to remember that these cases are still part of the initial patient population, count as part of the number of cases that you are required to submit, and should be submitted to CMS. For example, if, per your population size, you were required to submit 10 sepsis records and, upon abstracting those 10 cases, they were all excluded, you would still submit those 10 cases, and you would meet your submission requirement.

This slide lists all of the requirements and timeframes that need to be met to be in the numerator and pass the measure.

Let's look and see how the different measure outcomes are used in the algorithm. If you look at the data element *Transfer from Another Hospital or ASC*, you can see that the allowable values are Yes and No, and there is also a decision point for missing data. Missing data refers to data elements that are required for calculating the measure but that is not present or missing from the file that is submitted. So, in our example, if the value for *Transfer from Another Hospital or ASC* is missing, the measure cannot be calculated and will be rejected. The expectation then is the file will be corrected and resubmitted.

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If the value for the transfer data element is Yes, then the case will go to a measure outcome of “B,” excluded from the denominator, and no further abstraction is needed. As we just talked about, the case is still part of the initial patient population and/or sample and is still submitted to CMS. I’d like to take a moment here and talk about skip logic. Skip logic allows hospitals and vendors to minimize abstraction burden by using vendor software edit logic to bypass abstraction of data elements not utilized in the measure algorithm. So, in our *Transfer From Another Hospital or ASC* example, if the case goes to the measure outcome of “B,” no further abstraction is necessary. The use of skip logic by hospitals and vendors is optional and not required by CMS. As such, the abstractor can choose to continue to abstract and abstract all data elements used in the measure if allowed by their data abstraction tool. As a note, if you are using the CMS Abstraction & Reporting Tool, or CART, it allows the abstractor to choose whether they want to apply skip logic or not. Lastly, if you answer No to the transfer data element, you will continue abstracting.

As you are walking through the algorithm, how do you know what each of the allowable values mean? That information can be found in each of the individual data elements located in the specifications manual Alphabetical Data Dictionary. For the *Transfer from Another Hospital or ASC* data element, you can see that the value Yes means that the patient was received as a transfer, and the value No means that they were not received as a transfer or that you could not determine if they were received as a transfer or not. To determine the correct value, you will need to review the notes for abstraction which provide the abstraction guidance.

In this example, the selection of Value 3 or 4 for the data element *Persistent Hypotension* will result in the measure outcome of “D,” which means the case failed or did not meet the intent of the measure. As you can see for this data element, there are multiple allowable values. You will also see that, if the data element is missing, the case will be rejected and, if you select Value 1, the case will proceed to the next step in the algorithm.

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You will also see that if you select Value 2, you will bypass some of the data elements and will proceed to another data element that is later in the algorithm.

As was stated on the last slide, the *Persistent Hypotension* data element has multiple allowable values that can be selected. As per the algorithm, if you select Value 3, that the patient was not assessed, or Value 4, that the patient did not receive the targeted amount of crystalloid fluids, the intent of the measure was not met and the case will fail.

In this example, we can see that there are two decision points for the *Crystalloid Fluid Administration* data element. Ultimately, if you abstract the Value 4, the case will result in a measure outcome of “E,” meaning the case met the intent of the measure or passed. Looking at the data element, if the patient did not receive crystalloid fluids within the specified timeframe due to the patient having an implanted ventricular assist device or that the patient or their authorized advocate refused the IV fluids, the case will pass the measure.

Abstractors must “touch” and provide an answer to every data element that is applicable. While there is an expectation that all data elements are collected, it is recognized that in certain situations information may not be available, such as with dates and times. If, after due diligence, the abstractor determines that a value is not documented or is not able to determine the answer value, the abstractor must select “Unable to Determine (UTD)” as the answer. For the data elements that have Yes/No values, the allowable value “No” incorporates “UTD” into the definition. Data elements containing two or more categorical values, such as the date and time elements, the “UTD” value is a separate allowable value. In the date and time instances, if a value is unable to be determined, then the measure cannot be calculated. This will result in the case failing the measure.

This slide just shows you an example of how the date and time data elements have a separate UTD allowable value.

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Also, throughout the algorithm, you will find rectangular boxes, called process boxes, that include calculations that must occur. Typically, these are used to calculate time in minutes.

