# AHA Coding Clinic®

**for ICD-10-CM and ICD-10-PCS**

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ICD-10-CM NEW/REVISED CODES

All of the new and revised ICD-10-CM and ICD-10-PCS codes are effective October 1, 2016. Due to the large number of new and revised codes, the addenda changes demonstrating the specific revisions to the code titles or instructional notes are not included in the explanations below. The official ICD-10-CM addenda has been posted on the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics website at: http://www.cdc.gov/nchs/icd/icd10cm.htm

Over 2,000 new ICD-10-CM codes are being implemented on October 1, 2016, and about 600 codes are being revised. The high volume of new and revised codes partly reflects lifting the lengthy partial code freeze that has been in effect since 2011. Otherwise, the volume of codes is related to the exponential effect of the ICD-10-CM code structure. For example, adding laterality (left, right, unspecified, bilateral) along with combinations of more than one clinical concept and 7th characters to identify stages of severity for the different types of diabetes resulted in nearly 260 new codes for diabetic ophthalmic complications.

Zika Virus

Code A92.5, Zika virus disease, has been created to uniquely identify Zika virus fever, Zika virus infection and Zika NOS.

Zika virus disease is spread to people primarily through the bite of an infected mosquito. The most common symptoms are fever, rash, joint pain, and conjunctivitis. Other common symptoms include muscle pain and headache. The incubation period (the time from exposure to symptoms) for Zika virus disease is not known, but is likely to be a few days to a week. The illness is usually mild, with symptoms lasting for several days to a week after being bitten by an infected mosquito.

On February 1, 2016, the World Health Organization (WHO) declared Zika virus a Public Health Emergency of International Concern (PHEIC). According to the Centers for Disease Control and Prevention (CDC), Zika virus infection during pregnancy can cause microcephaly (a condition where
a baby’s head is much smaller than expected), as well as other severe fetal brain defects, such as intracranial calcifications, ventriculomegaly, and/or cerebral atrophy in infants born to mothers with confirmed Zika virus infection.

In all cases (inpatient and outpatient/physician offices), code only a confirmed diagnosis, based on the provider’s diagnostic statement. The provider’s diagnostic statement that the patient has been infected by the Zika virus is sufficient. This is an exception to the ICD-10-CM Official Guidelines for Coding and Reporting, hospital inpatient guideline Section II, H. (Uncertain Diagnosis, page 97), which indicates that in general for the inpatient setting, uncertain diagnoses should be coded as if the condition is established. For example:

- Assign code A92.5, Zika virus disease, for patients with a confirmed diagnosis of infection with the Zika virus, regardless of the stated mode of transmission.

- If the provider documents “suspected” or “possible” or “probable” Zika, do not assign code A92.5, Zika virus disease. Assign a code(s) explaining the reason for the encounter.

- Assign code Z86.1, Personal history of infectious and parasitic diseases, if documentation in the health records indicates that the patient has a past history of Zika virus infection.

Based on current recommendations, a pregnant woman with confirmed Zika virus infection may be screened more frequently during the pregnancy to monitor fetal development and possible fetal abnormalities. Examples include but are not limited to the following:

- A woman 16 weeks of gestation, who has been diagnosed with Zika virus infection, presents to the obstetrician for antenatal ultrasonic screening to check for fetal abnormalities. The ultrasound demonstrated abnormal findings and the patient was referred to a specialist for further tests. Assign code O28.3 Abnormal ultrasonic findings on antenatal screening of mother, as the first-listed diagnosis. Assign also codes O98.512, Other viral diseases complicating pregnancy, second trimester, A92.5, Zika virus disease, and Z3A.16, 16 weeks gestation of pregnancy. As appropriate, assign codes for any other specific findings identified.
• A woman 20 weeks of gestation diagnosed with Zika virus disease infection presents to the obstetrician for antenatal ultrasonic screening to check for fetal abnormalities, which shows no abnormal findings. Assign code Z03.73, Encounter for suspected fetal anomaly ruled out, as the first-listed diagnosis. Assign also codes O98.512, Other viral diseases complicating pregnancy, second trimester, A92.5, Zika virus disease, and Z3A.20, 20 weeks gestation of pregnancy.

• A woman with a known Zika virus infection presents for prenatal care at 32 weeks of gestation. A previous ultrasound did not demonstrate any fetal abnormalities. Code O98.513, Other viral diseases complicating pregnancy, third trimester, should be assigned, as the first-listed diagnosis. Assign also codes A92.5, Zika virus disease, to identify the infection and Z3A.32, 32 weeks gestation of pregnancy.

• A patient, who has a known Zika virus infection with previously diagnosed fetal anomalies, presents for prenatal care at 22 weeks of gestation. Assign code O35.3XX0, Maternal care for (suspected) damage to fetus from viral disease in mother, not applicable or unspecified, as the first-listed diagnosis. Assign also codes O98.512, Other viral diseases complicating pregnancy, second trimester, A92.5, Zika virus disease, and Z3A.22, 22 weeks gestation of pregnancy.

There may be several reasons a pregnant woman who has no symptoms of the Zika virus but is considered to be at risk may be sent for testing for the Zika virus. For example:

• A pregnant woman returning from areas where active mosquito-borne transmission of Zika virus is occurring or residents who live in areas (for example, Puerto Rico, American Samoa) where active mosquito-borne transmission is occurring presents for a prenatal visit. Assign the appropriate code from category Z34.--, Encounter for supervision of normal pregnancy, as the first-listed diagnosis. An additional code Z20.828, Contact with and (suspected) exposure to other viral communicable diseases, would be assigned for the suspected exposure.

• A pregnant woman whose sexual partner has symptoms of or has been confirmed to have Zika virus infection presents to the obstetrician for a prenatal visit. Assign the appropriate code from category Z34.--, Encounter for supervision of normal pregnancy, as the first-listed diagnosis. An additional code Z20.828, Contact with and (suspected) exposure to other viral communicable diseases, would be assigned for the suspected exposure.
• A patient, who is pregnant, is being seen by the obstetrician for results of Zika testing. The results are negative, and the Zika virus infection has been ruled out. Assign code Z03.79, Encounter for other suspected maternal and fetal conditions ruled out.

There is scientific confirmation of a causal relationship between microcephaly, intracranial calcifications or other birth defects (such as ventriculomegaly, or cerebral atrophy) in infants born to mothers with confirmed Zika virus infection. Examples of code assignment for newborns with Zika virus infection follow:

• An infant is born in the hospital via vaginal delivery, and the provider documents “Microcephaly and intracranial calcifications due to Zika virus infection.” Assign code Z38.00, Single liveborn infant, delivered vaginally, as the principal diagnosis. Codes P35.8, Other congenital viral diseases, A92.5, Zika virus disease, Q02, Microcephaly, and G93.89, Other specified disorders of brain, should be assigned as additional codes.

Asymptomatic nonpregnant persons may present for a variety of reasons related to the Zika virus before being diagnosed with Zika virus infection. Any (one or more) of the following codes may be used to describe encounters for observation or testing for the Zika virus:

• Persons who have no symptoms of the Zika virus but are considered to be at risk because of travel or residence in an area known to be affected by the mosquito-borne Zika virus, may present for testing for the Zika virus if they have a partner that is pregnant. For such encounters it may be appropriate to assign code Z20.828, Contact with and (suspected) exposure to other viral communicable diseases.

• An individual with any symptom consistent with the Zika virus (such as fever, rash, joint pain, conjunctivitis, etc.) who has been exposed to Zika virus, but has not been diagnosed previously with Zika virus infection should be assigned the appropriate code for each of the presenting signs and symptoms. In addition, assign code Z20.828, Contact with and (suspected) exposure to other viral communicable diseases.

• Patients who present for testing of the Zika virus out of personal concern, but do not fit any of the above scenarios should be assigned code Z71.1, Person with feared complaint in whom no diagnosis was made.
Gastrointestinal Stromal Tumor

New codes have been created to specifically identify gastrointestinal stromal tumors (GISTs). GISTs are the most common soft tissue sarcoma of mesenchymal origin. These tumors are thought to originate from specialized cells (interstitial cells of Cajal, or precursors of them). Although GISTs can start anywhere along the GI tract, more than half start in the stomach and most of the others start in the small intestine. GISTs are not the same as other more common types of GI tract cancers. GISTs start in different types of cells, require other types of treatment, and have a dissimilar prognosis. GISTs are most commonly found in adults between the ages of 40 to 70 years and most experts now consider all GISTs to be malignant.

GISTs are classified in subcategory C49.A with unique codes to identify the specific sites as follows: esophagus (C49.A1); stomach (C49.A2); small intestine (C49.A3); large intestine (C49.A4); rectum (C49.A5); and other sites (C49.A9). Code C49.A0 identifies GISTs of unspecified site.

Castleman Disease

Subcategory D47.Z, Other specified neoplasms of uncertain behavior of lymphoid, hematopoietic and related tissue, has been expanded to specifically identify Castleman disease (D47.Z2).

Castleman disease describes a group of related lymphoproliferative disorders involving proliferation of morphologically benign lymphocytes due to excessive proinflammatory hypercytokinemia, most notably of interleukin-6. Castleman disease is diagnosed when lymph node histopathology reveals regression of germinal centers, abnormal vascularity, and a range of hyaline vascular changes and/or polytypic plasma cell proliferation. It can occur in a single lymph node region (unicentric) or in multiple lymph node regions (multicentric). Clinical features and management vary significantly based on this distinction.

Unicentric Castleman disease (UCD) presents as a localized disease and mild symptoms are usually the result of enlarged or bulky lymph nodes. Based on limited epidemiological data, it has been estimated to account for approximately 90% of cases and has an excellent prognosis with surgical excision. Multicentric Castleman disease (MCD) patients often demonstrate intense episodes of systemic inflammatory symptoms, polyclonal lymphocyte and plasma cell proliferation, autoimmune manifestations, and organ system impairment. Some cases of MCD are caused by Human Herpes Virus 8 (HHV-8), and need to be treated differently than other MCD or UCD.
Neoplasm of Unspecified Behavior of Kidney and Other Genitourinary Organ

Three new codes have been created to uniquely identify neoplasm of unspecified behavior of the kidney: **D49.511**, Neoplasm of unspecified behavior of right kidney; **D49.512**, Neoplasm of unspecified behavior of left kidney, and **D49.519**, Neoplasm of unspecified behavior of unspecified kidney.

In addition, a unique code has been created for neoplasm of unspecified behavior of other genitourinary organ (**D49.59**).

**Postprocedural Hematoma, Hemorrhage and Seroma**

Changes have been made to the codes for postprocedural hemorrhage and hematoma to allow for separate identification of hemorrhage, hematoma and seroma.

The existing codes have been revised to identify postprocedural hemorrhage, while new codes have been created to identify postprocedural hematoma as well as new codes for postprocedural seroma. Prior to this change, postoperative hemorrhage, hematoma and seroma were classified to the same code. Differentiating between these conditions will improve the accuracy of tracking of patient safety indicators. There are clinical differences between postprocedural hemorrhage, hematoma and seroma which require different clinical care. Postprocedural hemorrhage indicates active bleeding usually requiring urgent intervention to prevent hypotension and other life-threatening consequences. Postprocedural hematoma indicates cessation of bleeding with blood clot formation and observation alone may be appropriate. Postoperative seroma is a collection of fluid that builds up under the surface of the skin, most often at the site of the surgical incision or where tissue was removed. The postoperative seroma may develop several weeks after surgery.

**D78.-** Intraoperative and postprocedural complications of the spleen

**E89.8.-** Other postprocedural endocrine and metabolic complications and disorders

**G97.-** Intraoperative and postprocedural complications and disorders of nervous system, not elsewhere classified
H59.3.- Postprocedural hemorrhage, hematoma, and seroma of eye and adnexa following a procedure

H95.- Intraoperative and postprocedural complications and disorders of ear and mastoid process, not elsewhere classified

I97.6.- Postprocedural hemorrhage, hematoma, and seroma of a circulatory system organ or structure following a procedure

J95.8.- Other intraoperative and postprocedural complications and disorders of respiratory system, not elsewhere classified

K91.- Intraoperative and postprocedural complications and disorders of digestive system, not elsewhere classified

L76.- Intraoperative and postprocedural complications of skin and subcutaneous tissue

M96.8- Other intraoperative and postprocedural complications and disorders of musculoskeletal system, not elsewhere classified

N99.8- Other intraoperative postprocedural complications and disorders of genitourinary system

Question:
A patient with a history of bilateral mastectomy followed by tissue expander presented with acute swelling of the left breast. She was diagnosed with acute postoperative hematoma which was determined to be underneath the pectoralis muscle. What is the diagnosis code for this condition?

Answer:
Assign code M96.841, Postprocedural hematoma of a musculoskeletal structure following other procedure.
Mast Cell Activation Syndromes

A new subcategory D89.4, Mast cell activation syndrome and related disorders, has been created with five new codes to specifically identify mast cell activation. Mast cell activation is found in a number of allergic reactions and is also caused by various other disorders. Mast cell activation syndrome (MCAS) in general involves hyper-responsive mast cells (there is a normal number of cells, however they react abnormally), as opposed to hyperproliferative mast cells (as is seen with mastocytosis).

Symptoms associated with MCAS may include, but are not limited to, flushing, pruritus, urticaria, headache, gastrointestinal symptoms (including diarrhea, nausea, vomiting, abdominal pain, bloating, and gastroesophageal reflux), and hypotension. In order to diagnose MCAS, symptoms must involve two or more organ systems in parallel, be recurrent or permanent, not be explained by other known conditions, and must require therapeutic intervention. In addition, mast cells must be directly involved in the symptoms.

Monoclonal mast cell activation syndrome (D89.41) is a distinct disease that is characterized by the presence of abnormal clonal mast cells. Monoclonal MCAS is a type of primary MCAS.

Idiopathic mast cell activation syndrome (D89.42) is a condition where there is a finding of mast cell activation; and the possibility of another known underlying cause for this activation has been excluded. Idiopathic MCAS is nonclonal.

Secondary mast cell activation syndrome (D89.43) is diagnosed when mast cell activation occurs as an indirect result of another disease or condition. Common causes of secondary MCAS include allergic reactions or atopy; however, other diseases can also cause this condition.

There are two additional codes to identify mast cell activation, unspecified (D89.40) and other mast cell activation disorder or syndrome (D89.49).

Diabetes with Ophthalmic Complications

The codes for diabetes with ophthalmic complications (subcategories E08.3, E09.3, E10.3, E11.3 and E13.3) for proliferative and nonproliferative diabetic retinopathy have been expanded to capture laterality (using 7th characters) and the stages of the condition:
• with macular edema
• without macular edema
• with traction retinal detachment involving the macula
• with traction retinal detachment not involving the macula
• with combined traction retinal detachment and rhegmatogenous retinal detachment
• stable proliferative diabetic retinopathy

Diabetic retinopathy is a progressive condition that is caused by damage to the blood vessels in the retina when there are high blood sugar levels over an extended period of time. The retina is responsible for detecting light and converting it to signals that are sent to the brain through the optic nerve. When blood sugar levels are not controlled, the blood vessels of the retina may bleed or leak fluid. In the early stages, there may be no symptoms. As the condition worsens, vision may blur, floaters may be seen, or there may be an empty spot at the center of the individual’s vision.

Mild nonproliferative diabetic retinopathy is the early form of the condition. This early stage is characterized by venous dilatation, retinal edema, small aneurysms and the leakage of fluid into the retina. In the moderate stage, the blood vessels hemorrhage and the fluid leaves behind hard exudates of cholesterol and fats that cause obstruction in the severe stage. The retina will show signs of damage and severe hemorrhage. The hard exudates and thickening of the retina cause swelling of the macula, the central part of the retina; vision becomes blurry, wavy, or the appearance of colors changes. When the vessels of the retina obstruct, and new vessels develop in response to the need for oxygenated blood, the condition has progressed from nonproliferative to proliferative diabetic retinopathy. The new blood vessels however, are fragile and cannot meet the necessary blood supply. Scar tissue forms and increases the risk of retinal detachment.

Retinal detachment results when the retina is pulled from its normal attachment to the underlying retinal pigment epithelium (RPE), the cell layer that nourishes the retina. The most common type of detachment, the rhegmatogenous retinal detachment, occurs when a retinal tear allows fluid to accumulate under the retina and the fluid separates the retina from the RPE. A traction retinal detachment occurs when the retina separation results from scar tissue on the surface of the retina.

A yearly comprehensive eye examination is recommended for diabetics who are at risk for diabetic retinopathy. Fluorescein angiogram and ocular coherence tomography (OCT) are used to exam the blood vessels of the retina.
The focus of treatment is to restore vision and prevent further vision loss. Anti-vascular endothelial growth factor (anti-VEGF) drugs may be administered to treat neovascularization; they block the protein that stimulates the growth of abnormal blood vessels. Laser treatment may be used to shrink abnormal blood vessels and reduce leakage into the retina.

Stable proliferative diabetic retinopathy refers to active neovascularization that is quieting following laser treatment, vitrectomy surgery or anti-VEGF therapy. Once proliferative diabetic retinopathy is stabilized, follow-up visits are reduced and medical/surgical intervention is less common.

**Hypercholesterolemia**

Code E78.0, Pure hypercholesterolemia, has been expanded to create code E78.00, Pure hypercholesterolemia, unspecified, and code E78.01, Familial hypercholesterolemia, in order to improve detection and screening in patients with this treatable condition.

Familial hypercholesterolemia (FH) is a common autosomal dominant genetic disorder that impairs the body’s ability to remove low density lipoprotein (LDL), the “bad cholesterol” that causes blockage of the coronary arteries. The condition may be inherited from one parent with heterozygous FH (HeFH) or in the most severe form, results when both parents have an FH mutation, homozygous FH (HoFH).

Optimal LDL levels are under 100 mg/dL. Untreated HeFH adults may have LDL levels over 190 mg/dL and untreated children or adolescents may exceed 160 mg/dL. A person with HoFH may have a level that is over 400 mg/dL. Such high levels of LDL cholesterol begin in utero and increase the likelihood of heart disease and infarction at an early age. Most individuals with HoFH do not survive beyond 30 years of age without treatment.

In the absence of secondary causes for hypercholesterolemia, familial cholesterolemia is suspected when xanthomas of lipid deposits are seen beneath the skin of the hands, knees, and elbows, Achilles tendons, and metacarpal phalangeal extensor tendons of the hands. Cholesterol deposits may also be seen in the eyelids (xanthelasmas) or around the cornea (corneal arcus). Cholesterol build up in the coronary arteries may cause chest discomfort and pain. Familial hypercholesterolemia is confirmed by genetic testing.
Treatment of familial hypercholesterolemia focuses on decreasing the risk factors for heart disease through diet and lifestyle changes, weight loss, and cholesterol lowering medication. LDL apheresis, the extracorporeal removal of LDL cholesterol from the blood, or liver transplant may be required in very severe cases of HoFH.

**Behavioral and Neurodevelopmental Disorders**

Thirteen new codes have been created in Chapter 5, Behavioral and Neurodevelopmental Disorders (F01-F99), for a variety of conditions to more closely align with the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5®), the criteria used by mental health providers to diagnose mental disorders. A summary of those changes follows.

**Premenstrual Dysphoric Disorder**

Premenstrual dysphoric disorder (F32.81) is a new disorder in DSM-5®. According to DSM-5®, diagnostic features are “the expression of mood lability, irritability, dysphoria, and anxiety symptoms that occur repeatedly during the premenstrual phase of the cycle and remit around the onset of menses or shortly thereafter.” Code F32.81 has an excludes1 note for “premenstrual tension syndrome (N94.3).” Premenstrual tension syndrome is generally considered less severe than premenstrual dysphoric disorder and does not require psychiatric treatment.

In addition, code F32.89 has been created for “other specified depressive episodes.”

**Disruptive Mood Dysregulation Disorder**

Disruptive mood dysregulation disorder (F34.81) is a new disorder in DSM-5® characterized by severe and recurrent temper outbursts that are grossly out of proportion in intensity or duration to the situation. The outbursts occur on average 3 or more times each week for one year or more. These symptoms go far beyond temperamental children to those with a severe impairment that requires clinical attention. The central feature of this disorder is chronic, severe, persistent irritability.

In addition, a new code has been created for “other specified persistent mood disorders” (F34.89).

**Obsessive Compulsive and Related Disorders**

Code F42, Obsessive-compulsive disorder, has been expanded and new codes created for two diagnoses newly recognized under DSM-5®: Hoarding disorder (F42.3) and excoriation (skin-picking) disorder (F42.4). In
addition, new codes have been created for mixed obsessional thoughts and acts (F42.2), other obsessive compulsive disorder (F42.8), and obsessive-compulsive disorder, unspecified (F42.9).

**Hoarding disorder**

Hoarding disorder (F42.3) is now recognized as a distinct disorder with distinct treatments. DSM-IV® listed hoarding as a symptom of obsessive compulsive disorder (OCD) and referred to it as “compulsive hoarding.” Modern studies indicate that people affected by compulsive hoarding differ from people affected by OCD in several important respects and require different treatment.

Hoarding disorder is characterized by the persistent difficulty discarding or parting with possessions, regardless of the value others may attribute to these possessions. Individuals affected have a conscious, ongoing urge to accumulate possessions, as well as corresponding feelings of anxiety or mental anguish whenever those possessions are discarded. While some individuals may accumulate things of value, most affected individuals accumulate items with limited or no real-world value, such as books, old magazines or newspapers, etc. The behavior usually has harmful effects for the person suffering from the disorder and family members. The harmful effects may be emotional, physical, social, financial, and even legal.

**Excoriation (skin-picking) disorder**

Excoriation (skin-picking) disorder (F42.4) is a new diagnosis added to DSM-5®. It is defined as “recurrent skin picking resulting in skin lesions” despite “repeated attempts to decrease or stop skin picking.” Skin picking also leads to clinically significant distress or disability. The condition is often accompanied by other mental disorders and can have important medical sequelae. Excoriation is closely related to obsessive-compulsive disorder and the ICD-10-CM placement under category F42 reflects this relationship.

Code F42.4, Excoriation (skin-picking) disorder, excludes factitial dermatitis (L98.1). Factitial dermatitis (also known as “dermatitis artefacta”) is a condition in which a patient self-inflicts lesions of the skin. These lesions are most commonly from prolonged deliberate scratching, cuts using a sharp instrument such as a knife, or application of caustic chemicals and burning, sometimes with a cigarette.

**Binge Eating Disorder**

Binge eating disorder (F50.81) is a new disorder in DSM-5®, and a unique code in ICD-10-CM will help differentiate this condition from other eating disorders. Binge eating disorder is defined in DSM-5® as “recurring episodes
of eating significantly more food in a short period of time than most people would eat under similar circumstances, with episodes marked by feelings of lack of control.” Individuals may eat too quickly, even when not hungry. It may be associated with feelings of guilt, embarrassment, or disgust and the individual may binge eat alone to hide the behavior. This disorder is associated with marked distress and occurs, on average, at least once a week over three months. Binge eating disorder displays a clinical course that differs from both anorexia nervosa and bulimia nervosa.

In addition, code F50.89 has been created for “other specified eating disorder.”

**Gender Identity Disorders**

Category F64, Gender identity disorders, has been expanded with a new code for transsexualism (F64.0) and a revision of the code title for F64.1 from “Gender identity disorder in adolescence and adulthood” to “Dual role transvestism.” “Gender identity disorder in adolescence and adulthood,” as well as “gender dysphoria in adolescents and adults” are now inclusion terms under code F64.0. These changes were made to better align with the World Health Organization’s (WHO) version of ICD-10.

The DSM-5® has also changed the name of gender identity disorder in adolescents and adult to gender dysphoria in adolescents and adulthood. According to DSM-5® gender dysphoria “refers to the distress that may accompany the incongruence between one’s experienced or expressed gender and one’s assigned gender.”

**Social Pragmatic Communication Disorder**

Code F80.82 has been created to uniquely describe social pragmatic communication disorder (SCD). SCD is a newly recognized diagnosis in DSM-5® to more accurately describe individuals with significant problems using verbal and nonverbal communication that cannot be explained by low cognitive ability. These problems lead to impairments in their ability to effectively communicate, participate socially, maintain social relationships, or otherwise perform academically or occupationally.
Mononeuropathies of Upper and Lower Limbs

New codes have been created for mononeuropathies that occur on both sides of the upper limbs:

- **G56.03** Carpal tunnel syndrome, bilateral upper limbs
- **G56.13** Other lesions of median nerve, bilateral upper limbs
- **G56.23** Lesion of ulnar nerve, bilateral upper limbs
- **G56.33** Lesion of radial nerve, bilateral upper limbs
- **G56.43** Causalgia of bilateral upper limbs
- **G56.83** Other specified mononeuropathies of bilateral upper limbs
- **G56.93** Unspecified mononeuropathy of bilateral upper limbs

Similarly, new codes have been created for mononeuropathies that occur on both sides of the lower limbs:

- **G57.03** Lesion of sciatic nerve, bilateral lower limbs
- **G57.13** Meralgia paresthetica, bilateral lower limbs
- **G57.23** Lesion of femoral nerve, bilateral lower limbs
- **G57.33** Lesion of lateral popliteal nerve, bilateral lower limbs
- **G57.43** Lesion of medial popliteal nerve, bilateral lower limbs
- **G57.53** Tarsal tunnel syndrome, bilateral lower limbs
- **G57.63** Lesion of plantar nerve, bilateral lower limbs
- **G57.73** Causalgia of bilateral lower limbs
- **G57.83** Other specified mononeuropathies of bilateral lower limbs
- **G57.93** Unspecified mononeuropathy of bilateral lower limbs
Mononeuropathy affects a single peripheral nerve or a single group of peripheral nerves. There may be loss of sensation, tingling, pain, weakness, difficult movement, or loss of other function of the nerve. Common forms of mononeuropathy include carpal tunnel syndrome as well as femoral, radial, sciatic ulnar and axillary nerve dysfunction. It is not uncommon for mononeuropathies to occur on both sides, yet the condition is not a true polyneuropathy, since polyneuropathy can affect multiple nerves, while mononeuropathy affects only one nerve or nerve group at a time.

**Multifocal Motor Neuropathy**

Code **G61.82**, Multifocal motor neuropathy, has been created. Multifocal motor neuropathy (MMN) is a commonly recognized progressive muscle disorder that occurs when there is a conduction block that prevents the transmission of an impulse completely down the nerve. The exact cause of the conduction block is not known but MMN is thought to be an autoimmune disorder. Motor nerve dysfunction causes muscle weakness, foot or wrist drop, and twitching that usually starts in a single limb. The condition is rare, affecting 1 of 100,000 individuals and occurs most often in men between the ages of 40-60 years.

MMN is often misdiagnosed as amyotrophic lateral sclerosis (ALS) because fasciculations, random dimpling of the muscle due to spontaneous firing of a motor unit, occur in both conditions. The clinical factor that identifies MMN is that the condition only affects motor nerves.

A nerve conduction study (NCS) will confirm the condition by showing that a nerve signal cannot conduct past a “lesion” along the nerve. For example, if a nerve of the forearm is involved, an electrical impulse may be blocked from reaching the hand when stimulus is applied at the elbow, but may easily transmit to the hand when stimulus is applied at the wrist. An electromyogram (EMG) may reveal abnormalities in the way muscles fire. High levels of anti-GM1 antibodies that attack the nerve fiber may also support the diagnosis. Patients do not always have positive serology for the antibody so a negative test does not rule out the condition.

Intravenous immunoglobulin (IVIg) has been shown to reduce conduction block and reduce the development of new “lesions” of the nerve. While effective against MMN, IVIg is not a cure.
Retinal Vein Occlusion

Seventh characters have been added to subcategory H34.8, Other retinal vein occlusions, to designate the severity of the occlusion:

0, with macular edema
1, with retinal neovascularization
2, stable

Retinal vein occlusion (RVO), blockage of the venous circulation that carries blood away from the retina, is one of the most common causes of vision loss. When the small veins of the retina are blocked, pressure builds in the capillaries, causing hemorrhage of fluid and blood.

Similar to a stroke, RVO may be caused by blockage, clotting, or hardening and narrowing of the arteries by chronic conditions such as atherosclerosis, glaucoma, diabetes mellitus, hypertension and macula edema. However, RVO may also result from disease of the wall of the vein or from external compression of the vein.

RVO is based on the area of occlusion. Narrowing may occur in the central retinal vein at the level of the optic nerve, known as central retinal vein occlusion (CRVO) or at the distal branch of the retinal vein, known as branch retinal vein occlusion (BRVO).

Severity of the RVO depends on location and the loss of blood flow. CRVO is sudden and ranges from mild blurring to severe vision loss. BRVO is more common than CRVO; there may be no symptoms.

Macular edema, swelling of the central portion of the retina, occurs in almost all cases of CRVO and in over half the cases of BRVO. Neovascularization occurs when new blood vessels develop in an attempt to continue to supply the retina with blood. These new blood vessels may hemorrhage and cause retinal detachment.

