Canadian Coding Standards for ICD-10-CA and CCI for 2006
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Acknowledgments

CIHI acknowledges with thanks the following people for their contribution to this publication.

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The continued support and contributions provided by the many individual reviewers from all provinces and territories are also gratefully acknowledged.

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Introduction

The Canadian Coding Standards for ICD-10-CA and CCI, 2006 are intended for use with the 2006 version of The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada (ICD-10-CA) and the Canadian Classification of Health Interventions (CCI). These standards apply to the Discharge Abstract Database (DAD) and the National Ambulatory Care Reporting System (NACRS).

The standards have been completely reformatted to clearly identify and support the directive statement. Each standard contains the following:

• Directive statements framed and shaded in a shadow box
• Examples to demonstrate the directive statements.

Where necessary, clinical information and interventional components are added. Exceptions are listed where appropriate.

Amendments and new standards continue to be developed by CIHI in consultation with the various provinces and territories. A small number of new standards have been adapted from provincial documents and incorporated into the national standards.

Revisions to the coding standards will be made on a regular basis to keep pace with changing health care information needs. This revision was made possible with the review and input of over 100 health information management professionals.

The coding standards are intended to supplement the coding rules inherent in ICD-10-CA and CCI by providing additional information that could not be embedded into the classifications. It is assumed that users of this document will have had training in abstracting relevant information from clinical records and in the use of ICD-10-CA and CCI.

The clinical record is the source for the coding of morbidity data and it is the healthcare provider’s responsibility to ensure that diagnoses and procedures are recorded accurately. If the record does not contain sufficient information to assign a code, the coder must consult with the responsible healthcare provider. The coding standards cannot provide direction in the absence of complete documentation.

Using the PDF Version of the Standards

When used in electronic form, the PDF document of the standards is easily searchable. In order to facilitate consistent searching capabilities, this document has been published using American spelling only. Please note that the tabular version of ICD-10-CA is published using British spelling (i.e. haemorrhage rather than hemorrhage). In the Coding Standards, any code referenced from ICD-10-CA will also reflect the American version of each word.
You can search the PDF using the following methods:
• Expand the table of contents to list and hyperlink to each standard by title.
• Select the binoculars near the top of the window (Find) to search by phrase or by code.

You can copy portions of text from the PDF by selecting the Copy Text Tool (T) and then highlighting the desired text.

Hyperlinks have been inserted into the document to allow quick navigation to other standards when further information is desired.
Coding Standards for National Ambulatory Care Reporting System (NACRS)

Main Problem Definition

- The Main Problem is the problem that is deemed to be the clinically significant reason for the client’s visit, and which requires evaluation and/or treatment or management. This can be a diagnosis, condition, problem or circumstance.
- The Main Problem is assigned by the health care provider at the end of the visit. This may be the physician.
- When multiple problems are considered as the main reason for the provision of ambulatory care services, the Main Problem is that which is responsible for the greatest use of resources.
- The entry must be a valid ICD-10-CA code.
- For patients who have left without being seen, the main problem will be the presenting complaint. This can occur at any point in the patient’s visit.

Other Problem Definition

- Other Problem(s) are problems, conditions, or circumstances which coexist at the time of the client’s visit and which influence the client’s need for treatment or care. Conditions that were previously treated and no longer exist are excluded.
- Sequence Other Problem(s) based on their impact on the services provided at the time of the visit.
- A maximum of 9 Other Problem(s) may be recorded. Entries must be valid ICD-10-CA codes.
- Other problems include External Cause of Injury codes (V01–Y98) which are mandatory for a diagnosis in the range of S00–T98.
- Place of occurrence (U98) code which is mandatory for a code in the range of W00–Y34 except for Y06 and Y07.
Coding of Main and Other Problems for Ambulatory Care Visits

Determine the Main Problem from the documentation by identifying either:

- The definitive (formulated) diagnostic statement
- A symptom, sign or abnormal test result in the absence of a definitive diagnostic statement
- The specific reason for encounter (e.g. follow-up exam, treatment, observation for suspected condition or pre-operative assessment)

List the Main Problem as the first diagnosis code on the abstract.
Always code to the greatest degree of specificity supported by the documentation.

Diagnosis typing does not apply to ambulatory care coding. Any diagnosis sequenced following the “Main Problem” is referred to as an “Other Problems”. Other problems may be recorded only if applicable to the ambulatory care visit. Suspected conditions may not be recorded as a “Main Problem” or “Other Problem”.

See also the coding standard entitled Specificity.

Definitive (Formulated) Diagnostic Statement

Example: A woman presents with hematemesis which, on investigation, is found to be due to an acute gastric ulcer (with hemorrhage). She is taking NSAID for an unrelated condition. Physician documented “NSAID related gastric bleed”.

K25.0 (Main Problem) Gastric ulcer, acute with hemorrhage
Y45.3 Other nonsteroidal anti-inflammatory drugs [NSAID] causing adverse effects in therapeutic use

Rationale: An external cause code may be assigned with any code when it describes a contributing factor to the condition or disorder—such as the adverse effect taking NSAID has on inducing an ulcer to bleed.

Assign an external cause code from Chapter XX as an additional code when the Main or Other Problem is coded to any injury from Chapter XIX.
Assign an additional code to describe the place where an injury occurred.

See also the coding standard entitled Place of Occurrence.

Example: An interior decorator falls from a ladder while painting a client’s living room. She sustains a closed fracture to her distal humerus.

S42.490 (Main Problem) Fracture, unspecified part of lower end of humerus, closed
W11 Fall on and from ladder
U98.0 Place of occurrence, home
U99.2 (Optional) Activity, while working for an income
Symptom, Sign or Abnormal Test Result

**Example:** A man who has recently argued with his wife presents in emergency complaining of acute dizziness. Upon examination, the physician finds elevated blood pressure readings and notes this as the cause of the dizziness. He has not been diagnosed with hypertension. Follow-up is arranged for him with his family physician and his social worker.

- R03.0 (Main Problem) Elevated blood pressure reading without diagnosis of hypertension
- Z63.0 (Other Problem) Problems in relationship with spouse or partner

**Specific Reason for Encounter**

- **Follow up examinations** (see also the coding standard entitled *Coding of Ambulatory Care Visits for Follow-up Examination or Care*).
- **Encounters for specific forms of treatment** such as dialysis, radiation therapy, adjustment of prosthesis, stoma appliances, pacemakers, etc. are assigned codes from Chapter XXI—Factors Influencing Health Status and Contact with Health Services.

**Example:** A patient has a scheduled appointment for reprogramming of his cardiac pacemaker.

- Z45.0 (Main Problem) Adjustment and management of cardiac pacemaker

**Example:** A patient with end-stage renal failure (diagnosed during a previous episode of care) attends the dialysis clinic for a scheduled session of hemodialysis.

- Z49.1 (Main Problem) Care involving Extracorporeal dialysis
- N18.0 (Other Problem) End-stage renal disease

- **Observation for suspected conditions ruled out**

Select a code from Z03.– *Medical observation and evaluation for suspected diseases and conditions* or from Z04.– *Examination and observation for other reasons* to describe the “Main Problem” when examination or observation (in a suspected condition that has been ruled out) is the sole reason for encounter and no presenting signs or symptoms are documented.

These codes may be assigned as “Other Problem” for a person who presents with some symptoms or evidence of abnormal conditions which require study, but who, after examination and observation, shows no need for further treatment or medical care.

**Example:** A bizarrely dressed and incoherent man is brought to the emergency department by the police for psychiatric examination. He does not speak English. The psychiatrist on call subsequently determines he was at a costume party but got lost on his way home.

- Z04.6 (Main Problem) General psychiatric examination requested by authority

**Example:** A 45-year old man presented in the Emergency Room with anterior wall chest pain. The physician decided to observe him for suspected myocardial infarction (MI). He was discharged 6 hours later after the MI was ruled out.

- R07.3 (Main Problem) Other chest pain
- Z03.4 (Other problem) Observation for suspected myocardial infarction
Coding of suspected conditions not yet ruled out

When no definite diagnosis has been established by the end of an ambulatory care visit, assign a code for the Main Problem based on the information that permits the greatest degree of specificity and knowledge about the condition that necessitated care or investigation. This may be a sign, an abnormal test result or a symptom.

When a diagnosis is documented as probable, suspected, questionable, query, rule out, working or differential, classify the symptom as the Main or Other Problem.

It is presumed that the physician treats the symptoms and continues to pursue a definitive diagnosis, exercising medical prudence and conservative treatment options.

**Example:** A young woman is brought to the Emergency Room with severe abdominal pain; the differential diagnoses listed on the chart are dysmenorrhea and severe constipation.

R10.4 (Main Problem) Other and unspecified abdominal pain

**Example:** A 50-year old man is brought to the Emergency Room with a chief complaint of coughing blood; the physician orders a chest X-ray and a tuberculin test. The patient is then referred to a respirologist.

R04.2 (Main Problem) Hemoptysis

3.GY.10.VA X-ray, thoracic cavity NEC, without contrast.

Preoperative assessment

When the sole reason for encounter is for a pre-treatment assessment, assign Z01.8 Other specified special examination as the Main Problem.

Assign a second code describing the underlying reason (diagnosis or condition) for the assessment, optionally, as an "Other Problem".

**Example:** A woman visits the pre-admission clinic for a preoperative assessment for carpal tunnel release scheduled in two weeks time.

Z01.8 (Main Problem) Other specified special examination

G56.0 (Other Problem) Carpal tunnel syndrome (Optional)

2.ZZ.02.ZZ Assessment (examination), total body, general NEC (e.g. multiple reasons)

**Example:** A man visits the oncology clinic for a pre-chemotherapy assessment for treatment of lung cancer post left lobectomy.

Z01.8 (Main Problem) Other specified special examination

C34.91 (Other Problem) Malignant neoplasm left bronchus or lung, unspecified site

2.ZZ.02.ZZ Assessment (examination), total body, general NEC (e.g. multiple reasons)
Coding of Interventions Performed During Ambulatory Care Visits  In effect 2002

See also the coding standard entitled *Selection of Interventions to Code From Sections 2 and 3.*

Codes from all sections of CCI may be applicable in an ambulatory care setting. Refer to the lists of procedures in the DPG and CACS directories. Check also for any provincially-mandated diagnostic interventions.

**Example:** A young woman is brought to the Emergency Room for suture of a laceration of the forehead sustained as a result of a fall at home.

1. YB.80.LA Repair, skin of forehead, using apposition technique
   (Main Intervention) [e.g. suturing, stapling]

**Example:** A 55-year old man was booked for a uroflowmetry in the cystoscopy suite.

2. PM.58.VG Function study, bladder, uroflowmetry (UFR)
   (Main Intervention)

**Example:** A 42-year old man was booked for a CT scan without enhancement of the lung in the Diagnostic Imaging Department.

3. GT.20.WA Computerized tomography [CT], lung NEC, without enhancement
   (Main Intervention)

**Example:** The police brought a young woman into ER for demonstrating inappropriate behaviour on the street. Blood was drawn for purposes of performing the drug-screening test.

2. ZZ.13.RA Specimen collection of blood by venous puncture
   (Main Intervention) (for diagnostic testing), total body

**Example:** The police brought a young rape victim into ER for examination.

2. RZ.02.CA Assessment (examination), female genital tract NOS,
   (Main Intervention) per orifice (internal exam) technique
7. SJ.35.ZZ Collection of legal evidence, support activity
   (Other Intervention)

**Example:** A patient with osteomyelitis is admitted to receive Cefazolin by I.V. An intravenous line is inserted, the agent is infused, the IV discontinued and the patient was discharged home within an hour.

1. ZZ.35.HA-K4 Pharmacotherapy, total body, using cephalosporin and related substance, percutaneous approach

**Rationale:** Note that it is the treatment by antibiotics via intravenous that is captured and not the process of establishing an intravenous line.
Special Instructions for Codes From Sections 2 and 3

Codes from Sections 2 and 3 are only mandatory if they affect Day Procedures Groups (or DPG) or Comprehensive Ambulatory Classification System (CACS) assignment. For example:

- Cardiac catheterization (3.IP.10.^^)
- Investigative procedures such as MRI, CT, Nuclear Scan, etc
- Certain biopsies or invasive explorations

### Coding of Ambulatory Care Visits for Rehabilitative Services

**In effect 2002**

Assign a code from the category Z50.– Care involving use of rehabilitation procedures, as the “Main Problem” when it is a reason for the ambulatory care visit.

When a person is referred solely for physical therapy (Care involving use of rehabilitation procedures), assign Z50.1 Other physical therapy as the Main Problem.

Assign an additional code, optionally, as an “Other Problem” to identify the underlying disorder.

These codes apply to patients who have already been treated for a disease or injury, but who are receiving follow-up or convalescent care, or care to consolidate the treatment, to deal with residual states.

**Example:** A woman with multiple sclerosis visits the rehabilitation clinic for physiotherapy.

- Z50.1 (Main Problem) Other physical therapy
- G35 (Other Problem) Multiple sclerosis

**Example:** A patient with a history of recent stroke attends the rehabilitation clinic for a scheduled speech therapy session.

- Z50.5 (Main Problem) Care involving use of speech therapy
- I69.4 (Other Problem) Sequelae of stroke not specified as hemorrhage or infarction
## Coding of Ambulatory Care Visits for Follow-up Examination or Care

For routine follow-up visits to examine post-treatment status without further care or treatment provided, assign a code from one of the following categories as the Main Problem:

- **Z08.** Follow-up examination after treatment of malignant neoplasms
- **Z09.** Follow-up examination after treatment for conditions other than malignant neoplasms
- **Z39.** Postpartum care and examination
- **Z47.** Other orthopedic follow-up care
- **Z48.** Other surgical follow-up care

Assign an additional code, optionally, as an “Other Problem” to indicate the history of a disease or disorder.

### Note:
Categories Z40–Z54 **Persons encountering health services for specific procedures and health care** are intended for use to indicate a reason for care. They may be used for patients who have already been treated for a disease or injury, but who are receiving follow-up or prophylactic care, convalescent care, or care to consolidate the treatment, to deal with residual states, to ensure that the condition has not recurred, or to prevent recurrence.1

### Example:
A woman presents to the emergency department for a dressing change (medicated) on the weekend. She had a mastectomy (for breast cancer) the week before.

- **Z48.0** (Main Problem) Attention to surgical dressings and sutures
- **C50.99** (Other Problem) Malignant neoplasm breast part unspecified, unspecified site.
- **1.YS.14.JA-H1** (Optional) Dressing, skin of abdomen and trunk, using medicated dressing

### Example:
A young man presents to the fracture clinic for removal of a cast. He had a cast put on for an undisplaced fracture of the ankle due to a fall on ice 6 weeks ago.

- **Z47.8** (Main Problem) Other specified orthopedic follow-up care
- **1.WA.38.JA-FQ** (Optional) Management of external appliance, ankle joint. Includes: removal, external immobilization or traction device (cast), ankle joint

### Example:
Patient admitted for follow-up cystoscopy. Bladder cancer previously treated by radiation therapy. Trabeculation of bladder was noted but no recurrence of the malignancy.

- **Z08.1** (Main Problem) Follow-up examination after radiotherapy for malignant neoplasm
- **Z85.5** (Other Problem) Personal history of malignant neoplasm of urinary tract.
- **2.PM.70.BA** Inspection, bladder, using endoscopic per orifice approach

### Example:
If the patient did exhibit a recurrence of the malignancy upon follow-up cystoscopy, code the definitive diagnostic statement in the chart as the Main Problem.

- **C67.9** (Main Problem) Malignant neoplasm of bladder, unspecified
- **Z85.5** (Other Problem) Personal history of malignant neoplasm of urinary tract
- **2.PM.70.BA** Inspection, bladder, using endoscopic per orifice approach

---

Coding of Ambulatory Care Visits for Chemotherapy/Radiation Therapy

When a patient’s ambulatory care visit is solely for the purpose of chemotherapy or radiation therapy, assign one of the following as the “Main Problem”:

- Z51.0 Radiotherapy session
- Z51.1 Chemotherapy session for neoplasm
- Z51.2 Other chemotherapy

Assign an additional code as an “Other Problem”, mandatory, to indicate the specific condition for which the treatment is being given.

CCI codes for systemic chemotherapy for neoplastic disease (drugs where the agent component of the qualifier begins with “M”) are required codes for DPG and CACS grouping methodology. They can be found within rubric 1.ZZ.35.^^ Pharmacotherapy, total body NEC. For example, the antineoplastic drug Vincristine administered by injection is coded to 1.ZZ.35.HA-M3.

See also the coding standard entitled Admissions for Chemotherapy, Brachytherapy and/or Radiation Therapy—Treatment for Malignancy.

**Example:** Patient admitted for IV Vincristine following partial resection of bowel for adenocarcinoma of the transverse colon.

- Z51.1 (Main Problem) Chemotherapy session for neoplasm
- C18.4 (Other Problem) Malignant neoplasm of transverse colon
- 1.ZZ.35.HA-M3 Pharmacotherapy, total body using plant alkaloid and other natural product, intravenous approach

**Example:** AIDS patient admitted for initiation of Chemotherapy.

- Z51.2 (Main Problem) Other chemotherapy
- B24 (Other Problem) Human immunodeficiency virus [HIV] disease
- 1.ZZ.35.HA-L4 Pharmacotherapy, total body using antiviral [systemic], intravenous approach

**Example:** Patient admitted for Radiation therapy session. Currently patient has small cell carcinoma of the left lower lobe of lung.

- Z51.0 (Main Problem) Radiotherapy session
- C34.31 (Other Problem) Malignant neoplasm of lower lobe, left bronchus or lung
- 1.GT.27.JA Radiation, lung NEC, using external beam
General Coding Standards

Diagnosis Typing Definitions

Diagnosis Typing applies to all data submitted to the Discharge Abstract Database (DAD). The assignment of a diagnosis type to a condition is meant to signify the impact that the condition had on the patient’s care as evidenced in the physician documentation. All diagnoses or conditions identified on the DAD must be assigned a diagnosis type.

There are multiple diagnosis types:
- Most responsible diagnosis (Type M)
- Comorbidity diagnoses (Types 1 and 2)
- Secondary diagnoses (Type 3)
- Morphology codes (Type 4)
- Admitting diagnoses (Type 5)
- Proxy most responsible diagnosis (Type 6)
- Patient service transfer diagnoses (Types W, X and Y)
- External cause, Place of occurrence, and Activity codes (Type 9)
- Diagnoses restricted to newborn abstracts only (Type 0)

Diagnosis types M, 1, 2, 6, W, X and Y are considered significant diagnosis types.

Definition of Comorbidity

Comorbidities are all conditions that coexist at the time of admission or develop subsequently and demonstrate at least one of the following:
- Significantly affects the treatment received
- Requires treatment beyond maintenance of the preexisting condition
- Increases the length of stay (LOS) by at least 24 hours

To support a determination of significance, there must be documented evidence in the physician’s documentation or discharge summary that the condition required at least one of the following:
- Clinical evaluation/consultation, excluding pre-operative anesthetic consults, where a new or amended course of treatment is recommended and instituted;
- Therapeutic treatment/intervention with a code assignment of 50 or greater from Section 1 of CCI;
- Diagnostic intervention, inspection or biopsy with a code assignment from Section 2 of CCI;
- Extended the length of stay (LOS) by at least 24 hours;
- Therapeutic intervention on the Flagged Interventions list in Appendix B (see also the coding standard entitled Selection of Interventions to Code From Section 1); or
- Diagnostic Imaging intervention as outlined in the coding standard Diagnostic Imaging Interventions.
Diagnoses must be supported by physician documentation as identified in the criteria listed above to be classified as comorbidities. However, nurses notes, pathology reports, laboratory reports, autopsy reports, medication profiles, radiological investigations, nuclear imaging, and other similar investigations are valuable tools for identifying specificity in assigning the appropriate diagnosis code. Conditions documented in these reports may be captured as a diagnosis type (3) when there is no physician documentation to support capture as a comorbidity.

**Diagnosis Type (M)—Most Responsible Diagnosis (MRDx)**

A Diagnosis Type (M) is the one diagnosis or condition that can be described as being most responsible for the patient’s stay in hospital. If there is more than one such condition, the one held most responsible for the greatest portion of the length of stay or greatest use of resources (i.e. operating room time, investigative technology, etc.) is selected.

- If no interventions have been performed select the first-listed diagnosis as the most responsible diagnosis.
- If no definite diagnosis was made, the main symptom, abnormal finding or problem should be selected as the MRDx.

**Diagnosis Type (1)—Pre-Admit Comorbidity**

A Diagnosis Type (1) is a condition that existed prior to admission, has been assigned an ICD-10-CA code, and satisfies the requirements for determining comorbidity.

**Diagnosis Type (2)—Post-Admit Comorbidity**

A Diagnosis Type (2) is a condition that arises post-admission, has been assigned an ICD-10-CA code and satisfies the requirements for determining comorbidity. A post-procedural condition becomes a comorbidity when any one of the following situations exist:

- The condition appears in the physician’s documentation as a complication of the procedure;
- The condition is present at discharge; or
- The condition persists post procedurally for at least 96 hours.

If a post-admit comorbidity qualifies as the MRDx, it must be recorded as both the MRDx and as a diagnosis Type (2)

See also the coding standard entitled, *Post-Procedural Conditions and Complications*. 
Diagnosis Type (3)—Secondary Diagnosis

A Diagnosis Type (3) is a secondary diagnosis or condition for which a patient may or may not have received treatment, has been assigned an ICD-10-CA code and does not satisfy the requirements for determining comorbidity. Diagnoses that are only listed on the Front Sheet, Discharge Summary, Death Certificate, History and Physical or Pre-operative Anesthetic Consults qualify as a Diagnosis Type (3)—Secondary Diagnosis. If there is physician documentation elsewhere in the chart that the condition affected the treatment received or required treatment beyond maintenance of the preexisting condition or increased the length of stay (LOS) by at least 24 hours it then must be determined if it is a Type (1) or Type (2) Comorbidity.

Note: The documentation of ongoing medication for treatment of a preexisting condition does not in itself denote significance. Conditions not qualifying as comorbidities, if coded, should be classified to Diagnosis Type (3).

Diagnosis type (3) is not allowed when the entry code is N—Newborn.

Diagnosis Type (W), (X), (Y)—Service Transfer Diagnosis

An ICD-10-CA code associated with the first/second/third service transfer.

Diagnosis Type (4)—Morphology Codes

Diagnosis Type (4), morphology codes are derived from ICD-O (International Classification of Diseases—Oncology) codes describing the type and behavior of neoplasm. These codes are found in Chapter XXII—Morphology of Neoplasms.

Diagnosis Type (5)—Admitting Diagnosis

Diagnosis Type (5) can be used to code the admitting diagnosis when it differs from the most responsible diagnosis code. Its use is determined at the provincial or facility level. Refer to the DAD manual and facility policies to determine the provincial or facility requirement for use of this diagnosis type.

Diagnosis Type (6)—Proxy Most Responsible Diagnosis (MRDx)

A diagnosis Type (6) is assigned to a designated asterisk code in a dagger/asterisk convention when the condition it represents fulfills the requirements stated in the definition for Diagnosis Type (M)—Most Responsible Diagnosis (MRDx). In morbidity coding, asterisk codes are manifestations of an underlying condition and according to the World Health Organization (WHO) rules, must be sequenced following the code for the underlying cause. The underlying cause codes are identified with a dagger symbol (†) in the ICD-10-CA classification. Diagnosis type (6) is used on the second line of the diagnosis field of the abstract to indicate that the manifestation is the condition most responsible for the patient’s stay in hospital. When the underlying condition meets the criteria for MRDx, or when it would be difficult to delineate whether it is the underlying condition or the manifestation that meets the criteria for MRDx, the asterisk code is assigned diagnosis type (3).

See also the coding standard entitled Dagger/Asterisk Convention.
John Doe was a patient with advanced Crohn’s disease. He was on maintenance dose of medications for his regional enteritis. This time, he presented with pain, swelling and inflammation of the lower back. He was admitted for treatment of sacro-iliac joint arthritis, a complication of the enteritis.

Example:

K50.9† (M) Crohn’s disease, unspecified
M07.4* (6) Arthropathy in Crohn’s disease [regional enteritis]

Rationale:
The arthropathy code is an asterisk code thus it must be sequenced in the second diagnosis location on the abstract. However, since it is the arthropathy that meets the criteria for MRDx (and not Crohn’s disease), it is assigned diagnosis type (6). Note that K50.9 is not always a dagger code. However, in this disease combination the Alphabetic Index directs that it be used as such with M07.4.

Patient with known systemic lupus erythematosus presented with hematuria and fever. He was diagnosed with nephritis and admitted for treatment of his renal condition.

Example:

M32.1† (M) Systemic lupus erythematosus with organ or system involvement
N08.5* (6) Glomerular disorders in systemic connective tissue disorders

Rationale:
The glomerular disorder code is an asterisk code thus it must be sequenced in the second diagnosis location on the abstract. However, since it is the nephritis that meets the criteria for MRDx (and not Systemic lupus erythematosus), it is assigned diagnosis type (6).

Jane Doe was admitted for meningococcal meningitis.

Example:

A39.0† (M) Meningococcal meningitis
G01* (3) Meningitis in bacterial diseases classified elsewhere

Rationale:
This patient has an infectious disorder involving the nervous system and a dagger/asterisk convention applies. However, since it would be difficult to delineate whether it is the underlying condition or the manifestation that meets the criteria for MRDx, the asterisk code is assigned diagnosis type (3).

Mr. F. is known to have Type 1 diabetes mellitus with diabetic retinopathy. He is admitted by an Ophthalmologist for management of his retinopathy.

Example:

E10.30† (M) Type 1 diabetes mellitus with background retinopathy
H36.0* (6) Diabetic retinopathy

Rationale:
Retinopathy is an asterisk code thus it must be sequenced in the second diagnosis location on the abstract. However, since it is the retinopathy that meets the criteria for MRDx (and not Diabetes Mellitus), it is assigned diagnosis type (6).

Mr. F. is known to have Type 1 diabetes mellitus with diabetic retinopathy. His blood sugars have been labile and he is admitted for control of this diabetes.

Example:

E10.30† (M) Type 1 diabetes mellitus with background retinopathy
H36.0* (3) Diabetic retinopathy

Rationale:
In this example, the Diabetes, itself, meets the criteria for MRDx, thus the asterisk code is not assigned diagnosis type 6.
**Diagnosis Type (7), (8)—Restricted to CIHI—DO NOT USE**

**Diagnosis Type (9)—External Cause of Injury Code**

A diagnosis Type (9) is an external cause of injury code (Chapter XX—External causes of morbidity and mortality), place of occurrence code (U98.—Place of occurrence) or activity code (U99.—Activity). Chapter XX codes are mandatory for use with codes in the range S00–T98 Injury, poisoning and certain other consequences of external causes. Category U98.—Place of occurrence is mandatory with codes in the range W00–Y34, with the exception of Y06 and Y07, and Category U99.—Activity is optional.

**Diagnosis Type (0)—Newborn**

Diagnosis Type (0) is restricted to newborn codes only (admit category N).

In a healthy infant where a code from category Z38.- Liveborn infants according to place of birth is the MRDx, any other codes entered on the newborn abstract must be a diagnosis type (0).

In an unhealthy infant where a code from the range P00 to P96, or any other code indicating a significant condition in the newborn, is the MRDx, then Z38.- must be a diagnosis type (0). In this circumstance, diagnosis Type (0) can be used to record any additional insignificant conditions that do not affect the newborn’s treatment or length of stay and do not satisfy the requirements for determining comorbidity. Additional conditions that meet the criteria of comorbidity are assigned diagnosis types (1), (2), (W), (X) or (Y) as indicated by the documentation in the chart.

**Note:** It is mandatory to assign a code from category Z38.- Liveborn infants according to place of birth on a newborn’s abstract. Diagnosis type (3) cannot be applied to any code on a newborn’s abstract.
More Examples of Diagnosis Typing for Comorbid and Secondary Conditions

**Example:** Mr. H. is admitted for inguinal hernia repair. The discharge summary states that he has chronic atrial fibrillation and is on Digoxin, Propranolol and long-term Coumadin. The post-op orders are to: hold warfarin tonight, give warfarin 2.5 mg tomorrow morning and evening, INR daily X 3 days. While in hospital the patient has a cardiology consult and his Digoxin and Propranolol medications are adjusted. It is also stated in the discharge summary that the patient was kept in the ICU for 24 hours in order to monitor his atrial fibrillation closely.

K40.9 (M) Unilateral or unspecified inguinal hernia, without obstruction or gangrene
I48.0 (1) Atrial fibrillation

**Rationale:** Atrial fibrillation is a comorbidity as it warranted a consult, adjustment of his medication, and admission to ICU. Note that “coagulopathy” or “acquired coagulopathy” is not coded. Adjusting warfarin dosage and checking INR values are part of the normal course of treatment for any patient on anticoagulation medication.

**Example:** Mr. A. is admitted with a non Q-wave Myocardial Infarction (MI) of the anterior wall. It states in the History and Physical (H&P) that he has Osteoarthritis and pain in his left knee. While recovering in hospital, an X-ray of his left knee is done but no treatment is undertaken and there is no further documentation.

I21.40 (M) Acute subendocardial myocardial infarction of anterior wall
M17.9 (3) Gonarthrosis, unspecified, (coding optional)

**Rationale:** The physician has documented osteoarthritis in the H&P. A simple X-ray was taken, but there was no treatment directed at the knee and there was no additional documentation indicating the condition prolonged the stay. If coded, M17.9 is recorded as a diagnosis type 3.

**Example:** Mr. W. is admitted with Congestive Heart Failure (CHF) and an acute exacerbation of Chronic Obstructive Pulmonary Disease (COPD). His treatment and progress is documented in the discharge summary and progress notes. He is treated with IV Lasix, oxygen and local pharmacotherapy (Ventolin and Combivent). He recovers quickly. On the day he is to be discharged a lab report shows hypokalemia. The patient is kept in hospital for an additional 24 hours to deliver KCL boluses x 2. Hypokalemia is documented in the physician’s progress notes and the patient is sent home on KCL Elixir p.o.

I50.0 (M) Congestive heart failure
J44.1 (1) Chronic obstructive pulmonary disease with acute exacerbation, unspecified.
E87.6 (2) Hypokalemia

**Rationale:** J44.1 is a Type (1) comorbidity because it was present prior to the patient’s admission and both the discharge summary and the progress notes confirm its significance. E87.6 is a Type (2) comorbidity because it was not present on admission to hospital (post-admission comorbidity) and the progress notes clearly reflect the increased LOS for treatment and stabilization.
**Example:** Mrs. C. is admitted with Congestive Heart Failure (CHF) and an acute exacerbation of her Chronic Obstructive Pulmonary Disease (COPD). She is treated with IV Lasix, oxygen and local pharmacotherapy (Ventolin and Combivent). Treatment for the CHF and COPD and the patient’s response are clearly documented in the progress notes. She recovers quickly but hypokalemia is noted on a lab report and an order for a KCL bolus is given. Following this, her potassium level returns to normal. There is no mention of hypokalemia in the progress notes.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I50.0</td>
<td>Congestive heart failure</td>
</tr>
<tr>
<td>J44.1</td>
<td>Chronic obstructive pulmonary disease with acute exacerbation, unspecified.</td>
</tr>
<tr>
<td>E87.6</td>
<td>Hypokalemia, (coding optional)</td>
</tr>
</tbody>
</table>

**Rationale:** In this example, hypokalemia does not meet the criteria for comorbidity as there is no documentation in the progress notes or discharge summary indicating significance.

### Diagnoses of Equal Importance

**In effect 2001, amended 2006**

When two or more diagnoses of equal importance are listed with no clear indication in the health record as to which one is the most responsible diagnosis, select the condition for which a definitive (as opposed to diagnostic) surgical or non-surgical procedure has been performed. If no surgery has been performed select the first-listed diagnosis as the most responsible diagnosis.

**Example:** Ms. R. is discharged home with a diagnosis of bronchopneumonia treated with antibiotics and upper gastrointestinal hemorrhage due to esophageal varices which were sclerosed, endoscopically, using a laser.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I85.0</td>
<td>Esophageal varices with bleeding</td>
</tr>
<tr>
<td>J18.0</td>
<td>Bronchopneumonia, unspecified</td>
</tr>
<tr>
<td>1.NA.13.BA-AG</td>
<td>Control of bleeding, esophagus, using endoscopic per orifice approach and laser</td>
</tr>
</tbody>
</table>

**Example:** Ms. C. has a 5-day stay in hospital to further investigate and conservatively manage her chronic obstructive pulmonary disease with acute exacerbation and a bowel obstruction.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>J44.1</td>
<td>Chronic obstructive pulmonary disease with acute exacerbation, unspecified</td>
</tr>
<tr>
<td>K56.6</td>
<td>Other and unspecified intestinal obstruction</td>
</tr>
</tbody>
</table>

**Rationale:** Both diagnoses are of equal importance. Neither was treated surgically. Assign COPD as MRDx as it is listed first.
**General Coding Standards**

**Specificity**

*In effect 2001, amended 2003*

When the “main” diagnosis describes a condition in general terms, but a more descriptive term providing more precise information about the site or nature of the condition is reported among the other listed diagnoses, select the most specific condition.

**Example:**

The physician lists both cerebrovascular accident and cerebral hemorrhage as diagnoses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>I61.9</td>
<td>Intracerebral hemorrhage, unspecified</td>
<td>Intracerebral hemorrhage is a type of cerebrovascular accident and is more specific; only a code for intracerebral hemorrhage is assigned.</td>
</tr>
</tbody>
</table>

**Example:**

The physician has noted that the patient has developed a decubitus ulcer that is delaying discharge (the ulcer was not present on admission). The nurse specialist has documented the ulcer as Stage 3.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>L89.2</td>
<td>Decubitus ulcer with fat layer exposed (Stage 3)</td>
<td>Since the ulcer is documented in the physician’s notes, the nursing documentation can be used to add specificity.</td>
</tr>
</tbody>
</table>

**Using Diagnostic Test Results in Coding**

*In effect 2003, amended 2006*

Use laboratory, X-ray, pathology and other diagnostic results when they clearly add specificity in identifying the appropriate diagnosis code for conditions documented in the physician’s notes.

**Example:**

Patient tripped and fell in a grocery store and physician recorded a closed fracture of the neck of femur. The X-ray result showed a “cervicotrochanteric” fracture.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>S72.010</td>
<td>Closed fracture of base of femoral neck (cervicotrochanteric)</td>
<td>Fall on same level from slipping, tripping and stumbling</td>
</tr>
<tr>
<td>W01</td>
<td>Fall on same level from slipping, tripping and stumbling</td>
<td>Place of occurrence, trade and service area (grocery store)</td>
</tr>
<tr>
<td>U98.5</td>
<td>Place of occurrence, trade and service area (grocery store)</td>
<td></td>
</tr>
</tbody>
</table>

**Example:**

Patient’s chart documentation showed that she was admitted for removal of a skin lesion, the pathology report showed “solar keratosis”.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>L57.0</td>
<td>Actinic keratosis (Includes: solar keratosis)</td>
<td></td>
</tr>
</tbody>
</table>

**Example:**

The physician has recorded the diagnosis of intracranial hemorrhage. The CT scan confirmed subarachnoid hemorrhage.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>I60.9</td>
<td>Subarachnoid hemorrhage, unspecified</td>
<td></td>
</tr>
</tbody>
</table>
When a condition is suggested by diagnostic test results, code it only when it has been confirmed by physician documentation.

**Example:** Microbiology reports suggest a urinary tract infection and medication reports indicate the patient received antibiotics. There is no documentation relating to this in the physicians’ notes.

No code is assigned  
**Rationale:** Clinical interpretation is required to confirm the diagnosis.

**Example:** A patient has lower abdominal pain. A CT scan reveals adhesions of the abdomen, but there is no documentation in physicians’ notes identifying the adhesions as the cause of pain.

R10.39 Lower abdominal pain, unspecified  
**Rationale:** Clinical interpretation is required to confirm the cause of pain.

**Exception:** Use lab tests, glucose meter readings, or any other acceptable glucose monitoring system to assign R73.8–2 Other evidence of elevated blood glucose to identify cases where there is evidence of blood glucose greater than or equal to 14.0 mmol/L (see also the coding standard entitled Diabetes Mellitus and Hyperglycemia).

**Example:** J.M. is a 69-year old man who was admitted for elective cardiac surgery. He is a type 2 diabetic. Postoperatively, he was in ICU for 4 days where his blood glucose levels were closely monitored. There were two blood glucose values of >14.0 mmol/L recorded on the glucose monitoring record. Insulin was adjusted during the ICU stay and he was considered stable when transferred to the ward.

E11.52 (1) Type 2 diabetes mellitus with certain circulatory complications  
R73.812 (3) Other evidence of elevated blood glucose greater than or equal to 14.0 mmol/L  
**Rationale:** Use glucose monitoring reports to identify cases where blood glucose values exceed 14.0 mmol/L.
Dagger/Asterisk Convention

In ICD-10-CA, the dagger symbol (†) is used to indicate a code that represents the etiology or underlying cause of a disease. The asterisk symbol (*) is used to indicate a code that represents the manifestation of a disease.

In the tabular portion of the classification, the dagger represents the different applications of the convention stipulated by WHO as shown below:

(i) If the dagger symbol and asterisk code both appear in the code title, all terms classifiable to that code are subject to dual classification and all have the same alternative code, e.g.

**A17.0† Tuberculous meningitis (G01*)**
Tuberculosis of meninges (cerebral)(spinal)
Tuberculous leptomenigitis

(ii) If the symbol appears in the code title but the asterisk code does not, all terms classifiable to that code are subject to dual classification but they have different asterisk codes (which are listed for each term) e.g.

**A18.0† Tuberculosis of bones and joints**
Tuberculosis of:
- hip (M01.1*)
- knee (M01.1*)
- vertebral column (M49.0*)

Tuberculosis:
- arthritis (M01.1*)
- mastoiditis (H75.0*)
- necrosis of bone (M90.0*), etc.

(iii) If neither the symbol nor the asterisk code appear in the title, the rubric as a whole is not subject to dual classification but individual inclusion terms may be; if so, these terms will be marked with the dagger symbol and their asterisk codes given, e.g.

**A54.8 Other gonococcal infections**
Gonococcal:
- brain abscess† (G07*)
- endocarditis† (I39.8*)
- meningitis† (G01*)
- myocarditis† (I41.0*)
- pericarditis† (I32.0*)
- peritonitis† (K67.1*)
- pneumonia† (J17.0*)
- septicemia
- skin lesions
(iv) There are some instances where the direction to use dual classification appears only in the index, e.g.

**Pneumonia**
- in (due to)
- - septicemia A41 J17.0*

Assign an asterisk code whenever indicated in ICD-10-CA.
Assign diagnosis type (6) or diagnosis type (3) to asterisk codes in accordance with the diagnosis typing definitions (see also the coding standard entitled *Diagnosis Typing Definitions*).

**Example:** Mr. S. is admitted for management of Herpes viral meningoencephalitis.

- **B00.4† (M)** Herpes viral encephalitis
- **G05.1* (3)** Encephalitis, myelitis and encephalomyelitis in viral diseases classified elsewhere

**Rationale:** Since the dagger symbol and asterisk code both appear in the code title, all inclusion terms are subject to dual classification and both codes are assigned. In this case, the asterisk code applies to encephalitis. Since it would be difficult to delineate whether it is the underlying condition or the manifestation that meets the criteria for MRDx, the asterisk code is assigned diagnosis type (3).

**Example:** A patient is admitted for meningococcal pericarditis.

- **A39.5† (M)** Meningococcal heart disease
- **I32.0* (3)** Pericarditis in bacterial diseases classified elsewhere

**Rationale:** The dagger symbol appears in the code title making all terms classifiable to A39.5 subject to dual classification, but the asterisk codes vary depending on the condition. Since it would be difficult to delineate whether it is the underlying condition or the manifestation that meets the criteria for MRDx, the asterisk code is assigned diagnosis type (3).

**Example:** A patient is admitted for balanitis due to an amoebic infection.

- **A06.8† (M)** Amoebic infection of other sites
- **N51.2* (3)** Balanitis in diseases classified elsewhere

**Rationale:** Neither the dagger symbol nor the asterisk symbol appear in the code title. Only the inclusion term “balanitis” is subject to dual classification, in which case A06.8 becomes a dagger code and N51.2 is the corresponding asterisk code. The dagger/asterisk convention does not apply to amoebic appendicitis. Since it would be difficult to delineate whether it is the underlying condition or the manifestation that meets the criteria for MRDx, the asterisk code is assigned diagnosis type (3).
**Example:** Mrs. B. has carcinoma of the lung and has developed anemia as a result of her neoplastic disease. She is admitted for management of the anemia.

C34.99† (M) Malignant neoplasm bronchus or lung, unspecified, unspecified side
D63.0* (6) Anemia in neoplastic disease

**Rationale:** In this case, the Alphabetic Index directs the coder to D48.9 and D63.0*. This indicates that the code to describe the patient’s neoplastic disorder becomes a dagger code. D48.9 is assigned when the neoplasia is unspecified. Since it is specified in this example, the more specific neoplasia code is the dagger code. Note that the full range of codes C00–D48 are identified as dagger codes following the code title at D63.0 in the Tabular Listing. D63.0 is an asterisk code, thus it must be sequenced in the second diagnosis location on the abstract. However, since it is the condition that meets the criteria for MRDx (and not the malignancy of the lung), it is assigned diagnosis type (6).

**Example:** Discharge diagnosis is hemolytic uremic syndrome encephalopathy.

D59.3 Haemolytic-uraemic syndrome
G93.4 Encephalopathy, unspecified

**Rationale:** There is no dagger/asterisk convention applied to this disorder. Each condition is coded separately. Diagnosis type and sequence will depend on circumstances documented in the record.

