



**Severe Sepsis and Septic Shock:  
Management Bundle (Composite Measure)  
*Crystalloid Fluid Administration*  
Data Element  
Version 5.16 Questions and Answers**

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**August 29, 2024**

# Speakers

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Behavioral Development and Inpatient and Outpatient  
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Program Lead, Hospital Inpatient Quality Reporting (IQR) Program  
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# Purpose

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The purpose of this event is to:

- Review the *Crystalloid Fluid Administration* data element.
- Respond to frequently asked questions.

# Objective

- Participants will be able to understand and interpret the guidance in Version (V)5.16, of the specification manual, specific to the *Crystalloid Fluid Administration* data element.
  - Version 5.16 is effective for July 1, 2024, through December 31, 2024, discharges.

# Acronyms and Abbreviations

<b>APN</b>	advance practice nurse	<b>kg</b>	kilogram
<b>ASC</b>	Ambulatory surgical center	<b>LR</b>	lactated ringers
<b>BMI</b>	body mass index	<b>MAR</b>	Medication Administration Record
<b>CCN</b>	CMS Certification Number	<b>MD</b>	Medical Doctor
<b>CHF</b>	congestive heart failure	<b>mL</b>	milliliter
<b>CI</b>	cardiac index	<b>NS</b>	normal saline
<b>CKD</b>	chronic kidney disease	<b>PA</b>	physician assistant
<b>CMS</b>	Centers for Medicare & Medicaid Services	<b>PC</b>	Perinatal Care
<b>CO</b>	cardiac output	<b>pt</b>	patient
<b>D</b>	In Measure Population	<b>Q&amp;A</b>	question and answer
<b>E</b>	In Numerator Population	<b>SEP</b>	sepsis
<b>ED</b>	Emergency Department	<b>SV</b>	stroke volume
<b>EMS</b>	Emergency Medical Services	<b>SVI</b>	stroke volume index
<b>hr</b>	hour	<b>UTD</b>	unable to determine
<b>IBW</b>	ideal body weight	<b>V</b>	version
<b>IQR</b>	Inpatient Quality Reporting	<b>VAD</b>	ventricular assist device
<b>IV</b>	intravenous	<b>X</b>	Data are Missing

# Webinar Questions Follow-Up

If we do not answer your question during the webinar, please submit your question to the [QualityNet](#) Question and Answer Tool at this link:

[https://cmsqualitysupport.servicenowservices.com/qnet\\_qa](https://cmsqualitysupport.servicenowservices.com/qnet_qa)

If your question is about a specific slide, please include the slide number.

If you have a question unrelated to this webinar topic, we recommend that you first search for it in the QualityNet Question and Answer Tool. If you do not find an answer, then submit your question to us via the same tool.

Noel Albritton, MSN, RN  
Jennifer Witt, RN

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## ***Crystalloid Fluid Administration* Data Element V5.16**