The new seventh characters will provide important information to indicate there is macular edema or neovascularization requiring intervention such as intraocular anti-vascular endothelial growth factor drugs and corticosteroids. The seventh-character, “2” (stable), is assigned when the disease process is not active and there is no reason for treatment.
Age-Related Macular Degeneration

Codes H35.311, Nonexudative age-related macular degeneration, right eye, H35.312, Nonexudative age-related macular degeneration, left eye, H35.313, Nonexudative age-related macular degeneration, bilateral, and H35.319, Nonexudative age-related macular degeneration, unspecified eye, have been created for nonexudative age-related macular degeneration.

Seventh characters are assigned to designate the stage of the disease:

- 0 stage unspecified
- 1 early dry stage
- 2 intermediate dry stage
- 3 advanced atrophic without subfoveal involvement
- 4 advanced atrophic with subfoveal involvement

Codes have also been created for exudative age-related macular degeneration: H35.321, Exudative age-related macular degeneration, right eye, H35.322, Exudative age-related macular degeneration, left eye, H35.323, Exudative age-related macular degeneration, bilateral, and H35.329, Exudative age-related macular degeneration, unspecified eye.

The following seventh characters are assigned for the stage:

- 0 stage unspecified
- 1 with active choroidal neovascularization
- 2 with inactive choroidal neovascularization with involuted or regressed neovascularization
- 3 with inactive scar

Age-related macular degeneration (AMD) is an age-related deterioration of the eye’s macula, the small area in the retina that is responsible for central vision and allows individuals to see fine details clearly for tasks such as, recognition of faces and colors, threading a needle, reading small print and reading street signs. In an advanced stage, central vision may be lost completely and render a person legally blind; however, if the rest of the retina is functioning, peripheral vision may be unaffected.

There are two types of AMD: nonexudative and exudative, referred to as dry and wet, respectively. Nonexudative (dry) is the most common form of AMD. It is caused by the gradual thinning of the macula. The formation of drusen, small deposits of fatty protein, under the retina is normal, but the first sign of AMD is an increase in the number and size of drusen. An examination of the retina may detect signs of AMD long before changes in vision are recognized. Dry AMD vision loss is gradual so monitoring of
central vision helps to reduce progression through the early, intermediate and advanced stages of the condition. Supplements of vitamins C and E, beta-carotene, zinc and copper, may slow the progression from intermediate to advanced AMD.

Exudative (wet) AMD involves the abnormal growth of blood vessels under the macula that leak and blur central vision. The wet form of AMD is rapid and may cause severe loss of vision. Wet AMD may be diagnosed on fluorescein angiography and optical coherence tomography (OCT) where the blood vessels are examined. Anti-vascular endothelial growth factor (anti-VEGF) drugs are used to treat wet AMD by targeting the chemical in the body that is responsible for the abnormal growth of blood vessels. It is administered directly to the eye. The blood vessels may also be destroyed by laser treatment and photodynamic therapy (PDT).

While AMD may develop as a person ages, genetics, smoking, high blood pressure and obesity increase the risk for the condition.

**Question:**
A 63-year-old patient presented to the office for her annual eye examination. She is asymptomatic but ophthalmoscopy showed newly found signs of early stage dry macular degeneration with drusen in her left eye and intermediate stage dry macular degeneration with drusen of the right eye. The provider recommended nutritional supplements, ultraviolet ray protection and a nine-month follow-up appointment. What are the appropriate diagnosis code assignments for the encounter?

**Answer:**
Assign code Z01.01, Encounter for examination of eyes and vision with abnormal findings, as the first-listed diagnosis. Assign codes H35.3121, Nonexudative age-related macular degeneration, left eye, early dry stage, and H35.362, Drusen (degenerative) of macula, left eye, for the early stage dry macular degeneration and drusen, of the left eye; and codes H35.3112, Nonexudative age-related macular degeneration, right eye, intermediate dry stage, and H35.361, Drusen (degenerative) of macula, right eye, for the intermediate degeneration and drusen of the right eye.
**Glaucoma**

New codes were created to capture laterality for subcategory H40.1, Open-angle glaucoma:

- **H40.111**  Primary open-angle glaucoma, right eye
- **H40.112**  Primary open-angle glaucoma, left eye
- **H40.113**  Primary open-angle glaucoma, bilateral
- **H40.119**  Primary open-angle glaucoma, unspecified eye

Seventh characters specify the stage of glaucoma.

Primary open angle is the most common form of glaucoma. In primary open angle glaucoma (POAG), the intraocular pressure in the eye increases as the balance of aqueous humor that flows out of the eye is not equal to the fluid that flows into the eye. When aqueous humor does not flow out of the eye properly, the increase in intraocular pressure damages nerve fibers of the optic nerve. POAG has no symptoms. By the time there is vision impairment, the damage to the optic nerve is irreversible. When vision loss occurs, it affects the peripheral vision and slowly moves centrally.

Treatment consists of slowing the disease. If left untreated, glaucoma can lead to blindness. Medications are prescribed to lower intraocular pressure by reducing the aqueous humor in the eye or increasing the outflow of aqueous humor from the eye. The most common surgical procedures for primary open-angle glaucoma are trabeculoplasty, trabeculectomy, and drainage implant, which focus on draining aqueous humor.

**Amblyopia**

A new subcategory, **H53.04**, Amblyopia suspect, has been created for codes **H53.041**, Amblyopia suspect, right eye, **H53.042**, Amblyopia suspect, left eye, **H53.043**, Amblyopia suspect, bilateral, and **H53.049**, Amblyopia suspect, unspecified eye.

Amblyopia (lazy eye), the decreased vision in one or both eyes due to abnormal vision development during childhood, occurs when the brain and the eye do not work together properly (strabismus) or when there is nearsightedness, farsightedness, astigmatism (unequal vision between the eyes) or when there is a congenital cataract, drooping eyelid, or similar
condition that covers the lens of the eye. When the images that the eye sends to the brain are not identical, the brain learns to ignore the poor image. As the brain ignores the eye with the poor images, that eye becomes weaker from lack of use. If the amblyopia is not corrected, the eye may be damaged permanently.

Comprehensive vision evaluations are highly recommended for infants and pre-school children. Special visual acuity and refractive error tests are used to detect amblyopia in early childhood. Otherwise, many children go undiagnosed until they have their eyes examined at the eye doctor’s office at a much later age.

A difference in vision in one eye or vision impairment in both eyes when detected before the age of 9 has the best treatment outcomes. Forcing a child to use the weak eye by covering or blurring vision in the strong eye gives the weak eye the opportunity to become stronger and develop normally. Eyeglasses help to correct refractive errors of unequal focus. Although the visual system is normally fully developed by age 9, it now appears that older children and adults with amblyopia can benefit from treatment using computer programs that stimulate neural changes leading to improvements in visual acuity and contrast sensitivity.

In some cases it is hard to be certain of the diagnosis. For instance, diagnosis is difficult when a young child is unable to read a chart and has other conditions such as refractive, strabismic, or eye structural problems that are often associated with amblyopia. Prior to the creation of the new codes, the possible presence of amblyopia could not be coded. The reporting of “amblyopia suspect” in the health record will serve as a reminder that the child has significant risk factors that can be associated with permanent visual loss due to amblyopia so that the child receives ongoing medical observation and timely intervention.

**Hearing Loss**

The following codes have been created to report bilateral hearing loss that is a different type for each ear:

- **H90.A11**  Conductive hearing loss, unilateral, right ear with restricted hearing on the contralateral side
- **H90.A12**  Conductive hearing loss, unilateral, left ear with restricted hearing on the contralateral side
The three different types of hearing loss are defined by the affected area of auditory canal.

Sensorineural hearing loss is the most common type of permanent hearing loss. It occurs when there is damage to the inner ear (cochlea) or to the nerve pathways from the inner ear (retrocochlear) to the brain. Possible causes include: age-related hearing loss, acoustic trauma (injury caused by loud noise to the hair cells), viral infections of the inner ear, birth injury, drugs that are toxic to the auditory system, Meniere’s disease, acoustic neuroma and brain tumor. Sensorineural hearing loss can be effectively treated with corrective surgery or medication to treat the source of the hearing loss, hearing aids and cochlear implants.

Conductive hearing loss occurs when sound is not properly conducted through the outer ear canal to the eardrum and ossicles of the middle ear. Possible causes are ear infection, allergies, perforated ear drum, impacted cerumen, benign tumors, and fluid in the ear. Conductive hearing loss can also be treated with hearing aids, cochlear implant and treating the source of the hearing loss.

Mixed hearing loss occurs when there is a combination of sensorineural hearing loss and conductive hearing loss.

Question:
A patient with previously diagnosed hearing loss is seen for her annual audiological evaluation. She has history of left tympanic membrane perforation due to middle ear infection that resulted in moderate
conductive hearing loss and also has severe right sensorineural hearing loss. What are the diagnosis code assignments?

**Answer:**
Assign code Z01.10, Encounter for examination of ears and hearing without abnormal findings, as the reason for the encounter. An examination with abnormal findings refers to a condition/diagnosis that is newly found, or a change in severity of a chronic condition, during a routine physical exam. Since the hearing loss doesn’t meet any of these criteria, code Z01.10 for “without abnormal findings” is assigned. Assign codes H90.A12, Conductive hearing loss, unilateral, left ear with restricted hearing on the contralateral side, and H90.A21, Sensorineural hearing loss, unilateral, right ear, with restricted hearing on the contralateral side, for the left conductive hearing loss and right sensorineural hearing loss. Code Z86.69, Personal history of other diseases of the nervous system and sense organs, may be assigned for the history of the perforated tympanic membrane.

**Pulsatile Tinnitus**

New codes were created to classify pulsatile tinnitus of the right ear (H93.A1), pulsatile tinnitus of the left ear (H93.A2), pulsatile tinnitus of both ears (H93.A3), and pulsatile tinnitus of unspecified ear (H93.A9).

Pulsatile tinnitus is described as a condition in which a beating, pulsing or whooshing sound is heard in the ear or head that is synchronous with an individual’s heartbeat. It is often referred to as vascular tinnitus because it is usually caused by an audible disturbance in head and neck blood flow, such as an increase in blood flow pressure through the jugular vein near the middle ear or a narrowing of the carotid artery due to arteriosclerotic carotid artery disease. Paragangliomas (glomus tumors) in the middle ear at the base of the skull may also cause pulsatile tinnitus, as well as arteriovenous malformations and fistulae. While rare, glomus tumors occur with pulsatile tinnitus 80% of the time. The tinnitus is usually unilateral.
The creation of distinct codes for pulsatile tinnitus will provide information on the medical necessity of diagnostic testing related to the condition compared to other forms of tinnitus.

**Question:**
A patient with pulsatile tinnitus of the right ear was diagnosed with a glomus jugular tumor within the temporal bone at the right jugular foramen. The patient agreed to treat the condition by reducing the blood supply to the tumor through coil embolization. Direct puncture of the lesion was performed via fluoroscopic guidance, and coils were injected into the ascending pharyngeal artery supplied by the right external carotid artery. What are the diagnosis and procedure code assignments?

**Answer:**
Assign code D44.7, Neoplasm of uncertain behavior of aortic body and other paraganglia, for the glomus jugular tumor. Assign code H93.A1, Pulsatile tinnitus, right ear, for the pulsatile tinnitus. Assign code 03VM3DZ, Restriction of right external carotid artery with intraluminal device, percutaneous approach, for the procedure.

**Hypertensive Crisis, Urgency and Emergency**

A new category has been created to describe hypertensive crisis. Codes in this new category differentiate hypertensive urgency (I16.0), hypertensive emergency (I16.1), and hypertensive crisis, unspecified (I16.9). The American Academy of Pediatrics requested detailed codes to track patients who present with clinically significant hypertension that requires immediate treatment.

A hypertensive crisis (urgency or emergency) occurs when blood pressure elevates rapidly and severely enough to potentially cause organ damage. Patients may present with symptoms of acute headache, shortness of breath, epistaxis, or marked anxiety. Immediate evaluation is needed to assess organ function, and determine appropriate treatment.

A hypertensive emergency occurs when blood pressure is severely elevated and results in organ damage. The condition can also occur at lower levels in patients whose blood pressure had not previously been high.
Serious consequences of uncontrolled hypertension include stroke, loss of consciousness, memory loss, acute myocardial infarction, angina, aortic dissection, damage to the eyes and kidneys, and pulmonary edema. During pregnancy, eclampsia can also develop along with a hypertensive emergency.

Although uncommon in children, a sudden severe increase in blood pressure or exceptionally high blood pressure requires immediate intervention to prevent harmful consequences. The National Heart, Lung, and Blood Institute defines hypertensive urgencies and emergencies in children as a systolic blood pressure greater than 99th percentile for age and sex, along with associated symptoms such as headache (urgency) or seizure (emergency). While approximately one in three adults have hypertension, the prevalence of hypertension in children is estimated to be upwards of 3% with higher values associated with certain chronic diseases.

*The ICD-10-CM Official Guidelines for Coding and Reporting* state, “Assign a code from category I16, Hypertensive crisis, for documented hypertensive urgency, hypertensive emergency or unspecified hypertensive crisis. Code also any identified hypertensive disease (I10-I15). The sequencing is based on the reason for the encounter.”

Please note that hypertension documented as accelerated or malignant, but not as hypertensive crisis, urgency, or emergency, is assigned code I10, Essential (primary) hypertension, per the Alphabetic Index instructions.

**Question:**
A 60-year-old male was admitted to the hospital with sudden onset of left-sided weakness, severe headache, slurred speech and left facial droop, and increased blood pressure (260/172). The patient had a chronic hypertension, but was nonadherent with his prescribed medications. CT scan of the head demonstrated right basal ganglia hemorrhage with shift. The patient underwent emergent right frontotemporal craniotomy and evacuation of clot. The provider’s diagnostic statement listed, “Basal ganglia hemorrhage with shift and hypertensive emergency.” What are the appropriate code assignments?

**Answer:**
Assign code I61.0, Nontraumatic intracerebral hemorrhage in hemisphere, subcortical, as the
principal diagnosis for the right basal ganglia hemorrhage. Code I16.1, Hypertensive emergency, and code I10, Essential (primary) hypertension, are assigned as additional diagnoses. For the procedure assign the following ICD-10-PCS code:

00C00ZZ Extirpation of matter from brain, open approach

**Cerebral Infarct– Bilateral**

As requested by the American Academy of Neurology (AAN), codes in category I63- Cerebral infarction, have been revised to include a bilateral option, since cerebral infarctions may occasionally be due to a bilateral arterial lesion.

**Cognitive Sequelae of Cerebrovascular Diseases**

At the request of the American Academy of Neurology, 48 new codes have been created at category I69, Sequelae of cerebrovascular diseases, to differentiate cognitive sequelae similar to the detail available for motor deficits and speech and language deficits. These new codes describe cognitive deficits following cerebrovascular disease, such as attention and concentration deficit; memory deficit; visuospatial deficit; psychomotor deficit; frontal lobe and executive function deficit; and cognitive social or emotional deficit. The codes have been created for nontraumatic subarachnoid hemorrhage, nontraumatic intracerebral hemorrhage, other nontraumatic intracranial hemorrhage, cerebral infarction, as well as other cerebrovascular diseases and unspecified cerebrovascular diseases.

**Aneurysm and Dissection of Precerebral and Vertebral Arteries**

New codes have been created to uniquely identify aneurysm of other precerebral artery (I72.5), and aneurysm of vertebral artery (I72.6). New codes have also been created to identify dissection of unspecified artery (I77.70), dissection of other precerebral arteries (I77.75), dissection of artery of upper extremity (I77.76), and dissection of artery of lower extremity (I77.77). Prior to this change, there were no ICD-10-CM codes to specifically describe an aneurysm or dissection of precerebral or vertebral arteries. Additionally, the title of code I77.79, Dissection of other artery, has been revised to “Dissection of other specified artery.”
An aneurysm is a balloon-like bulge in an artery. However, certain medical problems, trauma, and genetic conditions can damage or injure artery walls. Aneurysms can grow large and rupture or dissect. Arterial dissection refers to the abnormal, and sometimes abrupt, formation of a tear along the inside wall of an artery. As the tear grows, a small pouch (false lumen) is created. The blood that accumulates inside this false lumen can cause blood clots or even block blood flow, leading to a stroke. Both rupture and dissection are often fatal.

**Mediastinitis**

Mediastinitis is an inflammation of the mediastinum, usually a result of a bacterial infection. It is generally a very severe condition that can be an indicator of a disease process or a complication of care. Previously, all types of mediastinitis were indexed to J98.5, Diseases of mediastinum, not elsewhere classified. Code J98.5 has been expanded to include two new codes: J98.51 and J98.59.

Code J98.51, Mediastinitis, has been created to uniquely identify this condition. The new code allows greater specificity to capture the severity of the condition, setting it apart from less severe conditions of the mediastinum. If there is a known underlying condition, sequence the underlying condition first, such as postoperative mediastinitis (T81.-). Code J98.59, Other diseases of mediastinum, not elsewhere classified, will now capture conditions, such as fibrosis, hernia, and retraction of the mediastinum.

**Dental Codes Expansion**

Changes have been made to the following dental code categories resulting in 22 new codes:

- **K04** Pulpitis
- **K05** Gingivitis and periodontal diseases
- **K06** Other disorders of gingiva and edentulous alveolar ridge
- **K08** Other disorders of teeth and supporting structures

For details on the specific codes, please refer to the official ICD-10-CM addenda.
Diagnostic coding had not previously been widely utilized in dentistry. However, some State Medicaid programs require reporting of ICD-10-CM diagnosis codes on dental claims. According to the American Dental Association, “State Medicaid Programs that require ICD-10-CM reporting would like to capture clinical data to support public health activities, to support development of evidence-based benefits plans, and to support funding efforts. ICD-10-CM reporting is also required to facilitate payment for services related to the oral-systemic connection and coverage for additional dental services for certain medical conditions.”

**Noninfective Gastroenteritis and Colitis**

The following new codes have been created for gastroenteritis and colitis at category K52, Other and unspecified noninfective gastroenteritis and colitis:

- **K52.21** Food protein-induced enterocolitis syndrome
- **K52.22** Food protein-induced enteropathy
- **K52.29** Other allergic and dietetic gastroenteritis and colitis
- **K52.3** Indeterminate colitis
- **K52.831** Collagenous colitis
- **K52.832** Lymphocytic colitis
- **K52.838** Other microscopic colitis
- **K52.839** Microscopic colitis, unspecified

**Food Protein-Induced Enterocolitis Syndrome**

Food protein-induced enterocolitis syndrome (FPIES) (**K52.21**) is a food allergy that affects the gastrointestinal tract. It develops in response to the ingestion of proteins that are found in certain foods. Symptoms such as vomiting and bloody diarrhea are not immediate, but start within hours of eating the food allergen. Vomiting and diarrhea may become severe enough to induce severe lethargy, change in blood pressure, dehydration, and even shock. FPIES usually occurs in infants, with onset most often before 3 months, but up to 1 year of age. It may resolve by 3 years of age; it could persist, and has been described in adults. The most common allergens are milk, nuts, soybeans and grain. It is treated with the removal of the allergen.
**Food Protein-Induced Enteropathy**
Food protein-induced enteropathy (K52.22) is similar to FPIES but the symptoms are less severe. There is less vomiting, and no bloody diarrhea. It also occurs in young infants and is usually outgrown by 3 years of age.

**Indeterminate Colitis**
Indeterminate colitis (K52.3) refers to inflammatory bowel disease with colitis that cannot definitely be diagnosed as Crohn’s disease or ulcerative colitis upon colonoscopy, colon biopsy or colectomy. Clinically however, around half of the patients who are diagnosed with this condition are subsequently diagnosed with Crohn’s disease or ulcerative colitis. For a significant amount of individuals, this does not happen. Another term for indeterminate colitis is colonic inflammatory bowel disease unclassified (IBDU).

There are currently no set markers that identify indeterminate colitis. It is a diagnosis of exclusion, but identifiers such as anti-saccharomyces cerevisiae (ASCA) and perinuclear anti-cyttoplasmic antibody (pANCA) are usually negative. Patients who lack these markers continue to have indeterminate colitis. Those who have one or both markers eventually manifest Crohn’s disease or ulcerative colitis. Treatment is similar to therapies for ulcerative colitis. When proctocolectomy with ileal pouch to anal anastomosis is performed, patients with indeterminate colitis are more likely to have complications than those with ulcerative colitis, but less likely to have complications than patients with Crohn’s disease.

**Microscopic Colitis**
Microscopic colitis is a rare condition that is characterized by chronic watery, non-bloody diarrhea. The colon on examination is normal but shows unique inflammatory changes on biopsy. Collagenous and lymphocytic colitis are two types of microscopic colitis.

Collagenous colitis (K52.831) is marked by a thickened subepithelial layer of collagen. Lymphocytic colitis (K52.832) has increased numbers of lymphocytes in the colonic epithelial layer, along with increased numbers of subepithelial chronic inflammatory cells. Microscopic colitis can occur at any age but is most common after age 50. The condition has been associated with type 1 diabetes mellitus, thyroiditis, celiac disease, and rheumatoid arthritis. Treatment includes antidiarrheal medication, corticosteroids and immunosuppressant drugs.
Vascular Disorders of Intestine

Category K55, Vascular disorders of intestine, has been expanded to specify the extent of acute ischemia (K55.01- and K55.03-) and acute infarction (K55.02- and K55.04-): focal, diffuse and unspecified extent for the small intestine, large intestine, and unspecified part of the intestine.

Codes K55.30, Necrotizing enterocolitis, unspecified; K55.31, Stage 1 necrotizing enterocolitis; K55.32, Stage 2 necrotizing enterocolitis; and K55.33, Stage 3 necrotizing enterocolitis, have been created for necrotizing enterocolitis that originates outside of the newborn period. Previously, the only codes that identify this condition were for when necrotizing enterocolitis originates in newborns during the perinatal period.

Necrotizing enterocolitis is a serious condition that occurs when damage such as inflammation, infection, or ischemia lead to intestinal necrosis. Necrosis may involve the intestinal lining, or the full thickness of the intestine. While necrotizing enterocolitis is most commonly seen in premature infants of low birth weight, the condition can occur in term infants, and infants outside of the newborn period, as well as in adults.

In adults, the etiology of necrotizing enterocolitis is unclear. Infection, inflammation and ischemia are commonly suspected causes. There are three stages. In stage 1, there are nonspecific clinical and radiological signs. The patient may have abdominal distension with thickening and dilated loops of the bowel. In stage 2 there is blood in the stool, ileus, metabolic acidosis and intestinal pneumatosis. Stage 3 presentation is hypotension, hyponatremia, respiratory compromise, disseminated intravascular coagulation and occasional peritonitis.

Treatment consists of GI decompression, antibiotic therapy, and fluid resuscitation. Bowel resection may be required to remove the necrotic bowel.

Irritable Bowel Syndrome

Codes K58.1, Irritable bowel syndrome with constipation; K58.2, Mixed irritable bowel syndrome; and K58.8, Other irritable bowel syndrome, have been created to distinguish types of irritable bowel syndrome.

Irritable bowel syndrome (IBS) is characterized by abdominal pain or discomfort, bloating and changes in bowel movement. There are four types of IBS that are based on the predominant alteration in stool consistency: IBS-C, with constipation, IBS-D, with diarrhea, IBS-M, mixed IBS (both
constipation and diarrhea) and IBS-U, unsubtyped IBS (diarrhea and constipation less than 25% of the time).

IBS is a functional gastrointestinal disorder that affects 10% to 15% of the adult population. A thorough history and examination are important in obtaining the diagnosis. Colonoscopy and imaging are necessary to rule out other conditions.

The type of IBS and symptoms determines the treatment. Medication may reduce constipation and diarrhea. Medications that affect serotonin levels or serotonin receptors have been noted to improve symptoms by working on the nerves of the bowel.

**Constipation**

Codes K59.03, Drug induced constipation, and K59.04, Chronic idiopathic constipation, have been created to specify the cause of constipation.

There are many causes for constipation. Lack of dietary fiber, lack of exercise, low water intake, medications, and neurologic, metabolic, and endocrine disorders are known to contribute to the development of constipation. Opioids affect the stomach and colon by altering nerve input to the GI tract. Constipation is managed through diet, stool softeners, bulk forming agents, stimulant and lubricant laxatives and enemas.

**Megacolon**

Codes K59.31, Toxic megacolon, and K59.39, Other megacolon, have been created for megacolon.

Megacolon is a significant dilation of the colon. Toxic megacolon is the rapid nonobstructive dilation of the colon with infection or inflammation. Various forms of colitis such as ulcerative colitis, Crohn’s colitis, infectious colitis, ischemic colitis, radiation colitis and colitis associated with chemotherapy, and medications that affect motility of the bowel can all cause megacolon. The dilation may be segmental or include the entire colon. As nitric oxide increases and inhibits smooth muscle tone, inflammation progresses from the mucosa into smooth muscle layers and serosa, which causes the colon to expand. Radiologic evidence shows that the transverse colon may expand over 6 cm. This rapid widening may cause abdominal pain and tenderness, fever, perforation of the colon, rapid heart rate, shock, and sepsis.
Prognosis is best in the absence of perforation and when toxic megacolon is diagnosed and treated early. The distention must be reduced, electrolytes and fluids must be restored and any infection must be treated with antibiotics. Colectomy is recommended when dilation persists.

**Acute Pancreatitis**

New codes have been created at category K85, Acute pancreatitis, to uniquely describe idiopathic acute pancreatitis (K85.0-), biliary acute pancreatitis (K85.1-), alcohol induced acute pancreatitis (K85.2-), drug induced acute pancreatitis (K85.3-), other acute pancreatitis (K85.8-) and other diseases of the pancreas (K85.9-). ICD-10-CM further classifies the severity of acute pancreatitis at the 5th digit level as follows:

0 without necrosis or infection
1 with uninfected necrosis
2 with infected necrosis

Acute pancreatitis is an inflammation of the pancreas. It can occur suddenly and will cause pain and swelling in the upper abdominal region, with the pain often radiating to the back. Acute pancreatitis can spread to other organs or develop into chronic pancreatitis if it’s not treated. Physicians who manage patients with acute pancreatitis frequently categorize the severity of this condition by differentiating whether the pancreas is with or without necrosis and/or infection. Tissues altered by necrotizing pancreatitis can potentially develop secondary infection and might require debridement. Infection of the necrotic region of the pancreas occurs secondarily and increases the risk of death significantly.

The Patient Assessment and Outcome Committee of the American Association for the Surgery of Trauma requested specific codes be developed to capture the distinction in the severity of acute pancreatitis. These new codes will assist in tracking and studying these patients.

**Exocrine Pancreatic Insufficiency**

Category K86, Other diseases of the pancreas, has been further expanded to describe other specified diseases of the pancreas, unrelated to acute pancreatitis. Two new codes have been created: K86.81, Exocrine pancreatic insufficiency, and K86.89, Other specified diseases of pancreas.

Exocrine pancreatic insufficiency (EPI) (K86.81) refers to the inability to digest food properly due to a lack of exocrine pancreatic digestive
enzymes. Chronic pancreatitis is the most common cause of EPI. Other etiologies include cystic fibrosis, obstructions of the pancreatic duct (e.g., from pancreatic cancer or ampullary tumors) and Shwachman-Diamond Syndrome.

Once the pancreas becomes damaged to the point that the patient is unable to absorb fats, symptoms include abdominal pain or tenderness, foul-smelling bowel movements, diarrhea, gas, and bloated sensation. The patient may also start to lose weight as the body isn’t able to absorb enough vitamins.

**Non-Celiac Gluten Sensitivity and Malabsorption Disorders**

Code K90.4, Other malabsorption due to intolerance, not elsewhere classified, has been expanded. Code **K90.41**, Non-celiac gluten sensitivity, was added to allow the reporting of gluten sensitivity not related to celiac disease. This code assignment includes gluten sensitivity not otherwise specified, and non-celiac gluten sensitive enteropathy. Code K90.49, Malabsorption due to intolerance, not elsewhere classified, allows the reporting of malabsorption due to carbohydrates, fats, proteins, and/or starches.

Gluten sensitivity is a condition which can present with symptoms similar to those of celiac disease that improves when gluten is eliminated from the diet. People with gluten sensitivity may have gastrointestinal symptoms such as abdominal pain, bloating, diarrhea or constipation or non-gastrointestinal symptoms such as brain fogginess, depression, headaches, chronic fatigue, and/or attention-deficit/hyperactivity disorder type behavior. While these symptoms are common in celiac disease, individuals with gluten sensitivity do not test positive for celiac disease or wheat allergy; nor do they experience damage to the small intestine or develop tissue transglutamine (tTG) antibodies as those with celiac disease.

There is no cure for gluten sensitivity. The only treatment would be to follow a gluten-free diet.

**Question:**
A patient presented due to abdominal pain, bloating, and diarrhea after eating. The patient was tested for celiac disease which was found to be negative. The physician diagnosed the patient with non-celiac gluten sensitive enteropathy. How should this be reported?
Answer:
Assign code K90.41, Non-celiac gluten sensitivity, for this encounter. Code K90.41 includes non-celiac gluten sensitive enteropathy.

Periorbital (Preseptal) Cellulitis

Subcategory L03.21, Cellulitis and acute lymphangitis of face, has been expanded to specifically identify periorbital cellulitis (L03.213).

Periorbital cellulitis is an infection or inflammation of the eyelid or skin around the eye. Cellulitis around the orbit of the eye and the preseptal area is not to be confused with orbital cellulitis or postseptal cellulitis, which affects the orbit, can affect the eye, and is a more severe infection. Periorbital cellulitis is confined to the soft tissues that are anterior to the orbital septum.

