Fiscal Year 2007 ICD-9-CM Changes

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Hematology Issues

Lymphatic and Hematopoietic Tissues
New codes were approved to uniquely identify essential thrombocythemia, myelodysplastic syndrome, myelofibrosis with myeloid metaplasia, constitutional red blood cell aplasia, and pancytopenia. This change involves an expansion of codes 238.7, Neoplasm of uncertain behavior, other lymphatic and hematopoietic tissues, and 284.0, Constitutional aplastic anemia. Although the myeloproliferative disorders and myelodysplastic syndrome are now recognized as hematologic malignancies, for data consistency purposes, they will be maintained with the neoplasms of uncertain behavior in ICD-9-CM.

Thrombocythemia
Essential thrombocythemia is also known as essential thrombocytosis, idiopathic thrombocythemia, and primary thrombocytosis. It involves a markedly elevated platelet count and abnormal platelet aggregation. Additional findings may include hypercellular bone marrow, acrocyanosis, and splenomegaly. Bleeding or abnormal clotting events may occur. Essential thrombocythemia can have certain specific genetic causes, which can be a mutation of the thrombopoietin gene or a polymorphism in the myeloproliferative leukemia virus oncogene.

Myelodysplastic Syndrome
Myelodysplastic syndrome refers to a group of acquired bone marrow disorders, which involve dysplastic, hypercellular bone marrow, and peripheral cytopenia. It commonly precedes acute myelogenous leukemia and may be called preleukemia. Myelodysplastic syndrome may be classified (based on examination of peripheral smear and bone marrow) as refractory anemia with or without dysplasia, refractory anemia with ringed sideroblasts with or without dysplasia, and as refractory anemia with excess blasts. Chronic myelomonocytic leukemia has been considered to be related to myelodysplastic syndrome, but it has both myelodysplastic and myeloproliferative characteristics.

Myelofibrosis with Myeloid Metaplasia
Myelofibrosis with myeloid metaplasia may also be called agnogenic myeloid metaplasia, primary myelofibrosis, idiopathic myelofibrosis, or myelosclerosis with myeloid metaplasia. This chronic and progressive disease involves bone marrow being replaced by fibrous tissue. A progressive anemia results, even though other organs such as the spleen start to make blood. Splenomegaly may also occur.

Aplastic Anemia and Other Bone Marrow Failure Syndrome
The aplastic anemias include a diverse group of bone marrow disorders, most of which involve not just anemia, but pancytopenia as well. The hematopoietic marrow cells are generally replaced by fat in aplastic anemia, in comparison to disordered hematopoiesis in myelodysplasias, and fibrosis in myelofibrosis. Pancytopenia is a decrease in all the cellular elements in the blood, including red cells, white cells, and platelets.

Diseases of White Blood Cells
An expansion of code 288.0, Agranulocytosis, has been approved to create codes for congenital, cyclic, and drug-induced neutropenia. The title of subcategory 288.0 has changed to “neutropenia.” Unique codes for unspecified leukocytopenia, lymphocytopenia, other decreased leukocytes, unspecified leukocytosis, lymphocytosis, and other elevated leukocytes have also been approved in category 288, Diseases of white blood cells.

The new codes are

238.71	Essential thrombocythemia
238.72	Low grade myelodysplastic syndrome lesions
238.73	High grade myelodysplastic syndrome lesions
238.74	Myelodysplastic syndrome with 51 deletion
238.75	Myelodysplastic syndrome, unspecified
238.76	Myelofibrosis with myeloid metaplasis
238.79	Other lymphatic and hematopoietic tissues
284.01	Constitutional red blood cell aplasia
284.09	Other constitutional aplastic anemia
284.1	Pancytopenia
284.2	Myelophthisis
288.00	Neutropenia, unspecified
288.01	Congenital neutropenia
288.02	Cyclic neutropenia
288.03	Drug induced neutropenia
288.04	Neutropenia due to infection
288.09	Other neutropenia
288.4	Hemophagocytic syndromes
288.50	Leukocytopenia, unspecified
288.51	Lymphocytopenia
288.59	Other decreased white blood cell count
288.60	Leukocytosis, unspecified
288.61	Lymphocytosis (symptomatic)
288.62	Leukemoid reaction
288.63	Monocytosis (symptomatic)
288.64	Plasmacytosis
288.65	Basophilia
288.69	Other elevated white blood cell count
289.53	Neutropenic splenomegaly
289.83	Myelofibrosis

Familial Mediterranean Fever

Code 277.31, Amyloidosis, has been expanded to allow creation of a code for familial Mediterranean fever. Inclusion terms were added under the new code for benign paroxysmal peritonitis, hereditary amyloid nephropathy, periodic familial polyserositis, and recurrent polyserositis. Familial Mediterranean fever is a rare inherited disorder characterized by regular attacks of inflammation in the lining of the abdominal cavity, chest cavity, skin, or joints along with recurrent high fevers. It usually affects people of Mediterranean ancestry, most commonly people of non-Ashkenazi Jewish, Armenian, Arab, and Turkish background. Since there is no diagnostic laboratory test, the diagnosis is usually made based on clinical findings. Treatment using colchicine provides remission or improvement in most patients, though they are subject to further acute attacks.

Myelitis

A number of new codes have been approved for myelitis, encephalitis, and encephalomyelitis:

- Postvaricella myelitis (052.2)
- Herpes zoster myelitis (053.14)
- Herpes simplex myelitis (054.74)

- Encephalitis and encephalomyelitis in viral diseases classified elsewhere (323.01)
- Myelitis in viral diseases classified elsewhere (323.02)
- Other encephalitis and encephalomyelitis due to infection classified elsewhere (323.41)
- Other myelitis due to infection classified elsewhere (323.42)
- Encephalitis and encephalomyelitis following immunization procedures (323.51)
- Myelitis following immunization procedures (323.52)
- Infectious acute disseminated encephalomyelitis (ADEM) (323.61)
- Other postinfectious encephalitis and encephalomyelitis (323.62)
- Postinfectious myelitis (323.63)
- Toxic encephalitis and encephalomyelitis (323.71)
- Toxic myelitis (323.72)
- Other causes of encephalitis and encephalomyelitis (323.81)
- Other causes of myelitis (323.82)
- Acute (transverse) myelitis, not otherwise specified (341.20)
- Acute (transverse) myelitis in conditions classified elsewhere (341.21)
- Idiopathic transverse myelitis (341.22)

The code titles of several existing codes in the affected categories were revised to accommodate the modifications.

Myelitis is an inflammation of the spinal cord. It can have a number of possible presentations and possible underlying causes. Transverse myelitis involves a paraparesis or paraplegia, due to the spinal cord dysfunction. Some of the potential causes of myelitis include infectious, postinfectious, postvaccination, and toxic mechanisms.

A number of other disorders can also cause a secondary demyelinating acute transverse myelitis, including tumor, trauma, herniated intervertebral disc, hemorrhage, dissecting aortic aneurysm, arteritis, and systemic lupus erythematosus. Idiopathic transverse myelitis is demyelinating in pathology.

Mild Cognitive Impairment

Code 331.83 for mild cognitive impairment was added. This code does not describe cognitive impairment associated with head trauma, dehydration, malnutrition, and strokes. Mild cognitive impairment is a disease entity defined by an impairment in memory (or any other cognitive domain) that is beyond what is normal for age, with relatively intact function in the other cognitive domains. Many patients with this diagnosis go on to eventually develop dementia.

Torsion Dystonia and Athetoid Cerebral Palsy

New codes were created to describe athetoid cerebral palsy (333.71) and acute dystonia due to drugs (333.72). Athetoid cerebral palsy involves hypotonia, with poor head control and potential feeding difficulties. Athetoid movements are often noted at about one year of age. Speech is often slurred. Intellect is usually preserved. A new code for subacute dyskinesia due to drugs (333.85) was also approved.

Restless Legs Syndrome

A unique code for restless legs syndrome was created in subcategory 333.9, Other extrapyramidal disease and abnormal movement disorders. This request was discussed at the March 2006 meeting and it was requested that this code be effective October 2006. It was not included in the Proposed Rules, but is included in the Official Addenda and will be included in the Final Rules.