---

**Acute and Chronic Conditions**

When a condition is described as being both acute (or subacute) and chronic, and ICD-10-CA provides separate categories or subcategories for each, but not for the combination, code the acute condition. Assign a code for the chronic condition, optionally, as a diagnosis type 3.¹

When an appropriate combination code is provided for both the acute and chronic condition assign only the combination code.

**Example:** Patient was admitted for a total cholecystectomy because of chronic cholecystitis. The physician noted in the discharge summary that acute and chronic cholecystitis were noted on the pathology report.

K81.0 (M) Acute cholecystitis
K81.1 (3) Chronic cholecystitis

---

**Example:** Patient was admitted to hospital with a diagnosis of acute exacerbation of chronic obstructive pulmonary disease.

J44.1 Chronic obstructive pulmonary disease with acute exacerbation, unspecified

A condition described as recurrent cannot be assumed to be chronic. Follow the Alphabetic Index for a sub-term of “recurrent”. If no sub-term exists for “recurrent” classify the condition to the NOS category.

### Impending or Threatened Conditions

**Code impending or threatened conditions only when indexed as such in ICD-10-CA.**

**Example:** Patient has a Stage 4 decubitus ulcer. Documentation within the physician’s notes states “impending gangrene”.

L89.3 (M) Decubitus ulcer with depth involving muscle (Stage 4)

**Rationale:** In the case of impending gangrene of the leg which did not progress within the episode of care due to prompt treatment, the coder must look for an index entry such as “gangrene, impending”. If no index entry is found, this case must be coded to the documented precursor condition.

**Example:** Threatened Abortion.

O20.003 (M) Threatened abortion
Underlying Symptoms or Conditions

When a patient presents with a symptom or condition, and during that episode of care the underlying disease or disorder is identified, assign the underlying disease or disorder as the MRDx. Assign an additional code for the symptom or condition, optionally, as a diagnosis type (3) based on the facility’s data needs.

Example: Patient presented with seizures. CT scan taken at the time revealed a large brain tumor. Physician documentation stated “no previous history of seizures”. A stereotactic biopsy of the brain revealed a benign neoplasm and the patient was scheduled for further surgery.

D33.2 (M) Benign neoplasm of brain, unspecified
R56.8 (3) Other and unspecified convulsions (optional code)

When a patient presents with a manifestation of an underlying disease or disorder that is known at the time of admission, and management is directed solely to the manifestation, assign the manifestation as the MRDx. Assign a code for the underlying disease as a diagnosis type (3).

Example: Mr. T, known to have a malignant brain lesion, presents with seizures. During this episode, all treatment was directed solely towards control of his seizures.

R56.8 (M) Other and unspecified convulsions
C71.9 (3) Malignant neoplasm of brain unspecified

Example: A 45-year old patient presents with Unstable Angina. He has known coronary atherosclerosis at the time of admission. During this current admission, symptomatic treatment is directed only towards the unstable angina. Patient to see his physician to discuss surgical options.

I20.0 (M) Unstable angina
I25.19 (3) Atherosclerotic heart disease of unspecified type of vessel, native or graft

Example: Mrs. S is a patient suffering from advanced colon cancer. She was admitted with bowel obstruction and an entero-enterostomy was performed.

K56.6 (M) Other and unspecified intestinal obstruction
C18.9 (3) Malignant neoplasm colon, unspecified
Suspected Conditions/Query/Uncertain Diagnosis (Q)

When a definitive diagnosis has not been made at the time of discharge, the assignment of a diagnosis code is determined by the specific manner in which the physician has documented his/her conclusions.

If no definite diagnosis has been established by the end of an episode of health care, code the information that permits the greatest degree of specificity and knowledge about the condition that necessitated care or investigation.

**Example:**

Final diagnosis is recorded by the physician as:
- Chest pain. Query MI.
- R07.4  (M)  Chest pain, unspecified
- (Q)I21.9  (3)  Acute myocardial infarction, unspecified

**Rationale:** The physician has recorded both chest pain and query MI as the diagnosis.

If, after an episode of health care, the MRDx is still recorded by the physician as “suspected”, “questionable”, “rule out”, “possible”, “probable”, etc., and there is no further information or clarification, code the suspected diagnosis as if it were established. Use the prefix “Q” in such circumstances whenever applicable.

**Example:**

Final diagnosis is recorded by the physician as:
- Query Myocardial Infarction
- (Q)I21.9  (M)  Acute myocardial infarction, unspecified

**Rationale:** The physician has recorded the diagnosis as questionable.

Select category Z03.– *Medical observation and evaluation for suspected diseases and conditions*, for suspected diagnoses that have been ruled out after investigation and no further treatment or medical care is planned.

**Example:**

Final diagnosis is recorded by the physician as:
- Myocardial Infarction—ruled out
- Z03.4  (M)  Observation for suspected myocardial infarction

**Rationale:** Even though this patient would have presented with a clinical picture suggestive of an MI, the physician has ruled out an MI. If further medical care or treatment is planned as an outpatient, do not assign Z03.4, code the information that represents the greatest degree of knowledge about the condition (e.g. chest pain).
## General Coding Standards

### Use Additional Code/Code Separately Instructions

In effect 2006

Follow the “use additional code” and “code separately” instructions in ICD-10-CA whenever they are provided.

**Example:** Mr. P is a 54-year old man with a documented history of Diabetes Type 2 managed by Metformin. He is admitted to hospital with severe chest pain and a diagnosis of acute transmural myocardial infarction of the anterior wall was confirmed.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I21.0</td>
<td>Acute transmural myocardial infarction of anterior wall</td>
</tr>
<tr>
<td>E11.52</td>
<td>Type 2 diabetes mellitus with certain circulatory complications</td>
</tr>
</tbody>
</table>

**Rationale:** Follow the instruction at I21.– that states “Use additional code from category (E10–E14) with fourth and fifth digits .52 to classify any associated diabetes mellitus”. Additionally, follow the instruction at E11.52 that states “Code separately any of the following associated conditions when present”. Because E11.52 is not a dagger code and I21.0 is not an asterisk code, the dual coding convention does not apply. Sequencing will depend on the circumstances in the documentation. Based on the information in this example, it would appear that the MI would meet the definition of MRDx. The diagnosis type for the diabetes code will depend on circumstances documented in the record.

**Example:** Mr. J. is admitted for investigation of abnormal hematology tests. It was determined that he had aplastic anemia due to occupational exposure to insecticides.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D61.2</td>
<td>Aplastic anaemia due to other external agents</td>
</tr>
<tr>
<td>X48</td>
<td>Accidental poisoning by and exposure to pesticides</td>
</tr>
</tbody>
</table>

**Rationale:** Follow the “use additional code” instruction to identify the external cause.

**Exception:** Apply the instruction to “Use additional code (B95–B97) to identify infectious agent” as an optional additional code.

**Example:** A 70-year old male patient is admitted with Epididymitis due to E. coli.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>N45.00</td>
<td>Epididymitis with abscess</td>
</tr>
<tr>
<td>B96.2</td>
<td>Escherichia coli [E. coli] as the cause of diseases classified to other chapters (optional)</td>
</tr>
</tbody>
</table>

**Rationale:** Assignment of codes from B95–B97 is optional.
A “sequela” or “late effect” of a disease is a current condition under investigation or treatment that was caused by a previously occurring condition for injury. There is no universal timeframe for a condition to be considered a sequela. The residual condition (sequela) may be apparent early in the process, such as neurological deficits occurring following a cerebral infarction. A scar or cicatrix is a sequela of a third degree burn that develops remote to the burn incident itself.

**Example:** Unequal leg length (acquired). Late effect of poliomyelitis.

M21.7 (M) Unequal limb length (acquired)
B91 (3) Sequelae of poliomyelitis

**Example:** Osteoarthritis of hip joint due to an old hip fracture from a motor vehicle accident 20 years ago.

M16.5 (M) Other post-traumatic coxarthrosis
T93.1 (3) Sequelae of fracture of femur
Y85.0 (9) Sequelae of motor vehicle accident

**Example:** Patient admitted for release of skin contracture and fibrosis, old burn of hand (due to a hot oil spill two years ago).

L90.5 (M) Scar conditions and fibrosis of skin
T95.2 (3) Sequelae of burn, corrosion and frostbite of upper limb
Y86 (9) Sequelae of other accidents

See also the coding standard entitled *Current Versus Old Injuries*.

**Note:** Coders are reminded to read all notes at block headings and chapter headings where guidance is provided regarding time frames.

---

Admissions From Emergency Room

In effect 2003, amended 2006

Patients often move from one setting to another as their condition is being treated. Treatment begun in the emergency room may culminate in the inpatient setting.

Select the diagnosis(es) for each level of care (e.g., ambulatory care, acute care inpatient) to accurately reflect the circumstances for the treatment provided during that episode of care.

**Example:** An 87-year old man was seen in the Emergency Room for a fractured rib. He had slipped and fallen down in the grocery store that morning. He was kept in overnight as he lived alone. He was discharged the next morning in the care of his daughter.

<table>
<thead>
<tr>
<th>Emergency Visit</th>
<th>Inpatient Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>S22.300 (Main)</td>
<td>Z60.2 (M)</td>
</tr>
<tr>
<td>W01</td>
<td>S22.300 (3)</td>
</tr>
<tr>
<td>U98.5</td>
<td>W01 (9)</td>
</tr>
<tr>
<td></td>
<td>U98.5 (9)</td>
</tr>
</tbody>
</table>

- Fracture of rib, closed
- Fall on same level from slipping, tripping and stumbling
- Place of occurrence, trade and service area
- Living alone
- Fracture of rib, closed
- Fall on same level from slipping, tripping and stumbling
- Place of occurrence, trade and service area

When a patient is admitted as an Inpatient to complete treatment started in the ER, assign the MRDx according to the diagnosis typing definitions (see also the coding standards entitled *Diagnosis Typing Definitions*).

When definitive treatment for an injury or a condition occurs in the emergency room and no reason is given for why the patient had subsequently been admitted, assume that it was for continuation of treatment of the presenting condition.

**Example:** Prof. H., a middle-aged patient with known CAD, was brought to the Emergency Room complaining of chest pain. He was examined and a series of blood tests were conducted. Physician documentation on the ER record stated “coronary thrombosis” and the patient was started on thrombolytic therapy in the Emergency Room. He was then moved to an inpatient bed.

<table>
<thead>
<tr>
<th>Emergency Visit</th>
<th>Inpatient Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>I24.0 (Main)</td>
<td>I24.0 (M)</td>
</tr>
</tbody>
</table>

- Coronary thrombosis not resulting in myocardial infarction
- Coronary thrombosis not resulting in myocardial infarction
**Example:** A 4-year old child was brought into the Emergency Room with an anterior dislocation of the shoulder having fallen from the jungle gym in the daycare play area. Patient was admitted following a closed reduction in the Emergency Room. The child was discharged in the care of the mother the following morning.

Emergency Visit
S43.000 (Main) Anterior dislocation of shoulder joint, closed
W09 Fall involving playground equipment
U98.2 Place of occurrence, school other institution and public area

Inpatient Stay
S43.000 (M) Anterior dislocation of shoulder joint, closed
W09 (9) Fall involving playground equipment
U98.2 (9) Place of occurrence, school other institution and public area

---

**Cancelled Interventions—Diagnosis Code Selection** In effect 2001

Elective surgery may sometimes be cancelled for reasons such as staffing, another emergency case taking precedence, or even contraindications such as the patient developing flu-like symptoms.

**When an intervention is cancelled due to administrative reasons assign Z53.8 Procedure not carried out for other reasons, as the Most Responsible Diagnosis.**

**Example:** Procedure cancelled due to staffing problems—snowstorm.
Z53.8 (M) Procedure not carried out for other reasons
I25.19 (3) Atherosclerotic heart disease of unspecified type of vessel, native or graft

**When an intervention is cancelled due to a contraindication (a condition or circumstance that puts the patient at a higher risk should the physician proceed with the intervention) and the patient is discharged, assign Z53.0 Procedure not carried out because of contraindication, as the Most Responsible Diagnosis.**

**Example:** Patient admitted for coronary artery bypass graft. Surgery cancelled due to respiratory symptoms and influenza. Patient to go home and make another appointment.
Z53.0 (M) Procedure not carried out because of contraindication
I25.19 (3) Atherosclerotic heart disease of unspecified type of vessel, native or graft
J11.1 (3) Influenza with other respiratory manifestations, virus not identified
When a patient is admitted for surgery and develops a post admit comorbidity which then becomes the focus of continued care, and the planned surgery is cancelled, code the contraindication as the Most Responsible Diagnosis and as a post-admit comorbidity.

**Example:** Patient admitted for elective hip replacement for osteoarthritis (coxarthrosis), but developed acute anterior wall myocardial infarction after admission. Patient was transferred to CCU and the surgery was cancelled.

<table>
<thead>
<tr>
<th>Code</th>
<th>M</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I21.0</td>
<td>(M)</td>
<td>Acute transmural (Q-wave) myocardial infarction of anterior wall</td>
</tr>
<tr>
<td>I21.0</td>
<td>(2)</td>
<td>Acute transmural (Q-wave) myocardial infarction of anterior wall</td>
</tr>
<tr>
<td>Z53.0</td>
<td>(3)</td>
<td>Procedure not carried out because of contraindication</td>
</tr>
<tr>
<td>M16.9</td>
<td>(3)</td>
<td>Coxarthrosis, unspecified</td>
</tr>
</tbody>
</table>

**Note:** CCI does not allow for coding of cancelled interventions. No operating room resources were used and these cases should not be counted in any research or study parameters. It is incorrect to code such cases to the planned intervention with a status attribute “A”.

See also the coding standards entitled *Cancelled Day Surgery Interventions* and *Abandoned Interventions*.
General Coding Standards for CCI

Selection of Interventions to Code From Section 1

In effect 2001, amended 2003, 2006

Section 1—Physical and Physiological Therapeutic Interventions

The hierarchical code structure of CCI allows for the development of coding standards that can be applied to all body systems especially within Section 1.

| Code all interventions classified in Section 1 of CCI that affect CMG assignment and certain interventions that are factors in calculating cost weights (RIW). |

A complete list of CCI codes that affect Case Mix Group (CMG) assignment can be found in the CMG Directory.

As a general rule of thumb, all interventions, classified in Section 1 of CCI, that have a generic intervention number of “50” or higher, should be coded in acute care facilities.

The following codes are common interventions with low generic intervention numbers that must be coded as they affect CMG: (see the CMG Directory for a complete list)

1.LZ.37.LA-GB  Installation of external appliance, circulatory system NEC, cardiopulmonary bypass (intraoperative), open approach

1.GZ.31.CA-ND  Ventilation, respiratory system NEC, Invasive per orifice approach by endotracheal intubation using positive pressure

1.GZ.31.CR-ND  Ventilation, respiratory system NEC, Invasive per orifice with incision approach for intubation through tracheostomy using positive pressure

The following codes are examples of interventions numbered higher than “50” that are not mandatory for inpatient coding:

1.PM.52.^^  Drainage, bladder, NEC

1.PM.54.^^  Management of internal device, bladder, NEC

1.PM.55.^^  Removal of device, bladder, NEC

1.^^.80.^^  Repair of skin wound when performed concomitantly with other more significant surgery

Interventions that are factors in calculating cost weights are listed in Flagged Interventions in Appendix B.

Further details about coding interventions can be found in the chapters throughout this document.
Codes from Sections 2 and 3 do not follow the general rule of thumb stated in the coding standard “Selection of Interventions to Code from Section 1”. Facilities should follow their own internal coding standards and provincial requirements when selecting codes from Sections 2 and 3.

**Example:** A patient had an endoscopic biopsy of the prostate, followed by endoscopic electroloop excision of the prostate.

1. QT.87.BA-AK Excision partial, prostate, using loop electrode, endoscopic per orifice approach [transurethral]

**Rationale:** These are the same anatomical site, another procedure has been performed at this site, therefore, the biopsy is not coded.

**Example:** A patient has a skin lesion excised, with suture closure from his leg and an incisional skin biopsy taken from his chest wall.

1. YV.87.LA Excision partial, skin of leg, using apposition technique [e.g. suture, glue] for closure, open approach

2. YS.71.LA Biopsy, skin of abdomen and trunk, using open [incisional] approach

**Rationale:** These are separate anatomical sites so both procedures are coded.

**Note:** 3.IP.10.^^ X-ray, heart with coronary arteries may affect CMG assignment (see also the coding standard entitled *Diagnostic Imaging Interventions*).
## Selection of Interventions to Code From Section 5

| Code all interventions from Section 5 when the generic intervention number is >45. It is optional to use the other codes in this section of CCI when the generic intervention number is <45. |

Exception: 5.AC.30.^^ *Induction of Labor* must be coded when applicable even though the generic intervention number is "30".

Codes from the block 5.FB.^^–5 FT.^^ *Diagnostic Fetal Interventions* are those performed on the fetus prior to delivery.

Classify any intervention performed on the neonate after delivery to Section 1 of CCI.

Exception: 5.MD.11.^^ *Cord blood sampling*  
5.PB.01.AC *Postpartum care, follow up visit, mom and baby (first post natal visit)*

Select codes from the block 5.LB.^^–5.MD.^^ *Interventions During Labor and Delivery* to classify interventions that occur during the intrapartum phase (from the time labor begins until complete expulsion of the fetus).
When available, use one CCI code to describe complex health interventions by selecting the appropriate qualifier(s).

When one CCI code is not available to describe complex health interventions, code additionally any associated concomitant interventions.

Every attempt has been made to reduce the need for multiple code assignment to describe a complex health intervention. In most cases, it should be possible to use a single code to definitively describe, in generic terms, the intent and means of accomplishing an intervention. When an intervention commonly or frequently involves a sequence of associated concomitant actions in order to reach its goal, this will be described—wherever possible—by a single code. The qualifiers provide options that describe the alternate techniques involved.

**Example:**
A partial gastrectomy may be performed alone or with a vagotomy. When the vagotomy is performed with the gastrectomy, a qualifier is selected to identify this. A second code for the vagotomy is not recorded.

1.NF.87.GX  Excision partial, stomach endoscopic [laparoscopic] approach with vagotomy and esophagogastric anastomosis

**Rationale:** Vagotomy would only be a separate code when it is performed alone.

Even more common as an example, is the excision of (lesion of) an anatomy site with a concomitant repair involving a graft or a flap to close the surgical defect. A qualifier is selected to describe the concomitant repair.

**Example:**
Patient with carcinoma of the larynx and lymph node metastases has a radical laryngectomy with a radical neck dissection and a pedicled flap graft closure of the surgical defect.

1.GE.91.VB-XX-G  Excision radical, larynx using pedicled distant flap [e.g. myocutaneous flap] with modified radical neck dissection
When more than one intervention is performed during the same episode of care and there is no composite code (qualifier) to cover this combination, assign multiple codes.

This will be necessary particularly for trauma and congenital repairs where multiple anatomy sites may be involved. While “code also” notes have been included throughout CCI, they do not cover every possible circumstance where multiple codes are required.

**Note:** In CCI, the “code also” instruction should be interpreted to mean that the rubric does not include the procedure(s) in the “code also” instruction. If the intervention in the “code also” instruction was performed, an additional code is required. The additional code is mandatory if it meets the requirements for mandatory code selection specified in these Standards.

**Example:** Patient is admitted for a lumpectomy and sampling of the axillary lymph nodes.

1. YM.87.LA Excision partial, breast using open approach with simple apposition of tissue (e.g. suturing)
2. MD.87.LA Excision partial, lymph node(s), axillary, using open approach
Procurement or Harvesting of Tissue for Closure, Repair or Reconstruction

When a separate incision is made to obtain the tissue, assign the appropriate CCI code for procurement of tissue.

Procurements are coded to reflect the existence of a separate surgical defect (wound), which usually requires its own post-surgical care and monitoring. If an incision is simply enlarged to obtain the tissue, there is no need to code the procurement. A local flap (for advancement, rotation, and realignment) does not usually involve a separate incision for procurement of the flap.

**Example:** A fasciocutaneous free flap from the thigh is harvested to repair a serious facial burn.

1. YF.80.LA-XX-F  
   Repair, skin of face, using free flap
2. YV.58.LA-XX-F  
   Procurement, skin of leg, of free flap using open approach

**Example:** A high tibial osteotomy with patellar tendon transfer.

1. VQ.80.LA-KD  
   Repair, tibia and fibula, using open approach and wire
2. VS.80.LA-XX-E  
   Repair, tendons of lower leg [around knee] using apposition technique with tendon transfer for realignment

**Rationale:** Procurement is not coded since a separate incision at another site on the body was not made.

**Note:** When the tissue qualifier is “E”, this usually means that you do not need a procurement code.

**Exception:** Whenever a segment of the intestine is harvested, a procurement code is assigned. This happens most often for repairs and reconstructions of the urinary tract and the esophagus. Because the creation of a defect along the gastrointestinal tract always requires careful post-surgical monitoring, the procurement of intestine should be coded.

Combined Diagnostic and Therapeutic Interventions

When an intervention is done for both diagnostic and therapeutic purposes at the same anatomy site, assign a code for the therapeutic intervention, mandatory. Assign a code for the diagnostic intervention, optionally, as required to meet facility reporting requirements.

**Exception:** A coronary angiogram code may be required with certain therapeutic coronary procedures (see also the coding standard entitled Diagnosis Imaging Interventions).

**Example:** Ms. J. is brought into hospital to investigate a suspicious lump in her right breast. The surgeon performs an excisional biopsy of breast, which is sent to pathology for examination.

1. YM.87.^^  
   Excision partial, breast
Note: The intent of an excisional biopsy is therapeutic as well as diagnostic. The lesion has to be excised and a diagnosis established by pathology. The therapeutic intervention takes precedence and a code from section 2 is not assigned. An excisional biopsy is coded to a “partial excision” at the appropriate anatomy site (see also the standard entitled Selection of Interventions to Code From Section 2 and 3).

Example: Ms. K is brought into hospital for a lumpectomy of her left breast. A sentinel node biopsy is performed followed by an axillary node dissection.

1.YM.87.^^ Excision partial, breast
1.MD.89.LA Excision total, lymph node(s), axillary, using open approach
2.MD.71.LA Biopsy, axillary lymph nodes, using open approach (optional)

Location attribute: SN

Rationale: When a biopsy and a therapeutic intervention are performed at the same site, during the same operative episode, a code for the biopsy is not mandatory. The sentinel node biopsy may be coded to meet facility data requirements.

Example: A frozen section of a biopsy of thyroid, performed on this patient revealed malignancy and a total thyroidectomy was performed.

1.FU.89.^^ Excision total, thyroid gland

Rationale: When a biopsy and a therapeutic ablative intervention are performed at the same site, during the same operative episode, a code for the biopsy is not mandatory.

Example: A trauma victim is taken to the operating room for an explorative laparotomy. A ruptured spleen is identified upon opening the abdominal cavity. A total splenectomy is performed.

1.OB.89.LA Excision total, spleen, using open [abdominal] approach

Rationale: When the planned intervention was a diagnostic one but was subsequently changed to a therapeutic intervention, only the therapeutic component of the procedure is coded.

Example: Patient is experiencing severe shortness of breath. A CAT scan of the chest reveals significant pleural effusion. A pleurocentesis is performed and the fluid is sent to pathology for analysis. Pathology reported a malignant pleural effusion.

1.GV.52.^^ Drainage, pleura

Rationale: Aspiration of fluids from a body cavity may have both a diagnostic and a therapeutic value. Procedures such as pleurocentesis are coded to the therapeutic intervention of “drainage”.
Classify incisional biopsies in Section 2 to the generic intervention “Biopsy” at the appropriate anatomy site. Incisional biopsies involve removal of a tissue sample for diagnostic purposes only.

**Example:** Mr. H. is being followed by a nephrologist for elevated creatinine and BUN. He is now being admitted for a renal biopsy to rule out glomerulonephritis.

2.PC.71.^^ Biopsy, kidney

**Example:** Patient admitted for investigation of a suspicious lung lesion. A lung biopsy is done by percutaneous needle aspiration.

2.GT.71.HA Biopsy, lung, using percutaneous (needle) approach

See also the coding standard entitled *Endoscopic Interventions*.

### Control of Bleeding

**In effect 2002, amended 2006**

When documentation indicates an intervention is performed for “control of bleeding” or “control of hemorrhage”, assign 1.^^.13.^^ *Control of bleeding* for that anatomy site, unless otherwise indicated by the rubric excludes notes in CCI.

Control of bleeding can be classified to an intervention other than 1.^^.13.^^ *Control of bleeding* in CCI, depending upon:

- The anatomy site;
- The technique used to control the bleeding;
- The invasiveness of the approach into the anatomy site;
- Whether or not the bleeding is as a result of a damaged artery/vein or within a solid organ.

It is important to remember that each anatomy site is *not* treated in exactly the same way in regards to control of bleeding. It is essential to follow the includes/excludes notes in CCI in order to determine the correct rubric for this intervention.

Medical technology has enabled new, less invasive methods to be used to control bleeding within the body. In particular, the use of percutaneous transluminal (arterial) occlusion of vessels with either coils or inert synthetic substances such as gelfoam and microspheres, has radically lessened the risk of surgery by avoiding more open, invasive approaches. These procedures are often performed by interventional radiologists in a diagnostic imaging suite.

**Example:** During his hospital admission, Mr. Y required control of an episode of intractable epistaxis. A transarterial embolization of the ethmoid artery was accomplished using microspheres.

1.ET.13.GQ-W0 Control of bleeding, nose using percutaneous [transarterial] approach and other synthetic material [e.g. gelfoam, microspheres, polystyrene, polyvinyl alcohol]
**Example:** During his hospital admission, Mr. Y required control of an episode of intractable epistaxis. This was accomplished with the clipping of the ethmoid artery via a transantral open approach.

1.JX.51.LA-FF  
Mandatory attribute: 0  
**Rationale:** The excludes note at the rubric 1.ET.13.^^ directs the coder to 1.JX.51 for this intervention.

When a blood vessel outside of an organ has been transected and is being repaired to control hemorrhage, code it to Repair (80) of the blood vessel.

**Example:** A stabbing victim has surgery to control internal bleeding caused by a transected hepatic artery, which is repaired with simple suturing through a laparotomy approach.

1.KE.80.LA  
**Rationale:** When a solid organ is damaged and is bleeding from within, or the bleeding is due to internal pathology, assign 1.^^13.^^ Control of the bleeding, by organ anatomy site.

**Example:** A stabbing victim has surgery to control internal bleeding caused by a transected hepatic artery, which is repaired with simple suturing through a laparotomy approach.

1.OA.13.LA-W3  
**Rationale:** Some organs are only ever “repaired” to control bleeding. In order not to duplicate categories in CCI, there are no “Repair: 80” interventions available for the tonsil/adenoid, thyroid, spleen, and liver anatomy sites. The repair of these organs is included in intervention (13) Control of bleeding.

Mrs. M was admitted for uterine embolization for control of heavy uterine bleeding due to fibroids. This was accomplished via uterine artery embolization with coils.

1.RM.13.GQ-GE  
**Rationale:** Omit code for control of bleeding. Repair of skin is more invasive than cautery of the bleeding points; only the repair is coded.

**Example:** A patient with a bleeding laceration of the skin of his forehead had the bleeding controlled via cauterization only, with light dressing applied.

1.YB.59.JA-GX  
**Rationale:** When control of bleeding is done to a skin site via destruction of tissue, code that intervention to 1.^^. 59.^^ Destruction, skin by site. Omit the code when the control of bleeding is part of a more invasive procedure.

**Example:** A patient with a bleeding laceration of the skin of the forehead had the bleeding points cauterized prior to suturing of the laceration.

1.YB.80.LA  
**Rationale:** When a blood vessel outside of an organ has been transected and is being repaired to control hemorrhage, code it to Repair (80) of the blood vessel.
Destruction or Excision of Aberrant/Ectopic Tissue

Classify the excision or destruction of aberrant (or ectopic) tissue of a gland or an organ to the anatomy site of origin even though the tissue is found outside the site of origin and at a distance from it.

The most common types of aberrant tissue found away from a gland or organ are adrenal, endometrial and parathyroid. A location attribute indicating that the tissue is aberrant “AT” may be selected to accompany the intervention code.

**Example:** Laparoscopic destruction by electrocautery of endometrial tissue found within the pelvic cavity—on ovary and intestine.

<table>
<thead>
<tr>
<th>Location</th>
<th>Destruction, uterus and surrounding structures, using endoscopic approach and device NEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>attribute: AT</td>
<td>The destruction is of endometrial tissue even though it is found on the ovary and intestine. No intervention is assigned to indicate surgery on the ovaries or intestines.</td>
</tr>
</tbody>
</table>

Debulking of a Space-Occupying Lesion

For various reasons, it is not always possible to completely excise a lesion. For example, in an intracranial lesion, the neurological defect could be so severe as to outweigh the benefits of total eradication of the neoplasm. A surgeon may, however, choose to excise or destroy the bulk of the lesion to alleviate symptoms or to facilitate subsequent radiation or chemotherapy. When an intramarginal excision or destruction of a lesion is performed it is frequently termed a “debulking” of a tumor. Excisional debulking procedures should not be confused with a biopsy procedure where the intent is to remove a small piece of the tumor for diagnostic purposes only.

Debulking procedures of intracranial lesions may be performed using an ultrasonic aspirator. Common names for this frequently used tool are “Cavitron” and Cavitronic ultrasonic aspirator [CUSA].

Following this intraleional excision, chemotherapy may be used to further retard the growth of (and shrink) the neoplasm. A planned second resection done to complete surgical management of the lesion may be flagged with a status attribute “staged”. Because this is a completion procedure, this would never be described as a “revision”. This holds true even if a person returns for a neoplasm resection at the same site years later. In such a situation, the resection would be coded without the use of an attribute at all.

If, however, an unexpected re-visitation to the original site of the resection is required to evacuate a hematoma or to débride an abscess, the status attribute “revision” may be used to describe this (see also the coding standard entitled Revised Interventions).
Classify debulking procedures to the generic CCI interventions of “destruction” or “partial excision”, by site, according to the procedure performed.

**Example:** The surgeon performed a debulking of a tracheal tumor using laser via bronchoscopy.

1.GJ.59.BA-AG Destruction, trachea, using endoscopic per orifice approach and laser

**Example:** The surgeon performed a craniotomy to debulk a cerebral neoplasm using a CUSA device.

1.AN.87.SZ-AZ Excision partial, brain, craniotomy [or craniectomy] flap technique for access, with ultrasonic aspirator

---

**Cancelled Day Surgery Interventions**

In effect 2001, amended 2002

When a patient presents to a day surgery unit for a scheduled intervention that does not occur, enter the word “CANCELLED”, optionally or as indicated by ministry of health policies, in the code section (Group 11, Field 2) of the intervention line in the abstract.

Left-justify the word “CANCELLED” so that the last character will be a blank. Use upper case letters.

**Example:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Intervention Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>20020401</td>
<td>CANCELLED</td>
</tr>
</tbody>
</table>

The above standard is applicable when absolutely nothing has been done to the patient.

Please check with your provincial/territorial department/ministry of health for any policies that might apply to the coding of cancelled day surgery procedures. This coding standard applies to day surgery cases in DAD and NACRS.

See also the coding standards *Cancelled Interventions—Diagnostic Code Selection* and *Abandoned Interventions*.
Abandoned Interventions

Abandoned interventions (Section 1 and Section 5) are procedures that cannot, for whatever reason, be completed beyond anesthetization, incision, exploration or biopsy. This may describe a situation in which an intervention is begun and due to circumstances, usually unanticipated, nothing more than an exploration and/or biopsy can be completed.

An attribute for “abandoned” does not exist in Sections 2 and 3. When a planned intervention is not carried out at all (e.g. due to equipment failure) do not assign a CCI code. When a procedure is attempted and partially completed (e.g. at least one X-ray is taken), a code may be assigned to record what was accomplished in keeping with normal practice for selection of codes from Sections 2 and 3.

A status attribute “A” may be applied to the planned intervention code only when the intervention actually performed was one of the following:

- Incision (1.^.^.70)
- Inspection (2.^.^.70)
- Biopsy (2.^.^.71)
- Anesthetization (1.^.^.11)

Code the incision, inspection, biopsy or anesthetization as the principal procedure. On the second line, assign a code for the planned intervention with status attribute “A”.

Example: The intended intervention was to excise the large intestine for a malignancy, but at laparotomy, it was discovered that the neoplasm was so extensive that removal was impossible. The surgeon simply conducted an inspection and then closed the abdomen without attempting the colon resection.

2.OT.70.^\n1.NM.89.^\n
Status
attribute: A

There are a limited number of anatomy sites where an incision into the site may be coded (e.g. 1.OT.70.LA Incision NOS, abdominal cavity).

See also the coding standard entitled Failed Interventions.
**Change of Plans During an Intervention**  
In effect 2001

When a different intervention is performed other than the one originally intended, code only the intervention that was actually performed.

The intended therapeutic intervention has no clinical significance and must not be recorded on the abstract. Coding of therapeutic interventions should reflect what was actually done.

*Example:* Ms. X was admitted with abdominal pain. Appendicitis was suspected and patient was taken to OR for an appendectomy. At laparotomy, it was clear that patient had a ruptured ovarian cyst and a normal appendix. Unilateral oophorectomy was performed.

```
1.RB.89.LA    Excision total, ovary NEC open approach
```

**Converted Interventions**  
In effect 2001

When an intervention is begun as an endoscopic approach, but is changed to an open approach, select the qualifier to indicate open approach and assign the status attribute “C” (converted).

CCI allows for the capture of information regarding interventions that are begun as endoscopic procedures, but for some reason, must be changed to an open approach. The status attribute “C” (converted) is currently available at the most common interventions where this may occur. The intervention should be coded with the appropriate qualifier designating the open approach, and followed by the use of the status attribute “C”.

*Example:* Patient is admitted for a laparoscopic cholecystectomy. While attempting to perform the cholecystectomy extensive adhesions are encountered so the intervention is switched to an open cholecystectomy.

```
1.OD.89.LA    Excision total, gall bladder, open approach
```

Status attribute: C
Failed Interventions

Classify a failed intervention in the same manner as one that is successful.

For the purposes of classification, an intervention is considered “failed” if on termination of the procedure, the expected outcome is either poor or not achieved entirely.

Example: A failed cholangiogram could mean that the common bile duct was explored but that the dye could not pass, as expected, into the duct. As a result, the expected outcome (viewing of the common bile duct using a dye) was not adequately achieved. Code the cholangiogram.
3.OE.10.WZ X-ray, bile ducts, following endoscopic (retrograde) injection of contrast (includes: endoscopic retrograde cholangiography)

Example: A failed coronary angioplasty could be one during which the balloon catheter could not be advanced beyond the stenosis in the artery. The expected dilation of the coronary artery could not be performed to the satisfaction of the surgeon. Code the coronary angioplasty.
1.IJ.50.GQ-BD Dilation, coronary arteries, using percutaneous transluminal approach and balloon dilator

Note: In such a case scenario, the responsible physician will sometimes attempt to clear the plaque or thrombus formation by injection of an antithrombotic agent (Streptokinase) directly into the coronary artery. This should be coded to 1.II.35.HA-C1 Pharmacotherapy (local), vessels of heart, percutaneous injection approach, using an antithrombotic agent. When a drug is administered via a venous approach it must be considered as systemic pharmacotherapy. When the drug is injected into an artery, it should always be coded to local pharmacotherapy.

Example: Failed closed reduction of the shoulder joint is one in which the responsible physician could not reduce the displaced bone to its normal anatomical location despite efforts in that direction. Code the closed reduction, even though the desired outcome was not achieved. Patient went on to have an open reduction and internal fixation at a later operative episode.
1.TA.73.JA Reduction, shoulder joint, using closed (external) approach

Exception: Failed trial of labor following previous caesarean section (subcategory O66.4) and failed application of vacuum extractor and forceps (subcategory O66.5) are captured by ICD-10-CA codes and do not lend themselves to this coding standard. See also the coding standard entitled Interventions Associated With Delivery.

See also the coding standard entitled Abandoned Interventions.
Revised Interventions

Describing a therapeutic intervention as a “revision” in CCI requires the use of the status attribute “R”.

A revision may be due to mechanical failure, dehiscence, poor functional outcome or any other complication of healing at the anatomy site(s) involved in the initial intervention. It does not matter what the previous surgery was; if a current problem at the old operative site exists, code the actual intervention that is now being performed and designate it with a status attribute of “R” for revision.

Apply the revision status attribute when:

- The current intervention is a complete or a partial “redo” of an intervention performed previously due to any unexpected problem; or
- The current intervention is a re-visititation to the site of a previous intervention to correct a problem—caused by the previous intervention—that was neither anticipated (planned) nor part of a staged series of operations.

**Example:**

Diagnosis: Loose left hip arthroplasty

Previous procedure: Total left hip replacement

Current intervention: Replacement of acetabular cup using a bone graft and cement

1.SQ.53.LA-PM-Q  
Status attribute: R  
(Mandatory)  
Location attribute: L  
(Mandatory)  

**Rationale:** In this example, the current intervention is a partial “redo” of an intervention performed previously.

**Example:**

Diagnosis: Pain in the right knee. Patient had right knee arthroplasty 2 years ago.

Previous procedure: Total right knee replacement

Current intervention: Total replacement of the knee prosthesis, uncemented, using a tri component prosthetic device

1.VG.53.LA-PP  
Status attribute: R  
(Mandatory)  
Location attribute: R  
(Mandatory)  
Extent attribute: 3  
(Mandatory)  

**Rationale:** In this example, the current intervention is a complete “redo” of an intervention performed previously.
**Example:** Diagnosis: Leaking left breast implant
Previous procedure: Insertion of bilateral silicone breast implants
Current intervention: Replacement of the left breast prosthesis with a saline implant using open approach and no graft required

1.YM.79.LA-PM Repair by increasing size, breast, with implantation
**Status attribute:** R
**Location attribute:** L

**Rationale:** In this example, the current intervention is a complete “redo” of an intervention performed previously.

**Example:** Recurrent incisional hernia in upper abdominal region.
Previous procedure: Herniorrhaphy (Vicryl sutures used)
Current intervention: Herniorrhaphy with mesh and autograft, open approach

1.SY.80.LA-XX-Q Repair, muscles of the chest and abdomen, using open approach and using combined sources of tissue [e.g. mesh with autograft]
**Status attribute:** R
**Location attribute:** UP
**Mandatory**

**Rationale:** In this example, the current intervention is a complete “redo” of an intervention performed previously. It is optional to code this intervention as a revision.

**Example:** One year after fixation of 2 metatarsal bones of the right foot, the patient returns for surgery due to excessive pain and migration of the pins (noted on X-ray). The surgeon elects to fuse the MTP joints because the fracture did not heal properly the first time and fixation is not a good option for this obese man. This time, wire is used and an iliac crest bone graft is harvested.

1.WJ.75.LA-KD-A Fusion, MTP bone/joints, using wire and (bone) autograft
1.SQ.58.LA-XX-A Procurement, pelvis, bone graft (from living donor)

**Status attribute:** R
**Location attribute:** R

**Rationale:** In this example, the subsequent “revision” intervention is not the same as the initial procedure and yet the subsequent intervention is still considered a “revision” because the original operative site was revisited to correct a problem that arose subsequently. It is optional to code this intervention as a revision.

**Example:** The patient had a stent placed in the distal RCA. He is readmitted a year later with stenosis (due to further progression of CAD) in the proximal RCA (the stent in the distal RCA is patent). Balloon angioplasty with stenting is performed in the proximal RCA.

1.IJ.50.GQ-OA Dilation, coronary arteries, using percutaneous transluminal approach and balloon dilator with (endovascular) stent (insertion)

**Extent Attribute:** 1

**Rationale:** No revision attribute is assigned as this not an intervention to correct a problem caused by the previous intervention. Re-disease is an anticipated event in this disease entity (see also the coding standard entitled *Complications of Coronary Artery Bypass Surgery*).
Note: For an initial intervention where the status attribute is mandatory, select 0, which equates to “not applicable”. This will indicate that the procedure is not a revision.

Do Not Apply the Revision Attribute at the Following Interventions:

- Re-inserting stents, catheters and shunt systems (1.^52)—the replacement of stents and catheters is such a routine activity that it is considered a reasonable expectation, especially when in situ long term.

- Management of any internal device (1.^54)—devices such as cardiac pacemakers, lens prosthesis, chest tube, or penile prosthesis will always involve going back to the site of the original implant. Hence, it is redundant to code these as revisions and the attribute is unavailable at this generic intervention.

- Control of bleeding using local application of antihemorrhagic agent, packing, diathermy or thermal device, electrocautery or external manual compression or direct compression to the site (1.^13 and not requiring re-apposition by suture, staple etc.).

- A second resection at the same anatomic site—this is usually done to take care of additional diseased tissue and must be considered a “new” resection each time it is performed.

- Any intervention on a surgically created site, (i.e. anatomic sites OW Surgically Constructed Sites in Digestive and Biliary Tract, PV Surgically Created Sites in Urinary Tract and KY Artery with Vein) as these are always, by nature, revisions in themselves and attribute “R” is not available.

Diagnostic interventions such as biopsies that are repeated to discover if any new pathology has returned to a site or inspections with no further intervention (e.g. a post-operative exploratory laparoscopy) are not be “revisions” because they result in no real definitive change to the previous intervention at that anatomy site.

A Staged Intervention Versus Revision of an Intervention

Staged procedures are planned whereas revisions are generally unplanned. Revisions represent an unexpected problem requiring a complete or partial “redo”. Staged interventions involve a complex course of treatment planned right from the onset.