The American Academy of Pediatrics requested a unique code to better identify periorbital cellulitis since this condition may require more intensive evaluation and management than a simple cellulitis of the face. Prior to this change, there were no ICD-10-CM codes to specifically describe a patient that has been identified as having periorbital cellulitis.

Excessive and Redundant Skin and Subcutaneous Tissue

A new code (L98.7) has been created at category L98, Other disorders of skin and subcutaneous tissue, not elsewhere classified, to identify excessive and redundant skin and subcutaneous tissue.

Excessive and redundant skin is usually found among women after pregnancy and childbirth or among middle aged men or women after the loss of large amounts of weight over a short period of time. Those who undergo bariatric surgery often find themselves with skin and tissue too stretched out to snap back. Other risk factors such as genetics and sun damage will also cause the skin to sag or hang. Excess skin and subcutaneous tissue can cause inflammation between the skin folds which can lead to infection and painful rashes.
Autoinflammatory Syndromes

Category M04, Autoinflammatory syndromes, has been created and new codes were developed to uniquely identify periodic fever syndromes (M04.1), cryopyrin-associated periodic syndromes (M04.2), other autoinflammatory syndromes (M04.8), and autoinflammatory syndrome, unspecified (M04.9).

Cryopyrin is an important mediator of inflammation, via activating interleukin 1 (IL-1). Excessive activation of IL-1 can lead to an inflammatory response, which can be harmful. This is the key to the inflammation in cryopyrin-associated periodic syndromes (CAPS), as well as certain other autoinflammatory disorders. CAPS can cause end organ damage due to chronic inflammation. Some patients with CAPS may develop hearing loss, or amyloidosis.

CAPS include three genetically related syndromes: familial cold autoinflammatory syndrome (FCAS), Muckle-Wells syndrome (MWS), and neonatal onset multisystemic inflammatory disorder (NOMID), also called chronic infantile neurological, cutaneous and articular syndrome, (CINCA). Each of these conditions is caused by mutations of the same gene, encoding the protein cryopyrin. FCAS is the mildest, involving recurrent fevers, urticarial rash, joint pain, and CNS inflammation, particularly triggered by cold exposure. FCAS may also be called familial cold urticaria (this differs from acquired cold urticaria). MWS involves more frequent and prolonged episodes, which may be triggered by stress or exercise among other stimuli, and may also include headaches from aseptic meningitis.

Familial Mediterranean fever (FMF) is one of the most recognized cryopyrin-associated periodic syndromes. It is characterized by brief episodes of fever and serositis, usually with arthritis, and often with a rash on the legs.

Other periodic fever syndromes include hyperimmunoglobulin D syndrome (HIDS), and tumor necrosis factor receptor associated periodic syndrome (TRAPS). HIDS typically causes attacks lasting about four days, with cervical lymphadenopathy, rash, headache, arthritis, and abdominal pain. TRAPS attacks typically last about seven days, and involve myalgia along with abdominal pain and pleuritic chest pain. TRAPS may also cause rash and fasciitis, and when long-standing, it may cause amyloidosis.

NOMID, the most severe phenotype, often presents shortly after birth and involves chronic aseptic meningitis, potentially with papilledema.
Bunion and Bunionette

Category M21.6, Other acquired deformities of ankle and foot, has been expanded to specifically identify bunion of right foot (M21.611), bunion of left foot (M21.612), and bunion of unspecified foot (M21.619). Prior to this change, bunions were an inclusion term at code M20.1, Hallux valgus (acquired). In addition, a new subcategory and new codes have been created to describe bunionette (tailor’s bunion). The new codes include bunionette of right foot (M21.621), bunionette of left foot (M21.622), and bunionette of unspecified foot (M21.629). Bunionette was previously not uniquely identified in ICD-10-CM.

A bunion is an unnatural, bony hump that forms at the base of the big toe. Often, the big toe will begin to lean towards the other toes. When this occurs, the base of the big toe pushes outward on the first metatarsal bone, forming a bunion. A bunionette, or tailor’s bunion, develops at the base of the little toe. This occurs when the toe (metatarsal) bends away from the foot, the little toe bends inward and the joint swells or enlarges. Because a bunion occurs at a joint, the entire body weight rests on the bunion at each step which can be very painful. A bunion deformity does not involve any overt positional movement of the first metatarsal or of the hallux. If such movement did occur, with associated hypertrophy of the medial condyle of the first metatarsal head and related edema and bursitis, then that deformity would be a hallux valgus deformity (M20.1-).

Pain in Joints of Hand

Subcategory M25.5, Pain in joint, has been expanded. New subcategory M25.54, Pain in joints of hand, was created to capture pain in the joints of the hand. New codes were created to specify right (M25.541), left (M25.542) or unspecified (M25.549) hand.

Temporomandibular Joint Disorders

Codes at subcategory M26.6, Temporomandibular joint disorders, have been expanded to allow the reporting of laterality for temporomandibular (TMJ) disorders. Subcategories M26.60, Temporomandibular joint disorder, unspecified, M26.61, Adhesions and ankylosis of temporomandibular joint, M26.62, Arthralgia of temporomandibular joint, and M26.63, Articular disc disorder of temporomandibular joint, have all been expanded to allow the capturing of right, left, bilateral or unspecified side of TMJ disorder(s).
The temporomandibular joints are points of attachment of the lower jaw to the temporal bones of the skull. There are two joints on each side of the face just in front of the ears. These joints must move in synchronization each time a person talks, eats, swallows or yawns.

TMJ disorder refers to a cluster of conditions characterized by pain in the TMJ or its surrounding tissues, functional limitations of the mandible, or clicking in the TMJ during motion. TMJ disorders include, but are not limited to, adhesions, ankylosis, arthralgia and articular disc disorders.

Adhesions are typically found in deranged temporomandibular joints. In early stages the adhesions may not require treatment, however, release of adhesions may be required in advanced stages of adhesions.

Ankylosis is the stiffening (immobility) or fixation (fusion) of the joint. Ankylosis of the TMJ is often due to trauma or infection but may also be congenital or due to rheumatoid arthritis. With ankylosis, chronic, painless limitation of motion occurs. If ankylosis affects only one side of the joint, it produces a lateral deviation of the jaw to the nonaffected side. Over time, the deformity becomes more evident on the normal side causing a facial asymmetry.

Arthralgia of the temporomandibular joint is characterized by discomfort and pain of the joint. The articular disc is the fibrocartilaginous plate that separates the temporomandibular joint into upper and lower cavities. Disorders of the articular disc(s) are appropriately captured with subcategory M26.63.

**Cervical Disc Disorders**

Changes have been made to uniquely identify specific levels of the cervical spine for cervical disc disorders. New codes have been created to separately identify cervical disc disorder with myelopathy, mid-cervical region, unspecified level (M50.020), cervical disc disorder at C4-C5 level with myelopathy (M50.021), cervical disc disorder at C5-C6 level with myelopathy (M50.022) and cervical disc disorder at C6-C7 level with myelopathy (M50.023).

In addition, new codes have also been created to identify mid-cervical disc disorder, unspecified (M50.120), cervical disc disorder at C4-C5 level with radiculopathy (M50.121), cervical disc disorder at C5-C6 level with radiculopathy (M50.122) and cervical disc disorder at C6-C7 level with radiculopathy (M50.123).
Prior to this change, code M50.02, Cervical disc disorder with myelopathy, mid-cervical region, and code M50.12, Cervical disc disorder with radiculopathy, mid-cervical region, included all levels. Similar changes were applied to each of the following subcategories: M50.2, Other cervical disc displacement; M50.3, Other cervical disc degeneration; M50.8, Other cervical disc disorders; and M50.9, Cervical disc disorder, unspecified. The new ICD-10-CM codes will be useful in identifying each cervical level affected which will assist in tracking and studying these patients.

Cervical disc disorders can affect the spinal cord (causing myelopathy), or the nerve roots as they move through the spinal canal (causing radiculopathy). The seven cervical vertebrae are identified by number, with the highest (C1) being the atlas, and C2 being the axis. Nerve roots come from the spinal cord, and exit the spinal canal between each of cervical vertebra, which are also identified by number, with nerve root C1 just above the C1 vertebra, through to C8, which comes out of the spinal canal below the C7 vertebra and above the top thoracic vertebra, T1. There are no cervical discs around C1, so the first intervertebral disc space is between C2 and C3.

Cervical disc herniation can affect the nerve root in several ways depending on the level. Radiculopathy at C5 generally is from a problem such as herniation at the C4-C5 level. It typically involves pain in the shoulder, along with sensory disturbances from the top of the shoulder to the mid upper arm. There may also be shoulder weakness, among other findings. Radiculopathy at C6 involves pain radiating from the neck into the lateral aspect of the arm, with sensory disturbance in the back of the hand and the thumb. There may be weakness when flexing the arm, along with other findings. Radiculopathy at C7 often involves pain radiating from the neck into the back of the shoulder and arm, and the back and outside of the forearm. Weakness when extending the arm may be noticed. Radiculopathy at C8 may involve pain on the inner side of the forearm, sensory disturbances of the fourth and fifth fingers, and weakness of the hand.

Radiculopathy involving disc herniation at C3 and C4 as described in the medical literature, is fairly rare. Radiculopathy may occur from other causes besides disc herniation, and thus may also affect C1 and C2. However, since there are no cervical discs at these levels, there are no cervical disc disorders related to them. As there are specific findings associated with particular levels of cervical disc disorders, physicians generally give the level when documenting the disorder.
**Sarcopenia**

A new code has been created to describe sarcopenia, (M62.84). The underlying disease, if applicable, should be coded first. Sarcopenia is the age-related loss of muscle mass and strength that combines to result in functional issues including increased frailty, mobility limitations and the ability to carry out activities of daily living. Sarcopenia has been determined to be a clinically significant disorder based upon distinct findings and functional issues. These issues can lead to problems such as an increased incidence of falls and fractures, decreased activity levels, the inability to recover from serious injury and increased hospital and nursing home admissions.

Identifying sarcopenia will allow for interventions to improve muscle strength such as nutrition counseling and strength and resistance training that may partially reduce the effects of the condition.

**Atypical Femoral Fractures**

New codes at subcategory M84.75, Atypical femoral fracture, have been created to identify atypical femoral fractures. The new codes distinguish between whether the fracture is: incomplete or complete and whether the complete fracture is transverse or oblique. Seventh characters are required for atypical femoral fractures to indicate: initial encounter, subsequent encounter (with routine healing, with delayed healing, with nonunion, or with malunion) or sequela. The entire term “atypical femoral fracture” must be explicitly documented in order to assign a code from subcategory M84.75.

Atypical femoral fractures are a form of stress fracture that is associated with osteoporosis. These fractures occur in patients receiving long-term bisphosphonate therapy or other medications such as glucocorticoids. Atypical femoral fractures occur in the subtrochanteric region of the hip or the femoral shaft. They may be complete and extend across both cortices; or incomplete, involving only the lateral cortex.

In addition to their location, atypical femoral fractures have several additional distinctive features:

- They can have a transverse or short oblique orientation;
- There is minimal or no trauma associated with these fractures;
- There is a lack of comminution;
- There is cortical thickening that is either generalized or localized at the lateral cortex of the fracture site;
• There is periosteal reaction of the lateral cortex; and
• There is a medial spike when the fracture is complete.

In addition, if the fracture is due to the patient’s long term use of bisphosphonates, codes T45.8X5A, Adverse effect of other primarily systemic and hematological agents, initial encounter, and Z79.83, Long term (current) use of bisphosphonates, should also be assigned.

**Periprosthetic Fractures**

New codes have been created to identify periprosthetic fractures. A new category (M97) has been created in Chapter 13, Diseases of the musculoskeletal system and connective tissue. Periprosthetic fractures were previously classified in the complication section of ICD-10-CM at sub-subcategory T84.04, Periprosthetic fracture around internal prosthetic joint. However, the American Academy of Orthopaedic Surgeons (AAOS) clarified that periprosthetic fractures are not complications of the prosthesis (the prosthesis itself is not fractured, the area around the prosthesis is fractured). For breakage (fracture) of prosthetic joints, assign codes from subcategory T84.01, Broken internal joint prosthesis.

Periprosthetic fractures occur as a result of trauma or pathological conditions. A code for any underlying condition as well as a code for the specific type of fracture (traumatic or pathological) should also be assigned. If the reason for admission/encounter is the fracture, the specific type of fracture (traumatic or pathological) should be sequenced first and the periprosthetic fracture code should be sequenced as a secondary diagnosis code. These fractures can occur around any prosthesis, but the most common sites are the hip (M97.0), knee (M97.1), ankle (M97.2), shoulder (M97.3), elbow (M97.4). Subcategory M97.8 identifies “other” sites of periprosthetic fractures. These codes require a fifth character to specify laterality for each joint and also require a 7th character to indicate: initial encounter (A), subsequent encounter (D) or sequela (S).

**Question:**
A 64-year-old female patient with history of bilateral hip replacement presented to the hospital after having tripped and fallen sustaining a traumatic periprosthetic fracture of the lower end of the right femur. She had no symptoms of loosening of the prosthesis prior to this fall. How is this coded?
Answer:
Assign code S72.401A, Unspecified fracture of lower end of right femur, initial encounter for closed fracture, and code M97.01XA, Periprosthetic fracture around internal prosthetic right hip joint, initial encounter, along with the appropriate external cause code for the fall.

Question:
A patient, who is status post right total hip replacement, presents with a periprosthetic fracture. Patient states he stepped off of a curb, and immediately felt pain in the hip. After study, it was determined that the patient had a pathological fracture of the pelvis. How is this coded?

Answer:
Assign code M84.454A, Pathological fracture of pelvis, initial encounter, and code M97.01XA, Periprosthetic fracture around internal prosthetic right hip joint, initial encounter.

Acquired Ureteropelvic Junction Obstruction

A new code N13.0, Hydronephrosis with ureteropelvic junction obstruction, has been created at category N13, Obstructive and reflux uropathy, to uniquely identify acquired obstruction of ureteropelvic junction (UPJ) when hydronephrosis is present.

UPJ obstruction is described as an obstruction of the flow of urine from the renal pelvis to the proximal ureter. Congenital abnormalities may be observed in both adults and children as a result of infections, scarring, or a crossing vessel. UPJ obstruction may also be seen in adults following previous surgery or other disorders that can cause inflammation of the upper urinary tract. Hydronephrosis is characterized by the distension and dilation of the renal pelvis, usually caused by obstruction of the flow of urine from the kidney. If left untreated, it can lead to progressive atrophy of one or both of the kidneys.

The American Urological Association (AUA) requested a unique code for acquired ureteropelvic junction obstruction with hydronephrosis. UPJ obstruction without hydronephrosis is currently indexed to code N13.5, Crossing vessel and stricture of ureter without hydronephrosis.
Urinary Incontinence

New codes were created to uniquely identify types of urinary incontinence that are not currently classified in ICD-10-CM. Two new codes were added within subcategory N39.49, Other specified urinary incontinence, to capture coital incontinence (N39.491) and postural (urinary) incontinence (N39.492).

Urinary incontinence is the involuntary loss of urine and is a common problem for men and women over age 65, but does occur in younger patients as well. Multiple pregnancies, being overweight, and genetic weaknesses can increase the risk.

Code N39.491, Coital incontinence, was added to capture the involuntary loss of urine (incontinence) that occurs in women during intercourse. Coital incontinence is due to underlying pelvic floor dysfunction and the causes may be due to several factors.

Code N39.492, Postural (urinary) incontinence, was created to capture the involuntary loss of urine associated with change of body position, for example, rising from a seated or lying position.

An inclusion term was added under code N39.42, Incontinence without sensory awareness, to indicate that insensible (urinary) incontinence is appropriately captured with this code. Insensible incontinence results from stress leakage of small amounts of urine and is a very common type of urinary incontinence.

Atypical Small Acinar Proliferation

Code N42.3 has been expanded to uniquely identify unspecified dysplasia of prostate (N42.30), prostatic intraepithelial neoplasia (N42.31), atypical small acinar proliferation of prostate (N42.32), and other dysplasia of prostate (N42.39). Prior to this change, ICD-10-CM only provided code N42.3, Dysplasia of prostate; however this code did not include atypical small acinar proliferation of prostate.

Atypical small acinar proliferation (ASAP) is a pathological finding of a group of small prostatic glands that are suspicious for, but not diagnostic of, malignancy. Although ASAP implies an underlying carcinoma, the condition is not diagnosable because of qualitative or quantitative criteria falling below a threshold for malignancy. ASAP is not thought of as a pre-malignancy or a carcinoma in situ; but rather a diagnosis of uncertainty that may actually increase a man’s risk of ultimately developing prostate cancer.
Testicular Pain/Scrotal Pain

New codes have been created to uniquely describe right testicular pain (N50.811), left testicular pain (N50.812), testicular pain, unspecified (N50.819), scrotal pain (N50.82), and other specified disorders of the male genital organs (N50.89). Prior to this change, ICD-10-CM only provided code N50.8, Other specified disorders of male genital organs, to capture the wide spectrum of testicular and scrotal pain symptoms. Therefore, code N50.8 was further expanded to allow better tracking and studying of these patients.

Testicular or scrotal pain may sometimes be due to an inflammatory process, such as epididymitis, torsion or tumor, in which case, the code for the definitive diagnosis would be assigned. For example, if epididymitis is the definitive diagnosis, testicular/scrotal pain would not be reported. Urologists frequently evaluate men for testicular or scrotal pain before a definitive diagnosis has been established.

Postprocedural Erectile Dysfunction

Code subcategory N52.3, Postprocedural erectile dysfunction, has been expanded to uniquely identify erectile dysfunction following radiation therapy (N52.35), erectile dysfunction following interstitial seed therapy (N52.36) and erectile dysfunction following prostate ablative therapy (N52.37). Previously, these conditions were not represented under code subcategory N52.3, therefore, there was no accurate estimate of the number of cases of erectile dysfunction caused by other less invasive procedures, such as external beam radiation therapy, brachytherapy, and ablative therapies of the prostate.

Erectile dysfunction (ED) can begin immediately following the removal of the entire prostate and surrounding tissues. However, the onset of ED following radiation therapy is gradual and usually begins within 2 to 3 years following treatment. When hormone therapy is used, ED may occur approximately 2 to 4 weeks following the initiation of the therapy and is usually accompanied by a decreased desire for sex. In either case, without treatment, the ED is usually permanent.

The American Urological Association (AUA) requested additional codes be added to subcategory N52.3 to allow better tracking of erectile dysfunction caused by other procedures.
Noninflammatory Disorders of Ovary, Fallopian Tube and Broad Ligament

Category N83, Noninflammatory disorders of ovary, fallopian tube and broad ligament, has been expanded to capture laterality at the request of the American Congress of Obstetricians and Gynecologists (ACOG). This level of specificity is important for data collection as different services may be performed on each side depending on the disease process.

New codes have been created to identify right side, left side and unspecified side for the following subcategories:

- **N83.0-** Follicular cyst of ovary
- **N83.1-** Corpus luteum cyst
- **N83.2-** Other and unspecified ovarian cysts
- **N83.3-** Acquired atrophy of ovary and fallopian tube
- **N83.4-** Prolapse and hernia of ovary and fallopian tube
- **N83.5-** Torsion of ovary, ovarian pedicle and fallopian tube

**Hypertrophy of Vulva**

Code N90.6, Hypertrophy of vulva, has been expanded to three new codes and now uniquely identifies: childhood asymmetric labium majus enlargement (CALME) (N90.61), unspecified hypertrophy of vulva (N90.60) and other specified hypertrophy of vulva (N90.69). The new codes were created at the request of the American Congress of Obstetricians and Gynecologists (ACOG) with support from the American Academy of Pediatrics (AAP).

Childhood asymmetric labium majus enlargement (CALME) is a condition in which one side of the outer labia is enlarged or swollen by excess tissue growth. The extra tissue leads to an asymmetrical appearance as one side of the labia is larger than the other. The condition appears to coincide with hormonal surges of pre- and early puberty.
Pre-Pubertal Vaginal Bleeding

A new code N93.1, Pre-pubertal vaginal bleeding, has been created to differentiate pre-pubertal vaginal bleeding from other types of abnormal vaginal bleeding.

Pre-pubertal vaginal bleeding is frequently encountered in pediatric gynecology requiring work up. A specific code was required as this condition in a child requires a different differential diagnosis and workup compared to the adult patient. Causes of such pre-pubertal vaginal bleeding include foreign object, trauma, urethral prolapse, vulvar dermatologic conditions, fluctuations in endogenous hormones or exogenous intake of hormones, cervical or vaginal tumors, or precocious puberty. Although several of these conditions have their own unique codes, it will require work up and potentially several visits before a definitive diagnosis may be made.

Dyspareunia

Code N94.1, Dyspareunia, has been expanded to include four new codes that further identify the site of the dyspareunia as superficial (introital) or deep. Codes N94.10, Unspecified dyspareunia, N94.11, Superficial (introital) dyspareunia, N94.12, Deep dyspareunia and N94.19, Other specified dyspareunia, allow for greater specificity when reporting this condition.

Dyspareunia, or painful intercourse, can have a variety of causes and is described according to the site of the pain. Superficial or introital dyspareunia occurs in or around the vaginal entrance while deep dyspareunia is pain or discomfort that occurs as a result of deeper penetration in the mid or upper vagina. Determining the site of the pain can help identify the cause and the most effective remedy since treatment may differ depending on the underlying condition causing the pain.

Postprocedural Fossa Navicularis Urethral Stricture

Code N99.115, Postprocedural fossa navicularis urethral stricture, has been created at the request of the American Urological Association (AUA). Existing codes at subcategory N99.11, Postprocedural urethral stricture, male, represented other specific sites of the male urethra, such as the meatus, bulbous urethra, membranous urethra and anterior urethra.
In addition to the new code, code **N99.113** has been revised from postprocedural anterior urethral stricture, to postprocedural anterior bulbous urethral stricture.

**Complications of Stoma of Urinary Tract**

Subcategory **N99.5**, Complications of stoma of urinary tract, has been revised to distinguish between complications associated with an incontinent stoma (one that drains continuously to an external appliance that is periodically emptied) versus a continent stoma (one where the urine accumulates in an internal pouch that is periodically emptied by inserting a catheter).

In addition to the revisions that were made to the existing codes in these subcategories, two new codes have been created in each subcategory to identify: herniation (**N99.523** and **N99.533**) and stenosis (**N99.524** and **N99.534**).

**Question:**
A patient with urinary tract stoma is admitted and diagnosed with an infection of the external incontinent stoma. How is this coded?

**Answer:**
Assign code N99.521, Infection of incontinent external stoma of urinary tract, for infection of the external stoma.

**Ectopic and Molar Pregnancy**

Ten new codes have been created to capture multiple gestation pregnancy with or without co-existing ectopic and intrauterine pregnancies.

An ectopic pregnancy occurs when a fertilized ovum is implanted and develops anywhere outside the uterus. Utilization of assisted reproductive technologies has resulted in an increase in multiple gestational pregnancies in which an intrauterine pregnancy may coexist with an ectopic pregnancy. The fourth character indicates the extrauterine location of the ectopic pregnancy (i.e., abdominal, tubal, ovarian, other, etc.), and the fifth character indicates with or without intrauterine pregnancy.

The codes describing ectopic pregnancy are as follows:
O00.00 Abdominal pregnancy without intrauterine pregnancy
O00.01 Abdominal pregnancy with intrauterine pregnancy
O00.10 Tubal pregnancy without intrauterine pregnancy
O00.11 Tubal pregnancy with intrauterine pregnancy
O00.20 Ovarian pregnancy without intrauterine pregnancy
O00.21 Ovarian pregnancy with intrauterine pregnancy
O00.80 Other ectopic pregnancy without intrauterine pregnancy
O00.81 Other ectopic pregnancy with intrauterine pregnancy
O00.90 Unspecified ectopic pregnancy without intrauterine pregnancy
O00.91 Unspecified ectopic pregnancy with intrauterine pregnancy

Codes in subcategory O09.1, Supervision of pregnancy with history of ectopic pregnancy, were expanded, and a unique subcategory O09.A, Supervision of pregnancy with history of molar pregnancy, has been created. Patients who have a history of ectopic or molar pregnancy are at high risk of having another ectopic pregnancy. Codes O09.1- and O09.A- are assigned during the antenatal period to describe obstetric encounters involving supervision of high risk patients due to past history of ectopic or molar pregnancy.

The revised and new codes follow:

O09.10 Supervision of pregnancy with history of ectopic pregnancy, unspecified trimester
O09.11 Supervision of pregnancy with history of ectopic pregnancy, first trimester
O09.12 Supervision of pregnancy with history of ectopic pregnancy, second trimester
O09.13  Supervision of pregnancy with history of ectopic pregnancy, third trimester

O09.A0  Supervision of pregnancy with history of molar pregnancy, unspecified trimester

O09.A1  Supervision of pregnancy with history of molar pregnancy, first trimester

O09.A2  Supervision of pregnancy with history of molar pregnancy, second trimester

O09.A3  Supervision of pregnancy with history of molar pregnancy, third trimester

**Hypertension in Pregnancy**

New codes have been created in categories O11, Pre-existing hypertension with pre-eclampsia; O12, Gestational [pregnancy-induced] edema and proteinuria without hypertension; O13, Gestational [pregnancy-induced] hypertension without significant proteinuria; O14, Pre-eclampsia; and O16, Unspecified maternal hypertension. Additionally, codes in subcategory O15.0, Eclampsia complicating pregnancy, were revised. The new codes as well as the revised codes update the edema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium section (O10 through O16), and standardize reporting of these codes by incorporating “complicating childbirth” and “complicating the puerperium.”

**Gestational Diabetes Mellitus**

Subcategory O24.4, Gestational diabetes mellitus, has been expanded to identify gestational diabetes controlled by oral hypoglycemic drugs in pregnancy (O24.415), childbirth (O24.425) and the puerperium (O24.435). Prior to the creation of these codes, ICD-10-CM only provided codes for gestational diabetes, diet controlled, and insulin controlled. If a patient with gestational diabetes is treated with both diet and insulin, only the code for insulin controlled is required. If a patient with gestational diabetes is treated with both diet and oral hypoglycemic drugs, only the code for “controlled by oral hypoglycemic drugs” is required.
Maternal Care for Disproportion Due to Other Fetal Deformities

An instructional note has been added under subcategory O33.7, Maternal care for disproportion due to other fetal deformities. The note indicates that the 7th characters 1 through 9 are assigned for fetus identification to classify the fetus for which the complication code applies. The seventh character “0” is applied for multiple gestations when the documentation in the health record is not sufficient to determine the fetus affected and it is not possible to obtain clarification, or when it is not possible to clinically determine which fetus is affected. This note replaces an unintentional deletion that was made in the previous update.

The appropriate code from category O30, Multiple gestation, must also be assigned when assigning code O33.7 with a 7th character of 1 through 9.

Uterine Scar from Previous Surgery

Code O34.21, Maternal care for scar from previous cesarean delivery, has been expanded and new codes created to specify the type of incision used on a previous cesarean delivery. Subsequent pregnancy and delivery management may be determined by the previous type of cesarean incision. Patients with a previous cesarean scar are at an increased risk for dehiscence and uterine rupture depending on the location of the scar. For example, horizontal scars present less of a risk than vertical scars. ICD-10-CM did not previously provide codes that conveyed the type of incision used on previous cesarean delivery.

The new codes are as follows:

- O34.211 Maternal care for low transverse scar from previous cesarean delivery
- O34.212 Maternal care for vertical scar from previous cesarean delivery
- O34.219 Maternal care for unspecified type scar from previous cesarean delivery

In addition, narrative has been added under code O34.29, Maternal care due to uterine scar from other previous surgery, to specifically identify patients
who have a uterine scar from a previous myomectomy. A new history code Z98.891, History of uterine scar from previous surgery, has also been created to report a past history of other transmural uterine incisions in patients who are not currently pregnant.

**Placenta Previa**

Category O44, Placenta previa, has been expanded and new codes created to differentiate between low-lying placenta, partial, and complete placenta previa, and whether or not hemorrhage is present. The default for “placenta previa NOS” and “low lying placenta NOS” is without hemorrhage.

The new and revised subcategories are as follows:

- **O44.0** Complete placenta previa NOS or without hemorrhage
- **O44.1** Complete placenta previa with hemorrhage
- **O44.2** Partial placenta previa without hemorrhage
- **O44.3** Partial placenta previa with hemorrhage
- **O44.4** Low lying placenta NOS or without hemorrhage
- **O44.5** Low lying placenta with hemorrhage

Placenta previa is a condition that occurs when some portion of the placenta is covering the internal cervical os. It may be either complete, where the internal cervical os is completely covered by the placenta, or partial where the internal cervical os is partially covered by the placenta. Both conditions may result in hemorrhage and require close monitoring. In many cases, cesarean delivery is necessary. Clinically, complete placenta previa can complicate the pregnancy, cause early delivery, and result in morbidity. Low lying placenta is a condition where the placenta implants low in the uterus but does not cover the cervix. Although a low lying placenta can also develop hemorrhage, the condition can be managed with conservative treatment, and is less likely to result in early delivery. A partial placenta previa does not typically require extensive follow-up and is more likely to resolve as the pregnancy progresses, prior to delivery.
The American Congress of Obstetricians and Gynecologists (ACOG) requested unique codes to track these conditions separately and to indicate whether hemorrhage is present. ACOG also indicated that in clinical practice these conditions are usually diagnosed, treated and the infant delivered before hemorrhage can occur.

