

Coding Septicemia, SIRS, and Sepsis

Audio Seminar/Webinar
December 11, 2008

Practical Tools for Seminar Learning

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Faculty

Laurine Johnson, MS, RHIA, CPC-H

Laurie Johnson is a senior HIM consultant with Ingenix Consulting, where she specializes in APC/DRG review and education on RACS, coding, and transitioning to ICD-10. Ms. Johnson has over 20 years of experience in the HIM profession, including experience as an HIM director and adjunct coding instructor for an RHIA program. She is also a frequent speaker on HIM topics.

Marie Morin, RN, MSN, CCS

Marie Morin is a senior consultant with Ingenix Consulting, specializing in clinical data quality, coding and operations, and providing custom education programs for coding and clinical personnel. In addition to her consulting background, Ms. Morin has over 30 years experience in critical care and emergency room nursing. Her clinical experience offers a unique edge to working with coders and clinicians as it pertains to coding and documentation.

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GOALS

- ♦ **Discuss the differences in the terminology of these conditions**
- ♦ **Review Official Coding Guidelines related to these conditions and coding changes for FY 2009**
- ♦ **Discuss how POA and Hospital Acquired Conditions are affected**
- ♦ **Review challenging clinical scenarios**

1

Terminology

- ♦ **Infection**
- ♦ **Bacteremia vs. Septicemia (with and without an adjective)**
- ♦ **"Systemic Inflammatory Response Syndrome"**
- ♦ **Multi Organ Dysfunction (or Failure) Syndrome**
- ♦ **Sepsis (Syndrome) vs. Severe Sepsis vs. Septic Shock**
- ♦ **Septic (an adjective)**
- ♦ **Anatomical Sepsis (e.g. buccal sepsis, urinary sepsis (urosepsis))**

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Septicemia, SIRS, and Sepsis Coding Concepts

- ♦ All coding is based on physician documentation.
- ♦ Do not code on the basis of laboratory or radiological findings alone.
- ♦ ICD-9-CM code assignment issues related to inconsistent, missing, conflicting or unclear documentation must be resolved by the provider.
- ♦ Whenever there are concerns about a diagnosis and/or treatment, query the physician for clarification.

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SIRS

- ♦ SIRS is an inflammatory state involving the whole body without infection.
- ♦ Unique diagnostic criteria that are different from those for Sepsis.
- ♦ The key transition from SIRS to sepsis according to definition is the presence of an identified pathogen.

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Infection

- ◆ Presence of microorganisms in a body cavity that is normally sterile.
- ◆ In body cavities that are not sterile, it is the presence or inordinate number of microorganisms normally not found for which there is a pathological response.

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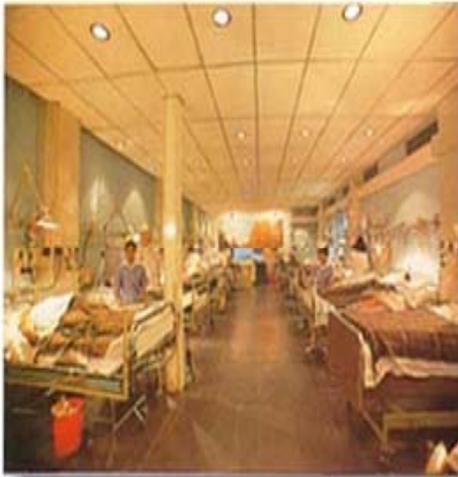
SIRS

SIRS can be diagnosed when two or more of the following are present as changes from the patient's baseline:

- ◆ Heart rate > 90 beats per minute
- ◆ Body temperature < 36 or > 38°C
- ◆ Tachypnea (high respiratory rate) > 20 breaths per minute or, on blood gas, a PaCO₂ < 32 mm Hg
- ◆ White blood cell count < 4000 cells/mm³ or > 12000 cells/mm³ or the presence of greater than 10% immature neutrophils

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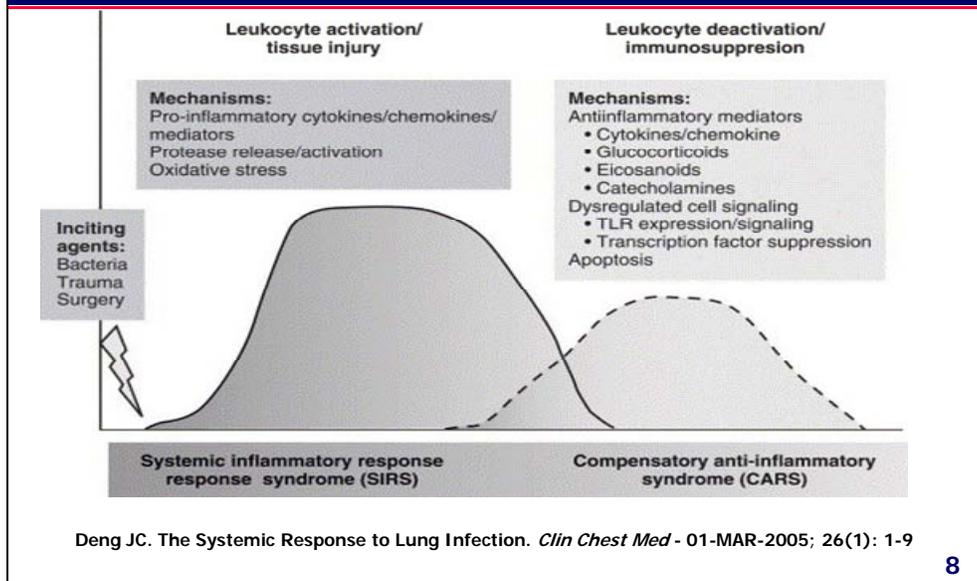
SIRS is a Manifestation or Complication of an Underlying Cause