Apply the status attribute “S” to all (initial and subsequent) surgical interventions that are part of the complex course of treatment. Currently capturing this attribute is optional, but facilities may elect to code this based on their data needs.

Example: A child who recently had her cleft palate repaired is admitted to undergo a secondary repair to her palate because the primary closure was inadequate.

1.FB.86.LA-XX-E Closure, fistula, hard palate, using local flap

Status attribute: R (optional)
Example: Another child with a cleft face anomaly has had the major portion of her face repaired but is now presenting for cleft palate repair.

1.FB.86.LA-XX-E Closure, fistula, hard palate, using local flap
Status attribute: S
(optional)

Note: At times it may be difficult to tell whether a second procedure is a revision or part of a planned series of steps (stages) to reach the desired outcome. When in doubt, the decision to use the revision attribute should be discussed with the surgeon.

Endoscopic Interventions

Endoscopic interventions are widely performed and may be either diagnostic or therapeutic in their intent.

When the intent of an endoscopy is diagnostic only, classify the intervention to “Inspection” of the anatomical site.

Code inspections to the furthest site visualized through the endoscope.

Example: Esophagogastroduodenoscopy (EGD) done for screening.

2.NK.70.BA Inspection, small intestine using endoscopic per orifice approach (or via stoma)

When a biopsy and an inspection are performed at the same anatomical site, code only the biopsy.

Example: Colonoscopy with biopsy of lesion in transverse colon.

2.NM.71.BA Biopsy, large intestine using endoscopic per orifice approach (or via stoma)

When an inspection goes beyond the site of the biopsy, code both the biopsy and the inspection, sequencing the biopsy first.

Example: Esophagogastroduodenoscopy (EGD) with biopsy of stomach lesion.

2.NF.71.BA Biopsy, stomach using endoscopic per orifice approach (or via stoma)
2.NK.70.BA Inspection, small intestine using endoscopic per orifice approach (or via stoma)
When the endoscopic intervention has both diagnostic and therapeutic components, code only the therapeutic intervention.

**Example:**
Colonoscopy with polypectomy of large intestine.

1. NM.87.BA  Excision partial, large intestine endoscopic per orifice approach, simple excisional technique.

When two separate anatomic sites are biopsied at one operative episode, sequence the biopsy of the deepest site first.

**Example:**
Esophagogastroduodenoscopy (EGD) with biopsy of stomach lesion and biopsy of a duodenal lesion.

2. NK.71.BA  Biopsy, small intestine using endoscopic per orifice approach (or via stoma)
2. NF.71.BA  Biopsy, stomach using endoscopic per orifice approach (or via stoma)

See also the coding standard entitled *Combined Diagnostic and Therapeutic Interventions*.

### Diagnostic Imaging Interventions

**In effect 2001, amended 2005, 2006**

**Code diagnostic imaging studies performed in conjunction with therapeutic interventions as required to meet facility and or provincial/territory requirements.**

When these studies are coded, note the option to select the status attribute “I”, for intraoperative, where available. As this attribute is optional at this time, facilities are free to define its use as required to meet internal reporting needs.

**Example:**
Open cholecystectomy with intra-operative cholangiogram.

1. OD.89.^^  Excision total, gall bladder
3. OE.10.^^  X-ray, bile ducts

**Status attribute:** I
(optional)

**Example:**
Patient has a cervical punch biopsy done via per orifice approach. In addition, a coloscope was used to visualize the operative area.

2. RN.71.CQ  Biopsy, cervix using per orifice needle approach
3. RZ.94.ZA  Imaging intervention NEC, female genital tract NEC using microscope [colposcopy] (OPTIONAL)

**Rationale:**
A colposcopy is an image assistance intervention (operating microscope) and not an intervention approach. When a therapeutic intervention is performed using a colroscope intra-operatively, this is a diagnostic imaging intervention and is optional to code.
Exception: It is mandatory to code coronary angiograms (3.IP.10.^^) when performed with any therapeutic intervention.

The 2006 Case Mix Groups will not rely entirely on 3.IP.10.^^ for grouping cardiac catheterization procedures as cardiac therapeutic interventions with a percutaneous transluminal approach (GQ in the approach field) will also be factored into the methodology. However, there is significant interest at all governmental levels in all aspects of cardiac catheterization services and it is only at 3.IP.10.^^ that right versus left catheterization can be identified. It is important, however, for analysts and researchers to note that the presence of both 3.IP.10.^^ and a coronary intervention with “GQ” as the operative approach on an abstract, may or may not be indicative of two cardiac catheterization procedures. When performed at the same operative episode, it is indicative of one cardiac catheterization procedure.

Example: Patient had a coronary angioplasty with balloon dilation of one artery and coronary arteriography performed via left heart catheterization.

1.IJ.50.GQ-BD Dilation, coronary arteries using percutaneous transluminal approach and balloon dilator

3.IP.10.VX X-ray, heart with coronary arteries via left heart catheterization with fluoroscopy using (retrograde) percutaneous intra arterial approach

Note: CCI provides combination categories in Section 3; coders are reminded to pay careful attention to the anatomic sites visualized during imaging interventions.

Example: 3.OE.^^ Bile ducts alone

Example: 3.OJ.^^ Pancreas alone

Example: 3.OG.^^ Biliary ducts with Pancreas

See also the coding standard entitled Selection of Interventions to Code From Section 2 and 3.
Chapter I—Certain Infectious and Parasitic Diseases

**Infections**

When coding an infection and the causative organism is not known, code the infection by site.

**Example:** Mrs. B presented with abdominal pain, which was later shown to be due to a urinary tract infection.

N39.0 Urinary tract infection, site not specified

When the causative organism is known, classify the case in one of the following three ways as indicated by the classification:

1. Use the dual classification (dagger/asterisk) with a code specifying the infectious organism followed by the manifestation. Both codes must be used together to identify the infectious disease.

2. Use a combination code.

3. Use two codes, the first identifying the locally manifesting disease and the second identifying the infectious organism. The infectious agent is classified to categories B95–B97. Assignment of codes from categories B95–B97 is optional; if coded, they must be assigned diagnosis type (3).

**Example:** Ms. B was diagnosed with a candidal infection of the vulva and vagina.

B37.3 † Candidiasis of vulva and vagina

N77.1* (3) Vaginitis, vulvitis and vulvovaginitis in infectious and parasitic diseases classified elsewhere

**Rationale:** This is an example of #1 above.

**Example:** Young patient was diagnosed with streptococcal pharyngitis.

J02.0 Streptococcal pharyngitis

**Rationale:** This is an example of #2 above.

**Example:** After laboratory investigation, the patient was confirmed to have acute cystitis caused by E.coli.

N30.0 (M) Acute cystitis

B96.2 (3) Escherichia coli [E. coli] as the cause of diseases classified to other chapters

**Rationale:** This is an example of #3 above. Assignment of B96.2 is optional.

When only the organism is known and the site is not specified, classify as infection by the organism of unspecified site.

**Example:** The chart documentation only states: “Staph infection”.

A49.0 Staphylococcal infection, unspecified

See also the coding standard entitled *Drug Resistant Microorganisms*. 

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**Chapter I—Certain Infectious and Parasitic Diseases**

Infections


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N39.0 Urinary tract infection, site not specified

When the causative organism is known, classify the case in one of the following three ways as indicated by the classification:

1. Use the dual classification (dagger/asterisk) with a code specifying the infectious organism followed by the manifestation. Both codes must be used together to identify the infectious disease.

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**Example:** Ms. B was diagnosed with a candidal infection of the vulva and vagina.

B37.3 † Candidiasis of vulva and vagina

N77.1* (3) Vaginitis, vulvitis and vulvovaginitis in infectious and parasitic diseases classified elsewhere

**Rationale:** This is an example of #1 above.

**Example:** Young patient was diagnosed with streptococcal pharyngitis.

J02.0 Streptococcal pharyngitis

**Rationale:** This is an example of #2 above.

**Example:** After laboratory investigation, the patient was confirmed to have acute cystitis caused by E.coli.

N30.0 (M) Acute cystitis

B96.2 (3) Escherichia coli [E. coli] as the cause of diseases classified to other chapters

**Rationale:** This is an example of #3 above. Assignment of B96.2 is optional.

When only the organism is known and the site is not specified, classify as infection by the organism of unspecified site.

**Example:** The chart documentation only states: “Staph infection”.

A49.0 Staphylococcal infection, unspecified

See also the coding standard entitled *Drug Resistant Microorganisms*. 

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Canadian Coding Standards for ICD-10-CA and CCI for 2006 49
**Drug Resistant Microorganisms**  
In effect 2003, amended 2006

| When there is documentation of a current infection due to a drug resistant organism, select a code from categories B95–B97 Bacterial, viral and other infectious agents, with diagnosis type (3) to identify the infectious agent, and another code from categories U80–U89 Bacterial agents resistant to antibiotics, with diagnosis type (3) to identify the drug to which the organism is resistant (although optional, capture of infections due to drug-resistant organisms is strongly recommended). |

*Example:* Patient has an infected hip prosthesis and laboratory tests confirmed the presence of MRSA in the wound. Patient was placed in isolation and had a consult with an infection control nurse who instituted the MRSA protocol.

- T84.53 (M), Infection and inflammatory reaction due to hip prosthesis
  - (1) or
  - (2)
- B95.6 (3) Staphylococcus aureus as the cause of diseases classified to other chapters
- U80.1 (3) Methicillin resistant agent
- Y83.1 (9) Surgical operation as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure with implant of artificial internal device
- Z29.0 (3) Isolation (optional)

**Assign Z22.30 Carrier of drug resistant microorganism, optionally, as a diagnosis type (3) to identify carriers of drug-resistant microorganisms (i.e. patients who do not have a documented current infection).**

*Example:* Patient has note on chart that he is a carrier of MRSA. No treatment or action taken.

- Z22.30 (3) Carrier of drug-resistant microorganism

For clinical information, see *Appendix A.*
Septicemia

When there is evidence in the chart of more than one positive blood culture, increase in body temperature and treatment with antibiotics, without physician documentation of septicemia, consult the physician for verification of a diagnosis of septicemia.

Assign a code for septicemia only when the physician has documented a diagnosis of septicemia. It cannot be assumed nor ruled out on the basis of laboratory values alone.

**Example:** Mrs. S was being treated in ICU for pneumonia and staphylococcus aureus septicemia.

- A41.0† (M) Septicemia due to Staphylococcus aureus
- J17.0* (3) Pneumonia in bacterial diseases classified elsewhere

**Rationale:** The physician has documented septicemia. Note the Alphabetic Index look-up for pneumonia in septicemia.

**Note:** Asterisk codes can be assigned either a diagnosis type (3) or (6) based on individual case scenarios. See also the coding standard entitled *Diagnosis Typing Definitions*.

When a patient has septicemia classified to any of the following:

- O03–O07 Pregnancy with abortive outcome
- O08.0 Following abortion and ectopic and molar pregnancy
- O75.3– Other infection during labor
- O85.– Puerperal sepsis
- T80.2 Infections following infusion, transfusions and therapeutic injection
- T81.4 Infection following a procedure, not elsewhere classified
- T88.0 Infection following immunization

Assign the appropriate code from the list above as a significant diagnosis type and assign an additional code from categories A40.– Streptococcal septicemia, or A41.– Other septicemia, optionally, as a diagnosis type (3), to indicate the organism. Assign an external cause code from categories Y60–Y89 when applicable.

**Example:** Patient developed post-operative E. coli septicemia following total colectomy.

- T81.4 (2) Infection following a procedure, not elsewhere classified
- A41.50 (3) Septicemia due to Escherichia coli [E.Coli]
- Y83.6 (9) Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure, removal of other organ (partial) (total).

When more than one causative organism is documented for septicemia, assign a code for each.

**Example:** Patient has septicemia documented as due to E. coli and staphylococcus bacteria.

- A41.50 Septicemia due to Escherichia coli [E.coli]
- A41.2 Septicemia due to unspecified staphylococcus

See also the coding standard entitled *Confirmed Sepsis and Risk of Septicemia in the Neonate.*
### Human Immunodeficiency Virus (HIV) Disease


Assign B24 Human immunodeficiency virus [HIV] disease as the MRDx on admissions for AIDS-related reasons.

Assign a code for the manifestation being treated and sequence it in the second position immediately following B24. Assign diagnosis type (1) to the first listed manifestation.

Assign at least one manifestation of AIDS as a diagnosis type (1). Code other manifestations, optionally, as a diagnosis type (3) when they are not treated during the current episode of care.

**Example:**
Patient with AIDS admitted for treatment of Kaposi’s sarcoma of the soft palate. Patient also has lymphoma, which is not actively treated at this admission.

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>B24</td>
<td>(M)</td>
<td>Human immunodeficiency virus [HIV] disease</td>
</tr>
<tr>
<td>C46.2</td>
<td>(1)</td>
<td>Kaposi’s sarcoma of palate</td>
</tr>
<tr>
<td>C85.9</td>
<td>(3)</td>
<td>Non-Hodgkin’s lymphoma, unspecified type</td>
</tr>
</tbody>
</table>

**Exception:** When the reason for hospitalization is F02.4* Dementia in human immunodeficiency virus [HIV], a dagger and asterisk convention applies. Record B24 Human immunodeficiency virus [HIV] disease as the MRDx followed by F03 Unspecified dementia as a diagnosis type (1) and F02.4* Dementia in human immunodeficiency virus [HIV], as a diagnosis type (3). (This is an interim measure until release of new grouper methodology.)

**Example:**
Patient admitted due to severe AIDS related dementia. Patient also has Kaposi’s sarcoma of the skin, which was not treated during this admission.

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>B24</td>
<td>(M)</td>
<td>Human immunodeficiency virus [HIV] disease</td>
</tr>
<tr>
<td>F03</td>
<td>(1)</td>
<td>Unspecified dementia</td>
</tr>
<tr>
<td>F02.4*</td>
<td>(3)</td>
<td>Dementia in human immunodeficiency virus [HIV]</td>
</tr>
<tr>
<td>C46.0</td>
<td>(3)</td>
<td>Kaposi’s sarcoma of skin</td>
</tr>
</tbody>
</table>

When the diagnosis is recorded as HIV Positive and there is documentation of an indicator disease of AIDS (as listed below), classify the case to B24 Human immunodeficiency virus [HIV] disease.
National Surveillance, Case Definition for Acquired Immunodeficiency Syndrome (AIDS), Indicator Diseases for Adults and Adolescents ≥ 15 Years of Age

Bacterial pneumonia (recurrent)
Candidiasis (bronchi, trachea or lungs)
Candidiasis (esophageal)
Cervical cancer (invasive)
Coccidioidomycosis (disseminated or extrapulmonary)
Cryptococcosis (extrapulmonary)
Cryptosporidiosis chronic intestinal (> 1 month duration)
Cytomegalovirus diseases (other than in liver, spleen or nodes)
Cytomegalovirus retinitis (with loss of vision)
Encephalopathy, HIV-related (dementia)
Herpes simplex: chronic ulcer(s) (> 1 month duration) or bronchitis, pneumonitis or esophagitis
Histoplasmosis (disseminated or extrapulmonary)
Isosporiasis, chronic intestinal (> 1 month duration)
Kaposi’s sarcoma
Lymphoma, Burkitt’s (or equivalent term)
Lymphoma, immunoblastic (or equivalent term)
Lymphoma (primary in brain)
Mycobacterium avium complex or Mycobacterium kansasii (disseminated or extrapulmonary)
Mycobacterium of other species or unidentified species
Mycobacterium tuberculosis (disseminated or extrapulmonary)
Mycobacterium tuberculosis (pulmonary)
Pneumocystis carinii pneumonia
Progressive multifocal leukoencephalopathy
Salmonella septicemia (recurrent)
Toxoplasmosis of brain
Wasting syndrome due to HIV

Indicator Diseases for Pediatric Cases Only (<15 Years Old)

Bacterial infections (multiple or recurrent, excluding recurrent bacterial pneumonia)
Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia

Example: A patient with a diagnosis of “HIV Positive” is admitted for treatment of invasive carcinoma of the cervix

Rationale: According to the National Surveillance Case Definitions for AIDS, a patient who is HIV Positive and has invasive carcinoma of the cervix has AIDS

When AIDS is recorded as a diagnosis, capture, as a manifestation of AIDS, any condition classifiable to:

- Infectious and viral diseases: A00–B19, B25–B34, B99;
- Mycoses: B35–B49;
- Neoplasms: C46.- C81–C96; or

**Example:**

AIDS with Kaposi’s sarcoma of the lung  
B24 (M) Human Immunodeficiency virus [HIV] disease  
C46.71 (1) Kaposi’s sarcoma of lung  

**Example:**

AIDS with PCP pneumonia  
B24 (M) Human Immunodeficiency virus [HIV] disease  
B59† (1) Pneumocystosis  
J17.3* (3) Pneumonia in parasitic diseases  

Ensure that the following codes are not assigned for the same episode of care, as they are mutually exclusive:

- R75 Laboratory evidence of human immunodeficiency virus [HIV]  
- Z21 Asymptomatic human immunodeficiency virus [HIV] infection status  
- B24 Human immunodeficiency virus [HIV] disease  

Ensure that R75 is not assigned as the MRDx as it relates to patients who have an inconclusive HIV test.

When patients are admitted and discharged on the same day for primary prophylactic chemotherapy for HIV infection, select Z29.2 Other prophylactic chemotherapy as the MRDx with Z21 Asymptomatic human immunodeficiency virus [HIV] infection status as an additional diagnosis type (3).

**Example:**

HIV infected patient with no symptoms attends for anti-retroviral therapy on a same day basis.  
Z29.2 (M) Other prophylactic chemotherapy  
Z21 (3) Asymptomatic human immunodeficiency virus [HIV] infection status  

When a patient who has previously been identified as having AIDS presents with a condition that is unrelated to the HIV disease, assign the presenting condition as the MRDx for that admission.

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Chapter I—Certain Infectious and Parasitic Diseases

**Example:** Mr. Y suffered a Colles fracture of the right arm due to a fall on ice on a sidewalk. The patient also has active HIV disease.

- S52.500 (M) Colles’ fracture, closed
- W00 (9) Fall on same level involving ice and snow
- U98.4 (9) Place of occurrence, street and highway
- U99.9 (9) During unspecified activity (optional)
- B24 (3) Human immunodeficiency virus [HIV] disease

**Note:** Diagnosis code B24 Human Immunodeficiency virus [HIV] disease must not be recorded as a post-admit comorbidity (diagnosis type (2)).

---

**Viral Hepatitis**

In effect 2002

For clinical information, see *Appendix A.*

- Classify a diagnostic statement of “hepatitis B positive”, without any indication of an infectious process, to Z22.50 *Carrier of viral hepatitis B.*

- When a “history of Hepatitis B” is documented, clarify the diagnosis with the physician. Do not assume the patient is a carrier of Hepatitis B nor that the patient has current acute or chronic hepatitis B.

**Example:** Mr. Y’s chart indicates only that he is “hepatitis B positive”. There is no indication of an infective process.

- Z22.50 (3) Carrier of viral hepatitis B.

- When “history of hepatitis C” is documented, clarify the diagnosis with the physician. Where consultation is not possible, assign Z22.51 *Carrier of viral hepatitis C.*

- When ambiguous terms such as “hepatitis C” or “hepatitis C positive” are recorded on the chart and the patient has symptoms of hepatitis C, clarify the diagnosis with the physician to determine if the disease is in the acute or chronic stage. Where consultation is not possible, assign B18.2 *Chronic viral hepatitis C.*

- When the patient is asymptomatic and ambiguous terms such as “hepatitis C” or “hepatitis C positive” are recorded, assign Z22.51 *Carrier of viral hepatitis C.*

**Example:** Ms. C’s condition is documented as “hepatitis C”. Physician consultation regarding whether this was at an acute or chronic stage is not possible.

- B18.2 Chronic viral hepatitis C.
Chapter II—Neoplasms

Primary Neoplasm With Metastasis

When a patient is diagnosed with a primary neoplasm with metastasis, and treatment is directed equally toward both the primary and secondary sites, select the primary site as the MRDx. Assign an additional code for the secondary site as a pre-admission comorbidity diagnosis (1).

This includes lymph node metastasis excised at the same time as the primary neoplasm.

Example: Patient is diagnosed with right lower lobe lung cancer with vertebral metastasis. Chemotherapy is initiated for the primary lesion and radiotherapy sessions given to the bony metastasis.

- C34.30 (M) Malignant neoplasm of lower lobe, right bronchus or lung
- C79.5 (1) Secondary malignant neoplasm of bone and bone marrow

Ensure that codes from the range C00–D48 are never assigned post-admit comorbidity diagnosis type (2).
Multiple Independent Primary Neoplasms

When a patient is diagnosed with multiple independent primaries, code each primary neoplasm separately.

In addition, assign C97 Malignant neoplasms of independent (primary) multiple sites, optionally as a diagnosis type (3).

Example: Patient had an exploratory laparotomy in which her left ovary and right kidney were biopsied. Pathology report revealed a primary ovarian malignancy and a renal cell carcinoma of the kidney.

<table>
<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>C56.0</td>
<td>Malignant neoplasm of ovary, unilateral</td>
</tr>
<tr>
<td>C64</td>
<td>Malignant neoplasm of kidney, except renal pelvis</td>
</tr>
<tr>
<td>C97</td>
<td>Malignant neoplasms of independent (primary) multiple sites</td>
</tr>
</tbody>
</table>

When a patient is diagnosed with documented separate primary invasive neoplasms in the same organ, but of non-contiguous sites, code each separate primary neoplasm.

In addition, assign C97 Malignant neoplasms of independent (primary) multiple sites, optionally as a diagnosis type (3).

Example: Patient has investigation and diagnosis of transitional cell carcinoma of the posterior wall of the bladder, and a separate non-contiguous transitional cell carcinoma of the trigone of the bladder.

<table>
<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>C67.4</td>
<td>Malignant neoplasm of posterior wall of bladder</td>
</tr>
<tr>
<td>C67.0</td>
<td>Malignant neoplasm of trigone of bladder</td>
</tr>
<tr>
<td>C97</td>
<td>Malignant neoplasms of independent (primary) multiple sites</td>
</tr>
</tbody>
</table>

Example: The pathology report describes two malignant primary neoplasms of the right breast, both in the 12 o’clock position, but non-contiguous (one is superior to the other).

<table>
<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>C50.80</td>
<td>Overlapping malignant lesion of right breast</td>
</tr>
<tr>
<td>C97</td>
<td>Malignant neoplasms of independent (primary) multiple sites</td>
</tr>
</tbody>
</table>

Rationale: The fourth digit .8 has been selected because the 12 o’clock position overlaps the outer and inner quadrant. This case is not one of a contiguous neoplasm whose point of origin cannot be determined. Even though these fall to the same code, it is listed twice to describe the circumstance of two separate primaries.

When a patient has separate primary invasive neoplasms and in-situ neoplasia at separate noncontiguous locations within the same organ, assign a code for each.

Example: The patient was admitted for left mastectomy for carcinoma of the breast. The pathology report describes infiltrating duct carcinoma and noncontiguous carcinoma in situ in the 2 o’clock position.

<table>
<thead>
<tr>
<th>Code</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>C50.41</td>
<td>Malignant neoplasm of upper Outer quadrant of left breast</td>
</tr>
<tr>
<td>D05.1</td>
<td>Intraductal carcinoma in situ</td>
</tr>
</tbody>
</table>
**Secondary Neoplasms**

In effect 2001, amended 2006

<table>
<thead>
<tr>
<th>When treatment is directed toward a secondary site only, assign the secondary as the MRDx.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign an additional code, mandatory, to identify the primary site; this will either be a code from Chapter II or a code from Z85.– <em>Personal history of malignant neoplasm.</em></td>
</tr>
<tr>
<td>When the primary site is identified by a Chapter II code, assign diagnosis type according to the circumstances in the documentation.</td>
</tr>
<tr>
<td>When the primary site is identified by a code from Z85.–, assign diagnosis type (3).</td>
</tr>
</tbody>
</table>

See also the coding standard entitled *Personal and Family History of Malignant Neoplasms* and the standard entitled *Diagnosis Typing Definitions.*

**Example:** Patient with an inoperable malignant neoplasm of the sigmoid colon is admitted for aspiration with drainage tube in situ, of malignant ascites. No treatment is directed toward the colon cancer.

- C78.6 (M) Secondary malignant neoplasm of retroperitoneum and peritoneum
- C18.7 (3) Malignant neoplasm of sigmoid colon
- 1.OT.52.HA-TS Drainage, abdominal cavity using percutaneous (needle) approach and leaving drainage tube in situ

**Example:** Patient is admitted for management of metastatic neoplasia of the brain. The primary site was the breast for which the patient had a radical mastectomy five years previously.

- C79.3 (M) Secondary malignant neoplasm of brain and cerebral meninges
- Z85.3 (3) Personal history of malignant neoplasm of breast
Malignant Neoplasms Without Specification of Site  

| Restrict the use of code C80 Malignant neoplasm without specification of site to cases where documentation within the health record and query of attending physicians yields no other option. |
| Use code C80 when a diagnosis of carcinomatosis is made and the physician has not listed the metastatic sites; otherwise, code all listed metastatic sites individually. |

**Example:**  
Mrs. M was brought in complaining of severe abdominal pain. She was admitted by the general surgeon. Exploratory laparotomy revealed extensive carcinomatosis. Patient was referred to palliative care.  
C80 (M) Malignant neoplasm without specification of site

**Example:**  
Mrs. J was admitted to hospital with known malignant ascites, but the primary site has not been determined. Colonoscopy was done to seek out primary site, but the scope reveals no pathology. Malignant ascites was not treated.  
C80 (M) Malignant neoplasm without specification of site  
C78.6 (3) Secondary malignant neoplasm of retroperitoneum and peritoneum

**Example:**  
Chart documentation for Mr. K indicates primary malignancy of his sigmoid colon “with metastases”. No treatment for the metastatic lesions was provided.  
C18.7 (M) Malignant neoplasm of sigmoid colon  
C80 (3) Malignant neoplasm without specification of site  
**Rationale:** Documentation does not indicate site of metastases.
Neoplasms Arising in Lymphoid, Hematopoietic and Related Tissue

When there is documentation of more than one site of malignancy in lymphatic and hematopoietic tissues, (i.e. one in each system) code each site as a separate primary neoplasm.

**Example:** Patient admitted with multiple myeloma also determined to have developed leukemia.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C90.0</td>
<td>Multiple myeloma</td>
</tr>
<tr>
<td>C95.9</td>
<td>Leukemia, unspecified</td>
</tr>
</tbody>
</table>

When a primary of the lymphoid, hematopoietic or related tissues (categories C81–C96) are documented to have metastasized, do not assign a secondary malignancy neoplasm code.

Unlike solid tumors of other sites, neoplasms that arise in lymphatic and hematopoietic tissues do not metastasize to secondary sites. The malignant cells circulate within the lymphatic or hematopoietic circulation and may occur in other sites within these tissues, but they are considered to be part of the primary disease rather than metastatic spread.

The physician documentation may describe the extent of these malignancies using terminology such as “spread to” or “metastasis to”: however, these are included in the appropriate code from C81–C96.1

**Example:** Patient with multiple myeloma is stated to have metastatic spread to pelvis and spine.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C90.0</td>
<td>Multiple myeloma</td>
</tr>
</tbody>
</table>

**Example:** Patient with non-Hodgkin’s lymphoma is stated to have metastatic spread to the inguinal nodes.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C85.9</td>
<td>Non-Hodgkin’s lymphoma, unspecified type</td>
</tr>
</tbody>
</table>

When documentation indicates “leukemia in remission”, assign a code from categories C91.– to C95.–.

**Example:** Patient is stated to have leukemia in remission for six months.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C95.9</td>
<td>Leukemia, unspecified</td>
</tr>
</tbody>
</table>

**Rationale:** Leukemia described as “in remission” cannot be specifically identified in ICD-10-CA. “In remission” means the disease activity has abated, but the condition is still present. Diagnosis type will depend on the circumstances documented in the record.

---

Neoplasms Extending Into Adjacent Tissue

Code neoplasms to the point of origin, when documented as “invading into” or “extending into” adjacent sites.

Example: Pancreatic malignancy extending into the duodenum.
C25.9 Malignant neoplasm pancreas part unspecified

Neoplasms of Ectopic Tissue

Code neoplasms of ectopic or aberrant tissue to anatomy site of origin.

Example: A 54-year-old woman presents with evidence of an anterior mediastinal mass suspicious for parathyroid adenoma. She was taken to the OR for removal of the mass by a partial sternotomy. Pathology Report diagnosis states ectopic nodular parathyroid adenoma
D35.1 (M) Benign neoplasm of parathyroid gland
1.FV.87.PZ Excision partial, parathyroid gland, open substernal approach, using device NEC
Location attribute: AT (mandatory)
Rationale: Although the lesion was in the mediastinum, it is of parathyroid tissue and classified as a benign lesion of the parathyroid. The removal of the lesion is also classified to the organ of origin. See also the coding standard entitled Destruction or Excision of Aberrant/Ectopic Tissue.
Neoplasms With Overlapping Boundaries (Contiguous Sites)

Classify a neoplasm that overlaps two or more contiguous sites within a 3-digit category and whose point of origin cannot be determined to the subcategory .8 (overlapping lesion), unless the combination is specifically indexed elsewhere.

Example: Patient has a carcinoma of the tip and ventral surface of the tongue, no point of origin determined or documented.
C02.8 Overlapping malignant lesion of tongue

Example: Patient has a carcinoma of the tip of the tongue documented as “with invasion” or “spreading to” the ventral surface of the tongue.
C02.1 Malignant neoplasm of border of tongue
Rationale: The point of origin is known, and stated as the tip of the tongue.

Example: Patient has a malignant neoplasm which overlaps the junction of the esophagus and stomach.
C16.0 Malignant neoplasm of cardia
Includes: gastro-esophageal junction
Rationale: This site of overlap (of sites next to each other) is indexed separately.

Classify a neoplasm that overlaps two or more contiguous sites of separate 3-digit category and whose point of origin cannot be determined to a distinct single code listed at Note #5 at the beginning of Chapter II.

Example: Patient has a malignant neoplasm, which is stated as overlapping the pylorus and duodenum.
C26.8 Overlapping malignant lesion of digestive system
Rationale: Malignant neoplasm of the pylorus is coded to C16.4 and malignant neoplasm of the duodenum is coded to C17.0. Since the neoplasm overlaps the two sites otherwise classified at different 3-character categories, and its point of origin cannot be determined, the code for overlapping lesion of the digestive tract is assigned. Coders are directed to the notes at the beginning of Chapter II—Neoplasms, where they will find a list of applicable .8 categories.
Chapter II—Neoplasms

Admissions Following Diagnosis of Cancer  
In effect 2001, amended 2006

| When a patient is admitted for definitive surgery to remove tissue from the site of a neoplasm that has previously been excised, assign a code for the primary malignancy as the MRDx. This is the case even when the pathology report for the current episode is negative for malignancy. |

**Example:**  
Mrs. X had a skin lesion removed from her shoulder area as an outpatient. The pathology report showed malignant melanoma. Patient was then admitted for wider excision and skin grafting. Pathology was negative for malignancy.  
C43.6 (M)  
Malignant melanoma of upper limb, including shoulder  
Rationale:  
Definitive surgery includes removal of a neoplasm and/or surrounding tissue. As in this example, the physician most often documents the diagnosis as malignancy in accordance with the initial biopsy or excision. The coder should accept this diagnosis, even though the pathology report shows no malignancy remaining, since the surgery is part of the treatment plan for the malignant condition.
Complications of Malignant Disease

When a patient is admitted for treatment of a specific complication of the malignancy, without treatment directed towards the malignancy itself, code the complication as the MRDx. Code the malignancy, optionally, as a diagnosis type (3).

Example: Mr. Q was admitted for treatment of his streptococcal septicemia. He has chronic myeloid leukemia.
A40.9 (M) Streptococcal septicemia, unspecified
C92.1 (3) Chronic myeloid leukemia

Exception: When the complication is captured as an asterisk code, assign the malignancy as the MRDx and the asterisk code as a diagnosis type (6).

Example: Patient has primary adenocarcinoma of the lung and is admitted for management of resulting anemia.
C34.99† (M) Malignant neoplasm bronchus or lung, unspecified, unspecified side
D63.0 * (6) Anemia in neoplastic disease

When a patient is admitted for management of a side effect of cancer treatment, code the side effect as the MRDx. Code the malignancy as a diagnosis type (3).

Example: Patient is admitted for treatment of chemotherapy induced neutropenia. The patient is receiving a combination of chemotherapy agents, as an outpatient, for treatment of cancer of the left lower lobe of the lung.
D70.0 (M) Neutropenia
Y43.3 (9) Drugs, medicaments and biological substances causing adverse effects in therapeutic use; other antineoplastic drugs
C34.31 (3) Malignant neoplasm of lower lobe, left bronchus or lung

Assign diagnosis type (2), post-admission comorbidity, to side effects of chemotherapy arising during a patient’s admission for diagnosis and initial treatment for cancer, when the condition satisfies the criteria for post-admit comorbidity.

Example: Mr. J, a patient newly diagnosed with acute lymphoblastic leukemia, has his initial chemotherapy treatment while in hospital. He experiences significant nausea and vomiting requiring IV therapy.
C91.0 (M) Acute lymphoblastic leukemia
R11.3 (2) Nausea with vomiting
Y43.3 (9) Drugs, medicaments and biological substances causing adverse effects in therapeutic use; other antineoplastic drugs
Z51.1 (3) Chemotherapy session for neoplasm (optional)

See also the coding standard entitled Adverse Reactions Versus Poisonings.
Use the following criteria to determine when to assign a code from the category Z85.– **Personal history of malignant neoplasm:**

- The malignancy was a primary (never a secondary) neoplasm, and one of the following:
  - The malignancy has been completely eradicated or excised.
  - There is no further treatment being directed to the primary site.
  - There is no evidence of any remaining malignancy at the primary site.
  - There is a recurrence at the same site that was previously excised.

See also the coding standard entitled **Secondary Neoplasms.**

**Example:** A patient who had a previous radical prostatectomy presents for management of bone metastases.

- C79.5 (M) Secondary malignant neoplasm of bone and bone marrow
- Z85.4 (3) Personal history of malignant neoplasm of genital organs

See also the coding standard entitled **Admission for Follow-up Examination After Completed Treatment for Malignant Neoplasm.**

Ensure that codes in category Z80.– **Family history of malignant neoplasm** are never used as the MRDx. Assign a code from this category, optionally, as diagnosis type (3), to denote a reason for an examination or prophylactic surgery.

**Example:** Patient has an extremely strong maternal family history for breast malignancy. She is admitted for prophylactic bilateral simple total mastectomies.

- Z40.00 (M) Prophylactic removal of breast
- Z80.3 (3) Family history of malignant neoplasm of breast
- 1.YM.89.^^ Excision total, breast (approach coded with qualifiers)

**Location:** B
(Mandatory)

See also the coding standard entitled **Prophylactic Organ Removal.**
Chapter II—Neoplasms

Admission for Follow-up Examination After Completed Treatment for Malignant Neoplasm

When a patient with a history of a malignancy presents for a follow-up examination, and there is no evidence of recurrence, assign a code from the category Z08.– Follow-up examination after treatment for malignant neoplasm as the MRDx.

Example: Bladder cancer re-checks: 3 months post fulguration of superficial tumors. No cystoscopic evidence of recurrence.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z08.0</td>
<td>Follow-up examination after surgery for malignant neoplasm</td>
</tr>
<tr>
<td>Z85.5</td>
<td>Personal history of malignant neoplasm of urinary tract</td>
</tr>
<tr>
<td>2,PM.70.BA</td>
<td>Inspection, bladder, using endoscopic per orifice approach</td>
</tr>
</tbody>
</table>

Rationale: Periodic follow-up examinations are carried out to determine if there is any recurrence to the primary site or if there has been an occurrence of metastasis.

Example: Patient admitted for follow-up cystoscopy. Bladder cancer previously treated by radiation therapy. Trabeculation of bladder was noted but no recurrence of the malignancy.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z08.1</td>
<td>Follow-up examination after radiotherapy for malignant neoplasm</td>
</tr>
<tr>
<td>Z85.5</td>
<td>Personal history of malignant neoplasm of urinary tract</td>
</tr>
<tr>
<td>N32.8</td>
<td>Other specified disorders of the bladder (optional)</td>
</tr>
<tr>
<td>2,PM.70.BA</td>
<td>Inspection, bladder, using endoscopic per orifice approach</td>
</tr>
</tbody>
</table>

Example: Patient admitted for follow-up cystoscopy. Bladder cancer previously treated by radiation therapy. Recurrence of the bladder malignancy was detected and fulgurated.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C67.9</td>
<td>Malignant neoplasm of bladder, unspecified</td>
</tr>
<tr>
<td>Z85.5</td>
<td>Personal history of malignant neoplasm of urinary tract</td>
</tr>
<tr>
<td>Z08.1</td>
<td>Follow-up examination after radiotherapy for malignant neoplasm (Optional code)</td>
</tr>
<tr>
<td>1,PM.59.BA-GX</td>
<td>Destruction, bladder NEC, using device NEC, endoscopic per orifice approach</td>
</tr>
</tbody>
</table>

Rationale: As recurrence was noted, the malignancy is recorded as the MRDx. Assignment of Z08.1 is optional.

See also the coding standard entitled Personal and Family History of Malignant Neoplasms.
**Prophylactic Organ Removal**  
In effect 2001, amended 2006

Select a code from the category Z40.– *Prophylactic surgery* when a patient is admitted for surgical removal of non-diseased organs or tissue related to risk of, or treatment for, malignancy.

**Example:** A patient is admitted for prophylactic bilateral orchidectomy due to advanced cancer of the prostate.

- Z40.08 (M) Prophylactic removal of other organ
- C61 (3) Malignant neoplasm of prostate
- 1.QM.89.^^ Excision total, testis (approach coded with qualifiers)

**Location:** B
(Mandatory)

**Example:** A patient with a personal history of breast cancer, left breast (no residual disease) elects to have a right total simple mastectomy to remove the non-diseased breast.

- Z40.00 (M) Prophylactic removal of breast
- Z85.3 (3) Personal history of malignant neoplasm of breast
- 1.YM.89.^^ Excision total, breast (approach coded with qualifiers)

**Location:** R
(Mandatory)

See also the coding standard entitled *Personal and Family History of Malignant Neoplasms.*
Recurrent Malignancies

Use a code from categories C00–C75 when a primary malignancy, eradicated from the same organ or tissue, has recurred. Assign an additional code from category Z85.– **Personal history of malignant neoplasm** as a diagnosis type (3).

**Example:**
Patient was diagnosed with infiltrating ductal carcinoma of the right breast and underwent a lumpectomy with removal of the entire lesion. A year later, she came in with a nodule in the same breast at the site of the previous lumpectomy. Needle biopsy showed infiltrating ductal carcinoma. This is a recurrence of the primary malignancy.

C50.90 (M) Malignant neoplasm of right breast, part unspecified
Z85.3 (3) Personal history of malignant neoplasm of breast

**Example:**
Patient was diagnosed with infiltrating ductal carcinoma of the right breast and underwent a mastectomy with removal of the entire breast. A year later she came in with a nodule at the site of the previous mastectomy. Needle biopsy showed infiltrating ductal carcinoma. Physician documentation or pathology report stated that there was recurrence of the infiltrating ductal carcinoma in the right chest wall (after the mastectomy).

C50.90 (M) Malignant neoplasm of right breast, part unspecified
Z85.3 (3) Personal history of malignant neoplasm of breast

**Example:**
Patient was diagnosed with infiltrating ductal carcinoma of the right breast and underwent a lumpectomy with removal of the entire lesion. A year later she came in with a nodule in the same breast at the site of the previous lumpectomy. Physician documentation or pathology report stated metastatic infiltrating ductal carcinoma in skin of lumpectomy scar.

C79.2 (M) Secondary malignant neoplasm of skin
Z85.3 (3) Personal history of malignant neoplasm of breast

**Example:**
A patient with a primary malignant neoplasm of the brain underwent a debulking procedure. A year later he returns to hospital for further debulking.

C71.9 (M) Malignant neoplasm of brain unspecified

**Rationale:**
A debulking procedure does not eradicate the lesion; malignant tissue would have been left at the site and continued to grow. This is not a recurrent malignancy and Z85.– is not assigned.

See also the coding standards entitled *Personal and Family History of Malignant Neoplasms* and *Debulking of a Space-Occupying Lesion.*
Admissions for Chemotherapy, Brachytherapy and/or Radiation Therapy—Treatment for Malignancy

In effect 2001, amended 2006

When a patient is admitted solely for chemotherapy or radiation therapy, select a code from either:

- Chemotherapy, to Z51.1 Chemotherapy session for neoplasm; or
- Radiation therapy, to Z51.0 Radiotherapy session

Assign an additional code for the malignant neoplasm as a diagnosis type (3).

See also the coding standard entitled Coding Ambulatory Care Visits for Chemotherapy/ Radiation Therapy.

Example: Admission for chemotherapy session for active left main bronchus malignancy.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z51.1</td>
<td>(M) Chemotherapy session for neoplasm</td>
<td></td>
</tr>
<tr>
<td>C34.01</td>
<td>(3) Malignant neoplasm of left main bronchus</td>
<td></td>
</tr>
</tbody>
</table>

Assign also the CCI code for chemotherapy.

Example: Admission for radiation therapy session for breast cancer previously treated with modified radical mastectomy.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z51.0</td>
<td>(M) Radiotherapy session</td>
<td></td>
</tr>
<tr>
<td>C50.99</td>
<td>(3) Malignant neoplasm of breast, part unspecified, unspecified side</td>
<td></td>
</tr>
</tbody>
</table>

Assign also the CCI code for chemotherapy.