Restless legs syndrome (RLS) is a sensory-motor disorder characterized by unpleasant sensations in the legs and an uncontrollable urge to move, when at rest, in an effort to relieve these feelings. RLS sensations are often described as a burning, creeping, or tugging pain associated with the desire to move the legs. The ability to sleep is affected because it occurs most often at night. No etiology has been found for restless legs syndrome, although it has been associated with a number of medical conditions including: neuropathies, radiculopathies, end-stage renal disease, Parkinson’s disease, rheumatoid arthritis, and diabetes. Treatment options range from nonpharmacological (hot baths, muscle stretching, massage, moderate exercise) to

pharmacologic folate, vitamin C, and vitamin B12. Dopamine agonist therapy and Levo-dopa are used for the primary form of RLS.

Central Pain Syndrome, Acute Pain, Generalized Pain, and Postoperative Pain

New codes for generalized pain, central pain syndrome, and postoperative pain have been approved. Previously, codes for pain were found in both the body system chapters and the symptom chapter. A new category was created in the nervous system chapter for some of these conditions, and the codes differentiate central pain syndrome, acute pain, and chronic pain. There is a specific code for neoplasm related pain (338.3). Generalized pain is coded to 780.96.

Central pain syndrome can be caused by damage to the central nervous system. This can be traumatic or brain-related (such as stroke, multiple sclerosis, tumors, epilepsy, or Parkinson's disease). The character and extent of the pain differs widely depending partly on the variety of causes. These patients are treated with pain medications and sometimes antidepressants or anticonvulsants. Central pain syndrome includes thalamic pain syndrome (previously indexed to code 348.8, Other conditions of brain) and myelopathic pain.

Postoperative pain was previously indexed to "see Pain, by site," however, coding only the site of the pain does not indicate that it is postoperative in nature.

The new codes related to pain are

338.0	Central pain syndrome
338.11	Acute pain due to trauma
338.12	Acute post-thoracotomy pain
338.18	Other acute postoperative pain
338.19	Other acute pain
338.21	Chronic pain due to trauma
338.22	Chronic post-thoracotomy pain
338.28	Other chronic postoperative pain
338.29	Other chronic pain
338.23	Neoplasm related pain (acute) (chronic)
338.4	Chronic pain syndrome
780.96	Generalized pain

Epilepsy/Complex Febrile Seizure

The terminology used to describe different types of epilepsy has changed over the years, and the ICD-9-CM code titles are no longer current. As a result, the code titles for subcategories 345.4 and 345.5 are revised. The new title of subcategory 345.4 will be "Localization-related (focal) (partial) epilepsy and epileptic syndromes with complex partial seizures," and the new title of subcategory 345.5 will be "Localization-related (focal) (partial) epilepsy and epileptic syndromes with simple partial seizures." Also, "seizure disorder NOS" and "recurrent seizures NOS" will be classified to subcategory 345.9. Category 345 will now read "Epilepsy and recurrent seizures." A single, isolated seizure would continue to be classified to code 780.39. Febrile convulsions that lead to status epilepticus would be classified to subcategory 345.3 instead of code 780.32. Code 780.31 will classify simple or unspecified febrile seizures, while a new code (780.32) was created for complex febrile convulsions

Complex febrile seizures are defined as seizures associated with fever that are focal, prolonged (greater than 15 minutes), or recur within 24 hours in children between six months and five years of age. They may also be referred to as atypical or complicated febrile seizures. Fever-associated seizures that do not meet these criteria may be called simple febrile seizures. There are significant differences in morbidity between simple and complex febrile seizures. Long-term risk of epilepsy can range from 6 to 8 percent in children who have a single feature of a complex seizure to 49 percent in patients who have all three features. A child with a complex febrile seizure may need neuroimaging and/or long-term anticonvulsant therapy.

Optic Nerve Hypoplasia

A new code for optic nerve hypoplasia (337.43) was accepted. Although it is a congenital abnormality, the American Academy of Ophthalmology feels the code should be placed in Chapter 6 (Diseases of the Nervous System and Sense Organs). Optic nerve hypoplasia is a congenital abnormality of the optic disc which can impair vision. It manifests as a small optic nerve that may be accompanied by a peripapillary ring (the double ring sign). Optic nerve hypoplasia can be unilateral or bilateral, and there may be mild or severe impairment in visual function.

Inflammation of Post-Procedural Bleb

A new subcategory for inflammation (infection) of postprocedural bleb has been created in category 379, Other disorders of eye. Four new codes for different stages of this condition (including unspecified 379.60) were created in this subcategory.

Following ophthalmologic procedures that create a filtering bleb (an auxiliary drain on the outside of the eyeball), inflammation (usually infectious) can occur. The bleb is extremely thin-walled and can be easily invaded by bacteria. Filtering blebs are most commonly associated with trabeculectomy for the treatment of glaucoma, but they may also be created with other ophthalmologic procedures.

The postprocedural bleb inflammation has different stages of severity. Stage 1 (379.61) is characterized by bleb purulence with or without a mild anterior segment inflammation. Stage 2 1 (379.62) includes bleb purulence and moderate anterior segment inflammation. Stage 3 1 (379.63) includes marked anterior chamber reaction, vitreitis, and severe pain. Stage 3 may lead to bleb-related endophthalmitis and acute visual loss. Topical antibiotics may resolve stage 1. Topical drugs and oral antibiotics are needed for stage 2. A subconjunctival antibiotic injection is generally recommended for patients who do not improve within 24 to 48 hours. Repeat injections may be needed for stage 3. After resolution of the infection, surgical revision of the bleb may be needed. Patients with avascular, thin blebs and recurrent bleb leaks are at risk for repeat infection.

Sensorineural Hearing Loss

New codes for unilateral (389.15) and asymmetrical sensorineural hearing loss (389.16) have been approved in subcategory 389.1, Sensorineural hearing loss. The word “bilateral” was also added to the titles of existing codes 389.11, 389.12, 389.14, and 389.18.

Otolaryngologists perform audiometric studies to evaluate hearing loss. When an asymmetric hearing loss (a bilateral hearing loss whereby the hearing loss is worse in one ear) or unilateral sensorineural hearing loss is noted, the patient is referred for further testing. Findings of asymmetric or unilateral sensorineural hearing loss may indicate a retrocochlear lesion, such as an acoustic neuroma or meningioma.

Fifth Digit Title Changes for Categories 403 and 404

With the modifications to category 585, Chronic kidney disease, that became effective on October 1, 2005, corresponding changes were made to the descriptions for the fifth digits for categories 403, Hypertensive kidney disease, and 404, Hypertensive heart and kidney disease. The revised descriptions were based on the structure of the previous descriptions. After the changes to these fifth digits were finalized, it became evident that they were no longer valid as a result of the changes made to category 585. The revised description for the fifth digit “0” was “without chronic kidney disease.” However, it is not possible to have hypertensive kidney disease or hypertensive heart and kidney disease without having chronic kidney disease.

As a result, new fifth digits were created in these categories. The new fifth digits are

403	Hypertensive chronic kidney disease
0	with chronic kidney disease stage I through stage IV, or unspecified
1	with chronic kidney disease stage V or end stage renal disease

404	Hypertensive heart and chronic kidney disease
0	without heart failure and with chronic kidney disease stage I through stage IV, or unspecified

1	with heart failure and with chronic kidney disease stage I through stage IV, or unspecified
2	without heart failure and with chronic kidney disease stage V or end stage renal disease
3	with heart failure and with chronic kidney disease stage V or end stage renal disease

An excludes note was added under code 585.5, Chronic kidney disease, stage V and an inclusion term was added under code 585.6; End stage renal disease to clarify that code 585.6 should be assigned for chronic kidney disease, stage V requiring dialysis.

Takotsubo Syndrome

A code for Takotsubo syndrome (429.83), also called "transient left ventricular apical ballooning syndrome, has been proposed in subcategory 429.8, Other ill-defined heart diseases. Effective October 1, 2005, apical ballooning syndrome was indexed to code 429.89, Other ill-defined heart diseases.

Takotsubo syndrome is a reversible left ventricular dysfunction in patients without coronary disease precipitated by emotional or physiological stress. This name refers to the associated left ventricular morphologic features including transient wall-motion abnormalities involving the left ventricular apex and mid-ventricle that accompany this syndrome. Patients commonly present with ST-segment elevation in the precordial leads, chest pain, relatively minor elevation of cardiac enzyme and biomarker levels, and transient apical systolic left ventricular dysfunction. They are usually monitored and treated for left heart failure, dynamic intraventricular obstruction, and arrhythmias. The exact cause of the syndrome is unknown.