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

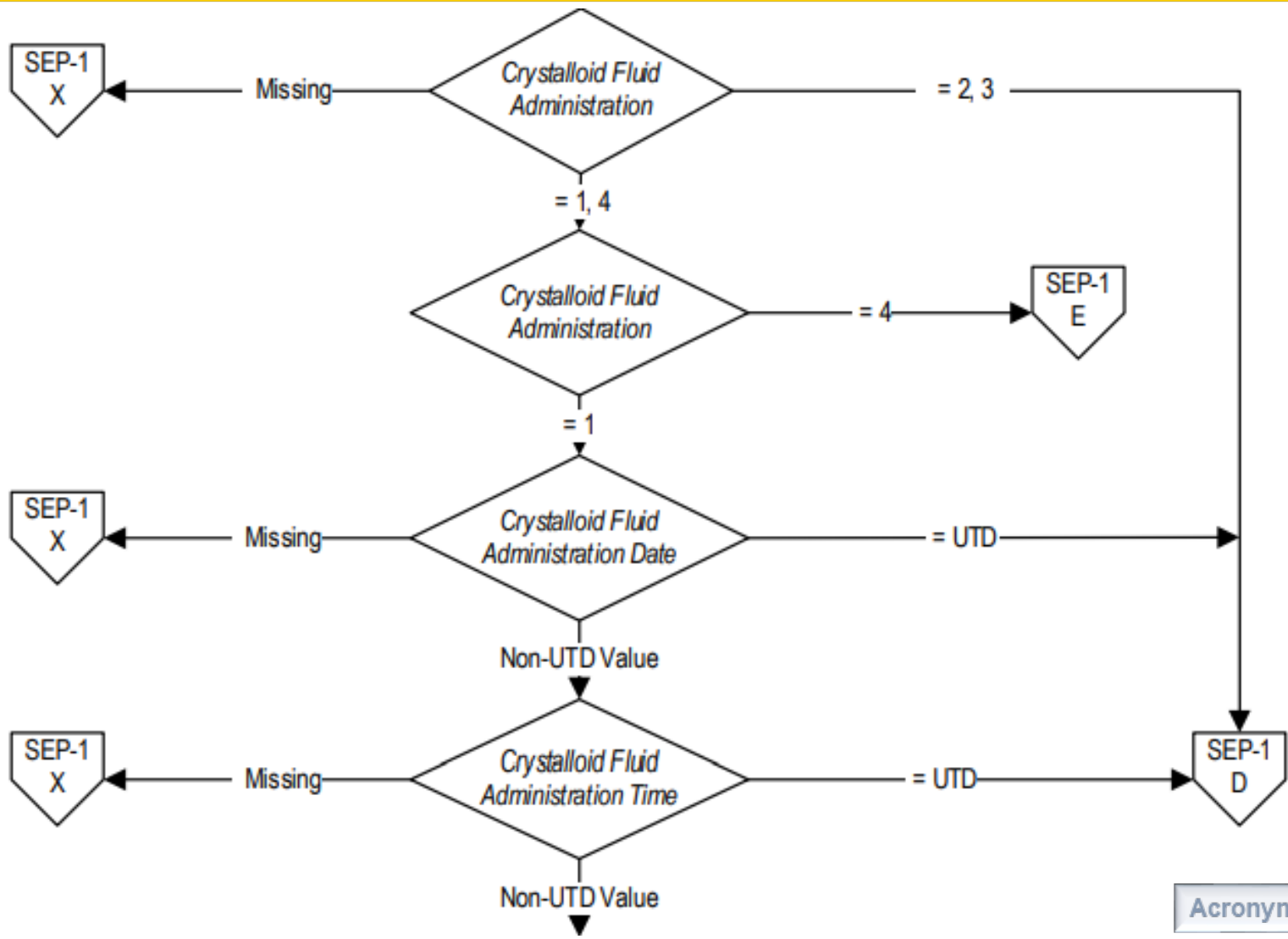
**Definition:** Documentation of initiation of crystalloid fluids within the specified time frame AND complete infusion of the target ordered volume.

**Suggested Data Collection Question:** Were crystalloid fluids initiated within the specified time frame AND completely infused based on the target ordered volume?



# SEP-1 Algorithm

## V5.16 Review



# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- The specified time frame for abstraction of crystalloid fluids is within six hours prior through three hours after either of the following trigger events. If both are present, use the earliest trigger event within the specified time frame.
  - Initial Hypotension Date and Time
  - Septic Shock Presentation Date and Time

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- A physician/APN/PA order for a volume of crystalloid fluids that is within 10% less than 30 mL/kg is acceptable for the target ordered volume. Documentation of a reason for a volume that is within 10% less than 30 mL/kg is not required.

Example:

2000 mL of normal saline was ordered and initiated in the ED. The patient's weight is not available or documented at the time of the order. After admission to critical care a weight is obtained of 74 kg. Based on this weight 30 mL/kg is 2220 mL. The target ordered volume is 2000 mL because it is within 10% less than 2220 mL ( $2220 \text{ mL} - 222 \text{ mL} = 1998 \text{ mL}$ ).

