Sepsis

The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3) was published in 2016. In the US, NCHS/CDC, AHA EAB and others have received numerous questions and comments. Similar questions were also raised at the international level regarding the new definitions, the impact on WHO ICD-10 code assignments and the impact on the codes for inclusion in ICD-11.

In ICD-10 sepsis is currently classified as a condition due to bacteria when it can also be due to viruses, fungi or protozoa. Advances in the pathobiology have created the need to reexamine the definitions and classification of sepsis. Previously, it was considered that there was a severity progression of infection from sepsis to septic shock, when, in fact, it is not linear and there may not be a continuum.

New definitions:

a) Sepsis is a life-threatening organ dysfunction caused by a dysregulated host response to infection.
b) Septic shock is a subset of sepsis in which profound circulatory, cellular and metabolic abnormalities are associated with a greater risk of mortality than with sepsis alone.

The following points have been considered in the development of the proposal for ICD-10-CM based on prior discussions regarding potential updates to ICD-10 and ICD-11:

- There is international agreement on the definition of sepsis although there are still ongoing discussions related to the clinical criteria and its applicability in low resource countries.
- SIRS is no longer the defining criteria of sepsis as a patient can have a life-threatening condition without SIRS, and a non-life-threatening condition with SIRS.
- SIRS can result from a non-infectious origin so a unique code is needed. Many patients suffer from SIRS after surgery.
- Inconsistent use of terminology in relation to sepsis has created difficulties in coding and inconsistent data has resulted.
- It is not always possible to identify the infectious agent, so there will always be a need to classify sepsis, unspecified.

Discussions and consultations between WHO, international subject matter experts and WHO Collaborating Center representatives (US, Sweden, UK, Japan) began in 2017 to identify steps that could be taken to address changes in ICD-10 and ICD-11, which was in beta at that time. It was noted that the ICD-10 structure and its limited life span could not easily accommodate major changes. Ultimately, no changes were made to ICD-10 before the updating process ended.

As noted during the March 2019 ICD-10 C&M meeting, the definition and the clinical criteria are two distinct functionalities. The definition is a presumed infection with a dysregulated host response and organ dysfunction. In Sepsis 3.0, a definition that has been close to universally accepted in adults

References:

### TABULAR MODIFICATIONS

Revise **A41** Other bacterial sepsis
- Code first: postprocedural sepsis (T81.4-)
- sepsis during labor (O75.3)
- sepsis following abortion, ectopic or molar pregnancy (O03-O07, O08.0)
- sepsis following immunization (T88.0)
- sepsis following infusion, transfusion or therapeutic injection (T80.2-)

**Excludes1:** bacteremia NOS (R78.81)
- neonatal (P36.-)
- puerperal sepsis (O85)
- streptococcal sepsis (A40.-)

**Excludes2:** sepsis (due to) (in) actinomycotic (A42.7)
- sepsis (due to) (in) anthrax (A22.7)
- sepsis (due to) (in) candidal (B37.7)
- sepsis (due to) (in) Erysipelothrix (A26.7)
- sepsis (due to) (in) extraintestinal yersiniosis (A28.2)
- sepsis (due to) (in) gonococcal (A54.86)
- sepsis (due to) (in) herpesviral (B00.7)
- sepsis (due to) (in) listerial (A32.7)
- sepsis (due to) (in) melioidosis (A24.1)
- sepsis (due to) (in) meningococcal (A39.2-A39.4)
- sepsis (due to) (in) plague (A20.7)
- sepsis (due to) (in) tularemia (A21.7)
- toxic shock syndrome (A48.3)