The word *tako-tsubo* refers to the round-bottomed, narrow-necked Japanese fishing pot used for trapping octopus. The syndrome was originally recognized and reported in the Japanese population; however, it is now reported more in the white U.S. population and in Europe.

Mucositis

Unique codes for mucositis have been approved. Specific ICD-9-CM codes for this condition were needed to enable accurate and consistent statistics on these patients and to be able to measure resource utilization and cost effectiveness of mucositis interventions. Several new codes were created in the appropriate sections of ICD-9-CM.

Mucositis is a frequent complication of anticancer treatment that causes redness and/or ulcerative sores in the soft tissues of the mucosal surfaces throughout the body, resulting in severe pain as well as difficulty in or lack of ability to eat, drink, and take oral medications. The rapidly dividing basal cells of the mucosal surfaces throughout the body are especially vulnerable to damage by chemotherapy and radiation therapy. The oral mucosa is the most frequent site of mucositis, but it can also occur along the entire alimentary tract (esophagus, stomach, duodenum, small intestine, colon, and rectum). Treatment of ovarian and nasopharyngeal cancers can also result in vaginal and nasal mucositis, respectively.

The new codes are

478.11	Nasal mucositis (ulcerative)
478.19	Other disease of nasal cavity and sinuses
528.00	Stomatitis and mucositis, unspecified
528.01	Mucositis (ulcerative) due to antineoplastic therapy
528.02	Mucositis (ulcerative) due to other drugs
528.09	Other stomatitis and mucositis (ulcerative)
538	Gastrointestinal mucositis (ulcerative)
616.81	Mucositis (ulcerative) of cervix, vagina, and vulva
616.89	Other inflammatory disease of cervix, vagina, and vulva

There is also a note with these codes to use an additional E code to identify adverse effects of therapy, such as antineoplastic and immunosuppressive drugs (E930.7, E933.1) and radiation therapy (E879.2).

Transfusion Related Acute Lung Injury (TRALI)

A new code for transfusion related acute lung injury (TRALI) has been created in category 518, Other diseases of lung. Transfusion related acute lung injury is a serious pulmonary syndrome seen in a small percentage of patients who have received blood products. The diagnostic features can include acute respiratory distress, acute bilateral pulmonary edema (noncardiogenic), severe hypoxemia, hypotension (rarely hypertension), and fever. The onset of TRALI is usually within one to six hours following a transfusion. The mortality rate is between 6 and 10 percent. Treatment requires interruption of the transfusion and, in some cases, ventilation with hemodynamic support. The vast majority of cases resolve within 96 hours with ventilatory support. Resolution is generally complete and few, if any, residual damages occur. According to the Center for Biologics Evaluation and Research, TRALI is the third leading cause of transfusion-related death. The majority of deaths were associated with fresh frozen plasma transfusions, with fewer being caused by packed red blood cell transfusions and platelet transfusions. In most cases, follow-up donor antibody screens showed donors who were positive for anti-HLA or antigranulocyte antibodies.

Nonasthmatic Bronchospasm

A new code has been approved for nonasthmatic bronchospasm. A child may present with bronchospasm but has not been diagnosed with asthma. Previously bronchospasm was indexed to code 519.1, Other diseases of trachea and bronchus, not elsewhere classified. Codes 519.11, Acute bronchospasm and 519.19, Other diseases of trachea and bronchus were added.

Cracked Tooth

A new code for cracked tooth (521.81) caused by normal wear and tear has been added. This new code is not assigned if the broken tooth is due to trauma. Human teeth flex during mastication or during parafunctional habits such as bruxing. In multicuspid teeth (molars and premolars), this flexure can force the cusps apart as forces provide a wedging action on the occlusal surfaces. Multicuspid teeth may experience incomplete fractures through crack propagation through enamel into dentin without the loss of tooth structure. Dentin, a living material, is innervated directly and indirectly. Teeth become symptomatic as they flex and fluid within the propagating crack moves, causing discomfort to varying degrees. Further crack propagation may lead to devitalizing of the tooth. This condition is occurring with increasing frequency as humans extend their life span and retain their dentition.

Acute and Chronic Gingival and Periodontal Disease

New codes have been created to distinguish plaque-induced and non-plaque induced gingivitis (for both acute and chronic gingivitis). There are many non-bacterial causes of gingivitis and knowledge of the etiology permits precise therapies to intercept the gingival lesions and prevent their progression. Chronic and plaque-induced gingivitis has been designated the defaults when the documentation doesn't provide further specificity.

New codes were also approved to specify localized and generalized periodontal disease. It is important to distinguish between the localized and generalized forms of this condition because different treatment strategies are employed, and these strategies have varied health and economic outcomes.

New codes were also created for aggressive periodontitis. Aggressive means that it is advancing at a rapid rate.

The new codes are

523.00	Acute gingivitis, plaque induced
523.01	Acute gingivitis, non-plaque induced
523.10	Chronic gingivitis, plaque induced
523.11	Chronic gingivitis, non-plaque induced
523.30	Aggressive periodontitis, unspecified
523.31	Aggressive periodontitis, localized
523.32	Aggressive periodontitis, generalized
523.33	Acute periodontitis
523.40	Chronic periodontitis, unspecified
523.41	Chronic periodontitis, localized

523.42 Chronic periodontitis, generalized

Unsatisfactory Restoration of Tooth

A new subcategory for unsatisfactory restoration of tooth has been approved in category 525, Other diseases and conditions of the teeth and supporting structures. Within this new subcategory, specific codes have been approved for unspecified unsatisfactory restoration of tooth (525.60) open restoration margins (525.61), unrepairable overhanging dental restorative materials (525.62), fractured restorative material without loss of material (525.63), fractured restorative material with loss of material (525.64), contour of existing restoration biologically incompatible with oral health (525.65), allergy to existing restorative material (525.66), poor aesthetics of existing restoration (525.67), and other unsatisfactory restoration of tooth (525.69).

Current dental restorative materials are not permanent and suffer from failure. When damaged surfaces of the teeth are replaced with prosthetic materials, these materials become part of and act like tooth structure. Failure of these materials is then failure or pathology of the dentition. Failed restorations are considered to have a clinically significant loss of function, tissue inflammation, or pulp pathology.

Unsuccessful Endodontic Treatment

A new subcategory for periradicular pathology associated with previous endodontic treatment was created in category 526, Diseases of the jaws. Within this new subcategory, specific codes were added for perforation of root canal space (526.61), endodontic overfill (526.62), endodontic underfill (526.63), and other periradicular pathology associated with previous endodontic treatment (526.69).

Torsion of Testis

Code 608.2, Torsion of testis, was expanded to create unique codes for extravaginal torsion of spermatic cord (608.21), intravaginal torsion of spermatic code (608.22), torsion of appendix testis (608.23), and torsion of appendix epididymis (608.24).

Cervical Stump Prolapse

A new code for cervical stump prolapse (618.84) was added under subcategory 618.8, Other specified genital prolapse. Previously prolapse of the cervical stump was indexed under code 618.1, Uterine prolapse without mention of vaginal wall prolapse. However, this is an incorrect classification of this condition because the uterus is no longer present.

Other Conditions or Status of Mother Complicating Pregnancy

The American College of Obstetrics and Gynecology requested that a new category be created in chapter 11 (Complications of Pregnancy, Childbirth, and the Puerperium) to allow for the classification of numerous conditions that affect pregnancy but couldn't be specifically coded. This new category would include codes for smoking, obesity, bariatric surgery status, coagulation defects, epilepsy, spotting, and uterine size and date discrepancy. Please refer to Table 6A of the regulations for the complete list of codes.

The following category and subcategories were created:

649	Other conditions or status of the mother complicating pregnancy, childbirth, or the puerperium
649.0	Tobacco use disorder complicating pregnancy, childbirth, or the puerperium
649.1	Obesity complicating pregnancy, childbirth, or the puerperium
649.2	Bariatric surgery status complicating pregnancy, childbirth, or the puerperium
649.3	Coagulation defects complicating pregnancy, childbirth, or the puerperium
649.4	Epilepsy complicating pregnancy, childbirth, or the puerperium
649.5	Spotting complicating pregnancy
649.6	Uterine size date discrepancy

Compartment Syndrome

Compartment syndrome due to trauma was previously indexed to code 958.8, Other early complications of trauma. Nontraumatic compartment syndrome was indexed to code 729.9, Other and unspecified disorders of soft tissue. Site-specific codes for nontraumatic and traumatic compartment syndrome have been created. Compartment syndrome involves increased pressure in an enclosed tissue space, leading to decreased blood flow and, potentially, tissue necrosis. It usually occurs within part of an extremity, but it can also occur in the abdomen and other sites. There are multiple compartments in the upper and lower extremity that can be affected by compartment syndrome.

