



DRG Desk Reference

*The ultimate resource for improving the new
MS-DRG assignment practices*

2015

Contents

Introduction	1	Human Immunodeficiency Virus Infections	497
DRG History	1	ALL MDC	499
Reasons for Moving to Severity-Adjusted DRGs	2	Documentation Specificity Tables	503
Development of MS-DRGs	2	Lists of CCs and MCCs	579
Comprehensive Review of CC List	3	CC List	579
Basic Characteristics of MS-DRG Classification	4	MCC List	616
DRG Assignment Process	7	Most Commonly Missed MCC/CC Conditions	639
Government Scrutiny	8	Introduction	639
Keys to a Financially Successful DRG Program	8	Abnormal EKGs	649
Instructions for Using Your DRG Desk Reference	9	Introduction	649
Optimizing Tips	13	Abnormal Laboratory Values	651
Introduction	13	Introduction	651
Pre MDC	13	Drug Usage	671
Diseases And Disorders Of The Nervous System	17	Introduction	671
Diseases And Disorders Of The Eye	73	Organisms	681
Diseases And Disorders Of The Ear, Nose, Mouth And Throat	76	Introduction	681
Diseases And Disorders Of The Respiratory System	89	Noninvasive Diagnostic Test Outcomes	685
Diseases And Disorders Of The Circulatory System	131	Introduction	685
Diseases And Disorders Of The Digestive System	207	Targeted DRG Listing	689
Diseases And Disorders Of The Hepatobiliary System And Pancreas	261	Introduction	689
Diseases And Disorders Of The Musculoskeletal System And Connective Tissue	280	MDC 1: Diseases And Disorders Of The Nervous System	689
Diseases And Disorders Of The Skin, Subcutaneous Tissue And Breast	344	MDC 4: Diseases And Disorders Of The Respiratory System	695
Endocrine, Nutritional And Metabolic Diseases And Disorders	370	MDC 5: Diseases And Disorders Of The Circulatory System	757
Diseases And Disorders Of The Kidney And Urinary Tract	384	MDC 6: Diseases And Disorders Of The Digestive System	835
Diseases And Disorders Of The Male Reproductive System	407	MDC 8: Diseases And Disorders Of The Musculoskeletal System And Connective Tissue	850
Diseases And Disorders Of The Female Reproductive System	415	MDC 10: Endocrine, Nutritional, And Metabolic Diseases And Disorders	855
Pregnancy, Childbirth And The Puerperium	429	MDC 11: Diseases And Disorders Of The Kidney And Urinary Tract	862
Newborns And Other Neonates With Conditions Originating In The Perinatal Period	432	MDC 18: Infectious And Parasitic Diseases (Systemic Or Unspecified Sites)	880
Diseases And Disorders Of The Blood And Blood-Forming Organs And Immunological Disorders	437	MDC 19: Mental Diseases And Disorders	889
Myeloproliferative Diseases And Disorders And Poorly Differentiated Neoplasms	445	DRG List	893
Infectious And Parasitic Diseases	456	Glossary	919
Mental Diseases And Disorders	461	Key Fields for Coder Abstracting	921
Alcohol/Drug Use And Alcohol/Drug-Induced Organic Mental Disorders	463	CC Principal Diagnosis Exclusion list	927
Injuries, Poisonings And Toxic Effects Of Drugs	465		
Burns	487		
Factors Influencing Health Status And Other Contacts With Health Services	489		
Multiple Significant Trauma	493		

Optimizing Tips

Introduction

This section lists each DRG and indicates whether it has potential to be reassigned to a DRG with a higher relative weight. Once a DRG has been assigned, turn to that DRG in this section and carefully review the DRGs listed under “Potential DRGs” being cautious to always read the DRG description carefully. Next, look at the listings in the table below the potential DRG descriptions for key elements you will want to identify in the medical record documentation before reassigning the DRG. No attempt has been made to compile a complete or even representative listing of all potential diagnoses/procedures. Do not assume that a DRG listed as nonoptimized can never be optimized. It is entirely possible that a very unusual combination of diagnoses or procedures could legitimately offer optimization potential. An asterisk (*) indicates a code range is represented.