**Third Degree Perineal Laceration During Delivery**

Codes in subcategory O70.2, Third degree perineal laceration during delivery, have been further expanded to subclassify third degree lacerations as grade IIIa, IIIb or IIIc depending on the severity of the trauma.

The American Congress of Obstetricians and Gynecologists (ACOG), through its collaborative hub, the Women’s Health Registry Alliance (reVITALize), initiative worked on the current classification of 3rd and 4th degree perineal lacerations to advance more robust data collection by moving toward standardization with the Royal College of Obstetricians and Gynaecologists.

The reVITALize definition for perineal lacerations is:

1° - Injury to perineal skin only
2° - Injury to perineum involving perineal muscles but not involving anal sphincter
3° - Injury to perineum involving anal sphincter complex
   3a - Less than 50% of external anal sphincter (EAS) thickness torn
   3b - More than 50% external anal sphincter (EAS) thickness torn
   3c - Both external anal sphincter (EAS) and internal anal sphincter (IAS) torn
4° - Injury to perineum involving anal sphincter complex (external anal sphincter (EAS) and internal anal sphincter (IAS) and anal epithelium

The benefits for documenting subclassifications within coding include the ability to risk stratify and/or adjust for measurement as well as the ability to identify cases for chart review and quality improvement. The following are the new ICD-10-CM codes for 3rd degree lacerations:

**O70.20** Third degree perineal laceration during delivery, unspecified
Newborn Affected by Maternal Factors and by Complications of Pregnancy, Labor and Delivery

The application of categories P00-P04, Newborn affected by maternal factors and by complications of pregnancy, labor and delivery, has been revised. The introductory note has been revised as follows:

Note: These codes are for use when the listed maternal conditions are specified as the cause of confirmed morbidity or potential morbidity which have their origin in the perinatal period (before birth through the first 28 days after birth). Codes from these categories are also for use for newborns who are suspected of having an abnormal condition resulting from exposure from the mother or the birth process, but without signs or symptoms, and, which after examination and observation, is found not to exist. These codes may be used even if treatment is begun for a suspected condition that is ruled out.

The phrase “(suspected to be)” has been deleted from all code titles in categories P00, P01, P02, P03 and P04. Concurrently, 14 new codes have been created at category Z05, Encounter for observation and evaluation of newborn for suspected diseases and conditions ruled out. For more information on category Z05, please refer to page 77 of this issue.

Question:
A newborn was admitted following cesarean delivery and was diagnosed with hypermagnesemia. The mother, a 25-year-old, had been diagnosed with pregnancy related eclampsia and was being treated with magnesium sulfate. What is the correct code assignment for hypermagnesemia in a newborn?

Answer:
Since the mother was being treated with magnesium sulfate for eclampsia at the time of delivery, query the provider to determine whether the baby’s hypermagnesemia resulted from the mother’s treatment with magnesium sulfate or
is due to a metabolic problem with the infant. If the baby has a metabolic problem, assign codes P71.8, Other transitory neonatal disorders of calcium and magnesium metabolism, and E83.41, Hypermagnesemia. If, however, the infant’s condition resulted from the mother’s treatment, assign codes P71.8, Other transitory neonatal disorders of calcium and magnesium metabolism, and P04.1, Newborn affected by other maternal medication.

**Question:**
A single liveborn newborn is kept in the hospital an additional two days for evaluation of possible infantile genetic agranulocytosis, which was subsequently ruled out. How should this be coded?

**Answer:**
Assign code Z38.00, Single liveborn infant, delivered vaginally, as the principal diagnosis. In addition, assign code Z05.41, Observation and evaluation of newborn for suspected genetic condition ruled out.

**Low Birth Weight Infant 2,500 Grams and Over**

New codes have been created to describe a newborn light for gestational age 2500 grams and over (P05.09) and newborn small for gestation age, other, which includes newborn small for gestational age, 2500 grams and over (P05.19).

Low birth weight is defined as a birth weight of a liveborn infant of less than 2500 grams, regardless of gestational age. Small for gestational age (SGA) or light-for-dates newborns are those who are smaller in size than normal for the gestational age, most commonly defined as weight below the 10th (or 5th) percentile for the gestational age. Although this cutoff is approximately 2500 grams for a full-term infant, it may be higher, depending on the underlying birth weight distribution. Although the great majority of preterm births (liveborn infant less than 37 weeks of gestation) are associated with low birth weight, at least 10% of newborns in their 37th week of gestation exceed 2,500 grams.
Previously ICD-10-CM did not provide codes for conditions originating in the perinatal period associated with birth weight over 2500 grams. The conditions included in category P05, Disorders of newborn related to slow fetal growth and fetal malnutrition, can be associated with birth weight of 2500 grams or over. This omission limited the ability to identify all infants with fetal growth and malnutrition, fetal growth retardation, and preterm birth, which could lead to misclassification of some affected infants as “normal newborns.”

**Coarctation and Atresia of Aorta**

Code Q25.2, Atresia of aorta, has been expanded to create new codes to specifically describe interruption of aortic arch (Q25.21) and other atresia of aorta (Q25.29). Additionally, “stenosis of aorta” has been added as an inclusion under code Q25.1, Coarctation of aorta. The Agency for Healthcare Research and Quality (AHRQ) had recommended that a specific code be created for interruption of aortic arch as well as revisions to code Q25.1, in order to address clinical differences, for the purposes of epidemiologic research, risk stratification, and outcome measurement.

Congenital malformations of the great arteries include coarctation of the aorta, and interruption of the aortic arch. Most of these defects are found at birth, but are frequently identified in adults. Coarctation of the aorta is a discrete narrowing of the aorta, which typically involves a thoracic location distal to the left subclavian artery, but proximal to the patent ductus arteriosus. The most extreme form of coarctation is an interrupted aortic arch, which may also be called atresia of the aortic arch. In aortic atresia there is no opening from the left ventricle into the aorta. Atresia refers to a missing heart structure, blood cannot move from the left ventricle to the body, and the only source of blood flow is through the ductus arteriosus. Treatment may involve medication to keep the ductus arteriosus from closing. Surgery can re-route blood flow. Aortic atresia usually occurs in combination with other heart anomalies, typically hypoplastic left heart syndrome (HLHS).

Complete aortic interruption usually occurs between the left carotid and left subclavian arteries, but can occur distal to the left subclavian artery or between the innominate artery and left carotid artery, and is usually associated with a large, nonrestrictive ventricular septal defect. Surgical correction is required for both the arch obstruction and the ventricular septal defect.
**Question:**
A 10-day-old male infant was admitted to the hospital for difficulty breathing and poor feeding. He was diagnosed with coarctation of the transverse aorta and underwent surgery. What is the principal diagnosis?

**Answer:**
Assign code Q25.1, Coarctation of aorta, as principal diagnosis.

**Other Congenital Malformations of the Aorta**

Code Q25.4, Other congenital malformations of aorta, has been expanded to uniquely describe specific aortic disorders, such as congenital malformation of aorta NOS (Q25.40); absence and aplasia of aorta (Q25.41); hypoplasia of aorta (Q25.42); congenital aneurysm of aorta (Q25.43); congenital dilation of aorta (Q25.44); double aortic arch (Q25.45); tortuous aortic arch (Q25.46); right aortic arch (Q25.47); anomalous origin of subclavian artery (Q25.48); and other congenital malformations of aorta (Q25.49).

Congenital malformations of the aorta are very common. The aorta is divided into segments according to its anatomic course. It starts from the left ventricle as the ascending aorta, which travels superiorly from the aortic valve and then makes a hairpin turn known as the aortic arch. Congenital aortic atresia and hypoplasia are usually associated with hypoplastic left heart, and involve the aortic valvular orifice and the ascending aorta. Other aortic malformations include congenital aneurysm, dilatation, persistence of the right aortic arch, persistence of the fetal double aortic arch, and anomalies of the origin of the left or right subclavian artery.

These diverse conditions were all previously listed under code Q25.4, Other congenital malformations of aorta. The Agency for Healthcare Research and Quality (AHRQ) requested expansion of code Q25.4 in order to capture additional clinical detail. These new codes classify specific aortic malformations, which will help facilitate research pertaining to epidemiology and outcomes. Additionally, outdated terminology has been revised, such as “aortic sinus” instead of “aortic root” and “convolutions” of the aorta instead of “tortuosity” (or tortuous) to be more consistent with current terminology.
Longitudinal Vaginal Septum

Code Q52.12, Longitudinal vaginal septum, has been further expanded and unique codes have been created. At the request of the American Congress of Obstetricians and Gynecologists (ACOG), the new codes differentiate nonobstructing vaginal septum from obstructing vaginal septum, and also include detail about laterality and microperforation as follows: longitudinal vaginal septum, nonobstructing (Q52.120); longitudinal vaginal septum, obstructing, right side (Q52.121); longitudinal vaginal septum, obstructing, left side (Q52.122); longitudinal vaginal septum, microperforate, right side (Q52.123); longitudinal vaginal septum, microperforate, left side (Q52.124); and longitudinal vaginal septum, unspecified (Q52.129).

A vaginal septum occurs when the female reproductive tract does not develop properly, creating a dividing wall of tissue within the vagina. When lateral fusion defects occur during organogenesis of the reproductive tract, complete duplication of the reproductive tract may occur, leading to uterus didelphys (a uterine malformation where the uterus is present as a paired organ) with a longitudinal vaginal septum that creates two vaginas. However, another presentation includes an oblique orientation of the longitudinal vaginal septum that leads to obstruction of one of the vaginas, while the other vagina is patent.

An obstructing longitudinal vaginal septum occurs with a recognized condition referred to as obstructed hemivagina with ipsilateral renal anomaly (OHVIRA). The obstructing longitudinal vaginal septum may be right- or left-sided, but occurs with greater frequency on the right side, in approximately 65% of cases. It is important to distinguish this anomaly from a nonobstructing longitudinal vaginal septum, which can be seen with other congenital anomalies of the female reproductive tract, such as a uterine septum. Additionally, an obstructing longitudinal septum can contain a microperforation. Management of an obstructing septum versus nonobstructing septum is very different. Screening for concurrent urinary tract anomalies may be indicated since this condition can occur with renal anomalies.

Question:
A 16-year-old female presents with acute abdominal pain and irregular menses for six months. Ultrasound imaging showed a hematometra and enlarged uterus. The patient underwent diagnostic laparoscopy. Gynecological examination under anesthesia revealed a left longitudinal vaginal
septum, creating a blind vaginal pouch. The septum appeared to have scarring over a previously fenestrated or microperforate surface. A large hematocolpometra was seen. An incision was made into the vaginal septum, and blood was evacuated. What are the appropriate code assignments for this case?

**Answer:**
Assign code Q52.124, Longitudinal vaginal septum, microperforate, left side, as the principal diagnosis. Code N89.7, Hematocolpos, should be assigned as an additional diagnosis. For the procedures, assign the following ICD-10-PCS codes:

- **0U9G7ZZ** Drainage of vagina, via natural or artificial opening, for the evacuation of the hematocolpometra.
- **0WJJ4ZZ** Inspection of pelvic cavity, percutaneous endoscopic approach, for the diagnostic laparoscopy.

**Congenital Metatarsus Primus Varus and Metatarsus Adductus**

Code Q66.2, Congenital metatarsus (primus) varus, has been further expanded and new codes created to identify congenital metatarsus primus varus (Q66.21) and congenital metatarsus adductus (Q66.22), at the request of the American Podiatric Medical Association (APMA).

Congenital metatarsus primus varus is deformity of the first metatarsal of the foot. The deformity involves adduction of the first metatarsal towards the midline, resulting in increased metatarsus adductus primus angle, stretch of intermetatarsal ligament and predisposition to hallux abductovalgus or in-toeing.

Congenital metatarsus adductus involves adduction of all the metatarsals, not just the first metatarsal (primus varus). Metatarsus adductus, also known as metatarsus varus, is a common foot deformity noted at birth that causes the front half of the foot, or forefoot, to turn inward.
**Congenital Sacral Dimple**

A new code that describes a congenital sacral dimple (Q82.6) has been created at the request of the American Academy of Pediatrics to uniquely identify this condition. Congenital sacral dimples are indentations in the skin of the lower back. They are a relatively common condition in neonates which may be benign in nature. However, sacral dimples with accompanying nearby tuft of hair or certain types of skin discoloration may indicate a serious underlying abnormality of the spine or spinal cord such as spina bifida or tethered cord syndrome. It is appropriate to code congenital anomalies when identified by the provider, since they can have implications for further evaluation.

**Arterial Tortuosity Syndrome**

A unique code has been created to identify arterial tortuosity syndrome (Q87.82). Arterial tortuosity syndrome (ATS) is an uncommon autosomal recessive connective tissue disorder characterized by tortuosity, elongation and stenosis, of large and medium sized arteries. Tortuosity arises from the abnormal elongation of the arteries, particularly tortuosity of the vessels carrying blood from the heart to the arteries. Other blood vessel abnormalities include constriction, stenosis, aneurysms, and enlarged clusters of vessels underneath the skin.

Complications resulting from ATS can be life-threatening. Rupture or dissection of an aneurysm can result in massive blood loss. Blockage of blood flow to the heart, brain, or lungs can result in acute myocardial infarction, cerebrovascular accident and respiratory issues. Arterial tortuosity syndrome can be life-threatening in childhood as a result of these complications. However, persons with mild ATS can live into adulthood. Other features of ATS include hypermobile joints, joint contractures, and abnormally soft and stretchable skin. Some affected individuals demonstrate arachnodactyly, scoliosis, pectus excavatum or pectus carinatum. Persons with ATS also demonstrate distinctive facial features, including a long narrow face, blepharophimosis with downslanting palpebral fissure; a beaked nose with soft cartilage, a high arched palate, micrognathia, and large ears. The cornea may also be cone-shaped and extremely thin.

Previously ICD-10-CM did not provide a code for ATS, and it was not possible to study the syndrome. This new code will allow researchers to study the syndrome and develop surveillance, management, and treatment guidelines.
Question:
A ten-month-old was admitted to the hospital due to dyspnea. CT scan of the head, neck and chest showed hairpin turns and twists in the aortic arch, carotid and pulmonary arteries. Cardiac catheterization showed severe lengthening, narrowing and twisting of all of the child’s major arteries and severe hypoplasia, or underdevelopment, of the aorta. The geneticist consultant diagnosed arterial tortuosity syndrome (ATS). What is the appropriate ICD-10-CM diagnosis code for ATS?

Answer:
Assign code Q87.82, Arterial tortuosity syndrome, for the ATS.

National Institutes of Health Stroke Scale (NIHSS) Scores

A new subcategory (R29.7-) has been created to report the National Institutes of Health Stroke Scale (NIHSS) scores. The NIHSS scale is a clinical assessment tool to evaluate and document neurological status in acute stroke patients. The NIHSS is a 15-item neurologic examination stroke scale used to evaluate the effect of acute cerebral infarction on the levels of consciousness, language, neglect, visual-field loss, extraocular movement, motor strength, ataxia, dysarthria, and sensory loss.

Codes from R29.7- are intended to be used as secondary codes as the acute cerebral infarction (I63-) should be coded first. The codes discretely identify NIHSS scores from 0 to 42. At a minimum, report the initial score documented. If desired, a facility may choose to capture multiple stroke scale scores.

Code assignment for the NIHSS may be based on medical record documentation from clinicians who are not the patient’s provider (i.e., physician or other qualified healthcare practitioner legally accountable for establishing the patient’s diagnosis), since this information is typically documented by other clinicians involved in the care of the patient. However, the associated diagnosis (such as stroke) must be documented by the patient’s provider. If there is conflicting medical record documentation, either from the same clinician or different clinicians, the patient’s attending provider should be queried for clarification.
**Question:**
A 70-year-old male patient was admitted with acute stroke. The physician documented an NIHSS score of 30. How should this be coded?

**Answer:**
Assign code I63.9, Cerebral infarction, unspecified as the principal diagnosis. Code R29.730, NIHSS score 30, is assigned as an additional diagnosis.

**Microscopic Hematuria**

Code R31.2, has been expanded to uniquely identify asymptomatic microscopic hematuria (R31.21) and other microscopic hematuria (R31.29). Prior to this change, microscopic hematuria was classified to code R31.2, Other microscopic hematuria. The American Urological Association requested a unique code for asymptomatic microscopic hematuria.

Hematuria is the presence of red blood cells in the urine. Gross hematuria is the term used to describe blood in the urine that can be seen with the naked eye, while microscopic hematuria is detected by the dipstick method or microscopic examination of the urinary sediment. In current urologic practice, asymptomatic microscopic hematuria (AMH) is a common condition for urology referral and evaluation. There are many causes of AMH including urinary tract infection, urethral calculus, benign prostatic hyperplasia and bladder tumor.

**Question:**
A 48-year-old female patient was seen by her primary care physician for her annual exam, which included laboratory work. There were no abnormal findings during the visit; however, three days later, after a lab finding of hematuria, the primary care physician referred the patient for outpatient urology consultation with a diagnosis of “asymptomatic microscopic hematuria.” What is the correct code assignment for asymptomatic microscopic hematuria?

**Answer:**
Assign code R31.21, Asymptomatic microscopic hematuria.
Difficulties with Micturition

Code R39.19, Other difficulties with micturition, has been expanded to uniquely identify the need to immediately re-void (R39.191), position dependent micturition (R39.192), and other difficulties with micturition (R39.198). Prior to this change, micturition disorder was classified to code R39.19. The American Urological Association (AUA) requested new codes to uniquely identify these specific difficulties with micturition.

Voiding dysfunction means that the bladder is not able to empty appropriately and can be characterized by needing to re-void immediately after urinating, straining to urinate, spontaneous leaking after urination, and needing to assume specific positions in order to spontaneously urinate or to improve bladder emptying (i.e. leaning forwards or backwards on the toilet seat or voiding in the semi-standing position).

**Question:**
A 68-year-old male was seen by his primary care physician with complaints of needing to stand in creative positions in order to successfully urinate, then immediately feeling the need to urinate again. The provider diagnosed position dependent micturition with the need to immediately re-void. What is the correct code assignment for the patient’s condition?

**Answer:**
Assign code R39.192, Position dependent micturition, and code R39.191, Need to immediately re-void, for position dependent micturition with the need to immediately re-void.

**Question:**
A 57-year-old male patient complained of leaking out after he urinates. The provider diagnosed the patient with post-void dribbling/post-micturition dribbling. What is the correct code assignment for this condition?

**Answer:**
Assign code R39.198, Other difficulties with micturition, for post-void dribbling/post-micturition dribbling.
Chronic Bladder Pain

Code R39.8 has been expanded to uniquely identify chronic bladder pain (R39.82). Prior to this change, bladder pain was indexed to code R39.89, Other symptoms and signs involving the genitourinary system. The American Urological Association (AUA) requested a unique code to distinguish patients with chronic bladder pain.

Several different bladder conditions can cause pain. The three most common causes of bladder pain are interstitial cystitis, urinary tract infection, and bladder cancer. Chronic bladder pain is distinguished by chronic pelvic pain, and discomfort or pressure related to the urinary bladder along with another urinary symptom such as urgency or frequency when there is no identifiable etiology.

Question:
A 62-year-old male patient complained of pelvic pain and pressure, along with urinary frequency. After diagnostic workup, the provider documented chronic bladder pain, etiology unknown. What is the correct code assignment for chronic bladder pain?

Answer:
Assign code R39.82, Chronic bladder pain, for chronic bladder pain with unknown etiology.

Glasgow Coma Scale

Subcategory R40.24-, Glasgow coma scale, total score, will require a 7th character to indicate when the scale was recorded. The 7th characters are similar to those already in existence for the Glasgow coma scale individual scores (R40.21- to R40.23-):

- 0 - unspecified time
- 1 - in the field [EMT or ambulance]
- 2 - at arrival to emergency department
- 3 - at hospital admission
- 4 - 24 hours or more after hospital admission

A code from subcategory R40.24 should be assigned when only the total coma score is documented.
In addition, the *ICD-10-CM Official Guidelines for Coding and Reporting* have been revised so that the coma scale codes may also be used to assess the status of the central nervous system for other nontrauma conditions, for example monitoring patients in the intensive care unit regardless of the medical condition. Prior to this change, the Official Coding Guidelines specified that the coma scale codes (R40.2-) could only be used in conjunction with traumatic brain injury codes, acute cerebrovascular disease or sequelae of cerebrovascular disease codes.

**Prediabetes**

A unique code has been created to describe prediabetes ([R73.03](#)). Previously, prediabetes did not have its own code, but was an inclusion term at code R73.09, Other abnormal glucose.

Prediabetes means that blood sugar levels are higher than normal, but not high enough to be classified as type 2 diabetes. According to the American Diabetes Association (ADA), prediabetes is defined as having: impaired fasting glucose, impaired glucose tolerance, or a Hemoglobin A1c value of 5.7-6.4%.

**Question:**
A 45-year-old morbidly obese male was seen in the physician’s office following impaired fasting glucose test results, and was diagnosed with prediabetes. The patient was referred to a dietitian for nutrition and weight loss assistance. What is the correct code assignment for prediabetes?

**Answer:**
Assign code R73.03, Prediabetes, for this follow-up visit, where the patient is diagnosed with prediabetes.

**Bacteriuria**

Code R82.7, Abnormal findings on microbiological examination of urine, has been expanded to uniquely identify bacteriuria ([R82.71](#)). In addition, a new code has been created for other abnormal findings on microbiological examination of urine ([R82.79](#)).

Bacteriuria refers to the presence of bacteria in a microscopic examination of the urine. In infants and young children, bacteriuria may lead to more detailed evaluations of the genitourinary system.
Abnormal Findings on Diagnostic Imaging

Code R93.4, Abnormal findings on diagnostic imaging of urinary organs, has been expanded to distinguish abnormal radiologic findings on diagnostic imaging of renal pelvis, ureter or bladder (R93.41), right kidney (R93.421), left kidney (R93.422), unspecified kidney (R93.429), and other urinary organs (R93.49). The American Urological Association requested expansion of these codes to uniquely distinguish abnormal findings found in diagnostic imaging of the kidney.

Abnormal Prostate Specific Antigen (PSA) Levels

Code R97.2, Elevated prostate specific antigen [PSA], has been expanded to create separate codes to distinguish elevated PSA from a rise in PSA following treatment. Codes R97.20, Elevated prostate specific antigen [PSA]), and R97.21, Rising PSA following treatment for malignant neoplasm of prostate, are included in category R97, Abnormal tumor markers.

The first step in treatment for a patient with an elevated PSA level is to attempt to suppress that level with hormone therapy or a similar therapy, such as removal of the testicles. When the PSA drops due to hormone therapy, the tumor is considered “hormone sensitive.” This will help physicians identify those patients who may require other therapies. The creation of these new codes will help track patients whose PSA is rising after therapeutic treatment which will indicate that the neoplasm is not “hormone sensitive.”

Fracture of Skull and Facial Bones

The following subcategories have been expanded to allow the ability to report laterality for these types of fractures of the skull and facial bones:

S02.1 Fracture of base of skull
S02.3 Fracture of orbital floor
S02.4 Fracture of malar, maxillary, and zygoma bones
S02.6 Fracture of mandible
S02.8 Fracture of other specified skull and facial bones
The occipital bone is a trapezoid shaped bone found at the lower back area of the cranium and is comprised of four parts: the basilar part, two condylar parts, and the squamous part. Occipital fractures may be further specified as type I, type II or type III fractures, with codes for left, right or unspecified side.

Fractures of the mandible are further broken down to allow the capturing of fractures of the condylar process, subcondylar process, coronoid process, ramus, angle, symphysis or alveolus of the mandible. Codes will now be available to capture the right, left or unspecified side of these mandibular sites.

### Dislocations and Sprains of Jaw

Subcategories S03.0, Dislocation of jaw, and S03.4, Sprain of jaw, have been expanded to allow the reporting of laterality of dislocations and/or sprains of the jaw. Codes from subcategory S03.0 include dislocations of the jaw, mandible or temporomandibular joint. The American Academy of Oral and Maxillofacial Surgeons (AAOMS) proposed adding codes to be able to report dislocation and sprain laterality of the temporomandibular joint as there are codes to specify laterality for fractures of other bones, joints and ligaments.

### Concussion

Codes in subcategory S06.0, Concussion, identifying loss of consciousness greater than 30 minutes (6th character of 2, 3, 4, 5, 6, 7 and 8) have been deleted. The excludes1 note has also been revised as follows:

*From* concussion with other intracranial injuries classified in category S06- code to specified intracranial injury

*To* concussion with other intracranial injuries classified in subcategories S06.1- to S06.6-, S06.81- and S06.82- code to specified intracranial injury

In 2013, the *Report to Congress on Traumatic Brain Injury in the United States: Understanding the Public Health Problem among Current and Former Military Personnel* was published by the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), the Department of Defense (DoD), and the Department of Veterans Affairs (VA). The report recommended revision of the intracranial injury code set to improve the accuracy of disease coding consistent with accepted case definitions. Previously, codes in subcategory S06.0 described concussion...
with or without loss of consciousness (LOC) to differentiate the severity of the concussion with the range extending from no loss of consciousness to greater than 24 hours including that with death. Mild traumatic brain injury (TBI) is synonymous with concussion. Moderate and severe TBI are not classified as concussion or post-concussive syndrome, and were being inappropriately labeled as concussion.

**Question:**
How should a case documented as concussion with loss of consciousness of 45 minutes be coded?
There was no documentation of intracranial injury.

**Answer:**
Assign code S06.0X9, Concussion with loss of consciousness of unspecified duration, with the appropriate 7th character.

**Other Fracture of Foot**

Twenty-one new codes have been created at a new sub-subcategory S92.81, Other fracture of foot, to identify other fracture of right foot, left foot and unspecified foot. This new sub-subcategory includes sesamoid fracture of the foot. These codes require a 7th character to identify initial encounter (“A” or “B”), subsequent encounter (“D,” “G,” “K” or “P”) and sequela (“S”).

**Salter-Harris Fractures and Other Physeal Fractures of Foot and Ankle**

New codes have been created to identify Salter-Harris physeal fractures and other physeal fractures of the ankle and foot. These codes are classified in category S99, Other and unspecified injuries of foot and ankle.

Physeal fractures are fractures that go through the growth plate in growing young people. Physeal fractures are classified into Salter-Harris fracture types (they are named for the authors who first described these fractures). Salter-Harris physeal fractures are classified as type I, type II, type III, type IV and type V.

Type I Salter-Harris physeal fractures follow the growth plate, separating the epiphysis from the metaphysis in long bones. These fractures are more common in younger childhood.
Type II Salter-Harris physeal fractures go through the growth plate and metaphysis (toward the longer shaft of the bone from the growth plate), but does not affect the epiphysis (the end of the bone). Type II Salter-Harris fractures are the most common type of physeal fractures and occur more often in children older than 10 years. Healing is rapid with this type of fracture and growth is not usually affected.

Fractures that go through the growth plate and epiphysis, but do not involve the metaphysis are Salter-Harris type III physeal fractures. These fractures usually happen after the age of 10, and when the growth plate is partially fused. Type III fractures often cause chronic disability, affecting the articular surface of the bone. Surgery is often needed.

Type IV Salter-Harris physeal fractures go across the growth plate and affects both the metaphysis and the epiphysis. These fractures may happen at any age. Type IV fractures may affect growth, as well they may involve the articular surface of the bone and may cause chronic disability. Surgery may be needed for these types of fractures.

Other physeal fractures are less common. A Salter-Harris fracture type V involves compression of the growth plate, which can destroy growth potential and lead to unequal limb lengths or abnormal limb angles.

ICD-10-CM codes already exist for a number of physeal fracture types involving the long bones of the limb. However, because these fractures may also affect the growth plates of various bones in the foot, including the calcaneus, the metatarsals, and the phalanges, additional codes were created to specifically represent these types of fractures.

Salter-Harris physeal fractures of foot and ankle are classified as follows:

- **Type I**: Subcategories **S99.01, S99.11** and **S99.21**
- **Type II**: Subcategories **S99.02, S99.12**, and **S99.22**
- **Type III**: Subcategories **S99.03, S99.13**, and **S99.23**
- **Type IV**: Subcategories **S99.04, S99.14**, and **S99.24**

Type V and other physeal fractures of the foot and ankle are classified in subcategories **S99.09, S99.19**, and **S99.29**.
Complications of Cardiac and Vascular Prosthetic Devices, Implants and Grafts

Two new codes have been created to uniquely differentiate stenosis of coronary artery stent (T82.855) from stenosis of peripheral vascular stent (T82.856). These codes include in-stent stenosis as well as restenosis. Codes T82.857 and T82.858 have been revised accordingly to identify stenosis of “other cardiac prosthetic devices, implants and grafts” (T82.857) and “other vascular prosthetic devices, implants and grafts” (T82.858).