**A41.0 Sepsis due to Staphylococcus aureus**

**A41.01 Sepsis due to Methicillin susceptible Staphylococcus aureus**
- MSSA sepsis
- Staphylococcus aureus sepsis NOS

**A41.02 Sepsis due to Methicillin resistant Staphylococcus aureus**

**A41.1 Sepsis due to other specified staphylococcus**
- Coagulase negative staphylococcus sepsis

**A41.2 Sepsis due to unspecified staphylococcus**

**A41.3 Sepsis due to Hemophilus influenzae**

**A41.4 Sepsis due to anaerobes**
Excludes1: gas gangrene (A48.0)

A41.5 Sepsis due to other Gram-negative organisms
   A41.50 Gram-negative sepsis, unspecified
      Gram-negative sepsis NOS
   A41.51 Sepsis due to Escherichia coli [E. coli]
   A41.52 Sepsis due to Pseudomonas
      Pseudomonas aeroginosa
   A41.53 Sepsis due to Serratia
   A41.59 Other Gram-negative sepsis

A41.8 Other specified sepsis
   A41.81 Sepsis due to Enterococcus
   A41.89 Other specified sepsis

A41.9 Sepsis, unspecified organism

Add Systems inflammatory Response Syndrome (SIRS) of infectious origin NOS

R57 Shock, not elsewhere classified
   Excludes1: anaphylactic shock NOS (T78.2)
      anaphylactic reaction or shock due to adverse food reaction (T78.0-)
      anaphylactic shock due to adverse effect of correct drug or medicament properly administered (T88.6)
      anaphylactic shock due to serum (T80.5-)
      anesthetic shock (T88.3)
      electric shock (T75.4)
      obstetric shock (O75.1)
      postprocedural shock (T81.1-)
      psychic shock (F43.0)
      shock complicating or following ectopic or molar pregnancy (O00-O07, O08.3)
      shock due to lightning (T75.01)
      traumatic shock (T79.4)
      toxic shock syndrome (A48.3)
R57.0  Cardiogenic shock
       Excludes2: septic shock (R65.21)

R57.1  Hypovolemic shock

New Code  R57.2  Septic shock
       Code first underlying condition
       Use additional code to identify infectious organism

R57.8  Other shock

R57.9  Shock, unspecified
       Failure of peripheral circulation NOS

R65  Symptoms and signs specifically associated with systemic inflammation and infection
       R65.1  Systemic inflammatory response syndrome (SIRS) of non-infectious origin
              Code first underlying condition, such as:
              heatstroke (T67.0)
              injury and trauma (S00-T88)

       Excludes1: sepsis- code to infection
            severe sepsis (R65.2)

Delete  R65.10 Systemic inflammatory response syndrome (SIRS) of non-infectious origin without acute organ dysfunction
       Systemic inflammatory response syndrome (SIRS) NOS

Delete  R65.11 Systemic inflammatory response syndrome (SIRS) of non-infectious origin with acute organ dysfunction
       Use additional code to identify specific acute organ dysfunction, such as:
       acute kidney failure (N17.-)
       acute respiratory failure (J96.-)
       critical illness myopathy (G72.81)
       critical illness polyneuropathy (G62.81)
       disseminated intravascular coagulopathy [DIC] (D65)
       encephalopathy (metabolic) (septic) (G93.41)
       hepatic failure (K72.-)

Delete  R65.2  Severe sepsis
       Infection with associated acute organ dysfunction
       Sepsis with acute organ dysfunction
       Sepsis with multiple organ dysfunction
       Systemic inflammatory response syndrome due to infectious process with acute organ dysfunction
       Code first underlying infection, such as:
infection following a procedure (T81.4-)
infections following infusion, transfusion and therapeutic injection (T80.2-)
puerperal sepsis (O85)
sepsis following complete or unspecified spontaneous abortion (O03.87)
sepsis following ectopic and molar pregnancy (O08.82)
sepsis following incomplete spontaneous abortion (O03.37)
sepsis following (induced) termination of pregnancy (O04.87)
sepsis NOS (A41.9)

Delete Use additional code to identify specific acute organ dysfunction, such as:
acure kidney failure (N17.-)
acute respiratory failure (J96.0-)
critical illness myopathy (G72.81)
critical illness polyneuropathy (G62.81)
disseminated intravascular coagulopathy [DIC] (D65)
encephalopathy (metabolic) (septic) (G93.41)
hepatic failure (K72.0-)

Delete R65.20 Severe sepsis without septic shock
Severe sepsis NOS

Delete R65.21 Severe sepsis with septic shock