



Sepsis Coding and Documentation Perspectives

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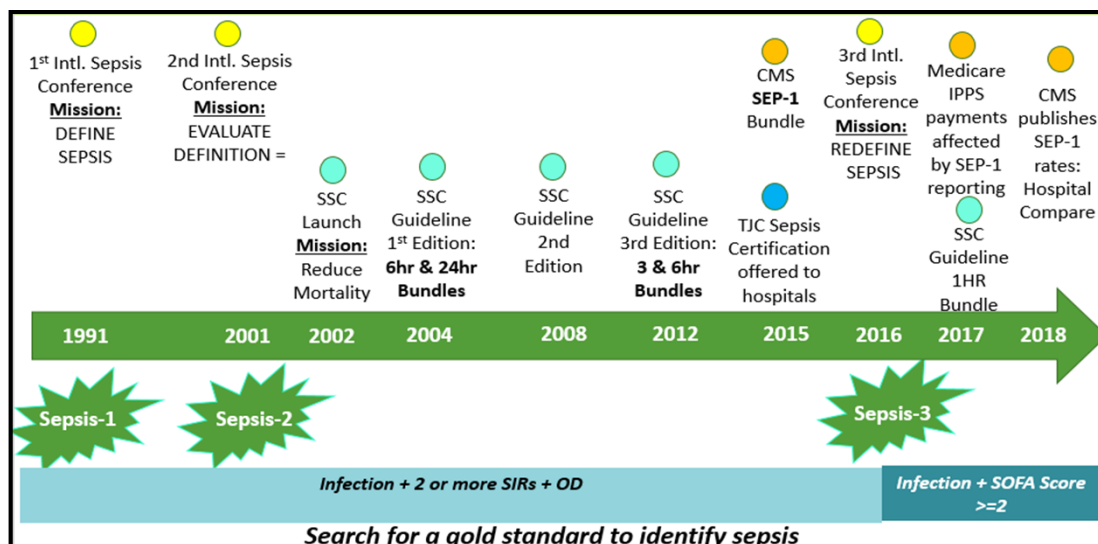
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Learning Objectives

- At the completion of this educational activity, the learner will be able to:
 - Define Sepsis II and Sepsis III criteria
 - Explain how to apply the SOFA criteria and differentiate from qSOFA
 - Describe coding guidelines on when to query for sepsis
 - Identify query scenarios and key components for sepsis and related diagnoses (i.e., SIRS, septic shock)

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Sepsis: How Did We Get Here?



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Sepsis Definition

- Sepsis is defined as life-threatening organ dysfunction caused by a dysregulated host response to infection (JAMA, 2016)
- Organ dysfunction can be identified as an acute change in total SOFA score ≥ 2 points consequent to the infection.
 - The baseline SOFA score can be assumed to be zero in patients not known to have preexisting organ dysfunction.
 - A SOFA score ≥ 2 reflects an overall mortality risk of approximately 10% in a general hospital population with suspected infection. Even patients presenting with modest dysfunction can deteriorate further, emphasizing the seriousness of this condition and the need for prompt and appropriate intervention, if not already being instituted.
- In lay terms, sepsis is a life-threatening condition that arises when the body's response to an infection injures its own tissues and organs.

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Sepsis 2 or Sepsis 3?

- The Society of Critical Care Medicine supports the Sepsis-3 (SOFA) scoring system to diagnose severe sepsis.
- The 2016 JAMA paper suggests that all sepsis is severe sepsis when using the SOFA criteria. The patient must have an acute change in physical exam and/or laboratory findings consequent to infection to meet the criteria
- The Sepsis-3 publication states that sepsis diagnosed using SOFA criteria is **always** Severe Sepsis.