In addition, the code titles in sub-subcategories T82.81, T82.82, T82.83, T82.84 and T82.86 have been changed from “of” to “due to” as shown in the example below:

Revise from T82.817 Embolism of cardiac prosthetic devices, implants and grafts
Revise to T82.817 Embolism due to cardiac prosthetic devices, implants and grafts

Complications of Genitourinary Prosthetic Devices, Implants, and Grafts

Category T83, Complications of genitourinary prosthetic devices, implants, and grafts has been revised at the request of the American Urological Association (AUA). These changes are intended to capture current terminology as well as to better represent complications of certain urinary catheters and other devices that are not currently represented in ICD-10-CM.

Revisions and the addition of new codes at subcategory T83.0, Mechanical complication of urinary catheter, were made to capture the correct diagnosis coding of all urinary catheters, not limited to the term “indwelling.” Terminology used in the practice of urology specifically alludes to the urethral catheter as indwelling. All other catheters are related to specific organs in which they reside while in the body.

Subcategory T83.1, Mechanical complication of other urinary devices and implants, was revised and new codes added to account for breakdown, displacement and other mechanical complications of all existing urinary devices and implants that are available.

Two new codes were created at subcategory T83.2, Mechanical complication of graft of urinary organ, to identify erosion (T83.24) and exposure (T83.25)
of grafts used in the urinary system. Urinary grafts, such as a pubovaginal sling using rectus fascia or fascia lata, can erode to surrounding tissues or expose into an organ. This can cause pain, inflammation and infection.

Changes were made and new codes created at subcategory T83.4, Mechanical complication of devices, prosthetics, implants and grafts of genital tract, to allow coding complications of a testicular prosthesis implant.

Subcategories T83.5, Infection and inflammatory reaction due to prosthetic device, implant and graft in urinary system; and T83.6, Infection and inflammatory reaction due to prosthetic device, implant and graft in genital tract, were revised and new codes created to maintain consistency with other subcategories of T83 and to better capture infection and inflammation due to prosthetic devices, implants, and grafts, both in the urinary system and the genital tract.

The creation of new codes and revisions at subcategory T83.7, Complications due to implanted mesh and other prosthetic materials, to surrounding organ or tissue, were made to capture erosion (T83.71-) and exposure (T83.72-) specific to the use of urethral mesh and urethral/ureteral bulking agents. In addition, code T83.711 has been revised and now is specific only for vaginal mesh. All other types of mesh and prosthetic materials have been reclassified to codes T83.718/T83.728 and T83.719/T83.729, respectively.

Complications of Other Internal Prosthetic Devices, Implants and Grafts

A number of changes were made to the codes in category T85, Complications of other internal prosthetic devices, implants and grafts. The existing codes for these complications were found to be lacking in detail for data analysis, tracking, and other classification measures.

Codes in subcategory T85.1, Mechanical complication of implanted electronic stimulator of nervous system, were revised to differentiate complications of neurostimulators as either mechanical complications of the electrodes (leads) or mechanical complications of the generator. The existing codes were revised along with the creation of new codes to specify complications of the electrode (lead) only, and new codes were created to specify complications of the generator.

Subcategory T85.6, Mechanical complication of other specified internal and external prosthetic devices, implants and grafts, was revised and new codes
created to specifically identify mechanical complications of other nervous system devices beyond ventricular shunts and neurostimulators. In addition, codes in this subcategory were revised to clarify that these codes can be applied to both cranial and spinal catheters in the epidural, subdural and subarachnoid spaces because implanted intrathecal infusion catheters are subarachnoid.

Codes in subcategory T85.7 identify infections and inflammatory reactions due to other internal prosthetic devices, implants, and grafts. Infections of the nervous system, particularly of the brain and spinal cord, can be very serious. However, presently there are no specific codes for infection and inflammatory reaction due to nervous system devices. These conditions were indexed to code T85.79, Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts. Because there was no specificity for nervous system devices in this code, new codes were created to provide this detail as well as to further specify the condition as due to a nervous system device.

New codes were created in subcategory T85.8, Other specified complications of internal prosthetic devices, implants and grafts, not elsewhere classified, because currently there is no way to identify other specified complications of nervous system devices. In addition, erosion and breakdown of a subcutaneous device pocket has been specifically added as an inclusion term at subcategory T85.89, Other specified complication of internal prosthetic devices, implants and grafts, not elsewhere classified. This is a known complication of neurostimulators and intrathecal pumps.

**Unintended Awareness under General Anesthesia**

Subcategory T88.5, has been expanded to uniquely identify unintended awareness under general anesthesia during a procedure (T88.53), and subcategory Z92.8, has been expanded to uniquely identify patients with history of unintended awareness under general anesthesia during a procedure (Z92.84).

Although rare, a patient can become conscious during surgery and remember what occurred. This is referred to as “intraoperative awareness,” or anesthesia awareness, and is estimated to occur about 1 to 2 times per every 1,000 uses of general anesthesia. Although most patients do not experience pain, the experience can be bothersome, as some patients may need counseling to address anxiety. According to the American Society of Anesthesiologists, awareness during surgery applies only to patients who are under general anesthesia.
Question:
The provider documented that immediately following inpatient surgery his patient reported being able to recall sounds during the procedure. The provider diagnosed the patient with unintended awareness under general anesthesia. What is the correct code assignment for this diagnosis?

Answer:
Assign codes T88.53XA, Unintended awareness under general anesthesia during procedure, initial encounter; and T41.205A, Adverse effect of unspecified general anesthetics, initial encounter.

Car Occupant Injured in Collision with Fixed or Stationary Object

Specific codes distinguishing “driver/passenger of sport utility vehicle (SUV)” and “driver/passenger of other type car” were deleted in category V47, Car occupant injured in collision with fixed or stationary object. It was determined that there is no need to have separate codes to identify “sport utility vehicle” versus “other type of car” in this category. The definition of a car (a four-wheeled motor vehicle designed primarily for carrying up to 7 persons—excluding vans and minivans) includes SUVs. Any car occupant injured in a collision with a fixed or stationary object is coded in category V47.

Contact with Other Sharp Objects

The title of category W26 has been revised to “contact with other sharp objects.” The previous title was “contact with knife, sword or dagger.” Three new codes have been created in this category as follows: contact with edge of stiff paper; includes paper cut (W26.2); contact with other sharp object(s), not elsewhere classified (W26.8); and contact with unspecified sharp object(s) (W26.9).

Overexertion

A new category of external cause codes has been created, X50, Overexertion and strenuous or repetitive movements, to allow for the identification of the type of movement (mechanism) associated with an injury. Unique codes have been created to identify overexertion from strenuous movement or load
(X50.0-), overexertion from prolonged static or awkward postures (X50.1-), overexertion from repetitive movements (X50.3-) and other and unspecified overexertion or strenuous movements or postures (X50.9-).

**Question:**
Is there a “hierarchy” for the E codes in category X50, Overexertion and strenuous or repetitive movements, when more than one might apply? For example, if a cumulative trauma resulted from an activity that was both a repetitive motion and a strenuous movement (e.g., chopping wood and lifting heavy loads), which code would take precedence, X50.3, Overexertion from repetitive movements, or X50.0, Overexertion from strenuous movement or load?

**Answer:**
It is appropriate to assign both codes. There is no rule or hierarchy for sequencing these external cause codes.

**Question:**
The patient was seen in the emergency department (ED) after suffering a back strain from lifting a heavy patient as part of his employment as a caregiver. How should this be coded?

**Answer:**
Assign code S39.012A, Strain of muscle, fascia and tendon of lower back, initial encounter, as the first listed code. Assign codes X50.0XXA, Overexertion from strenuous movement or load, initial encounter; Y93.F2, Activity, caregiving, lifting; and Y99.0, Civilian activity done for income or pay, to report the external cause of morbidity.

**Choking Game**

Code Y93.8, has been expanded to uniquely identify the choking game (Y93.85). Prior to this change, code Y93.8, Activities, other specified, was assigned for the choking game.
The “choking game,” also known as passout game, blackout game, fainting game, knockout, flat line and other terms, is a strangulation activity to achieve a brief euphoria or high-like sensation related to hypoxia. The game involves some children and adolescents choking themselves or each other, by cutting off circulation to the carotid artery with their hands or a noose, which may be an article of clothing, a rope, belt, hands, or holding one’s breath. There is a potential of loss of consciousness and possible injury due to falling. There is also a potential for hypoxic injury, and death may also occur. Those who participate in this game may have disorientation, petechiae of the face, marks on the neck, headache, hostility, irritability, and bloodshot eyes. Some may even experience seizure and coma. A request was made to create a specific code to track these cases in order to better educate children, adolescents, parents and health care providers of the risk of death and serious injury that can occur from this game.

**Question:**
A 16-year-old female patient was brought to the emergency department (ED). The ED physician documented that she was disoriented and also noted that she had bloodshot eyes and visible signs of marks around her neck. Once the patient was stable, she admitted that she played the choking game, allowing one of her close friends to tighten a scarf around her neck to help her “feel good” because she thought this was a better option than smoking marijuana, since marijuana would show up on drug tests. The provider’s final diagnosis is disorientation due to intentional choking while trying to get high. What is the correct code assignment for disorientation as a result of playing the choking game?

**Answer:**
Assign code R41.0, Disorientation, unspecified, followed by code Y93.85, Activity, choking game.

**Question:**
A 15-year-old male was brought to the ED by ambulance after passing out. His cousin told the nurse that they played the pass out game by choking each other because they wanted to get high. The provider documented asphyxiation due to playing the choking game. What is the correct code assignment for this condition?
Answer:
Assign code T71.191A, Asphyxiation due to mechanical threat to breathing due to other causes, accidental, initial encounter, followed by code Y93.85, Activity, choking game.

Z Codes Update

Effective October 1, 2016, Z codes have been deleted and new Z codes have been created as noted below.

Status
Codes Z19.1, Hormone sensitive malignancy status, and Z19.2, Hormone resistant malignancy status, have been created to identify hormone sensitivity and resistant malignancy status. These codes are intended to be secondary diagnoses as the code for the malignant neoplasm should be coded first.

Codes in subcategory Z22.5, Carrier of viral hepatitis, which specifically identified carriers of unspecified viral hepatitis, hepatitis B, hepatitis C and other viral hepatitis have been deleted. Instead, carriers of viral hepatitis are now classified under category B18, Chronic viral hepatitis. The revision is made due to a change in clinical understanding and to align with the World Health Organization’s reclassification. The concept of a “healthy carrier” of viral hepatitis is no longer considered clinically accurate. Instead, this condition is considered a form of chronic viral hepatitis.

Code Z79.84, Long term (current) use of oral hypoglycemic drugs, has been created to report the long term use of oral hypoglycemic or antidiabetic drugs. The code will allow better tracking of diabetes mellitus controlled using oral medications.

Two new codes have been created at subcategory Z98.8, Other specified postprocedural states. Code Z98.891, History of uterine scar from previous surgery, is used to report a history of other transmural uterine incisions in a patient who is not currently pregnant. Despite the code title, Z98.891 is a status code as it indicates the previous uterine surgery, which may impact the handling of future pregnancies. For a patient who is currently pregnant, a code from subcategory O34.2 should be used instead of Z98.891. Code Z98.890 is for other specified postprocedural states.
History (of)
Two new family history codes and one new personal history code have been created as noted below.

Code **Z83.42** has been created to report a family history of familial hypercholesterolemia. Familial hypercholesterolemia (FH) is a common, autosomal dominant genetic disease. For additional information on FH, please refer to page 13 of this issue.

Code **Z84.82, Family history of sudden infant death syndrome**, has been created to allow tracking of this family history. Preventing sudden infant death syndrome (SIDS) is an important public health priority. According to the Centers for Disease Control and Prevention (CDC), some analysis has shown there to be an increased risk of SIDS occurring in siblings and twins, though it is difficult to determine if the increased risk is due to environmental factors or biological factors.

Code **Z92.84, Personal history of unintended awareness under general anesthesia**, has been created to describe a personal history of having experienced unintended awareness under general anesthesia in the past.

Observation
Fourteen new codes have been created at category Z05, Encounter for observation and evaluation of newborn for suspected diseases and conditions ruled out. This category is to be used for newborns, within the neonatal period (the first 28 days of life), who are suspected of having an abnormal condition **unrelated** to exposure from the mother or the birth process, but without signs or symptoms, and which, after examination and observation, is ruled out.

Unique codes identify the type of condition suspected, such as cardiac (Z05.0), infectious (Z05.1), neurological (Z05.2), respiratory (Z05.3), genetic (Z05.41), metabolic (Z05.42), immunologic (Z05.43), gastrointestinal (Z05.5), genitourinary (Z05.6), skin and subcutaneous tissue (Z05.71), musculoskeletal (Z05.72), connective tissue (Z05.73), other (Z05.8) or unspecified (Z05.9).

Aftercare
Code **Z51.6, Encounter for desensitization to allergens**, has been created to report encounters for allergen desensitization or hypo-sensitization therapy.
Encounters for Obstetrical and Reproductive Services

Category Z30, Encounter for contraceptive management, has been expanded with new codes created to further refine encounters for initial prescription and surveillance of vaginal ring hormonal contraceptive, transdermal patch hormonal contraceptive device and implantable subdermal contraceptive as follows:

- **Z30.015** Encounter for initial prescription of vaginal ring hormonal contraceptive
- **Z30.016** Encounter for initial prescription of transdermal patch hormonal contraceptive device
- **Z30.017** Encounter for initial prescription of implantable subdermal contraceptive
- **Z30.44** Encounter for surveillance of vaginal ring hormonal contraceptive device
- **Z30.45** Encounter for surveillance of transdermal patch hormonal contraceptive device
- **Z30.46** Encounter for surveillance of implantable subdermal contraceptive

Category Z33, Pregnant state, has been expanded to identify a pregnant patient who is a gestational carrier (Z33.3). Gestational carrier refers to a woman who agrees to bear a genetically unrelated child from an embryo created by in vitro fertilization (IVF) implanted in her uterus. The pregnancy is carried for an individual or couple who intend(s) to be the legal and rearing parent(s), referred to as the intended parent(s). The IVF process used to create the embryo can use egg and sperm from the intended parents, or donor egg/sperm may be used. In addition, code **Z31.7, Encounter for procreative management and counseling for gestational carrier**, has been created to identify patients undergoing counseling and evaluation prior to the assisted reproductive technology procedure to become a gestational carrier.

Miscellaneous

Seven new codes have been created at a new category Z29, Encounter for other prophylactic measures. Four of the new codes are for encounters for prophylactic immunotherapy, such as prophylactic immunotherapy for respiratory syncytial virus (Z29.11), antivenin (Z29.12), Rho(D) immune
globulin (Z29.13), and rabies immune globulin (Z29.14). The remaining new codes are Z29.3, Encounter for prophylactic fluoride administration; Z29.8, Encounter for other specified prophylactic measures; and Z29.9, Encounter for prophylactic measures, unspecified. Category Z29 excludes desensitization to allergens (Z51.6) and prophylactic surgery (Z40.-).

Four new codes have been created to identify procedures converted to open procedures. No ICD-10-CM codes existed to identify procedures using a scope that was converted to an open procedure. The new codes listed below may only be used as additional codes.

- **Z53.31** Laparoscopic surgical procedure converted to open procedure
- **Z53.32** Thoracoscopic surgical procedure converted to open procedure
- **Z53.33** Arthroscopic surgical procedure converted to open procedure
- **Z53.39** Other specified procedure converted to open procedure
New/Revised ICD-10-PCS Procedure Codes

Due to the large number of new and revised procedure codes, the addenda changes demonstrating the specific revisions to the code titles are not included in the explanations below. Rather a summary of the changes is provided. The FY 2017 ICD-10-PCS updates, including the complete list of FY 2017 ICD-10-PCS code titles, addenda, and a conversion table showing changes from FY 2016 are available on the Centers for Medicare & Medicaid Services (CMS) website at: https://www.cms.gov/Medicare/Coding/ICD10/2017-ICD-10-PCS-and-GEMs.html

Over 3,800 new ICD-10-PCS codes are being implemented on October 1, 2016 and about 500 codes are being revised. The high volume of new and revised codes partly reflects lifting the lengthy partial code freeze that has been in effect since 2011. Otherwise, the volume of codes is related to the exponential effect of the code table structure in ICD-10-PCS. When a single new value is added to a row within a code table, it creates multiple new codes when combined with the existing values for other characters within that row.

The majority of new and revised codes are in Section 0-Medical and Surgical. There are also a small number of changes in Sections 3-Administration, 4-Measurement and Monitoring, 6-Extracorporeal Therapies, and X-New Technology. The specific changes are described below by section. Additions are shown as underlined, deletions are shown as strikeouts in the excerpts from the ICD-10-PCS Tables below.

Section 0-Medical and Surgical

Thoracic Aorta, Ascending/Arch and Descending

Changes to the Medical and Surgical Section involve both new codes and revised codes. To provide greater clinical detail on the specific segment of the thoracic aorta being treated, this body part value has now been revised. New body part value “X” is specifically defined for the ascending and arch segments of the thoracic aorta. The existing body part value “W” was revised to include only the descending segment of the thoracic aorta. Prior to this change the thoracic aorta was defined with the body part “W.”

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Body Part</td>
<td>Body Part</td>
</tr>
<tr>
<td>W Thoracic Aorta</td>
<td>W Thoracic Aorta, Descending</td>
</tr>
<tr>
<td></td>
<td>X Thoracic Aorta, Ascending/Arch</td>
</tr>
</tbody>
</table>
The thoracic aorta extends from the aortic valve to the diaphragm (the portion below the diaphragm is the abdominal aorta). The thoracic aorta has three anatomic segments: 1) the ascending aorta, which runs from the aortic valve to the arch; 2) the arch, which gives rise to the precerebral arteries supplying the neck and the head, including the brachiocephalic (innominate) artery, left common carotid artery, and left subclavian artery; and 3) the descending thoracic aorta, which runs from the arch to the diaphragm.

Because the ascending thoracic aorta is contiguous with the aortic valve, procedures on this segment are more complex and carry higher risk. The same is true for procedures on the aortic arch because of its curved configuration and particularly because measures must be taken with the origins of the precerebral arteries to preserve blood flow to the brain. The descending thoracic aorta, in contrast, is relatively straight and its branches supply less critical sites. It is not uncommon to see hybrid procedures in which pathology in the descending thoracic aorta is treated via an endovascular approach while pathology in the arch is treated via an open approach.

This change impacts the following procedure code tables:

- 021 Bypass of Heart and Great Vessels
- 025 Destruction of Heart and Great Vessels
- 027 Dilation of Heart and Great Vessels
- 02B Excision of Heart and Great Vessels
- 02C Extirpation of Heart and Great Vessels
- 02H Insertion of Heart and Great Vessels
- 02N Release of Heart and Great Vessels
- 02Q Repair of Heart and Great Vessels
- 02R Replacement of Heart and Great Vessels
- 02S Reposition of Heart and Great Vessels
- 02U Supplement of Heart and Great Vessels
- 02V Restriction of Heart and Great Vessels
Coronary Artery, Number of Arteries

The body part values for specifying procedures on the coronary arteries were revised from the number of sites to the number of arteries.

<table>
<thead>
<tr>
<th>From</th>
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<tbody>
<tr>
<td>Body Part</td>
<td>Body Part</td>
</tr>
<tr>
<td>0 Coronary Artery, One Site</td>
<td>0 Coronary Artery, One Artery</td>
</tr>
<tr>
<td>1 Coronary Artery, Two Sites</td>
<td>1 Coronary Artery, Two Arteries</td>
</tr>
<tr>
<td>2 Coronary Artery, Three Sites</td>
<td>2 Coronary Artery, Three Arteries</td>
</tr>
<tr>
<td>3 Coronary Artery, Four or More Sites</td>
<td>3 Coronary Artery, Four or More Arteries</td>
</tr>
</tbody>
</table>

According to the *ICD-10-PCS Official Guidelines for Coding and Reporting*, “The coronary arteries are classified as a single body part that is further specified by number of arteries treated.” The coronary arteries supply blood to the heart muscle itself. Coronary circulation consists of two main arteries, right and left, each with several branches:

- Right coronary artery (RCA)
- Right marginal
- Right posterior descending
- Left main coronary artery (LMCA)
- Left anterior descending branch (LAD)
- Diagonal
- Septal
- Left circumflex (LCX)
- Obtuse marginal (OM)
- Posterior descending
- Posterolateral

Procedures may involve any of these coronary arteries and branches and these branches are counted as coronary arteries when coding coronary artery bypass and other coronary interventional procedures.

This change impacts the following procedure code tables:

021 Bypass of Heart and Great Vessels
027 Dilation of Heart and Great Vessels
02C Extirpation of Heart and Great Vessels
Question:
The patient was admitted for coronary artery bypass graft (CABG) for treatment of severe coronary artery disease. The procedure consisted of aortocoronary bypass graft to the posterior descending branch of the right coronary artery via a radial artery graft; aortocoronary artery bypass graft to the obtuse marginal branch of the left circumflex coronary artery and diagonal branch of the left anterior descending coronary artery via saphenous vein grafts; and left internal mammary artery bypass of the left anterior descending coronary artery. What are the procedure codes?

Answer:
Assign the following ICD-10-PCS codes:

02100AW  Bypass coronary artery, one artery from aorta with autologous arterial tissue, open approach, for the aortocoronary bypass graft to the posterior descending branch of the right coronary artery using a radial artery graft

021109W  Bypass coronary artery, two arteries from aorta with autologous venous tissue, open approach, for the aortocoronary artery bypass graft to the obtuse marginal branch of the left circumflex coronary artery and diagonal branch of the left anterior descending coronary artery using saphenous vein grafts
**02100Z9**  Bypass coronary artery, one artery from left internal mammary, open approach, for the internal mammary artery bypass of the left anterior descending coronary artery.

Assign additional procedure codes for harvesting the radial artery and saphenous vein grafts.

**Coronary Artery, Number of Stents**

In conjunction with the revisions for body part values to identify the number of coronary arteries, six new “Device values” were added for coronary interventional procedures as shown below:

**New Device Values**

5 Intraluminal Device, Drug-Eluting, Two  
6 Intraluminal Device, Drug-Eluting, Three  
7 Intraluminal Device, Drug-Eluting, Four or More  
E Intraluminal Device, Two  
F Intraluminal Device, Three  
G Intraluminal Device, Four or More  

These new values restore detail that was available in ICD-9-CM to capture the specific number of drug-eluting and non-drug-eluting coronary artery stents placed. This change impacts codes describing “Dilation of Heart and Great Vessels” since stent insertion is typically associated with angioplasty.

**Question:**

The patient underwent placement of two overlapping drug-eluting stents to treat a long lesion in the left anterior descending coronary artery with another drug-eluting stent placed in the left circumflex coronary artery. In addition, two non-drug-eluting stents were placed in the right coronary artery to treat two separate lesions. How is this procedure coded?

**Answer:**

Assign the following procedure codes:
027136Z  Dilation of coronary artery, two arteries with three drug-eluting intraluminal devices, percutaneous approach, for the placement of two drug-eluting stents in the left anterior descending coronary artery and one drug-eluting stent in the left circumflex coronary artery

02703EZ  Dilation of coronary artery, one artery with two intraluminal devices, percutaneous approach, for placement of two non-drug-eluting stents in the right coronary artery

The code assignments reflect the number of coronary arteries treated and the number of stents placed. The codes also reflect drug-eluting and non-drug-eluting stents, because they have different device values. Two coronary arteries, the left anterior descending and the left circumflex, were treated with a total of three drug-eluting stents. One coronary artery, the right coronary artery, was treated with two non-drug-eluting stents.

**Question:**
The patient presented with stenosis of her coronary artery bypass graft (CABG). The provider documented that a portion of the saphenous vein graft was stenotic due to further progression of atherosclerotic heart disease. A drug-eluting stent was placed to treat stenosis of the distal segment of the saphenous vein graft originating from the aorta and attached to the right posterior descending artery. The stent reduced the stenosis. However, after deployment, there was dissection of the saphenous vein graft expanding from the ostium to the recently deployed stent. The dissection was sealed with three additional overlapping drug eluting stents. Since placement of the stents was performed for distinct purposes, dilation of the graft and repair of the graft, what are the code assignments for this case?
Answer: Assign code I25.810, Atherosclerosis of coronary bypass graft(s) without angina pectoris, for the stenosis of the saphenous vein bypass graft due to progression of disease. Placement of the stents is coded to the root operation “Dilation” rather than the root operation “Revision,” because the procedure is performed for progression of disease rather than failure of the device. Assign the following ICD-10-PCS code:

027037Z  Dilation of coronary artery, one artery with four or more drug-eluting intraluminal devices, percutaneous approach

Peripheral Artery, Number of Stents

Similar to the new device values for coronary artery, six new “Device values” were added for peripheral artery procedures as shown below:

New Device Values
5 Intraluminal Device, Drug-Eluting, Two
6 Intraluminal Device, Drug-Eluting, Three
7 Intraluminal Device, Drug-Eluting, Four or More
E Intraluminal Device, Two
F Intraluminal Device, Three
G Intraluminal Device, Four or More

Although this change only impacts codes describing “Dilation of Upper Arteries” and “Dilation of Lower Arteries,” it has resulted in the addition of many new procedure codes, because there are many specific body part values for upper and lower peripheral arteries.

Coronary and Peripheral Artery Bifurcation

In conjunction with the revisions for the device value to identify the number of drug-eluting and non-drug-eluting stents, the qualifier value 6 “Bifurcation” has been added for certain coronary artery and peripheral artery procedures to restore detail that was available in ICD-9-CM.
Bifurcation of an artery describes the division of one artery into two branch or side arteries. Coronary examples include: bifurcation of the left main coronary artery as it divides into the left anterior descending and left circumflex coronary arteries, and bifurcation of the left anterior descending coronary artery and its diagonal side branch.

Peripheral examples include: bifurcation of the common carotid artery into the internal carotid artery and external carotid artery, the distal aortic bifurcation into the left and right common iliac arteries, bifurcation of the common iliac artery into the internal and external iliac arteries, bifurcation of the common femoral artery into the superficial femoral artery and the profunda femoral artery, and bifurcation of the popliteal artery into the anterior tibial artery and the tibioperoneal trunk.

Previously, the qualifier value “Bifurcation” was only in table 027, Dilation of Heart and Great Vessels. “Bifurcation” has been added to the following procedure code tables:

02C Extirpation of Heart and Great Vessels
037 Dilation of Upper Arteries
03C Extirpation of Upper Arteries
047 Dilation of Lower Arteries
04V Restriction of Lower Arteries

**Question:**
The patient had a lesion within the left anterior descending (LAD) coronary artery that extended into the diagonal 1 branch artery at the bifurcation. Two drug-eluting stents were placed percutaneously, one in the LAD and one in the diagonal 1 branch, via the T-stent technique. How is this coded?

**Answer:**
Each artery (LAD and diagonal) was treated with a separate stent. Assign the following ICD-10-PCS code:

0271356 Dilation of coronary artery, two arteries, bifurcation, with two drug-eluting intraluminal devices, percutaneous approach
**Question:**
The patient had a lesion within the left anterior descending (LAD) coronary artery that extended into the diagonal 1 branch artery at the bifurcation. A drug-eluting stent was placed percutaneously in the LAD and angioplasty was performed of the diagonal 1 branch. How is this coded?

**Answer:**
Assign the following procedure codes:

0270346  Dilation of coronary artery, one artery, bifurcation, with drug-eluting intraluminal device, percutaneous approach, for the stent placed in the LAD coronary artery at the bifurcation

02703ZZ  Dilation of coronary artery, one artery, percutaneous approach, for angioplasty of the diagonal 1 branch

**Question:**
A patient with severe claudication underwent angiography which revealed 90% heavily calcified stenosis involving the distal right common femoral artery extending into the origin of the right superficial femoral artery and right profunda artery. The physician performed percutaneous atherectomy of the distal common femoral artery, the femoral bifurcation and the proximal superficial femoral artery. Interval angiography revealed residual stenosis at the femoral bifurcation which was then treated with angioplasty. Completion angiography revealed no residual stenosis of the common femoral artery, the bifurcation, or the superficial femoral artery. How should the atherectomy of the distal common femoral artery, femoral artery bifurcation and proximal superficial femoral artery with angioplasty of residual stenosis at the bifurcation be coded?
Answer:
ICD-10-PCS does not have separate body part values for the common femoral artery and the superficial femoral artery. The body part value “femoral artery” applies to the atherectomy procedure performed on the entire overlapping lesion. The angioplasty procedure is also coded because it is a separate surgical objective from the atherectomy procedure. Assign the following procedure codes:

04CK3Z6 Extirpation of matter from right femoral artery, bifurcation, percutaneous approach, for the atherectomy performed on the femoral artery

047K3Z6 Dilation of right femoral artery, bifurcation, percutaneous approach, for the angioplasty

Branched and Fenestrated Endograft Repair of Aneurysms

Two new device values were added for branched and fenestrated endograft procedures used to treat aneurysms.

<table>
<thead>
<tr>
<th>Device</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E Intraluminal Device, Branched or Fenestrated, One or Two Arteries</td>
<td></td>
</tr>
<tr>
<td>F Intraluminal Device, Branched or Fenestrated, Three or More Arteries</td>
<td></td>
</tr>
</tbody>
</table>

These new values restore the detail previously available in ICD-9-CM to identify the use of branched and fenestrated endografts, also known as stent grafts, in endovascular aneurysm repair (EVAR).