- ♦ SIRS is a systemic consequence to an infection, trauma or burn, not the infection or trauma itself
- ♦ SIRS involves many different chemicals that cause clotting and tissue destruction
- ♦ SIRS damages organs and can lead to death

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Overwhelming Anti-inflammatory Response



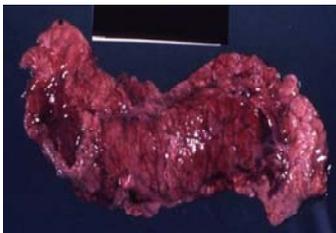
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Common Causes

- ♦ Severe Trauma
- ♦ Cardiac Tamponade
- ♦ Complication of Surgery
- ♦ Anaphylaxis
- ♦ Adrenal Insufficiency
- ♦ Drug overdose
- ♦ Pulmonary Embolism
- ♦ Burns
- ♦ Complicated aortic aneurysm
- ♦ Acute pancreatitis
- ♦ Myocardial Infarction
- ♦ Immunodeficiency (such as AIDS)
- ♦ Hemorrhage

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Other Causes Surgery, Trauma, Burns, Pancreatitis



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Localized Inflammatory Response

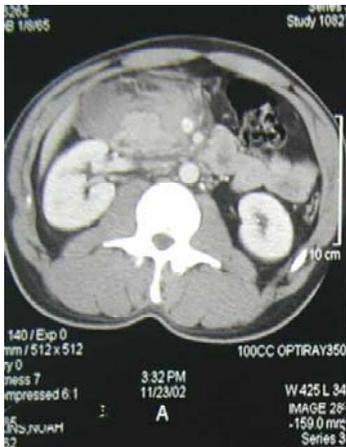


- ◆ Inflammatory response to infection that is localized or segregated.
- ◆ Pain, redness, swelling in one spot.
- ◆ White count is normal; no fever

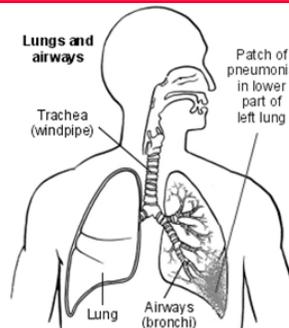
Examples: Acne, tooth infection, simple UTI, paronychia, even some pneumonias or bacteremias

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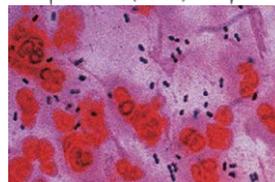
Localized Inflammatory Response



Pancreatitis



Pneumonia



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Mediator Release – inflamed organ becomes an innocent bystander

- **Pro-inflammatory Mediators**
 - TNF, IL-1 (endogenous pyrogen), IL-6, IL-8 (recruits segmented cells), Interferon gamma, HMGB-1
- **Anti-inflammatory Mediators**
 - IL-4, IL-10, Soluble Receptor and Receptor Antagonists
- **Hemostatic and Anti-hemostatic Factors**
 - Tissue Factor, Thrombin, Antithrombin, Protein C, Protein S, Plasmin, Plasminogen Activator Inhibitor
- **Others**
 - Myocardial Depressant Factor, Bradykinin, Complement, Prostaglandins, Platelet Activation Factor, Nitric Oxide

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Coding of SIRS

- ♦ ***SIRS Codes (added in Oct 2002)***
 - **995.90** Systemic inflammatory response syndrome, unspecified
 - **995.91** Systemic inflammatory response syndrome due to infectious process without organ dysfunction
 - **995.92** Systemic inflammatory response syndrome due to infectious process with organ dysfunction
 - **995.93** Systemic inflammatory response syndrome due to non-infectious process without organ dysfunction
 - **995.94** Systemic inflammatory response syndrome due to non-infectious process with organ dysfunction

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Coding of SIRS

SIRS due to Non-infectious Process

- ◆ When SIRS is documented with a noninfectious condition, and no subsequent infection is documented, the code for the underlying condition, such as an injury, should be assigned, followed by code **995.93**, Systemic inflammatory response syndrome due to noninfectious process without acute organ dysfunction, or **995.94**, Systemic inflammatory response syndrome due to non-infectious process with acute organ dysfunction. If an acute organ dysfunction is documented, the appropriate code(s) for the associated acute organ dysfunction(s) should be assigned in addition to code **995.94**.

Official Coding Guidelines

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Coding of SIRS

- ◆ If acute organ dysfunction is documented, but it cannot be determined if the acute organ dysfunction is associated with SIRS or due to another condition (e.g., directly due to the trauma), the provider should be queried.
- ◆ If trauma was the initiating insult that precipitated the SIRS. An external cause code(s) may be used with codes **995.93**, Systemic inflammatory response syndrome due to noninfectious process without organ dysfunction, and **995.94**, Systemic inflammatory response syndrome due to noninfectious process with organ dysfunction. The external cause(s) code should correspond to the most serious injury resulting from the trauma.