Indicator	Clinical Criteria	
	Sepsis-3, SOFA Severe Sepsis (2016) ¹	Sepsis-2, Severe Sepsis (2012) ²
Definition of Sepsis	A life-threatening organ dysfunction (<i>not</i> failure) caused by a dysregulated host response to infection.	Sepsis: infection, suspected or documented, with systemic manifestations of infection due to the infectious process. Severe sepsis: plus sepsis-induced organ dysfunction or tissue hypoperfusion
Scoring Methodology	Sequential Organ Failure Assessment Score (SOFA). Acute change of ≥ 2 SOFA points due to the infectious process – associated with in-hospital mortality > 10%.	“Some” clinical indicators of sepsis plus organ dysfunction due to the infectious process
CNS	GCS 13-14 = 1 point (e.g., “conversational but disoriented”) GCS 10-12 = 2 points	Altered mental status
Respiratory	$\text{PaO}_2/\text{FiO}_2 < 400$ = 1 point $\text{PaO}_2/\text{FiO}_2 < 300$ = 2 points	Without pneumonia: $\text{PaO}_2/\text{FiO}_2 < 250$ (86% RA) With pneumonia: $\text{PaO}_2/\text{FiO}_2 < 200$ (80% RA)
Cardiovascular	Mean arterial pressure $\text{MAP} \sim [(\text{SBP} - \text{DBP}) \times 0.33 + \text{DBP}]$ $\text{MAP} < 70$ = 1 point Use of pressors = 2 points	Sepsis-induced hypotension
Renal – Creatinine	$> 1.2 - 1.9 \text{ mg/dL}$ = 1 point $2.0 - 3.4 \text{ mg/dL}$ = 2 points	$> 2.0 \text{ mg/dL}$
Renal – UOP	$\text{UOP} < 500 \text{ mL/day}$ = 3 points	$\text{UOP} < 0.5 \text{ mL/kg/hr}$ for more than 2 hrs despite adequate fluid resuscitation
Hepatic: Total bilirubin	$1.2 - 1.9$ = 1 point $2.0 - 5.9$ = 2 points	$> 2 \text{ mg/dL}$
Thrombocytopenia:	$< 150,000/\mu\text{L}$ = 1 point $< 100,000/\mu\text{L}$ = 2 points	$< 100,000/\mu\text{L}$
Coagulation	–	INR > 1.5
Lactate	–	Above laboratory normal
Link the acute change in clinical indicators to the infectious process, “due to”		

SOFA SCORE

- Organ systems assessed:
 - Pulmonary
 - Hepato-Biliary
 - Cardiovascular
 - Neurological
 - Renal

Sequential [Sepsis-Related] Organ Failure Assessment (SOFA) Score

System	0	1	2	3	4
Respiration $\text{PaO}_2/\text{FiO}_2$, mmHg (kPa)	≥ 400 (53.3)	< 400 (53.3)	< 300 (40)	< 200 (26.7) with respiratory support	< 100 (13.3) with respiratory support
Coagulation Platelets, $\times 10^3/\mu\text{L}$	≥ 150	< 150	< 100	< 50	< 20
Liver Bilirubin, mg/dL (umol/L)	< 1.2 (20)	$1.2 - 1.9$ (20 - 32)	$2.0 - 5.9$ (33 - 101)	$6.0 - 11.9$ (102 - 204)	> 12.0 (204)
Cardiovascular	$\text{MAP} \geq 70 \text{ mmHg}$	$\text{MAP} < 70 \text{ mmHg}$	Dopamine < 5 or Dobutamine (any dose)	Dopamine $5.1 - 15$ or Epinephrine ≤ 0.1 or Norepinephrine ≤ 0.1	Dopamine > 15 or Epinephrine > 0.1 or Norepinephrine > 0.1
CNS GCS Score	15	13 - 14	10 - 12	6 - 9	< 6
Renal Creatinine, mg/dL (umol/L) Urine Output, mL/d	< 1.2 (110)	$1.2 - 1.9$ (110 - 170)	$2.0 - 3.4$ (171 - 299)	$3.5 - 4.9$ (300 - 440)	> 5.0 (440)
*Catecholamine Doses = ug/kg/min for at least 1hr					

QSOFA



qSOFA is NOT USED TO DIAGNOSE SEPSIS

The qSOFA score (also known as quickSOFA) is a bedside prompt that may identify patients with suspected infection who are at greater risk for a poor outcome outside the intensive care unit (ICU).