Because branched and fenestrated endografts are used only for treatment of aneurysms, of the thoracic aorta, abdominal aorta and common iliac arteries, this change impacts just two procedure code tables:

02V Restriction of Heart and Great Vessels
04V Restriction of Lower Arteries
The simplest aortic endografts are essentially straight tubes that re-line a segment of the aorta to exclude the aneurysm from circulation. However, these cannot be used to treat aneurysms close to or involving major branches of the aorta, because the tube could cover the origins of the branches and cut off blood flow to the organs the branches supply. Branched and fenestrated endografts were developed to address this issue.

Branched endografts have small “nubs” that stem off the main body of the tube into the branch arteries that would otherwise be covered. Fenestrated endografts have openings or “windows” in the main body of the tube that align with the branch vessel origins. A covered stent is then placed through the nub or through the fenestration into the branch artery to ensure that blood flow is preserved. “Scallops” are a type of fenestration in which a U-shaped cut-out is made in the proximal end of the endograft. This scallop allows blood to flow into the branch vessel without being blocked.

In the abdominal aorta, four side branches must be kept open: the right renal artery, the left renal artery, the superior mesenteric artery and the celiac trunk, collectively referred to as the visceral arteries. In the thoracic aorta, specifically the aortic arch, three branches must be kept open: the left subclavian artery, the left common carotid artery, and the brachiocephalic (innominate) artery, collectively referred to as the precerebral arteries.

It is important to note that clinically and for coding purposes, the stents which are placed through the nubs or fenestrations into the side branches are not the equivalent of a regular stent procedure. In a regular stent procedure, the objective is to re-open an occluded vessel. In contrast, the objective of placing a stent during EVAR is to ensure that a vessel which was already open remains open. The new device values used with EVAR procedures specifically identify the number of side branches being kept open, so separate codes are not assigned for stenting the side branches.

The qualifier value Bifurcation was added to table 04V, Restriction of Lower Arteries, in the rows for the abdominal aorta body part to identify procedures performed to restrict the lumen of the abdominal aorta at the bifurcation.

<table>
<thead>
<tr>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Bifurcation</td>
</tr>
</tbody>
</table>

The qualifier value “Bifurcation” is only used to describe bifurcated vessels. It is not used to identify a bifurcated endograft. Bifurcated endografts may be used for treating aneurysms located at or just above the distal bifurcation of the abdominal aorta into the left and right common iliac arteries (e.g.,
aorto-iliac aneurysm). In such cases, no separate codes are assigned for additional endograft limbs or extensions placed in the common iliac arteries unless the aneurysm continues distally into the internal iliac artery, external iliac artery, or external femoral artery, necessitating another endograft.

Endograft procedures always involve a “landing zone,” also called a “seal zone.” This is a segment of healthy tissue into which the endograft extends so it can form a proper seal and reduce the risk of endoleaks. Finding a landing zone for an aneurysm may involve crossing anatomic boundaries into another body part. For example, an abdominal aortic endograft may have a proximal landing zone in the thoracic aorta or a distal landing zone in the common iliac artery. That is, the aneurysm itself is entirely within the abdominal aorta but the endograft extends up into the thoracic aorta or down into the common iliac artery simply to achieve a proper seal. A separate code is not assigned for the landing zone even if it is in a different body part.

**Question:**
The patient has a suprarenal abdominal aortic aneurysm (AAA), extending from above the origins of the renal arteries to just above the aortic bifurcation. A Zenith® Fenestrated AAA proximal body endograft is placed percutaneously in the abdominal aorta with covered stents in the renal arteries. The distal bifurcated body graft is placed with its limbs extending into the left and right common iliac arteries along with an additional iliac leg extension graft. What codes are assigned for placement of the endovascular endografts?

**Answer:**
Assign code **04V03E6**, Restriction of abdominal aorta, bifurcation, with branched or fenestrated intraluminal device, one or two arteries, percutaneous approach, for placement of the fenestrated endograft with covered stents and the distal bifurcated body graft placed at the vessel bifurcation. In this case, the fenestrated endograft is a 3 component modular system consisting of a proximal portion, a distal bifurcated portion and an iliac leg extension. Do not assign a separate code for the endograft limbs extending into the common iliac arteries or for the iliac leg extension. It is only appropriate to assign a code for the vessel in which the aneurysm was treated.
Stents which are placed through the holes of a fenestrated endograft or through nubs of a branched endograft into the side branches allow the surgeon to maintain and preserve blood flow to those arteries that lead to other organs. The placement of these stents are not coded separately since they are captured with the device value “Branched or fenestrated intraluminal device” indicating the number of side branches (arteries) being treated.

**Question:**
The patient underwent branched endograft repair of a thoracoabdominal aortic aneurysm (TAAA), involving the renal arteries bilaterally and the superior mesenteric artery (SMA). The aneurysm extended distally to the aortic bifurcation. During surgery, a Zenith® t-Branch™ endovascular graft was placed percutaneously to repair the TAAA with nubs (branches) from the graft extending to the visceral arteries. Covered stents were placed through the nubs, one each into the left renal artery, the right renal artery, the SMA, and the celiac trunk. The Zenith® Universal Distal Body graft with legs extending into the iliac arteries was positioned below the proximal Zenith t-Branch. Are two codes reported for this thoracoabdominal aortic aneurysm repair and what are the appropriate device values?

**Answer:**
Yes, two codes are reported in this case because the descending thoracic aorta and the abdominal aorta are distinct body part values and each of these aortic segments were treated. The branched portion of the endograft is utilized for the abdominal aortic segment (below the diaphragm) of the thoracoabdominal aortic aneurysm where the visceral arteries are located, therefore, the device value “branched or fenestrated intraluminal device” with the number of arteries is only reported with the abdominal aorta body part. Assign the following ICD-10-PCS codes:
Restriction of thoracic aorta, descending with intraluminal device, percutaneous approach, for placement of the endograft in the descending thoracic aorta segment of the thoracoabdominal aortic aneurysm

Restriction of abdominal aorta, bifurcation, with branched or fenestrated intraluminal device, three or more arteries, percutaneous approach, for placement of the branched endograft in the abdominal aortic segment of the thoracoabdominal aortic aneurysm with nubs at the origins of the four visceral arteries and distally crossing the bifurcation.

A separate code is not reported for the distal endograft portion extending into the iliac arteries.

**Question:**
A patient with an infrarenal abdominal aortic aneurysm and bilateral common iliac artery aneurysms underwent endovascular repair where the surgeon placed a GORE® EXCLUDER® Iliac Branch Endoprosthesis (IBE) along with a GORE® EXCLUDER® AAA Endoprosthesis. Components of the IBE endoprosthesis were deployed into each common iliac artery followed by deployment of bilateral internal iliac artery components. Are separate codes assigned for deployment of the bilateral internal iliac artery branch components?

**Answer:**
The abdominal aorta bifurcates into the right and left common iliac artery, and in this case, the abdominal aortic aneurysm extended distally and involved the common iliac arteries bilaterally. The objective of this aneurysm repair is to restrict the lumen of the vessel while preserving blood flow to the branch
arteries. The documentation states that three of the vessels treated all had aneurysms; therefore, it is appropriate to assign separate codes for each vessel in which an aneurysm was treated.

The GORE® EXCLUDER® IBE is comprised of two components, the iliac branch component and the internal iliac component. The iliac branch component is a bifurcated iliac branch device with an external iliac leg and an internal iliac gate. The internal iliac component is used to extend into the internal iliac artery. Separate codes are not required for the internal iliac component.

Assign the following codes:

04V03F6  Restriction of abdominal aorta, bifurcation, with intraluminal device, percutaneous approach, for the treatment of the AAA including the area of the bifurcation

04VC3EZ  Restriction of right common iliac artery with branched or fenestrated intraluminal device, one or two arteries, percutaneous approach, for treatment of the right common iliac artery aneurysm with the iliac branch endoprosthesis

04VD3EZ  Restriction of left common iliac artery with branched or fenestrated intraluminal device, one or two arteries, percutaneous approach, for treatment of the left common iliac aneurysm with the iliac branch endoprosthesis
Intracardiac Pacemaker

A new Device value was added for a novel type of pacemaker. Intracardiac pacemakers are also known as “leadless” pacemakers and “transcatheter” pacemakers.

<table>
<thead>
<tr>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>N Intracardiac Pacemaker</td>
</tr>
</tbody>
</table>

Pacemakers treat slow heart rates, such as bradycardia, sick sinus syndrome, and atrioventricular heart blocks. Conventional pacemaker devices require two components: a generator in a subcutaneous pocket on the chest plus a lead or leads tunneled below the skin and advanced into one or more heart chambers.

Intracardiac pacemakers treat the same conditions as conventional pacemakers, but the components are combined into a single device implanted within a heart chamber. There is no subcutaneous pocket and there is no tunneled lead. All components have been miniaturized into a capsule-like device that is introduced into a peripheral vessel, typically the femoral vein, then advanced into the heart chamber and fixed to the chamber wall. Although intracardiac pacemakers are also referred to as “leadless” pacemakers, there is actually a tiny electrode at the end of the battery capsule which delivers the pacing pulse to the heart tissue.

Intracardiac pacemakers are currently placed within the right ventricle for single-chamber pacing.

Like all pacemakers, intracardiac pacemakers must be programmed and then periodically interrogated and reprogrammed. Also, intracardiac pacemakers eventually reach end-of-battery-life and a new device must be placed. The old device can either be removed or it can be turned off and abandoned in place. It can also happen that the intracardiac pacemaker becomes dislodged and must be repositioned.

This change impacts the following procedure code tables:

- 02H Insertion of Heart and Great Vessels
- 02P Removal of Heart and Great Vessels
- 02W Revision of Heart and Great Vessels
**Question:**
A patient with unexplained syncope, who had recently undergone single-chamber leadless pacemaker implant insertion, presents for repositioning of the pacemaker. The right femoral vein was re-accessed with wire insertion into the inferior vena cava. The device was grasped and repositioned in an apical septal position 1 mm to the right of the original position. What is the appropriate ICD-10-PCS code assignment for repositioning of a leadless pacemaker?

**Answer:**
Assign the following ICD-10-PCS code:

02WA3NZ  Revision of intracardiac pacemaker in heart, percutaneous approach, for the repositioning of the leadless pacemaker

The ICD-10-PCS table does not provide a specific value for heart chamber at the root operation “Revision,” and only general anatomic regions are available. In this case “Heart” is the appropriate general anatomic region.

**Question:**
A patient with sustained ventricular tachycardia due to malfunctioning leadless pacemaker presents for removal of the single-chamber leadless pacemaker. A retrieval system was advanced into the inferior vena cava and the device was grasped and turned 1-1/4 counter clockwise in order to remove the implant with the exposed helix. The device was removed in standard fashion. What is the appropriate ICD-10-PCS code assignment for removal of a leadless pacemaker?

**Answer:**
Assign the following ICD-10-PCS code:
02PA3NZ  Removal of intracardiac pacemaker from heart, percutaneous approach, for the removal of the leadless pacemaker.

The ICD-10-PCS table does not provide a specific value for heart chamber at the root operation “Removal,” and only general anatomic regions are available. In this case “Heart” is the appropriate general anatomic region.

**Phrenic Neurostimulator**

Revisions were made to the tables in the upper vein body system to create a new body part value and to add existing device values to capture phrenic neurostimulators.

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>A  Azygos Vein</td>
<td>2  Monitoring Device</td>
</tr>
<tr>
<td></td>
<td>M Neurostimulator Lead</td>
</tr>
</tbody>
</table>

Phrenic neurostimulators treat central sleep apnea. They work by sensing respiratory patterns and then delivering stimulation as needed to the diaphragm via the phrenic nerve.

Current phrenic neurostimulators have three components. The first is a generator placed in a subcutaneous pocket on the chest. The second is a sensing lead that monitors respiration, typically inserted into the azygos vein. The third is a stimulation lead. However, as opposed to conventional neurostimulators, the stimulation lead is not in touch directly with the phrenic nerve. Instead, it uses the vasculature as a “highway” to reach the nervous target. The stimulation lead is actually inserted inside a vein, typically the right innominate (brachiocephalic) vein or the left pericardiophrenic vein (a tributary of the left innominate vein). The phrenic nerve, which innervates the diaphragm, runs alongside these veins within the thorax. The stimulation lead delivers the electric pulse inside the vein and it then travels through the vessel wall to stimulate the phrenic nerve. The phrenic nerve carries the pulse to the diaphragm causing it to contract, which triggers the lungs to inhale.
Phrenic neurostimulators may need to be removed and sometimes the sensing lead or the stimulation lead may need to be repositioned or otherwise revised.

This change impacts the following procedure code tables:

05H   Insertion of Upper Veins
05P   Removal of Upper Veins
05W   Revision of Upper Veins

**Question:**
The patient has central sleep apnea and a phrenic neurostimulator was recommended. At surgery, the generator was placed in a subcutaneous pocket dissected in the upper chest. One end of the sensing lead was advanced into the azygos vein and the other end was tunneled under the skin to the generator pocket. Similarly, one end of the stimulation lead was advanced into the left pericardiophrenic vein and the other end was tunneled under the skin to the generator pocket. The leads were then connected to the generator and the pocket was closed. How is this procedure coded?

**Answer:**
The procedure requires three codes, one for each component of the system. Placement of the neurostimulator generator uses the same procedure codes as for any other neurostimulator generator. For coding purposes, the sensing lead is designated as a monitoring device to differentiate between the sensing lead that monitors the respiratory activity and the electrode that delivers the electrical stimulation. Although its target is the phrenic nerve, placement of the stimulation lead is assigned to the code table for the vein in which it is placed. Assign the following codes:

0JH60MZ   Insertion of stimulator generator into chest subcutaneous tissue and fascia, open approach
05H032Z   Insertion of monitoring device into azygos vein, percutaneous approach
05H43MZ  Insertion of neurostimulator lead into left innominate vein, percutaneous approach, for the insertion of the neurostimulator lead into the pericardiophrenic vein.

According to guideline B4.2, where a specific branch of a body part does not have its own body part value in PCS, the closest proximal branch that has a specific body part value is coded. The body part value “left innominate vein” is coded because the left pericardiophrenic vein flows into the left innominate vein.

**Root Operation Control**

The definition of the root operation “Control” was revised.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Operation</td>
<td>Root Operation</td>
</tr>
<tr>
<td>Control: Stopping, or attempting to stop, postprocedural bleeding</td>
<td>Control: Stopping, or attempting to stop, postprocedural or other acute bleeding</td>
</tr>
</tbody>
</table>

The change in the root operation definition was to address situations when no other root operation applied, but the bleeding that was being controlled was not postprocedural. The root operation “Control” can now be used for controlling/stop ping other types of acute bleeding, in addition to postprocedural bleeding.

This change impacts the following procedure code tables:

- 0W3  Control of Anatomical Regions, General
- 0X3  Control of Anatomical Regions, Upper Extremities
- 0Y3  Control of Anatomical Regions, Lower Extremities

**Question:**
A patient presents with bleeding duodenal ulcer and an esophagogastrroduodenoscopy was carried out. Multiple clips were applied to the vessels to control the multiple hemorrhaging ulcers. Should “control” be assigned for the root operation? What is the appropriate ICD-10-PCS procedure code?
Answer:
The definition of the root operation “control” has been revised and is now applicable to correct postprocedural or other acute bleeding. In this case, the bleeding is of the duodenum. Most of the body’s organs and tissues are vascular, and they bleed when cut or eroded. Control of bleeding of a cut or eroded body part is coded to the body part where the bleeding was controlled, rather than to a vascular system body part. In this case, the bleeding from the duodenal ulcer was controlled via an endoscopic approach, with clips placed on vessels eroded by the ulcers. Assign the following ICD-10-PCS code:

0W3P8ZZ  Control bleeding in gastrointestinal tract, via natural or artificial opening endoscopic

Question:
The patient underwent laparoscopic supracervical hysterectomy and bilateral salpingo-oophorectomy. After the uterus, tubes and ovaries had been removed, rapid bleeding was noted from the site of the laparoscopic port. The surgeon converted to an open approach by extending the incision to control the bleeding in the abdominal cavity. The bleeding was then controlled with suture. The physician documented in his diagnostic statement, “Complication, bleeding right inferior epigastric artery.” What are the appropriate diagnosis and procedure code assignments for the intraoperative bleeding?

Answer:
Assign code I97.42, Intraoperative hemorrhage and hematoma of a circulatory system organ or structure complicating other procedure, for the intraoperative bleeding, since the surgeon documented the bleeding of the right inferior epigastric artery as a complication. There was no mention of puncture or laceration. Assign also code Z53.31, Laparoscopic surgical procedure converted to open procedure. Assign the follow ICD-10-PCS code:
Control bleeding in abdominal wall, open approach

This is not a typical surgical case where “achieving hemostasis” is considered integral to the procedure, since the surgeon opened the patient up to control the bleeding of the abdominal wall (where the trocar went through). Therefore, a separate procedure code for control of bleeding is appropriate in this case.

**Root Operation Creation**

The definition of the root operation “Creation” has been revised.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root Operation</td>
<td>Root Operation</td>
</tr>
<tr>
<td>Creation: Making a new genital structure that does not take over the function of a body part</td>
<td>Creation: Putting in or on biological or synthetic material to form a new body part that to the extent possible replicates the anatomic structure or function of an absent body part</td>
</tr>
</tbody>
</table>

The root operation “Creation” can be used for the initial surgery to correct congenital defects by creating a functioning anatomical structure from an anomalous one, such as creating a functional mitral valve from a common atrioventricular valve. Because subsequent surgeries are often required to correct problems that develop over the patient’s lifetime, new qualifier values were also added to the root operation tables 02Q and 02U, Repair and Supplement of Heart and Great Vessels, for subsequent procedures on the structures originally created from an anomalous structure. Previously, the root operation “Creation” was used only for gender reassignment surgery. The definition was revised to allow this root operation to also be used for procedures correcting congenital heart anomalies.

This change impacts the following procedure code tables:

- 024 Creation of Heart and Great Vessels
- 0W4 Creation of Anatomical Regions, General
Correction of Congenital Heart Defects

Changes were made to multiple tables within the Heart and Great Vessels body system to enable more precise coding for various procedures performed to correct congenital heart defects. Some of these changes involved new values for body parts, devices, and qualifiers, depending on the particular table.

The tables impacted are as follows:

- 021  Bypass of Heart and Great Vessels,
- 024  Creation of Heart and Great Vessels
- 02L  Occlusion of Heart and Great Vessels
- 02Q  Repair of Heart and Great Vessels
- 02S  Reposition of Heart and Great Vessels
- 02U  Supplement of Heart and Great Vessels

Note that table 024 is entirely new, while the other code tables were updated and revised.

Modified Blalock-Taussig Shunt

Three body part values and three qualifiers have been added at table 021, Bypass of Heart and Great Vessels.

<table>
<thead>
<tr>
<th>Body Part</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Pulmonary Trunk</td>
<td>A Innominate Artery</td>
</tr>
<tr>
<td>Q Pulmonary Artery, Right</td>
<td>B Subclavian Artery</td>
</tr>
<tr>
<td>R Pulmonary Artery, Left</td>
<td>D Carotid Artery</td>
</tr>
</tbody>
</table>

A modified Blalock-Taussig shunt is performed to increase pulmonary blood flow in individuals with congenital defects such as tetralogy of Fallot and pulmonary atresia. It is a palliative step until a fully corrective procedure can be performed. To re-route the blood flow, a graft is placed from the innominate, subclavian or carotid arteries to the pulmonary trunk, right pulmonary artery or left pulmonary artery.

Coding Clinic, Third Quarter 2014, page 3, advised use of code 021W0JQ, Bypass thoracic aorta to right pulmonary artery with synthetic substitute, open approach, for the modified Blalock-Taussig shunt procedure.
With the new body part and qualifier values, the procedure can be coded more specifically. As of October 1, 2016, assign code **021Q0JA**, Bypass right pulmonary artery from innominate artery with synthetic substitute, open approach, for the creation of a modified Blalock-Taussig shunt between the innominate artery and the right pulmonary artery using a Gore-Tex graft.

**Arterial Switch with Repositioning of Coronary Artery Buttons**

Two body part values have been added to table 02S, Reposition of Heart and Great Vessels.

<table>
<thead>
<tr>
<th>Body Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Coronary Artery, One Artery</td>
</tr>
<tr>
<td>1 Coronary Artery, Two Arteries</td>
</tr>
</tbody>
</table>

The arterial switch procedure is performed to correct transposition of the great vessels, where the locations of the aorta and the pulmonary trunk are reversed. In other words, the aorta anomalously arises from the right ventricle rather than the left ventricle, and the pulmonary trunk anomalously arises from the left ventricle rather than the right ventricle. Because the ostia of the right and left coronary arteries arise from the aorta, the origins of the coronary arteries are also in the wrong place. The patients may have other anomalies as well, such as patent ductus arteriosus (PDA) and atrial septal defect (ASD).

At surgery, the aorta and the pulmonary trunk are transected from their anomalous locations. The ostia of the coronary arteries are removed from the aorta as small “buttons” of tissues. The aorta is repositioned and anastomosed to the root above the left ventricle where it belongs and the coronary buttons are reattached to the new aortic root. The pulmonary trunk is repositioned and reconstructed at the right ventricle where it belongs.

Assign the following codes for an arterial switch with repositioning of coronary artery buttons:

- **02SX0ZZ** Reposition thoracic aorta, ascending/arch, open approach, for moving the aorta to the left ventricle (new code)
- **02S10ZZ** Reposition coronary artery, two arteries, open approach, for moving the coronary buttons (new code)
Reposition pulmonary trunk, open approach, for moving the pulmonary trunk to the right ventricle (existing code)

Other procedures, such as repair of PDA and ASD, are coded separately. Assign additional codes if reconstruction of the aorta or the pulmonary trunk is done using a patch.

It should also be noted that other procedures, such as aortic root remodeling (David procedure or Yacoub procedure), may involve removing and reattaching coronary artery buttons. This component may be coded separately with these procedures as well using codes from table 02S.

**Rastelli Procedure**

In table 02L, Occlusion of Heart and Great Vessels, the following body part value has been added.

<table>
<thead>
<tr>
<th>Body Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>H Pulmonary Valve</td>
</tr>
</tbody>
</table>

The Rastelli procedure is an extensive procedure performed to correct multiple congenital defects including transposition of the great vessels with pulmonary stenosis, pulmonary atresia with ventricular septal defect (VSD), and double outlet right ventricle with pulmonary stenosis or pulmonary atresia. A baffle, or patch, is used to close the ventricular septal defect. The anomalous pulmonary valve is essentially abandoned and permanently oversewn. To take over the function of the pulmonary valve, a valved conduit is placed between the right ventricle (RV) and the pulmonary artery (PA). It’s common for patients to have a previously placed modified Blalock-Taussig shunt. With creation of the RV-PA conduit, the Blalock-Taussig shunt is no longer needed, and it is divided and ligated.

**Repair of Complete Common Atrioventricular Canal Defect**

Complete common atrioventricular canal defect is also known as an endocardial cushion defect. It has three features: an atrial septal defect (ASD), a ventricular septal defect (VSD), and a single common valve between the upper atria and the lower ventricles rather than separate mitral and tricuspid valves. This cluster of anomalies is often associated with Down’s syndrome. It is common for patients to undergo initial correction of the septal and valve defects, and then continue to require further valve interventions throughout their lifetimes.
To initially correct the defects, the surgeon divides the common valve and its leaflets into left and right sides. The ventricular septal defect is closed with a patch and the valve leaflets in that area are re-suspended by sewing them to the VSD patch. The atrial septal defect is then closed with a patch and the valve leaflets in that area are sutured to the ASD patch. The leaflets on the left side become the new mitral valve and those on the right side become the new tricuspid valve.

Effective October 1, 2016, new code table 024, Creation of Heart and Great Vessels, enables coding for initial repair of the complete common atrioventricular canal defect. The row with body part values G-Mitral Valve and J-Tricuspid Valve contains a unique qualifier value for this.

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Code examples include:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Common Atrioventricular Valve</td>
<td></td>
</tr>
<tr>
<td>024G0J2</td>
<td>Creation of mitral valve from common atrioventricular valve using synthetic substitute, open approach</td>
</tr>
<tr>
<td>024G0K2</td>
<td>Creation of mitral valve from common atrioventricular valve using nonautologous tissue substitute, open approach</td>
</tr>
<tr>
<td>024J0J2</td>
<td>Creation of tricuspid valve from common atrioventricular valve using synthetic substitute, open approach</td>
</tr>
<tr>
<td>024J0K2</td>
<td>Creation of tricuspid valve from common atrioventricular valve using nonautologous tissue substitute, open approach</td>
</tr>
</tbody>
</table>

Closure of the VSD and closure of the ASD are coded separately using existing code tables.

Further interventions on the new valves over the patient’s lifetime can be reported using table 02U, Supplement of Heart and Great Vessels, if additional patch material was used in the intervention. The root operation “Repair” is assigned as a default when no other root operation applies (table 02Q). New qualifier values were added to these tables for the mitral and pulmonary valve respectively:
### Qualifier

<table>
<thead>
<tr>
<th>E Atrioventricular Valve, Left</th>
</tr>
</thead>
<tbody>
<tr>
<td>G Atrioventricular Valve, Right</td>
</tr>
</tbody>
</table>

Code examples include:

- **02UG0JE** Supplement mitral valve created from left atrioventricular valve with synthetic substitute, open approach
- **02UJ0KG** Supplement tricuspid valve created from right atrioventricular valve with nonautologous tissue substitute, open approach
- **02QG0ZE** Repair mitral valve created from left atrioventricular valve, open approach
- **02QJ0ZG** Repair tricuspid valve created from right atrioventricular valve, open approach

### Truncus Arteriosus Repair

In truncus arteriosus, the aorta and the pulmonary trunk are fused into a single great vessel. Further, rather than an aortic valve between the left ventricle and the aorta, and a pulmonary valve between the right ventricle and the pulmonary trunk, there is a single “truncal valve” giving rise to the single great vessel. Patients typically have a large ventricular septal defect as well. It is common for patients to undergo initial correction of the septal defect, valve, and great vessel defects, and then continue to require further interventions on the valve throughout their lifetimes.

To initially correct the defects, the surgeon transects and detaches the pulmonary trunk from the single great vessel. The single great vessel is then repaired as necessary to become the new aorta, while the single truncal valve is repaired as necessary to become the new aortic valve. The ventricular septal defect is closed with a patch. Because there is no pulmonary valve, a valved conduit is placed between the right ventricle (RV) and the previously detached pulmonary artery (PA) trunk to re-route the blood flow and perform the function of the pulmonary valve.

Table 024, Creation of Heart and Great Vessels, was developed to allow for coding the initial truncal valve repair. A unique qualifier has been created as follows:
<table>
<thead>
<tr>
<th>Qualifier</th>
<th>J Truncal Valve</th>
</tr>
</thead>
</table>

Code examples include:

- **024F08J** Creation of aortic valve from truncal valve using zooplastic tissue, open approach
- **024F0JJ** Creation of aortic valve from truncal valve using synthetic substitute, open approach

For the portion of the procedure involving repair of truncus arteriosus and ventricular septal defect, the following codes can be reported, depending on the documentation in the operative report:

- **021K0KP** Bypass right ventricle to pulmonary trunk with nonautologous tissue substitute, open approach, for creating a RV-PA conduit using a homograft
- **02UM08Z** Supplement ventricular septum with zooplastic tissue, open approach, for VSD repair with a bovine pericardium patch

The procedure to convert the single great vessel to the new aorta is coded separately to the root operation “Repair” or “Supplement” depending on the documentation in the operative report.

Further interventions on the new aortic valve over the patient’s lifetime can be coded using the root operation “Supplement” (table 02U), if additional graft material is used in the intervention. Repair is the default (table 02Q). The new qualifier value has also been added to those tables:

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>J Truncal Valve, Left</th>
</tr>
</thead>
</table>

Code examples include:

- **02UF0KJ** Supplement aortic valve created from truncal valve with nonautologous tissue substitute, open approach
- **02QF0ZJ** Repair aortic valve created from truncal valve, open approach


Repair of Anomalous Pulmonary Venous Return

Under table 021, Bypass of Heart and Great Vessels, the following new qualifier values were added:

<table>
<thead>
<tr>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>S Pulmonary Vein, Right</td>
</tr>
<tr>
<td>T Pulmonary Vein, Left</td>
</tr>
<tr>
<td>U Pulmonary Vein, Confluence</td>
</tr>
</tbody>
</table>

There are four pulmonary veins, two left and two right, that carry oxygenated blood from the lungs to the left atrium of the heart, from which it then flows into the left ventricle to be pumped out to the rest of the body. In partial anomalous pulmonary venous return (PAPVR), some of the pulmonary veins do not connect properly to the left atrium and instead connect to other veins emptying into the right atrium. In total anomalous pulmonary venous return (TAPVR), all four pulmonary veins do not connect properly to the left atrium. Sometimes all four veins join together to form a single venous confluence which then empties into the right atrium by way of another vein. The result is that oxygenated blood cannot reach the left ventricle. It is common for patients with TAPVR to partially compensate by developing an atrial septal defect which allows at least some oxygenated blood to move from the right atrium into the left atrium.