Official Coding Guidelines

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Coding of SIRS

- ♦ The external cause code(s) should only be assigned if the trauma necessitated the admission in which the patient also developed SIRS. If a patient is admitted with SIRS but the trauma has been treated previously, the external cause codes should not be used.

Official Coding Guidelines

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SIRS Coding

- ♦ Patient admitted due to acute MI and traumatic injury to hip. Physician documents the patient has SIRS due to both conditions.
- ♦ The appropriate code assignment is **995.93** (SIRS due to non-infectious cause without organ failure)

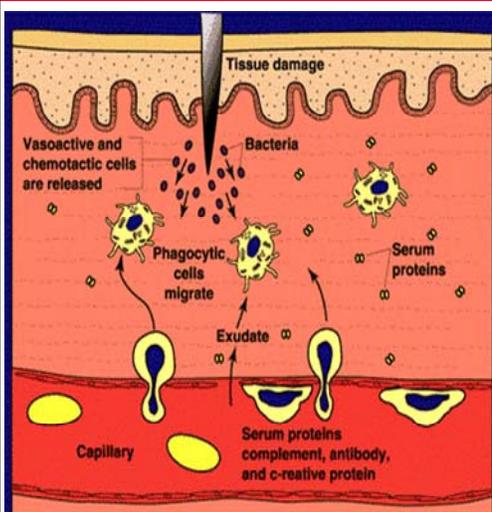
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SIRS Coding

- ◆ Physician documents the patient has SIRS but does not identify the cause as being infectious or non-infectious.
- ◆ Appropriate code assignment would be **995.90** (SIRS, Unspecified)

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Source Initiation - Infection



- ◆ Host Factors (change in bacterial flora, presence of foreign objects, breakdown in defense integrity)
- ◆ Adaptive and Innate Immunity
- ◆ Bacterial Factors (adhesion, resistance, toxin production, virulence)

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SIRS vs. Sepsis

- ♦ **Sepsis: This is a systemic inflammatory response to a documented infection. The manifestations of sepsis are the same as those previously defined for SIRS. The clinical features include 2 or more of the of the conditions listed under SIRS but occurring as a result of a documented infection:**

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Sepsis

- ♦ **At least 1 of the following manifestations of inadequate organ function/perfusion also must be included:**
- ♦ **Alteration in mental state**
- ♦ **Hypoxemia (PaO₂ <72 mm Hg at FiO₂ where overt pulmonary disease not the direct cause of hypoxemia)**
- ♦ **Elevated plasma lactate level**
- ♦ **Oliguria (urine output <30 mL or 0.5 mL/kg for at least 1 h)**

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Sepsis

Affects 750,000 people annually

- ♦ 2-3 % of all hospital admissions
- ♦ Mortality rates of 30-50% for Sepsis
- ♦ Patients with Septic Shock have 80-90% mortality
- ♦ The most common presenting symptom of severe sepsis is respiratory system dysfunction, followed by shock and renal system dysfunction.
- ♦ The most common site of infection is the lung, followed by intra-abdominal and urologic sources.
- ♦ In 22% to 33% of suspected sepsis cases, culture results are not positive for pathogens.
- ♦ Of all positive culture results, gram-positive bacteria are identified in 25% to 50% of cases and gram-negative bacteria in 22% to 37% of cases.
- ♦ Pneumonia is the most common trigger for severe sepsis, followed by peritonitis and urinary tract infection with or without pyelonephritis.

Medscape "Evidence-Based Guidelines Issued to Detect and Treat Sepsis" June 12, 2007

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Sepsis – Blood Cultures

- ♦ Frequently, a patient is suspected of having septicemia and is treated for the condition even though the blood cultures may not be supportive.
- ♦ Although blood is usually drawn for culturing during the initial workup, treatment must be started quickly, often before the results of the culture are known. Even when a patient shows clinical evidence of septicemia, the blood culture may be negative owing to the difficulty of culturing certain organisms from blood, the effects of growth-inhibitory factors in the blood, or the initiation of specific antibiotic therapy before laboratory test samples were taken. Negative or inconclusive blood cultures do not preclude a diagnosis of septicemia in patients with clinical evidences of the condition.

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Sepsis

- ♦ **Patients at increased risks of developing sepsis:**
 - **Underlying diseases:** neutropenia, solid tumors, leukemia, dysproteinemias, cirrhosis of the liver, diabetes, AIDS, serious chronic conditions
 - **Surgery or instrumentation:** catheters or other invasive lines
 - **Prior drug therapy:** Immuno-suppressive drugs, especially with broad-spectrum antibiotics
 - **Age:** males, above 40 y; females, 20-45 y
 - **Miscellaneous conditions:** childbirth, septic abortion, trauma and widespread burns, intestinal ulceration

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Coding Sepsis

- ♦ Most septicemias are classified to category 038, with fourth and fifth digits indicating the responsible organism. Staphylococcal septicemia uses the fifth digit to indicate that the infection is due to either *Staphylococcus aureus* (038.11) or other specified type of staphylococcus (038.19).
- ♦ Some are classified to another organism, such as disseminated candidiasis (112.5) and herpetic septicemia (054.5). Organisms are sometimes transferred to other tissue, where they may seed infection in another site and lead to such conditions as arteritis, meningitis, and pyelonephritis.