At the end of the algorithm, you will find the algorithm narrative. This is just a text version of the algorithm that is included to meet 508 compliance which has to do with the Americans with Disabilities Act. You are able to use this as a resource for understanding the algorithm, but it is not intended to be used for programming the algorithm.

CMS provides feedback on all data that are submitted to the *HQR Secure Portal*. These are referred to as Feedback and Measure Messages. Feedback Messages provide feedback regarding submitted data, file structure, and data integrity that either cause the case to be rejected from the secure portal, also referred to as a Critical Message, or ask for further verification, which is referred to as an Informational Message. Cases with any critical error messages will not be processed or stored in the secure portal. Measure Messages provide feedback related to the outcome of the case, as per the measure algorithm.

Our example on the slide shows examples of both a Feedback Message, example A, where the case would be rejected due to missing data and a Measure Message, example B, where the case resulted in a measure outcome of “B” or is excluded because the patient was received as a transfer.

This slide shows additional examples of Measure Messages where, in example A, the case resulted in a measure outcome of “D” or failed the measure and example B, where the case resulted in a measure outcome of “E” or passed the measure.

The Feedback and Measure Message edits documents can be found on QualityNet at the link provided on the slide. With each release of the specifications manual, there is a respective edits document available.

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Within the *Hospital Quality Reporting Secure Portal*, there are reports available that provide you with the results of your submissions and your performance. To locate these reports, you will sign into the *HQR Secure Portal*, click on Data Results on the left-hand side dashboard, and click on Chart-Abstracted.

Once on the Data Results page, select the File Accuracy tab, select IQR in the Program dropdown, select Submission Detail under the Report dropdown, select the appropriate quarter, and click the Export CSV button.

There are a few things that I would like to point out on the Submission Detail Report. The Patient ID is the number used by the hospital to identify this patient's stay. Most generally, you will find a unique ID for each case. However, there are times when there may be duplicate cases. A unique case is determined by five key identifiers: the hospital Provider ID or CCN, the measure set, the patient identifier, the admission date, and the discharge date. If a case is resubmitted and those five key identifiers match, then the case that is already in the secure portal will be overwritten. However, if a case is resubmitted and one or more of those key identifiers do not match, the system will identify it as another unique case and it will be considered a duplicate. You can run the Duplicate Report in the *HQR Secure Portal* to determine if you have any cases that may be considered a duplicate. There is no penalty for having duplicate cases in the *HQR Secure Portal*. The Upload Date is the date that the case was submitted to the *HQR Secure Portal*. Each time a case is re-uploaded, it will display on the report. The Action Code describes the action intended with the submission of the file. The options include Add, which is used when submitting a file for the first time or for a file that is being submitted as an update or replacement for an existing file, and Delete, which is used to delete a file that has already been submitted to the *HQR Secure Portal*. The File Status will tell you whether the case was accepted or rejected. The one column that you will really want to pay attention to is the Test Case column. This column will tell you if the case was submitted to Test. It will display a Yes if submitted to Test, or if it was submitted to Production, in which case it will display a No.

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Only cases that are submitted to Production are stored and count toward the submission requirements. As such, if you only submit a case to Test then you will not be meeting the IQR submission requirements. Then, the Message column will provide the Feedback and Measure Messages applicable to that case.

Just briefly, I would like to provide an overview of the sepsis bundles.

The SEP-1 measure is a composite measure, meaning that there is one or more measures within the one measure. For the Hospital IQR Program, CMS only assesses and requires the composite measure. However, as a courtesy and for information only, CMS does provide feedback on each of the sepsis bundles which can be found on the Facility, State, and National Report and the public reporting Provider Data Catalog. As only the composite measure is required, the bundle breakdowns are not included in the specifications manual.

Since the bundle data breakdowns are not in the specifications manual, we do provide two resource documents, with each manual release, that can be found on the specifications manual page on QualityNet.

The Overview of Bundle-Level Results document provides an overview of each of the bundles and lists the requirements to meet each of the bundle numerators and denominators.

The sepsis bundle algorithm which of the bundles are affected by each decision point and if it is included in the bundle numerator and/or denominator.

Again, if you have questions that are pertinent to the webinar topic, please submit them to the QualityNet Inpatient Question and Answer Tool. Thank you for watching our On Demand webinar. We hope you have a great day.