When chemotherapy or radiation therapy is given during the admission in which the definitive surgical treatment occurs, code the malignancy as the MRDx. Assign a code from category Z51 Other medical care, optionally, as a diagnosis type (3).

Example: Patient with cancer of the right lower lobe of the lung was admitted for lobectomy. He was begun on chemotherapy before discharge.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>C34.30</td>
<td>(M) Malignant neoplasm of lower lobe, right bronchus or lung</td>
<td></td>
</tr>
<tr>
<td>Z51.1</td>
<td>(3) Chemotherapy session for neoplasm (optional)</td>
<td></td>
</tr>
</tbody>
</table>

Assign also the CCI code for chemotherapy.

Assign a CCI code, mandatory, for any radiotherapy or chemotherapy interventions.

These procedures are in the Flagged Intervention list for Inpatients (see also the coding standard entitled Selection of Interventions to Code From Section 1).

For grouping purposes, these procedures need only be assigned once. Facilities may choose to code multiple episodes as appropriate for internal reporting requirements.
### Related Interventions

The codes used for chemotherapy interventions are:

- **1.ZZ.35.\textsuperscript{**}.M\textsuperscript{*} Pharmacotherapy, total body (with the drug identified by the agent qualifiers beginning with M) for systemic chemotherapy
- **1.^{**}.35.\textsuperscript{**}.M\textsuperscript{*} Pharmacotherapy, local for local pharmacotherapy of particular anatomical sites (with the appropriate anatomy alpha characters in the second field and the drug identified by the agent qualifiers beginning with M)

**Example:** Debulking of malignant neoplasm of temporal lobe (burr hole access and using laser) with instillation of antineoplastic chemotherapy into the cerebral meninges.

- C71.2 (M) Malignant neoplasm of temporal lobe
- Z51.1 (3) Chemotherapy session for neoplasm (optional)
- 1.AN.87.SE-AG Excision partial, brain, with laser, Burr hole technique for access
- 1.AA.35.HA-M0 Pharmacotherapy, local, meninges and dura mater of brain, using antineoplastic agent NEC, percutaneous [needle] approach

**Example:** A patient with a malignant neoplasm of the temporal lobe is admitted to the outpatient clinic for an intravenous chemotherapy session, combination drugs.

- Z51.1 (M) Chemotherapy session for neoplasm
- C71.2 (3) Malignant neoplasm of temporal lobe
- 1.ZZ.35.HA-M9 Pharmacotherapy, total body, using combination [multiple] antineoplastic agents, percutaneous approach

The codes for radiation therapy are (as appropriate to anatomy site):

- **1.^{**}.27.JA Radiation [anatomy site] using external beam; or
- **1.^{**}.27. JX Radiation [anatomy site] using focused beam [e.g. gamma knife, cyber knife stereotactic radiosurgery].

**Example:** Patient with breast cancer receives external beam radiation therapy (any type).

- 1.YM.27.JA Radiation, breast using external beam

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When a patient is admitted for brachytherapy, assign a code for the malignant disease as the MRDx.

Assign separate codes for the preparation for brachytherapy and the administration of brachytherapy.

Sequence the administration of brachytherapy first.

---

Admissions for brachytherapy should not be confused with admissions for radiation therapy.

There are typically two distinct phases required to complete the process of brachytherapy. The first phase involves the insertion of non-radioactive applicators or conduits [e.g. hollow needles, catheters, stents, etc.] that receive or transmit the radioactive material into the body. The second phase involves the after loading of the radioactive material [e.g. seeds, pellets, wires, etc.] into the applicator or conduit. These stages may occur at the same operative episode or in separate episodes.
**Example:** Cancer of the prostate gland. Patient admitted for percutaneous transcatheter interstitial implantation of radioactive material. Brachytherapy applicator implanted at same episode.

C61 (M) Malignant neoplasm of prostate  
1.QT.26.HA Brachytherapy, prostate using percutaneous (transcatheter or trans-needle) approach  
1.QT.53.HA-EM Implantation of internal device, prostate of brachytherapy applicator using percutaneous approach  

**Rationale:** A code for malignancy is assigned as the MRDx; no Z-code is assigned. The code for brachytherapy is sequenced before the code for the preparatory procedure.

**Example:** Patient admitted for brachytherapy treatment of cancer of the uterus. Hysteroscopic approach was used to insert the brachytherapy applicator in a separate episode on day one and the sealed radiation source after-loaded on the second day.

C54.9 (M) Malignant neoplasm corpus uteri NOS  
1.RM.26.BA Brachytherapy, uterus and surrounding structures using endoscopic per orifice (hysteroscopic) approach  
1.RM.53.BA-EM Implantation of internal device, uterus and surrounding structures of brachytherapy applicator using endoscopic per orifice (hysteroscopic) approach
Therapeutic and Diagnostic Interventions Relevant to Neoplasm Coding

**Therapeutic Interventions**

Generally speaking, in the Canadian Classification of Interventions the therapeutic interventions performed on body sites are hierarchical in nature and this means that the higher the number in the third field (intervention), the more extensive or complex the intervention. The destruction and excisional interventions are of particular relevance in neoplasm treatment.

**When no body tissue is removed, only destroyed, select a code from intervention 1.^^.59.^^**

*Destruction, by site.*

Rubric 1.^^.59.^^ *Destruction, body site* includes ablation of tissue, often using extreme heat (laser, cautery), extreme cold (cryoprobe) or chemicals (chemical cautery). There is no tissue removed, just destroyed. Sometimes debulking of a neoplasm may be done in this way if none of the actual body parts is being removed.

**Example:** Patient with malignant neoplasm of the large intestine has an endoscopic debulking of the neoplasm using a laser device.

1.NM.59.BA-AG Destruction, large intestine, using endoscopic per orifice approach and laser

**When a neoplasm is excised locally, with a margin of normal tissue, with or without grafting to the surgical defect, select a code from rubric 1.^^.87.^^**

*Excision, partial, by site.*

**Example:** Lumpectomy of the breast.

1.YM.87.LA Excision partial, breast using open approach with simple apposition of tissue

**Note:** There is no separate generic intervention for excisional biopsy in CCI. This intervention is coded as a partial excision of the anatomic site involved.

**Example:** Lumpectomy of the breast with autograft to fill in defect.

1.YM.87.LA-XX-A Excision partial, breast using open approach and full thickness autograft (to close defect)

**When a neoplasm is excised by removing an entire body part, (except amputations) with or without grafting to the surgical defect, select a code from rubric 1.^^.89.^^**

*Excision total, body site.*

**Example:** Patient with breast malignancy underwent a simple total mastectomy with grafting of defect.

1.YM.89.LA-XX-A Excision total, breast with full thickness autograft
Chapter II—Neoplasms

For the four body sites Eyelid (CX), Esophagus (NA), Vulva (RW) and Breast (YM) select a code from the rubric 1.^^.88.^^. Excision, partial, with reconstruction when the intervention includes an excision not as extensive as total or radical excision but includes reconstruction and/or prosthetic implants.

**Example:** Patient with malignant neoplasm of the eyelid has a partial excision of the eyelid with a local flap reconstruction performed at the same episode.

1.CX.88.UD-XX-E Excision, partial, with reconstruction, eyelid NEC, full thickness excision of major lesion, with local flap

**Rationale:** In CCI, a radical excision does not require a total excision of a body part. It usually means organs from multiple body systems are involved in the excision. There may be partial or total excision of the multiple sites. This intervention is often used for definitive surgical treatment of large malignant neoplasms.

When an excision of tissue includes removal of adjacent body structures, with or without complex repair of the wide surgical defect, select a code from rubric 1.^^.91.^^. Excision, radical.

**Example:** A patient with osteosarcoma of the humeral head is treated with a “limb sparing” radical excision of the humerus with prosthetic implants.

1.TK.91.LA-PM Excision radical, humerus, using endoprosthesis [humeral head], no tissue used (for closure of defect)

**Rationale:** In CCI, a radical excision does not require a total excision of a body part. It usually means organs from multiple body systems are involved in the excision. There may be partial or total excision of the multiple sites. This intervention is often used for definitive surgical treatment of large malignant neoplasms.
Diagnostic Interventions

Diagnostic interventions in CCI are important in the care of patients with neoplastic disease. There are several key diagnostic procedures of which to be aware.

Select a code from rubric 2.\textsuperscript{.70}.\textsuperscript{.70} \textit{Inspection, body site}, when it is the only intervention performed.

In CCI, inspections include endoscopic, open, manual, and percutaneous transluminal inspections of the body site.

- When a biopsy is taken, the biopsy code is assigned and the inspection code is not coded.
- When an excisional biopsy is done, then Excision, partial, body site is coded and not the biopsy code.
- The endoscopy is the approach (captured via the qualifier field) for many diagnostic and therapeutic interventions.

When the intent of the intervention is to sample the tissue or neoplasm, select a code from rubric 2.\textsuperscript{.71}.\textsuperscript{.71} \textit{Biopsy, body site}. When a complete excision of the neoplasm or abnormal tissue is performed, with a margin of healthy tissue, select a code from rubric 1.\textsuperscript{.87}.\textsuperscript{.87} \textit{Excision partial, body site} (see note above re: \textit{Excisional biopsy}).

\begin{itemize}
  \item \textbf{Example:} Patient with suspicious breast mass underwent needle biopsy of the breast.
  \hspace{1cm} 2.YM.71.HA Biopsy, breast NOS using percutaneous (needle) aspiration
  \item \textbf{Example:} Patient with a suspicious mole underwent a “wide margin excisional biopsy” of the skin of the back, with suture closure.
  \hspace{1cm} 1.YS.87.LA Excision partial, skin of abdomen and trunk, open [excisional] approach with or without apposition technique [e.g. suture, glue] for closure
\end{itemize}

See also the coding standards entitled \textit{Diagnostic Imaging Interventions, Endoscopic Interventions} and \textit{Combined Diagnostic and Therapeutic Interventions}. 
Chapter IV—Endocrine, Nutritional and Metabolic Diseases

Diabetes Mellitus

Diabetes is a serious disease, which, if not controlled, can be life threatening. It is often associated with long-term complications that can affect every system and part of the body. Diabetes can contribute to eye disorders and blindness, heart disease, stroke, kidney failure, amputation, and nerve damage. It can affect pregnancy and cause birth defects, as well. Clinical advisors to CIHI have indicated that diabetes mellitus should always be captured whenever it is documented in the health record and that when it is uncontrolled, it would always significantly affect the treatment received. As such, uncontrolled diabetes should always be captured as a comorbid diagnosis type.

For clinical information, see Appendix A.

Code diabetes mellitus whenever the condition is documented by the physician.

- Assign diagnosis type according to the diagnosis typing definitions.
- Assign diagnosis type (M), (1), (W), (X) or (Y) whenever diabetes mellitus is out of control (i.e. documented as “uncontrolled” by the physician or when there is evidence of a blood glucose level greater than or equal to 14.0 mmol/L) (see also the coding standard entitled Diabetes Mellitus and Hyperglycemia).
- Apply one or more codes to a case of diabetes mellitus such that the type of diabetes (e.g. Type 1 or Type 2 Diabetes Mellitus) is always assigned to the same 3-digit category in the range E10–E14 when multiple complications of diabetes are present.
- Assign multiple diabetes codes when more than one condition classified in the diabetes subcategories (E1–.2 to E1–.71) is assessed, evaluated or treated in an episode of care.
- Ensure that E10.9, E11.9, or E14.9 are never assigned with any other code from the range E10–E14 with fourth digits 1–7.
- When the type of diabetes is not documented, seek clarification from the physician or assign to E14.– Unspecified diabetes mellitus.

**Example:** Mrs. X, a 45-year old woman known to have Type 2 diabetes mellitus, is admitted to the hospital for treatment of her diabetic nonproliferative retinopathy. She is also seen by a nephrologist to evaluate signs of diabetic nephropathy noted by her family physician. The nephrologist recommended and began appropriate treatment. She has no other known complications related to diabetes.

- E11.30† (M) Type 2 diabetes mellitus with background retinopathy
- H36.0* (6) Diabetic retinopathy
- E11.21 † (1) Type 2 diabetes mellitus with established diabetic nephropathy
- N08.3* (3) Glomerular disorders in diabetes mellitus

**Rationale:** Diagnosis typing definitions have been applied: retinopathy is the condition that meets the definition for MRDx and since it is an asterisk code, it is assigned diagnosis type (6). Diabetes with renal complications meets the criteria for diagnosis type (1) since a consultant evaluated the condition and instituted treatment. All diabetes codes are from the same 3-digit category. Multiple diabetes codes have been assigned because more than one diabetic condition classified in the diabetes subcategories has been evaluated and/or treated.
Chapter IV—Endocrine, Nutritional and Metabolic Diseases

Example: Mr. G., a 54-year old male, is admitted for a problem not related to diabetes mellitus. The physician notes that he has been a type 1 diabetic for many years and manages well on insulin.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E10.9</td>
<td>Type 1 diabetes mellitus without (mention of) complication</td>
</tr>
</tbody>
</table>

Rationale: Always assign a code for diabetes whenever documented by the physician. Diagnosis typing in this case would depend on additional circumstances documented in the record.

E10.9 stands alone; it cannot be assigned with any other code from the range E10–E14 with fourth digits 1–7.

When a “code separately” instruction is present at a diabetes code, assign an additional code when the condition is documented by the physician.

- Assign diagnosis type to the code according to the diagnosis type definitions.

When a “use additional code” instruction is present at a diabetes code, assign an additional code for the condition.

- Assign diagnosis type (6) or (3) to the code according to the diagnosis type definitions.

Exception: The “use additional code” instruction at E10–E14 with fourth character .0 does not apply to this directive (see also the coding standards entitled Hypoglycemia in Diabetes Mellitus, Coma in Diabetes Mellitus and Diabetes Mellitus as a Post-Admit Comorbidity).

The instructions “use additional code” and “code separately” are found in several places throughout ICD-10-CA with frequent reference to diabetes mellitus (see also the coding standard entitled Use Additional Code/Code Separately Instructions).

Example: Mr. B was admitted through the ER with chest pain. He was diagnosed with a transmural anterior wall myocardial infarction. He has Type 2 diabetes mellitus and known coronary artery disease, but no previous bypass surgery.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I21.0</td>
<td>Acute transmural myocardial infarction of anterior wall</td>
</tr>
<tr>
<td>I25.10</td>
<td>Atherosclerotic heart disease of native coronary artery</td>
</tr>
<tr>
<td>E11.52</td>
<td>Type 2 diabetes mellitus with certain circulatory complications</td>
</tr>
</tbody>
</table>

Rationale: At category I21, in the Tabular Listing, there is an instruction: Use additional code from category (E10–E14) with fourth and fifth digits .52 to classify any associated diabetes mellitus. At E10–E14 with fourth and fifth digits .52, there is a “code separately” instruction for I21—I22 and I25.–. These codes are assigned in addition to E11.52 and diagnosis type definitions are applied. Myocardial infarction meets the definition of MRDx in this example. Myocardial infarction and coronary artery disease are a macrovascular complication of diabetes. Diagnosis type for E11.52 will vary depending on the circumstances documented in the record.
Mr. H. F., a 54-year old patient, is admitted in congestive heart failure. He has been a Type 2 diabetic for many years on oral hypoglycemic medication. His blood sugars have been consistently on the high side and the physician noted that his diabetes was out of control.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I50.0</td>
<td>Congestive heart failure</td>
</tr>
<tr>
<td>E11.52</td>
<td>Type 2 diabetes mellitus with certain circulatory complications</td>
</tr>
</tbody>
</table>

**Rationale:** At category I50, in the Tabular Listing, there is an instruction: **Use additional code from category (E10–E14) with fourth and fifth digits .52 to classify any associated diabetes mellitus.** At E10–E14 with fourth and fifth digits .52, there is a “code separately” instruction for I50.–. I50.0 is assigned in addition to E11.52 and diagnosis type definitions are applied. Congestive heart failure meets the definition of MRDx in this example. As the Dr. has stated that the diabetes is out of control it is assigned diagnosis type (1). Congestive heart failure is a macrovascular complication of diabetes.

Mr. T. L., a 54-year old patient, is admitted for vitreous hemorrhage. The physician notes that he has been a Type 2 diabetic, well controlled, for many years.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H43.1</td>
<td>Vitreous hemorrhage</td>
</tr>
<tr>
<td>E11.33†</td>
<td>Type 2 diabetes mellitus with other retinopathy</td>
</tr>
<tr>
<td>H36.0*</td>
<td>Diabetic retinopathy</td>
</tr>
</tbody>
</table>

**Rationale:** There is no Alphabetic Index subterm for diabetes under vitreous hemorrhage. However, at H43.1 follow the instruction to use additional code from category (E10–E14) with fourth and fifth digits .33 to classify any associated diabetes mellitus. At E11.33, follow the instruction to code separately, the vitreous hemorrhage when present. The asterisk code at the code tile must also be assigned (see also the coding standard entitled Dagger/Asterisk Convention). This indicates all 3 codes are required. Diagnosis type is assigned based on the Diagnosis Typing Definitions.

Mr. CVA is 69-year old patient who suffered a cerebral infarction and was admitted. The physician noted he has been a Type 2 diabetic for many years. He was given Streptokinase infusion to clear the occlusion in the cerebral arteries to prevent any further extension of his stroke.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I63.5</td>
<td>Cerebral infarction due to unspecified occlusion or stenosis of cerebral arteries</td>
</tr>
<tr>
<td>E11.52</td>
<td>Type 2 diabetes mellitus with certain circulatory complications</td>
</tr>
</tbody>
</table>

**Rationale:** At category I63, in the Tabular Listing, there is an instruction: **Use additional code from category (E10–E14) with fourth and fifth digits .52 to classify any associated diabetes mellitus.** At E10–E14 with fourth and fifth digits .52, there is a “code separately” instruction for I60–I69. I63.5 is assigned in addition to E11.52 and diagnosis type definitions are applied. Cerebral infarction the definition of MRDx in this example. Cerebral infarction is a macrovascular complication of diabetes. Diagnosis type for E11.52 will vary depending on the circumstances documented in the record.
The Dagger/Asterisk Convention is frequently used to capture complications of diabetes mellitus (see also the coding standard entitled *Dagger/Asterisk Convention*).

**Example:** The patient is a 53-year old Type 2 diabetic with Kimmelstiel-Wilson disease. He was admitted for evaluation of his renal disease.

- E11.21† (M) Type 2 diabetes mellitus with established diabetic nephropathy
- N08.3* (6) Glomerular disorders in diabetes mellitus

**Rationale:** This is an example of the first type of dagger/asterisk convention.

**Example:** The patient was admitted for evaluation of her diabetic myasthenia gravis. The patient is a Type 2 diabetic.

- E11.40† (M) Type 2 diabetes mellitus with mononeuropathy
- G73.0* (6) Myasthenic syndromes in endocrine diseases

**Rationale:** This is an example of the second type of dagger/asterisk convention as different asterisk codes may apply.

**Example:** A patient has developed Charcot’s arthropathy due to her Type 2 diabetes and is admitted for management of the arthropathy.

- E11.60 (M) Type 2 diabetes mellitus with musculoskeletal and connective tissue complication
- M14.6* (6) Neuropathic arthropathy

**Rationale:** This is an example of the third type of dagger asterisk convention. Note that it is presented in a slightly different way as the asterisk codes are listed under a “Use additional code to identify” instruction.

---

**Classify a condition as a complication of diabetes mellitus when the Alphabetic Index lists a subterm indicating “diabetic”, “in diabetes”, or “with diabetes”.**

When no subterm is present, classify each condition separately using a code from E10–E14 with fourth digit .9 to capture the diabetes.

ICD-10 includes conditions (often termed “complications”) which occur commonly with diabetes mellitus. These conditions may or may not have been caused by the metabolic disturbance, however the presence of a cause and effect relationship does not affect the code assignment.¹

**Example:** A patient is admitted for treatment of glomerulonephritis. The physician has also listed Type 1 diabetes.

- E10.21† (M) Type 1 diabetes mellitus with established diabetic nephropathy
- N08.3* (6) Glomerular disorders in diabetes mellitus

**Rationale:** Follow the Alphabetic Index for Glomerulonephritis, in, diabetes mellitus.

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¹. Extracted from NCCH ICD-10-AM, July 2002, Standards Index, Diabetes Mellitus and Impaired Glucose Regulation.
**Example:** A patient is admitted for bypass grafting for peripheral angiopathy of the iliac artery. The patient is a Type 2 diabetic.

E11.50† (M) Type 2 diabetes mellitus with peripheral angiopathy  
I79.2* (6) Peripheral angiopathy in diseases classified elsewhere  

**Rationale:** Follow the Alphabetic Index for Angiopathy, peripheral, diabetic.

**Example:** Mrs. X was seen for an ulcer on the sole of her foot. She is a Type 1 diabetic. The ulcer was cleaned; Clioquinol 3% in zinc oil was applied. The ulcer was covered with a large hydrophilic gauze compress and a non-elastic compression bandage. Homecare was notified, as the patient was going to require dressing changes.

E10.70 (M) Type 1 diabetes mellitus with ulcer  
L97.9 (3) Ulcer of lower limb without mention of severity  

**Rationale:** Follow the Alphabetic Index for Ulcer, diabetes which directs the coder to E10–E14 with fourth and fifth digits .70. Follow the “use additional code” instruction to classify the ulcer of lower limb. Since this is a “use additional code” instruction and not a “code separately” instruction, assign diagnosis type (6) or (3). L97.9 is not an asterisk code; therefore, diagnosis type (6) does not apply and L97.9 is assigned diagnosis type (3). Note that ulcer of the lower limb is listed in the code title. Diabetic ulcer is a condition of multiple diabetic complications; however since a specific code has been created to capture this, only one diabetes code is assigned.

**Example:** A patient is admitted with acute cholecystitis, the physician noted the patient has Type 2 diabetes.

K81.0 (M) Acute cholecystitis  
E11.9 Type 2 diabetes mellitus without (mention of) complications  

**Rationale:** There are no subterms for diabetes under cholecystitis in the Alphabetic Index so each condition is classified separately. Diagnosis type for the diabetes code will vary depending on the circumstances documented in the record. It is mandatory to code diabetes whenever it is documented by the physician.

**Exception:** Unspecified and senile cataracts are not classified as diabetic cataracts. The fourth and fifth digits .35 apply only to true diabetic cataracts (see also Diabetic Cataracts in Appendix A).

**Example:** A patient is admitted for extraction of senile nuclear cataracts. The physician has indicated Type 2 diabetes on the history.

H25.1 (M) Senile nuclear cataract  
E11.38 Type 2 diabetes mellitus with other specified ophthalmic complication not elsewhere classified  

**Rationale:** Do not assign E11.35 for this case; assign E11.38 and code separately the senile cataract. Diagnosis type for the diabetes code will vary depending on the circumstances documented in the record. It is mandatory to code diabetes whenever it is documented by the physician.

**When an inclusion term in the diabetes codes is not an asterisk code, assign an additional code, optionally, as a diagnosis type (3), as required to fulfill facility data needs.**
Inclusion terms are used to guide code selection as they indicate conditions that are included in the code. When an asterisk code follows the inclusion term, the asterisk code must be assigned. When no code follows the inclusion term, an additional code is not required.

**Example:**
A Type 1 diabetic patient with end-stage renal failure is admitted for renal transplant.

E10.22† (M)  Type 1 diabetes mellitus with end-stage renal disease [ESRD]
N08.3* (6)   Glomerular disorders in diabetes mellitus
N18.0 (3)    End-stage renal disease (optional)

**Rationale:** A code from N18.– Chronic renal failure is not required as chronic renal failure is listed as an inclusion term. (Note that in this example, end-stage renal failure is also listed in the code title.) If assigned, it must be diagnosis type (3).

Assign E1–.78 Type ~ diabetes mellitus with multiple other complications to capture multiple diabetic complications that are not assessed, evaluated or treated during the current episode of care.

**Example:**
Elderly male diabetic patient admitted for poor glycemic control of his Type 2 diabetes mellitus and initiation of insulin therapy. An admission laboratory value of fasting blood glucose was reported as 17.2 mmol/L. Patient has diabetic nephropathy, diabetic retinopathy and coronary artery disease.

Final diagnosis: Type 2 diabetes.

E11.78     (M)  Type 2 diabetes mellitus with multiple other complications
R73.802  (3)   Evidence of blood glucose greater than or equal to 14.0 mmol/L

**Rationale:** The patient was admitted for control of his diabetes and although he has multiple diabetic complications, no care was directed at these. It is unnecessary to assign additional codes for each of the complications. R73.802 is assigned to identify the occurrence of blood sugars > 14.0 mmol/L (see also the coding standard entitled Diabetes Mellitus and Hyperglycemia).

**Example:**
Mrs. P.C. was admitted for Type 2 diabetic nephropathy. She was in end-stage renal failure and dialysis was initiated. She complained of having double vision “diplopia” and was seen by a neurologist who documented “diabetic mononeuropathy—third nerve palsy”. She was given a patch to use over her right eye.

E11.22†  (M)  Type 2 diabetes mellitus with end-stage renal disease [ESRD]
N08.3*  (6)   Glomerular disorders in diabetes mellitus
N18.0  (3)    End-stage renal disease (optional)
E11.40†  (1)  Type 2 diabetes mellitus with mononeuropathy
G59.0*  (3)   Diabetic mononeuropathy
H49.0  (3)    Third (oculomotor) nerve palsy (optional)

**Rationale:** As evaluation or treatment was directed to the renal and neurological complications, each is classified separately.
Example: A 45-year old female patient with Type 1 diabetes was admitted for treatment of preproliferative diabetic retinopathy. She also has diabetic nephropathy and mononeuropathy for which she received no treatment on this occasion.

E10.31† (M) Type 1 diabetes mellitus with preproliferative retinopathy
H36.0* (6) Diabetic retinopathy
E10.78 (3) Type 1 diabetes mellitus with multiple other complications

Rationale: As no care was directed to the other complications of her diabetes, individual diabetes codes are not assigned.

When a diagnostic statement of “borderline diabetes” is recorded, seek further information from the physician to determine whether the patient has mild Type 2 diabetes or just elevated blood glucose levels.

Without clarification, a diagnosis of “borderline diabetes” cannot be coded. The term is not indexed in the Alphabetic Index and no assumptions about the intent of the statement can be made (see also Borderline Diabetes in Appendix A).
### Diabetes Mellitus and Hyperglycemia

In effect 2006

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R73.8–2</td>
<td>Other evidence of elevated blood glucose level, greater than or equal to 14.0 mmol/L as a diagnosis type (3). Any acceptable glucose monitoring system may be used for testing blood glucose levels (e.g. glucose meter).</td>
</tr>
</tbody>
</table>

Ensure that R73.0 Abnormal glucose tolerance test and R73.9 Hyperglycaemia, unspecified are not recorded on an abstract with any code from the range E10–E14.

Codes from R73.8– are assigned to provide information about level of control. Evidence of blood glucose >14.0 mmol/L indicates the diabetes is out of control. In these cases, the code for diabetes mellitus is assigned a comorbid diagnosis type as the diabetes requires management that is consistent with the definition of comorbidity (see also the coding standard entitled Diabetes Mellitus). Codes from R73.8– can be assigned in addition to a code from E10–E14. Codes R73.0 and R73.9 can never be assigned with a code from E10–E14 because they are inappropriate when a diagnosis of Diabetes has been documented.

**Example:** J.M. is a 69-year old man who was admitted for CABG for CAD. He has had no previous bypass surgery. He is a type 2 diabetic. Postoperatively, he was in ICU for 4 days where his blood glucose levels were closely monitored. There were two blood glucose values of >14.0 mmol/L recorded on the glucose monitoring record. Insulin was adjusted during the ICU stay and he was considered stable when transferred to the ward.

- **I25.10** (M) Atherosclerotic heart disease of native coronary artery
- **E11.52** (1) Type 2 diabetes mellitus with certain circulatory complications
- **R73.812** (3) Evidence of elevated blood glucose greater than or equal to 14.0 mmol/L, post-meal (or NOS).

**Example:** M.D. is a 36-year old obese woman who was being assessed in the clinic prior to elective surgery. She has never been diagnosed as a diabetic. Her Fasting blood glucose was 15.1 mmol/L. The physician stated that the patient had hyperglycemia and ordered her to return at a later date for a Glucose Tolerance Test.

- **R73.9** Hyperglycemia, unspecified
- **R73.802** Evidence of elevated blood glucose level blood glucose greater than or equal to 14.0 mmol/L, fasting

**Rationale:** Assign R73.9 to identify that this patient has hyperglycemia, but has not been diagnosed as Diabetic. Since this patient’s glucose was greater than 14.0 mmol/L, R73.802 is also assigned. As this patient was seen in a clinic and not as an inpatient, diagnosis typing does not apply. Further details would be required to complete the coding of this case.
Hypoglycemia in Diabetes Mellitus

Assign code E1–.63 Type — diabetes mellitus with hypoglycemia to identify a hypoglycemic episode in the diabetic patient.

Ensure that code E1–.63 does not appear on the same abstract with codes from E16.0–E16.2 to record the hypoglycemia as these are mutually exclusive.

Hypoglycemia is not how diabetes manifests itself; therefore, it is not an acute exacerbation of diabetes. Hyperglycemia, on the other hand, is how diabetes manifests itself and is an acute exacerbation of the condition.

**Example:**

H.Y., a 51-year old man with Type 1 diabetes mellitus, was admitted because his blood sugars were only sub-optimally controlled. He was given his insulin as per the physician’s orders. Having had only a light breakfast, he complained of feeling dizzy and weak. This was documented as “hypoglycemia” and treated appropriately.

E10.63 Type 1 diabetes mellitus with hypoglycemia

Rationale: This is not an adverse reaction to the insulin. A number of factors contributed to the hypoglycemia. An external cause code is not required. Diagnosis type assignment will vary depending on the circumstances documented in the record.

**Example:**

N.D., a 75-year old man was brought in to the ER by a social worker from the “Blue Door”—a shelter for homeless men. He was feeling dizzy and was trembling. He appeared confused. He was given a hot meal and some orange juice with glucose and discharged. Diagnosis was “hypoglycemia”.

E16.2 Hypoglycemia, unspecified

Rationale: E16.2 would be either the MRDx or Main Problem depending on the circumstances of the case.

See also the coding standard entitled *Diabetes Mellitus as a Post-Admit Comorbidity*. 
Chapter IV—Endocrine, Nutritional and Metabolic Diseases

Coma in Diabetes Mellitus

Assign two codes to appropriately capture a diabetic coma identified as hypoglycemic or due to ketoacidosis and/or lactic acidosis.

Assign one code to capture a diabetic coma in the absence of hypoglycemia, ketoacidosis or lactic acidosis.

Sequence the code for diabetic coma first.

Example: Elderly female diabetic patient, brought in by ambulance, from a home for the aged. She had not been eating well for sometime prior to admission. On the morning of the admission she was found unconscious. Mrs. M had known, long standing type 2 diabetes mellitus and required insulin for many years.

Final diagnosis: Type 2 diabetes mellitus with hypoglycemic coma

E11.0 (M) Type 2 diabetes mellitus with coma
E11.63 (1) Type 2 diabetes mellitus with hypoglycemia

Example: Junior is a 6-year old child who was brought in to the local hospital from his school where the child had collapsed. The child went into a diabetic coma. His teacher indicated that the child had complained of nausea, abdominal pain and feeling thirsty. He was airlifted to a children’s hospital from the remote community hospital.

The child had elevated blood sugar levels and was in diabetic ketoacidosis. While in hospital, he was treated with insulin and IV fluids.

Final diagnosis: Diabetic ketoacidosis

Newly diagnosed Type 1 diabetes mellitus

E10.0 (M) Type 1 diabetes mellitus with coma
E10.10 (1) Type 1 diabetes mellitus with ketoacidosis

Example: The patient is a 56-year old man, brought to the hospital by EMS. His wife said that the patient appeared to be semi conscious. His blood glucose was 16 mmol/L. The patient was admitted.

Final diagnosis: Hyperosmolar hyperglycemic nonketotic coma

Type 2 diabetes mellitus

E11.0 (M) Type 2 diabetes mellitus with coma
R73.812 (3) Blood glucose greater than or equal to 14.0 mmol/L

Rationale: Hyperosmolar hyperglycemic nonketotic coma (HHNC) is characterized by hyperglycemia, hyperosmolality, and an absence of significant ketosis. Therefore, one code is required, as indicated in the use of non-essential (bracketed) modifiers found in the inclusion note at E11.0. An additional code is assigned to capture the blood glucose level ≥14 mmol/L.
Diabetes Mellitus as a Post-Admit Comorbidity

Diabetes mellitus is a chronic condition and is seldom a post-admit co-morbidity. However, a hypoglycemic episode in a diabetic patient or steroid-induced diabetes could sometimes develop after admission.

Assign a code from category E13 as a diagnosis type (2) to identify a patient who develops steroid-induced diabetes after admission.
Assign E10.63, E11.63, E13.63 or E14.63 as a diagnosis type (2) when a hypoglycemic event meets the criteria for a post-admit comorbidity.

Example:  
D. J., a 15-year old young man with pre-existing Type 1 diabetes mellitus, was involved in a MVA and admitted due to a fractured femur. During hospitalization, he was given Insulin as per physician’s orders. Having had only a light breakfast in the morning and no mid-morning snack, he complained of feeling dizzy and weak. This was documented as “hypoglycemia” and treated appropriately.

E10.63 (2) Type 1 diabetes mellitus with hypoglycemia

Rationale: A number of factors contributed to the hypoglycemia. This is not an adverse reaction to insulin and an external cause code is not required. Although the patient had diabetes prior to admission, it is the hypoglycemic event that qualifies the assignment of diagnosis type (2) (see also the coding standard entitled Hypoglycemia in Diabetes Mellitus).

Example:  
Mrs. J was in hospital undergoing treatment for pemphigus. She was given high doses of steroids. She developed steroid induced diabetes and was put on oral hypoglycemic medication.

E13.9 (2) Other specified diabetes mellitus without (mention of) complication
Y42.0 (9) Drugs, medicaments and biological substances causing adverse effects in therapeutic use, glucocorticoids and synthetic analogues

Rationale: Steroid-induced diabetes mellitus developing after admission to hospital is captured as a diagnosis type (2).

Do not assign diagnosis type (2) to codes from categories E10–E14, for hyperglycemia in the diabetic patient.

Diabetes expresses itself with hyperglycemia. Therefore, codes from categories E10–E14, must not be assigned a diagnosis type (2) to identify an incidence of hyperglycemia. A patient who requires insulin to keep the blood glucose levels down may have elevated blood sugar readings if the medication is temporarily discontinued (see also the coding standard entitled Diabetes Mellitus and Hyperglycemia).
**Example:** Mr. BPH was admitted to hospital for a TURP. He is a Type 2 diabetic with several known diabetic complications. He was on insulin, this being discontinued prior to surgery. Post surgery day 1, he had a fasting blood sugar of 9.2 mmol/L. The insulin was restarted four hours after surgery.

E11.78 (3) Type 2 diabetes mellitus with multiple other complications  
R73.800 (3) Evidence of elevated fasting blood glucose between 8.0–11.9 mmol/L (optional)

**Rationale:** While this patient had a hyperglycemic episode post admission, diagnosis type 2 is never assigned to E11.78. Hyperglycemic episodes are captured using R73.8—. Since the physician has not stated that the diabetes is out of control and this hyperglycemic episode is not >14 mmol/L, his diabetes is not in the “out of control” range and E11.78 does not qualify as a comorbid condition (see also the coding standard entitled *Diabetes Mellitus and Hyperglycemia*).

Mrs. K was admitted to hospital for an elective hysterectomy. She is a known type 2 diabetic, on insulin. She has both renal and peripheral vascular manifestations of her diabetes but these required no management on this admission. Insulin was discontinued prior to surgery. Post surgery day 1, she had a fasting blood sugar value of 15.1 mmol/L. This came under control once her insulin was restarted.

E11.78 (1) Type 2 diabetes mellitus with multiple other complications  
R73.802 (3) Evidence of elevated fasting blood glucose greater than or equal to 14.0 mmol/L

**Rationale:** Because this patient’s diabetes went out of control, E11.78 is captured as a diagnosis type (1). The episode of hyperglycemia >14 mmol/L is captured by assigning R73.802 (see also the coding standard entitled *Diabetes Mellitus and Hyperglycemia*).
Chapter IV—Endocrine, Nutritional and Metabolic Diseases

Diabetes Mellitus and the Pregnant State  
In effect 2006

Most women who have pre-existing diabetes who become pregnant have Type 1 diabetes, although some may have Type 2. A review of the literature shows that gestational diabetes occurs in about 4% of pregnant women. Gestational diabetes mellitus (GDM) is a transient type of diabetes that appears usually only in the second half of pregnancy (after about 24 weeks) in women who have never had diabetes before. It resolves afterwards, however, GDM is associated with a high risk of future Type 2 diabetes mellitus.

For additional coding standards relating to Pregnancy, see Chapter XV—Pregnancy, childbirth and the puerperium.

Classify diabetes that is diagnosed for the first time during pregnancy to O24.8– Diabetes mellitus arising in pregnancy (gestational).

When diabetes is present prior to pregnancy, assign a code from O24.– Diabetes mellitus in pregnancy. When the patient has complications of pre-existing diabetes mellitus, assign as many additional codes from E10–E14 as required to capture the complications that are assessed or managed during admission.

Sequence the diabetes code from Chapter XV before any diabetes code from Chapter IV.

Example:  
Mrs. X, a 28-year old woman was admitted for her delivery. She was 38 weeks pregnant. She had gestational diabetes that was diagnosed at 27 weeks. She had been monitored closely since that time for blood sugar control.

O24.801  
Diabetes mellitus arising in pregnancy (gestational), delivered, with or without mention of antepartum condition

Rationale:  
O24.8– is assigned to capture gestational diabetes mellitus. Additional codes and diagnosis typing will vary depending on the circumstances documented in the record.

Example:  
Mrs. G. is 32-year old Type 1 diabetic who also has diabetic nephropathy. She manages well on insulin. She had a planned pregnancy and was monitored closely by her obstetrician. She delivered during this admission.

O24.501  
Pre-existing diabetes mellitus, Type 1, delivered, with or without mention of antepartum condition

E10.21†  
Type 1 diabetes mellitus with established diabetic nephropathy

N08.3*  
Glomerular disorders in diabetes mellitus

Rationale:  
Diagnosis type will vary depending on the circumstances documented in the record.
Dehydration

Code documented dehydration as a Most Responsible Diagnosis (MRDx) or as a comorbidity when it is either:
- a condition in its own right without any documented underlying cause; or
- noted to be severe enough to warrant rehydration with intravenous (IV) fluids.

When there is a documented underlying cause and dehydration is managed by increased oral intake of fluids alone, it must not be assigned a comorbid diagnosis type; if coded at all, assign a diagnosis type (3).

Note: The presence of an IV in itself is not an indicator of rehydration. IV lines may be started for other purposes including administration of medications and stabilization of the patient.

Example: An elderly man, living alone, is found in a state of confusion and dehydration. He improves significantly following aggressive intravenous fluid treatment and is sent home with homecare to visit three times a week.

E86.0 (M) Dehydration
R41.0 (3) Disorientation, unspecified (optional)

Rationale: Dehydration must be clearly documented before it can be coded. Dehydration is a condition in its own right in this example and is treated with IV fluids. Disorientation is a symptom of dehydration, if coded, it must be assigned diagnosis type (3).

Example: A Type 1 diabetic is admitted to stabilize his condition. He is given insulin twice and responds to this treatment nicely with fasting and random blood sugar levels well within the adequate range. The physician documents dehydration and prescribes an increase in oral fluids.

E10.9 (M) Type 1 diabetes mellitus without (mention of) complication
E86.0 (3) Dehydration (optional)

Rationale: Dehydration treated with an increase in oral intake of fluids is not a significant comorbidity and, if documented, is an optional type (3) diagnosis.

See also coding standard entitled Gastroenteritis and Diarrhea.
Chapter VI—Disease of the Nervous System

Intracranial Resection of Lesions or Neoplasms

In effect 2001, amended 2006

Duraplasty and Cranioplasty Following Intracranial Resection

To gain access to the brain, the cranium and dura must be incised. Raising/closing of a cranial flap and incising/re-approximating dura are considered an integral part of any invasive intracranial intervention.

Assign an additional CCI code for a concomitant cranial dural repair only when:

1. The cranioplasty is so extensive it involves the use of a plate or screw device. This is classified to 1.EA.80.^^ Repair, cranium or

2. The duraplasty is so extensive it involves a dural graft. This is classified to 1.AA.80.^^ Repair, meninges and dura mater of brain.

Neither of these situations is a normal expectation of intracranial surgery. To properly reflect the defect closure, separate codes are required when applicable.

Example: A 59-year old man with a history of low-grade astrocytoma (subtotal resection 8 years ago) now presents with seizure activity due to the recurrence of the neoplasm. A craniotomy is performed through the original craniotomy incision to remove the recurrent astrocytoma. The dura is adhesive and tears during surgery. Following removal of the tumor, a duraplasty using the patient’s own temporalis fascia is performed. Finally, the defect was repaired by performing a cranioplasty using bone from the bone bank and plates and screws to secure the graft.