Three criteria: (1 point each)

- SBP ≤ 100 mmHg
- respiratory rate ≥ 22 per min
- Glasgow coma scale < 15

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Guidelines: Which to Follow, Should Query

1. I.A.15 Conventions for the ICD-10-CM, “With”

- Don’t follow this
- Follow Sepsis guideline that requires cause-and-effect documentation

ICD-10-CM Index

Sepsis (generalized) (unspecified organism) A41.9
with
organ dysfunction (acute) (multiple) R65.20
with septic shock R65.21

1. II.C.1.d.1.a.i Negative/Inconclusive Blood Cultures

- Blood cultures do not need to be positive to diagnose sepsis
- Diagnosed based on clinical evidence
- *You should query the provider*

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Sepsis Guidelines: Must Query

3. Guideline I.C.1.d.1.a.iii Sepsis with Organ Dysfunction

- Follow Guideline I.C.1.d.1.b Severe Sepsis when an acute organ dysfunction or multiple organ dysfunction is linked to sepsis

4. Guideline I.C.1.d.1.a.iv Acute Organ Dysfunction Not Linked

- If acute organ dysfunction is documented as due to something else, do not assign R65.2- Severe sepsis
- Acute organ dysfunction must be documented as due to Sepsis to assign R65.2- Severe sepsis
- Query if documentation is unclear whether they are related

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Severe Sepsis Guidelines: Must Query, Should Query

5. Guideline I.C.1.d.1.b Severe Sepsis

- Assign codes for any associated acute organ dysfunctions
 - Some cases may not have any
 - Some cases may *require* a query

6. Guideline I.C.1.d.3 Sequencing of Severe Sepsis

- Severe Sepsis may be present on admission (POA) but not confirmed until later
- *Should* query if POA status is unclear
- W-Clinically Undetermined = provider is unable to clinically determine whether condition was present on admission or not

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Sepsis Due to Postprocedural Infection Guidelines: Must Query

7. Guideline I.C.1.d.5.a Sepsis due to Postprocedural Infection Casual Relationship

- As with all postprocedural complications, code assignment is based on the provider's documentation of the relationship between the infection and the procedure.

8. Guideline I.C.1.d.5.c Postprocedural Infection and Postprocedural Septic Shock

- As with all postprocedural complications, code assignment is based on the provider's documentation of the relationship between the infection and the procedure.

9. Guideline I.B.16 Documentation of Complications of Care

- Cause-and-effect relationship
- Indication in documentation of a complication
- Query if complication is not clearly documented

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Querying on Similar Terms

10. Guideline I.C.1.d.1.a.ii Urosepsis

- No code for Urosepsis
- Must clarify meaning: Sepsis vs. UTI vs. Sepsis and UTI vs. other

• ICD-10 Index

- Septicemia A41.9
 - meaning sepsis-see Sepsis A41.9
- Sepsis Syndrome – no index entry
- SIRS due to localized infection – no index entry

• *Coding Clinic for ICD-9-CM, Second Quarter 2000, pages 5-6*

- Bacteremia – consult physician when diagnosis is not clearly differentiated

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Clinical Scenario

- Clinical indicators: 39.1 F (febrile); HR 126; BP 150/80; Lactic acid 2.3; Bilirubin 1.5; P/F ratio of 194
- Admitted for acute respiratory failure
- Found to have a vegetation on her ICD lead and subsequent blood cultures resulted positive for ampicillin sensitive enterococcus faecalis. She was started on antibiotics and has had gradual stabilization of hemodynamic and return to her baseline oxygen requirement
- Underwent TEE and ICD removal 5/14. TEE also concerning for possible AV valve vegetation

Bacteremia Due to Enterococcus

- Ampicillin sensitive, d/c vancomycin started Ampicillin 5/10; continue and ceftriaxone at increased dose if 2g Iv q 12
- TEE: Large mass measuring 1.6X1.3 cm attached to the ICD lead present in the RA
- Repeat blood cultures drawn daily until negative; Bcx from 5/9 and 5/10 have NGTD, repeat cultures drawn 5/16 after ICD removal with NGTD

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Clinical Query

Per 5/10 admission note by Dr. X, patient admitted with bacteremia due to Enterococcus, with vegetation on her ICD lead.

- Clinical indicators: Bilirubin 1.5, P/F ratio 194
- Treatment: Ampicillin, Ceftriaxone IVPB, 4 liters oxygen nasal cannula

Based on your medical judgment and above clinical findings please further specify diagnosis that was monitored, evaluated, assessed, and/or treated this admission.