Specific causes of compartment syndrome include burn, frostbite, snakebite, postsurgical edema or bleeding, hemophilia, and anticoagulant therapy. Exertional compartment syndrome is a nontraumatic type that occurs in individuals who exercise a lot (particularly in runners' legs).

The new codes are

729.71	Nontraumatic compartment syndrome of upper extremity
729.72	Nontraumatic compartment syndrome of lower extremity
729.73	Nontraumatic compartment syndrome of abdomen
729.79	Nontraumatic compartment syndrome of other sites

958.90	Compartment syndrome, unspecified
958.91	Traumatic compartment syndrome of upper extremity
958.92	Traumatic compartment syndrome of lower extremity
958.93	Traumatic compartment syndrome of abdomen
958.99	Traumatic compartment syndrome of other sites

Major Osseous Defects

A unique code for major osseous defects (731.3) has been approved in category 731, Osteitis deformans and osteopathies associated with other disorders classified elsewhere. This code could be assigned either by itself or in addition to a mechanical complication code. The underlying cause, if known, would be sequenced first.

Osseous defects are the result of extensive bone loss, typically in the area of the hip joint. The most common cause of this bone loss is peri-prosthetic osteolysis from a previous joint replacement, contributing to implant failure and need for revision. Other causes include osteomyelitis, aseptic or osteonecrosis, benign or malignant neoplasms, pathological fractures, severe osteoporosis, or trauma. Osseous defects can also be caused by combinations of these factors. While some bone loss is common and treated incidentally as part of joint replacement, major defects are clinically meaningful since the surrounding bone structure into which the joint implants are placed is not strong enough to mechanically support the implants without prior structural repair. Treatment of major osseous defects of the hip and knee may involve primary or revision hip or knee arthroplasty, often in conjunction with filling the defect with moralized or structural autogenous or allogenic bone graft and providing added mechanical support for the graft itself (using wires, cables, acetabular roof rings, cages, metal wedges, augments, or screws). Combined, these devices provide additional structural support for the hip and knee implants.

Hypoxia of Newborn, Hypoxic Ischemic Encephalopathy, and Related Newborn Issues

A proposal from the American Academy of Pediatrics involving code modifications for hypoxia of newborn and hypoxic ischemic encephalopathy was presented at the September 2005 Coordination and Maintenance Committee meeting. A proposal was presented at the March 2006 meeting that was based on the initial proposal, with subsequent input from the American College of Obstetricians and Gynecologists. Since this proposal was slightly different from the original proposal and it was not clear which code modifications the American Academy of Pediatrics and American College of Obstetricians and Gynecologists had reached consensus on, meeting attendees recommended that these two organizations be asked for a complete consensus proposal prior to implementation in order to ensure agreement on the final revisions. The following codes were not included in the Proposed Rules, but are included in the Official Addenda and will be included in the Final Rules. These new codes were created:

768.7	Hypoxic-ischemic encephalopathy (HIE)
768.9	Unspecified birth asphyxia in liveborn infant
770.87	Respiratory arrest of newborn
770.88	Hypoxemia of newborn
775.81	Other acidosis of newborn
775.89	Other neonatal endocrine and metabolic disturbances
779.85	Cardiac arrest of newborn

A careful review of the notes and inclusion terms is recommended in these categories.

Altered Mental Status

A code for altered mental status (780.97) has been approved in subcategory 780.9, Other general symptoms. Change in mental status is included in this code. An altered mental status may frequently be described as a symptom of a number of different types of illness. Underlying etiologies include trauma, infection, neoplasm, alcohol, and drugs, as well as endocrine, neurological, psychiatric, and renal disorders. If a specific cause of the altered mental status is documented, the cause should be coded and the proposed symptom code should not be assigned as an additional diagnosis.

Postnasal Drip

A specific code for postnasal drip (784.91) has been approved. It has been created through an expansion of code 784.9, Other symptoms involving head and neck.

Postnasal drip is the symptom of fluid or mucous dripping down the back of the throat. There are quite a few possible causes. Sinusitis and allergic rhinitis are among the most common causes. When the underlying cause is known, the code for that condition should be assigned and not the new code. The new symptom code would be assigned when the cause is not known.

Lower Urinary Tract Symptoms

New codes for urinary hesitancy (788.64) and straining on urination (788.65) have been added in subcategory 788.6, Other abnormalities of urination.

The addition of an inclusion term for “enlarged prostate” under code 600, Hyperplasia of prostate, was also added since this term is becoming increasingly common in describing benign prostatic hypertrophy. Notes have also been added to use an additional code to identify the urinary tract symptoms.

Inconclusive Imaging Tests Due to Excess Body Fat

A new code has been added for “image test inconclusive due to excess body fat” (793.91). According to radiologists, the prevalence of obesity has led to an increase in occurrence of inconclusive imaging test results due to excess body fat. Excess body fat reduces the ability to diagnose and treat patients using imaging technologies that have become the cornerstone of modern medicine (x-rays, CT scans, ultrasound, magnetic resonance imaging). It can be difficult or impossible to tell whether a patient has a kidney obstruction, to distinguish a benign fibroid tumor from ovarian cancer, or to see whether a fetal heart is developing properly.

Cytologic Evidence of Malignancy

A unique code for Papanicolaou smear of cervix with cytologic evidence of malignancy (795.06) has been added under subcategory 795.0, Abnormal Papanicolaou smear of cervix and cervical HPV.

Elevated Tumor Associated Antigens [TAA]

The creation of a new subcategory in category 795, Other and unspecified abnormal cytological, histological, immunological, and DNA test findings; to capture elevated tumor associated antigens [TAA] has been approved. Within this new subcategory,

the codes are elevated carcinoembryonic antigen [CEA] (795.81), elevated CA 125 (795.82), and other elevated tumor associated antigens (795.89).

Understanding of the mechanism involved in the induction of immunity and the recognition of antigens by effector cells has improved dramatically over the past decade. Testing for elevations in tumor associated antigens [TAA] (antigens that are relatively restricted to tumor cells) and tumor specific antigens [TSA] (antigens unique to tumor cells) in the diagnosis of and follow-up care for many cancers has become common practice. A unique code for elevated prostate specific antigen [PSA] was created when this test became routine in the diagnosis of prostate cancer. Many additional TAA and TSA tests have now become routine.

Unspecified Adverse Effect of Drug, Medicinal, and Biological Substance

In an effort to improve the coding of adverse effects of drugs and drug allergies, and to reduce the use of code 995.2, Unspecified adverse effect of drug, medicinal, and biological substance, code 995.2 is being modified. Code 995.2 should be used in very rare circumstances, when no information is provided regarding the adverse effect. It should not be used in the inpatient setting. However, there are a number of terms representing specific adverse effects that are indexed to code 995.2. All nonspecific terms for allergies to drugs are also indexed to code 995.2.

The following codes have been added:

995.20	Unspecified adverse effect of unspecified drug, medicinal, and biological substance
995.21	Arthus phenomenon
995.22	Unspecified adverse effect of anesthesia
995.23	Unspecified adverse effect of insulin
995.27	Other drug allergy
995.29	Unspecified adverse effect of other drug, medicinal, and biological substance

Sepsis/Severe Sepsis

Several recommendations were discussed at the April 2005 Coordination and Maintenance Committee meeting regarding the coding of severe sepsis.

There was a deletion of the instructional note to code first systemic inflammatory response syndrome (SIRS) due to noninfectious process with organ dysfunction that appears under code 785.52, Septic shock. Since it is not possible to develop septic shock in the absence of severe sepsis, an instructional note referencing a code for SIRS due to noninfectious process does not seem to make sense. The parallel instructional note under code 995.94, Systemic inflammatory response syndrome due to noninfectious process with organ dysfunction that references code 785.52 was also deleted.