1.AN.87.SZ-GX Excision partial, brain, craniotomy [or craniectomy] flap technique for access, with device NEC
1.AA.80.SZ-XX-A Repair, meninges and dura mater of brain, using autograft [e.g. pericranium, fascia lata]
1.EA.80.LA-NW-K Repair, cranium using plate, screw device (with/without wire/mesh), with homograft
1.EP.58.LA Procurement, muscles of head and neck, of autograft using open approach

Coding Hierarchy for Intracranial Lesion Resection

To avoid multiple code assignment in the description of the surgical management of intracranial resections, a coding hierarchy has been factored into CCI, which considers the severity of the neurological defect and surgical complexity in order to determine the single most appropriate code for the type of resection. Necessary guidance for code selection is provided in the inclusions, exclusions and notes at the excision codes.

See also the coding standard entitled Debulking of a Space-Occupying Lesion.
The following code finder is also provided as a quick reference during coding of resections that overlap regions of the brain:

Hierarchy for Classifying Intracranial Lesion Resection

```
Start

1. Involves cranial (or skull) base at all? Yes → 1.EA.92.^^

   2. May be referred to as a "posterior fossa" resection


               5. Involves cerebellar pontine angle? Yes → 1.AK.87.^^


                           8. Involves pituitary region primarily? Yes → 1.AF.87.^^


                                   10. Involves only meninges, dura mater of brain? Yes → 1.AA.87.^^

```

End
Revision of CSF Shunt Systems (Ventricle, Brain Stem, Spinal Canal)
In effect 2001, amended 2006

Partial Revision

When the replacement of a part of a shunt system is documented as a revision, select one of the following codes depending on the originating site of drainage (where the blockage lies):

1.AC.54.^^ Management of internal device, ventricles of brain
1.AP.54.^^ Management of internal device, brain stem
1.AX.54.^^ Management of internal device, spinal canal and meninges

The qualifier portion of the code identifies the region of the body in which the shunt terminates.

Example: Patient had a ventriculoperitoneal shunt because of hydrocephalus. He was admitted on this occasion for changing the valve.

1.AC.54.ME-SJ Management of internal device, ventricles of brain, open approach, shunt system terminating in abdominal cavity.

Complete Revision

When there is removal and concomitant reinstallation of an entire shunt system, select one of the following code sets depending on the originating site of drainage (i.e. where the blockage lies). The qualifier portion of the code identifies the region of the body in which the shunt terminates.

1.AC.52.^^ Drainage, ventricles of brain
1.AC.55.^^ Removal of device, ventricles of brain
1.AP.52.^^ Drainage, brain stem
1.AP.55.^^ Removal of device, brain stem
1.AX.52.^^ Drainage, spinal canal and meninges
1.AX.55.^^ Removal of device, spinal canal and meninges

The insertion of the new system is sequenced as the principal intervention followed by the removal of the old system.

Example: Patient had a previous insertion of a syringopleural shunt for syringomyelia. On this occasion she is admitted for a complete removal and replacement of the syringopleural shunt due to shunt failure.

1.AP.52.MQ-SJ Drainage, brain stem using shunt system terminating in thoracic cavity [e.g. syringopleural]
1.AP.55.SE-SJ Removal of device, brain stem, of shunt catheter system, burr hole technique for access

As with any other indwelling catheterization for continuous drainage, in CCI there is no status attribute to indicate “Revision” at the drainage codes as there is a reasonable expectation that there may be a need to replace valves, unblock shunts and reposition catheters over the course of its installation. With any long-term indwelling catheter system it is quite common to replace it in its entirety, especially in a growing child.
## Seizures

<table>
<thead>
<tr>
<th>In effect 2001, amended 2003, 2006</th>
</tr>
</thead>
</table>

Classify seizures to **G40.– Epilepsy** when the physician clearly documents a recurring seizure disorder.

Classify an isolated or first seizure to **R56.8 Other and unspecified convulsions**.

When a diagnosis of "seizure disorder" is provided with no further specification, classify to **R56.8 Other and unspecified convulsions**.

Assign a code from either category **G40.– Epilepsy** OR category **G41.– Status epilepticus**, but not both, as these categories are mutually exclusive.

---

In ICD-10, most seizure disorders are categorized under epilepsy using terminology that is becoming outdated in neurological medicine. This poses a problem for coders intent on finding an appropriate code for the diagnostic term used in clinical documentation. The following code map uses the common language proposed in the international classification of epileptic seizures (see *Epilepsia* 22:489, 1981) and found in current medical textbooks and provides the corresponding ICD-10-CA code that best fits. This categorization is also in keeping with the neurological adaptation of ICD-10, as approved by the World Health Organization. To use G40.– *Epilepsy*, the documentation must clearly describe a recurring seizure disorder. A single, isolated seizure described using terminology listed in this table is classified to R56.8.
### COMMON TERMINOLOGY FOR SEIZURE DISORDERS

<table>
<thead>
<tr>
<th>COMMON TERMINOLOGY FOR SEIZURE DISORDERS</th>
<th>ICD-10-CA CODE</th>
<th>ICD-10-CA CODE DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Simple partial seizure disorder&lt;br&gt;Includes: focal or local seizures (no loss of consciousness), Jacksonian seizure, somatosensory or somatomotor seizure</td>
<td>G40.1</td>
<td>Localized related (focal)(partial) epilepsy and epileptic syndromes with simple partial seizures</td>
</tr>
<tr>
<td>Complex partial seizure disorder&lt;br&gt;Includes: focal or local seizures with a loss of consciousness, psychomotor or psychosensory seizures</td>
<td>G40.2</td>
<td>Localized related (focal)(partial) epilepsy and epileptic syndromes with complex partial seizures</td>
</tr>
<tr>
<td>Generalized absence seizure disorder&lt;br&gt;Includes: petit mal seizure, recurrent</td>
<td>G40.7</td>
<td>Petit mal, unspecified, without grand mal seizures</td>
</tr>
<tr>
<td>Myoclonic seizure disorder&lt;br&gt;Includes: Myoclonic epilepsy with ragged red fibre (MERRF)</td>
<td>G40.4</td>
<td>Other generalized epilepsy and epileptic syndromes</td>
</tr>
<tr>
<td>Tonic seizure disorder</td>
<td>G40.3</td>
<td>Generalized epilepsy and epileptic syndromes</td>
</tr>
<tr>
<td>Clonic seizure disorder</td>
<td>G40.3</td>
<td>Generalized epilepsy and epileptic syndromes</td>
</tr>
<tr>
<td>Tonic—clonic seizure disorder&lt;br&gt;Includes: grand mal seizure, recurrent</td>
<td>G40.6</td>
<td>Grand mal seizures, unspecified (with or without petit mal)</td>
</tr>
<tr>
<td>Atonic (akinetic) seizure disorder</td>
<td>G40.3</td>
<td>Generalized epilepsy and epileptic syndromes</td>
</tr>
<tr>
<td>Seizure disorders not otherwise specified which are induced by alcohol, drugs, stress, sleep deprivation or photosensitivity</td>
<td>G40.5</td>
<td>Special epileptic syndromes</td>
</tr>
<tr>
<td>Epileptic seizure disorder, not otherwise specified&lt;br&gt;Includes: Epileptic convulsion NOS</td>
<td>G40.9</td>
<td>Epilepsy unspecified</td>
</tr>
<tr>
<td>Febrile seizure R56.0</td>
<td></td>
<td>Febrile convulsions</td>
</tr>
<tr>
<td>Infantile seizure NOS R56.8</td>
<td></td>
<td>Other and unspecified convulsions</td>
</tr>
<tr>
<td>Newborn seizure R56.8</td>
<td></td>
<td>Convulsions of newborn</td>
</tr>
<tr>
<td>Seizure disorder, recurrent G40.9</td>
<td></td>
<td>Epilepsy, unspecified</td>
</tr>
<tr>
<td>Seizure NOS R56.8</td>
<td></td>
<td>Other and unspecified convulsions</td>
</tr>
<tr>
<td>Includes: Convulsion NOS&lt;br&gt;Seizure disorder NOS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:** A 65-year old male patient was brought in by ambulance having suffered a seizure. The physician described a tonic-clonic seizure and noted the patient had three such seizures in the past. The final diagnosis is recorded as tonic-clonic seizure disorder.

G40.6

**Rationale:** The terminology “tonic-clonic seizure disorder” is found in the table and classified to G40.6.
**Example:** A 5-year old child is admitted following a seizure. The physician documents that he has had at least two previous seizures and records the final diagnosis as “Seizure Disorder”.

G40.9   Epilepsy, unspecified  
**Rationale:** Since the diagnosis is recorded as “seizure disorder” and there is reference to this being a recurring problem, classify to G40.9.

**Example:** A 4-year old child is admitted following a febrile convulsion. The physician documents that he has had a previous febrile convulsion. Final diagnosis is recorded as “Febrile Convulsion”.

R56.0   Febrile convulsions  
**Rationale:** Even though there is evidence that this may be a recurring problem, the terminology of “seizure disorder” is not used to describe this patient’s condition.

**Example:** This 57-year old woman had a grand mal seizure in the shopping mall. She was taken to hospital by ambulance. History and physical revealed that she had no previous history of seizures. Final diagnosis is recorded as grand mal seizure.

R56.8   Other and unspecified convulsions  
**Rationale:** An isolated seizure, even when described using terminology such as “grand mal”, “tonic-clonic”, “petit mal”, etc., with no documented history of “seizure disorder” or documentation of “epilepsy” is classified to R56.8.

**Example:** Mr. X is a known alcoholic. He was enrolled in an alcohol rehab program but quit. He went back to drinking heavily. His wife called 911 when he began convulsing in the afternoon after having consumed several drinks. The emergency physician notes that this patient has a history of alcoholic seizures with multiple emergency visits in the past. The ER record showed “Alcohol poisoning and seizures”. Patient was admitted to ICU.

T51.0   (M)  Toxic effect of ethanol  
G40.5   (3)  Special epileptic syndromes  
X45     (9)  Accidental poisoning by and exposure to alcohol  
**Rationale:** Recurring seizures induced by alcohol, drugs, stress, sleep deprivation, or photosensitivity are classified to G40.5 as indicated in the table.

**Example:** A 17-year old male is brought to Emergency following a seizure. He had consumed an excessive amount of alcoholic beverages throughout the evening. History revealed no previous seizures. The diagnosis is recorded as seizure due to alcohol poisoning.

T51.0   (M)  Toxic effect of ethanol  
R56.8   (3)  Other and unspecified convulsions  
X45     (9)  Accidental poisoning by and exposure to alcohol  
**Rationale:** Although this is an alcohol related seizure, it is an isolated event and classified to R56.8.
Example:  Babe, a 3-day old female, was brought to the emergency room of Children’s Hospital because she had a seizure. Tests were done and the child was treated with anticonvulsive medication. The baby was released and the parents were to take her to the pediatrician for monitoring and follow-up.
P90    Convulsions of newborn

Example:  J.D. a known epileptic was admitted through the emergency room. The admitting diagnosis was “status epilepticus”.
G41.9    Status epilepticus, unspecified

Rationale:  G40.– and G41.– are mutually exclusive; do not assign a code from each category.

Status Epilepticus

A patient with a known (epileptic) seizure disorder who suffers continuous seizure activity (duration >30 minutes) is in what is known as status epilepticus (G41). While status epilepticus is often precipitated by low levels of anti-seizure medication in patients with a known seizure disorder, it may also be precipitated by other factors such as high fever, CVA, brain tumor, drug or alcohol intoxication and traumatic brain injuries.

Neurological Deficits Following a Stroke

<table>
<thead>
<tr>
<th>Code as comorbid conditions all neurological deficits documented by the physician, e.g. paralysis, dysphagia, aphasia, urinary incontinence and fecal incontinence when they affect the management and treatment of the patient during the acute care phase of the stroke.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Criteria:</td>
</tr>
<tr>
<td>R13.–  Dysphagia may be assigned a diagnosis type (1) when requiring nasogastric tube/enteral feeding or still requiring treatment more than 7 days after the stroke occurred.</td>
</tr>
<tr>
<td>R15  Fecal incontinence may be assigned a diagnosis type (1) when it is still present at discharge or persists for at least 7 days.</td>
</tr>
<tr>
<td>R32  Unspecified urinary incontinence may be assigned as a diagnosis type (1) when it is still present at discharge or persists for at least 7 days.</td>
</tr>
<tr>
<td>For all other neurological deficits following a stroke, apply the Diagnosis Typing Standard.</td>
</tr>
<tr>
<td>See also the coding standard entitled Strokes, Cerebrovascular Accidents (CVA) and Transient Ischemic Attacks (TIA).</td>
</tr>
</tbody>
</table>

Example:  On admission a patient experienced left-sided weakness. He was diagnosed as having suffered an acute cerebral infarction and tissue plasminogen activator (TPA) was administered. On admission this patient had difficulty swallowing. On day 8 following the stroke the patient was transferred to a facility closer to home for continued stroke care with a nasogastric tube in place.
I63.9    (M)    Cerebral infarction, unspecified
R13.8    (1)    Other and unspecified dysphagia
Hemiplegia

Assign G81.– *Hemiplegia* as a most responsible diagnosis only when it is reported without further specification or it is stated to be old or longstanding but of unspecified cause. ¹

Assign a code from this category as an additional code to identify hemiplegia resulting from any cause. Assign diagnosis type according to the standard entitled *Diagnosis Typing Definitions*.

**Example:** Patient admitted for excision of multiple skin lesions of basal cell carcinoma—lower leg. Examination revealed residual hemiparesis from a previous stroke. No specific treatment was directed to the residual hemiparesis in this episode of care.

- C44.7 (M) Malignant neoplasm skin of lower limb, including hip
- G81.99 (3) Hemiplegia of unspecified type of unspecified [unilateral] side (optional)
- I69.4 (3) Sequelae of stroke, not specified as hemorrhage or infarction (optional)

**Example:** A right-handed patient has suffered a CVA due to an embolism of a cerebral artery. He has left sided hemiplegia which was a focus of this treatment and he received physiotherapy.

- I63.4 (M) Cerebral infarction due to embolism of cerebral arteries
- G81.91 (1) Hemiplegia of unspecified type of non-documented side

See also the coding standard entitled *Strokes, Cerebrovascular Accidents (CVA) and Transient Ischemic Attacks (TIA)* and the coding standard entitled *Sequelae*.

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Chapter IX—Diseases of the Circulatory System

Hypertension and Associated Conditions


Hypertensive Heart Disease

Assign I11 Hypertensive heart disease or I13 Hypertensive heart and renal disease, only when the physician specifically documents a cause/effect relationship between the cardiac condition and hypertension. A causal relationship must not be assumed.

Assign an additional code to identify any associated (congestive) heart failure (I50.– Heart failure).

Sequence I11 or I13 first.

Ensure that codes from the category I10–I13:

- are never recorded as a post admit comorbidity (diagnosis type (2)) on an inpatient abstract.
- are never used together on one abstract as they are mutually exclusive.

Example: This obese patient with longstanding hypertension complained of exertional and non-exertional dyspnea, ankle edema and weight gain. A transthoracic echocardiography (TTE) was performed. He was admitted in congestive heart failure.

Diagnosis: Hypertensive heart disease
- Congestive heart failure

I11 Hypertensive heart disease
I50.0 Congestive heart failure

Rationale: When heart failure is caused by essential hypertension, physicians commonly use terminology such as “due to hypertension” or “hypertensive” to link the two. When diagnostic statements on the chart mention both conditions independently, a causal relationship may not be assumed. Since “hypertensive” is used in this example, a causal relationship is indicated.

Hypertensive Renal Disease

When hypertension exists with any condition in N18.– Chronic renal failure, N19 Unspecified renal failure or N26.– Unspecified contracted kidney, assume a causal relationship and assign I12 Hypertensive renal disease or I13 Hypertensive heart and renal disease.

Assign an additional code to identify any associated chronic renal failure (N18–N19).

Sequence I12 first.

Do not assume a causal relationship between hypertension and acute renal failure. When the two conditions occur together, assign both I10.– Essential primary hypertension and N17.– Acute renal failure.

Example: Chronic renal failure and hypertension

I12 Hypertensive renal disease
N18.9 Chronic renal failure, unspecified

Rationale: A causal relationship is presumed.
Example: Acute renal failure with renal medullary necrosis and hypertension
N17.2 Acute renal failure with renal medullary necrosis
I10.0 Benign hypertension
Rationale: No causal relationship is presumed for acute renal failure.

Example: Diagnosis: Type 2 diabetes with chronic renal failure
Chronic renal failure
Hypertension
E11.22† Type 2 diabetes mellitus with end-stage renal disease [ESRD]
N08.3* Glomerular disorders in diabetes mellitus (E10–E14† with common fourth character.2)
I12 Hypertensive renal disease
N18.9 Chronic renal failure, unspecified

Example: A patient is admitted in congestive heart failure due to hypertension. The patient also has chronic renal failure. He was treated with aggressive diuresis and dialysis.
I13 (M) Hypertensive heart and renal disease
I50.0 (1) Congestive heart failure
N18.9 (1) Chronic renal failure, unspecified

**Hypertension with Cerebrovascular Disease**

Sequence the code for cerebrovascular disease first when it is present with hypertension.

Example: Occlusion of basilar artery with hypertension
I65.1 Occlusion and stenosis of basilar artery
I10.0 Essential (primary) hypertension

**Angina**

Angina pectoris (I20) is a clinical syndrome due to myocardial ischemia characterized by precordial discomfort or pressure, typically precipitated by exertion and relieved by rest or sublingual nitroglycerin. Unstable Angina is characterized by a progressive increase in anginal symptoms, new onset of rest or nocturnal angina, or onset of prolonged angina (see also the coding standard entitled *Chronic Ischemic Heart Disease*).

Classify angina as a significant diagnosis type (M, 1 or 2) only when it is documented as occurring during the current episode of care.

When a patient has a diagnosis of angina and interventions such as Percutaneous Transluminal Coronary Angioplasty (PTCA) and/or Coronary Artery Bypass Graft (CABG) are performed, assign I25.1– *Atherosclerotic heart disease* as the MRDx.
**Example:** Ms. M, who was known to have coronary artery disease (CAD), presented to the emergency department with unstable angina. She was subsequently admitted to undergo coronary artery bypass grafting (CABG). Patient has had no previous bypass procedure.

Final Diagnosis: CAD with unstable angina

Procedure: CABG (x3)

I25.10 (M) Atherosclerotic heart disease of native coronary artery
I20.0 (1) Unstable angina

**Rationale:** The abstract must identify the conditions being treated during the current episode of care. A CABG or PTCA is aimed at treating the underlying coronary atherosclerosis. Since the unstable angina occurred during the current episode of care and was present on admission, it is assigned a diagnosis type (1).

**Example:** Mrs. N was admitted electively for a CABG. On the second post-operative day, she had unstable angina. She was kept in the coronary care unit (CCU) an extra day to monitor her cardiac condition.

Final Diagnosis: CAD with unstable angina

Procedure: Surgical operation with anastomosis, bypass or graft

I25.10 (M) Atherosclerotic heart disease of native coronary artery
I20.0 (2) Unstable angina
Y83.2 (9) Surgical operation with anastomosis, bypass or graft

**Rationale:** Unstable angina is an unexpected condition following CABG and therefore meets the criteria of a post-admit comorbidity.

**Example:** Mr. O has had a longstanding history of CAD with angina that has been worsening in severity. He was admitted electively for a PTCA with stent insertion. He experienced no events of unstable angina during the current episode of care.

Final Diagnosis: CAD with unstable angina

Procedure: PTCA (x2)

I25.10 (M) Atherosclerotic heart disease of native coronary artery
I20.0 (3) Unstable Angina (optional)

**Rationale:** Treatment was aimed at the underlying disease. While the patient has had unstable angina prior to admission, there was no episode of unstable angina during the current episode of care. A history of angina with no documented episode occurring during the patient’s stay in hospital is simply a risk factor and may be recorded at the facility’s discretion with a diagnosis type (3).

**Example:** A patient with known CAD is admitted with unstable angina. He was stabilized and transferred to another hospital for coronary angiogram and possible CABG.

Procedure: PTCA (x2)

I20.0 M Unstable Angina
I25.10 3 Atherosclerotic heart disease of native coronary artery

**Rationale:** Treatment was aimed at the unstable angina only.

See also the coding standard entitled *Underlying Symptoms or Conditions.*
Chapter IX—Diseases of the Circulatory System

Acute Myocardial Infarction  
In effect 2001, amended 2003, 2006

A myocardial infarction (MI) specified as acute has a stated duration of 4 weeks (28 days) or less from onset.¹

Classify a myocardial infarct of overlapping sites to the myocardial infarct of “other sites” category.

Assign a code from the category I22.— Subsequent myocardial infarction to capture a repeat infarction within the acute phase (28 days) of the initial infarction or an extension of the initial infarct occurring within the 28 day period. Assign diagnosis type according to the diagnosis typing definitions (see also the coding standard entitled Diagnosis Typing Definitions).

Example:  
Acute transmural myocardial infarction involving the anterolateral and inferolateral wall.  
I21.2  
Acute transmural myocardial infarction of other sites

Example:  
Mrs. P, a 63-year old woman was brought in by ambulance to the hospital because she sustained an acute subendocardial myocardial infarction of the anterior wall. Dr. Fine saw her in consultation and she was admitted to the Coronary Care Unit (CCU). On her fourth day in CCU, she sustained a further myocardial infarction.

I21.40  
(M)  
Acute subendocardial myocardial infarction of anterior wall

I22.9  
(2)  
Subsequent myocardial infarction of unspecified site

Rationale:  
Because the subsequent MI occurred within 28 days, I22.9 is assigned. Since the subsequent MI occurred after admission, it is assigned diagnosis type (2).

Example:  
Mr. R was treated and discharged from hospital with an acute transmural myocardial infarction of the inferolateral wall. Two days following discharge, he was readmitted with an acute myocardial infarction of the posterolateral and posteroseptal wall.

I22.8  
(M)  
Subsequent myocardial infarction of other sites

I21.1  
(3)  
Acute transmural myocardial infarction of inferior wall (optional)

Rationale:  
Note that I22.8 would not be assigned if the previous MI was >28 days old, therefore, I21.— is inherent in I22.8. It is optional to code, if coded, assign diagnosis type (3).
Chapter IX—Diseases of the Circulatory System

Assign a code from the category I23.– Certain current complications following acute myocardial infarction for specified complications that occur during the acute phase of a myocardial infarction.

Do not assign an additional code when these complications occur concurrently with the infarction as they are included in the acute myocardial infarction code.

These complications usually occur within 2–7 days post acute myocardial infarction (AMI) but this does not preclude the use of these codes when the condition is documented as a current complication following AMI or the MI is within 28 days.

**Example:**
Ms. S was admitted from the emergency department directly to the coronary care unit. She was diagnosed with a transmural AMI of the inferior wall. Two days later she suffered postmyocardial infarction angina.

Diagnosis: Acute myocardial infarction of inferior wall
Postmyocardial infarction angina

I21.1 (M) Acute transmural myocardial infarction of inferior wall
I23.82 (2) Postmyocardial infarction angina as current complication following acute myocardial infarction

Assign I24.0 Coronary thrombosis not resulting in myocardial infarction to classify terms such as missed MI, aborted MI or averted MI.

**Example:**
Patient was admitted with shortness of breath and chest pain. Tests showed coronary thrombosis. She was diagnosed with a missed MI.

I24.0 (M) Coronary thrombosis not resulting in myocardial infarction

Assign I25.2 Old myocardial infarction (i.e. “history of MI”) optionally, as a diagnosis type (3), only when BOTH of the following criteria apply:

- The previous myocardial infarction occurred more than 4 weeks (28 days) ago and
- The patient is not currently receiving observation, evaluation, or treatment for the previous myocardial infarction.

**Example:**
Patient was admitted for a hemicolectomy. Physician documented a past history of myocardial infarction based on ECG investigations. No treatment was directed towards the healed infarct.

I25.2 (3) Old myocardial infarction (optional)

Acute Coronary Syndrome

Acute coronary syndrome is actually a spectrum of conditions which includes:

- Unstable angina
- Nontransmural myocardial infarction (STEMI or nonSTEMI, see below)
- Transmural myocardial infarction (STEMI or nonSTEMI, see below)

A diagnosis of Acute Coronary Syndrome is classified according to the most specific diagnosis documented in the record (see also the coding standard entitled Specificity).

ST segment elevation refers to changes noted on the electrocardiogram (EKG). A myocardial infarction with ST segment elevation may be described as an ST elevation MI (STEMI). A myocardial infarction with no ST segment elevation may be described as a nonST segment elevation MI (nonSTEMI). The presence (STEMI) or absence (nonSTEMI) of the elevated ST segments determines the clinical treatment of the patient, but cannot currently be classified in ICD-10-CA.

STEMI and nonSTEMI are often recorded as admission diagnoses and in some cases, an MI may have been averted. By the time of discharge, it should be determined whether or not the patient has experienced a true MI, or if an MI has been prevented by the use of thrombolytic therapy.

Transmural or Q-wave infarctions are those where necrosis reaches the epicardium or full thickness of the myocardium. Subendocardial infarctions affect a partial thickness of the wall of the heart and may also be described as nontransmural or nonQwave. The terms STEMI and nonSTEMI are not always an indicator of transmural or nontransmural infarction. In ICD-10-CA, myocardial infarctions are identified as transmural or nontransmural, if this detail has not been provided in the documentation, the record should be referred to the physician for clarification. The assignment of I21.9 Acute myocardial infarction, unspecified should be avoided.

**Example:** Mrs. M is admitted in chest pain and no ST segment elevation on her ECG. The admission diagnosis is nonSTEMI acute coronary syndrome. There was no elevation of her troponins or cardiac enzymes and the final diagnosis was recorded as unstable angina.

I20.0 (M) Unstable angina

**Example:** Mr. P is admitted in chest pain with ST segment elevation on his ECG. The admission diagnosis is STEMI. He was given thrombolytic therapy. Cardiac enzymes indicate myocardial damage. The final diagnosis is recorded as STEMI acute subendocardial myocardial infarction, inferior wall.

I21.41 (M) Acute subendocardial myocardial infarction of inferior wall
Mr. E is admitted in chest pain and has ST segment elevation on his ECG. He was given thrombolytic therapy. The admission diagnosis is STEMI. He was treated in CCU for 3 days and discharged after 5 days. The final diagnosis is recorded as STEMI.

Example:

I21.9  (M)  Acute myocardial infarction, unspecified

Rationale: There is no way to specifically classify STEMI. Since no further documentation is provided to indicate whether this was transmural or nontransmural, nor indication of the myocardial wall, the record should be returned to the physician for clarification. In the absence of further detail, it can only be classified to acute myocardial infarction, unspecified.

Mrs. G is admitted in chest pain and has no ST segment elevation on her ECG. The admission diagnosis is nonSTEMI. She was treated in CCU for 24 hours and discharged the following day. The final diagnosis is recorded as Acute Coronary Syndrome.

Example:

I24.9  (M)  Acute ischaemic heart disease, unspecified

Rationale: As in all cases, only the discharge diagnosis is captured. Since this leads to an unspecified category, the record should be returned to the physician to determine whether a more specific diagnosis was made.

Acute Myocardial Infarctions Complicating Surgery and the Peri-Operative Period

A post-operative acute myocardial infarction is not a functional disturbance of the heart. It denotes a localized area of ischemic necrosis of the myocardium produced by an interruption of blood supply to the area. The ICD-10-CA codes are site specific and they are reflective of the areas where the structural damage of the heart muscle has occurred.

Select I21.— Acute myocardial infarction, as a diagnosis type (2) for a myocardial infarction complicating surgery or occurring in the immediate post/peri-operative period (i.e. either in the operating room or during the subsequent post-operative monitoring period of 96 hours following the patient’s departure from the operating room).

Assign an external cause code from the category Y83 or Y84 to identify the relationship between the infarction and the procedure.

Note: Do not assign a code from T80–T88 Complications of surgical and medical care, not elsewhere classified nor I97.— Postprocedural disorders of circulatory system, not elsewhere classified since it is not possible to determine if this is a complication of the surgical procedure or a natural progression (possibly expedited) of a disease process culminating in a sudden acute event.

Example: Mrs. T, a 63-year old woman, was brought in for elective total abdominal hysterectomy. While in the Recovery Room, she sustained a Non-Q-wave myocardial infarct of the anterior wall. Dr. Goodheart saw her in consultation and she was admitted to the Coronary Care Unit (CCU).

I21.40  (2)  Acute subendocardial myocardial infarction of anterior wall

Y83.6  (9)  Surgical operation for removal of other organ (partial) (total) as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure.
Acute Myocardial Infarction Occurring in the Post Procedural Period

Select I21.– **Acute myocardial infarction**, for an initial myocardial infarction occurring during hospitalization, in the post-procedural period (i.e. > 96 hours following completion of the surgical intervention). This diagnosis should be recorded as a post-admit comorbid condition—diagnosis type (2).

Assign a code from the category I22.– **Subsequent myocardial infarction** to capture a repeat infarction within the acute phase of the initial infarction or an extension of the initial infarct also occurring within the 28 day period. Base diagnosis typing on the diagnosis typing definitions (see also the coding standard entitled *Diagnosis Typing Definitions*).

Do not assign an external cause code for an acute myocardial infarction (initial or subsequent) occurring > 96 hours after a surgical intervention, unless specified as a complication of surgery by the physician.

**Example:** Mrs. U is a 63-year old woman who sustained a Non-Q-wave myocardial infarct of the anterior wall. Once her condition was stabilized, a triple coronary artery bypass graft was performed. On the second day following surgery, she sustained a further myocardial infarction.

I25.10 (M) Atherosclerotic heart disease of native coronary artery
I21.40 (1) Acute subendocardial myocardial infarction of anterior wall
I22.9 (2) Subsequent myocardial infarction of unspecified site
Y83.2 (9) Surgical operation with anastomosis, bypass or graft

**Example:** Mr. M, a 58-year old gentleman, underwent a radical prostatectomy. Five-days post surgery, while he was still an inpatient, he developed severe chest pains. He was diagnosed as having sustained an acute myocardial infarction.

I21.9 (2) Acute myocardial infarction, unspecified

**Rationale:** No external cause code is required since the myocardial infarction occurred more than 96 hours following surgery and there is no physician documentation linking the surgery to the infarct.
Chronic Ischemic Heart Disease

Chronic ischemic heart disease is also described as arteriosclerotic heart disease, atherosclerotic heart disease (ASHD), coronary artery disease (CAD) or coronary atherosclerosis and is coded to I25.1—Atherosclerotic heart disease. I25.0 Atherosclerotic cardiovascular disease, so described is only used for atherosclerotic cardiovascular disease (ASCVD) when it is so documented by the physician. In advanced disease, ASHD is often accompanied by angina (see also the coding standard entitled Angina).

Related Interventions

Coronary Artery Bypass Graft (CABG) is classified in CCI to the rubric 1.IJ.76.^^ Bypass, coronary arteries. The tissue used for the bypass is captured as the qualifier. The saphenous vein is considered a free graft whereas the internal mammary artery is a pedicled graft. When pedicled and free autografts are used, the qualifier for combined grafts should be selected.

Harvesting of the vessel used for the bypass is coded (e.g. saphenous vein or radial artery) whenever a separate incision is made to obtain it (see also the coding standard entitled Procurement or Harvesting of Tissue for Closure, Repair or Reconstruction).

Note: It is mandatory to record the number of arteries bypassed in the extent attribute field.

When cardiopulmonary bypass or endarterectomy is performed with coronary artery bypass graft, assign an additional CCI code to capture the procedure.

Cardiopulmonary bypass affects Case Mix Group (CMG) assignment.

Other procedures such as hypothermia, cardioplegia, insertion of pacing wires and chest tube insertions are an inherent part of the bypass surgery and do not need to be coded separately.

Example: Internal mammary artery bypass graft of the left anterior ascending artery and saphenous vein bypass graft of the proximal posterior descending artery. Extracorporeal heart-lung bypass was used and cardioplegia was achieved. Epicardial pacing wires were placed and a chest tube was inserted.

1.IJ.76.LA-XX-Q Bypass coronary arteries, open approach, using combined sources of tissue [e.g. graft/pedicled flap] Extent Attribute: 2
1.LZ.37.LA-GB Installation of external appliance, circulatory system NEC, cardio-pulmonary bypass (intraoperative)
1.KR.58.LA Procurement, veins of leg NEC, using open approach

Rationale: Extracorporeal bypass is coded because it affects CMG assignment, but pacing wires and chest tube insertion are not.
When a patient has a current MI and undergoes angioplasty or bypass surgery during the same admission, assign a code for both the MI and any underlying coronary artery disease. Assign diagnosis type according to the *Diagnosis Typing* standard.

Since both the acute condition and the underlying coronary artery disease have been treated, selection of MRDx will depend on the individual circumstances of the case. When it is difficult to determine which condition consumed the greatest resources follow the coding standard entitled *Diagnoses of Equal Importance*.

**Example:** Patient was admitted with an acute transmural anterolateral wall myocardial infarction. He was admitted to the CCU. On the sixth day, he underwent PTCA with stent insertion and was discharged the following day. Patient has had no previous bypass surgery.

- **I21.0 (M)** Acute transmural myocardial infarction of anterior wall
- **I25.10 (1)** Atherosclerotic heart disease of native coronary artery

**Rationale:** In this example, the six-day stay in CCU was estimated to be more resource intensive than the PTCA, thus the acute MI was selected as the MRDx. As the CAD was also treated, it meets the criteria for comorbidity.

**Example:** Patient was admitted with an acute transmural anterolateral wall myocardial infarction. He was admitted to the Coronary Care Unit. On the third day, he underwent PTCA with stent insertion and was discharged three days later. Patient has had no previous bypass surgery.

- **I25.10 (M)** Atherosclerotic heart disease of native coronary artery
- **I21.0 (1)** Acute transmural myocardial infarction of anterior wall

**Rationale:** In this example, the resource use for treatment of the CAD were estimated to exceed the resources required for treatment of the AMI. Assess each case on an individual basis and consider the definition of MRDx which states “If there is more than one such condition, the one held most responsible for the greatest portion of the length of stay or greatest use of resources (i.e. operating room time, investigative technology, etc.) is selected.”

**Example:** Patient was admitted with an acute transmural anterolateral wall myocardial infarction. He was admitted to the Coronary Care Unit. On the fifth day, he underwent CABG and was discharged 5 days later. Patient has had no previous bypass surgery.

- **I25.10 (M)** Atherosclerotic heart disease of native coronary artery
- **I21.0 (1)** Acute transmural myocardial infarction of anterior wall

**Rationale:** In this case, the treatment of the coronary artery disease meets the criteria for MRDx
Complications of coronary artery bypass grafts (CABG) that may occur following surgery include postoperative hypertension, cardiac arrhythmias, hemorrhage and wound infections (of either the sternal wound or the procurement area, e.g. leg or arm). Procedural complications of PTCA include arrhythmias, hemorrhage at the puncture site and contrast reactions. Cerebrovascular accidents may also occur following both types of interventions (see also the coding standard entitled Post-Procedural Conditions and Complications).

Occlusion Following CABG

The success of coronary artery bypass graft varies depending on whether the revascularization was performed using saphenous vein graft or a pedicled artery. Saphenous vein grafts are prone to occlusive disease. By 10 years after surgery, 50% have closed, mainly because of atherosclerosis. In contrast, the internal mammary artery is less affected by atherosclerosis and has a 90% patency rate after 10 years.

Different processes can cause saphenous vein graft occlusion. These processes include:

- Thrombosis accounts for graft failure within the first month but continues to occur as long as 1 year after surgery. Graft thrombosis is classified in ICD-10-CA to T82.8 Other complications of cardiac and vascular prosthetic devices, implants and grafts.

- Vein graft atherosclerosis may begin as early as the first year but is fully developed after about 5 years. Saphenous vein graft atherosclerosis is classified to I25.11 Atherosclerotic heart disease of autologous vein bypass graft.  

CIHI has sought clinical advise for classification of occluded coronary artery bypass grafts when documentation is ambiguous.

<table>
<thead>
<tr>
<th>When coronary artery bypass graft occlusion is stated as due to thrombosis or when it occurs within one month of surgery, assign T82.8 Other complications of cardiac and vascular prosthetic devices, implants and grafts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>When coronary artery bypass graft occlusion is stated as due to atherosclerosis (or atheroma) or occurs one year after surgery, assign a code from I25.1– Atherosclerotic heart disease.</td>
</tr>
<tr>
<td>When the cause of coronary artery bypass graft occlusion is not stated and occlusion occurs between one month and one year after surgery, seek clarification from the physician.</td>
</tr>
</tbody>
</table>

**Example:**

Patient is admitted for occlusion of his previous saphenous vein coronary artery bypass graft. The graft surgery was done almost 6 years previously.

I25.11 Atherosclerotic heart disease of autologous vein bypass graft

**Example:**

Patient is readmitted 2 weeks following CABG due to a thrombus within the newly placed graft.

T82.8 Other complications of cardiac and vascular prosthetic devices, implants and grafts.

Y83.2 Surgical operation with anastomosis, bypass or graft

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Cardiac Arrest

Assign I46.0 Cardiac arrest with successful resuscitation or I46.9 Cardiac arrest, unspecified only when a resuscitative intervention is undertaken (regardless of outcome) and it is not occurring as a post-procedural event.

Assign I46.1 Sudden cardiac death, so described only when specifically documented as such by the physician.

When cardiac arrest occurs as an expected terminal event in hospital and no resuscitation is attempted, code only the underlying condition.

When cardiopulmonary resuscitation (CPR) is performed, assign the appropriate CCI code regardless of outcome.

When defibrillation or open cardiac massage is performed with or following CPR, assign 1.HZ.09.^^ Stimulation, heart NEC only.

When CPR is performed without defibrillation or open cardiac massage, assign 1.HZ.30.^^ Resuscitation, heart NEC.

Assignment of 1.HZ.30.^^ Resuscitation, heart NEC and 1.HZ.09.^^ Stimulation, heart NEC is mandatory as it is included on the Flagged Intervention List (see also the coding standard entitled Selection of Interventions to Code From Section 1).

**Example:** An 80-year old woman called 911. When ambulance crew arrived, she was found vital signs absent. At the hospital, the Emergency Room physician pronounced her dead and documented “Sudden cardiac death” on the death certificate.
I46.1 Sudden cardiac death, so described

**Example:** An AIDS patient with disseminated aspergillosis was terminally ill. There was a “do not resuscitate” (DNR) order on the chart. The physician documented that the patient arrested at 11:45 and he was subsequently pronounced dead.
B24 (M) Human Immunodeficiency virus [HIV] disease
B44.7 (1) Disseminated aspergillosis

**Rationale:** Cardiac arrest is not coded, only the underlying condition is coded.

**Example:** A 40-year old man arrested in ER. Cardiopulmonary resuscitation (CPR) with external manual compression was initiated and was successful. The patient reverted to normal sinus rhythm.
I46.0 Cardiac arrest with successful resuscitation
1.HZ.30.JN Resuscitation, heart NEC, with external manual compression

**Example:** A 52-year old lady had a cardiac arrest. Code blue was called. CPR was started and the defibrillator was used. Resuscitation efforts were subsequently stopped and the patient was declared dead at 21:00 hours.
I46.9 Cardiac arrest, unspecified
1.HZ.09.JA-FS Stimulation, heart NEC, using electrode converter/defibrillator, external approach
Cardiac Arrest Complicating Surgery

When cardiac arrest occurs in the immediate post/perioperative period (either in the operating room/intervention room or during the first 96 hours following the patient’s departure from the operating room/intervention room) following either cardiac or noncardiac surgery, assign T81.88—Other complications of procedures, not elsewhere classified.

When the code title of a post procedural condition or a complication of surgery or medical care does not fully describe the problem (e.g. cardiac arrest), assign an additional code, optionally as a diagnosis type (3), to provide more detail regarding the nature of the condition. Sequence (“sandwich”) the code between the T-code and the external cause code.

Example: Patient was admitted for an on pump mechanical valve replacement. She arrested on the operating table during surgery. An open cardiac massage was performed. The surgeon documented intraoperative cardiac arrest. Unfortunately, the patient died in the operating room.

T81.88 (2) Other complications of procedures, not elsewhere classified
I46.9 (3) Cardiac arrest, unspecified (recommended sandwich code)
Y83.1 (9) Surgical operation with implant of artificial internal device
1.HU.90.LA–CF Excision total with reconstruction, mitral valve, open approach, with mechanical valve
1.LZ.37.LA–GB Installation of external appliance, circulatory system NEC, extracorporeal circulation device
1.HZ.09.LA–CJ Stimulation, heart NEC, open approach, using open manual massage
Chapter IX—Diseases of the Circulatory System

Other Postoperative Cardiac Arrest

Select I97.8– Other post-procedural disorders of circulatory system, NEC for a cardiac arrest with or without successful resuscitation, occurring during hospitalization in the post-procedural period, (after the post-operative monitoring is complete, i.e. between day 5–15 following surgery).

Record an appropriate external cause code from Y83–Y84, when there is a definite link between the surgery performed and the cardiac arrest. Documentation in the medical record must support the cause-effect relationship.

Do not code symptoms leading to cardiac arrest, e.g. hypotension, bradycardia, etc.

Do not assign a code from the category I97 and T81.88 to capture the same cardiac arrest.

**Example:** Patient underwent emergency surgery. On day five following surgery she developed bradycardia and went into cardiac arrest. There was a “do not resuscitate” (DNR) order on the chart. She passed away peacefully at 10:43 a.m. The physician recorded “post-op cardiac arrest”.

I97.8   (2)   Other post-procedural disorders of circulatory system, not elsewhere classified
I46.9   (3)   Cardiac arrest, unspecified (recommended sandwich code)
Y83.1   (9)   Surgical operation with implant of artificial internal device

**Rationale:** An external cause code is assigned because the physician documented it as a postoperative condition.

**Example:** Patient underwent a partial nephrectomy. On day eight following surgery he went into cardiac arrest. He was resuscitated and admitted to the special care unit.