- ☐ Bacteremia present without sepsis
- ☐ Simple sepsis only
- ☐ Severe Sepsis
- ☐ Sepsis causing acute respiratory failure
- ☐ Other please specify
- ☐ Unable to determine

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Sepsis With Organ Dysfunction Not Linked

Scenario 1

Discharge diagnosis: Sepsis

Acute respiratory failure with hypoxia

- A41.9 Sepsis
- J96.01 Acute respiratory failure

Scenario 2

Discharge Diagnosis: Sepsis

Acute respiratory failure with hypoxia due to sepsis

- A41.9 Sepsis
- J96.01 Acute respiratory failure
- R65.20 Severe sepsis

DRG 871 CMS WT 1.8722 G/LOS 4.8

APR 720 APR WT 1.068 GLOS 4.62

SOI 3 ROM 3

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Sepsis & COVID-19

Patient admitted with COVID-19, acute hypoxic respiratory failure secondary to COVID pneumonia

Cardiology note on admission documents shock/treated with IV fluids and pressors, patient on broad spectrum antibiotics.

On admission WBC was elevated (13.3), patient was febrile, heart rate 137-152, elevated lactic acid (4.3 mmol/L), MAP 60, creatinine 1.5 mg/dL P/F ratio 122

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Clinical Query

Per review of medical record admission note documents patient admitted with COVID-19, COVID PNA, acute respiratory failure.

- Clinical indicators: MAP 60, Creatinine 1.5mg/dl, P/F ratio 222
- Treatment: IV fluids, broad spectrum antibiotics, Norepinephrine, intubated

Based on your medical judgment and above clinical findings please further specify diagnosis that was monitored, evaluated, assessed, and/or treated this admission.

- ☐ COVID-19 pneumonia without sepsis
- ☐ Simple sepsis only
- ☐ Severe sepsis causing acute respiratory failure
- ☐ Septic shock
- ☐ Other please specify
- ☐ Unable to determine

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QUALITY 

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What's the Big Deal? It's About Quality!

- CMS collects quality data for Hospital Inpatient Quality Reporting Program from hospitals paid under the Inpatient Prospective Payment System
- Hospital Compare Star Rating Measures
 - Mortality
 - Safety of care
 - Readmission
 - Patient experience
 - Effectiveness of care
 - Timeliness of care
 - Includes Sep1 Bundle compliance (Sepsis care)
 - Efficient use of medical imaging



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CMS Measures: “Timely and Effective Care”

Sepsis care as defined by CMS:

Sepsis is a complication that occurs when your body has an extreme response to an infection. It causes damage to organs in the body and can be life-threatening if not treated. Sepsis can sometimes turn into septic shock, which has a higher risk of death. Identifying sepsis early and starting appropriate care quickly increase the chances of survival.



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It IS a Big Deal



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- The care interventions in SEP-1 when provided as a composite lead to a significant reduction in hospital length of stay, re-admission rates and mortality. Mortality benefit for each data element singularly has also been observed.
- Even with compliance rates of less than 30%, absolute reductions in mortality of 4-6% have been noted.
- 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.

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Why All the Confusion?



The SEP 1 bundle is initiated when **3 / 4 SIRS criteria** are present along with the suspicion of an infection.

SIRS Criteria

Temperature > 38° C (100.4° F) or < 36° C (96.8° F)
Heart rate > 90
Respiratory rate > 20
WBC > 12,000/mm³ or < 4,000³ or >10% bands



The SEP 1 bundle is independent of Sep 3 criteria.

3 Hour Bundle (to be completed within 3 hours of time zero)

- Send initial Lactic Acid Level
- Obtain Blood Cultures Before Abx
- Administer Antibiotics
- 30 ml/kg IV fluid bolus in presence of hypotension* or Lactic Acid >4.0

6 Hour Bundle (to be completed within 6 hours of time zero)

- Repeat Lactic Acid if initial Lactic Acid >2
- Vasopressors if hypotensive after fluids
- Repeat Physical Exam



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Actual Denial Letters From Auditors