Pre MDC

DRG 001 Heart Transplant or Implant of Heart Assist System with MCC RW 25.3518

No Potential DRGs

DRG 002 Heart Transplant or Implant of Heart Assist System without MCC RW 15.2738

Potential DRGs

001 Heart Transplant or Implant of Heart Assist System with MCC 25.3518

DRG	PDx/SDx/Procedure	Codes	Tips
001	MCC Condition	See MCC section	

DRG 003 ECMO or Tracheostomy with Mechanical Ventilation 96+ Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. RW 17.6369

No Potential DRGs

DRG 004 Tracheostomy with Mechanical Ventilation 96+ Hours or Principal Diagnosis Except Face, Mouth and Neck without Major O.R. RW 10.9288

Potential DRGs

003 ECMO or Tracheostomy with Mechanical Ventilation 96+ Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. 17.6369

DRG	PDx/SDx/Procedure	Codes	Tips
003	Extracorporeal membrane oxygenation (ECMO) WITH Operating room procedure	39.65 Any O.R. procedure not listed under DRGs 984-989 (Nonextensive O.R. procedures)	

DRG 005 Liver Transplant with MCC or Intestinal Transplant RW 10.4214

No Potential DRGs

DRG 006 Liver Transplant without MCC RW 4.7639

Potential DRGs

005 Liver Transplant with MCC or Intestinal Transplant 10.4214

DRG	PDx/SDx/Procedure	Codes	Tips
005	Intestinal transplant OR MCC Condition	46.97 See MCC section	

Pre MDC

DRG 007 Lung Transplant

RW 9.1929

Potential DRGs

- 001 Heart Transplant or Implant of Heart Assist System with MCC 25.3518
- 002 Heart Transplant or Implant of Heart Assist System without MCC 15.2738

DRG	PDx/SDx/Procedure	Codes	Tips
001	Heart-lung transplant AND MCC Condition	33.6 See MCC section	
002	Heart-lung transplant	33.6	

DRG 008 Simultaneous Pancreas/Kidney Transplant

RW 5.1527

No Potential DRGs

DRG 010 Pancreas Transplant

RW 4.1554

Potential DRGs

- 008 Simultaneous Pancreas/Kidney Transplant 5.1527

DRG	PDx/SDx/Procedure	Codes	Tips
008	Pancreas and kidney transplant AND PDx or SDx of chronic kidney disease (CKD)	52.80 & 55.69 or 52.82 & 55.69 403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 585*, V42.0, V43.89	

DRG 011 Tracheostomy for Face, Mouth, and Neck Diagnoses with MCC

RW 4.7246

Potential DRGs

- 003 ECMO or Tracheostomy with Mechanical Ventilation 96+ Hours or Principal Diagnosis Except Face, Mouth and Neck with Major O.R. 17.6369
- 004 Tracheostomy with Mechanical Ventilation 96+ Hours or Principal Diagnosis Except Face, Mouth and Neck without Major O.R. 10.9288

DRG	PDx/SDx/Procedure	Codes	Tips
003	Extracorporeal membrane oxygenation (ECMO) OR Tracheostomy WITH Mechanical ventilation 96+ hours AND Principal diagnosis not including those related to face, mouth or neck WITH Operating room procedure	39.65 31.1, 31.21, 31.29 96.72 Any diagnosis not listed under DRG 011 Any O.R. procedure not listed under DRGs 984-989 (Nonextensive O.R. procedures)	A mini tracheostomy is coded as a temporary tracheostomy. Tracheostomy carried out elsewhere prior to admission or in an ambulance prior to arrival should not be reported as a current procedure. A tracheostomy procedure may be performed at the bedside and documented in the progress notes or in the operating room and documented in an operative note.
004	Tracheostomy WITH Mechanical ventilation 96+ hours AND Principal diagnosis not including those related to face, mouth or neck	31.1, 31.21, 31.29 96.72 Any diagnosis not listed under DRG 011	

Documentation Specificity Tables

Chapter 1: Infectious and Parasitic Diseases

Condition	Non-specific Code (non-CC)	Specific Code and CC/MCC Designation
Food Poisoning	005.9 (Food poisoning, unspecified)	005.0-005.89 (Staphylococcal or botulism food poisoning or that due to Clostridium perfringens [C. welchii], other Clostridia, Vibrio parahaemolyticus, Vibrio vulnificus or other bacteria) CC