I97.8   (2)   Other post-procedural disorders of circulatory system, not elsewhere classified
I46.9   (3)   Cardiac arrest, unspecified (recommended sandwich code)

**Rationale:** An external cause code is not required since the cardiac arrest occurred more than 96 hours following surgery and there is no documented linkage between the complication and the surgery.
Strokes, Cerebrovascular Accidents (CVA) and Transient Ischemic Attacks (TIA)  

For clinical information, see Appendix A.

Current Stroke

Code stroke as the current condition, classifiable to I60–I68, during the initial episode of care for the stroke. This includes both the acute care hospitalization and any subsequent transfer for rehabilitation to another facility to continue treatment of the associated neurological deficits.

Classify a second stroke or re-infarction that occurs after admission to hospital as a diagnosis type (2).

Assign an external cause code for a postoperative stroke when:

- the stroke occurs in the immediate post-operative period or during the subsequent postoperative monitoring period of 96 hours following the patient’s departure from the operating room or when the physician documents the stroke as “postoperative” or “post-procedural”.

A stroke may continue to worsen or progress several hours to a day or two as a steadily enlarging area of brain tissue dies (stroke in evolution). When a stroke is described as progressing or evolving, an additional code is not assigned.

Note: For a postoperative stroke, do not assign a code from T80–T88 Complications of surgical and medical care, not elsewhere classified nor I97.– Postprocedural disorders of circulatory system, not elsewhere classified since it is not possible to determine if this is a complication of the surgical procedure or a natural progression (possibly expedited) of a disease process culminating in a sudden acute event.

Note: When any code from the range I60–I64 is recorded on an abstract, code G45.9 Transient cerebral ischemic attack, unspecified must not be recorded on the same abstract.

Example: A person is admitted through the emergency room with a cerebral infarction.
I63.9 (M) Cerebral infarction

Example: Same person is now transferred from acute care to rehabilitation to regain activities of daily living (ADL) and to improve speech. Deficits are dominant-sided hemiplegia and aphasia.
Z50.8 (M) Rehabilitation in activities of daily living (ADL)
I63.9 (3) Cerebral infarction, unspecified (for cerebral infarction occurring two weeks ago)
G81.90 (1) Hemiplegia of unspecified type of dominant side
R47.0 (1) Dysphasia and aphasia
Mrs. B was admitted with a cerebral infarction due to an embolism. She was seen by a cardiologist and found to have atrial fibrillation and anticoagulants were started. She was receiving intense physiotherapy for left-sided hemiplegia (patient is right-handed). On the 10th day after admission, she suffered a second stroke due to an embolism of the cerebral arteries.

Example:  
I63.4  (M)  Cerebral infarction due to embolism of cerebral arteries  
I48.0  (1)  Atrial fibrillation  
G81.91 (1)  Hemiplegia of unspecified type of non-dominant side  
I63.4  (2)  Cerebral infarction due to embolism of cerebral arteries  

See also the coding standard entitled Neurological Deficits Following a Stroke.

Sequelae of Cerebrovascular Disease

Select a code from I69.– Sequelae of cerebrovascular disease to classify conditions in I60–I67 as the cause of sequelae (i.e. a continuing neurological deficit).

When there is no longer any neurological deficits present assign Z86.7 Personal history of diseases of the circulatory system, optionally, as a diagnosis type (3) (see also the coding standard entitled Sequelae).

Example:  
Six months post-stroke, a person is admitted to hospital with aspiration pneumonia secondary to dysphagia which is present despite rehabilitation efforts.

J69.0  (M)  Pneumonitis due to food and vomit  
R13.8  (3)  Other and unspecified dysphagia  
I69.4  (3)  Sequelae of stroke, not specified as hemorrhage or infarction  

Example:  
Three months post-stroke a person is admitted to hospital with a broken right hip due to a stumble in the house. This person still has residual hemiparesis.

S72.090  (M)  Unspecified fracture of neck of femur, closed  
W01    (9)  Fall on same level from slipping, tripping and stumbling  
U98.0  (9)  Place of occurrence, at home  
G81.99 (3)  Hemiplegia of unspecified type of unspecified [unilateral] side  
I69.4  (3)  Sequelae of stroke, not specified as hemorrhage or infarction

Example:  
Patient admitted for treatment of focal seizure disorder (simple partial seizures)—a late effect of his stroke.

G40.1  (M)  Localization-related (focal)(partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures  
I69.4  (3)  Sequelae of stroke, not specified as hemorrhage or infarction

Related Interventions

Once stroke is suspected, a computed tomography scan (CT scan) or magnetic resonance imaging (MRI) scan may be performed to distinguish a stroke caused by blood clot from one caused by hemorrhage, a critical distinction that guides therapy.

Emergency treatment of stroke from a blood clot is aimed at dissolving the clot. Thrombolytic therapy is coded in CCI using 1.ZZ.35.HA-C1 Pharmacotherapy, total body NEC, percutaneous approach [intramuscular, intravenous, subcutaneous, intradermal], using antithrombotic agent (see also the coding standard entitled Thrombolytic Therapy).
Other aggressive treatment options include:

- Intracranial angioplasty 1.JW.50.^
- Intracranial thrombectomy 1.JW.57.^
- Bypass, IC to IC vessels 1.JW.76.^

When the cause of stroke is hemorrhage, an evacuation procedure may be carried out (e.g. 1.AA.52.^

An extensive number of occupational and rehabilitation assessment and therapy codes exist in CCI. These are not mandatory for routine data collection. For example, gait training is coded in CCI to 1.VZ.02.^

**Vascular Syndromes of Brain in Cerebrovascular Diseases**

Whenever a vascular syndrome is the cause of the stroke, follow the dagger/asterisk convention.

When a vascular syndrome is the cause of a stroke, all the codes in the range I60–I67† become dagger codes requiring the selection of an asterisk code from the category G46.–*

**Vascular syndromes of brain in cerebrovascular diseases** (see also the coding standard entitled *Dagger/Asterisk Convention*).

**Example:** Stroke due to brain stem hemorrhage resulting in Millard-Gubler syndrome.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I61.3</td>
<td>Intracerebral hemorrhage in brain stem</td>
</tr>
<tr>
<td>G46.3</td>
<td>Brain stem stroke syndrome (I60–I67†)</td>
</tr>
</tbody>
</table>

**Rationale:** Millard-Gubler syndrome is an inclusion term under G46.3.

**Peripheral Vascular Disease**

Peripheral vascular disease (or peripheral arterial disease) is a nonspecific term. However, research indicates that this phrase is used to describe atherosclerotic disease of the peripheral arteries. Common manifestations of advanced/occlusive atherosclerosis of the extremities may be ischemia of the limbs, ulcers and gangrene. Peripheral atherosclerosis is a common complication of diabetes mellitus (see also the coding standard entitled *Diabetes Mellitus*).

**Classify a diagnostic statement of “peripheral vascular disease” to I70.2 Atherosclerosis of arteries of extremities unless there is documentation to indicate anything else was intended.**

**Note:** Atherosclerotic gangrene is an inclusion at I70.2.
**Example:** Mr. P a 65-year old patient was admitted electively for arteriography of the lower limbs. He had been experiencing dull cramping pain in his thigh and he noticed that his symptoms were precipitated by walking and were relieved by rest. He had a history of hypertension and no history of diabetes. The physician documented the diagnosis as “PVD”. The arteriogram demonstrated occlusions within the left femoral artery system.

I70.2 (M) Atherosclerosis of arteries of extremities

**Exception:** Peripheral vascular disease without gangrene in a patient with diabetes is classified to E10-E14 with fourth and fifth characters .50 and the asterisk code I79.2*

Peripheral angiopathy in diseases classified elsewhere.

Peripheral vascular disease with gangrene in a patient with diabetes is classified to E10-E14 with fourth and fifth characters .51 and the asterisk code I79.2*

Peripheral angiopathy in diseases classified elsewhere.

Follow the Alphabetic Index lookup for Angiopathy, peripheral, diabetic.

See also the coding standard entitled *Diabetes Mellitus*.

**Example:** A Type 2 diabetic patient was admitted for treatment of peripheral vascular disease (PVD). He underwent iliac artery angioplasty and stenting.

E11.50† Type 2 diabetes mellitus with peripheral angiopathy

I79.2* Peripheral angiopathy in diseases classified elsewhere

**Related Interventions**

Percutaneous transluminal angioplasty (PTA) with or without stent insertion is classified at “dilation” by site. Coding arteriograms performed with the angioplasty is optional.

Endarterectomy is sometimes done locally to improve outflow and is classified at “extraction” by site.

Bypass grafting may also be performed for revascularization of a limb. When an artery is bypassed, it is coded to the anatomic site in which it originates. The terminating site of the graft is captured in the qualifier component of the code (see also the coding standard entitled Procurement or Harvesting of Tissue for Closure, Repair or Reconstruction).

**Example:** Aorto-femoral bypass graft using saphenous vein—originates in the aorta

1.KA.76.MZ-XX-A Bypass, abdominal aorta, terminating at lower limb vessels [e.g. iliac, femoral, popliteal, tibial], using autograft [e.g. saphenous vein]

1.KR.58.LA Procurement, veins of leg NEC, using open approach

Amputation (93) may be performed if attempts at revascularization fail. The intervention is classified to “amputation” when an incision is made through a bone and to “disarticulation” when the incision is made through a joint.

Debridement of bone performed at a previous amputation site is coded to amputation of the same site with a status attribute “R” for revision.
Aneurysms

An aneurysm is an abnormal local dilatation in the wall of a blood vessel, causing an abnormal widening or ballooning of a blood vessel, usually an artery, due to a defect, disease, or injury.

Aneurysms may be treated surgically in one of five ways:
1. Repair (reinforcement of the aneurysm wall)—Repair (80)
2. Repair with graft insertion—Repair (80)
3. Resection with graft replacement—Excision, partial (87)
4. Clipping and using [detachable] coils—Occlusion (51)
5. Filipuncture or wiring—Destruction (59)

When an aortic aneurysm is incised and a Dacron (or other) tubular or bifurcated graft is inserted into the vessel and then covered with the residual sac of the aneurysm (aneurysmorrhaphy), assign the appropriate CCI code indicating “repair with graft insertion”. These are:

- 1.KA.80.^^ Repair, abdominal aorta
- 1.ID.80.^^ Repair, aorta NEC
- 1.IC.80.^^ Repair, thoracic [descending] aorta or to another site, depending on the location of the graft/aneurysm.

Example: Patient was admitted with an abdominal aortic aneurysm. It was repaired by opening up the aneurysmal sac and sewing a prosthetic Dacron graft into position within the aorta. The wall of the aneurysm was then sewn over the graft to protect it.

1.KA.80.LA-XX-N Repair, abdominal aorta using open approach with synthetic material [e.g. Teflon felt, Dacron, Nylon, Orlon]

When an aortic aneurysm is excised and the aortic segment is replaced with a tubular or bifurcated Dacron (or other) graft (aneurysmectomy), assign the appropriate CCI code indicating “excision partial of the aortic segment with graft replacement”. These are:

- 1.KA.87.^^ Excision partial, abdominal aorta
- 1.ID.87.^^ Excision partial, aorta NEC
- 1.IC.87.^^ Excision partial, thoracic [descending] aorta depending on the location of the graft/aneurysm.

Example: Patient came in to hospital for an elective repair of a thoracoabdominal aortic aneurysm. The aneurysm was excised and a synthetic graft was inserted to replace the excised portion of the thoracoabdominal aorta.

1.ID.87.LA-XX-N Excision partial, aorta NEC, open approach (for aorta NOS), using synthetic material
When aneurysms of cerebral and precerebral arteries are treated surgically by clipping or clamping, select the CCI generic intervention of “occlusion” (51).

Clips are applied externally to the artery in order to clamp it. Coils are inserted internally into an artery and are used to occlude an artery. The mandatory extent attribute applies to the number of coils deployed during an occlusion and is applicable for two codes only. They are 1.JE.51.GQ–GE Occlusion, carotid artery, using percutaneous transluminal approach and [detachable] coils and 1.JE.51.LA–GE Occlusion, carotid artery, using open approach and [detachable] coils. When occlusion of the carotid artery is performed using technique/device other than coils, select “0”.

**Example:** A 45-year old patient was admitted with epistaxis. Radiological studies showed an external carotid artery aneurysm. The patient was taken to the operating room for clipping of the aneurysm.

1.JE.51.LA-FF Occlusion, carotid artery, using open approach and clip

**Extent** = 0

---

**Post-Operative Atrial Fibrillation**

In effect 2002, amended 2003, 2006

The WHO considers all conditions classified in the range I44.– to I50.– to be functional disturbances of the heart. The word “functional” is sometimes printed in brackets because it is treated as a non-essential modifier according to the ICD-10 coding convention. Post-operative atrial fibrillation is considered a “functional disturbance” of the heart (see also the coding standard entitled *Post-Procedural Conditions and Complications*).

When atrial fibrillation follows open cardiac surgery and

- occurs as a complication of surgery (i.e. within 96 hours)
- occurs in the post-procedural period (i.e. 96 hours to 15 days following departure from the operating room)
- is specified by the physician as due to cardiac surgery

assign:

- I97.1 Other functional disturbances following cardiac surgery
- I48.0 Atrial fibrillation

There is no time limit specified for using the code I97.1 Other functional disturbances following cardiac surgery. It can be used when the atrial fibrillation occurs in the immediate postoperative period (within 96 hours of the procedure) or at a later time following the cardiac surgery.

When atrial fibrillation occurs within 96 hours following open-heart surgery or when the atrial fibrillation is documented as arising due to the open-heart surgery, assign a code from Y83.– Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure.
External cause codes are not required when a condition arises >96 hours after the patient has left the operating room and there is no documented evidence of any relationship to the procedure. Such a condition may not be assumed as DUE to the surgery. Medical documentation within the health record must be present to support any cause and effect relationship (see also the coding standard entitled *Post-Procedural Conditions and Complications*).

**Example:** Mr. AF was admitted for coronary artery bypass surgery. Twenty-four hours following surgery he developed atrial fibrillation. He was kept in ICU for two additional days because of atrial fibrillation.

I97.1    (2) Other functional disturbances following cardiac surgery  
I48.0    (3) Atrial fibrillation  
Y83.2    (9) Surgical operation with anastomosis, bypass or graft

**Example:** A patient was admitted for coronary artery bypass surgery. Five days following surgery he developed atrial fibrillation. He was kept in hospital for two additional days because of the atrial fibrillation.

I97.1    (2) Other functional disturbances following cardiac surgery  
I48.0    (3) Atrial fibrillation

**Example:** A patient with known atrial fibrillation was admitted for coronary artery bypass surgery. Following surgery he had an episode of atrial fibrillation and was monitored in CCU.

I48.0    (1) Atrial fibrillation  

**Rationale:** Since atrial fibrillation was a known condition prior to surgery it is not captured as a complication of surgery, no I-code, T-code or Y-codes are assigned.

---

When atrial fibrillation follows non cardiac surgery and

- occurs as a complication of surgery (i.e. within 96 hours)
- occurs in the post-procedural period (i.e. 96 hours to 15 days following departure from the operating room)
- is specified by the physician as due to surgery

assign:

- I97.8 *Other postprocedural disorders of circulatory system, not elsewhere classified*
- I48.0 *Atrial fibrillation*

When atrial fibrillation occurs within 96 hours following an intervention or when the atrial fibrillation is documented as arising due to surgery, assign a code from Y83.– *Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure.*
**Example:** A patient was admitted for a hip replacement. Five days following surgery the physician noted and documented “she developed postoperative atrial fibrillation”. She was seen in consultation by a cardiologist and antiarrhythmic medication was started.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I97.8</td>
<td>Other post-procedural disorders of circulatory system, not elsewhere classified</td>
</tr>
<tr>
<td>I48.0</td>
<td>Atrial fibrillation</td>
</tr>
<tr>
<td>Y83.1</td>
<td>Surgical operation with implant of artificial internal device</td>
</tr>
</tbody>
</table>

**Example:** This patient was admitted for a splenectomy. Five days following surgery, she developed atrial fibrillation. There was no chart documentation linking the complication to the surgery.

<table>
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<td>Atrial fibrillation</td>
</tr>
</tbody>
</table>

**Rationale:** An external cause code is not selected because there is no physician documentation linking the atrial fibrillation to the surgery.

For clinical information, see *Appendix A*.

**Related Interventions**

Atrial fibrillation and flutter are usually treated with medications and/or electrical shock (cardioversion). In some cases, removal of a small portion of the heart (ablation), implantation of a pacemaker or a cardioverter defibrillator, or maze surgery is needed.

When the heart rate cannot be quickly controlled, electrical cardioversion may be used. Cardioversion, the electric shock to the chest wall, is usually performed in emergency situations. A device briefly suspends the heart’s activity and allows it to return to a normal rhythm.

In CCI, cardioversion is classified to the generic intervention of “stimulation”. The rubric for code selection is 1.HZ.09.^^ *Stimulation, heart NEC* (see also the coding standard entitled *Selection of Interventions to Code From Section 1 and Appendix B*).

Ablation interrupts the electrical pathways that cause the arrhythmia and can be performed by percutaneous catheterization, endoscopic (thoracoscopic) approach or open surgery. Radiofrequency catheter ablation, performed in a cardiac catheterization laboratory, can cure atrial flutter and control the heart rate in atrial fibrillation. This intervention is coded to 1.HH.59.^^ *Destruction, cardiac conduction system*. The cardiac catheterization is captured as the approach in qualifier 1 (see also the coding standard entitled *Diagnostic Imaging Interventions*).
Chapter IX—Diseases of the Circulatory System

Post-Operative Heart Failure

In effect 2002, amended 2006

Heart Failure Complicating Surgery

Assign T81.88 Other complications of procedures, not elsewhere classified for documented heart failure (cardiac or cardiorespiratory failure) that occurs as an early complication of a procedure—i.e. while the patient is in the operating room or during the post-operative monitoring period of 96 hours from the time the patient leaves the operating room/intervention room (see also the coding standard entitled Post-Procedural Conditions and Complications).

When heart failure occurs within 96 hours of an intervention, assign a code from Y83.– Surgical operation and other surgical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure.

Example: Following surgery, a patient was taken to ICU for post-operative monitoring. She developed post-operative congestive heart failure within the first 24 hours.

T81.88 (2) Other complications of procedures, not elsewhere classified
I50.0 (3) Congestive heart failure
Y83.9 (9) Surgical procedure, unspecified, as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure (required code)

Rationale: Documentation within the medical record supports the cause-effect relationship.

Post Procedural Condition

When heart failure occurs in the post-procedural period (>96 hours but <15 days post op) following open-heart surgery OR when heart failure occurs after 15 days post op and is specified by the physician as due to cardiac surgery, assign:

➢ I97.1 Other functional disturbances following cardiac surgery
➢ I50.– Heart failure

When heart failure occurs in the post-procedural period (>96 hours but <15 days post op) following surgery not classified as cardiac surgery, assign:

➢ I97.8 Other postprocedural disorders of circulatory system, not elsewhere classified
➢ I50.– Heart failure

Do not assign an external cause when heart failure occurs anytime after 96 hours unless the physician records it as “post-operative” or “post-procedural” on the patient’s chart.

Ensure T81.88 and I97.1/I97.8 are never used on the same abstract to describe the same condition.
**Example:** Mrs. Z, a 52-year old female, underwent wedge resection of the lung for a malignancy. Her postoperative course was complicated by an episode of post-procedural heart failure that developed on day 6 following surgery (physician documented cause-effect relationship between congestive heart failure and surgery).

I97.8 (2) Other post procedural disorders of circulatory system, not elsewhere classified  
I50.9 (3) Heart failure, unspecified  
Y83.6 (9) Surgical procedure, removal of other organ (partial) (total) as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

**Rationale:** External cause code required anytime the physician documents a cause and effect relationship between the complication and surgery.

**Example:** Mrs. B, a 65-year old female with fracture of shaft of left femur following a fall on ice was treated surgically with open reduction and internal fixation. Her postoperative course was non-contributory except for an episode of congestive heart failure identified on day 8 of her stay. Lasix was added to her treatment (no documented cause-effect relationship between complication and surgery).

I97.8 (2) Other post procedural disorders of circulatory system, not elsewhere classified  
I50.0 (3) Congestive heart failure

**Rationale:** External cause code not required for heart failure occurring 96 hours following surgery without physician documentation.

**Example:** This kidney/pancreas transplant patient was in hospital for a total of 28 days due to multiple complications. One of the complications was congestive heart failure that occurred on day 21 of his hospital stay and required treatment and consultation. There was no physician documentation linking the CHF to the surgery.

I50.0 (2) Congestive heart failure

**Rationale:** This did not occur in the post procedural period and there is no documentation that the condition is linked to surgery.

**Example:** Mr. F, a 72-year old man, has been admitted for treatment of heart failure. The physician states this has been occurring off and on ever since the patient had a valve replacement for his rheumatic valve disease three years ago.

I97.1 (M) Other functional disturbances following cardiac surgery  
I50.9 (3) Heart failure, unspecified  
Y83.1 (9) Surgical operation with implant of artificial internal device as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure (required code)  
Z95.2 (3) Presence of prosthetic heart valve (optional code—for use at facility’s discretion)

**Rationale:** An external cause code is used since the heart failure is documented as a long-term effect due to the presence of a cardiac prosthesis.
Thrombolytic Therapy

Patients presenting with acute cardiac or cerebral ischemia may be given thrombolytic agents such as Streptokinase or Urokinase. The intent is to achieve a re-perfusion of the heart or brain by thrombolysis.

Assign a code for thrombolytic therapy, mandatory, whenever it is administered.

Classify administration of a thrombolytic agent by intravenous infusion to 1.ZZ.35.HA–C1
Pharmacotherapy, total body, percutaneous approach [intramuscular, intravenous, subcutaneous, intradermal], using antithrombotic agent.

Classify injection of a thrombolytic agent into an artery to 1.^^.35.^^ Pharmacotherapy (local), by site, i.e:

- 1.JW.35.HA-C1 Pharmacotherapy (local), intracranial vessels, percutaneous injection approach, using antithrombotic agent
- 1.IL.35.HA-C1 Pharmacotherapy (local), vessels of heart, percutaneous injection approach, of antithrombotic agent

Example: Patient was admitted with left hemiparesis, slurred speech and facial drooping. He was diagnosed with a cerebral infarction. Intravenous Streptokinase was immediately administered.

1.ZZ.35.HA-C1 Pharmacotherapy, total body, percutaneous approach [intramuscular, intravenous, subcutaneous, intradermal], using antithrombotic agent

Example: Patient was admitted electively for percutaneous transluminal angioplasty (PTLA) of the coronary artery. Two culprit arteries were balloon dilated. Thrombolytic agent was injected directly into the coronary artery, femoral artery approach, and angiograms taken.

1.IJ.50.GQ-BD Extent attribute: 2
1.IL.35.HA-C1 Pharmacotherapy (local), vessels of heart, percutaneous injection approach, of antithrombotic agent
3.IP.10.VX Left heart catheterization with fluoroscopy using (retrograde) percutaneous intra arterial approach
Chapter X—Diseases of the Respiratory System

Lobar Pneumonia

When a diagnosis is recorded by the physician as pneumonia, with no stated organism, and X-ray reports document complete consolidation of a lobe, assign J18.1 Lobar pneumonia, unspecified.

When a specific organism is stated as the cause of pneumonia, select the code indicating pneumonia due to the organism.

When the physician documents pneumonia, radiology reports may be used to add specificity (see also the coding standard entitled Using Diagnostic Test Results in Coding).

When pneumonia is stated as “RLL pneumonia”, one cannot assume that this means lobar pneumonia unless there is physician or X-ray documentation to CLEARLY indicate involvement of the entire lobe. Right lower lobe (RLL) pneumonia may simply mean that there is a patchy area or segment of pneumonia within the lower lobe of the lung. Terms such as catarrhal, confluent, diffuse, disseminated (focal), lobular (segmental) and patchy are indicative of bronchopneumonia (J18.0) as per the Alphabetic Index look-ups under Pneumonia. The terms apical, basilar and massive are indicative of lobar pneumonia (J18.1) as per the Alphabetic Index look-ups.

When documentation does not specifically state the organism and neither lobar pneumonia nor bronchopneumonia is recorded, then J18.9 Pneumonia, unspecified must be selected.

Example: A 28-year old male was admitted due to chest pain and the discharge diagnosis is stated as pneumonia. The patient is a heavy smoker of one to two packs daily. His CT scan of the lungs demonstrated he had developed complete consolidation of the left lower lobe and there is also consolidation and partial collapse of the right lower lobe.

J18.1 Lobar pneumonia, unspecified

Example: An elderly patient is admitted from a retirement home with fever, chills and dyspnea. X-ray demonstrated complete consolidation of the left lower lobe. Sputum cultures were done and the physician records the diagnosis as Pneumococcal pneumonia.

J13 Pneumonia due to Streptococcus pneumoniae

Example: An elderly patient is admitted from a retirement home with fever, chills and dyspnea. X-ray demonstrated complete consolidation of the left lower lobe. Sputum cultures were done showing heavy growth of pneumococcus. There was no physician documentation acknowledging the C & S results.

J18.1 Lobar pneumonia, unspecified

Rationale: An X-ray is the report of an interpretation of an MD whereas most lab reports are not. Microbiology results are open to interpretation and include factors such as source of specimen, capture methodology, storage of specimen, length of time between capture and analysis, specific gravity (in the case of urine), etc. A physician’s interpretation of the results is required.

For clinical information, see Appendix A.
Pneumonia in Patients With Chronic Obstructive Pulmonary Disease (COPD)

When COPD presents with pneumonia or any other acute lower respiratory tract infection as the major reason for hospitalization, assign J44.0 *Chronic obstructive pulmonary disease with acute lower respiratory infection.*

When the infection is a significant condition in its own right, such as pneumonia, acute bronchitis or acute bronchiolitis, assign an additional code, as a diagnosis type (1), to specify the type of infection for epidemiological purposes.

Sequence the code for COPD first.

Patients with COPD are generally considered a high risk for pneumonia. When a person with COPD gets a cold, it could develop into bronchitis or pneumonia. The infection could damage the bronchial linings creating a safe haven for bacteria to grow.

**Example:** A 68-year old man with severe COPD contracted the common cold. He was being treated by the family physician for exacerbation of COPD. His condition worsened and he was brought into Emergency. Chest X-ray revealed pneumonia. He was subsequently admitted for treatment of COPD exacerbation and pneumonia.

J44.0 (M) Chronic obstructive pulmonary disease with acute lower respiratory infection

J18.9 (1) Pneumonia, unspecified

**Example:** A patient from a nursing home presented to Emergency with aspiration pneumonia. He has a long-standing history of COPD.

J44.0 (M) Chronic obstructive pulmonary disease with acute lower respiratory infection

J69.0 (1) Pneumonitis due to food and vomit

**Example:** A woman with COPD is admitted and treated with antibiotics for streptococcal pneumoniae. She also receives oxygen and has her corticosteroidal regimen adjusted to manage the obstructive airway changes.

J44.0 (M) Chronic obstructive pulmonary disease with acute lower respiratory infection

J13 (1) Pneumonia due to Streptococcus pneumoniae

**Example:** A woman with COPD is admitted and treated with antibiotics for acute bronchitis.

J44.0 (M) Chronic obstructive pulmonary disease with acute lower respiratory infection

J20.9 (1) Acute bronchitis, unspecified

**Example:** Final diagnosis is recorded as bronchitis in a patient who has COPD.

J44.8 (M) Other specified chronic obstructive pulmonary disease

**Rationale:** J44.0 is not assigned in this example as bronchitis is not specified as acute. Follow the Alphabetic Index for bronchitis, with obstruction.
Classify asthma with onset during childhood (typically to age 16 years) to J45.0—*Predominantly allergic asthma* unless otherwise specified by the physician.

Ensure that asthma is not reported as a post-admit comorbidity, diagnosis type (2).

**Example:** A 14-year old was admitted to hospital suffering from an asthmatic attack. He was placed on bronchodilators.

J45.00  (M)  Predominantly allergic asthma without stated status asthmaticus

**Example:** An 18-year old was admitted to hospital suffering from an asthmatic attack. He was placed on bronchodilators. It was noted in the chart that the young man has had asthma since childhood.

J45.00  (M)  Predominantly allergic asthma without stated status asthmaticus

**Note:** As long as asthma onset is documented as having begun during childhood follow this coding standard. This applies to the adult with chronic asthma that began in childhood and now presents for treatment of asthmatic attacks.

**Example:** A 19-year old man was admitted to hospital suffering from shortness of breath with wheezing. The young man had no previous history of asthma. The patient was placed on bronchodilators. The diagnosis noted in the chart was asthma.

J45.90  (M)  Asthma, unspecified, without stated status asthmaticus

For clinical information, see *Appendix A*.

**Status Asthmaticus**

Status asthmaticus is a severe asthma attack where there is profound and intractable bronchospasm. It is a life-threatening condition with prolonged bronchiolar spasm that cannot be reversed with medication. It is sometimes referred to as “acute severe asthma”. Alternate terms that denote status asthmaticus are “intractable asthma attack”, “refractory asthma”, “severe intractable wheezing” and “airway obstruction not relieved by bronchodilators”. Diagnostic statements of “acute asthma” and “severe asthma” alone do not qualify as status asthmaticus.
Resection of Space-Occupying Lesion (Polyps) of Nose

In effect 2002

Classify resections of space occupying lesions according to the deepest anatomical site from which the lesion is removed. This may be different from the site in which the lesion originates.

Start

Does the lesion extend into the nasopharynx?

Yes

Involves radical nasopharyngectomy?

Yes

Code to 1.FA.91.^^

No

Code to 1.FA.87.^^

No

Does the lesion extend into multiple sinuses (but not as far as the nasopharynx)?

Yes

Involves a radical pansinusectomy?

Yes

Code to 1.EY.91.^^

No

Code to 1.EY.87.^^

No

Does the lesion extend into one sinus only?

Yes

Ethmoid sinus?

Yes

Involves total exenteration?

Yes

Code to 1.EU.89.^^

No

Code to 1.EU.87.^^

No

Sphenoid sinus?

Yes

Code to 1.EV.87.^^

No

Frontal sinus?

Yes

Code to 1.EX.87.^^

No

Maxillary sinus?

Yes

Involves radical antrectomy?

Yes

Code to 1.EW.91.^^

No

End

Code to 1.EW.87.^^

End

Code to 1.ET.87.^^

End

Code to 1.ET.87.^^
Nasal Repairs

Classify nasal repairs according to the anatomical site and the intent of the intervention.

Start

Does repair involve both cartilage and nasal bone(s)*?

Yes

Code to repair of cartilage 1.ES.80.^^
(A turbinate reduction or a turbinectomy may be involved in this procedure but should not be coded separately.)

End

No

Does repair involve repositioning cartilage using cartilage grafts (e.g. septum "strut" grafts)?

Yes

Code to repair of cartilage 1.ES.80.^^
(A turbinate reduction or a turbinectomy may be involved in this procedure but should not be coded separately.)

End

No

Does repair involve repositioning cartilage by resecting and swinging but with no cartilage grafting (e.g. SMR of septum)?

Yes

Code to partial excision of cartilage 1.ES.87.^^

End

No

Does repair just involve simple manual reduction of cartilage/nasal bone(s) into place?

Yes

Code to reduction of nose 1.ET.73.^^

End

No

Does repair only involve suturing or grafting the skin of nose?

Yes

Code to repair of skin of nose 1.YD.80.^^

End

No
**Mechanical Ventilation**  
In effect 2006

Assign a CCI code, mandatory, for any invasive mechanical ventilation.

Note: The Extent attribute is mandatory for all codes at 1.GZ.31.^^ Ventilation, Respiratory System, NEC. Use “0” when the ventilation is non-invasive.

To calculate the number of hours (duration) of continuous mechanical ventilation during a hospitalization, begin the count from the time of the endotracheal intubation. The duration ends with endotracheal extubation.

- When a patient is intubated prior to admission, begin counting the duration from the time of admission.
- When a patient is transferred or discharged while intubated, the duration would end at the time of transfer or discharge.
- For patients who begin ventilation with intubation and subsequently have tracheostomy performed for mechanical ventilation, the duration begins with the endotracheal intubation and ends when the mechanical ventilator is turned off or the patient is extubated.
The location attribute at 1.SY.80.^^ Repair, muscles of the chest and abdomen is mandatory because it is the only way to identify the intervention as a hernia repair and Case Mix Group (CMG) assignment is dependant on this field. The location attribute for ventral and incisional hernias will vary depending on the location of the hernia.

**Example:** John Doe was admitted by the trauma team. He had sustained a penetrating wound to the abdominal wall during a fight at a youth center. The victim was attacked with a knife. Internal organs were not injured. The patient was taken to OR where the defect in the abdominal wall was closed with sutures.

S31.190 Open wound of unspecified site of abdominal wall, uncomplicated
X99 Assault by sharp object
U98.2 Place of occurrence, school other institution and public area
1.SY.80.LA Repair, muscles of the chest and abdomen, open approach,
Location attribute: 0 without tissue [e.g. suturing or stapling]
Rationale: This was not a hernia repair as the MRDx is an injury code, therefore, location attribute is 0.

**Example:** Mr. Smith was admitted for suture repair of an incisional hernia at the site of a previous cholecystectomy.

K43.9 Ventral hernia without obstruction or gangrene
1.SY.80.LA Repair, muscles of the chest and abdomen, open approach,
Location attribute: UP without tissue [e.g. suturing or stapling]
Rationale: Location attribute is mandatory when the diagnosis is hernia classifiable to K40–K43 and K45–K46. A cholecystectomy incision is located in the upper abdominal region.

**Assign the STATUS attribute, optionally, as required to meet facility data requirements.**

The status attribute at 1.SY.80.^^ Repair, muscles of the chest and abdomen, is able to capture whether the procedure was a revision [R], an abandoned procedure [A] or an intervention converted from endoscopic to open approach [C]. This field accepts only one option from the selection list. Should users of CCI encounter scenarios where more than one applies, the facility must decide which attribute best meets their data requirements.
Example: Mr. G was admitted for a redo of his left inguinal hernia. The procedure was converted from endoscopic approach to open approach and sutures were used to repair the defect.

1.SY.80.LA
Status attribute: C
Location attribute: LW
Rationale: Status attribute “Converted” selected as this hospital was tracking interventions converted from endoscopic to open approach.

Related Interventions

Code any contra-lateral exploration (2.OT.70.^) done concomitantly with a unilateral hernia repair (optional, but recommended)

Contra-lateral exploration is an inspection done on the opposite side to the current repair. This means that if a left inguinal hernia were being repaired, the surgeon would do a quick check/inspection on the right side to find small hernias that could be repaired at the same time.
Chapter XI—Diseases of the Digestive System

Gastroenteritis and Diarrhea


**Assume gastroenteritis to be noninfectious unless documented as infectious by the responsible physician.**

**Sequence gastroenteritis as the most responsible diagnosis (MRDx) in admissions for treatment of gastroenteritis and dehydration.**

**Code any associated dehydration as a significant pre-admit comorbidity only when the electrolyte imbalance is severe enough to warrant treatment with intravenous fluids and the physician clearly documents these fluids are intended to treat the dehydration.**

The selected gastroenteritis and diarrhea codes that must be sequenced before the code for dehydration are K52.0–K52.9, A02.0, A05.9, A07.2, A08.0–A08.5 and A09. Other codes to which this directive applies are J10.8, J11.8, and A18.3† with K93.0* (see also the coding standard entitled *Dehydration*).

**Example:**

A 4-year old child is admitted with infectious gastroenteritis and dehydration. The entire family is affected: mom and dad with three older siblings. She needs input/output monitoring and is prescribed increased oral fluids. No intravenous fluids are administered to her.

A09   (M)   Diarrhea and gastroenteritis of presumed infectious origin
E86.0   (3)   Dehydration (optional)

**Example:**

A 74-year old woman is admitted to hospital from a nursing home after three days of gastroenteritis; she is quite dehydrated on admission and receives intravenous fluids for two days with close monitoring of her input and output status. Stool culture returns negative for organisms.

K52.9   (M)   Noninfective gastroenteritis and colitis, unspecified
E86.0   (1)   Dehydration

**Rationale:**

If the dehydration were mild and treated with oral intake of fluids and close monitoring of input/output, it would not be considered a significant comorbid condition and would be an optional additional code with a diagnosis type (3).
Bleeding Esophageal Varices

Follow the dagger/asterisk convention when coding bleeding esophageal varices associated with liver disorders classified to K70.– *Alcoholic liver disease*, K71.– *Toxic liver disease* and K74–*Fibrosis and cirrhosis of liver*.

Example:

Patient with known alcoholic cirrhosis of the liver was admitted with hematemesis. Endoscopy showed bleeding esophageal varices. He was treated with sclerotherapy.

- K70.3† (M) Alcoholic cirrhosis of liver
- I98.20* (6) Esophageal varices in diseases classified elsewhere with bleeding
- 1.NA.13.BA-X7 Control of bleeding, esophagus, using endoscopic per orifice approach and chemical agent [e.g. ethanolamine, murrhate sodium, polidocanol, sclerosants, tetradecyl sulfate]

Example:

Mrs. J has chronic persistent hepatitis that resulted in fibrosis of the liver. She presented with an upper GI bleed. Endoscopy showed bleeding esophageal varices.

- K74.0† (M) Hepatic fibrosis
- I98.20* (6) Esophageal varices in diseases classified elsewhere with bleeding
- K73.0 (1) Chronic persistent hepatitis, not elsewhere classified

Rationale:
While chronic persistent hepatitis (K73.0) in this case did lead to the formation of fibrosis of the liver (K74.0) causing bleeding esophageal varices (I98.20*), only codes from categories K70, K71 and K74 are designated with the dagger symbol at I98.20*. Therefore the pair K74.0† with I98.20* is sequenced first and K73.0 is coded separately.

Select the asterisk code I98.20* *Esophageal varices in diseases classified elsewhere with bleeding* when the physician records bleeding esophageal varices as a preoperative diagnosis but active bleeding is not evident at endoscopy.

Example:

Mr. J with known alcoholic cirrhosis of the liver presented for urgent endoscopy and banding of varices following an episode of upper gastrointestinal bleeding. Physician documented “Bleeding esophageal varices”. Endoscopy showed esophageal varices but no active bleeding was noted. Several varices were banded.

- K70.3† (M) Alcoholic cirrhosis of liver
- I98.20* (6) Esophageal varices in diseases classified elsewhere with bleeding
- 1.NA.13.BA-FA Control of bleeding, esophagus, using endoscopic per orifice approach and banding (varices)
Related Interventions

In endoscopic therapy, the health care provider may directly inject the varices with a clotting agent, or may place a rubber band around the bleeding veins. This procedure is used in acute bleeding episodes and as prophylactic (preventive) therapy.

**Prophylactic endoscopic sclerotherapy** (injection of varices with sclerosant) is done regularly, usually every 1 to 3 weeks, until varices are obliterated, then at 3 to 6 month intervals to maintain obliteration.

**Select code:** 1.NA.13.BA-X7 *Control of bleeding, esophagus, using endoscopic per orifice approach and chemical agent [e.g. ethanolamine, murrhate sodium, polidocanol, sclerosants, tetradecyl sulfate]*

**Endoscopic sclerotherapy** (injection of varices with sclerosant) is also used for controlling acute hemorrhage from the esophageal varices.

**Select code:** 1.NA.13.BA-X7 *Control of bleeding, esophagus, using endoscopic per orifice approach and chemical agent [e.g. ethanolamine, murrhate sodium, polidocanol, sclerosants, tetradecyl sulfate]*

**Esophageal variceal rubber band ligation** controls active bleeding and eradicates varices as effectively as sclerotherapy.

**Select code:** 1.NA.13.BA-FA *Control of bleeding, esophagus, using endoscopic per orifice approach and banding (varices)*

**Sengstaken-blakemore double balloon tube or Linton single balloon tube tamponade**

Gastric balloon placement needs X-ray confirmation. Acute bleeding may be treated by a balloon tamponade—a tube that is inserted through the nose into the stomach and inflated with air to produce pressure against the bleeding veins.

**Select code:** 1.NA.13.BA-BD *Control of bleeding, esophagus, using endoscopic per orifice approach and balloon (or Sengstaken) tube tamponade*

**Transjugular intrahepatic portosystemic shunt (TIPS)** or Distal spleno-renal shunt (DSRS) consists of a catheter that is extended through a vein into the liver where it connects the portal system to the systemic venous system and decreases portal venous pressure.

**Select code:** 1.KQ.76.^^ *Bypass, abdominal veins NEC*
Gastrointestinal Bleeding

Assign:

- K92.0 Haematemesis
- K92.1 Melena OR
- K92.2 Gastrointestinal hemorrhage, unspecified

as an additional code only when hemorrhage or bleeding is not clearly expressed in the title of a selected ICD-10-CA diagnosis code.

In qualifying cases where the above codes are required:

- Sequence the disease or underlying cause first.
- Assign diagnosis type for codes K92.0–K92.2 in accordance with the diagnosis typing definitions (see also the coding standard entitled Diagnosis Typing Definitions).

Example: Patient’s final diagnosis noted as “Acute gastritis with hemorrhage”.

K29.0 (M) Acute hemorrhagic gastritis

Example: Mrs. J was admitted with melena due to diverticulitis of the large bowel. Colonoscopy was carried out and she was treated with antibiotics and Ferrous gluconate.