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Severe Sepsis

- ♦ Sepsis and SIRS associated with some degree of organ dysfunction as evidenced hypotension or hypoperfusion.
- ♦ The evidence of hypoperfusion of organs and perfusion abnormalities may include, but are not necessarily limited to, an acute alteration in mental status, oliguria, and/or lactic acidosis.
- ♦ The systemic response to infection is manifested by 2 or more of the same conditions noted for SIRS

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Severe Sepsis

- ♦ Sepsis-induced hypotension defined as systolic blood pressure less than 90 mm Hg or a reduction in baseline blood pressure by 40 mm Hg.
- ♦ Hypotension may develop despite the patient being given adequate fluid resuscitation.

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Sepsis Resuscitation

- ♦ ***Recommendations within the first 6 hours of admission, includes the following:***
 - Measure serum lactate level.
 - Obtain blood cultures before antibiotic administration.
 - From the time of presentation, administer broad-spectrum antibiotics within
 - 3 hours for emergency department admissions and within 1 hour for non-emergency department intensive care unit (ICU) admissions.

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Severe Sepsis

- ♦ **Organ Dysfunctions associated with Severe Sepsis and Septic Shock:**
 - **Lungs:** early fall in arterial PO₂, Acute Respiratory Distress Syndrome (ARDS): capillary-leakage into alveoli; tachypnea, hyperpnea
 - **Kidneys:** (acute renal failure): oliguria, anuria, azotemia, proteinuria
 - **Liver:** elevated levels of serum bilirubin, alkaline phosphatase, cholestatic jaundice
 - **Digestive tract:** nausea, vomiting, diarrhea and ileus

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Sepsis Resuscitation

- In the event of hypotension and/or lactate level greater than 4 mmol /L (36 mg/dL), deliver an initial minimum dose of 20 mL kg of crystalloid (or colloid equivalent); use vasopressors for hypotension not responding to initial fluid resuscitation to maintain mean arterial pressure of 65 mm Hg or greater.
- In the event of persistent hypotension despite fluid resuscitation (septic shock) and/or lactate level greater than 36 mg/dL , achieve central venous pressure of 8 mm Hg or greater and achieve central venous oxygen saturation of 70% or greater or a mixed venous oxygen saturation of 65% or greater.

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Sepsis Maintenance

- ♦ *Should be accomplished as soon as possible and scored during the first 24 hours, includes the following:*
 - Low-dose steroids should be administered for septic shock, following a standardized ICU protocol.
 - Activated drotrecogin alfa (Xigris) should be administered following a standardized ICU protocol.
 - Glucose control should maintain glucose level at or above the lower limit of normal, but less than 150 mg/dL (8.3 mmol/L).
 - For mechanically ventilated patients, inspiratory plateau pressures should be maintained at less than 30 cm H₂O.

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Septic Shock

- ♦ A subset of people with severe sepsis will develop hypotension despite adequate fluid resuscitation.
- ♦ These patients may develop the perfusion abnormalities previously noted with Sepsis which may include lactic acidosis, oliguria, or an acute alteration in mental status.
- ♦ Patients receiving vasopressor agents such as Levophed or dopamine may not be hypotensive by the time that they manifest hypoperfusion abnormalities or organ dysfunction.

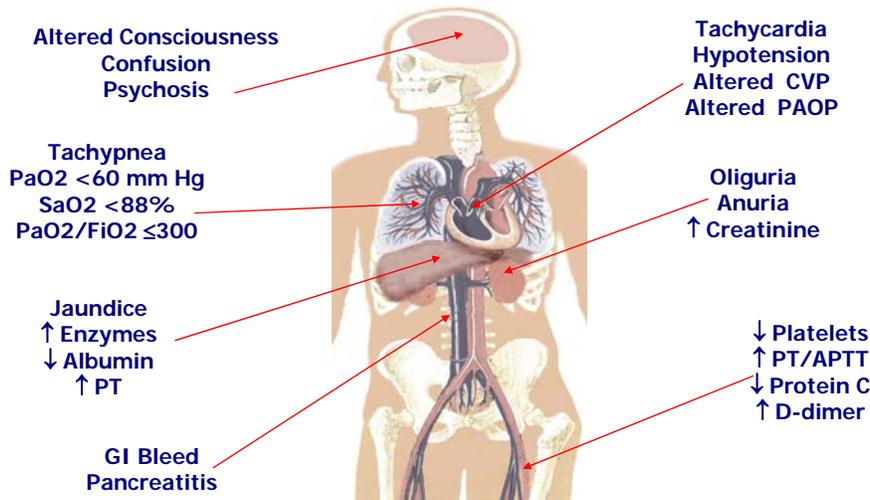
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Septic Shock

- ♦ This condition is extremely serious and has a high mortality rate.
- ♦ Shock is caused principally by the pooling of the blood in small vessels. The pooling results from the dysfunction of cells and tissues injured by the circulation toxic bacteria. Sometimes referred to as multi-organ failure, an inadequate blood supply to the brain, kidneys, lungs, or heart can lead to renal failure, respiratory failure, coma, and/or heart failure.

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Multi-Organ Dysfunction Syndrome



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Multi-Organ Dysfunction/Failure

- ♦ **CV - Shock:** SBP < 90 or MAP < 70 for at least one hour despite adequate fluid resuscitation. Vasopressor use may mask hypotension.
- ♦ **Lactic (metabolic) Acidosis:** pH < 7.3 AND plasma lactate > 1.5 times normal.
- ♦ **Renal:** Urine Output < 0.5 cc/kg/hr for 1 hour despite fluid resuscitation or Serum Cr ↑ > 0.5 mg/dl.