Also approved was the retitling of the codes in subcategory 995.9, Systemic inflammatory response syndrome (SIRS). For codes 995.91 and 995.92, the code titles and inclusion terms have changed. The code title for 995.91 is now “sepsis,” with an inclusion term for “systemic inflammatory response syndrome due to infectious process.” Code 995.92 is retitled “severe sepsis,” with inclusion terms for “sepsis with acute organ dysfunction,” “sepsis with multiple organ dysfunction,” and “systemic inflammatory response syndrome due to infectious process with organ dysfunction.” The rationale for this change is that the previous code titles so not clearly explain the meaning of the codes and their intended use. The codes under subcategory 995.9 were created to allow for the classification of sepsis and severe sepsis and to allow for the identification of whether the SIRS was precipitated by infection or trauma.

Other changes were made to the placement of the note, “code first underlying systemic infection” under subcategory 995.9, Systemic inflammatory response syndrome (SIRS), since it does not properly apply to all codes under the subcategory (an infection is not the underlying cause of SIRS due to a noninfectious process).

Moreover, the word “systemic” has been deleted from the note on sequencing. It is recommended that a careful review of all notes in this section be undertaken, as well as a careful review of the Official Coding Guidelines.

V Code Changes

Family History of Colon Polyps

Creation of a code for family history of colon polyps (V18.51) has been approved. Though most colon polyps are benign, some types can eventually become cancerous. Individuals who are at higher risk of developing colon polyps include people over age 50, those with a past history of colon polyps, and those who have had a family member diagnosed with colon polyps or with cancer of the large intestine. A family history of colon polyps may prompt screening colonoscopies at earlier ages or with more frequency than average risk individuals. An individual with this family history may also seek medical advice to initiate lifestyle prevention methods.

Antepartum Testing on Father

New codes for "testing of male for genetic disease carrier status" (V26.34) and "other genetic testing of male" (V26.39) have been added in subcategory V26.3, Genetic counseling and testing. Often the male partner of a woman who is planning to conceive or is already pregnant will be evaluated for possible conditions that may affect a fetus. The new codes would only be for use on the record of the patient (the male being tested), not on the female's record. Code V26.35 was also added for an encounter for testing of a male partner of a habitual aborter.

Bariatric Surgery Status

A code for bariatric surgery status (V45.86) has been added in subcategory V45.8, Other postprocedural status. It is important to be able to identify patients who have undergone this type of surgery because of the potential impact this might have on future healthcare.

Attention to Surgical Dressings and Sutures

An expansion of code V58.3, Attention to surgical dressings and sutures, has been approved to differentiate between care of surgical and nonsurgical dressings. Previously use of code V58.3 was limited to surgical dressings and sutures. However, the home health industry has a need to identify encounters for change or removal of nonsurgical dressings.

The following codes will be available:

V58.30	Encounter for change or removal of nonsurgical wound dressing
V58.31	Encounter for change or removal of surgical wound dressing
V58.32	Encounter removal of sutures

Encounter for Hearing Examination Following Failed Hearing Screening

An expansion of code V72.1, Examination of ears and hearing, has been approved to create a code for "encounter for hearing examination following failed screening." (V72.11). Children are routinely screened for proper hearing function, and those who fail the initial screening may have additional audiology testing performed before a diagnosis of a hearing problem is made. The new code would describe the reason for the visit for the additional testing.

Body Mass Index (BMI), Pediatric

On October 1, 2005, new ICD-9-CM diagnosis codes will become effective for body mass index (BMI) in adults. The American Academy of Pediatrics has requested that new codes also be established for pediatric BMI that use the value ranges for children as currently represented in the Centers for Disease Control and Prevention (CDC) growth charts. BMI has been a common approach to determine if adults are overweight or obese, and recently, there has been increased attention on using it for pediatric patients as well. BMI is calculated from weight and height measurements and then used to compare a child's weight relative to stature with other children of the same age and gender. The percentile lines on the growth chart indicate the rank of the child's measurement. For example, when the child's BMI-for-age is plotted on the 95th percentile line, it means that 5 of 100 children (5 percent) of the same age and gender in the reference population have a higher BMI-for-age

than that child. A table showing the percentile cut-off values is used to help determine children at risk for being overweight, indicating a nutrition-related health concern. BMI can be used to characterize underweight as well as overweight status.

The new codes are

V85.51	Body Mass Index, pediatric, less than 5th percentile for age
V85.52	Body Mass Index, pediatric, 5th percentile to less than 85th percentile for age
V85.53	Body Mass Index, pediatric, 85th percentile to less than 95th percentile for age
V85.54	Body Mass Index, pediatric, greater than or equal to 95th percentile for age

Estrogen Receptor Status

A new V code category has been approved for estrogen receptor status. Within this category, new codes for estrogen receptor positive status (V86.0) and estrogen receptor negative status (V86.1) were created. TA note instructs that the appropriate code for malignant neoplasm of breast would be sequenced first.

About two-thirds of breast cancer patients have an estrogen receptor positive (ER+) tumor. The incidence of ER+ tumors is greater among postmenopausal women than premenopausal women. Patients with estrogen receptors have a somewhat better prognosis and are more likely to benefit from endocrine therapy. Estrogen ablation (by oophorectomy) provides palliation in advanced breast cancer. Tamoxifen is an effective treatment because it can bind to estrogen receptors on breast cancer cells. As an adjuvant therapy in breast cancer treatment, Tamoxifen prolongs the duration of disease-free survival, improves cure rate in receptor positive patients by 20 to 30 percent, and reduces the risk of contralateral breast cancer by about 60 percent.

New Procedures FY2007

00.44 Procedure on vessel bifurcation

Treatment on vessels that branch in two directions
The procedural differences between a “straight” procedure and a bifurcation procedure can be substantial. Vessel and vascular stent codes of straight intervention procedures do not translate into the same resource use as a bifurcation procedure with stent placement and/or PTCA.

Example:

> Angioplasty of the LAD and left circumflex coronary artery with insertion of two drug-eluting stents at bifurcation in the left anterior descending:
> 00.66 PTCA
> 36.07 Insertion of drug-eluting coronary artery stent(s)
> 00.44 Procedure on bifurcated vessels
> 00.46 Insertion of two vascular stents
>
> Angioplasty of left common femoral artery and left popliteal artery with insertion of a bare metal stent in the left common femoral at the bifurcation and a bare metal stent in the left popliteal
> 39.50 Angioplasty of other non-coronary vessels
> 39.90 Insertion of non-drug eluting peripheral vessel stents
> 00.44 Procedure on bifurcated vessels
> 00.47 Insertion of three vascular stents

Note: This code is to be used to identify the presence of a vessel bifurcation; it does not describe a specific bifurcation stent.
Use this code only once per operative episode, irrespective of the number of bifurcations in the vessels
Use with code 00.55, Insertion of drug-eluting peripheral vessel stent(s)

Use with code 00.61, Percutaneous angioplasty or atherectomy of precerebral (extracranial) vessel(s)
Use with code 00.62, Percutaneous angioplasty or atherectomy of intracranial vessel(s)
Use with code 00.63, Percutaneous insertion of carotid artery stent(s)
Use with code 00.64, Percutaneous insertion of other precerebral (extracranial) artery stent(s)
Use with code 00.65, Percutaneous insertion of intracranial vascular stent(s)
Use with code 00.66, Percutaneous transluminal coronary angioplasty [PTCA] or coronary atherectomy
Use with code 36.03, Open chest coronary artery angioplasty
Use with code 36.06, Insertion of non-drug-eluting coronary artery stent(s)
Use with code 36.07, Insertion of drug-eluting coronary artery stent(s)
Use with code 36.09, Other removal of coronary artery obstruction
Use with code 38.1, Endarterectomy
Use with code 39.50, Angioplasty or atherectomy of other non-coronary vessel(s)
Use with code 39.74, Endovascular removal of obstruction from head and neck vessel(s)
Use with code 39.90, Insertion of non-drug-eluting peripheral vessel stent(s)

00.56 Insertion or replacement of implantable pressure sensor (lead) for intracardiac hemodynamic monitoring

Code also any associated implantation or replacement of monitor (00.57)
Patients with severe degrees of heart failure (NYHA Class III and IV) need hospital care frequently due to volume overload brought on by high cardiac filling pressures. Volume overload is also called congestion and fluid retention. Controlled episodes of volume overload require close monitoring of the cardiac filling pressures. An implantable hemodynamic monitor (IHM) has been developed to provide continuous monitoring. It has two key components. The first is a lead tipped with a pressure sensor that is placed within the right ventricular outflow tract. It is always inserted transvenously into the heart chamber, never epicardially. The second component is the monitor device that includes pressure-sensing circuitry and memory to process and collect data obtained by the sensor. This is implanted in a subcutaneous pocket usually in the chest. Periodically, the data collected by the monitor is downloaded noninvasively via telemetry for physician analysis and decision making. The implantable hemodynamic monitoring system allows clinicians to identify early signs of volume overload before they become apparent by physical exam. Clinicians can then immediately adjust treatment to reduce or prevent heart failure deterioration as well as the need for hospital treatment. This procedure can be performed as either an inpatient or outpatient procedure.