# ***Crystalloid Fluid Administration*** **(Target Volume Question #1)**

Q. What is the target volume for this patient based only on the physician documentation below?

**Weight recorded in ED:**

61.67 kg (30 mL/kg x 61.67 kg = 1850 mL)

**MD order:**

Sepsis Fluids, NS IV 1800 mL over 120 minutes

A. 1800 mL

# ***Crystalloid Fluid Administration*** **(Target Volume Question #2)**

Q. What is the target volume for this patient based only on the physician documentation below?

**Weight recorded in ED:**

82 kg (30 mL/kg x 82 kg = 2460 mL)

**MD order #1:**

NS IV 1000 mL over 60 minutes

**MD order #2:**

NS IV 1500 mL over 90 minutes

A. 2460 mL

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- A physician/APN/PA order for less than 30 mL/kg of crystalloid fluids is acceptable for the target ordered volume if all of the following criteria were met:
  - There is a physician/APN/PA order for the lesser volume of crystalloid fluids as either a specific volume (e.g., 1500 mL) or a weight-based volume (e.g., 25 mL/kg).
  - The ordering physician/APN/PA documented within a single source (e.g., note or order) in the medical record all of the following:
    - The volume of fluids to be administered as either a specific volume (e.g., 1500 mL) or a weight-based volume (e.g., 25 mL/kg).
    - AND a reason for ordering a volume less than 30 mL/kg of crystalloid fluids. Reasons include and are not limited to the following:
      - Concern for fluid overload
      - Heart failure
      - Renal failure
      - Blood pressure responded to lesser volume
      - A portion of the crystalloid fluid volume was administered as colloids (If a portion consisted of colloids, there must be an order and documentation that colloids were started or noted as given)

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- If there are multiple physician/APN/PA orders for lesser volumes with documented reasons, use the total of the lesser volumes ordered within the specified time of six hours prior through three hours after the triggering event.
- If a lesser volume is ordered and there is physician/APN/PA documentation indicating the target ordered volume is 30 mL/kg within six hours after the lesser volume is ordered, use the 30 mL/kg volume as the target ordered volume.

# ***Crystalloid Fluid Administration*** **(Lesser Volume Question #1)**

Q. Which volume would you use as the target ordered volume?

Patient weight 90 kg, 30 mL/kg = 2700 mL

Initial Hypotension: 08:00

## **IV Fluid Orders:**

06:00: NS 0.9% IV volume 250 mL over 30 minutes

Order Comments: Fluid overload

08:15: NS 0.9% IV volume 250 mL over 30 minutes

Order Comments: Hypotensive but improving

## **MAR:**

06:10 new bag 250 mL NS, stop time 06:40

08:15 new bag 250 mL NS, stop time 08:45

A. 500 mL



# ***Crystalloid Fluid Administration*** **(Lesser Volume Question #2)**

Q. Which volume would you use as the target ordered volume?

Patient weight 75 kg, 30 mL/kg = 2250 mL

Septic Shock Presentation Time: 13:00

## **IV Fluid Orders:**

11:20: NS 0.9% IV volume 1000 mL over 1 hr

Order Comments: Only give 1000 mL due to CHF.

14:30: NS 0.9% IV volume 500 mL over 1 hr

## **MAR:**

11:45 new bag 1000 mL NS, stop time 12:45

14:45 new bag 500 mL NS, stop time 15:45

A. 1000 mL

# Crystalloid Fluid Administration (Lesser Volume Question #3)

Q. Which volume would you use as the target ordered volume based only on the information below?

Patient weight 105 kg, 30 mL/kg = 3150 mL

Initial Hypotension: 21:30

## ED Physician Note:



The screenshot shows a medical software interface with a blue header bar. The header bar contains several menu items: "Medical Summary", "Alerts", "Labs", "DI", "Procedures", "Growth Chart", "Immunization", "Encounters", and "Pati". Below the header bar, there are three dropdown menus: "SF" (with a dropdown arrow), "Rel" (with a dropdown arrow), and "Default" (with a dropdown arrow). Below the dropdown menus, there is a text input field containing the text "CHF, concern with overload, 0 mL ordered.".

A. 3150 mL

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you use 250 mL as the target ordered volume for the *Crystalloid Fluid Administration* data element based only on this physician statement?

“Ordering 250 mL due to pneumonia.”

**A. Yes**

**B. No**

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you use 250 mL as the target ordered volume for the *Crystalloid Fluid Administration* data element based only on this physician statement?

“Ordering 250 mL due to pneumonia.”

**A. Yes**

**B. No**

# ***Crystalloid Fluid Administration*** **(Lesser Volume Question #4)**

Q. Which volume would you use as the target ordered volume?

Patient weight 62 kg, 30 mL/kg = 1860 mL

Initial hypotension: 18:00

## **IV Fluid Orders:**

18:30: NS 0.9% IV volume 250 mL over 30 minutes

Order Comments: 250 mL due to mild hypotension

## **Physician note:**

22:00: "Ordering 30 mL/kg due to septic shock."