At surgery, the abnormal connections to other veins are tied off and a new connection to the left atrium is formed, re-routing the blood to the proper location.

**Question:**
A patient with total anomalous pulmonary venous return underwent surgery in which the posterior wall of the left atrium and the pulmonary venous confluence were both incised and opened widely, then anastomosed together, via open surgical technique. How is this coded?

**Answer:**
Assign the following ICD-10-PCS code:

02170ZU          Bypass left atrium to pulmonary vein confluence, open approach

Transecting and ligating the prior abnormal
connections is integral and not coded separately.

**Zooplastic Tissue Substitute**

A new device value was added to table 021, Bypass of Heart and Great Vessels, which allows for the assignment of bioprosthetic devices such as valved conduits (e.g., Contegra®), or porcine bioprostheses (Hancock®) when utilized during a component of a congenital heart anomaly procedure.

<table>
<thead>
<tr>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 Zooplastic Tissue</td>
</tr>
</tbody>
</table>

**Partial (Unicondylar) Knee Replacement**

A new device value was added to differentiate unicondylar knee replacement from other knee replacement procedures. In addition, body part values C-Knee Joint, Right and D-Knee Joint, Left, were moved into their own rows to enable this.

<table>
<thead>
<tr>
<th>Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>L Synthetic Substitute, Unicondylar</td>
</tr>
</tbody>
</table>

This change impacts just one table:

**0SR Replacement of Lower Joints**

The articular surfaces in the knee are the condyles. In the medial compartment of the knee, the medial condyle of the femur articulates with the medial condyle of the tibia. In the lateral compartment of the knee, the lateral condyle of the femur articulates with the lateral condyle of the tibia.

In a total knee replacement, the condyles of the femur and tibia are replaced in both the medial compartment and the lateral compartment of the knee. In a partial knee replacement, the condyles of only one compartment are replaced. In other words, either the medial condyles of the femur and tibia are replaced, or the lateral condyles of the femur and tibia are replaced. Because only one set of condyles are replaced, this type of partial knee replacement is also known as unicondylar replacement.

**Question:**
The patient had severe arthritis of the left knee and underwent total knee replacement. How is this procedure coded?

**Answer:**
Assign the following ICD-10-PCS procedure code:

**0SRD0JZ**  
Replacement of left knee joint with synthetic substitute, open approach

**Question:**
The patient had severe arthritis in the lateral compartment of the left knee and underwent a partial knee replacement. The lateral condyles of the femur and tibia were replaced using an open approach. How is this procedure coded?

**Answer:**
Assign the following ICD-10-PCS procedure code:

**0SRD0LZ**  
Replacement of left knee joint with unicondylar synthetic substitute, open approach

**Removal and Revision of Hip and Knee Devices**

Additional body part values were added to provide more detail on the precise anatomic site of hip and knee devices being either revised or removed.

<table>
<thead>
<tr>
<th>Body Part</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Hip Joint, Acetabular Surface, Right</td>
</tr>
<tr>
<td>E Hip Joint, Acetabular Surface, Left</td>
</tr>
<tr>
<td>R Hip Joint, Femoral Surface, Right</td>
</tr>
<tr>
<td>S Hip Joint, Femoral Surface, Left</td>
</tr>
<tr>
<td>T Knee Joint, Femoral Surface, Right</td>
</tr>
<tr>
<td>U Knee Joint, Femoral Surface, Left</td>
</tr>
<tr>
<td>V Knee Joint, Tibial Surface, Right</td>
</tr>
<tr>
<td>W Knee Joint, Tibial Surface, Left</td>
</tr>
</tbody>
</table>
In conjunction with the body part changes, a new qualifier was also added.

<table>
<thead>
<tr>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>C Patellar Surface</td>
</tr>
</tbody>
</table>

Previously, removal of a hip or joint prosthesis was coded to generic body part values for the joint. However, some patients have only a partial joint replacement with a prosthesis at only one anatomic site within the joint. Also, even in a total joint replacement, not all components of the prosthesis are removed or revised. When components are removed or revised, the new body part and qualifier values allow identification of which components were addressed.

These changes impact the following procedure code tables:

0SP  Removal of Lower Joints
0SW  Revision of Lower Joints

**Question:**
The patient previously underwent a right total hip replacement. The femoral stem has now fractured and must be replaced. At surgery for revision arthroplasty, the broken femoral component was removed and a new femoral component was implanted and cemented. The acetabular liner was also replaced. The acetabular shell (cup) component was found to be intact and well fixed, and it was not revised. How is this procedure coded?

**Answer:**
Although documented as a “revision” arthroplasty, root operation “Revision” is not used here. When the components of a replaced joint are removed and new components (i.e., femoral head, femoral stem, acetabular component, liner) are inserted, codes are assigned for the placement of new components and for the removal of the old components. Assign the following codes:

0SRR0J9  Replacement of right hip joint, femoral surface with synthetic substitute, cemented, open approach
**Question:**
The patient previously underwent a left total knee replacement but the tibial component has now come loose. At surgery, the joint is exposed and inspected with no evidence of infection. The loose tibial component is then re-cemented to the underlying bone. How is this procedure coded?

**Answer:**
Because the existing device is not removed or replaced but is corrected instead, this is a “Revision” procedure. Assign the following ICD-10-PCS code:

0SWW0JZ Revision of synthetic substitute in left knee joint, tibial surface, open approach

---

**Transplantation**

Two new code tables were created using the root operation “Transplantation” to capture new anatomic areas that can be transplanted:

0WY Transplantation of Anatomical Regions, General
0XY Transplantation of Anatomical Regions, Upper Extremities

New code table 0WY enables face transplant (partial or total) to be coded specifically and new code table 0XY allows hand transplant to be coded specifically.

As with all ICD-10-PCS tables involving the transplantation root operation, there are two notable qualifiers:
<table>
<thead>
<tr>
<th>Qualifier</th>
<th>To</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Allogeneic</td>
<td>0 Autologous</td>
</tr>
<tr>
<td>1 Syngeneic</td>
<td>2 Allogeneic, Related</td>
</tr>
<tr>
<td></td>
<td>3 Allogeneic, Unrelated</td>
</tr>
<tr>
<td></td>
<td>4 Allogeneic, Unspecified</td>
</tr>
</tbody>
</table>

In a syngeneic transplant, the donor is the patient’s identical twin. In an allogeneic transplant, the donated organ comes from a matched donor who is another family member or an unrelated person.

Section 3—Administration

Bone Marrow and Stem Cell Transfusion (“Transplantation”)

More specific qualifier values describing transfusion of stem cells, bone marrow and other substances have been added to differentiate types of non-autologous cells infused during bone marrow and stem cell transplantation procedures.

Autologous bone marrow and stem cells are harvested from the patient’s own body prior to transplantation. For example, stem cells are harvested prior to chemotherapy for re-infusion after chemotherapy. Nonautologous bone marrow and stem cells, also called allogeneic, are donated by others who may or may not be related.

These changes restore detail that was available in ICD-9-CM to identify the source of the cells.

Substances Applied to Cranial Cavity and Brain

The value identifying “Open Approach” has been added for specific drugs or other substances applied to the cranial cavity and brain. This will allow for substances applied via craniotomy to be captured more accurately. Previously only the percutaneous approach value was available.
**Question:**
A patient undergoes craniotomy for resection of a brain tumor. Immediately following the resection, Gliadel® chemotherapy wafers are placed into the resection cavity. What code is assigned for placing the Gliadel® wafers?

**Answer:**
Assign the following procedure code:

3E0Q005 Introduction of other antineoplastic into cranial cavity and brain, open approach

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**Section 4—Measurement and Monitoring**

**Fluorescence Vascular Angiography**

Under “Monitoring of Physiologic Systems” a new function/device value and a new qualifier have been created as follows.

<table>
<thead>
<tr>
<th>Function/Device</th>
<th>Qualifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Vascular Perfusion</td>
<td>H Indocyanine Green Dye</td>
</tr>
</tbody>
</table>

The new values are available for the cardiac, gastrointestinal, and skin and breast body systems, and are assigned to identify intraoperative fluorescence vascular angiography, for example, SPY angiography.

SPY angiography assesses perfusion in tissue grafts and transfers, to determine the likelihood that the graft will take. It is also used to assess perfusion in various gastrointestinal, skin wound, and breast procedures to ensure adequate blood flow and patent anastomoses, for example of coronary artery bypass grafts.

Fluorescence does not involve external ionizing radiation. Instead, indocyanine green dye (IC-Green) is injected into the bloodstream and fluoresces when illuminated with a specific light source. The fluorescence is captured on camera as a moving image sequence.

The code assigned from table 4A1 is complete for assessing perfusion via the use of fluorescence vascular angiography. No additional code is assigned from the Imaging section.
Section 6—Extracorporeal Therapies

Donor Organ Perfusion

New codes describing perfusion of circulatory donor organ, perfusion of respiratory system donor organ, perfusion of hepatobiliary system and pancreas donor organ, and perfusion of urinary system donor organ have been created under “Perfusion of Physiologic Systems.”

These new codes identify an adjunct procedure in which marginal organs, initially judged unacceptable for transplant, are extensively perfused to remove waste products and then they are physiologically assessed for several hours for acceptable function. This enables some organs to ultimately be used for transplant.

The procedure is sometimes referred to as the XVIVO perfusion, after the name of the system used. It may be abbreviated as EVLP for ex-vivo lung perfusion.

Section X—New Technology

Five new code tables have been created in Section X and one existing code table has been revised.

Cerebral Embolic Filtration

A new table X2A describing assistance of the cardiovascular system captures the placement of two filters into precerebral arteries during certain cardiac procedures that have a known risk of perioperative stroke.

<table>
<thead>
<tr>
<th>Device/Substance/Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Cerebral Embolic Filtration, Dual Filter</td>
</tr>
</tbody>
</table>

One model of the dual filter system is called the Sentinel™ Cerebral Protection System.

In certain patient populations, release of embolic debris is a known complication of the transcatheter aortic valve replacement (TAVR) procedure. Placing two filters at the beginning of the TAVR procedure, one in the innominate artery and one in the left common carotid artery, is intended to capture the debris, thereby reducing the risk of ischemic stroke. The filters
can also be placed during other cardiac and great vessel procedures, such as cardiac ablation and endovascular repair of aortic aneurysm.

The primary procedure, such as TAVR, is coded separately.

**Aortic Valve Rapid Deployment**

A new table X2R describing replacement of the cardiovascular system captures aortic valve replacement using rapid deployment technique.

<table>
<thead>
<tr>
<th>Device/Substance/Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Zooplastic Tissue, Rapid Deployment Technique</td>
</tr>
</tbody>
</table>

One model of the rapid deployment technique for the aortic valve is called the Intuity Elite Heart Valve System. These types of valves are sometimes referred to as “sutureless” valves. Although the technique usually requires three sutures to secure the valve in place, the time needed to deploy the valve, and thus the total operative time, is significantly less than conventional open valve replacement.

**Application of Wound Matrix**

A new table has been created for replacement of the skin, subcutaneous tissue, fascia and breast (XHR) to capture the application of a unique type of acellular wound matrix.

<table>
<thead>
<tr>
<th>Device/Substance/Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>L Skin Substitute, Porcine Liver Derived</td>
</tr>
</tbody>
</table>

One example is called Miroderm™ biologic wound matrix. Derived from porcine liver tissue, this skin substitute is processed to remove cells which could cause rejection while preserving the high vascularity of the liver. It can be used as a graft to close various types of wounds including ulcers, traumatic and surgical wounds.
Placement of Magnetic Growth Rods

A new table XNS has been created for reposition of bones to capture the use of magnetically controlled spinal growth rods.

<table>
<thead>
<tr>
<th>Device/Substance/Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Magnetically Controlled Growth Rod(s)</td>
</tr>
</tbody>
</table>

Growth rods are part of the overall treatment for scoliosis in children. One or more rods are surgically implanted along the patient’s spine and secured using hooks or pedicle screws. Limited fusion of the vertebrae at either end of the rods can be performed at the same time. Over time, the rods are lengthened or shortened as needed to brace the spine and minimize progression of the curvature while keeping up with the patient’s personal growth.

With conventional growth rods, each adjustment requires surgery. Magnetic rods, such as the MAGEC Spinal Bracing and Distraction System, can be adjusted non-invasively using an external controller.

*Coding Clinic*, Fourth Quarter 2014, page 28, advised use of root operation Insertion with internal fixation device for initial implantation of a growth rod. However, it has since been determined that the root operation Reposition is more accurate because the objective is to move the vertebrae into the normal location. The new device value in code table XNS specifically identifies magnetic growth rods.
Changes to the ICD-10-CM Official Guidelines for Coding and Reporting

Effective October 1, 2016, there are changes to the ICD-10-CM and ICD-10-PCS Official Guidelines for Coding and Reporting. The complete set of guidelines are not shown in their entirety; only those guidelines that have been added or modified are included below. The complete guidelines may be downloaded by visiting for ICD-10-CM guidelines and https://www.cms.gov/Medicare/Coding/ICD10/2017-ICD-10-PCS-and-GEMs.html for ICD-10-PCS guidelines.

The modifications are published below using the following format:

- Narrative changes appear in bold text (e.g., severe sepsis)
- Items underlined have been moved within the guidelines since October 1, 2016 (e.g., severe sepsis)
- Deletions are shown as strikeouts (e.g., severe sepsis)

Section I. Conventions, general coding guidelines and chapter specific guidelines

A. Conventions for the ICD-10-CM . . .

12. Excludes Notes
   a. Excludes 1 . . .

   An exception to the Excludes1 definition is the circumstance when the two conditions are unrelated to each other. If it is not clear whether the two conditions involving an Excludes1 note are related or not, query the provider. For example, code F45.8, Other somatoform disorders, has an Excludes1 note for “sleep related teeth grinding (G47.63),” because “teeth grinding” is an inclusion term under F45.8. Only one of these two codes should be assigned for teeth grinding. However psychogenic dysmenorrhea is also an inclusion term under F45.8, and a patient could have both this condition and sleep related teeth grinding. In this case, the two conditions are clearly unrelated to each other, and so it would be appropriate to report F45.8 and G47.63 together.
13. Etiology/manifestation convention (“code first,” “use additional code” and “in diseases classified elsewhere” notes) Certain conditions have both an underlying etiology and multiple body system manifestations due to the underlying etiology. For such conditions, the ICD-10-CM has a coding convention that requires the underlying condition be sequenced first, if applicable, followed by the manifestation. Wherever such a combination exists, there is a “use additional code” note at the etiology code, and a “code first” note at the manifestation code. These instructional notes indicate the proper sequencing order of the codes, etiology followed by manifestation. . . .

15. “With” The word “with” should be interpreted to mean “associated with” or “due to” when it appears in a code title, the Alphabetic Index, or an instructional note in the Tabular List. The classification presumes a causal relationship between the two conditions linked by these terms in the Alphabetic Index or Tabular List. These conditions should be coded as related even in the absence of provider documentation explicitly linking them, unless the documentation clearly states the conditions are unrelated. For conditions not specifically linked by these relational terms in the classification, provider documentation must link the conditions in order to code them as related. . . .

19. Code assignment and Clinical Criteria 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.

B. General Coding Guidelines . . .

13. Laterality . . . When a patient has a bilateral condition and each side is treated during separate encounters, assign the “bilateral” code (as the condition still exists on both sides), including for the encounter to treat the first side. For the second encounter for treatment after one side has previously been treated and the condition no longer exists on that side, assign the appropriate unilateral code for the side where the condition still exists (e.g., cataract surgery performed on each eye in separate
encounters). The bilateral code would not be assigned for the subsequent encounter, as the patient no longer has the condition in the previously treated site. If the treatment on the first side did not completely resolve the condition, then the bilateral code would still be appropriate. . . .

14. Documentation for BMI, Depth of Non-pressure ulcers, Pressure Ulcer Stages, Coma Scale, and NIH Stroke Scale
For the Body Mass Index (BMI), depth of non-pressure chronic ulcers, pressure ulcer stage, coma scale, and NIH stroke scale (NIHSS) codes, code assignment may be based on medical record documentation from clinicians who are not the patient’s provider (i.e., physician or other qualified healthcare practitioner legally accountable for establishing the patient’s diagnosis), since this information is typically documented by other clinicians involved in the care of the patient (e.g., a dietitian often documents the BMIs and nurses, a nurse often documents the pressure ulcer stages, and an emergency medical technician often documents the coma scale). However, the associated diagnosis (such as overweight, obesity, acute stroke, or pressure ulcer) must be documented by the patient’s provider. If there is conflicting medical record documentation, either from the same clinician or different clinicians, the patient’s attending provider should be queried for clarification. The BMI, coma scale, and NIHSS codes should only be reported as secondary diagnoses. As with all other secondary diagnosis codes, the BMI codes should only be assigned when they meet the definition of a reportable additional diagnosis (see Section III, Reporting Additional Diagnoses).

16. Documentation of Complications of Care
Code assignment is based on the provider’s documentation of the relationship between the condition and the care or procedure, unless otherwise instructed by the classification. The guideline extends to any complications of care, regardless of the chapter the code is located in. It is important to note that not all conditions that occur during or following medical care or surgery are classified as complications. There must be a cause-and-effect relationship between the care provided and the condition, and an indication in the documentation that it is a complication. Query the provider for clarification, if the complication is not clearly documented. . .
C. Chapter Specific Coding Guidelines

1. Chapter 1: Certain Infectious and Parasitic Diseases (A00-B99) . . .

f. Zika virus infections

1) Code only confirmed cases
Code only a confirmed diagnosis of Zika virus (A92.5, Zika virus disease) as documented by the provider. This is an exception to the hospital inpatient guideline Section II, H. In this context, “confirmation” does not require documentation of the type of test performed; the physician’s diagnostic statement that the condition is confirmed is sufficient. This code should be assigned regardless of the stated mode of transmission. If the provider documents “suspected”, “possible” or “probable” Zika, do not assign code A92.5. Assign a code(s) explaining the reason for encounter (such as fever, rash, or joint pain) or Z20.828, Contact with and (suspected) exposure to other viral communicable diseases. . . .

4. Chapter 4: Endocrine, Nutritional, and Metabolic Diseases (E00-E89) . . .

a. Diabetes mellitus . . .

3) Diabetes mellitus and the use of insulin and oral hypoglycemics
If the documentation in a medical record does not indicate the type of diabetes but does indicate that the patient uses insulin, code E11, Type 2 diabetes mellitus, should be assigned. Code Z79.4, Long-term (current) use of insulin, or Z79.84, Long term (current) use of oral hypoglycemic drugs, should also be assigned to indicate that the patient uses insulin or hypoglycemic drugs. Code Z79.4 should not be assigned if insulin is given temporarily to bring a type 2 patient’s blood sugar under control during an encounter. . . .
6) Secondary diabetes mellitus . . .

(a) Secondary diabetes mellitus and the use of insulin or hypoglycemic drugs
For patients who routinely use insulin or hypoglycemic drugs, code Z79.4, Long-term (current) use of insulin, or Z79.84, Long term (current) use of oral hypoglycemic drugs should also be assigned. Code Z79.4 should not be assigned if insulin is given temporarily to bring a patient’s blood sugar under control during an encounter. . . .

9. Chapter 9: Diseases of the Circulatory System (I00-I99)

a. Hypertension
The classification presumes a causal relationship between hypertension and heart involvement and between hypertension and kidney involvement, as the two conditions are linked by the term “with” in the Alphabetic Index. These conditions should be coded as related even in the absence of provider documentation explicitly linking them, unless the documentation clearly states the conditions are unrelated.

For hypertension and conditions not specifically linked by relational terms such as “with,” “associated with” or “due to” in the classification, provider documentation must link the conditions in order to code them as related.

1) Hypertension with Heart Disease
Hypertension with heart conditions classified to I50.- or I51.4-I51.9, are assigned to a code from category I11, Hypertensive heart disease when a causal relationship is stated (due to hypertension) or implied (hypertensive). Use an additional code from category I50, Heart failure, to identify the type of heart failure in those patients with heart failure.

The same heart conditions (I50.-, I51.4-I51.9) with hypertension, but without a stated causal relationship, are coded separately if the provider has specifically documented a different cause. Sequence according to the circumstances of the admission/encounter.
2) Hypertensive Chronic Kidney Disease
Assign codes from category I12, Hypertensive chronic kidney disease, when both hypertension and a condition classifiable to category N18, Chronic kidney disease (CKD), are present. Unlike hypertension with heart disease, ICD-10-CM presumes a cause-and-effect relationship and classifies chronic kidney disease with hypertension as hypertensive chronic kidney disease. **CKD should not be coded as hypertensive if the physician has specifically documented a different cause.**

The appropriate code from category N18 should be used as a secondary code with a code from category I12 to identify the stage of chronic kidney disease.

3) Hypertensive Heart and Chronic Kidney Disease
Assign codes from combination category I13, Hypertensive heart and chronic kidney disease, when both hypertensive kidney disease and hypertensive heart disease are stated in the diagnosis. Assume a relationship between the hypertension and the chronic kidney disease, whether or not the condition is so designated. **There is hypertension with both heart and kidney involvement.** If heart failure is present, assign an additional code from category I50 to identify the type of heart failure.

10) Hypertensive Crisis
Assign a code from category I16, Hypertensive crisis, for documented hypertensive urgency, hypertensive emergency or unspecified hypertensive crisis. Code also any identified hypertensive disease (I10-I15). The sequencing is based on the reason for the encounter.

e. Acute myocardial infarction (AMI)
1) ST elevation myocardial infarction (STEMI) and non ST elevation myocardial infarction (NSTEMI)
For encounters occurring while the myocardial infarction is equal to, or less than, four weeks old, including transfers to another acute setting or a postacute setting, and the patient requires continued care for the myocardial infarction, **meets the definition for “other diagnoses”** (see Section III, Reporting Additional Diagnoses), codes from category I21 may continue to be reported.
12. Chapter 12: Diseases of the Skin and Subcutaneous Tissue (L00-L99)

a. Pressure ulcer stage codes

1) Pressure ulcer stages
   Codes from category L89, Pressure ulcer, are combination codes that identify the site of the pressure ulcer as well as the stage of the ulcer.

5) Patients admitted with pressure ulcers documented as healing.

For ulcers that were present on admission but healed at the time of discharge, assign the code for the site and stage of the pressure ulcer at the time of admission.

6) Patient admitted with pressure ulcer evolving into another stage during the admission
   If a patient is admitted with a pressure ulcer at one stage and it progresses to a higher stage, assign the two separate codes should be assigned: one code for the site and stage of the ulcer on admission and a second code for the same ulcer site and the highest stage reported for that site during the stay.

13. Chapter 13: Diseases of the Musculoskeletal System and Connective Tissue (M00-M99)

c. Coding of Pathologic Fractures
   7th character A is for use as long as the patient is receiving active treatment for the fracture. Examples of active treatment are: surgical treatment, emergency department encounter, evaluation and continuing treatment by the same or a different physician. While the patient may be seen by a new or different provider over the course of treatment for a pathological fracture, assignment of the 7th character is based on whether the patient is undergoing active treatment and not whether the provider is seeing the patient for the first time.

7th character D is to be used for encounters after the patient has completed active treatment. The other 7th characters, listed under each subcategory in the Tabular List, are to be
used for subsequent encounters for routine care of fractures during the healing and recovery phase as well as treatment of problems associated with the healing, such as malunions, nonunions, and sequelae.

15. Chapter 15: Pregnancy, Childbirth, and the Puerperium (O00-O9A)

b. Selection of OB Principal or First listed Diagnosis

2) Prenatal outpatient visits for high-risk patients

Supervision of High-Risk Pregnancy

Codes from category O09, Supervision of high-risk pregnancy, are intended for use only during the prenatal period. For complications during the labor or delivery episode as a result of a high-risk pregnancy, assign the applicable complication codes from Chapter 15. If there are no complications during the labor or delivery episode, assign code O80, Encounter for full-term uncomplicated delivery.

4) When a delivery occurs

When a delivery occurs an obstetric patient is admitted and delivers during that admission, the condition that prompted the admission should be sequenced as the principal diagnosis should correspond to the main circumstances or complication of the delivery. If multiple conditions prompted the admission, sequence the one most related to the delivery as the principal diagnosis. A code for any complication of the delivery should be assigned as an additional diagnosis. In cases of cesarean delivery, if the patient was admitted with a condition that resulted in the performance of a cesarean procedure, that condition should be selected as the principal diagnosis. If the reason for the admission/encounter was unrelated to the condition resulting in the cesarean delivery, the condition related to the reason for the admission/encounter should be selected as the principal diagnosis.
h. Long term use of insulin and oral hypoglycemics
   Code Z79.4, Long-term (current) use of insulin, or code Z79.84, Long-term (current) use of oral hypoglycemic drugs, should also be assigned if the diabetes mellitus is being treated with insulin or oral medications. If the patient is treated with both oral medications and insulin, only the code for insulin-controlled should be assigned.

i. Gestational (pregnancy induced) diabetes . . .
   The codes under subcategory O24.4 include diet controlled, insulin controlled, and controlled by oral hypoglycemic drugs. If a patient with gestational diabetes is treated with both diet and insulin, only the code for insulin-controlled is required. If a patient with gestational diabetes is treated with both diet and oral hypoglycemic medications, only the code for “controlled by oral hypoglycemic drugs” is required. Code Z79.4, Long-term (current) use of insulin or code Z79.84, Long-term (current) use of oral hypoglycemic drugs, should not be assigned with codes from subcategory O24.4.

16. Chapter 16: Certain Conditions Originating in the Perinatal Period (P00-P96) . . .

b. Observation and Evaluation of Newborns for Suspected Conditions Not Found
   Reserved for future expansion

1) Assign a code from category Z05, Observation and evaluation of newborns and infants for suspected conditions ruled out, to identify those instances when a healthy newborn is evaluated for a suspected condition that is determined after study not to be present. Do not use a code from category Z05 when the patient has identified signs or symptoms of a suspected problem; in such cases code the sign or symptom.

2) A code from category Z05 may also be assigned as a principal or first-listed code for readmissions or encounters when the code from category Z38 code no longer applies. Codes from category Z05 are for use only for healthy newborns and infants for which no condition after study is found to be present.
3) **Z05 on a birth record**  
A code from category Z05 is to be used as a secondary code after the code from category Z38, Liveborn infants according to place of birth and type of delivery. . . .

18. Chapter 18: Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified (R00-R99) . . .

e. **Coma scale**  
The coma scale codes (R40.2-) can be used in conjunction with traumatic brain injury codes, acute cerebrovascular disease or sequelae of cerebrovascular disease codes. These codes are primarily for use by trauma registries, but they may be used in any setting where this information is collected. **The coma scale may also be used to assess the status of the central nervous system for other nontrauma conditions, such as monitoring patients in the intensive care unit regardless of medical condition.** The coma scale codes should be sequenced after the diagnosis code(s). . . .

i. **NIHSS Stroke Scale**  
The NIH stroke scale (NIHSS) codes (R29.7- -) can be used in conjunction with acute stroke codes (I63) to identify the patient’s neurological status and the severity of the stroke. The stroke scale codes should be sequenced after the acute stroke diagnosis code(s).

At a minimum, report the initial score documented. If desired, a facility may choose to capture multiple stroke scale scores.  
*See Section 1.B.14. for information concerning the medical record documentation that may be used for assignment of the NIHSS codes.*

19. Chapter 19: Injury, poisoning, and certain other consequences of external causes (S00-T88)

a. **Application of 7th Characters in Chapter 19 . . .**  
7th character “A”, initial encounter is used **while for each encounter where** the patient is receiving active treatment for the condition. Examples of active treatment are: surgical treatment, emergency department encounter, and evaluation-
and continuing treatment by the same or a different physician.

7th character “D” subsequent encounter is used for encounters after the patient has received completed active treatment of the condition and is receiving routine care for the condition during the healing or recovery phase. Examples of subsequent care are: cast change or removal, an x-ray to check healing status of fracture, removal of external or internal fixation device, medication adjustment, other aftercare and follow up visits following treatment of the injury or condition.

c. Coding of Traumatic Fractures . . .

1) Initial vs. Subsequent Encounter for Fractures

Traumatic fractures are coded using the appropriate 7th character for initial encounter (A, B, C) while for each encounter where the patient is receiving active treatment for the fracture. Examples of active treatment are: surgical treatment, emergency department encounter, and evaluation and continuing (ongoing) treatment by the same or different physician.

Fractures are coded using the appropriate 7th character for subsequent care for encounters after the patient has completed active treatment of the fracture and is receiving routine care for the fracture during the healing or recovery phase. Examples of fracture aftercare are: cast change or removal, an x-ray to check healing status of fracture, removal of external or internal fixation device, medication adjustment, and follow-up visits following fracture treatment.

The open fracture designations in the assignment of the 7th character for fractures of the forearm, femur and lower leg, including ankle are based on the Gustilo open fracture classification. When the Gustilo classification type is not specified for an open fracture, the 7th character for open fracture type I or II should be assigned (B, E, H, M, Q). . .
e. Adverse Effects, Poisoning, Underdosing and Toxic Effects

5) The occurrence of drug toxicity is classified in ICD-10-CM as follows:

   (b) Poisoning...