00.57 Implantation or replacement of subcutaneous device for intracardiac hemodynamic monitoring

May also be referred to as implantation of monitoring device with formation of subcutaneous pocket and connection to intracardiac pressure sensor (lead)
Code also any associated insertion or replacement of implanted pressure sensor (lead) (00.56)

* 00.77 Hip replacement bearing surface, ceramic-on-polyethylene

New addition to options available to code for surface types (00.74, Metal on polyethylene; 00.75, Metal on metal; 00.76, Ceramic on ceramic)
Two other forms of hip replacement bearing surfaces exist: metal-on-ceramic and ceramic-on-polyethylene. The metal-on-ceramic bearing surface is not approved by the FDA and is several years away from approval. One new code was created this year to recognize the use of ceramic-on-polyethylene bearing surface.
Use with code 00.70, Revision of hip replacement, both acetabulum and femoral components
Use with code 00.71, Revision of hip replacement, acetabulum component
Use with code 00.72, Revision of hip replacement, femoral component
Use with code 00.73, Revision of hip replacement, acetabular liner and/or femoral head only

00.8 Other knee and hip procedures

00.85 Resurfacing, hip, total, acetabulum and femoral head
Also known as hip resurfacing arthroplasty, total

* **00.86 Resurfacing, hip, partial, femoral head**
Also known as hip resurfacing arthroplasty, NOS and hip resurfacing arthroplasty, partial, femoral head

* **00.87 Resurfacing, hip, partial, acetabulum**
Also known as hip resurfacing arthroplasty, partial, acetabulum
Until now there was no ICD-9-CM code that describes the hip resurfacing arthroplasty procedure. It is different from traditional hip replacement. Hip resurfacing involves grinding away the worn surfaces of the femoral head and acetabulum and the placement of new bearing surfaces. Hip resurfacing is intended as a primary joint replacement for patients who are at risk of requiring more than one hip joint replacement over their lifetimes. Usually these peoples are at a younger age and/or have a high activity level. Hip resurfacing can delay total hip replacement and potentially eliminate the need for a revision. Evidence suggests that it will become the procedure of choice for patients who wish to maintain a relatively active lifestyle. Traditional total hip replacement (THR) requires resection of the head and the majority of the neck of the femur and reconstruction with a stem and replacement head. On the acetabulum side the socket requires reaming to fit the shape of the metal/titanium shell, which is press fit or cemented into the reamed cavity. This shell usually requires a bearing surface insert that articulates with the head. In contrast, resurfacing utilizes instruments that machine or grind away just the worn surfaces on the femoral head, retaining the femoral neck and majority of the femoral head. Then a cobalt chrome cap is placed over the machined surfaces of the femoral head, which articulates with a metal shell press fitted into a reamed acetabulum. The technique on the acetabular side is almost identical to that of uncemented THR except that there is no insert into the shell. That is, the articulation is metal on metal.
There are many similarities between THR and resurfacing. Both can be done via the posterior approach. However, the resurfacing is far more soft tissue aggressive. This requires adequate exposure to perform the reaming of the acetabulum. The incision is larger and a gluteus maximus insertion is released and a circumferential capsulotomy is required that is not done in the standard THR procedure.
The hip resurfacing can involve a resurfacing of only the femoral head. This is referred to as a partial or hemi-resurfacing. Partial resurfacing is not recommended as a treatment for osteoarthritis or any inflammatory disease. Unsatisfactory pain relief can lead to a conversion of the partial resurfacing to a total hip replacement in five years.
A total resurfacing involves resurfacing of both the femoral and acetabular surfaces and has consistently good pain relief. Total resurfacing involves inserting components into the femur and the acetabulum. Partial or hemi-surfacing involves only the femoral side. However, a patient may undergo a partial resurfacing of the femoral side and then later require a resurfacing of the acetabular component.
FDA Approval: Birmingham Hip Resurfacing System

* **01.28 Placement of intracerebral catheter(s) via burr hole(s)**
Also known as convection enhanced delivery or stereotactic placement of intracerebral catheter(s)
Code also infusion of medication (such as 99.28, cintredekin besudotox)
A new delivery technique called convection enhanced delivery (CED) involves the microinfusion of therapeutic agents through catheters that are strategically placed directly into the target brain tissue. CED provides a means of administering small and large molecules to the brain that cross the blood brain barrier. CED involves the stereotactic placement through cranial burr holes of two to four catheters into tumor cell-infiltrated brain parenchyma and the subsequent microinfusion of an antineoplastic agent.
Approximately two weeks following craniotomy with tumor resection, the antineoplastic agent is administered through the catheters by means of a microinfusion pump over 96 hours. Patients are expected to have a separate hospital admission (apart from any admission for tumor resection) for CED catheter placement and microinfusion of the therapeutic agent. CED is a drug delivery technique that could be use for a wide range of agents, not just antineoplastics. This delivery system has been used in the treatment of Alzheimer's disease and epilepsy. Any large molecule compound needed to treat brain tissue could be administered by CED.

13.90 Operation on lens Not Elsewhere Classified (NEC)

* **13.91 Implantation of intraocular telescope**
Includes removal of lens, any method
Also known as implantable miniature telescope
The implantable miniature telescope (IMT) is a visual prosthetic device intended to treat patients with moderate to profound

visual impairment due to end-stage age-related macular degeneration (AMD). AMD is the leading cause of blindness for people over 55 years old. It currently affects more than 10 million Americans and the majority of these patients are “legally blind” from central vision loss.
The implanted miniature telescope functions as a fixed-focus telephoto quartz optical device comprising multiple wide-angle micro-optics. The device will improve visual function for individuals with AMD by allowing them to recognize and respond to visual images as necessary for activities of daily living. The device is implanted in one of the patient’s eyes, providing central vision, while the nonimplanted eye can continue to provide peripheral vision for orientation and mobility. Placing the device requires a procedure that removes the patient’s lens materials and implants the new visual prosthetic device. The device is larger, heavier, more fragile, and less flexible than any other item that has ever been implanted in the eye and requires a particular surgical skill set. The procedure includes a large 12-mm limbal incision, large 7-mm capsule incision, multiple and specific viscoelastics to protect ocular tissues, skilled insertion with specific angulation, posterior pressure and manipulation to avoid trauma to intraocular structures, precise orientation and positioning along visual axis for image clarity, multiple sutures for wound management and post-operative suture removal for astigmatic management. A one-year, 28-center pivotal trial produced remarkable results: 90 percent of patients met or exceeded the study’s visual acuity end point, the patients’ vision-related quality of life significantly improved, the IMT device was well tolerated in the eye, and preservation of vision was achieved in 95 percent of the patients.
FDA Approval: Vision Care Ophthalmic Technologies

* **32.23 Open ablation of lung lesion or tissue**
* **32.24 Percutaneous ablation of lung lesion or tissue**
* **32.25 Thorascopic ablation of lung lesion or tissue**
* **32.26 Other and unspecified ablation of lung lesion or tissue**

These are not “excision” type procedures
Codes 32.23 through 32.26 are specifically ablation procedures
Other endoscopic excision or destruction of lesion of liver is coded to 32.28
Other local excision or destruction of lesion or tissue of lung is coded to 32.29

* **50.23 Open ablation of liver lesion or tissue**
* **50.24 Percutaneous ablation of liver lesion or tissue**
* **50.25 Laparoscopic ablation of liver lesion or tissue**
* **50.26 Other and unspecified ablation of liver lesion or tissue**

Codes 50.23 through 50.26 are specifically ablation procedures
Other destruction of lesion of liver is coded to 50.29