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Multi-Organ Dysfunction/Failure

- ♦ **Respiratory:** P_aO_2/FiO_2 ratio < 300 (nl wedge); Hypoxemia
- ♦ **Hematology:** Plt. Ct. <80,000 or 50% decrease over the past 3 days (thrombocytopenia); leukemoid or neutropenic reaction; ↓ Protein C, ↑ D-Dimer (hypercoaguable state), ↑aPTT, Protime (hypocoaguable state), hemolysis, anemia

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Multi-Organ Dysfunction/Failure

- ♦ **Metabolic/Septic Encephalopathy:** “altered mental status” progressing to delirium and then coma, bilateral asterixis and myoclonus, hypothermia, and other multiple abnormal signs of incomplete brain dysfunction”.
- ♦ **Liver failure:** Presence of metabolic encephalopathy in a patient with severe, acute liver disease. Reflected by elevation of protime; other liver enzymes (bilirubin > 2.0, tranaminases 2X normal) suggestive but not definitive.

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Coding Sepsis

- If sepsis or severe sepsis is present on admission, and meets the definition of principal diagnosis, the systemic infection code (e.g., **038.xx**, **112.5**, etc) should be assigned as the principal diagnosis, followed by code **995.91**, Sepsis, or **995.92**, Severe sepsis.
- As noted in the sequencing instruction in the Tabular list, the code for septic shock cannot be assigned as a principal diagnosis.

Official Coding Guidelines

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Coding Sepsis

- ♦ *Septic shock generally refers to circulatory failure associated with severe sepsis, and, therefore, it represents a type of acute organ dysfunction.*
 - For all cases of septic shock, the code for the systemic infection should be sequenced first, followed by codes **995.92** and **785.52**. Any additional codes for other acute organ dysfunctions should also be assigned.

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Coding Sepsis

- ♦ ***Sepsis/SIRS with Localized Infection***
 - If the reason for admission is both sepsis, severe sepsis, or SIRS and a localized infection, such as pneumonia or cellulitis, a code for the systemic infection (038.xx, 112.5, etc) should be assigned first, then code 995.91 or 995.92, followed by the code for the localized infection. If the patient is admitted with a localized infection, such as pneumonia, and sepsis/SIRS doesn't develop until after admission, see guideline 2b).
 - Note: The term urosepsis is a nonspecific term. If that is the only term documented then only code 599.0 should be assigned based on the default for the term in the ICD-9-CM index, in addition to the code for the causal organism, if known.

Official Coding Guidelines

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Coding Sepsis

- ♦ ***In most cases, it will be a code from category 038, Septicemia, that will be used in conjunction with a code from subcategory 995.9 such as the following:***
 - (a) Streptococcal sepsis
If the documentation in the record states streptococcal sepsis, codes **038.0**, Streptococcal septicemia, and code **995.91** should be used, in that sequence.
 - (b) Streptococcal septicemia
If the documentation states streptococcal septicemia, only code **038.0** should be assigned, however, the provider should be queried whether the patient has sepsis, or an infection with SIRS.

Official Coding Guidelines

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Coding Sepsis

- ♦ ***Acute organ dysfunction that is not clearly associated with the sepsis***
 - If a patient has sepsis and an acute organ dysfunction, but the medical record documentation indicates that the acute organ dysfunction is related to a medical condition other than the sepsis, do not assign code **995.92**, Severe sepsis.
 - An acute organ dysfunction must be associated with the sepsis in order to assign the severe sepsis code. If the documentation is not clear as to whether an acute organ dysfunction is related to the sepsis or another medical condition, query the provider.

Official Coding Guidelines

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Coding Sepsis

- ♦ ***Sepsis due to a Post procedural Infection***
 - Sepsis resulting from a post procedural infection is a complication of care. For such cases, the post-procedural infection, such as code **998.59**, Other postoperative infection, or **674.3x**, Other complications of obstetrical surgical wounds, should be coded first followed by the appropriate sepsis codes (systemic infection code and either code **995.91** or **995.92**). An additional code(s) for any acute organ dysfunction should also be assigned for cases of severe sepsis.

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Coding Sepsis

Sepsis and Severe Sepsis Associated with Non-infectious Process

- In some cases, a non-infectious process, such as trauma, may lead to an infection which can result in sepsis or severe sepsis. If sepsis or severe sepsis is documented as associated with a non-infectious condition, such as a burn or serious injury, and this condition meets the definition for principal diagnosis, the code for the non-infectious condition should be sequenced first, followed by the code for the systemic infection and either code 995.91, Sepsis, or 995.92, Severe sepsis.

Official Coding Guidelines

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Coding Sepsis

Sepsis and Severe Sepsis Associated with Non-infectious Process

- Additional codes for any associated acute organ dysfunction(s) should also be assigned for cases of severe sepsis. If the sepsis or severe sepsis meets the definition of principal diagnosis, the systemic infection and sepsis codes should be sequenced before the non-infectious condition. See Section I.C.1.b.2)(a) for guidelines pertaining to sepsis or severe sepsis as the principal diagnosis.

Official Coding Guidelines

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Coding Sepsis

Sepsis and Severe Sepsis Associated with Non-infectious Process

- When both the associated non-infectious condition and the sepsis or severe sepsis meet the definition of principal diagnosis, either may be assigned as principal diagnosis.