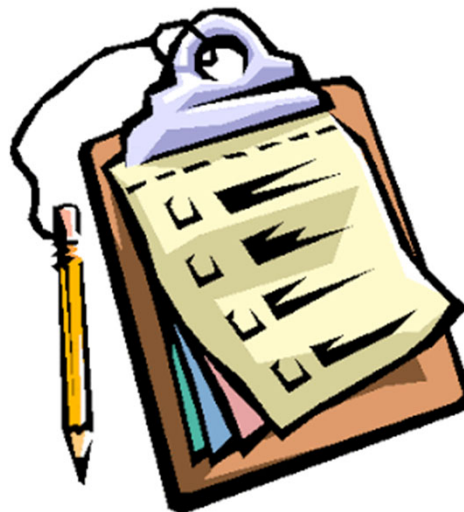
“To validate sepsis, the medical record is examined for **consistent documentation** of the condition; evidence that the patient's presentation **cannot be explained by the local infection alone** or by a **non-infectious condition**; and evidence of organ dysfunction caused by a dysregulated response to infection. While the patient's presentation warranted consideration of sepsis as a possible diagnosis, and localized infection of pneumonia was identified, upon investigation, the diagnosis of sepsis was not supported by the clinical evidence.”

“It is acknowledged a positive blood culture was obtained; however, “bacteremia” is not evidence of sepsis. There was no evidence in the medical record provided of a systemic response to infection **beyond that expected** with pneumonia.”

“Though the patient was noted to have **tachycardia, tachypnea, and leukocytosis**; these are expected findings with an infectious process such as pneumonia. It is acknowledged the patient was hypotensive, yielding a **SOFA score of 1**. This resolved quickly with fluids.”

Documentation Tips to Mitigate Denial Risk

- A41.9 code only will trigger audit
- Linking sepsis with organ dysfunction allows capture of R65.20 for severe sepsis ex:
 - Sepsis causing acute hypoxic respiratory failure
 - AKI due to sepsis
 - Metabolic encephalopathy due to sepsis
- Results in fewer charts pulled for audit



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Clinical Validation

- It is important to review for clinical validity to ensure complete and accurate representation of a patient's clinical condition in the health record, REGARDLESS of the financial outcome.
- *AHA Coding Clinic for ICD-10-CM/PCS* offers the following advice on clinical validation: **“It is not appropriate to develop internal policies to omit codes automatically when the documentation does not meet a particular clinical definition or diagnostic criteria...”**
- A robust clinical validation process can help avoid denials.

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Center for Medicare & Medicaid Services Definition of Clinical Validation

- Clinical validation is an additional process that may be performed along with DRG validation.
- Clinical validation involves a clinical review of the case to see whether or not the patient truly possesses the conditions that were documented in the medical record.
- Recovery Auditor clinicians shall review any information necessary to make a prepayment or post-payment claim determination.
- Clinical validation is beyond the scope of DRG (coding) validation, and the skills of a certified coder. This type of review can only be performed by a clinician.

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Sepsis Case Example

- 31-year-old male presents to ER with right elbow pain and swelling for a few weeks
- Previously diagnosed with right elbow infection but did not pick up antibiotic RX
- Alert & oriented on arrival
- Prior medical Hx:
 - Schizophrenia, meth abuse
- B/P 157/89, HR 102, RR 22, Temp 100.6° O₂ sat 98% on room air
- WBC 14.5, plt. 397, creat. 0.8, bili. 0.7
- H&P: “Due to tachycardia and leukocytosis, patient has met sepsis criteria”
- Orders:
 - Admit to medical unit with sepsis due to olecranon bursitis
 - Vancomycin IV q 24 hours
 - Consult ID

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TRIC: Treatment, Risk, Indicators, Compliant Question

- The TRIC approach is designed to satisfy query criteria compliantly.
- Remember the TRI in TRIC:
 - Treatment** - what specific and pertinent treatments are consuming resources (monitored, evaluated or treated)?
 - Risk** - what is the risk to the patient for the diagnosis? What is the risk to the integrity of the medical record if the diagnosis is not specified to the greatest level possible?
 - Indicators** - which clinical indicators are pertinent to the process of making a medical diagnosis?
- The condition must be clinically significant to the current encounter; in other words, if documented, the condition must satisfy Section III of the *Official Guidelines for Coding and Reporting* of other (additional) diagnoses.
- It remains inappropriate for coders to report codes on a current encounter based solely on information documented in a previous encounter

Dear Doctor: Attending

Please exercise your independent, professional judgment in responding to the clarification form. Questions asked do not imply that a particular response is desired or expected. We appreciate your clarification on this issue.