Clinical Indicators & Comments	Typical Treatment & Source Documents
Staphylococcal enterotoxin is a common cause of food poisoning, typically transmitted via eggs, milk, or meat products. Symptoms include diarrhea and vomiting within a few hours of ingestion. Clostridium botulinum is a neurotoxic bacterium and ingestion of contaminated food leads to weakness and dizziness , leading to double vision and other optic neurology symptoms. The toxin has a paralyzing effect on the nervous system. V. vulnificus is the result of eating raw seafood with resulting gastroenteritis. Other symptoms of food poisoning may include fever, chills, bloody stools, and dehydration.	Diagnosis of food poisoning due to a specific virus, bacterium, or toxin is typically performed via a stool culture or fecal smear. Botulism is usually diagnosed by its distinctive neurological symptoms and rapid treatment is required. Treatment for food poisoning other than botulism involves supportive care with hydration and electrolyte replacement to counteract those lost with diarrhea and vomiting. IV fluids may be given for dehydration or to prevent dehydration. The CDC maintains a supply of antitoxin against botulism, which effectively reduces the severity of symptoms. Review ED reports, laboratory findings, infectious disease consult, and nursing intake records.

Condition	Non-specific Code (non-CC)	Specific Code and CC/MCC Designation
Viral Enteritis or Gastroenteritis NEC	008.8 (Intestinal infections due to other organisms NEC) 558.9 (Other and unspecified noninfectious gastroenteritis and colitis)	008.00-008.69 (Intestinal infection due to E. coli, staphylococcus, pseudomonas, campylobacter, Yersinia enterocolitica, clostridium difficile, other anaerobes, other gram-negative bacteria, rotavirus, adenovirus, Norwalk virus, other small round viruses [SRVs], calicivirus, astrovirus, enterovirus NEC or other viral enteritis) CC 558.1-558.2 (Gastroenteritis/colitis due to radiation/ Toxic gastroenteritis) CC

Clinical Indicators & Comments	Typical Treatment & Source Documents
Enteritis refers to swelling and irritation of the small intestine. Unlike food poisoning, symptoms don't typically include nausea or vomiting but do involve abdominal discomfort and bloating and diarrhea. If the above mentioned symptoms are present with nausea and vomiting, it is known as gastroenteritis. Most cases of enteritis are caused by viruses, but some may be caused by bacteria such as E. coli, staphylococcus, or C. difficile.	Diagnosis of enteritis or gastroenteritis due to a specific virus or bacterium is typically performed via a stool culture or fecal smear. Treatment consists of supportive care to prevent dehydration. Refer to ED reports, laboratory findings, infectious disease consultations, admit records, history and physical, and nursing notes for documentation.

Condition	Non-specific Code (non-CC)	Specific Code and CC/MCC Designation
Acute poliomyelitis, unspecified	045.9 (Acute poliomyelitis, unspecified)	045.0, 045.1 Acute paralytic poliomyelitis specified as bulbar, acute poliomyelitis with other paralysis MCC

Clinical Indicators & Comments	Typical Treatment & Source Documents
Poliomyelitis is an infectious viral disease of the central nervous system that sometimes results in paralysis, although nonparalytic cases outnumber paralytic cases. The virus enters the nervous system usually through the blood-brain barrier; the nerves undergo a chromatolysis process, whereby the neurons degenerate. Muscle paralysis or atrophy appear. Bulbar polio affects nerve cells in the medulla oblongata, which produces paralysis of the lower motor cranial nerves. Impairment of muscles used for swallowing and respiration also result.	Review history and physical and neurology reports for indications of paralysis or degeneration that may progress to paralysis. Acute bulbar polio most often results in respiratory distress or failure; review respiratory and ventilation flow sheets.

Condition	Non-specific Code (non-CC)	Specific Code and CC/MCC Designation
Herpes zoster	053.9 (Herpes zoster without mention of complication)	053.0, 053.14 (Herpes zoster with meningitis or myelitis) MCC
Clinical Indicators & Comments		Typical Treatment & Source Documents
<p>Varicella zoster virus causes chickenpox and herpes zoster. Herpes zoster is a reactivation of the virus in a latent stage. It's also known as shingles or zona. The virus reactivates in the ganglion and causes a localized, unilateral eruption of shingles. Myelitis (an inflammation of the myelin lining of the spinal cord that facilitates nerve conduction) may appear days to weeks after the appearance of the initial rash. Common symptoms of myelitis include loss of spinal cord function, low back, pain, weakness of the muscles, or altered sensations in the feet and toes. This condition may progress to paralysis, urinary retention, and loss of bowel or bladder control. Meningitis is an inflammation of the meninges of the brain and spinal cord. It involves symptoms of a stiff neck, fever, body aches, acute headache, and photophobia.</p>		<p>Myelitis is diagnosed by spinal tap, which may also rule out transverse myelitis, which affects the entire spinal cord. Meningitis is also diagnosed by spinal tap analysis and is usually treated with supportive care (rest and fluids). Review history and physical, nursing notes and neurology consults. Refer to results of laboratory or other investigative procedures for further documentation.</p>