A. 1860 mL

# ***Crystalloid Fluid Administration*** **(Lesser Volume Question #5)**

Q. Which volume would you use as the target ordered volume?

Patient weight 100 kg, 30 mL/kg = 3000 mL

Septic Shock Presentation Time: 09:35

**ED physician note:**

“Giving 500 mL due to CKD”

**IV Fluid Orders:**

09:35: LR IV volume 500 mL over 60 minutes

**APN note:**

18:00: “Concerned for septic shock, pt received 500 mL earlier, adding 2500 mL for total of 3000 mL.”

A. 500 mL

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- The target ordered volume must be ordered and initiated within the specified time frame if initial hypotension or septic shock is present.
- To select Value “1,” the target ordered volume must be documented as completely infused.
- The target ordered volume does NOT need to be completely infused within the specified time frame.

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- To determine if the target ordered volume was completely infused, one of the following must be documented along with the infusion start time.
  - Infusion rate (e.g., 1000 mL/hr)
  - Infusion duration or time over which to infuse (e.g., 1000 mL over 30 minutes)
  - Infusion end or completion time (e.g., MAR documentation of 1000 mL End Time 12:00)



# ***Crystalloid Fluid Administration*** **(Completely Infused Question #1)**

Q. Was the target ordered volume of crystalloid fluids completely infused based only on the documentation below?

Patient weight 87 kg, 30 mL/kg = 2610 mL

Septic Shock Presentation Time: 18:30

## **EMS documentation:**

17:15: Started 1000 mL NS

17:50: ED Arrival Time

## **IV Fluid Orders:**

18:20: NS IV volume 2000 mL at 1000 mL/hr

## **MAR:**

18:23: New Bag, NS IV 1000 mL, start time 18:23 at 1000 mL/hr

19:25: New Bag, NS IV 1000 mL, start time 19:25 at 1000 mL/hr

A. No.

# ***Crystalloid Fluid Administration*** **(Completely Infused Question #2)**

Q. Was the target ordered volume of crystalloid fluids completely infused based only on the documentation below?

Patient weight 95 kg, 30 mL/kg = 2850 mL

Initial hypotension: 06:00

## **EMS documentation:**

05:00: Started 1000 mL NS bolus

05:45: ED Arrival Time

## **IV Fluid Orders:**

06:40: NS IV volume 2000 mL over 2 hours

## **MAR:**

06:45: Start Time: New Bag, NS IV 1000 mL

07:50: Start Time: New Bag, NS IV 1000 mL

A. No.

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- Crystalloid fluid orders:
  - Physician/APN/PA orders are required for the fluids.
  - The order must include the type of fluid, the volume of fluid, and a rate or time over which the fluids are to be given.
  - The terms bolus, wide-open, or open are acceptable for a rate or infusion duration.

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you use the prior to arrival fluids toward the target ordered volume based only on this EMS documentation?  
“NS 1000 mL bolus 16:25 to 17:10”

- A. Yes**
- B. No**

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you use the prior to arrival fluids toward the target ordered volume based only on this EMS documentation?  
“NS 1000 mL bolus 16:25 to 17:10”

**A. Yes**

**B. No**

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- Only include crystalloid fluids or colloids given at a rate greater than 125 mL/hour towards the target ordered volume.  
Do not use crystalloid fluids or colloids given at 125 mL/hr or less toward the target ordered volume.

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- Acceptable fluids are crystalloid or balanced crystalloid solutions.

## **Inclusion Guidelines for Abstraction:**

- 0.9% saline solution
- 0.9% Sodium Chloride Solution
- Isolyte
- Lactated Ringers Solution
- normal saline
- Normosol
- PlasmaLyte

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- Select Value “4” if:
  - There is documentation that the patient has an implanted ventricular assist device (VAD) prior to or at the time of identifying the need for crystalloid fluids, regardless of the volume and rate of crystalloid fluids ordered.
  - Physician/APN/PA or nursing documentation indicates patient or authorized patient advocate has refused IV fluid administration prior to or within six hours following presentation of septic shock.



# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- Select Value “4” if:
  - Physician/APN/PA or nursing documentation indicates no crystalloid fluids were ordered because the patient was not volume or not fluid responsive. Documentation must indicate that invasive or noninvasive measurements of cardiac output (CO), cardiac index (CI), stroke volume (SV), or stroke volume index (SVI) were used to determine the patient was not volume or fluid responsive.

# ***Crystalloid Fluid Administration*** **(Value “4” Question #1)**

Q. Is the physician/APN/PA or nursing documentation required to state the following?

“No crystalloid fluids were ordered because the patient was not volume or not fluid responsive.”

A. No

# ***Crystalloid Fluid Administration*** **(Value “4” Question #2)**

- Q. Is the physician/APN/PA or nursing documentation required to include the measurement value and the invasive or non-invasive method used to measure the cardiac output, cardiac index, stroke volume, or stroke volume index?
- A. No.

# ***Crystalloid Fluid Administration*** **(Value “4” Question #3)**

Q. Would you select Value “4” (No) for the *Crystalloid Fluid Administration* data element based only on the physician documentation below?

Hospitalist note: “Severe sepsis patient with hypotension, unlikely to respond to fluid resuscitation based on cardiac output.”

A. Yes.

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you select Value “4” (No) for the *Crystalloid Fluid Administration* data element based only on the physician documentation of “ordering 500 mL due to stroke volume”?

- A. Yes
- B. No

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you select Value “4” (No) for the *Crystalloid Fluid Administration* data element based only on the physician documentation of “ordering 500 mL due to stroke volume”?

A. Yes

B. No

# ***Crystalloid Fluid Administration*** **(Abstraction Guidance V5.16)**

- Physician/APN/PA can use ideal body weight (IBW) to determine the target ordered volume if all of the following conditions are met. Other acceptable weight terms include predicted weight, dosing weight, and adjusted body weight.
  - Physician/APN/PA documents the patient is obese (defined as BMI >30).
  - Physician/APN/PA documents IBW is used to determine target ordered volume.
  - IBW is present in the medical record, abstractors should not calculate the IBW.

# ***Crystalloid Fluid Administration*** **(IBW Question #1)**

Q. Which weight would you use to determine the target ordered volume based only on the documentation below?

**Patient weight:**

125 kg, 30 mL/kg = 3750 mL

**PA Note:**

“Sepsis fluids based on IBW 75 kg, BMI is 29”

A. 3750 mL



Jennifer Witt, RN

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## **Knowledge Check Question and Answer Review**

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you use 250 mL as the target ordered volume for the *Crystalloid Fluid Administration* data element based only on this physician statement?

“Ordering 250 mL due to pneumonia.”

**A. Yes**

**B. No**

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you use the prior to arrival fluids toward the target ordered volume based only on this EMS documentation?  
“NS 1000 mL bolus 16:25 to 17:10”

**A. Yes**

**B. No**

# Knowledge Check:

## *Crystalloid Fluid Administration*

Would you select Value “4” (No) for the *Crystalloid Fluid Administration* data element based only on the physician documentation of “ordering 500 mL due to stroke volume”?

A. Yes

B. No

Noel Albritton, MSN, RN

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## **Submitting Questions to the QualityNet Question and Answer Tool**

# Webinar Questions Follow-Up

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# Submitting a Question

The screenshot shows the CMS.gov Quality Question and Answer Tool interface. At the top left, the logo reads "CMS.gov | QualityNet". Below the logo are navigation links: "Quality Q&A Tool", "Ask a Question", "Browse Program Articles", and "My Questions". On the top right, there is a link for "How to Use this Tool". The main heading is "Quality Question and Answer Tool" with the subtitle "Your one-stop shop for CMS Quality Answers". Below the heading is a search bar with the placeholder text "Search for the answer to your question" and a search icon. At the bottom, there are three main action buttons: "Browse" (with a document icon and the subtext "View existing articles"), "My Questions" (with a database icon and the subtext "Both Old & New Q&A tools"), and "Ask a Question" (with a question mark icon and the subtext "Submit a Question to CMS").

- Click **Browse** to search for existing questions and answers.
- Click **Ask a Question** to submit a new question.

# Submitting a Question

## QualityNet Question and Answer Site

### Submit a Question to Our Support Team

\* Indicate required field

**WARNING:** Individually identifiable health information in this system is subject to the Health Information Portability and Accountability Act of 1996 and the Privacy Act of 1974. Submission of questions to the QIO and Hospital Q&A System that contains Protected Health Information (PHI) is a violation of these Acts. **Questions containing PHI will be deleted from the system and not processed.** For detailed information regarding transmitting or receiving healthcare information or data read the [QualityNet System Security Policy \(PDF\)](#).