   If the intent of the poisoning is unknown or unspecified, code the intent as accidental intent.
   The undetermined intent is only for use if the documentation in the record specifies that the intent cannot be determined. . . .

f. Adult and child abuse, neglect and other maltreatment . . .

For cases of confirmed abuse or neglect an external cause code from the assault section (X92-Y08-Y09) should be added to identify the cause of any physical injuries. A perpetrator code (Y07) should be added when the perpetrator of the abuse is known. For suspected cases of abuse or neglect, do not report external cause or perpetrator code. . . .

If a suspected case of alleged rape or sexual abuse is ruled out during an encounter code Z04.41, Encounter for examination and observation following alleged physical adult abuse, ruled out rape or code Z04.42, Encounter for examination and observation following alleged child rape sexual abuse, ruled out, should be used, not a code from T76.

21. Chapter 21: Factors influencing health status and contact with health services (Z00-Z99)

Categories of Z Codes

3) Status . . .

   The status Z codes/categories are: . . .

   Z19  Hormone sensitivity malignancy status
   Z68  Body mass index (BMI)

   As with all other secondary diagnosis codes, the BMI codes should only be assigned when they meet the definition of a reportable diagnosis (see Section III, Reporting Additional Diagnoses).
6) Observation
There are two observation Z code categories. . . . The observation codes are to be used as principal diagnosis only. The only exception to this is when the principal diagnosis is required to be a code from category Z38, Liveborn infants according to place of birth and type of delivery. Then a code from category Z05, Encounter for observation and evaluation of newborn for suspected diseases and conditions ruled out, is sequenced after the Z38 code. . . .

Z05 Encounter for observation and evaluation of newborn for suspected diseases and conditions ruled out

7) Aftercare . . .
The aftercare Z category/codes:
Z51 Encounter for other aftercare and medical care . . .

11) Encounters for Obstetrical and Reproductive Services. . .
Category Z3A codes should not be assigned for pregnancies with abortive outcomes (categories O00-O08), elective termination of pregnancy (code Z33.32), nor for postpartum conditions, as category Z3A is not applicable to these conditions.

14) Miscellaneous Z codes
Miscellaneous Z codes/categories: . . .
Z29 Encounter for other prophylactic measures . . .

Z72 Problems related to lifestyle
Note: These codes should be assigned only when the documentation specifies that the patient has an associated problem. . . .

16) Z Codes That May Only be Principal/First-Listed Diagnosis

Z31.82—Encounter for Rh incompatibility status
Section II. Selection of Principal Diagnosis . . .
Since that time the application of the UHDDS definitions has been expanded to include all non-outpatient settings (acute care, short term, long term care and psychiatric hospitals; home health agencies; rehab facilities; nursing homes, etc.). The UHDDS definitions also apply to hospice services (all levels of care). . . .

Section III. Reporting Additional Diagnoses . . .
Since that time the application of the UHDDS definitions has been expanded to include all non-outpatient settings (acute care, short term, long term care and psychiatric hospitals; home health agencies; rehab facilities; nursing homes, etc.). The UHDDS definitions also apply to hospice services (all levels of care).

Section IV. Diagnostic Coding and Reporting Guidelines for Outpatient Services
These coding guidelines for outpatient diagnoses have been approved for use by hospitals/ providers in coding and reporting hospital based outpatient services and provider-based office visits. Guidelines in Section I, Conventions, general coding guidelines and chapter-specific guidelines, should also be applied for outpatient services and office visits. . . .

The Uniform Hospital Discharge Data Set (UHDDS) definition of principal diagnosis applies only to inpatients in acute, short term, long-term care and psychiatric hospitals does not apply to hospital-based outpatient services and provider-based office visits.

P. Encounters for general medical examinations with abnormal findings
The subcategories for encounters for general medical examinations, Z00.0-, provide codes for with and without abnormal findings. Should a general medical examination result in an abnormal finding, the code for general medical examination with abnormal finding should be assigned as the first-listed diagnosis. An examination with abnormal findings refers to a condition/diagnosis that is newly identified or a change in severity of a chronic condition (such as uncontrolled hypertension, or an acute exacerbation of chronic obstructive pulmonary disease) during a routine physical examination. A secondary code for the abnormal finding should also be coded.
Appendix I

Present on Admission Reporting Guidelines

Introduction . . .
Please see the CDC website for the detailed list of ICD-10-CM codes that do not require the use of a POA indicator (ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/ICD10CM/2017/). The conditions on this exempt list represent categories and/or codes for circumstances regarding the healthcare encounter or factors influencing health status that do not represent a current disease or injury or are always present on admission.

Assigning the POA Indicator . . .

Chronic condition with acute exacerbation during the admission
If a single code identifies both the chronic condition and the acute exacerbation, see POA guidelines pertaining to combination codes that contain multiple clinical concepts. . . .

Acute and Chronic Conditions
Assign “Y” for acute conditions that are present at time of admission and N for acute conditions that are not present at time of admission.
Assign “Y” for chronic conditions, even though the condition may not be diagnosed until after admission.
If a single code identifies both an acute and chronic condition, see the POA guidelines for combination codes that contain multiple clinical concepts.

Combination Codes That Contain Multiple Clinical Concepts
Assign “N” if any part at least one of the combination clinical concepts included in the code was not present on admission (e.g., COPD with acute exacerbation and the exacerbation was not present on admission; gastric ulcer that does not start bleeding until after admission; asthma patient develops status asthmaticus after admission).
Assign “Y” if all parts of the combination clinical concepts included in the code were present on admission (e.g., duodenal ulcer that perforates prior to admission).
If the final diagnosis includes comparative or contrasting diagnoses, and both were present, or suspected, at the time, assign “Y”.

For infection codes that include the causal organism, assign “Y” if the infection (or signs of the infection) were present on admission, even though the culture results may not be known until after admission (e.g., patient is admitted with pneumonia and the provider documents Pseudomonas as the causal organism a few days later).

[Please note that the entire POA exempt list has been deleted from the Official Guidelines for Coding and Reporting and instead moved to the CDC website as noted in the introduction to the POA guidelines.]
Changes to the ICD-10-PCS Official Guidelines for Coding and Reporting

Effective October 1, 2016, there are changes to the *ICD-10-PCS Official Guidelines for Coding and Reporting*. The complete set of guidelines are not shown in their entirety; only those guidelines that have been added or modified are included below. The complete guidelines may be downloaded by visiting [https://www.cms.gov/Medicare/Coding/ICD10/2017-ICD-10-PCS-and-GEMs.html](https://www.cms.gov/Medicare/Coding/ICD10/2017-ICD-10-PCS-and-GEMs.html).

The modifications are published below using the following format:

- **Narrative changes** appear in bold text (e.g., *arteries*).
- **Items underlined** have been moved within the guidelines since October 1, 2016 (e.g., *artery sites*).
- **Deletions** are shown as strikeouts (e.g., *artery sites*).

**B2.1a**
The procedure codes in the general anatomical regions body systems should only be used when the procedure is performed on an anatomical region rather than a specific body part (e.g., root operations Control and Detachment, Drainage of a body cavity) or on the rare occasion when no information is available to support assignment of a code to a specific body part.

*Examples:* Control of postoperative hemorrhage is coded to the root operation Control found in the general anatomical regions body systems. **Chest tube drainage of the pleural cavity is coded to the root operation Drainage found in the general anatomical regions body systems. Suture repair of the abdominal wall is coded to the root operation Repair in the general anatomical regions body system.**

**B3.1b . . .**

*Examples* . . .

**B3.2 . . .**

a. The same root operation is performed on different body parts as defined by distinct values of the body part character.

*Examples:* Diagnostic excision of liver and pancreas are coded separately. **Excision of lesion in the ascending colon and excision of lesion in the transverse colon are coded separately.**
b. The same root operation is repeated in multiple body parts, and those body parts are separate and distinct body parts classified to a single ICD-10-PCS body part value.

Examples: Excision of the sartorius muscle and excision of the gracilis muscle are both included in the upper leg muscle body part value, and multiple procedures are coded.

Extraction of multiple toenails are coded separately.

B3.4a . . .

Examples: Fine needle aspiration biopsy of fluid in the lung is coded to the root operation Drainage with the qualifier diagnostic.

B3.6b

Coronary arteries are classified by number of distinct sites treated, rather than number of coronary arteries or anatomic name of a coronary artery (e.g., left anterior descending). Coronary artery bypass procedures are coded differently than other bypass procedures as described in the previous guideline. Rather than identifying the body part bypassed from, the body part specifies the number of coronary artery sites arteries bypassed to, and the qualifier specifies the vessel bypassed from.

Example: Aortocoronary artery bypass of one site on the left anterior descending coronary artery and one site on the obtuse marginal coronary artery is classified in the body part axis of classification as two coronary artery sites arteries and the qualifier specifies the aorta as the body part bypassed from.

B3.6c

If multiple coronary artery sites arteries are bypassed, a separate procedure is coded for each coronary artery site artery that uses a different device and/or qualifier.

B3.7

The root operation Control is defined as, “Stopping, or attempting to stop, postprocedural or other acute bleeding.” If an attempt to stop postprocedural or other acute bleeding is initially unsuccessful, and to stop the bleeding requires performing any of the definitive root operations Bypass, Detachment, Excision, Extraction, Reposition, Replacement, or Resection, then that root operation is coded instead of Control.

Example: Resection of spleen to stop postprocedural bleeding is coded to Resection instead of Control.
B3.9
If an autograft is obtained from a different body part procedure site in order to complete the objective of the procedure, a separate procedure is coded.

B4.2
Where a specific branch of a body part does not have its own body part value in PCS, the body part is typically coded to the closest proximal branch that has a specific body part value. In the cardiovascular body systems, if a general body part is available in the correct root operation table, and coding to a proximal branch would require assigning a code in a different body system, the procedure is coded using the general body part value.

Examples: A procedure performed on the mandibular branch of the trigeminal nerve is coded to the trigeminal nerve body part value. Occlusion of the bronchial artery is coded to the body part value Upper Artery in the body system Upper Arteries, and not to the body part value Thoracic Aorta, Descending in the body system Heart and Great Vessels.

B4.4
The coronary arteries are classified as a single body part that is further specified by number of sites treated and not by name or number of arteries. Separate body part values are used to specify the number of sites treated. One procedure code specifying multiple arteries is used when the same procedure is performed, on multiple sites in the coronary arteries including the same device and qualifier values. Separate codes are used when the same procedure is performed on multiple sites in the coronary arteries.

Examples: Angioplasty of two distinct sites in the left anterior descending coronary artery arteries with placement of two stents is coded as Dilation of Coronary Arteries Artery, Two Artery Sites, with Two Intraluminal Devices.

Angioplasty of two distinct sites coronary arteries, in the left anterior descending coronary artery, one with stent placed and one without, is coded separately as Dilation of Coronary Artery, One Site Artery with Intraluminal Device, and Dilation of Coronary Artery, One Site Artery with no device.
Heart Assist Device Systems

The Central Office has received numerous requests for clarification regarding appropriate coding for cases involving temporary circulatory system heart assist devices. These devices are generally classified as hemodynamic support devices that unload the left ventricle, mini heart pumps/ventricular assist devices (VAD), and temporary circulatory support and recovery devices. Generally, these heart assist devices include an inflow cannula, a pump, an outflow graft, and an external controller component. These devices are indicated for conditions such as advanced heart failure, cardiogenic shock and other heart diseases.

One example of a temporary heart assist device is the Impella®. With recent changes to the indications in which a procedure involving an Impella® may be performed, coders are asking how to appropriately code these cases. In particular, they are seeking coding guidance for cases where a patient has an Impella® device inserted at one facility and is subsequently transferred to another facility where the device is removed. There is also confusion among coders as to the appropriate approach value for cases involving a surgical cut-down when an Impella® device is inserted.

When a patient is admitted and has an Impella® device inserted, two codes should be reported: a code from table 02H that describes the insertion of the device and a code from table 5A0 that describes assistance with an impeller pump. If a patient is subsequently transferred with the Impella® still in place, the only code reported by the second facility is a code for the removal of the device, if the device is removed.

If a surgical cut-down is documented, the full definition of the approach must be taken into consideration when selecting the approach value to report for a procedure involving an Impella®. Under ICD-10-PCS, the definition of the approach Open is “cutting through the skin or mucous membrane and any other body layers necessary to expose the site of the procedure.” A surgical cut-down (arteriotomy) describes the approach used to reach the access site and not the approach used to expose the site of the procedure.

This advice regarding selection of the appropriate approach value applies for any procedure where the access site and the procedure site use different approaches. For example, in procedures where an Impella® device is inserted or removed, the site of the procedure is in the heart or aorta (specifically the aorta, right ventricle or left ventricle). Neither the heart nor aorta is exposed when a femoral or axillary artery cut-down occurs, therefore it would be
incorrect to state that an open approach was utilized in those cases when a surgical cut-down for vascular access is documented.

Under ICD-10-PCS, the open approach value coded for procedures where an Impella® device is inserted or removed specifies exposure of the site of the procedure (in this case the heart or aorta) via a median sternotomy or thoracotomy incision.

Likewise, the body part value in the ICD-10-PCS code specifies the site where the procedure occurred. Coders should keep in mind that the ICD-10-PCS code specifies both the site (body part value) and approach to the site where the definitive procedure was done, and does not specify the access site.

The following questions and answers have been developed for further clarification:

**Question:**
An Impella CP left ventricular assist device was introduced via the femoral artery. Left ventricular assist device support was undertaken. The patient’s hemodynamics improved, however, due to changes in left ventricular geometry and increased venous return to the right side, despite inotropic support, there was evidence of significant right ventricular dysfunction in association with low cardiac index. As such, the decision was made to place the Impella RP right ventricular assist device. The right common femoral vein was accessed, and then using a combination of fluoroscopic and transesophageal echo guidance, the Impella RP device was introduced into the left common pulmonary artery. Right ventricular assist device support was undertaken. The patient’s hemodynamics were stabilized and pressure requirements reduced. How are both ventricular assist devices reported in ICD-10-PCS?

**Answer:**
Assign the following ICD-10 PCS codes
**Question:**
A patient was transferred to our facility status post placement of an Impella 5.0 left ventricular assist device for cardiogenic shock four days prior and is subsequently taken to the operating room for explantation of the device. The right subclavian incision was opened, and distal control of the axillary artery achieved. The Impella flow was reduced to P1, pulled out of the ventricle and Impella flow terminated. The device was then removed from the vascular graft. The graft was bled and evaluated, and no clot was found to be present. The distal tape was relieved, and the graft was oversewn with 4-0 Prolene suture. Do we code the root operation Assistance to identify that the patient was continuously being monitored with this device or is only a code to identify removal of the device reported?

**Answer:**
Only a code to identify the removal of the device should be reported. The code for Assistance is only reported when the initial insertion of an external heart assist system occurs. Assign the following ICD-10-PCS code

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>02HA3RS</td>
<td>Insertion of biventricular external heart assist system into heart, percutaneous approach, to identify the insertion of a biventricular external heart assist device.</td>
</tr>
<tr>
<td>5A0221D</td>
<td>Assistance with cardiac output using impeller pump, continuous, to identify the assistance with the impeller pump</td>
</tr>
<tr>
<td>02PA3RZ</td>
<td>Removal of external heart assist system from heart, percutaneous approach</td>
</tr>
</tbody>
</table>
Ask the Editor

Question:
A patient, who is three weeks post-acute myocardial infarction, is readmitted for treatment of exacerbated chronic obstructive pulmonary disease and acute bronchitis. During the hospital stay, the patient is continued on cardiac medications. Based on chapter 9 of the ICD-10-CM Official Guidelines for Coding and Reporting would the myocardial infarction still be coded as acute with a code from category I21, or would this be considered history of myocardial infarction?

Answer:
Continue to assign a code from category I21, ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction, as the patient is within four weeks of the initial acute myocardial infarction. The updated ICD-10-CM Official Guidelines for Coding and Reporting for acute myocardial infarction state “For encounters occurring while the myocardial infarction is equal to, or less than, four weeks old, including transfers to another acute setting or a postacute setting, and the myocardial infarction meets the definition for “other diagnoses” (see Section III, Reporting Additional Diagnoses), codes from category I21 may continue to be reported.”

For reporting purposes the definition for “other diagnoses” is interpreted as additional conditions that affect patient care in terms of requiring:

- clinical evaluation; or
- therapeutic treatment; or
- diagnostic procedures; or
- extended length of hospital stay; or
- increased nursing care and/or monitoring.
**Question:**
When referencing the Alphabetic Index under Dementia, Lewy body, the coder is directed to codes G31.83, Dementia with Lewy bodies, and [F02.80], Dementia in other diseases classified elsewhere without behavioral disturbance.

When referencing the Tabular List under category F02-, Dementia in other diseases classified elsewhere, there is an instructional note to “Code first the underlying physiological condition, such as:” and the list includes Dementia with Lewy bodies (G31.83), which is consistent with the Alphabetic Index. However, there is also an Excludes1 note under category F02- that prohibits assigning dementia with Parkinsonism (G31.83). Based on this inconsistency in the Tabular, how should Lewy body dementia be coded?

**Answer:**
Assign both codes G31.83 and F02.80 based on the Alphabetic Index listing the etiology (G31.83) and the associated manifestation (F02.80) and the corresponding instructional note in the Tabular List under category F02.80. As of October 1, 2016, the excludes1 note under category F02 prohibiting assignment of dementia with Parkinsonism (G31.83) has been deleted.

**Question:**
*Coding Clinic*, Fourth Quarter 2013, page 114, indicated that ICD-10-CM does not presume a linkage between diabetes and osteomyelitis and that the provider would need to document a linkage or relationship between the two conditions before it can be coded as such. Is this still true?
Answer:
No, effective October 1, 2016, the Index has been revised as follows:

**Diabetes, diabetic** (mellitus) (sugar) E11.9
with
osteomyelitis E11.69

The subterm “with” in the Index should be interpreted as a link between diabetes and any of those conditions indented under the word “with.” The physician documentation does not need to provide a link between the diagnoses of diabetes and osteomyelitis to accurately assign code E11.69, Type 2 diabetes mellitus with other specified complication. This link can be assumed since osteomyelitis is now listed under the subterm “with.” These conditions should be coded as related even in the absence of provider documentation explicitly linking them, unless the documentation clearly states the osteomyelitis is unrelated and due to some other underlying cause besides diabetes.

The same linkage between diabetes and osteomyelitis applies to other types of diabetes from categories E08-E13 as noted in the following index entry:

**Osteomyelitis**
- in diabetes mellitus -see E08-E13 with .69

Question:
We have previously been extensively trained that the diabetic cataract is rare, and may occur with rapid onset in Type I diabetics. *Coding Clinic for ICD-9-CM* previously informed us that the type of cataract more commonly found in adult diabetic patients is the age-related cataract which is not classified as an ocular manifestation of diabetes. The new “With” guidelines instruct us to link any condition indented under the word “with” to diabetes. In this guideline, all cataracts in diabetic patients are diabetic.
cataracts. Is there a change in understanding of the pathophysiology of the diabetic cataract, and if so, are all cataracts in diabetic patients now considered diabetic cataracts?

**Answer:**
The advice published in *Coding Clinic for ICD-9-CM* for diabetic cataracts dates back to 1985. Based on the revised guideline and changes in the understanding of the relationship between diabetes and cataracts, cataracts in diabetic patients should be coded as linked conditions. Cataracts are considered a major cause of visual impairment in diabetic patients as the incidence and progression of cataract is elevated in patients with diabetes mellitus. Several clinical studies have shown that cataract development occurs more frequently and at an earlier age in diabetic compared to nondiabetic patients.

**Question:**
How do we code an outpatient encounter for an x-ray of a specific site when the only reason for the examination is pain?

**Answer:**
When the only documentation specified by the physician is pain, assign the appropriate code for pain of the site that is being examined. If there are findings on the x-ray, code the findings. It is appropriate to code what is known at the time of code assignment. When available, coders may use the x-ray results to provide greater specificity. In the outpatient setting, when the physician has interpreted a diagnostic test, the diagnosis may be modified based on physician interpretation.

**Question:**
We understand that the ICD-10-CM codes for pressure ulcers include the location of the ulcer as well as the stage. What is the correct diagnosis code and present on admission (POA) indicator
for a patient admitted to the hospital with a stage 2 pressure ulcer of the left heel that worsens during the hospitalization and becomes a stage 3 ulcer?

**Answer:**
Assign code L89.622, Pressure ulcer of left heel, stage 2, for the site and stage of the ulcer on admission. Assign code L89.623, Pressure ulcer of left heel, stage 3, for the site and highest stage of the ulcer reported during the admission. Report a POA indicator of “Y” for code L89.622, Pressure ulcer of left heel, stage 2; and a POA indicator of “N” for code L89.623, Pressure ulcer of left heel, stage 3, to reflect that the pressure ulcer was a stage 2 on admission, but progressed to stage 3 during the hospitalization.

As of October 1, 2016, the *ICD-10-CM Official Guidelines for Coding and Reporting* have been revised to indicate that if a patient is admitted with a pressure ulcer at one stage and it progresses to a higher stage, two separate codes should be assigned: one code for the site and stage of the ulcer on admission and a second code for the same ulcer site and the highest stage reported during the stay.

**Question:**
The patient was admitted for repair of an atrial septal defect and partial anomalous pulmonary venous return of the right lung. A pericardial patch was anastomosed to baffle the return of the pulmonary veins on the right-hand side through the atrial septal defect, and the superior vena cava was attached to the right atrial appendage. What are the code assignments for this procedure?

**Answer:**
Assign code 021V09S, Bypass superior vena cava to right pulmonary vein with autologous venous tissue, open approach.
**Question:**
A patient with sinus venosus atrial septal defect and right partial anomalous pulmonary venous return was admitted for modified Warden procedure, atrial septectomy and replacement of superior vena cava with tubularized cormatrix patch. A bovine pericardial patch was trimmed and the superior vena cava opening was baffled to the margin of the right atrium septal defect. The superior vena cava was closed with a bovine pericardial patch. The tubularized cormatrix was used to reconstruct the systemic venous pathway onto the atrium. What are the code assignments for this procedure?

**Answer:**
Assign code **021V08S**, Bypass superior vena cava to right pulmonary vein with zooplastic tissue, open approach.

**Question:**
A patient is admitted for shoulder replacement due to osteoarthritis of the right shoulder. The default index entry for osteoarthritis takes you to a primary osteoarthritis code. Is it appropriate to assign a code for primary osteoarthritis, if the provider has not documented it as such?

**Answer:**
Yes, it is appropriate to assign a code for primary osteoarthritis. Assign code M19.011, Primary osteoarthritis, right shoulder. In ICD-10-CM, osteoarthritis is classified as primary, secondary and generalized. When the type of osteoarthritis is not specified, “primary” is the default.

Primary osteoarthritis is the most common form, and the condition is related to age. Typically, middle-aged adults (55-60) develop primary osteoarthritis, which is usually caused by “wear and tear.” Repetitive use of the joints over time can result in damage to the cartilage, causing joint pain and swelling.
**Question:**
A patient presents with bilateral osteoarthritis of the hips. The index entry directs to code M16.0, which is primary osteoarthritis. Should a code for bilateral primary osteoarthritis be assigned?

**Answer:**
Yes, it is appropriate to assign code M16.0, Bilateral primary osteoarthritis of hip. As previously stated, “When the type of osteoarthritis is not specified, ‘primary’ is the default.”

Primary osteoarthritis is the most common form, and the condition is related to age. Typically, middle-aged adults (55-60) develop primary osteoarthritis, which is usually caused by “wear and tear.” Repetitive use of the joints over time can result in damage to the cartilage, causing joint pain and swelling. Secondary osteoarthritis has a specific cause, such as an injury, an effect of obesity, genetics, inactivity, or other diseases, and usually develops at an earlier age (45-50).

**Question:**
A patient is admitted for a total knee replacement due to osteoarthritis of the left knee. It appears that the index entries for osteoarthritis of most sites leads to the primary osteoarthritis (OA) codes. However, when coding osteoarthritis of the knee, we are led to an unspecified osteoarthritis code. Why is the coding of OA of the knee different than other sites? What is the correct code assignment for OA of the left knee?

**Answer:**
Assign code M17.12, Unilateral primary osteoarthritis, left knee. Although the index references an unspecified code (M17.9), when reviewing the tabular list, it is important to review other codes in the related area to determine whether a more specific code can be assigned. Code M17.12 is a more specific code, which fully captures the diagnostic statement.
Question:
When coding “arthritis of the knee,” it appears that the index leads to code M19.90, Unspecified osteoarthritis, unspecified site. However, the provider documented “arthritis is of the knee.” What is the appropriate code assignment?

Answer:
Assign code M17.10, Unilateral primary osteoarthritis, unspecified knee, for a diagnosis of arthritis of the knee. When reviewing the tabular list, it is important to review other codes in the related area to determine whether a more specific code can be assigned. In this case, code M17.10 is more specific than code M19.90, and more accurately captures the diagnostic statement.

In the United States “arthritis” is primarily meant to represent osteoarthritis, and defaults in ICD-10-CM were adjusted to recognize this.

Question:
We cannot find index entries for arthritis of a site unless the type of arthritis is documented. How should we report arthritis when the type is not further specified? Is it appropriate to reference “osteoarthritis” by site when coding arthritis?

Answer:
Yes. Assign code M19.90, Unspecified osteoarthritis, unspecified site, if the site of the arthritis is not documented. In ICD-10-CM the default for “arthritis, unspecified” is “osteoarthritis, unspecified site.” In the United States “arthritis” is primarily meant to represent osteoarthritis, and defaults in ICD-10-CM were adjusted to recognize this.

Question:
Please explain the intent of the new ICD-10-CM guideline regarding code assignment and clinical criteria that reads as follows: “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.” Some people are interpreting this to mean that clinical documentation improvement (CDI) specialists should no longer question diagnostic statements that don’t meet clinical criteria. Is this true?

**Answer:**

Coding must be based on provider documentation. This guideline is not a new concept, although it had not been explicitly included in the official coding guidelines until now. *Coding Clinic* and the official coding guidelines have always stated that code assignment should be based on provider documentation. As has been repeatedly stated in *Coding Clinic* over the years, diagnosing a patient’s condition is solely the responsibility of the provider. Only the physician, or other qualified healthcare practitioner legally accountable for establishing the patient’s diagnosis, can “diagnose” the patient. As also stated in *Coding Clinic* in the past, clinical information published in *Coding Clinic* does not constitute clinical criteria for establishing a diagnosis, substitute for the provider’s clinical judgment, or eliminate the need for provider documentation regarding the clinical significance of a patient’s medical condition.

The guideline noted addresses coding, not clinical validation. It is appropriate for facilities to ensure that documentation is complete, accurate, and appropriately reflects the patient’s clinical conditions. Although ultimately related to the accuracy of the coding, clinical validation is a separate function from the coding process and clinical skill. The distinction is described in the Centers for Medicare & Medicaid (CMS) definition of clinical validation from the Recovery Audit Contractors Scope of Work document and cited in the AHIMA Practice Brief (“Clinical Validation: The
Next Level of CDI”) published in the August issue of JAHIMA: “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. Clinical validation is performed by a clinician (RN, CMD, or therapist). 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 or may be performed by a clinician with approved coding credentials.”

While physicians may use a particular clinical definition or set of clinical criteria to establish a diagnosis, the code is based on his/her documentation, not on a particular clinical definition or criteria. In other words, regardless of whether a physician uses the new clinical criteria for sepsis, the old criteria, his personal clinical judgment, or something else to decide a patient has sepsis (and document it as such), the code for sepsis is the same—as long as sepsis is documented, regardless of how the diagnosis was arrived at, the code for sepsis can be assigned. Coders should not be disregarding physician documentation and deciding on their own, based on clinical criteria, abnormal test results, etc., whether or not a condition should be coded. For example, if the physician documents sepsis and the coder assigns the code for sepsis, and a clinical validation reviewer later disagrees with the physician’s diagnosis, that is a clinical issue, but it is not a coding error. By the same token, coders shouldn’t be coding sepsis in the absence of physician documentation because they believe the patient meets sepsis clinical criteria. A facility or a payer may require that a physician use a particular clinical definition or set of criteria when establishing a diagnosis, but that is a clinical issue outside the coding system.
Question:
If an elderly multigravida or primigravida mother has a normal delivery, would a code for “normal delivery” be the principal diagnosis with the elderly supervision code as the secondary diagnosis in ICD-10-CM? An edit of “unacceptable principal diagnosis” is triggered, when assigning code O09.523, Supervision of elderly multigravida, third trimester. Therefore, when the patient has a completely normal delivery, and the only issue is advanced maternal age, what diagnosis code is assigned?

Answer:
Assign only code O80, Encounter for full-term uncomplicated delivery, as the principal diagnosis.

Effective October 1, 2016, Guideline 15.b.2 of the ICD-10-CM Official Guidelines for Coding and Reporting has been revised and states:

“Codes from category O09, Supervision of high-risk pregnancy, are intended for use only during the prenatal period. For complications during the labor or delivery episode as a result of a high-risk pregnancy, assign the applicable complication codes from Chapter 15. If there are no complications during the labor or delivery episode, assign code O80, Encounter for full-term uncomplicated delivery.”