Condition	Non-specific Code (non-CC)	Specific Code and CC/MCC Designation
Herpes zoster	053.9 (Herpes zoster without mention of complication)	053.10-053.13, 053.19-053.8 (Herpes zoster with other nervous system complications, ophthalmic complications, other specified and unspecified complications) CC
Clinical Indicators & Comments		Typical Treatment & Source Documents
<p>Varicella zoster virus causes chickenpox and herpes zoster. Herpes zoster (also known as shingles or zona) is a reactivation of the virus in a latent stage. The virus reactivates in the ganglion and causes a localized, unilateral eruption of shingles. When the herpes zoster virus affects the ophthalmic division of the fifth cranial nerve (trigeminal nerve), the infection produces pain, redness, and eyelid swelling. The cornea may become swollen, severely damaged and scarred, and permanent glaucoma may result. Geniculate herpes zoster involves unilateral eruptions and neuralgia along the facial nerve geniculum affecting the face and outer and middle ear. The herpes zoster virus may also cause other ophthalmic conditions such as eyelid dermatitis, keratoconjunctivitis, and iridocyclitis. The virus may also cause otitis externa (inflammation of the external auditory canal).</p>		<p>Refer to medication records; treatment with acyclovir by mouth may be prescribed when herpes zoster affects the face and corticosteroid eye drops may also be used. Atropine drops are often used to keep pressure in the eye from increasing. Review history and physical, nursing notes, and consults for further documentation.</p>

Condition	Non-specific Code (non-CC)	Specific Code and CC/MCC Designation
Herpes simplex	054.8, 054.9 (Herpes simplex with unspecified complication or without mention of complication)	054.3, 054.5, 054.72, 054.74 (Herpetic meningoencephalitis, septicemia, herpes simplex meningitis or myelitis) MCC
Clinical Indicators & Comments		Typical Treatment & Source Documents
<p>Herpes simplex infections are caused by the HSV-1 and HSV-2 viruses. Meningoencephalitis is an inflammation of the meninges, brain, and spinal cord. It involves symptoms of a stiff neck, fever, body aches, acute headache, and photophobia. When the HSV invades the bloodstream, septicemia, a systemic infectious process, may result. Myelitis (an inflammation of the myelin lining of the spinal cord that facilitates nerve conduction) may appear days to weeks after the appearance of the initial HSV outbreak.</p>		<p>Myelitis is diagnosed by spinal tap, which may also rule out transverse myelitis, which affects the entire spinal cord. Meningitis is also diagnosed by spinal tap analysis and is usually treated with supportive care (rest and fluids). Septicemia is diagnosed by physical exam and by blood cultures, although a negative culture does not necessary rule out the disease process. Review history and physical, laboratory findings, and neurology consults.</p>

Condition	Non-specific Code (non-CC)	Specific Code and CC/MCC Designation
Herpes simplex	054.8, 054.9 (Herpes simplex with unspecified complication or without mention of complication)	054.2, 054.40 –054.49, 054.71, 054.79 (Herpetic gingivostomatitis, ophthalmic complications, visceral herpes simplex, other specified complications) CC
Clinical Indicators & Comments		Typical Treatment & Source Documents
<p>HSV-1 and HSV-2 may cause other infections, particularly in the immunosuppressed patient. These may include gingivo-stomatitis, an infection of the gums and soft tissues of the mouth, and ophthalmic complications, such as eyelid dermatitis, keratitis, or iridocyclitis.</p>		<p>If a patient has any of the mentioned complications and also has HSV-1 or HSV-2, the documentation should be reviewed for a linkage between them. Check laboratory results, consultations, and eye clinic or eye surgery area documentation.</p>

Most Commonly Missed MCC/CC Conditions

Introduction

This section provides a list of major complication/comorbidity (MCC) or complication/comorbidity (CC) conditions and a quick review of the most common signs and symptoms associated with those MCCs or CCs. According to coding guidelines, MCCs or CCs must affect patient care in terms of requiring clinical evaluation; therapeutic treatment; further evaluation by diagnostic studies, procedures, or consultation; extended length of stay; or increased nursing care and/or monitoring for reporting purposes.