Official Coding Guidelines

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Line Sepsis

- ♦ *Clarifications - Sepsis Due to Vascular Catheter – Coding Clinic, Second Quarter 2004, pg. 16*
 - **Question:** Coding Clinic, Second Quarter 1994, page 13, advised to assign code **996.62**, Infection and inflammatory reaction due to other vascular device, implant, and graft, for septicemia due to a vascular access device. Does this advice still apply when a patient is admitted with sepsis due to vascular catheter? Is the principal diagnosis sepsis or infection of vascular catheter?

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Line Sepsis

- ♦ *Clarifications - Sepsis Due to Vascular Catheter – Coding Clinic, Second Quarter 2004, pg. 16*
 - Answer: When a patient has sepsis due to the vascular catheter, code **996.62**, Infection and inflammatory reaction due to other vascular catheter, should be the principal diagnosis, followed by the appropriate sepsis code, generally a code from category 038 and a code from subcategory 995.9. If no organ dysfunction is involved then code **995.91**, Systemic inflammatory response syndrome due to infectious process without organ dysfunction, should be assigned following the sepsis code. If the infection has advanced to severe sepsis, SIRS with organ dysfunction, then code **995.92**, Systemic inflammatory response syndrome due to infectious process with organ dysfunction, should be assigned with additional codes identifying the specific types of organ dysfunction.

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Line Sepsis

- ♦ *Clarifications - Sepsis Due to Vascular Catheter – Coding Clinic, Second Quarter 2004, pg. 16 - continued*
 - If the term septicemia is used to describe the infection, the physician should be queried as to whether the patient has sepsis. If the infection is documented as septicemia due to a vascular catheter, then code **996.62** should be the principal diagnosis followed by code **038.9**. No code from subcategory **995.9** should be assigned with a diagnosis of septicemia. If SIRS is documented then the patient, in fact, has sepsis, and a code from subcategory **995.9** should be assigned

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Line Sepsis

Coding Clinic – Fourth Quarter 2007, pg. 35

- ♦ **Question:** A dialysis patient with end-stage renal disease was admitted with sepsis and septic pulmonary emboli due to an infected venous dialysis catheter. Blood cultures confirmed gram-negative bacilli. What are the diagnosis code assignments for this case?

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Line Sepsis

Coding Clinic – Fourth Quarter 2007, pg. 35

- ♦ **Answer:** Assign code **996.62**, Infection and inflammatory reaction due to other vascular device, implant and graft, as principal diagnosis. Assign codes **038.40**, Septicemia due to gram-negative organism, unspecified, **995.91**, Sepsis, **415.12**, Septic pulmonary embolism, **585.6**, End stage renal disease, and **V45.1**, Renal dialysis status, as additional diagnoses.

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Vascular Catheter Infections (999.31)

Coding Clinic, Fourth Quarter 2007, pg. 96

- ♦ Central venous catheters provide necessary vascular access and are used to provide medications, fluids, nutrients, or blood products over a long period of time, usually several weeks or more.
- ♦ The catheter is inserted through the skin into a vein often in the neck or chest. It is threaded through the vein until it reaches a large vein near the heart. The most commonly used veins are the internal jugular vein, the subclavian vein and the femoral vein.
- ♦ This is in contrast to a peripheral line which is usually placed in the arms or hands.

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Vascular Catheter Infections (999.31)

Coding Clinic, Fourth Quarter 2007, pg. 96

- ♦ As with other postprocedural complications, assignment of the complication code is based on the providers documentation of the relationship between the infection and the procedure or vascular catheter.

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Vascular Catheter Infections (999.31)

Coding Clinic, Fourth Quarter 2007, pg. 96

- ♦ Possible complications associated with these catheters include local and systemic infectious complications including local site infections, catheter-related bloodstream infections, septic thrombophlebitis, endocarditis, and other metastatic infections (e.g. lung or brain abscess, endophthalmitis and osteomyelitis).
- ♦ Central venous catheters include Hickman catheters, peripherally inserted central catheters (PICC), and triple lumen catheters. Infections due to vascular catheters should be coded as indexed and are excluded from **999.31**.

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Sepsis Exercises

1. The patient presents to the ED with high WBC, tachycardia, tachypnea, and shaking chills. A blood culture is drawn which the physician documents as being positive MRSA. MRSA Sepsis is documented by the physician. Antibiotics are changed based on the blood culture and the patient is treated with appropriate antibiotics. Due to poor vascular access, a central venous catheter is inserted and antibiotics are infused through this access. The patient responded slowly to treatment and CVC access becomes red and inflamed. The catheter is removed and cultured. The culture physician documents this to be a CC infection due to MRSA. How would the diagnosis codes be assigned for this inpatient stay?

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Sepsis Exercises

2. The physician documents patient presenting with cough, fever, hypoxemia, high WBCs, and pressure ulcer of the sacral area. The physician orders CXR, sputum culture, basic metabolic panel. The sputum culture is positive for E. coli. The physician documents pneumonia due to E. coli bacteria. The patient is given antibiotics. The pneumonia clears by radiologic evidence. The patient develops shaking chills, tachypnea, tachycardia, and altered mental status. A blood culture is ordered and is returned as negative. The physician documents that the patient has sepsis and the antibiotics are changed. How would you code the diagnoses for this scenario?