To be completed by CDI/Coding staff for physician review:

Present	Clinical Indicators	Location in Medical Record
[X]	"Due to tachycardia and leukocytosis, patient has met sepsis criteria."	Per H&P 6/11/2021
[X]	Creat. 0.8, bili. 0.7, pils. 397, O2 sat 100% RA, A&O x 3 CDI calculated SOFA score = 0	Per Meditech labs, VS, H&P 6/11/2021
Present	Risk Factors	Location in Medical Record
[X]	"Right upper extremity cellulitis with septic olecranon bursitis"	Per ID progress note 6/13/2021
Present	Treatments	Location in Medical Record
[X]	Vancomycin IV, Zosyn IV	Per MD orders 6/11/2021

SEPSIS-3 Dysregulated host response to an infection. Organ dysfunction can be represented by an increase in the Sequential (Sepsis-related) Organ Failure Assessment (SOFA) score of 2 points or more (from baseline). JAMA 2016

System Parameter	1 Point (need 2)	2 Points	3 Points	4 Points
P/F Ratio	<400	<300	<200 with respiratory support	<100 with respiratory support
Platelets	<150	<100	<50	<20
Bilirubin	1.2-1.9	2.0-5.9	6.0-11.9	>12.0
MAP	MAP<70	Dopamine <5 or Dobutamine any dose	Dopamine 5.1-15 or Epinephrine ≤0.1 or Norepinephrine ≤0.1	Dopamine >15 or Epinephrine >0.1 or Norepinephrine >0.1
GCS Score	13-14	10-12	6-9	<6
Creatinine (or Urine Output)	1.2-1.9	2.0-3.4	3.5-4.9/(<500ml)	>5.0/(<200)

Please clarify if sepsis is ruled in or ruled out. If ruled in, please provide corresponding SOFA indicators.

Provider Response Examples:

- Sepsis is ruled out; cellulitis with septic olecranon bursitis is present
- Sepsis is ruled in with these supporting SOFA indicators: _____
- Other Specify: _____
- Clinically unable to determine



Sepsis Clinical Validation Query Example

Treatment - IV antibiotics
 Risk-cellulitis
 Indicators - SOFA score 0
 Compliant Question - direct, concise

CLINICAL DOCUMENTATION CLARIFICATION FORM:

Dear Doctor: Admitting

Please exercise your independent, professional judgment in responding to the clarification form. Questions asked do not imply that a particular response is desired or expected. We appreciate your clarification on this issue.

To be completed by CDI/Coding staff for physician review:

Present	Clinical Indicators	Location in Medical Record
[X]	"Sepsis due to pneumonia..."	Per H&P 12/15/2021
Present	Risk Factors	Location in Medical Record
[X]	"Patient has AKI with elevated creatinine..."	Per H&P 12/15/2021
Present	Treatments	Location in Medical Record
[X]	IVF at 150 mL/hr	Per MD orders 12/15/2021
[X]	Vanc IV q 24 hours, Zosyn IV q 6 hours	Per MD orders 12/15/2021

Please clarify stage of sepsis.

Provider Response Examples:

- Severe Sepsis
- Sepsis causing AKI
- Simple sepsis only, AKI unrelated
- Other Specify: _____
- Clinically unable to determine

For continuity of documentation, please document condition throughout progress notes and discharge summary. Thank You

This is a permanent part of the Medical Record

If sepsis is diagnosed and not documented as severe sepsis or linked to organ failure, a query clarifying stage of sepsis is necessary.

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Denial Mitigation Tips

- When the medical record appears to lack evidence-based clinical criteria for a diagnosis, CDI specialists must query the provider. Doing so provides the physician an opportunity to either add more clinical criteria to support the diagnosis, confirm the diagnosis as it stands, or confirm that the diagnosis was ruled out or is without clinical significance.
- If sepsis is documented by the provider, it will be coded but if the SOFA score is < 2, a clinical validation query will be sent.

Create the link for appropriate capture to reduce denial risk
PDx A41.9 (unspecified sepsis)
SDx R65.20 (severe sepsis)

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Thank you. Questions?

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In order to receive your continuing education certificate(s) for this program, you must complete the online evaluation. The link can be found in the continuing education section of the program guide.

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