K57.9 (M) Diverticular disease of intestine, part unspecified, without perforation or abscess
K92.1 (3) Melena

When a patient presents for investigations following an episode of gastrointestinal bleeding and no active hemorrhage is manifest on endoscopy, select an ICD-10-CA combination code indicating “with bleeding” or “with hemorrhage” in the disease/condition.

Alternately, if such combination codes are non-existent, code the underlying condition and an additional code to indicate the presence of bleeding (i.e. K92.0, K92.1 or K92.2).

Example: Mr. UC presented for urgent colonoscopy following an episode of lower gastrointestinal bleeding. Physician documented “ulcerative colitis”. Endoscopy report indicated no active bleeding but ulcerated lesions noted with prominent vessels.

K51.9 Ulcerative colitis, unspecified
K92.2 Gastrointestinal hemorrhage, unspecified

When a patient is admitted for investigation or treatment of hemorrhage and has documented episodes of GI bleeding while in hospital, do not assign diagnosis type (2) to the ICD-10-CA code indicating GI bleeding.

Example: Mr. M.W. was admitted through the Emergency Room following an episode of hematemesis. His wife reported that he threw up about ½ cup of bright red blood. During his stay he had another episode of hematemesis. Several diagnostic tests and investigations were carried out and the final diagnosis on the chart was recorded as Mallory-Weiss syndrome.

K22.6 (M) Gastro-esophageal laceration-hemorrhage syndrome
Diagnostic Esophagastroduodenoscopy (EGD) In effect 2003

When separate anatomic sites are biopsied at one operative episode, code each. Sequence the biopsy of the deepest site first (see also the coding standard entitled *Endoscopic Interventions*).
Chapter XI—Diseases of the Digestive System

CCI Rubrics to be used with this flowchart:
2.NA.70 Inspection, Esophagus
2.NA.71 Biopsy, Esophagus
2.NF.70 Inspection, Stomach
2.NF.71 Biopsy, Stomach
2.NK.70 Inspection Small intestine (duodenum)
2.NK.71 Biopsy, Small intestine (duodenum)
Diagnostic Colonoscopic Interventions

See also the coding standards entitled Endoscopic Interventions and Combined Diagnostic and Therapeutic Interventions.

Select location attribute SG Sigmoid alone, for interventions performed at the sigmoid colon alone and Z Other sites within large intestine including that with sigmoid for an intervention performed on any part of the large intestine including or excluding the sigmoid colon.

Sigmoid and colonoscopy procedures are differentiated by the location attribute.

The location attribute is mandatory at:

- 2.NK.70.^  Inspection, small intestine
- 2.NK.71.^  Biopsy, small intestine
- 2.NM.70.^  Inspection, large intestine
- 2.NM.71.^  Biopsy, large intestine

When a colonoscope is passed into the terminal ileum and the physician documents findings, normal or abnormal, relating to the terminal ileum, assign:

- 2.NK.70.^  Inspection, small intestine with location attribute I

When no findings related to the terminal ileum are documented, assign 2.NM.70.^ only, as the entry into the terminal ileum in this case simply denotes that the furthest point has been reached.

Example:
Operative Report: “The scope was advanced through the rectum and sigmoid colon and both appeared normal. The transverse colon was normal except for some patchy areas of chronic inflammation. The terminal ileum was entered and the scope was withdrawn.”

2.NM.70.BA  Inspection, large intestine, using endoscopic per orifice approach (or via stoma)

Location attribute: Z  Other sites within large intestine including that with sigmoid

Example:
Ms. C. was prepped and a colonoscopy was carried out. The scope was advanced through the large intestine to the ileo-cecal valve. Physician documented, “No abnormality noted in the sigmoid colon and the rest of the large intestine.”

2.NM.70.BA  Inspection, large intestine, using endoscopic per orifice approach (or via stoma)

Location attribute: Z  Other sites within large intestine including that with sigmoid
**Example:** The colonoscopy was advanced through the colon into the terminal ileum. The colon and the ileum were described to be free of disease.

2.NK.70.BA  
Location attribute: I  
Rationale: Since findings were described in the terminal ileum, it qualifies as an inspection of this site. The location attribute indicates ileum implying it was via colonoscopy.

**Example:** The colonoscopy was advanced through the colon into the terminal ileum. The colon was free of disease. However, ileitis was noted in the terminal ileum and a biopsy was taken of the ileum.

Diagnosis: Crohn’s ileitis

2.NK.71.BA  
Location attribute: I  
Rationale: When a biopsy and an inspection are performed at the same anatomical site, code only the biopsy.

**Example:** The colonoscopy was advanced through the colon and into the terminal ileum. Biopsies were taken of the rectum, colon and ileum.

2.NK.71.BA  
Location attribute: I  
Rationale: Although two codes from the same rubric are not normally assigned, it is acceptable in this scenario because there are two distinct procedures being performed.

2.NM.71.BA  
Location attribute: Z  
Rationale: When separate anatomic sites are biopsied, each are coded; the deepest site is sequenced first.

**Example:** The patient had an esophagogastroduodenoscopy (EGD) and a colonoscopy. The gastroscope was advanced to the duodenum. The colonoscopy was advanced into the terminal ileum and the physician noted findings of ileitis in the terminal ileum.

2.NK.70.BA  
Location attribute: I  
Rationale: Although two codes from the same rubric are not normally assigned, it is acceptable in this scenario because there are two distinct procedures being performed.
Diagnostic Endoscopic Interventions Performed on the Lower Gastrointestinal Tract

Rubrics for use with this flowchart
2.NQ.70—Inspection, Rectum
2.NQ.71—Biopsy, Rectum
2.NM.70—Inspection, Large intestine (colon)
2.NM.71—Biopsy, Large intestine (colon)
2.NK.70—Inspection, Small intestine (ileum)
2.NK.71—Biopsy, Small intestine (ileum)
Chapter XI—Diseases of the Digestive System

1

Was the scope advanced into the ileum? Yes

Was biopsy of ileum taken? Yes

Code biopsy of ileum
Code biopsy of colon
Code biopsy of rectum

No

Code biopsy of colon
Code biopsy of rectum

End

End

End
Chapter XII—Diseases of the Skin and Subcutaneous Tissue

**Cellulitis**

In effect 2001, amended 2003, 2006

Classify an open wound with associated cellulitis to a “complicated” open wound.

When the course of treatment involves *intravenous antibiotics*, sequence cellulitis as the most responsible diagnosis and record the soft tissue injury as an additional diagnosis.

When the course of treatment involves only *oral antibiotics*, sequence the soft tissue injury as the most responsible diagnosis and the cellulitis as a comorbid condition.

Assign an additional code, optionally, as a diagnosis type (3), from range B95–B97 when a causative agent is identified.

For clinical information, see *Appendix A*.

**Example:** Mrs. C lacerated her left index finger while using a kitchen knife about 3 days prior to this visit. She presented to emergency with cellulitis. She was given a prescription for oral antibiotics.

- S61.01 (M) Open wound of finger(s) without damage to nail, complicated
- L03.00 (3) Cellulitis of finger
- W26 (9) Contact with knife, sword or dagger
- U98.0 (9) Place of occurrence, home

**Example:** Approximately 36 hours ago, a woman received a dog bite to her right hand. She had intervened in an altercation between two dogs. She now presents with cellulitis spreading up her arm and is admitted to hospital for a course of intravenous antibiotics. The bite wound is superficial.

- L03.10 (M) Cellulitis of upper limb
- S61.91 (3) Open wound of wrist and hand part, part unspecified, complicated
- W54 (9) Bitten or struck by dog
- U98.9 (9) Unscheduled place of occurrence

**Example:** On a hiking trip in the woods, a young man fell down a ravine sustaining minor lacerations to his lower leg two days ago. He presents to emergency with cellulitis and is treated with a wound debridement, topical dressing and a course of oral antibiotics.

- S81.91 (M) Open wound of lower leg, part unspecified, complicated
- L03.11 (3) Cellulitis of lower limb
- W17 (9) Other fall from one level to another
- U98.8 (9) Other specified place of occurrence
Chapter XIII—Diseases of the Musculoskeletal System and Connective Tissue

**Arthrectomy and Arthroplasty**  
*In effect 2001*

Code arthrectomy as a separate intervention only when it is not part of an arthroplasty or joint repair.

```
Start

Is the arthrectomy concomitant with joint replacement (using antibiotic cement spacer or prosthesis)?

Yes

Code to Implantation, joint, by site 1.^^.53.^^

End

No

Is the arthrectomy concomitant with a joint release, loose body extraction, ligament repair, an excision or other arthroplasty?

Yes

Code to Repair, joint, by site 1.^^.80.^^

End

No

Code to Excision partial, joint, by site 1.^^.87.^^

End
```
## Excision (of Lesion) of Bone, Soft Tissue and Skin

<table>
<thead>
<tr>
<th>When a lesion excision involves removal of soft tissue and bone, select a CCI code with a generic intervention indicating radical excision of bone.</th>
</tr>
</thead>
<tbody>
<tr>
<td>When an intervention involves skin and soft tissue, select a CCI code indicating the anatomic site of soft tissue.</td>
</tr>
<tr>
<td>When the intent of a soft tissue excision of lesion is minor debridement only, select a CCI code with a generic intervention indicating destruction of soft tissue.</td>
</tr>
<tr>
<td>When the intent of a soft tissue excision of lesion is removal of the lesion, select a CCI code with a generic intervention indicating partial excision of soft tissue.</td>
</tr>
</tbody>
</table>

In CCI, an excision confined to muscle alone is presumed to be a removal of a previously placed and nonviable muscle flap and is classified to partial excision of muscle by site. Any other excision of a muscle lesion is presumed to involve other soft tissues (e.g. skin, subcutaneous tissues, fascia, and tendon) and classified accordingly.
Excision (of Lesion) of Bone, Soft Tissue and Skin

Start

Lesion excised involves bone with other soft tissues?

Yes

Lesion excised involves bone alone?

Yes

Is lesion excised involves soft tissues (e.g. muscle, tendon) with or without skin involvement?

Yes

Is this a minor débridement only?

Yes

Is débridement followed by a skin graft/ flap?

Yes

Is débridement followed by temporary skin coverage (e.g. Dermagraft, cadaver allograft or xenograft)?

Yes

Lesion excised involves only skin and is a minor débridement?

Yes

Is débridement followed by a skin graft flap?

Yes

Lesion excised involves soft tissues?

No

No

No

Lesion excised involves bone alone?

Yes

Is a non-viable (necrotic) muscle flap being excised?

Yes

Code to radical excision of bone, by site:

Cranium 1.EA.92.**
Humerus 1.TK.91.**
Radius/ Ulna 1.TV.91.**
Pelvis 1.SG.91.**
Femur 1.VC.91.**
Tibia/ Fibula 1.VQ.91.**
Bony Decubitus 1.VE.91.**

Code to partial excision of bone, by site:

Cranium 1.EA.87.**
Zygoma 1.EB.87.**
Maxilla 1.ED.87.**
Mandible 1.EE.87.**
Scapula 1.SN.87.**
Clavicle 1.SM.87.**
Rib 1.SL.87.**
Humerus 1.TK.87.**
Radius/ Ulna 1.TV.87.**
Carpal 1.UC.87.**
Metacarpal 1.UF.87.**
Phalanges 1.UJ.87.**
Sacrum/ Coccyx 1.SF.87.**
Pubis 1.SW.87.**
Pelvis 1.SQ.87.**
Tibia/ Fibula 1.VQ.87.**
Tarsal 1.WE.87.**
Metatarsal 1.WJ.87.**

Code to partial excision of soft tissue, by site:

Head/ Neck 1.EQ.87.**
Abdomen/ Chest 1.SZ.87.**
Back 1.SH.87.**
Arm 1.TX.87.**
Wrist/ Hand 1.UY.87.**
Leg 1.VX.87.**
Ankle/ Foot 1.WV.87.**

Code to partial excision of muscle, by site:

Head/ Neck 1.EP.87.**
Abdomen/ Chest 1.SY.87.**
Back 1.SG.87.**
Arm 1.TQ.87.**
Leg 1.VD.87.**

Code to partial excision of skin, by site:

Scalp 1.YA.87.**
Forehead 1.YB.87.**
Ear 1.YC.87.**
Nose 1.YD.87.**
Eyelid 1.CX.87.**
Lip 1.YE.87.**
Face 1.YF.87.**
Neck 1.YG.87.**
Axilla 1.YR.87.**
Trunk 1.YS.87.**
Arm 1.YT.87.**
Hand 1.YU.87.**
Leg 1.YV.87.**

Code to destruction of soft tissue (e.g. amputation stump), by site:

Arm 1.TX.59.**
Wrist/ Hand 1.UY.59.**
Foot/ Ankle 1.WV.59.**

Code to destruction of soft tissue (e.g. amputation stump), by site:

Scalp 1.YA.59.**
Forehead 1.YB.59.**
Ear 1.YC.59.**
Nose 1.YD.59.**
Eyelid 1.CX.59.**
Lip 1.YE.59.**
Face 1.YF.59.**
Neck 1.YG.59.**
Axilla 1.YR.59.**
Trunk 1.YS.59.**
Arm 1.YT.59.**
Hand 1.YU.59.**
Leg 1.YV.59.**
Skin NEC 1.YZ.59.**

Code to dressing of skin, by site:

Scalp 1.YA.14.**
Forehead 1.YB.14.**
Ear 1.YC.14.**
Nose 1.YD.14.**
Eyelid 1.CX.14.**
Lip 1.YE.14.**
Face 1.YF.14.**
Neck 1.YG.14.**
Axilla 1.YR.14.**
Trunk 1.YS.14.**
Arm 1.YT.14.**
Hand 1.YU.14.**
Leg 1.YV.14.**
Skin NEC 1.YZ.14.**

End
Joint Fracture Reduction, Fixation and Fusion  

In effect 2001, amended 2002

When an intervention is performed to amend a fracture and the fracture involves a portion of a bone that forms a joint, select a CCI code where the anatomical site indicates a joint.

Start

Is the joint reduced into place only? (Does not matter if closed or open reduction is done.)

Yes → Code to Reduction, joint by site - 1.^^.73.^^ → End

No

Is a fixation device inserted into the joint (with or without a concomitant joint reduction)?

Yes → Is this done to fuse the joint? (This often involves a bone graft.)

Yes → Code to Fusion, joint by site - 1.^^.75.^^ → End

No → Code to Fixation, joint by site - 1.^^.74.^^ → End

Fracture through joint repaired without fixation device - Code to Repair, joint by site - 1.^^.80.^^ → End

Note: This coding standard applies to all joints including the spinal vertebrae.
Pathological Fractures
Pathological fractures are also known as “compression” or “spontaneous” fractures and occur in bones and joints weakened by pre-existing disease.

When there is no known traumatic injury to account for a fracture or when the physician clearly states the fracture is a result of an underlying disease (such as neoplasm, osteoporosis, Paget’s disease or an endocrine disorder) classify the fracture as pathological.

When a combination category is not available or when a dagger/asterisk convention is not applicable, assign separate codes for the pathological fracture and the underlying disease that precipitated the fracture. Sequence the code for the pathological fracture first followed by the code for the underlying disease as a mandatory diagnosis type (3).

Example:

M84.45 (M) Pathological fracture not elsewhere classified, pelvic region and thigh
M88.8 (3) Paget’s disease of other bones

Apply the dagger/asterisk convention when coding a fracture in neoplastic disease (see also the coding standard entitled Dagger/Asterisk Convention).

Example:

Mr. B was diagnosed with osteosarcoma of the leg 2 years ago. He is now admitted with a pathological fracture of the left tibia. He was treated with internal fixation of the tibia.

Example:

C40.2† (M) Malignant neoplasm long bones of lower limb
M90.7* (6) Fracture of bone in neoplastic disease

Mrs. W was admitted in acute distress due to collapsed vertebrae. She has known bone metastases. She had left breast cancer, treated 3 years ago with mastectomy.

Example:

C79.5† (M) Secondary malignant neoplasm of bone and bone marrow
M49.5* (6) Collapsed vertebrae in diseases classified elsewhere
Z85.3 (3) Personal history of malignant neoplasm of breast (removed)

Select a code from the combination category M80.– Osteoporosis with pathological fracture for fractures documented as due to osteoporosis.

When a fracture is documented as traumatic and occurs in a patient with osteoporosis, assign a code from Chapter XIX. Assign an additional code from M81.– Osteoporosis without pathological fracture to identify the existing osteoporosis.

The osteoporotic pathological fracture is uniquely identified with a single code under the category M80.– Osteoporosis with pathological fracture. The codes in this category explicitly state the causal relationship between the disease and the fracture.

Example:

An 80 year-old-man presents with a fractured hip due to osteoporosis with no known significant traumas.

Example:

M80.95 (M) Unspecified osteoporosis with pathological fracture, pelvic region and thigh
Example: A 70-year old lady with known osteoporosis, slipped and fell down several stairs in her home. X-rays demonstrated a fracture of L1.

S32.000 (M) Fracture of lumbar vertebra, L1 level, closed
W10 (9) Fall on and from stairs and steps
U98.0 (9) Place of occurrence, home
M81.0 (3) Postmenopausal osteoporosis

Rationale: Even though the patient has osteoporosis, there was a significant traumatic event documented.

Stress Fractures
Stress fractures are also known as “fatigue” or “march” fractures and occur most commonly in metatarsals, hips, heels and fibula/tibia. Long distance runners, military personnel, people with cavus foot and those wearing shoes without proper shock absorption are most susceptible. This type of fracture is due to overexertion causing a crack in otherwise healthy bone and it frequently is not diagnosed until after callus formation at the site of the fracture.

When a stress fracture occurs in the vertebra, assign M48.4– Fatigue fracture of vertebra. For any other site, assign M84.3– Stress fracture, not elsewhere classified.

Example: A 45-year old lady was admitted when, on X-ray, it was discovered she had a stress fracture located in the lumbar region of the vertebra.
M48.46 (M) Fatigue fracture of vertebra, lumbar region

Example: A 25-year old long distance runner was admitted when, on X-ray, it was discovered he had a stress fracture located in his right fibula.
M84.36 (M) Stress fracture, not elsewhere classified, lower leg

Assign stress fractures in osteoporotic bone to M80.– Osteoporosis with pathological fracture. (do not assign M84.3– Stress fracture, not elsewhere classified).

Example: A 65-year old lady with osteoporosis of the vertebrae is found, on X-ray, to have stress fractures of T11–T12.
M80.98 (M) Unspecified osteoporosis with pathological fracture, other site
Fractures

* These codes are manifestation codes and require the use of an additional code for the underlying disease (dagger code).
Bilateral Osteoarthritis

When a patient who has had a previous unilateral joint replacement for osteoarthrosis (OA) is admitted for treatment of the contralateral osteoarthrotic joint, select the appropriate code (primary, secondary, or post-traumatic osteoarthrosis) to indicate bilateral disease.

Clinical input has indicated that even though a joint has been replaced, the joint replacement is not curative, and the patient is still considered to have bilateral disease. Bilateral disease, not specified as due to any other cause is presumed to be primary disease.

Example: Mr. GN, a 53-year old man, with primary osteoarthritis of both knees was admitted electively for arthroscopic debridement of the left knee. The OA in the right knee was treated 5 years ago with a total knee replacement.
M17.0 (M) Primary gonarthrosis, bilateral
Z96.61 (3) Presence of artificial knee (optional)

Example: Mr. CX, a 64-year old man, with primary osteoarthritis of both hips had a left hip replaced a year ago. He is now admitted electively for a right hip arthroplasty.
M16.0 (M) Primary coxarthrosis, bilateral
Z96.60 (3) Presence of artificial hip (optional)

For clinical information, see Appendix A.

Related Interventions

Cortisone injections—a steroid, may be injected into the joint to relieve severe inflammation and swelling.
Select code: 1.^^.35.^^ Pharmacotherapy (local)

Viscosupplementation, is a procedure in which a clear gel-like substance is injected into the knee. This substance lubricates the cartilage (much like oil lubricates an engine), reducing pain and allowing greater movement of the knee.
Select code: 1.^^.35.^^ Pharmacotherapy (local)

Surgical treatment for OA ranges from debridement (select code 1.^^.87.^^ Excision, partial) to replacement of a joint with an artificial or a man-made joint.
Select code: 1.^^.53.^^ Implantation)¹

Chapter XIV—Diseases of the Genitourinary System

See also the coding standard entitled *Hypertension and Associated Conditions*.

### Continuous Ambulatory Peritoneal Dialysis (CAPD) Peritonitis

An exit site infection at the site of the dialysis catheter for continuous ambulatory peritoneal dialysis (APD) may not be presumed to be the cause of peritonitis and does not always result in peritonitis. Physician documentation specifying a causal relationship between the two conditions is required to substantiate coding both conditions. The causes of peritonitis may be the introduction of bacteria into the peritoneum by the dialysis procedure, but it is not always related to an exit site infection. It is usually related to a breach in the patient’s sterile technique. It is true however, that if the patient has a chronic exit site infection, he will be more prone to get an episode of peritonitis caused by the same organism. Pneumococcus and staphylococcus are the most common organisms.

**Example:** Acute peritonitis in a peritoneal dialysis patient (CAPD peritonitis)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K65.0</td>
<td>Acute peritonitis</td>
</tr>
<tr>
<td>Z99.2</td>
<td>Dependence on renal dialysis</td>
</tr>
</tbody>
</table>

**Example:** Peritonitis due to peritoneal dialysis catheter exit site infection. The physician ordered skin and peritoneal fluid cultures (positive for staphylococcus) to confirm the cause of the peritonitis.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T85.7</td>
<td>Infection and inflammatory reaction due to other internal prosthetic device, implants and grafts</td>
</tr>
<tr>
<td>K65.9</td>
<td>Peritonitis, unspecified</td>
</tr>
<tr>
<td>B95.7</td>
<td>Other staphylococcus as the cause of diseases classified to other chapters</td>
</tr>
<tr>
<td>Y84.1</td>
<td>Other procedures without mention of misadventure at the time of procedure, as the cause of abnormal reaction of patient or of later complication, kidney dialysis</td>
</tr>
<tr>
<td>Z99.2</td>
<td>Dependence on renal dialysis</td>
</tr>
</tbody>
</table>

**Example:** Peritoneal dialysis catheter exit site infection—no peritonitis

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T85.7</td>
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</tr>
<tr>
<td>Z99.2</td>
<td>Dependence on renal dialysis</td>
</tr>
</tbody>
</table>
Menorrhagia as the Most Responsible Diagnosis (MRDx)

Menorrhagia (uterine bleeding) can be related to a variety of causes (e.g. hormonal) and in the great majority of cases the cause is unknown or not fully explained. It can be the main reason a hysterectomy is performed.

Even when large, fibroids may produce no symptoms. Symptoms depend on the number of fibroids, their size, and their location in the uterus, as well as their status (i.e. whether they are growing or degenerating). Symptoms may include heavy or prolonged menstrual bleeding or bleeding between periods, pain, pressure or heaviness in the pelvic area during or between periods, need to urinate more frequently, and swelling in the abdomen.

The Society of Obstetricians and Gynecologists of Canada (SOGC) indicated that fibroids in and of themselves are not a reason for hysterectomy or embolization. The percentage of symptomatic fibroids is very low and fibroids are often just an incidental finding on pathology. When it has been documented that the fibroid is the cause of the excessive uterine bleeding or pain then the fibroid would be the most responsible diagnosis.

When a patient presents for a hysterectomy due to menorrhagia, select the MRDx based on the final diagnosis as stated by the attending physician. Do not assume that diagnoses listed on the pathology report are the underlying cause of the menorrhagia. These diagnoses may be incidental findings.

Example: Patient presents with menorrhagia and a hysterectomy is performed. Pathology report shows uterine fibroids. The physician documents menorrhagia as the final diagnosis on the front sheet.

N92.0 (M) Excessive and frequent menstruation with regular cycle
D25.9 (3) Leiomyoma of uterus, unspecified

Rationale: The leiomyoma were identified on the pathology report only and not included in the final diagnosis recorded by the physician. It is optional to code and assigned diagnosis type (3).
Chapter XV—Pregnancy, Childbirth and the Puerperium

For gestational age definitions, see *Gestational Age* in Appendix A.

For trimester definitions, see *Trimesters* in Appendix A.

### Intrauterine Death

<table>
<thead>
<tr>
<th>In effect 2001, amended 2006</th>
</tr>
</thead>
</table>

Late intrauterine fetal death where the fetal demise occurs at or after 20 completed weeks of gestation is classified as O36.4—*Maternal care for intrauterine death*.

Early intrauterine fetal death where the fetal demise occurs before 20 completed weeks of gestation with retention of the fetus is classified to O02.1 *Missed abortion*.

**Example:**

Patient noticed decreased fetal movement at 23 weeks gestation. On examination, no fetal heart rate could be detected. She now presents at 25 weeks gestation, in labor. She delivered a dead male fetus.

O36.421 Maternal care for intrauterine death, second trimester, delivered, with or without mention of antepartum condition

Z37.1 (3) Outcome of delivery, single stillbirth

**Example:**

An ultrasound examination done on Mrs. Q diagnosed fetal demise at 19 weeks. She was sent home to await labor. Contractions began 10 days later and she delivered a macerated male fetus weighing 150 grams.

O02.1 Missed abortion

**Rationale:** Gestational age is determined at the time of fetal death.

### Pregnancy With Abortive Outcome

| In effect 2001, amended 2004, 2006 |

**003–008 Pregnancy with Abortive Outcome**

Pregnancy with an abortive outcome is classified to categories 003–008. The primary axis is the type of abortion with the fourth-digit axis indicating any associated complication(s).

**Example:**

Spontaneous abortion, incomplete, without complication, treated by dilation and curettage.

003.4 (M) Spontaneous abortion, incomplete, without complication

5.PC.91.GA Dilation and curettage (following delivery or abortion)
O04 Medical Abortion

This is a broad category encompassing the diagnosis code for both surgical and pharmacologically induced abortions; the diagnosis code does not indicate the method used to terminate the pregnancy.

Classify all medical abortions or planned terminations of pregnancy, regardless of the gestational age or fetal weight, to category O04. – Medical abortion on the mother’s abstract.

When applicable, assign an additional code to identify any fetal reason for the termination of pregnancy (e.g. anencephalic fetus) on the mother’s abstract.

Example: Medical abortion for unwanted pregnancy treated with a suction curettage at 10 weeks.

O04.9 (M) Medical abortion, complete or unspecified, without complication
5.CA.89.GC Surgical termination of pregnancy, vaginal approach, aspiration and curettage

Example: Ms. W. presented at 26 weeks gestation. During her last pre-natal visit, an ultrasound and amniocentesis were ordered. The results of the amniocentesis demonstrated that the fetus had Trisomy 21. Ms. W. decided that she did not wish to carry this pregnancy to term. She was admitted for a medical termination of the pregnancy by vaginal insertion of prostaglandin.

O04.9 (M) Medical abortion, complete or unspecified, without complication
O35.109 (1) Maternal care for (suspected) chromosomal abnormality in fetus, unspecified as to episode of care, or not applicable
5.CA.88.CK-I2 Pharmacological termination of pregnancy, per orifice approach, using oxytocin

When terminations are performed later in gestation, some facilities may generate a stillbirth abstract, and it is appropriate to use the code P96.4 Termination of pregnancy, fetus and newborn as the MRDx on this abstract.

When a termination results in a livebirth, regardless of gestational age, select O04.– Medical abortion, for the mother’s abstract, along with Z37.0 Outcome of delivery, single live birth, to indicate that the abortion resulted in a live birth.

Example: Ms. T. presented at 20 weeks gestation, requesting a therapeutic abortion. She was started on misoprostol, intravenously. The fetus was successfully expelled. A heart beat and respirations were detected at birth.

O04.9 (M) Medical abortion, complete or unspecified, without complication
Z37.0 (3) Outcome of delivery, single live birth
5.CA.88.HA–A2 Pharmacological termination of pregnancy, antacid treatment, percutaneous approach [e.g. intravenous, injection into intraamniotic or extraamniotic sac]
**Example:** Medical abortion at 23 weeks for fetal anencephaly. Labor induced with intravenous Syntocinon. Fetus was born alive and survived for 1 hour.

Mother’s abstract:
- O04.9 (M) Medical abortion, complete or unspecified without complication.
- O35.009 (1) Maternal care for (suspected) fetal anencephaly, unspecified as to episode of care, or not applicable
- Z37.0 (3) Outcome of delivery, single live birth
- 5.CA.88.HA-I2 Pharmacological termination of pregnancy, using oxytocin, percutaneous approach [e.g. intravenous, injection into intraamniotic or extraamniotic sac]

**Example:**

When an intended termination results in a live birth, the fetus may be registered as a newborn by the facility. In this case, select P96.4 *Termination of pregnancy, fetus and newborn* as the MRDx on the newborn abstract.

Assign a code(s) to describe any associated congenital anomaly as an additional comorbidity.

Assign a code from category Z38.–, as a diagnosis type (0).

**Example:** The outcome of delivery was a liveborn fetus with anencephaly.

Newborn abstract:
- P96.4 (M) Termination of pregnancy, fetus and newborn
- Q00.0 (0) Anencephaly
- Z38.00 (0) Singleton, born in hospital, delivered vaginally

**Example:** The outcome of delivery was a stillborn fetus with anencephaly.

Stillbirth abstract:
- P96.4 (M) Termination of pregnancy, fetus and newborn
- Q00.0 (3) Anencephaly

**Rationale:** Additional codes assigned on a stillbirth abstract are assigned diagnosis type (3) (these are not the same as newborn abstracts) as length of stay is not impacted.
**O05 Other Abortion**

*Assign O05.– Other abortion for self-inflicted abortion or abortion following amniocentesis or trauma.*

*Example:* Ms. B. is at 18 weeks gestation. While driving home from work her car is hit broadside by a gentleman who came through a stop sign. She sustains a fractured (ischium) pelvis and subsequently goes on to spontaneously deliver a dead fetus.

- S32.800 (M) Fracture of other and unspecified parts of lumbar spine and pelvis, closed
- V43.5 (9) Car occupant injured in collision with car, pick-up truck or van, driver of car, traffic accident
- O05.9 (1) Other abortion, complete or unspecified, without complication

**O07 Failed Attempted Abortion**

*When an intervention intended to terminate pregnancy does not result in terminating the pregnancy, assign O07.– Failed attempted abortion. To use this category, there must be a viable fetus within the uterus following the intervention.*

*Example:* Patient was admitted at 19 weeks for a medical abortion. Prostin gel was inserted to initiate labor, but no labor ensued. Patient declined any further intervention and was discharged home.

- O07.4 Failed attempted abortion, without complication
- 5.CA.88.CK-I2 Pharmacological termination of pregnancy, per orifice approach, oxytocin
Chapter XV—Pregnancy, Childbirth and the Puerperium

Abortion With Remaining Fetus

When a multiple pregnancy continues after abortion of one fetus or more, assign O31.1—Continuing pregnancy after abortion of one fetus or more.

Example: Ms. A. presented with a twin pregnancy, at 18 weeks gestation. She had some mild cramping and intermittent spotting. In spite of bed rest, she aborted one fetus. She is now at 37 weeks, 2 days gestation, presenting in labor. She delivered a healthy female baby at 05:45 hours.

O31.101 (M) Complications specific to multiple gestation, continuing pregnancy after abortion of one fetus or more, delivered, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

Complications Following Abortion and Ectopic and Molar Pregnancy

ICD-10-CA makes a distinction between an episode of care at which the abortion or ectopic and molar pregnancy and any resulting complications are treated together (code from O00-O07 is MRDx) and an episode of care for a complication of the abortion or ectopic and molar pregnancy treated previously (category O08 is the MRDx). The inclusion terms provided at the subcategories of O08 should be referenced when assigning the fourth character subcategories of O03–O07.

When the episode of care is solely for the treatment of a complication, the abortion itself having been performed and completed at a previous episode of care, select a code from category O08, Complications following abortion and ectopic and molar pregnancy, as the MRDx.

Example: Mrs. S. had a spontaneous abortion and underwent a dilation and curettage (D&C) in the first episode of care. She was brought to the emergency room two days after discharge because she had developed a fever. She was treated with antibiotics for endometritis.

O08.0 (M) Genital tract and pelvic infection following abortion and ectopic and molar pregnancy

Rationale: No other code required since the abortion was performed during a previous episode of care.
Chapter XV—Pregnancy, Childbirth and the Puerperium

When a complication and the abortion occur during the same episode of care, select a code from O00–O07 as the MRDx. Assign a code from category O08,– Complications following abortion and ectopic and molar pregnancy, as an additional code to identify associated complications with a code from O00–O02 or to provide fuller details with a code from O03–O07.

Example: Ruptured tubal pregnancy with shock. (Initial episode of care)

<table>
<thead>
<tr>
<th>Code</th>
<th>(M)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>O00.1</td>
<td></td>
<td>Tubal pregnancy</td>
</tr>
<tr>
<td>O08.3</td>
<td>(1)</td>
<td>Shock following abortion and ectopic and molar pregnancy</td>
</tr>
</tbody>
</table>

Rationale: Complication occurred during same episode of care. O08.3 is added to show a complication with O00.1.

Example: Incomplete spontaneous abortion with perforation of uterus. (Initial episode of care)

<table>
<thead>
<tr>
<th>Code</th>
<th>(M)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>O03.3</td>
<td></td>
<td>Spontaneous abortion, incomplete, with other and unspecified complications</td>
</tr>
<tr>
<td>O08.6</td>
<td>(3)</td>
<td>Damage to pelvic organs and tissues following abortion and ectopic and molar pregnancy</td>
</tr>
</tbody>
</table>

Rationale: Complication occurred during the same episode of care. O08.6 is added to provide further detail of the complication referenced in O03.3 (other and unspecified complication).

Streptococcal Group B Infection/Carrier in Pregnancy

Infections due to Group B Streptococcus (GBS) in pregnant women are quite rare. Often a low vaginal swab will identify GBS, however, the woman will have no symptoms and is simply a carrier of the bacteria. Prophylactic antibiotic treatment may be given following premature rupture of membranes or during labor to ensure that the organism is not passed onto the baby during birth.

Select code O23.90– Other and unspecified genitourinary tract infection in pregnancy only when there is documented evidence of an active infection. When there is active infection, assign B95.1 Streptococcus, Group B, as the cause of diseases classified to other chapters, optionally, as a diagnosis type (3), to identify the organism.

Assign Z22.38 Carrier of other specified bacterial diseases, optionally, as a diagnosis type (3), to identify GBS carrier state.

When antibiotics are given for prophylaxis to in a GBS carrier patient, assign Z29.2 Other prophylactic chemotherapy, optionally, as a diagnosis type (3).

Example: Patient had a vaginal swab that was positive for Group B Streptococcus. On presentation, she had no symptoms. It was decided that no prophylactic treatment was necessary.

<table>
<thead>
<tr>
<th>Code</th>
<th>(3)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z22.38</td>
<td></td>
<td>Carrier of other specified bacterial diseases</td>
</tr>
</tbody>
</table>
The vaginal swab taken from Ms. C. came back positive for Group B Streptococcus. She had no documentation indicating active infection. She received a course of antibiotics, as a prophylactic measure.

**Example:**

Z22.38 (3) Carrier of other specified bacterial diseases
Z29.2 (3) Other prophylactic chemotherapy

A patient presents for delivery with a genitourinary tract infection due to Streptococcus Group B. No other complications of pregnancy or delivery were documented.

**Example:**

O23.901 (M) Other and unspecified genitourinary tract infection in pregnancy, delivered, with or without mention of antepartum condition
B95.1 (3) Streptococcus, Group B, as the cause of diseases classified to other chapters

**Delivery in a Completely Normal Case**

| Assign a code from category Z37.– *Outcome of delivery*, mandatory, for all deliveries. |
| ➢ Select Z37.0– *Outcome of delivery, single live birth* as the MRDx when a single, spontaneous vaginal delivery without any conditions complicating the pregnancy, childbirth or puerperium occurs. |
| ➢ When any other code from Chapter XV applies to the case, assign the appropriate code from category Z37.–, mandatory, as a diagnosis type (3). |

The following terms, when used in the absence of any other documentation to suggest otherwise, are indicators of a spontaneous delivery without complication

➢ Spontaneous vertex delivery
➢ Left occiput anterior [LOA]
➢ Right occiput anterior [ROA]
➢ Single term liveborn
➢ Healthy mother delivered
➢ Occiput posterior and occiput transverse not stated as persistent
➢ No fetal manipulation or instrumentation (e.g. forceps)

See also the coding standard entitled *InterventionsAssociated With Delivery*.

**Example:**

Ms. G delivered a healthy newborn male, vaginally, left occiput posterior presentation, without complication.

Z37.0 (M) Outcome of delivery, single live birth
5.MD.50.AA Manually assisted vaginal delivery (vertex), without episiotomy
Example: Ms. H delivered, vaginally, a healthy female baby, in the breech position. An obstetrician was in attendance.

O32.101 (M) Maternal care for breech presentation, delivered, with or without mention of antepartum condition
Z37.0 (3) Outcome of delivery, single live birth
5.MD.56.AA Breech delivery, spontaneous breech delivery, without episiotomy, with spontaneous delivery of head

Note: Certain obstetrical interventions do not preclude the use of Z37.0 as the most responsible diagnosis (e.g. induction for convenience, artificial rupture of membranes, simple manual removal of placenta [for convenience] and/or episiotomy). In a case where a cesarean section is requested by a mother who has not had a previous cesarean section, and done in the absence of any indications, Z37.0 Outcome of delivery, single live birth may still be used as the MRDx.

Example: Mrs. W is a primipara who does not want a vaginal delivery and requested an elective cesarean section. She had no complications of her pregnancy or delivery. The obstetrician performed a low segment section with no forceps.

Z37.0 (M) Outcome of delivery, single live birth
5.MD.60.AA Cesarean section delivery, lower segment transverse incision, without instrumentation

Example: Mrs. F had a cesarean section delivery of her first child. The obstetrician has noted that she is a candidate for vaginal birth after cesarean (VBAC) but the patient does not want a vaginal delivery and has requested an elective cesarean section. She had no complications of her pregnancy or delivery. The obstetrician performed a low segment section with no forceps.

O34.201 (M) Maternal care for known or suspected abnormality of pelvic organs, uterine scar due to previous cesarean section, delivered, with or without mention of antepartum condition
Z37.0 (3) Outcome of delivery, single live birth
5.MD.60.AA Cesarean section delivery, lower segment transverse incision, without instrumentation
Selection of the Sixth-Digit in Obstetrical Coding

In effect 2001, amended 2006

The sixth-digit that is applied to all codes in the range O10–O99 identifies the period (i.e. antepartum, intrapartum or postpartum) in which the patient is receiving care, and whether or not the delivery occurs within that episode of care.

<table>
<thead>
<tr>
<th>Select the sixth-digit “1”—Delivered, with or without mention of antepartum condition, when delivery occurs during the current episode of care and the condition occurred prior to or during delivery of the baby.</th>
</tr>
</thead>
</table>
| **Example:** The patient is admitted, at 38 weeks gestation, with gestational diabetes. She delivers a healthy baby boy and is discharged home.  
O24.801 (M) Diabetes mellitus arising in pregnancy [gestational], delivered, with or without mention of antepartum condition  
Z37.0 (3) Outcome of delivery, single live birth |

<table>
<thead>
<tr>
<th>Select the sixth-digit “2”—Delivered, with mention of postpartum condition when the delivery occurred during the current episode of care and the condition occurred after delivery of the baby.</th>
</tr>
</thead>
</table>
| **Example:** The patient is admitted, at 39 weeks gestation. She delivers a healthy baby boy, via spontaneous vaginal delivery. Two hours following delivery, the patient is taken to the operating room for removal of retained placenta, because of postpartum hemorrhage. She is discharged home on her fourth postpartum day.  
O72.002 (M) Postpartum hemorrhage, third-stage hemorrhage, delivered, with mention of postpartum complication  
Z37.0 (3) Outcome of delivery, single live birth |

<table>
<thead>
<tr>
<th>Select the sixth-digit “3”—Antepartum condition or complication when the patient is admitted for management of an antepartum condition. The patient does not deliver during the current episode of care and is still pregnant on discharge.</th>
</tr>
</thead>
</table>
| **Example:** Ms. C, who is at 14 weeks gestation, presents to hospital with hyperemesis gravidarum. She is discharged home, undelivered.  
O21.003 (M) Excessive vomiting in pregnancy, mild hyperemesis gravidarum, antepartum condition or complication |
Chapter XV—Pregnancy, Childbirth and the Puerperium

Select the sixth-digit “4”—Postpartum condition or complication when the patient is admitted for management of a postpartum condition or complication following delivery. The delivery having occurred during a previous episode of care or outside the hospital and the mother is subsequently admitted for observation or care.

The postpartum period is six weeks from delivery unless specified otherwise in the documentation. In other words, if physician documentation states a condition to be a postpartum problem, but the time period is beyond six weeks, it is still captured as a postpartum problem.

**Example:** This patient delivered a healthy baby boy via spontaneous vaginal delivery, with episiotomy, at 38 weeks gestation. She was discharged home on postpartum day 2. She now presents for readmission, with dehiscence of the episiotomy.

O90.104 (M) Complications of the puerperium, not elsewhere classified, disruption of perineal obstetric wound, postpartum condition or complication

Select the sixth-digit “9”—Unspecified as to episode of care, or not applicable, only when the outcome of the pregnancy is abortive. In these cases, assign the code from O10 to O99 as an additional code to describe any obstetrical condition present with an abortion.

**Example:** Ms. A presents requesting a medical abortion because of known fetal anomalies. Ultrasound identified spina bifida with hydrocephalus.