* **55.32 Open ablation of renal lesion or tissue**
* **55.33 Percutaneous ablation of renal lesion or tissue**
* **55.34 Laparoscopic ablation of renal lesion or tissue**
* **55.35 Other and unspecified ablation of renal lesion or tissue**

Codes 55.32 through 55.35 are specifically ablation procedures
Other local excision or destruction of renal lesion or tissue is coded to 55.39

Until now, ICD-9-CM procedure code system did not contain codes that describe and differentiate the unique procedures involving thermal ablation of lung, liver, and renal lesions or tissues. Thermal ablative procedures that use heat to destroy lung, liver, and renal lesions apply energy to a specific lesion for the purpose of achieving lesion destruction. Energy derived from the radio frequency bandwidth originates from a base generator and is transmitted through the ablation device causing lesion cell death via coagulation necrosis. Active ablation lasts 10 to 15 minutes but can be longer depending on the number of lesions being treated. Thermal ablation can be performed by one of three methods: open, endoscopic, and percutaneous. Prior to the procedure, the patient receives general anesthesia or conscious sedation. Once sedated, the patient is positioned to provide the best angle necessary for accurate device placement.
The open or surgical approach to thermal ablation involves the physician creating an incision to provider greater visual identification for ablation device placement and activation. The incision is closed via traditional methods upon completion of the procedure.
The endoscopic thermal ablation can be laparoscopic or thoracoscopic. This approach requires the physician to insert the ablation device into the lesion with the assistance of the endoscope and imaging guidance. The small incisions are closed with a few sutures.

The percutaneous thermal ablation requires the physician inserting the ablation device through the skin and into the lesion. To achieve accurate device placement, ultrasound or computed tomography (CT) guidance is used. A bandage is placed over the insertion point at the conclusion of the procedure.

33.7 new subcategory: Endoscopic insertion, replacement and removal of therapeutic device or substances in bronchus or lung
Also known as Biologic Lung Volume Reduction (BLVR)
* **33.71 Endoscopic insertion or replacement bronchial valve(s)**
Also known as Endobronchial or Intrabronchial airflow redirection valve
* **33.78 Endoscopic removal of bronchial device(s) or substances**
* **33.79 Endoscopic insertion of other bronchial device or substance**
Also known as Biologic Lung Volume Reduction (NOS) (BLVR)
The endoscopic insertion of a bronchial valve is new therapy for the treatment of chronic obstructive pulmonary disease (COPD). Endoscopically placed bronchial valve closes during inspiration and opens during expiration, helping to reduce air trapping and hyperinflation. It is a less invasive alternative to lung volume reduction surgery (LVRS) and/or lung transplant. About 80 percent of patients referred for LVRS are ineligible because of their fragile conditions and concerns about morbidity related to the surgical procedure. This new treatment is minimally invasive with a focus on an endobronchial approach to COPD and emphysema treatment. The one way endobronchial value blocks air from going into a diseased segment of the lung but allows air to escape. The device is either a small umbrella shaped valve or a reinforced duckbill valve that is placed in the bronchial tree using standard bronchoscopic techniques. Its intent is to limit the ventilation of targeted sections of the lung while still allowing trapped air and normal secretions to flow out. By limiting ventilation in part of the diseased lungs, the remaining healthier portions of lung may function with better efficiency. The intent of LVRS is similar in that it improves the functioning of healthy tissue by excising diseased portions of the lung. Typically, six to seven valves are placed during the operative episode. The number of valves placed is determined by the extent of the disease as assessed on CT scan. The valves are intended to be permanent, but are designed to be removed if necessary.
FDA Approval – Spiration IBV Valve; Emphasys Medical Zephyr EBV.

* **35.55 Repair of ventricular septal defect with prosthesis, closed technique**
Until now, ICD-9-CM procedure code 35.53 does not distinguish between open and closed approaches for repair of a ventricular septal defect (VSD). The title of code 35.53 is being changed on October 1, 2006, to be repair of ventricular septal defect with prosthesis, open technique. VSD is a congenital heart defect characterized by a hole in the wall (or septum) which separates the right and left ventricles. A large enough hole can allow blood to be shunted from the left ventricle with its high pressure into the right ventricle causing pulmonary hypertension. Historically, repair of VSD involves major open heart surgery in order to place a patch or graft over the defect. A number of catheter-based interventional techniques are now available to place a variety of prostheses over the defect and avoid open heart surgery.

* **36.33 Endoscopic transmyocardial revascularization**
Also known as Robot-assisted transmyocardial revascularization
Also known as Thoracoscopic transmyocardial revascularization
* **36.34 Percutaneous transmyocardial revascularization**
Also known as Endovascular transmyocardial revascularization
Until now, ICD-9-CM has procedure code 36.31 for open transmyocardial revascularization (TMR) and code 36.32 for percutaneous, thoracoscopic, and other TMR approaches. TMR is a late or last resort for relief of symptoms of severe angina in patients with ischemic heart disease and NYHA Class III-IV angina who are not suitable for angioplasty, stenting, or coronary artery bypass surgery. The patients typically exhibit a left ventricular ejection fraction (LVEF) of less than 25 percent. The premise of TMR is that is creates channels in the left ventricular myocardium inducing the formation of new vessels from preexisting vessels via cellular outgrowth and partial cardiac denervation. The traditional approach to TMR is through an anterolateral thoracotomy. A laser is used to bore holes through the myocardium in an attempt to restore perfusion. New codes are being created for FY2007 to describe an endoscopic or thoracoscopic approach (36.33) and percutaneous or endovascular approach (36.34.) Code 36.32, other transmyocardial revascularization, will continue for open approach.
37.20 Noninvasive programmed electrical stimulation (NIPS)
Excludes note: NIPS as part of intraoperative testing – omit code
This is a type of electrophysiological study (EPS) that uses a device that is already implanted, such as an implantable cardiac defibrillator, to induce arrhythmias with the pulse generator via telemetry signals in order to assess the adequacy of the device

or to assess the effectiveness of drug therapy. Although it is noninvasive in that no catheters are inserted into the heart, it requires the ability to emergently terminate the life-threatening arrhythmias that are induced. This procedure must be done in cardiac catheterization lab or similarly equipped facility.
EPS may be done as intraoperative testing at the time of implantation of a cardiac pacemaker or defibrillator in order to ascertain that is it functioning properly. This is part of the implantation procedure and is not coded separately from the implantation.
NIPS is not the same as catheter based invasive electrophysiologic testing (37.26)
NIPS is not device interrogation only with arrhythmia induction (bedside check) (89.45-89.49)

39.74 Endovascular removal of obstruction from head and neck vessel(s)
Also known as Endovascular embolectomy
Also known as Endovascular thrombectomy or pre-cerebral and cerebral vessel(s)
Also known as Mechanical embolectomy or thrombectomy
Code also:
Injection or infusion of thrombolytic agent (99.10)
Number of vessels treated (00.40-00.43)
Procedure on vessel bifurcation (00.44)
Endovascular mechanical thrombectomy is the first surgical treatment available for acute ischemic stroke. Ischemic strokes account for 80 to 90 percent of all strokes and are caused by obstruction and occlusion of the precerebral and cerebral blood vessels by thrombosis, embolism, and stenosis. Until recently, treatment of ischemic strokes has been exclusively medical, using infusion of anticoagulants and thrombolytic drugs. To be effective, intravenous infusion must be administered within three hours of the onset of the ischemic stroke.
Mechanical thrombectomy physically removes thrombus from the occluded vessel. It can be used beyond the three-hour limit. Once the location of the stroke-inducing thrombus is identified using angiography, a balloon catheter is inserted, usually via the femoral artery approach, and maneuvered to the carotid artery. A microcatheter and guidewire is advanced into the appropriate intracranial vessel and placed just beyond the thrombus. A retrieval device is deployed to ensnare the thrombus and withdraw it into the balloon catheter and ultimately out of the body. Several passes with the retrieval device may be necessary to ensure the thrombus is removed and the vessel lumen has been cleared.
FDA Approval: Concentric Merci (Mechanical Embolus Removal in Cerebral Ischemia) Retriever