<p>Abscess, skin/subcutaneous tissue 682.0–682.9 CC</p>	<p>Signs and Symptoms: Skin or wound infection; may occur more often in people with poor circulation or diabetes mellitus; usually begins at site of injury to skin and quickly intensifies; affected area may be red, hot, and swollen; usual cause is an infection of an operative or traumatic wound, burn, or other lesion Drug Therapy: Antibiotics Laboratory: Cultures, gram stains, and antibiotic sensitivity tests; blood cultures may be positive Procedures: May include punch biopsy, surgical debridement, incision, and drainage; drainage under fluoroscopic, ultrasound, or computed tomography (CT) guidance</p>
<p>Abscess of Bartholin's gland 616.3 CC</p>	<p>Signs and Symptoms: Localized pain in region of duct; discomfort when sitting or walking; organisms causing the infection include <i>Neisseria gonorrhoea</i>, <i>Escherichia coli</i> (<i>E. coli</i>), <i>Streptococcus</i>, and <i>Trichomonas vaginalis</i> Drug Therapy: Antibiotic therapy Laboratory: Blood: Smears/cultures: positive for organism causing infection. Possible increase in white blood cells (WBCs) Procedures: Marsupialization of Bartholin's gland cyst; CT scan of pelvis</p>
<p>Acidosis, respiratory/metabolic/lactic 276.2 CC</p>	<p>Signs and Symptoms: Retention of CO₂ and increasing pCO₂; hypoventilation, dyspnea, drowsiness, weakness, malaise, and nausea Laboratory: Blood: Arterial blood gases: decreased CO₂ (less than 22); decreased HCO₂ (less than 24); decreased pH (less than 7.35); increased pCO₂ (more than 45); decreased pCO₂ (less than 35); increased blood urea nitrogen (BUN) (over 22); increased potassium (greater than 5.0); decreased potassium (less than 3.5); increased chloride (greater than 105)</p>
<p>Alcohol withdrawal syndrome 291.81 CC</p>	<p>Signs and Symptoms: Coarse tremor of hands, tongue, and eyelids within several hours of cessation or reduction of alcohol ingestion Development of one or more of the following: nausea or vomiting, fleeting hallucinations (auditory, tactile, or visual), illusions, grand mal seizures, anxiety, insomnia, autonomic hyperactivity, and psychomotor agitation; may cause very noticeable impairment of the sufferer's ability to function at work or in social settings Drug Therapy: Benzodiazepines such as Librium for treatment of anxiety; thiamine or large doses of vitamin C and B-complex for fluid imbalances Laboratory: Liver enzymes: CPK, LDH, SGOT, SGPT, and serum cholesterol may be increased; blood ethanol level may be increased Procedures: Detoxification, group, and/or individual therapy Radiology: Liver scan and abdominal series; liver biopsy</p>
<p>Alkalosis, metabolic/respiratory 276.3 CC</p>	<p>Signs and Symptoms: Metabolic alkalosis may show weakness; respirations slow and shallow; uremia; respiratory alkalosis may show drowsiness, giddiness, or paresthesias of the extremities; may be accompanied by a potassium deficiency Laboratory: Blood: (metabolic alkalosis): increased bicarbonate, decreased potassium, and increased pH; blood (respiratory alkalosis): Increased bicarbonate excretion, increased pH, and decreased pCO₂ Radiology: CT scan, abdomen, and head studies</p>
<p>Anemia due to acute blood loss 285.1 CC</p>	<p>Signs and Symptoms: Rapid, sudden loss of blood following rupture of an ulcer, trauma, hemophilia, acute leukemia, or excessive blood loss during surgery Laboratory: Blood: hemoglobin less than 8 and hematocrit less than 28 Procedures: Transfusion(s) of blood and blood components; red cell volume, bone marrow scan, upper gastrointestinal studies, colonoscopy, or flexible sigmoidoscopy</p>

