Bridging the Gap Between Coding Guidelines and Sepsis Clinical Criteria

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In addition to thousands of new codes, the October 2016 ICD-10-CM update included a new general rule in Section I of the 2017 ICD-10-CM Official Guidelines for Coding and Reporting. The convention I.A.19 specifically states:

> "The assignment of a diagnosis code is based on the provider's diagnostic statement that the condition exists. The provider's statement that the patient has a particular condition is sufficient. Code assignment is not based on clinical criteria used by the provider to establish the diagnosis."[1]

While most coding professionals feel that the addition of this guideline explicitly states what is already being done, there are cases where individual coders are reporting, or not reporting, diagnoses based on established clinical criteria. There are a substantial number of published clinical criteria for common diseases and illnesses that coding professionals report on a daily basis. Some examples include the RIFLE criteria for acute renal failure, glomerular filtration rate criteria for chronic renal failure, and, more recently, new definitions and clinical criteria for sepsis. This article reviews recent clinical information on sepsis and makes suggestions to bridge the gap between documentation and coding of sepsis.

Sepsis Clinical Criteria

Established definitions of sepsis, septic shock, and organ dysfunction remained largely unchanged for more than two decades. However, updated definitions and clinical criteria for sepsis were published in the February 2016 issue of the *Journal of the American Medical Association* (JAMA).[2] These revisions were generated by a task force made up of 19 clinicians with representation from critical care, infectious disease, and other specialists in the field of sepsis. The task force sought to differentiate sepsis from an uncomplicated infection and to update definitions of sepsis and septic shock to be consistent with improved understanding of the pathobiology. Up to this point, multiple definitions and terminologies were utilized for sepsis, septic shock, and organ dysfunction, leading to discrepancies in reporting and observed mortality. Current Systemic Inflammatory Response Syndrome (SIRS) criteria are present in many hospitalized patients, including those who never develop infection and never incur adverse outcomes. Because no gold standard diagnostic test exists, the task force sought to compile definitions and supporting clinical criteria that were clear and fulfilled multiple domains of usefulness and validity.The group's recommendations have been endorsed by more than 30 medical societies from six continents, spanning disciplines from critical care and emergency medicine to infectious disease and family practice.

In the *JAMA* article, the task force distinguishes between definitions and clinical criteria for sepsis. A definition is the description of an illness concept whereas clinical criteria identify the elements of sepsis such as infection, host response, and organ dysfunction. Clinical criteria should be easily and rapidly obtained to allow practitioners to better identify patients with suspected infection that are likely to progress to a life-threatening state.

Sepsis Definitions

The new recommendations define sepsis as "life-threatening organ dysfunction due to a dysregulated host response to infection." In contrast, septic shock is defined as "a subset of sepsis in which particularly profound circulatory, cellular, and metabolic abnormalities substantially increase mortality." Thus, septic shock represents a more severe illness with a much higher likelihood of death than sepsis alone.

Sepsis Clinical Criteria

The task force determined there was an important need for features that can be identified and measured in individual patients and sought to provide criteria to offer uniformity. To accomplish this, they used the Sequential [Sepsis-related] Organ Failure Assessment (SOFA) score.[3] The score grades abnormality by organ system and accounts for clinical interventions. The baseline SOFA score can be assumed to be zero in patients not known to have preexisting organ dysfunction. A higher SOFA score is associated with an increased probability of mortality. Organ dysfunction can be represented by an increase in the SOFA score of two points or more, which is associated with in-hospital mortality greater than 10 percent. Table 1 below shows the new clinical criteria incorporating SOFA.

Table 1: Clinical Criteria Incorporating SOFA

SEPSIS	SEPTIC SHOCK
Suspected or documented infection	Sepsis
Acute increase of ≥2 SOFA points	Vasopressor therapy needed to elevate mean arterial pressure (MAP) ≥65 mm Hg
	Lactate >2 mmol/L (18 mg/dL) despite adequate fluid resuscitation

The SOFA score is used to characterize and track the status of a patient's organ function. The score is based on six organ system scores, one each for respiratory, cardiovascular, hepatic, coagulation, renal, and neurological systems (see Table 2 below). As previously noted, a higher SOFA score is associated with an increased probability of mortality.