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MRSA

- ♦ *Selection and sequencing of MRSA codes*
 - Combination codes for MRSA infection
 - When a patient is diagnosed with an infection that is due to methicillin resistant *Staphylococcus aureus* (MRSA), and that infection has a combination code that includes the causal organism (e.g., septicemia, pneumonia) assign the appropriate code for the condition (e.g., code **038.12**, Methicillin resistant *Staphylococcus aureus* septicemia or code **482.42**, Methicillin resistant pneumonia due to *Staphylococcus aureus*). Do not assign code **041.12**, Methicillin resistant *Staphylococcus aureus*, as an additional code because the code includes the type of infection and the MRSA organism. Do not assign a code from subcategory V09.0, Infection with microorganisms resistant to penicillins, as an additional diagnosis.
 - See Section C.1.b.1 for instructions on coding and sequencing of septicemia.

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MRSA Conditions

- ♦ ***Methicillin susceptible Staphylococcus aureus (MSSA) and MRSA colonization***
 - The condition or state of being colonized or carrying MSSA or MRSA is called colonization or carriage, while an individual person is described as being colonized or being a carrier. Colonization means that MSSA or MRSA is present on or in the body without necessarily causing illness. A positive MRSA colonization test might be documented by the provider as “MRSA screen positive” or “MRSA nasal swab positive”.

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MRSA Conditions

- ♦ ***Methicillin susceptible Staphylococcus aureus (MSSA) and MRSA colonization***
 - Assign code **V02.54**, Carrier or suspected carrier, Methicillin resistant Staphylococcus aureus, for patients documented as having MRSA colonization. Assign code **V02.53**, Carrier or suspected carrier, Methicillin susceptible Staphylococcus aureus, for patient documented as having MSSA colonization. Colonization is not necessarily indicative of a disease process or as the cause of a specific condition the patient may have unless documented as such by the provider.
 - Code **V02.59**, Other specified bacterial diseases, should be assigned for other types of staphylococcal colonization (e.g., *S. epidermidis*, *S. saprophyticus*). Code **V02.59** should not be assigned for colonization with any type of *Staphylococcus aureus* (MRSA, MSSA).

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MRSA Conditions

- ♦ ***MRSA colonization and infection***
 - If a patient is documented as having both MRSA colonization and infection during a hospital admission, code **V02.54**, Carrier or suspected carrier, Methicillin resistant *Staphylococcus aureus*, and a code for the MRSA infection may both be assigned.
- ♦ ***Other codes for MRSA infection***
 - When there is documentation of a current infection (e.g., wound infection, stitch abscess, urinary tract infection) due to MRSA, and that infection does not have a combination code that includes the causal organism, select the appropriate code to identify the condition along with code **041.12**, Methicillin resistant *Staphylococcus aureus*, for the MRSA infection. Do not assign a code from subcategory **V09.0**, Infection with microorganisms resistant to penicillins.

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Infectious and Parasitic Diseases – Surgical DRGs

MS-DRG System

- ♦ **DRG 853 – Infectious and Parasitic Diseases with O.R. Procedure with MCC (5.4328)**
- ♦ **DRG 854 – Infectious and Parasitic Diseases with O.R. Procedure with CC (2.9172)**
- ♦ **DRG 855 – Infectious and Parasitic Diseases with O.R. Procedure without CC/MCC (1.8140)**

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Infectious and Parasitic Diseases – Surgical DRGs

MS-DRG System

- ♦ DRG 856 – Postoperative or Post-Traumatic Infection with O.R. Procedure ***with MCC*** (4.7522)
- ♦ DRG 857 – Postoperative or Post-Traumatic Infection with O.R. Procedure ***with CC*** (2.0522)
- ♦ DRG 858 – Postoperative or Post-Traumatic Infection with O.R. Procedure ***without CC/MCC*** (1.3595)

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Infectious and Parasitic Diseases – Medical DRGs

MS-DRG System

- ♦ DRG 862 – Postoperative and Post-traumatic Infections ***with MCC*** (1.9142)
- ♦ DRG 863 – Postoperative and Post-traumatic Infections ***without MCC*** (0.9605)
- ♦ DRG 864 – Fever of Unknown Origin (0.6257)

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Infectious and Parasitic Diseases – Medical DRGs

MS-DRG System

- ♦ DRG 865 – Viral Illness ***with MCC*** (1.5049)
- ♦ DRG 866 – Viral Illness ***without MCC*** (0.6708)

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Infectious and Parasitic Diseases – Medical DRGs

MS-DRG System

- ♦ DRG 867 – Other Infectious and Parasitic Diagnosis ***with MCC*** (2.3441)
- ♦ DRG 868 – Other Infectious and Parasitic Diagnosis ***with CC*** (1.0786)
- ♦ DRG 869 – Other Infectious and Parasitic Diagnosis ***without CC/MCC*** (0.7650)

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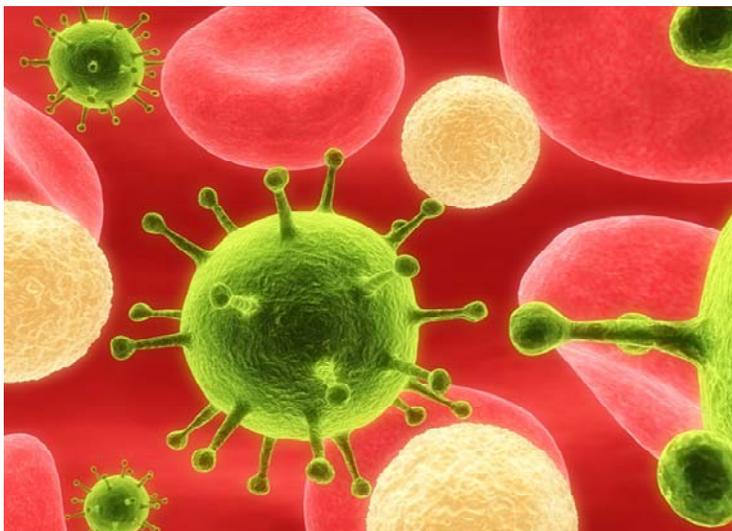
Infectious and Parasitic Diseases – Medical DRGs