Aneurysm of aorta with rupture 441.00–441.03, 441.1, 441.3, 441.5–441.6 MCC	Signs and Symptoms: Can be immediately fatal; pain is present (constant or paroxysmal) in lower back, groin, and possibly testes; pain is relieved by elevation of knees; numbness and weakness of legs with occasional paralysis; cyanosis, syncope, and shortness of breath Drug Therapy: IV and narcotics for pain Nurse's Notes: Frequent check of vital signs Procedures: Surgical management, whole blood transfusion, and invasive monitoring; transesophageal echocardiography Radiology: Chest: calcification of aortic wall; aortography: clinically diagnostic; may show displacement of kidney or ureter; CT thorax and abdominal to scan for confirmation of location
Angina Pectoris, Decubitus or Prinzmetal 413.0–413.1 CC	Signs and Symptoms: Discomfort in the chest, described as heaviness, pressure, tightness, or squeezing sensation with radiation most usually to the left arm; underlying disease of ischemia causes interruption of coronary blood flow, creating a lack of oxygen supply to the myocardium; attacks may be precipitated by emotion, exertion, cold weather, heavy meals, or tachycardia Drug Therapy: May include nitroglycerin, isordil, or procardia EKG: Normal at first or during rest; exercise test may show inducing S-T segment depression Procedures: Coronary angiography: evidence of significant obstruction of major coronary artery; myocardial perfusion scans; echocardiography; thallium stress test
Anorexia nervosa 307.1 CC	Signs and Symptoms: Intense fear of obesity resulting in excessive dieting; high level of activity and alertness, associated endocrinologic and physiologic changes, and distortion in body image Drug Therapy: Includes medications for correction of nutritional and metabolic deficiencies and psychotherapeutic drugs EKG: Ventricular arrhythmias due to hypokalemia Laboratory: Blood: may show evidence of anemia (hemoglobin less than 8, hematocrit less than 28) Nurse's Notes: Intake and output, daily weights, and supplemental feedings Procedures: Psychotherapy and nutritional counseling
Arrest, cardiac 427.5 MCC —only if patient is discharged alive	Signs and Symptoms: Sudden unexpected cessation of cardiac action and absence of heart sounds and/or blood pressure; cardiopulmonary resuscitation performed Drug Therapy: May include isoproterenol, atropine, sodium bicarbonate, epinephrine, and calcium gluconate EKG: Changes prior to arrest may show bradycardia, tachycardia, or other arrhythmias, fibrillation, or asystole Physician's/Nurse's Notes: Resuscitative efforts recorded in notes or "code" sheet Procedures: May include intubation and artificial ventilation
Ascites, Malignant and Other 789.51, 789.59 CC	Signs and Symptoms: Serous fluid effusion and accumulation within the peritoneal cavity Laboratory: Blood: possible increase in WBC; albumin/globulin ratio possibly reversed Nurse's Notes: Daily weights, intake and output, and daily abdominal measurements Procedures: CT scan of abdomen, liver and spleen, abdominal ultrasound; paracentesis, liver biopsy, and insertion of LeVeen Shunt
Atelectasis 518.0, 770.4–770.5 CC	Signs and Symptoms: Known as lung collapse; symptoms vary based on severity of the collapse; dyspnea, cough, and possibly orthopnea Nurse's Notes: Deep breathing and coughing; suctioning mucus; postural drainage (often done by physical therapist); pulmonary immaturity Procedures: Bronchoscopy, spirometry, and nebulizer treatments Radiology: Chest x-ray: clinically diagnostic; CT scan of thorax
Bacteremia 790.7 CC	Signs and Symptoms: Bacteria in the blood; elevated temperature and chills and joint pains Drug Therapy: Antibiotics depending on organism sensitivity Laboratory: Blood culture: positive Procedures: IV hydration; chest films, CT scan of abdomen
Bronchiectasis with acute exacerbation 494.1 CC	Signs and Symptoms: Irreversible dilation of bronchi, usually resulting from chronic infection; may be congenital or acquired; production of foul-smelling sputum in large amounts Drug Therapy: May include antibiotics for infection and bronchodilators Laboratory: Sputum culture: to rule out bacteria or fungi (Aspergillus) Nurse's Notes: Documentation of postural drainage Procedures: Bronchoscopy to determine location and extent of disease and pulmonary function studies Radiology: Chest x-ray: to rule out tuberculosis and determine fluid level

Targeted DRG Listing

Introduction

This section lists DRGs targeted for potential abuse and coding guidelines to assist coders in determining whether documentation in the medical record supports ICD-9-CM and DRG assignment. Similar DRGs are grouped with the targeted DRGs and represent DRGs that the case would most likely group to when documentation and code assignment do not support the targeted DRG. Common diagnosis codes associated with DRGs are listed and specific coding guidelines. Coders should reference the coding guidelines listed for each ICD-9-CM code to assist them in determining appropriate ICD-9-CM and DRG assignments.