Table 2: SOFA Score

SYSTEM		Respiratory	CNS	Cardiovascular	Liver	Coagulation	Renal
		PaO2/FiO2 (mmHg)	Glasgow coma scale	MAP or vasopressors	Bilirubin (mg/dL) [µmol/L]	Platelets×103/µL	Creatinine mg/dL(µmol/L) or urine output [mL/d]
SOFA SCORE	1	<400	13–14	MAP <70 mmHg	1.2–1.9 [20-32]	<150	1.2–1.9 (110-170)
	2	<300	10–12	Dop <5 or Dob (any dose)	2.0–5.9 [33-101]	<100	2.0–3.4 (171-299)
	3	<200 and mech. vent	6–9	Dop 5.1 - 15 OR Epi ≤0.1 OR Nor ≤0.1	6.0–11.9 [102-204]	<50	3.5–4.9 (300-440) or [<500 mL/d]

	4	<100 and mech. vent	<6	Dop >15 OR Epi >0.1 OR Nor >0.1	>12.0 [204]	<20	>5.0 (>440) or [<200 mL/d]

Cardiovascular Abbreviation Key:
Dop = Dopamine Dob = Dobutamine Epi = Epinephrine MAP = Mean Arterial pressure Nor = Norepinephrine

The SOFA score has a high predictive validity for sepsis but is heavily dependent on laboratory analysis of multiple systems. A new measure introduced by the task force, termed qSOFA for "quick SOFA," provides a fast and simple bedside analysis not dependent on laboratory analysis with the same predictive validity as SOFA. The clinical criteria for qSOFA include:

- Respiratory rate ≥22/min
- Altered mentation
- Systolic blood pressure ≤100 mm Hg

Bridging the Gap

As clearly stated in the ICD-10-CM Official Guidelines for Coding and Reporting (see the aforementioned coding convention I.A.19), coding professionals must assign codes based on physician documentation and should not include or exclude codes based solely on clinical definitions and criteria such as sepsis and septic shock. However, organizations continue to see a rise in audit activities and subsequent clinical denials on the basis of established clinical definitions and criteria for sepsis. Providers must therefore have a mechanism to ensure both correct coding and reporting as well as complete clinical documentation of sepsis cases. While no two organizations are the same, there are a number of different processes that must be assessed—and possibly revised—to reduce the risk of clinical denials for sepsis.

Medical Staff

The goal for medical staff is to develop a clinical policy which includes the new definitions as well as documentation expectations. The medical staff should review and discuss the new definitions and clinical criteria for sepsis and septic shock; physicians providing critical care to sepsis patients—such as emergency medicine, infectious disease, pulmonary, and hospitalist physicians—should be included in that discussion. If the medical staff is unaware or unfamiliar with these new definitions, then education must be provided. The medical staff may adopt or adapt the new criteria, or define facility-specific criteria applicable to diagnosing and managing patients with suspected sepsis.

Clinical Documentation Improvement and Sepsis

The goal for clinical documentation improvement (CDI) specialists is the concurrent validation of documentation as it relates to the established sepsis policy. CDI staff should work directly with providers to present the new criteria and facilitate implementation of the medical staff's policy for sepsis. CDI staff may subsequently adjust CDI policies and procedures to incorporate this policy. This might include, for example, developing (or refining) a query template for sepsis that includes specific documentation requirements. The CDI staff should also consider how they might use the SOFA score or qSOFA criteria to determine when a clinical query related to sepsis may be necessary. Finally, the CDI policies should also include query guidelines for cases where the documentation does not meet clinical criteria established in the medical staff policies and provider clarification is needed to confirm the diagnosis and not to just omit the code. This policy should also include a mechanism for physician involvement in defending sepsis if contested in an audit in these cases.

Coding and Sepsis

The goal for coding is to have a policy that supports consistent and accurate reporting of sepsis for reimbursement and internal and external data reporting. As the cooperating parties have not yet developed new guidelines for this new criteria, organizations will need to be proactive and develop their own policies. While individual coding professionals should not report

codes solely on the basis of clinical criteria, facilities can and should adopt/revise internal coding policies that incorporate clinical information on how to consistently and compliantly code sepsis and septic shock based on the medical staff's clinical policy.

Collaboration between the medical, CDI, and coding staff is a critical success factor in bridging the gap between coding guidelines and clinical guidelines as well as managing any claims denials. Furthermore, alignment in CDI and coding policies and procedures is a key step to successfully mitigating and defending coding and/or clinical denials.

Continued Alignment of Coding and Clinical Guidelines

The strategies and approach described in this article for aligning sepsis coding guidelines and sepsis clinical guidelines can also be employed for other common diseases and illnesses where clinical criteria have been defined. Effective claims denial management should help spotlight other areas where collaboration and coordination of clinical and coding policies are needed.

Notes

1. Centers for Disease Control and Prevention. ICD-10-CM Official Guidelines for Coding and Reporting FY 2017. www.cdc.gov/nchs/data/icd/10cmguidelines_2017_final.pdf.
2. Singer, Mervyn et al. "The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)." *Journal of the American Medical Association* 315, no. 8 (February 23, 2016): 801-810. https://jamanetwork.com/journals/jama/fullarticle/2492881.
3. Vincent, J. L. et al. "The SOFA (Sepsis-related Organ Failure Assessment) score to describe organ dysfunction/failure: On behalf of the Working Group on Sepsis-Related Problems of the European Society of Intensive Care Medicine." *Intensive Care Medicine* 22, no. 7 (July 1996): 707-710. http://icmjournal.esicm.org/Journals/abstract.html?doi=10.1007/BF01709751.

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