MS-DRG System

- ◆ DRG 870 – Septicemia or Severe Sepsis ***with*** Mechanical Ventilator 96+ Hours (5.7258)
- ◆ DRG 871 – Septicemia or Severe Sepsis ***without*** Mechanical Ventilator ***with MCC*** (1.8222)
- ◆ DRG 872 – Septicemia or Severe Sepsis ***without*** Mechanical Ventilator ***without MCC*** (1.1209)

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Sepsis/Septicemia



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Septicemia, SIRS, and Sepsis Coding Concepts

- ♦ All coding is based on physician documentation.
- ♦ Do not code on the basis of laboratory or radiological findings alone.
- ♦ ICD-9-CM code assignment issues related to inconsistent, missing, conflicting or unclear documentation must be resolved by the provider.
- ♦ Whenever there are concerns about a diagnosis and/or treatment, query the physician for clarification.

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SIRS, Septicemia, and Sepsis

- ♦ The terms **septicemia** and **sepsis** are often used interchangeably by providers, however they are not considered synonymous terms.
 - Septicemia generally refers to a systemic disease associated with the presence of pathological microorganisms or toxins in the blood, which can include bacteria, viruses, fungi or other organisms
 - Systemic inflammatory response syndrome (SIRS) generally refers to the systemic response to infection, trauma/burns, or other insult (such as cancer) with symptoms including fever, tachycardia, tachypnea, and leukocytosis.
 - Sepsis generally refers to SIRS due to infection.
 - Severe sepsis generally refers to sepsis with associated acute organ dysfunction.

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Hospital Acquired Conditions/Infections and Present on Admission

- ◆ **Hospital Acquired Conditions Including Infections (HAC/HAI) are those conditions identified by CMS that if not present on admission, they will not be recognized by the MS-DRG methodology.**

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POA Indicators

- ◆ **Present condition(s) at the time that the order for inpatient admission occurs;**
- ◆ **Conditions that develop during an outpatient encounter including observation, emergency department, or outpatient surgery are considered present on admission**

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POA Indicators

- ◆ Diagnoses subsequently confirmed after admission are considered present on admission if at the time of admission they are documented as suspected, possible, rule out, differential diagnosis, or constitute an underlying cause of a symptom that is present at the time of admission.

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Infection POA Indicators

| Condition | Corresponding ICD-9-CM Codes |
|--|---|
| Catheter-Associated Urinary Tract Infection (UTI) | 996.64 (CC) Also excludes the following from acting as a CC/MCC: 112.2 (CC), 590.10 (CC), 590.11 (MCC), 590.2 (MCC), 590.3 (CC), 590.80 (CC), 590.81 (CC), 595.0 (CC), 597.0 (CC), 599.0 (CC) |
| Vascular Catheter Associated Infections | 999.31 (CC) |
| Surgical Site Infection: Mediastinitis, Following Coronary Artery Bypass Graft (CABG) | 519.2 (MCC) And one of the following procedure codes: 36.10–36.19 |

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Infection POA Indicators

| Condition | Corresponding ICD-9-CM Codes |
|--|---|
| Surgical Site Infection Following Certain Orthopedic Procedures | 996.67 (CC), 998.59 (CC) And one of the following procedure codes: 81.01-81.08; 81.23; ,81.24; 81.31-81.38; 81.83; 81.85 |
| Surgical Site Infection Following Bariatric Surgery for Obesity | <i>Principal Diagnosis</i> – 278.01; 998.59 (CC) And one of the following procedure codes: 44.38; 44.39; 44.95 |

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POA – Hands on Practice

- ◆ **Scenario: A patient with viral hepatitis B progresses to hepatic coma after admission.**
- ◆ **Was this present on admission? No because all elements were not present at the time of admission.**

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Resource/Reference List

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- ♦ Santhanam S, Tolan RW. Sepsis. eMedicine.com, URL: <http://www.emedicine.com/ped/topic3033.htm> Accessed on Mar 12, 2006.
- ♦ http://www.cms.hhs.gov/HospitalAcqCond/06_Hospital-Acquired_Conditions.asp#TopOfPage
- ♦ ICD-9-CM Official Coding Guidelines for Coding and Reporting Effective 10/01/08
<http://www.cdc.gov/nchs/dataawh/ftpserv/ftp/pcd9/icdguide08.pdf>

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Appendix

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| CE Certificate Instructions | |

Appendix

Resource/Reference List

http://www.cms.hhs.gov/HospitalAcqCond/06_Hospital-Acquired_Conditions.asp#TopOfPage

<http://www.cdc.gov/nchs/dataawh/ftpserv/ftpicd9/icdguide08.pdf>

<http://www.emedicine.com/ped/topic3033.htm>

<http://www.emedicine.com/MED/topic2101.htm>



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