Optum has provided a crosswalk from the pre-existing CMS DRGs to the new MS-DRGs for all targeted DRGs and similar DRGs that the case would most likely group to under certain circumstances. It should be noted, there is no direct one-to-one crosswalk from one DRG to another; the mapping assumes a relationship between the cases that would group to a particular DRG subgroup, such as CMS DRG 014, which has now been replaced by MS-DRGs 064, 065, and 066.

MDC 1: Diseases And Disorders Of The Nervous System

CMS DRG	MS DRG
014 Intracranial Hemorrhage or Cerebral Infarction	064 Intracranial Hemorrhage or Cerebral Infarction with MCC 065 Intracranial Hemorrhage or Cerebral Infarction with CC or tPA in 24 Hours 066 Intracranial Hemorrhage or Cerebral Infarction without CC/MCC
015 Nonspecific Cerebrovascular and Precerebral Occlusion without Infarction	067 Nonspecific Cerebrovascular Accident and Precerebral Occlusion without Infarction with MCC 068 Nonspecific Cerebrovascular Accident and Precerebral Occlusion without Infarction without MCC
524 Transient Ischemia	069 Transient Ischemia

Issue

The issue of coding cerebrovascular disease (430-438) is problematic because of the lack of physician documentation on the known or suspected presence of cerebral infarction and the complexity of ICD-9-CM diagnosis codes and coding guidelines for cerebrovascular disorders. The following represent the major issues affecting the DRG subgroups 064/065/066 and 067/068/069:

- Distinguishing between whether the patient has experienced a cerebrovascular accident, or a transient ischemic attack (both produce similar symptoms)
- Physician documentation in establishing a relationship between the stroke or cerebrovascular accident and the site of a neurological brain impairment such as a cerebral infarction or cerebral hemorrhage for the current episode of care
- Determination of the underlying cause such as hemorrhagic or ischemic, ischemic strokes account for 80 percent of all strokes
- Documentation of onset of current acute condition versus residual neurological deficits from previous stroke

Most Common Diagnosis Codes

DRG 064, 065, 066

- 431 Intracerebral hemorrhage
- 434.11 Cerebral embolism with cerebral infarction
- 434.91 Unspecified cerebral artery occlusion with cerebral infarction

DRG 067, 068

- 433.10 Occlusion and stenosis of carotid artery without mention of cerebral infarction
- 433.30 Occlusion and stenosis of multiple and bilateral precerebral arteries without mention of cerebral infarction
- 436 Acute, but ill-defined, cerebrovascular disease *+

DRG 069

- 435.3 Vertebrobasilar artery syndrome
- 435.9 Unspecified transient cerebral ischemia *

* Denotes codes that have been reassigned for FY 2003

+ To improve coding consistency the ICD-9-CM Coordination and Maintenance Committee removed the terms stroke and CVA from under code 436 and added exclusion notes directing the coder to assign more appropriate codes for hemorrhagic and nonhemorrhagic stroke and CVA. In addition, the note otherwise specified stroke or CVA is now indexed and assigned to code 434.91 Cerebral artery occlusion, unspecified, with cerebral infarction.

CMS DRG (Continued)

MS DRG (Continued)

014 Intracranial Hemorrhage or Cerebral Infarction

064 Intracranial Hemorrhage or Cerebral Infarction with MCC

065 Intracranial Hemorrhage or Cerebral Infarction with CC or tPA in 24 Hours

066 Intracranial Hemorrhage or Cerebral Infarction without CC/MCC

015 Nonspecific Cerebrovascular and Precerebral Occlusion without Infarction

067 Nonspecific Cerebrovascular Accident and Precerebral Occlusion without Infarction with MCC

068 Nonspecific Cerebrovascular Accident and Precerebral Occlusion without Infarction without MCC

524 Transient Ischemia

069 Transient Ischemia

Coding and Documentation Guidelines

431 Intracerebral hemorrhage

DRG 064, 065, 066

CG: Do not classify cerebrovascular accident (CVA) to category 431 without obtaining physician verification and supporting documentation in the medical record