New subcategory 68.4 Total abdominal hysterectomy
Code also any synchronous removal of tubes and ovaries (65.31-65.34)
68.41 Laparoscopic total abdominal hysterectomy
Also known as Total laparoscopic hysterectomy [TLH]
68.49 Other and unspecified total abdominal hysterectomy
Also known as Hysterectomy: extended
New subcategory 68.6 Radical abdominal hysterectomy
Code also any synchronous lymph gland dissection (40.3, 40.5) and any synchronous removal of tube and ovaries (65.31-65.34)
68.61 Laparoscopic radical abdominal hysterectomy
Also known as Laparoscopic modified radical hysterectomy
Also known as Total laparoscopic radical hysterectomy [TLRH]
68.69 Other and unspecified radical abdominal hysterectomy
Also known as Modified radical hysterectomy
Also known as Wertheim's operation
New subcategory 68.7 Radical vaginal hysterectomy
Code also any synchronous lymph gland dissection (40.3, 40.5) and any synchronous removal of tube and ovaries (65.31-65.34)
68.71 Laparoscopic radical vaginal hysterectomy (LRVH)
68.79 Other and unspecified radical vaginal hysterectomy
Also known as Hysterocolpectomy
Also known as Schauta operation
Hysterectomies, some of the most commonly performed surgical procedures in the United States, are indicated in the treatment of abnormal uterine bleeding, uterine prolapse, pelvic pain, and precancerous and cancerous conditions. The standard approach has been either abdominal or vaginal. Recent advances in endoscopic surgery have made the laparoscopic approach a viable alternative. A total laparoscopic hysterectomy (TLH) involves excision via laparoscope of the entire uterus with

cervix. It involves an incision at the umbilicus and secondary incisions in the lower abdominal area. A total laparoscopic radical hysterectomy (TLRH) involves excision via laparoscope of the uterus, cervix, upper portion of the vagina, lymph nodes, lymph channels, and tissue in the pelvic cavity surrounding the cervix. The radical procedure is usually only performed to treat cancers of the uterus or cervix. A laparoscopic modified radical hysterectomy involves excision of the uterus, the medial half of the uterosacral and cardinal ligaments and a portion of the upper vagina.

Addenda – Index and Tabular Changes

The following codes had a new note added, Device testing during procedure – omit code.
00.50, Implantation of cardiac resynchronization pacemaker without mention of defibrillation, total system [CRT-P]
00.51, Implantation of cardiac resynchronization defibrillator, total system [CRT-D]
00.53, Implantation or replacement of cardiac resynchronization pacemaker pulse generator only [CRT-P]
00.54, Implantation or replacement of cardiac resynchronization defibrillator pulse generator only [CRT-D]
37.26, Catheter based invasive electrophysiologic testing
37.8, Insertion, replacement, removal, and revision of pacemaker device
37.94, Implantation or replacement of automatic cardioverter/defibrillator, total system [AICD]
37.96, Implantation of automatic cardioverter/defibrillator pulse generator only
37.98, Replacement of automatic cardioverter/defibrillator pulse generator only

Code title revision
01.27 – code title revision: Removal of catheter(s) from cranial cavity or tissue
35.53 – code title revision: Repair of ventricular septal device with prosthesis, open technique
37.26 – code title revision: Catheter based invasive electrophysiologic testing
The procedure known as EPS, previously titled cardiac electrophysiologic stimulation and recording studies.
EPS used to include NIPS but a new code for NIPS was created in FY 2007 as 37.20
37.73 – code title revision: Insertion, revision, replacement, and removal of (pacemaker removed) leads; insertion of temporary pacemaker system; or revision of cardiac device pocket
68.39 – code title revision: Other and unspecified subtotal abdominal hysterectomy
68.59 – code title revision: Other and unspecified vaginal hysterectomy

Inclusion terms, exclusion terms, other notes added
34.92 Injection into thoracic cavity
Add inclusion terms: Instillation into thoracic cavity

37.66 Insertion of implantable heart assist system
New second note added: This device can be used as either destination therapy (DT) or bridge-to-transplant (BTT)

37.75 Revision of lead [electrode]
Revise inclusion term: Reposition of lead(s) (AICD) (cardiac device) (CRT-D) (CRT-P) (defibrillator) (pacemaker) (pacing) (sensing) [electrode]

37.79 Revision or relocation of cardiac device pocket
Ten inclusion terms added, as follows:
Insertion of loop recorder
Removal of cardiac device/pulse generator without replacement
Removal of the implantable hemodynamic pressure sensor (lead) and monitor device
Removal without replacement of cardiac resynchronization defibrillator device
Reposition of implantable hemodynamic pressure sensor (lead) and monitor device
Repositioning of pulse generator
Revision of cardioverter/defibrillator (automatic) pocket
Revision of pocket for intracardiac hemodynamic monitoring
Revision or relocation of CRT-D pocket

37.99 Other operations on heart and pericardium, other
Six inclusion terms deleted with most procedures moved to 37.79

Three exclusion terms added referring the coder to 37.79 and 37.75

38.4 Resection of vessel with replacement
Add inclusion term: Partial resection with replacement

39.72 Endovascular repair or occlusion of head and neck vessels
Add inclusion term: Excludes mechanical thrombectomy of pre-cerebral and cerebral vessels (39.74)

80.51 Excision of intervertebral disc
Add exclusion term: Excludes: that with corpectomy, vertebral (80.99)

84.59 Insertion of other spinal devices
Add inclusion term: Insertion of non-fusion spinal stabilization device

84.73 Application hybrid external fixator device
Add inclusion term: Computer (assisted) (dependent) external fixator device

86.28 Nonexcisional debridement of wound, infection, or burn
Add inclusion term: Water scalpel (jet)

89.45 Artificial pacemaker rate check
Revise exclusion term: Excludes: catheter based invasive electrophysiologic testing (37.26)
Revise exclusion term: Excludes: noninvasive programmed electrical stimulation [NIPS] (arrhythmia induction (37.20)

89.49 Automatic implantable cardioverter/defibrillator (AICD) check
Revise exclusion term: Excludes: catheter based invasive electrophysiologic testing (37.26)
Revise exclusion term: Excludes: noninvasive programmed electrical stimulation [NIPS] (arrhythmia induction (37.20)

89.6 Circulatory monitoring
Add exclusion term: Excludes: Implantation or replacement of subcutaneous device for intracardiac hemodynamic monitoring (00.57)
Add exclusion term: Excludes: Insertion or replacement of implantable pressure sensor (lead) for intracardiac hemodynamic monitoring (00.56)

93.59 Other immobilization, pressure and attention to wound
Add inclusion term: Strapping (non-traction)
Add inclusion term: Infusion of cintredekin besudotox

99.10 Injection or infusion of thrombolytic agent
Add inclusion term: Alteplase, Anistreplase, Reteplase, Tenecteplase

99.28 Injection or infusion of biological response modifier [BRM] as an antineoplastic agent.
Add inclusion term: Infusion of cintredekin besudotox
Cintredekin besudotox has been granted Fast-Track development designation by FDA. Infusion of cintredekin besudotox is a novel cytotoxin-based therapy used in the treatment of recurrent glioblastoma multiforme. Glioblastoma multiforme is the most common adult brain tumor with a media survival of five to seven months upon recurrence. Despite aggressive therapy that currently includes tumor resection, radiation therapy, and chemotherapy, the majority of patients with glioblastoma multiforme often relapse due to infiltrating tumor. Therapies that target both the solid tumor and infiltrating tumor are necessary to improve overall survival of patients with this disease. Cintredekin besudotox is a novel recombinant protein consistent of a single molecule composed of two parts: a tumor-targeting molecule (Interleukin-13 or IL13) and a cytotoxin (Pseudomonas Exotoxin, or PE). As a large molecule that cannot cross the blood brain barrier, cintredekin besudotox is delivered via a novel drug delivery system by convection enhanced delivery (01.28) using catheters placed following tumor resection, in areas of microscopic tumor spread or at risk of tumor spread around the tumor resection cavity. These catheters are placed by neurosurgeons following a complex plan that takes into account the location of residual nonresectable tumor, brain anatomy, and fluid dynamics. Anywhere from two to four catheters are placed during multihour surgery. Once the patient is stable, cintredekin besudotox is slowly infused through the catheters directly into the brain over 96 hours while the patient is

hospitalized. Patients are often hospitalized just for the catheter placement and cintredekin besudotox infusion.

* These procedure codes were discussed at the March 23–24, 2006, ICD-9-CM Coordination and Maintenance Committee meeting and were not finalized in time to include in the Proposed Rule. They will be implemented on October 1, 2006.

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