### Tell us about yourself.

First Name \*

Limit 75 chars

Last Name \*

Limit 75 chars

Email Address \*

e.g. joe@domain.com

Confirm Email Address \*

Phone Number

(xxx)xxx-xxxx(ext.)

### Question Details

Program \*

Select from the drop down



# Submitting a Question


### Question Details


Program \*

Select from the drop down

- ASC - Ambulatory Surgical Centers - Quality Reporting
- BFCC-QIO - Beneficiary and Family Centered Care-Quality Improvement Organization
- DRA HAC - Deficit Reduction Act Hospital-Acquired Conditions
- ESRD QIP - End-Stage Renal Disease -Quality Incentive Program
- HACRP - Hospital-Acquired Condition Reduction Program
- Hospital Compare - Hospital Compare Site Support
- HRRP - Hospital Readmissions Reduction Program
- HVBP - Hospital Value Based Purchasing
- Inpatient - Measures & Data Element Abstraction**
- Inpatient Claims-Based Measures
- IPF - Inpatient Psychiatric Facility
- IQR - Inpatient Quality Reporting
- OQR - Outpatient Quality Reporting
- Overall Hospital Star Ratings
- PCH - Cancer Hosp. Quality Reporting
- PI - Promoting Interoperability
- Public Reporting & Preview Period
- SNF VBP - Skilled Nursing Facility Value-Based Purchasing
- Validation

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 SUBMIT QUESTION

# Submitting a Question

The image shows a web form for submitting a question. The form is titled "Question" and "Browse Program Article". It has several fields: "Program" (selected: "Inpatient - Measures & Data Element Abstraction"), "Topic" (placeholder: "Select from the list of topics"), "Hospital CCN" (placeholder: "#####"), "Reporting Quarter" (placeholder: "Select from the drop down"), "Discharge Period" (placeholder: "Select from the drop down"), "Subject" (placeholder: "Limit 160 chars"), and "Please describe your question" (placeholder: "Enter your question for CMS (limit 4,000 chars)"). A modal window titled "Select a topic" is open, showing a list of topics under three main categories: "Inpatient - Measures & Data Element Abstraction", "Hospital Inpatient - ED", and "Hospital Inpatient - PC-01". The "Hospital Inpatient - Sepsis" category is currently selected, showing sub-topics like "Administrative Contraindication to Care" and "Blood Culture Collection". An "OK" button is at the bottom right of the modal.

Question [Browse Program Article](#)

### Question Details

Program \*  
Inpatient - Measures & Data Element Abstraction

Topic \*  
Select from the list of topics

Hospital CCN  
#####

Reporting Quarter  
Select from the drop down

Discharge Period \*  
Select from the drop down

Subject \*  
Limit 160 chars

Please describe your question \*  
Enter your question for CMS (limit 4,000 chars)

Select a topic

- Inpatient - Measures & Data Element Abstraction
  - Hospital Inpatient - ED
    - Arrival Date/Time
    - Decision to Admit Date/Time
    - ED Departure Date/Time
    - ED Patient
  - Hospital Inpatient - PC-01
    - Data Submission
    - General Abstraction Guidelines
    - Population and Sampling
  - Hospital Inpatient - Sepsis
    - Administrative Contraindication to Care
    - Blood Culture Collection

OK

# Submitting a Question

**Question Details**

Program \*

Topic \*

Hospital CCN  
 6 Digit CMS Certification Number, Numeric only. Format: #####

Reporting Quarter

Discharge Period \*

Subject \*

Please describe your question \*

Noel Albritton, MSN, RN  
Jennifer Witt, RN

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## **Questions and Answers**

# Continuing Education Approval

This program has been approved for [continuing education credit](#) for the following boards:

- **National credit**
  - Board of Registered Nursing (Provider #16578)
- **Florida-only credit**
  - Board of Clinical Social Work, Marriage & Family Therapy and Mental Health Counseling
  - Board of Registered Nursing
  - Board of Nursing Home Administrators
  - Board of Dietetics and Nutrition Practice Council
  - Board of Pharmacy

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