AHA CC: A coma is not inherent to an intracerebral hemorrhage. If a patient presents in a coma and it is found to be due to the intracerebral hemorrhage, assign separate codes for both conditions, which will more completely represent the patient's severity level. [*Coding Clinic*, 1Q, '12, 14]

AHA CC: A conversion of cerebral infarction to hemorrhagic occurs when a patient is treated with thrombolytic therapy (tPA) for cerebral infarction, and subsequently suffers a cerebral hemorrhage due to the tPA. Report the initial cerebral infarction, followed by a complication code to indicate the iatrogenic cerebrovascular infarction or hemorrhage, with an additional code for the intracerebral hemorrhage. Report also an external cause code for the adverse effects in therapeutic use of fibrinolysis-affecting drugs. In addition, report the injection procedure and any residual conditions resulting from the infarction. [*Coding Clinic*, 3Q, '10, 5-6]

AHA CC: When a patient is diagnosed with intracerebral hemorrhage (ICH) and vasogenic edema, both should be coded, with the ICH sequenced first. The cerebral edema is not an inherent condition with the hemorrhage, so it should be coded separately. [*Coding Clinic*, 1Q, '10, 8]

AHA CC: When a patient with brain metastasis has diagnostic studies that reveal hemorrhagic metastasis, a separate code such as 431, Intracerebral hemorrhage, should be assigned as a secondary condition, along with the code for the brain metastasis and a V code for any history of previous cancer. [*Coding Clinic*, 3Q, '07, 4]

AHA CC: Use code 434.91, Cerebral artery occlusion, with cerebral infarction, for aborted CVA when there is no further specification as to the type of CVA. Patients presenting with symptoms of an acute cerebrovascular infarction that receive treatment with tissue plasminogen activator (tPA), have actually had a cerebral infarction. Although brain damage may not be visible by CT scan, microscopic changes are present. [*Coding Clinic*, 1Q, '07, 23]

AHA CC: Use code 434.11 when the physician documents a diagnosis of right embolic hemorrhagic infarct of the temporal lobe. Do not assign code 431, intracranial hemorrhage, as the hemorrhage is a component of the occlusion. [*Coding Clinic*, 3Q, '97, 11, effective with discharges August 1, 1997]

AHA CC: Use code 431 if the physician documents "new CVA," indicating a repeat hemorrhage of a new or same site. [*Coding Clinic*, 2Q, '89, 8, effective with discharges July 31, 1989]

AHA CC: If the physician documents a diagnosis of RIND, the code assignment depends on the context in which the "reversible ischemic neurologic deficit" is used. Neurologic deficits (e.g., weakness, paralysis of facial muscles, clumsiness, paresthesia or paralysis in one or both limbs on the same side, numbness, loss of sensation, inability to eat or talk, loss of vision or partial vision in one eye, double vision, memory loss and vertigo) are commonly associated with cerebral vascular disease (430-435). The physician may further describe the deficits as either fixed (ongoing) or reversible (of brief duration or recovery occurring within six months or more). Use a code from category 434, occlusion of cerebral arteries, if RIND is used in association with a physician's diagnosis of cerebral artery occlusion. A microthrombosis or microembolism may result in a reversible neurologic deficit if the blood supply to the ischemic region is restored promptly. [*Coding Clinic*, M-A, '85, 7]

DOC: Use code 431 if the physician documents a rupture of a blood vessel in the brain.

DOC: Use code 431 if the physician documents basilar, bulbar, cerebellar, cerebral, cerebramenigeal, cortical, internal capsule, intrapontine, pontine, subcortical, or ventricular hemorrhage.

434.11 Cerebral embolism with cerebral infarction

DRG 064, 065, 066

CG: Use code 434.11 if the physician documents the obstruction or occlusion of a cerebral artery due to the migration of a blood clot, which can cause the death of brain tissue (cerebral infarction). The cerebral artery is one that supplies the main portion of the brain (right and left cerebral hemispheres), which occupies the upper cranial cavity. The majority of cerebral emboli originate from the carotid bifurcation. Rarely, the embolism may consist of fat, vegetations, air, a mass of bacteria or other foreign material.