O04.9 (M) Medical abortion, complete or unspecified, without complication
O35.039 (1) Maternal care for (suspected) fetal spina bifida with hydrocephalus, unspecified as to episode of care, or not applicable

**Allowable Sixth-Digit Combinations**

Multiple coding is commonly used with obstetrical cases because a patient often has more than one condition that affects the obstetrical experience. Differing sixth digits may be used on the obstetric codes when a patient delivers and has both an antepartum or intrapartum condition and a postpartum condition. However, there are certain combinations of sixth digits that are illogical for the same episode of care.

<table>
<thead>
<tr>
<th>Sixth-Digit</th>
<th>Use:</th>
<th>Never Use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>alone or with “2”</td>
<td>- with “3”, “4”, or “9”</td>
</tr>
<tr>
<td>2</td>
<td>alone or with “1”</td>
<td>- with “3”, “4”, or “9”</td>
</tr>
<tr>
<td>3</td>
<td>alone</td>
<td>- with any other sixth-digit</td>
</tr>
<tr>
<td>4</td>
<td>alone</td>
<td>- with any other sixth-digit</td>
</tr>
<tr>
<td>9</td>
<td>alone</td>
<td>- with any other sixth-digit</td>
</tr>
</tbody>
</table>

**Note:** Certain obstetric conditions occur only at one point within an obstetric period. For example, placenta previa occurs only in the antepartum period (sixth-digits 1, 3 or 9 would only ever apply). Other obstetric conditions, such as hypertension, may be present at any time throughout the pregnancy and persist into the puerperium (any sixth-digit may apply).

Coders are reminded to read all inclusion and exclusion notes carefully. In some circumstances, ICD-10-CA has separate categories for conditions that occur either antepartum or postpartum (e.g. phlebothrombosis).
The following are examples of the correct usage of the sixth-digits “1” and “2”.

**Example:** Patient admitted in labor. Twins delivered. Subsequent postpartum hemorrhage on the second day followed by deep phlebothrombosis.

- O30.001 (M) Multiple gestation, twin pregnancy, delivered, with or without mention of antepartum condition
- O72.202 (2) Delayed and secondary postpartum hemorrhage, delivered with mention of postpartum complication
- O87.102 (2) Deep phlebothrombosis in the puerperium, delivered with mention of postpartum complication
- Z37.2 (3) Outcome of delivery, twins, both liveborn

**Example:** Patient delivered by cesarean section due to obstructed labor due to breech presentation of the baby. Prior to discharge, cesarean wound dehiscence was diagnosed.

- O64.101 (M) Obstructed labor due to breech presentation, delivered, with or without mention of antepartum condition
- O90.002 (2) Complications of the puerperium, not elsewhere classified, disruption of cesarean section wound, delivered, with mention of postpartum complication
- Z37.0 (3) Outcome of delivery, single live birth

Sixth-digit “3”—Antepartum condition or complication, must only be used alone.

**Example:** Ms. Y is at 30 weeks gestation. She is admitted with gestational diabetes. She was monitored for three days and discharged home in good condition, undelivered.

- O24.803 (M) Diabetes mellitus arising in pregnancy [gestational], antepartum condition or complication

Sixth-digit “4”—Postpartum condition or complication, must only be used alone.

**Example:** Patient delivered a healthy baby boy two weeks ago. She was discharged home postpartum day two. She is breastfeeding. She now presents with an abscess of the right breast.

- O91.104 (M) Abscess of breast associated with childbirth, postpartum condition or complication

The sixth-digit “9”—Unspecified as to episode of care, or not applicable, must only be used alone.

**Example:** Ms. V was diagnosed with ovarian cancer when she was at 8 weeks gestation. She underwent a series of radiotherapy sessions to shrink the tumor. Following discussion with her radiation oncologist, regarding the possible risk the radiation presented to her fetus, Ms. V opted to have a medical termination of the pregnancy. She is now admitted for a medical abortion.

- O04.9 (M) Medical abortion, complete or unspecified, without complication
- O35.609 (1) Maternal care for (suspected) damage to fetus by radiation, unspecified as to episode of care, or not applicable
Ensure that codes:

- O75.701 Vaginal delivery following previous cesarean section, delivered, with or without mention of antepartum condition
- O66.401 Failed trial of labor following previous cesarean, delivered, with or without mention of antepartum condition and
- O34.201 Uterine scar due to previous cesarean section, delivered, with or without mention of antepartum condition

never appear together on the same abstract as they are mutually exclusive.

When a patient who is booked for an elective repeat cesarean section is admitted early in labor and proceeds immediately to cesarean section, assign O34.201 Uterine scar due to previous cesarean section, delivered, with or without mention of antepartum condition.

The patient was admitted for an elective Cesarean Section. Select O34.201 - Maternal care for known or suspected abnormality, Uterine scar due to previous Caesarean section, Delivered, with or without mention of antepartum condition. (elective C-section with previous history of C-section)

End
Sequencing Obstetrical Diagnoses Codes

In effect 2001, amended 2006

When selecting the MRDx in obstetrical cases, the diagnosis typing definition for most responsible diagnosis applies (see also the coding standard entitled Diagnosis Typing Definitions). The following directives are provided to assist the coder in applying the MRDx Definition in certain obstetrical cases.

When an episode of care includes non-instrumental, spontaneous, vaginal delivery of an infant but the mother was admitted for an antepartum condition that required treatment for more than five days before the birth, sequence the antepartum condition as the most responsible diagnosis.

An antepartum condition that prolongs stay prior to delivery by at least five days is considered to consume greater resources than the delivery itself when the delivery is a routine vaginal delivery.

**Example:** Patient admitted with gestational hypertension, treated with bed rest and delivered baby boy, manually assisted without episiotomy, on day 6 of admission. Patient had a first-degree laceration of the perineum which was repaired.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>013.001</td>
<td>Gestational [pregnancy-induced] hypertension without significant proteinuria delivered, with or without mention of antepartum condition</td>
</tr>
<tr>
<td>070.001</td>
<td>First degree perineal laceration during delivery, delivered, with or without mention of antepartum condition</td>
</tr>
<tr>
<td>Z37.0</td>
<td>Outcome of delivery, single live birth</td>
</tr>
<tr>
<td>5.MD.50.AA</td>
<td>Manually assisted vaginal delivery (vertex), without episiotomy</td>
</tr>
<tr>
<td>5.PC.80. JP</td>
<td>Surgical repair, postpartum, of current obstetric laceration of pelvic floor, perineum, vagina or vulva</td>
</tr>
</tbody>
</table>

**Rationale:** O13.001 is selected as the MRDx as it most responsible for the patient’s length of stay.

**Example:** Patient admitted at term with pregnancy-induced hypertension. Labor was induced by intravenous oxytocin. She delivered a baby boy, manually assisted without episiotomy. A first-degree laceration of the perineum was repaired.

<table>
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<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>013.001</td>
<td>Gestational [pregnancy-induced] hypertension without significant proteinuria delivered, with or without mention of antepartum condition</td>
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<td>Manually assisted vaginal delivery (vertex), without episiotomy</td>
</tr>
<tr>
<td>5.PC.80. JP</td>
<td>Surgical repair, postpartum, of current obstetric laceration of pelvic floor, perineum, vagina or vulva</td>
</tr>
<tr>
<td>5.AC.30.HA-I2</td>
<td>Induction of labor, using percutaneous injection of oxytocic agent</td>
</tr>
</tbody>
</table>

**Rationale:** Even though the antepartum condition in this example did not require a lengthy predelivery stay of >5 days, it can still be the MRDx. In this case it is the condition for which an induction was performed. The perineal tear is minor and consumed minimal resources.
In cases within the expected length of stay, where a cesarean section or instrumentation has been used (i.e. forceps or vacuum), select the diagnosis stating the indication for the intervention as the most responsible diagnosis.

When a case is within an expected length of stay for an instrumental delivery, it is presumed that no other condition contributed to a greater consumption of resources than the condition that indicated the delivery method.

**Example:** Patient was admitted with gestational diabetes. On day 1 of her admission, she went into labor. After 7 hours of labor, it was determined that she could not deliver vaginally because of cephalopelvic disproportion. She was taken to the labor and delivery operative suite and delivered a health baby girl by cesarean section.

O65.401 (M) Obstructed labor due to maternal pelvic abnormality, obstructed labor due to fetopelvic disproportion, unspecified, delivered, with or without mention of antepartum condition

O24.801 (1) Diabetes mellitus arising in pregnancy (gestational), delivered, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

**Example:** Patient admitted with gestational hypertension, treated with bed rest. On the 7th day, she went into spontaneous labor. After 8 hours of labor, it was determined that she could not deliver vaginally because of cephalopelvic disproportion. Signs of fetal distress (heart rate anomaly) were noted and the mother’s blood pressure was continuing to rise. She was taken to the labor and delivery operative suite and delivered a health baby girl by cesarean section.

O13.001 Gestational [pregnancy-induced] hypertension without significant proteinuria delivered, with or without mention of antepartum condition

O65.401 Obstructed labor due to maternal pelvic abnormality, obstructed labor due to fetopelvic disproportion, unspecified, delivered, with or without mention of antepartum condition

O68.001 Labor and delivery complicated by fetal heart rate anomaly, delivered, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

5.MD.60.AA Cesarean section delivery, lower segment transverse incision, without instrumentation

**Rationale:** As will be true in many obstetrical cases, this patient’s circumstances are unique and the above directives do not apply. Selection of MRDx must be determined on the basis of the documentation of this case. When there is no clear indication as to which is most responsible, select the condition first listed by the physician (see also the coding standard entitled *Diagnoses of Equal Importance*).
Diabetes Mellitus in Pregnancy

All types of diabetes (pre-existing or gestational) occurring during pregnancy are classified to category O24. – *Diabetes mellitus in pregnancy*. Patients with diabetes are more apt to develop pre-eclampsia and eclampsia. When the patient record indicates that either condition is present, assign an additional code.

Classify all types of diabetes (pre-existing or gestational) occurring during pregnancy to category O24. – *Diabetes mellitus in pregnancy*. Assign an additional code from the block E10–E14, to classify any specific diabetic complication that may be present (see also the coding standard entitled *Diabetes Mellitus and the Pregnant State*).

**Example:**
Patient with Type 1 diabetes mellitus, with chronic renal failure is admitted at 39 weeks gestation. She delivers a healthy baby girl. She was seen by a nephrologist for evaluation and recommendations for treatment of her renal condition.

- O24.501 (M) Preexisting diabetes mellitus, Type 1, delivered, with or without mention of antepartum condition
- E10.22† (1) Type 1 diabetes mellitus with end-stage renal disease [ESRD]
- N08.3* (3) Glomerular disorders in diabetes mellitus
- N18.9 (3) Chronic renal failure, unspecified (optional)
- Z37.0 (3) Outcome of delivery, single live birth

Rationale: Diagnosis typing for E10.22 will depend on circumstances documented in the record. It is assigned type 1 in this scenario because of the consultation and treatment.

**Example:**
Patient presents with gestational diabetes, at 39 weeks gestation. She also has signs of pre-eclampsia. She is placed on bed rest. She delivers a healthy baby girl, spontaneously, on day 3 of her admission.

- O24.801 Diabetes mellitus arising in pregnancy [gestational], delivered with or without mention of antepartum condition
- O13.001 Gestational [pregnancy-induced] hypertension without significant proteinuria delivered, with or without mention of antepartum condition
- Z37.0 (3) Outcome of delivery, single live birth

Rationale: Selection of MRDx will depend on the circumstances documented in the record.
Maternal Care Related to the Fetus, Amniotic Cavity and Possible Delivery Problems

Select a code from the range O32–O34 when the mother is diagnosed with these conditions prior to the onset of labor. When labor has begun, but medical intervention is required due to one of the conditions, classify the case to a code from the range O64—O66 Obstructed Labor.

See also the coding standard entitled *Obstructed Labor*.

**Example:** 26-year old primigravida with known twin pregnancy admitted for cesarean section due to breech presentation of one twin. Patient underwent lower segment cesarean section with successful delivery of twin boys.

- O32.501 (M) Maternal care for multiple gestation with malpresentation of one fetus or more, delivered with or without mention of antepartum condition
- O30.001 (1) Twin pregnancy, delivered with or without mention of antepartum condition
- Z37.2 (3) Outcome of delivery, twins, both liveborn

**Rationale:** This mother was admitted for a planned cesarean section, she did not go into labor, hence code selection is from O32–O34 and not from O64–O66.

**Example:** 26-year old primigravida with known twin pregnancy admitted in early labor. She progressed well until almost fully dilated when it became apparent that twin A was in breech presentation. Patient underwent lower segment cesarean section with successful delivery of twin boys.

- O64.101 (M) Obstructed labor due to breech presentation, delivered with or without mention of antepartum condition
- O30.001 (1) Twin pregnancy, delivered with or without mention of antepartum condition
- Z37.2 (3) Outcome of delivery, twins, both liveborn

**Example:** 27-year old multigravida admitted for elective cesarean section due to past history of two previous sections. Single live male delivered.

- O34.201 (M) Maternal care for uterine scar due to previous cesarean section, delivered with or without mention of antepartum condition
- Z37.0 (3) Outcome of delivery, single live birth

**Example:** 27-year old P1, G2, admitted in active labor at 6 cm dilation. This patient has a history of a previous cesarean section but wished for a trial of labor in the hope of delivering vaginally. After several hours of labor, persistent occipitoposterior was diagnosed and a cesarean section was carried out.

- O64.001 (M) Obstructed labor due to incomplete rotation of fetal head, delivered with or without mention of antepartum condition
- O66.401 (1) Other obstructed labor, failed trial of labor following previous cesarean
- Z37.0 (3) Outcome of delivery, single live birth
Example: 27-year old multigravida admitted in active labor at 6 cm dilation. This patient has a history of a previous cesarean section but wished for a trial of labor. After two more hours of labor, she successfully delivered a female fetus vaginally.

O75.701 (M) Other complications of labor and delivery, vaginal delivery following previous cesarean section, delivered with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

Premature Rupture of Membranes


Select a code from category O42.– Premature rupture of membranes when there is spontaneous rupture of the amniotic sac for more than one hour prior to the onset of contractions. Select codes within the category O42.– according to the length of time between rupture of the membranes and the onset of labor with a second axis of term or preterm gestational age at the time of rupture.

Example: Patient presented to hospital at 35 weeks gestation with spontaneous rupture of membranes. She was not having any contractions or tightenings. Labor began 6 hours after her PROM. She delivered a healthy baby boy 2 hours after her labor began.

O42.011 (M) Preterm premature rupture of membranes, onset of labor within 24 hours, delivered, with or without mention of antepartum condition

O60.101 (1) Preterm labor with preterm delivery, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

When delivery occurs more than 24 hours after premature rupture of membranes, assign as an additional code, O75.601 Delayed delivery after spontaneous or unspecified rupture of membranes.

Example: 24-year old primigravida at 39 weeks gestation admitted at 0200 hours with documented rupture of membranes at 1900 hours on the night before admission. She was observed for several hours as due to the shortage of available staff, induction could not be started until 1800 hours. Contractions began at 1930 hours and a healthy male infant was delivered at 2200 hours. Membranes were ruptured for a total of 24.5 hours prior to the onset of labor.

O42.121 (M) Premature rupture of membranes, onset of labor after 24 hours, full term, delivered with or without mention of antepartum condition

O75.601 (1) Delayed delivery after spontaneous or unspecified rupture of membranes, delivered with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth
Pre-Term Delivery  

When labor occurs before completion of 37 weeks of pregnancy, assign a code from category O60.– Preterm labor. Labor may be spontaneous or induced and followed by vaginal or surgical delivery.

Example: Patient presents in spontaneous labor. Patient delivers a healthy baby girl at 36 weeks gestation.

O60.101 (M) Preterm labor with preterm delivery, delivered with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

See also the coding standards entitled Pregnancy With Abortive Outcome and Premature Rupture of Membranes.

Long Labor  

Select a code from category O63.– Prolonged labor, when the length of time of the stages of labor meet the following criteria:

O63.0– Prolonged first stage

- >18 hours for primipara
- >12 hours for multipara

O63.1– Prolonged second stage

- >2 hours for primipara
- >3 hours for primipara who has received an epidural anesthetic
- >1 hour for multipara
- >2 hours for multipara who has received an epidural anesthetic

O63.2– Delayed delivery of second twin, triplet, etc.

- a time lapse of >15 minutes between births

Example: Ms. J is a primipara. She presents to hospital in labor. After 20 hours of labor her obstetrician recommends that they proceed to cesarean section because her cervix remains at 6 cm dilation. She delivered a healthy baby girl by cesarean section.

O63.001 (M) Prolonged first stage (labor), delivered, with or without mention of antepartum condition

O62.101 (1) Secondary uterine inertia, delivered, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

Rationale: As the patient is 6 cm dilated, she is still in the first stage. Both conditions are present, therefore, both codes are assigned. Sequencing does not matter in this case, either one can be MRDx.
Ms. B is G3 P2. She presents to hospital in active labor. She finds the contractions bothersome so an epidural anesthetic is administered by Dr. C. Upon examination her cervix is 10 cm dilated and 100% effaced. She pushes for 2 hours and 5 minutes. Her obstetrician applies a vacuum. A healthy baby girl is delivered vaginally assisted by low vacuum traction.

**Example:**

O63.101 (M) Prolonged second stage (labor), delivered, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

**Rationale:** Once the patient is 10 cm dilated she is in the second stage.

Ms. N, a primipara, presented in labor at 38 weeks, with a twin gestation. Following 1 hour of pushing, she successfully delivers a healthy baby boy (twin A). She continues to push and 18 minutes later, her obstetrician applies a vacuum to facilitate the delivery of a health baby girl (twin B).

**Example:**

O63.201 (M) Delayed delivery of second twin, triplet, etc., delivered, with or without mention of antepartum condition

O30.001 (1) Multiple gestation, twin pregnancy, delivered, with or without mention of antepartum condition

Z37.2 (3) Outcome of delivery, twins, both liveborn

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**Obstructed Labor**

*In effect 2001, amended 2002*

classify labor as obstructed when abnormalities occur that prevent a spontaneous vaginal delivery.

- Ensure there is documentation that the patient is in labor before assigning a code from the block O64–O66.

- Code obstructed labor when the physician states that labor was obstructed or when the Alphabetical Index leads to an obstructed labor code (e.g. POP [persistent occipitoposterior]).

- Look for documentation of obstructed labor when emergency cesarean section is performed for maternal indications.

**Note:** Failure to progress NOS, is not necessarily an indication that labor is obstructed. It is an inclusion term at O62.2—Abnormalities of forces of labor, other uterine inertia.

See also the coding standard entitled Maternal Care Related to the Fetus, Amniotic Cavity and Possible Delivery Problems.

**Example:** Pregnancy, at term delivered, with obstructed labor due to transverse lie.

O64.801 (M) Obstructed labor due to other malposition and malpresentation, delivered, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth
Example: Pregnancy, at term delivered, with obstructed labor due to breech presentation. A cesarean section is performed (unplanned).
O64.101 (M) Obstructed labor due to breech presentation, delivered, with or without mention of antepartum condition
Z37.0 (3) Outcome of delivery, single live birth

When maternal care is administered prior to the commencement of labor for a potentially obstructing factor, assign a code from the appropriate rubric in the O31–O34 range.

Example: A patient is known to have a breech presentation diagnosed on ultrasound. She is admitted for an elective cesarean section (planned). She never went into labor.
O32.101 (M) Maternal care for breech presentation, delivered, with or without mention of antepartum condition
Z37.0 (3) Outcome of delivery, single live birth

Note: An obstructed labor may sometimes end in a vaginal delivery.

When an obstructing factor is resolved by version and/or rotation at time of delivery or by certain other maneuvers, resulting in a vaginal delivery, assign a code from O64–O66 and an intervention code for the procedure leading to the resolution of the obstruction.

Example: Patient is admitted in active labor at 37 weeks gestation. Labor was obstructed due to in breech presentation. The physician successfully performed a rotation maneuver and the infant was born vaginally in cephalic presentation.
O64.101 (M) Obstructed labor due to breech presentation, delivered, with or without mention of antepartum condition
Z37.0 (3) Outcome of delivery, single live birth
5.MD.50.AA Manually assisted vaginal delivery (vertex), without episiotomy
5.LD.40.JA Version during labor, by external cephalic version

Labor and Delivery Complicated by Fetal Stress

The codes in category O68.– Labor and delivery complicated by fetal stress [distress] identify the presence of possible indicators that the fetus may be in danger of developing asphyxia. Delivery interventions may be based on the presence of these indicators. Fortunately, despite the predelivery concerns, the delivery most often results in a completely normal infant. Codes in the range O68.0–O68.2 may be assigned on the mother’s abstract even when the fetus is delivered with no substantial evidence of asphyxia. Assignment of O68.3– Labor and delivery complicated by evidence of fetal asphyxia, however, cannot be assigned without lab evidence that the condition is present.

When a diagnosis of fetal asphyxia has been substantiated by a documented acid-base status on the basis of cordocentesis, fetal scalp sampling, cord blood pH, pCO2 etc., assign O68.3– Labor and delivery complicated by evidence of fetal asphyxia.
Note: When signs of fetal asphyxia are present prior to commencement of labor, select a code from O36.3—Maternal care for signs of fetal asphyxia.

Note: The Society of Obstetricians and Gynecologists of Canada (SOGC) values for fetal asphyxia:
- umbilical cord arterial pH ≤ 7.0
- umbilical cord arterial base deficit ≥ 16/mmol/L

For further information, see also the coding standard entitled *Fetal Asphyxia*.

**Example:** Patient is admitted in active labor at 37 weeks gestation. During labor, a non-reassuring fetal heart rate is identified. Fetal scalp sampling indicates an arterial pH of 6.7. The obstetrician recommends an emergency cesarean section for fetal distress.

O68.301 (M) Labor and delivery complicated by evidence of fetal asphyxia, delivered, with or without mention of antepartum condition

Z37.0 (3) Outcome of delivery, single live birth

### Postpartum Hemorrhage

In effect 2001, amended 2006

Classify excessive blood loss occurring during the first 24 hours following delivery as early postpartum hemorrhage:
- Assign O72.0—Third-stage hemorrhage, when it is caused by a retained or trapped placenta.
- Assign O72.1—Other immediate postpartum hemorrhage, when it is due to other causes, such as uterine atony.

Use the following criteria to determine when blood loss is excessive:
- Vaginal delivery ≥ 500 cc blood loss during third stage of labor, in immediate postpartum period or after first 24 hours following delivery or if so stated by the physician when the estimated blood loss is < 500 cc.
- Cesarean delivery ≥ 1000 cc blood loss or if so stated by the physician when the estimated blood loss is < 1000 cc.

**Example:** Patient starts to hemorrhage 2 hours following delivery. She is taken to the operating room where a manual removal of retained placenta is performed under general anesthetic.

O72.002 Third-stage hemorrhage, delivered, with mention of postpartum complication

**Example:** Patient delivers a healthy male baby at 06:15 and starts to hemorrhage at 11:25. The obstetrician documents patient has uterine atony and takes patient to the operating room for a dilation and curettage.

O72.102 Other immediate postpartum hemorrhage, delivered, with mention of postpartum complication
Classify excessive blood loss occurring between 24 hours and six weeks after delivery as late postpartum hemorrhage:

Assign O72.2—Delayed and secondary postpartum hemorrhage.

**Example:** Ms. D delivered a healthy baby boy two weeks ago. She presents to hospital today with vaginal bleeding. She is taken to the operating room, where a dilation and curettage is performed. Retained products of conception are removed.

O72.204 (M) Delayed and secondary postpartum hemorrhage, postpartum condition or complication

**Complications of Anesthesia During Labor and Delivery**

Select a code to classify complications arising from the administration of a general or local anesthetic, analgesic or other sedation during pregnancy or the puerperium on the basis of the stage of the pregnancy at the time of the administration of the agent.

**Example:** Patient receives an epidural anesthetic during labor and delivery. Within 24 hours she complains of a headache. A diagnosis of post-epidural headache is made.

O74.502 Complications of anesthesia during labor and delivery, spinal and epidural anesthesia-induced headache during labor and delivery, delivered, with mention of postpartum complication
Dilation and Curettage

The dilation and curettage intervention is the only intervention in CCI that is found in more than one section and in more than one rubric within Section 5.

Select the CCI code for dilation and curettage of the uterus based on the gravid status of the uterus.

See also the section on Postpartum Interventions in the coding standard entitled *Interventions Associated With Delivery*. 
Interventions Associated With Delivery

Assign an intervention code from the range 5.MD.50.^\textsuperscript{^a} to 5.MD.60.^\textsuperscript{^b} inclusive, for every delivery including each delivery in a multiple gestation.

Exception: When the deliveries in a multiple gestation result in assignment of the same CCI code, assign the code only once.

Example: Ms. E spontaneously delivered a healthy female baby at 04:15 hours. The physician had not yet arrived, however, nursing staff were in attendance.

- Z37.0 (M) Outcome of delivery, single live birth
- 5.MD.50.AA Manually assisted vaginal delivery (vertex), without episiotomy

Example: 24-year old mother delivered this tiny, preterm fetus in her bed without any health care personnel present.

- 5.MD.51.ZZ Unassisted spontaneous vaginal delivery, using approach/technique NOS

Example: Twin gestation at 36 weeks delivered by lower segment cesarean section.

- 5.MD.60.AA Cesarean section delivery, lower segment transverse incision, without instrumentation

Example: Twin gestation—mother admitted fully dilated. First twin in vertex presentation and successfully delivered with low forceps over a mediolateral episiotomy. Second twin in breech presentation and required a partial breech extraction.

- 5.MD.53.KL Forceps traction and rotation delivery, low forceps (i.e. Pajot maneuver), with episiotomy (including midline or mediolateral)
- 5.MD.56.PA Breech delivery, partial breech extraction [assisted breech delivery], with spontaneous delivery of head, with episiotomy

Rationale: The episiotomy is only done once. However, as it was done prior to the delivery of the first twin, both intervention codes selected should be that with episiotomy. This allows for retrieval of all deliveries done with an episiotomy regardless of whether or not it was a multiple birth.

Induction and Augmentation of Labor

When a patient who has no physical signs of labor presents for delivery and an intervention is performed to initiate labor, assign a code, mandatory, from the rubric 5.AC.30.^\textsuperscript{^c} Induction of labor. Code all methods that apply.

When labor begins spontaneously, or has been induced, and an intervention is required to ensure that labor continues to progress, assign a code, optionally, from the rubric 5.LD.31.^\textsuperscript{^d} Augmentation of labor.

Example: Patient presents to hospital at 42 weeks gestation with no signs of labor. The decision is made to induce her by performing an artificial rupture of membranes. She goes into labor and delivers a healthy baby girl.

- 5.AC.30.AP Induction of labor, using artificial rupture of membranes
Chapter XV—Pregnancy, Childbirth and the Puerperium

When an induction of labor procedure is performed and no labor begins, and the patient is either discharged or a cesarean section is performed, assign a code from O61.– Failed induction of labor.

Multiple attempts at induction during a single admission that eventually result in labor and vaginal delivery are not classified as failed induction.

**Example:** A patient with pregnancy-induced hypertension (PIH) and significant proteinuria is admitted for induction of labor. She is given prostaglandin gel intravaginally and intravenous (IV) oxytocin. After 5 hours, no labor ensues and due to increasing concerns of rising blood pressure in the mother, she is taken to the operating room for a cesarean section. The patient had no previous history of hypertension.

- O14.001 (M) Gestational [pregnancy-induced] hypertension with significant proteinuria delivered, with or without mention of antepartum condition
- O61.001 (1) Failed medical induction of labor, delivered, with or without mention of antepartum condition
- Z37.0 (3) Outcome of delivery, single live birth
- 5.MD.60.AA Cesarean section delivery, lower segment transverse incision, without instrumentation
- 5.AC.30.AL-I2 Induction of labor, using oxytocic agent with combined approaches of administration (e.g. oral with intra-vaginal)

**Example:** A patient with PIH and significant proteinuria is admitted for induction of labor. She is given prostaglandin gel intravaginally and IV oxytocin. Labor begins, but after 8 hours she is not fully dilated and her blood pressure is continuing to rise. She is taken to the operating room for emergency cesarean section. The patient had no previous history of hypertension.

- O14.001 (M) Gestational [pregnancy-induced] hypertension with significant proteinuria delivered, with or without mention of antepartum condition
- Z37.0 (3) Outcome of delivery, single live birth
- 5.MD.60.AA Cesarean section delivery, lower segment transverse incision, without instrumentation
- 5.AC.30.AL-I2 Induction of labor, using oxytocic agent with combined approaches of administration (e.g. oral with intra-vaginal)

**Rationale:** Even though this patient was delivered by cesarean section, induction did result in labor thus this is not considered a failed induction.

Labor that has been induced, either surgically or medically, can at times require further augmentation—the same as labor that begins naturally. When this is the case, the codes for induction of labor and augmentation of labor may be used together on the same abstract.

**Example:** Patient presents to hospital at 42 weeks gestation with no sign of labor. The decision is made to induce her by performing an artificial rupture of membranes. At 5 cm dilation, her contractions slowed and a Syntocinon drip was started.

- 5.AC.30.AP Induction of labor, using artificial rupture of membranes
- 5.LD.31.HA-I2 Augmentation of labor using injection of oxytocic agent (optional)
Postpartum Interventions

Assign a code from the block 5.PB.^^ to 5.PD.^^ Postpartum interventions when an intervention is performed during the third stage of labor until 42 days after delivery.

The third stage of labor includes the time from delivery of the fetus to delivery of the placenta. The postpartum period includes the third stage of labor to 42 days after delivery. Repairs of obstetrical lacerations are included in postpartum interventions as are dilation and curettage procedures.

Example: During delivery of a healthy baby boy, the patient sustains a third degree perineal laceration. The delivery physician repairs the obstetrical laceration in the labor and delivery unit before the patient is transferred to the obstetrical nursing unit.

5.PC.80.JQ Surgical repair, postpartum, of current obstetric laceration of rectum and sphincter ani
Chapter XVI—Certain Conditions Originating in the Perinatal Period

Low Birth Weight

When birth weight is less than 2500 grams, assign, mandatory, as a significant diagnosis type, either:

- P07.0 Extremely low birth weight, birth weight 999 g or less; or
- P07.1 Other low birth weight birth weight 1000-2499 g.

Assign any other code(s), additionally, to identify “light” or “small” for gestational age (P05.9 Slow fetal growth, unspecified) and prematurity (P07.2 Extreme immaturity or P07.3 Other preterm infants).

Sequence the code for low birth weight before a code for poor fetal growth.

Low Birth Weight Infants

<table>
<thead>
<tr>
<th>Associated Conditions</th>
<th>Weight 1000 to 2499 grams</th>
<th>Weight ≤999 grams</th>
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</thead>
<tbody>
<tr>
<td><strong>Term infant ≥ 37 weeks gestation</strong></td>
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<tr>
<td>Fetal malnutrition</td>
<td>P07.1</td>
<td>-</td>
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<td></td>
<td>P05.2</td>
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<tr>
<td>Intrauterine growth restriction</td>
<td>P07.1</td>
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<td>P05.9–</td>
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<tr>
<td>Low birth weight NEC</td>
<td>P07.1</td>
<td>-</td>
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<tr>
<td><strong>Preterm infant ≥ 28 weeks but &lt; 37 weeks gestation</strong></td>
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<tr>
<td>Fetal malnutrition</td>
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<td>P07.3</td>
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<td><strong>Extremely preterm infant &lt; 28 weeks gestation</strong></td>
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<td>P07.2</td>
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</table>
**Example:** Infant delivered vaginally at 38 weeks gestation with evidence of symmetrical growth restriction. Birth weight is 2400 grams.

P07.1 (M) Other low birth weight  
P05.90 (1) Symmetric intrauterine growth restriction [IUGR]  
Z38.00 (0) Singleton, born in hospital, delivered vaginally

**Example:** Infant delivered by cesarean section at 28 weeks gestation weighing 1700 grams.

P07.1 (M) Other low birth weight  
P07.3 (1) Other preterm infants  
Z38.01 (0) Singleton, born in hospital, delivered by cesarean

**Example:** Infant delivered by cesarean section at 28 weeks gestation weighing 950 grams. Along with the prematurity, there is evidence of fetal growth restriction.

P07.0 (M) Extremely low birth weight  
P07.99 (1) Unspecified intrauterine growth restriction [IUGR]  
P07.3 (1) Other preterm infants  
Z38.01 (0) Singleton, born in hospital, delivered by cesarean

**Note:** This standard does not mean to imply that low birth weight must be selected as the MRDx. When a serious condition other than low birth weight/prematurity qualifies as the MRDx then that condition should be selected as such.

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**Fetal Asphyxia and Birth Asphyxia**  
In effect 2001, amended 2006

For clinical information, see *Appendix A*.

When values for asphyxia, as established by the Society of Obstetricians and Gynecologists of Canada (SOGC), are documented on the chart, assign a code from:

- P20.-- Fetal Asphyxia; or  
- P21.-- Birth Asphyxia.

When these criteria are not met, code a stated diagnosis of asphyxia as “suspected” asphyxia.

Assign additional code(s) to identify any mention of neonatal findings indicative of neonatal harm such as hypoxic ischemic encephalopathy (HIE), and/or organ failure.

**Note:** The Society of Obstetricians and Gynecologists of Canada (SOGC) values for asphyxia are:
- Umbilical cord arterial pH $\leq 7.0$
- Umbilical cord arterial base deficit $\geq 16$/mmol/L

Blood gases can be reported as base excess in negative values or base deficit in positive values. The actual values are unchanged.
P20  Fetal Asphyxia

Fetal asphyxia is defined as that occurring before birth or during the birthing process. Although fetal asphyxia can sometimes be predicted during labor, it is often not discovered until after the baby is born. Further detail is provided in the codes to describe when the asphyxia is first noted, i.e.:

- before the onset of labor (definitive diagnosis by blood gas analysis of cord blood obtained by cordocentesis or during cesarean section prior to onset of labor)
- during labor and delivery (definitive diagnosis by blood gas analysis obtained by fetal scalp sampling during labor or cord blood taken at delivery)
- unspecified when first noted

These babies may have a 5 minute Apgar score of 0–5, but must have clinical evidence of asphyxia, i.e. documented arterial pH $\leq 7.0$. 

P21  Birth Asphyxia

Newborn (birth) asphyxia is defined as that occurring in the neonatal period (i.e. after birth). These babies have no evidence of antepartum or intrapartum fetal asphyxia and may have normal cord blood gases and Apgar scores but suffer an asphyxial insult after birth. The code P21.9 will be used rarely. Apgar scores alone do not determine newborn asphyxia. It may be based on a variety of clinical indicators not diagnosed or evident at the time of birth. Definitive diagnosis is by blood gas analysis of arterial or capillary blood taken from the baby.

Example:  
Electronic fetal monitoring during active labor shows non-reassuring fetal heart tracing. Fetal scalp blood sampling revealed a pH of 6.5. Infant delivered by emergency cesarean section. Diagnosis is stated as asphyxia.

P20.1  (M)  Intrapartum fetal asphyxia first noted during labor and delivery
Z38.01  (O)  Singleton, born in hospital, delivered by cesarean

Example:  
Baby delivered by emergency cesarean section due to prolonged fetal bradycardia noted during first stage of labor. Baby did not breathe spontaneously at delivery and required resuscitation with bag and mask. Apgar scores were 3 at one minute and 8 at 5 minutes. Cord gases showed arterial pH of 6.74. The baby did not show any neurologic sequelae during the stay. Final diagnosis is stated as prolonged fetal bradycardia and low cord blood gases.

P20.1  (M)  Intrapartum fetal asphyxia first noted during labor and delivery
Z38.01  (O)  Singleton, born in hospital, delivered by cesarean

Rationale:  
Cord blood pH values met the established criteria for asphyxia as set out by the SOGC; therefore, it is correct to select P20.1. Selection of this code simply captures the fact that the newborn suffered an asphyxial episode as evidenced by the low cord blood value. It does not mean that the newborn suffered any harm from this asphyxial episode.
Example: Mom presents in labor and fetal heart rate tracing is initially reassuring. Several hours into labor the fetal heart rate becomes non-reassuring with loss of variability and decelerations. It was therefore elected to perform an emergency cesarean section. The infant initially experiences breathing problems requiring resuscitation by the neonatology team. Apgar scores are 2 and 5 at 1 minute and 5 minutes respectively. Arterial cord blood pH is 7.15. Final diagnosis is stated as perinatal asphyxia and severe metabolic acidosis.

(Q) P20.1 (M) Intrapartum fetal asphyxia first noted during labor and delivery  
Z38.01 (0) Singleton, born in hospital, delivered by cesarean  
Rationale: Asphyxia is not substantiated by the cord blood pH value; therefore, asphyxia can only be suspected and must be recorded as a query diagnosis. A query or questionable diagnosis is indicated with a diagnosis prefix of (Q).

Example: Male infant delivered vaginally with an absent heart beat. Apgar score at 1 minute and at 5 minutes was 0. The fetal heart tracing had been reassuring throughout the entire course of labor. Extensive resuscitation ensued for 40 minutes and the baby was eventually revived. Blood gases performed on cord blood revealed a pH of 5.0 and a base excess of –21. Throughout the day, the neurological status of the child was not reassuring and he began having seizures. The kidney function was also non-reassuring. A foley catheter was placed and there was only 1 cc of urine output over the entire course of the day. Final diagnosis is stated as hypoxic ischemic encephalopathy (HIE), anuria.

P20.1 (M) Intrapartum fetal asphyxia first noted during labor and delivery  
P91.6 (1) Hypoxic ischemic encephalopathy  
P96.0 (1) Congenital renal failure  
Z38.00 (0) Singleton, born in hospital, delivered vaginally  
Rationale: Asphyxia is substantiated by cord blood pH values. Any associated neonatal signs are coded separately. HIE is manifested by convulsions; therefore, the convulsions are not coded separately.

Example: Infant, delivered vaginally, exhibiting initial respiratory depression requiring bag and mask resuscitation. Apgar scores are 4 at one minute and 9 at 5 minutes. Arterial cord blood pH is 7.32.

P28.5 (M) Respiratory failure of newborn  
Z38.00 (0) Singleton, born in hospital, delivered vaginally  
Rationale: The physician does not document asphyxia nor do the cord blood pH values meet the criteria for asphyxia; therefore, this case is not coded to category P20.– or P21.–. Insufficient or poor respiration in the newborn is classified to P28.5.

Example: Baby born vaginally at 30 weeks gestation. Arterial cord blood pH at birth is 7.5. The infant fails to sustain respirations and the physician documents asphyxia. Arterial blood gases taken 30 minutes after birth show a pH of 6.9.

P21.9 (M) Newborn asphyxia, unspecified  
Z38.00 (0) Singleton, born in hospital, delivered vaginally  
Rationale: Cord blood gases at birth are normal. This is evidence that the asphyxial episode did not occur during labor or the birthing process.
Respiratory Distress of Newborn

<table>
<thead>
<tr>
<th>Always select P22.0 <em>Respiratory distress syndrome of newborn (RDS)</em>, when the drug Surfactant has been administered and the diagnosis is documented as either Respiratory Distress Syndrome or Transient Tachypnea of Newborn (TTN).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign P22.0 <em>Respiratory distress syndrome of newborn (RDS)</em> to cases of documented RDS, when the patient is either transferred to a higher-level nursery or dies before Surfactant is administered.</td>
</tr>
<tr>
<td>Ensure P22.0 <em>Respiratory distress syndrome of newborn (RDS)</em> and P22.1 <em>Transient tachypnea of newborn</em> are never assigned on the same abstract.</td>
</tr>
</tbody>
</table>

**Example:**

- Newborn diagnosed with respiratory distress syndrome. Surfactant is administered.
  - P22.0 Respiratory distress syndrome of newborn (RDS)

**Example:**

- Newborn diagnosed with transient tachypnea. Surfactant is administered.
  - P22.0 Respiratory distress syndrome of newborn (RDS)
  - **Rationale:** In ICD-10-CA, babies given Surfactant are classified to P22.0 regardless of whether the diagnosis is stated as respiratory distress syndrome or transient tachypnea of the newborn.

**Example:**

- Newborn diagnosed with respiratory distress syndrome. Surfactant is not administered. Baby is discharged home on day 3.
  - P22.1 Transient tachypnea of newborn
  - **Rationale:** A diagnosis of RDS without administration of Surfactant is coded to TTN (unless the infant is transferred or expires).

**Example:**

- Newborn diagnosed with respiratory distress syndrome and is transferred to tertiary care centre for administration of Surfactant.
  - P22.0 Respiratory distress syndrome of newborn (RDS)
  - **Rationale:** Although Surfactant is not administered to the infant at this facility, it is the intent at the time of transfer that the infant will receive Surfactant at the receiving facility. Follow up with the receiving facility to confirm administration of Surfactant is not required.
Neonatal Jaundice  

Classify neonatal jaundice as the MRDx or a significant comorbidity only when there is documented evidence of jaundice and/or elevated bilirubin with associated treatment by phototherapy or exchange transfusion.

**Example:** Term infant delivered vaginally. Physician states “jaundice” and phototherapy was administered.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P59.9</td>
<td>Neonatal jaundice, unspecified</td>
</tr>
<tr>
<td>Z38.00</td>
<td>Singleton, born in hospital, delivered vaginally</td>
</tr>
</tbody>
</table>

**Example:** Preterm infant delivered at 35 weeks by cesarean section. Birth weight is 2000 grams. Infant has hyperbilirubinemia that is treated with phototherapy.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P07.1</td>
<td>Other low birth weight</td>
</tr>
<tr>
<td>P07.3</td>
<td>Other preterm infants</td>
</tr>
<tr>
<td>P59.0</td>
<td>Neonatal jaundice associated with preterm delivery</td>
</tr>
<tr>
<td>Z38.01</td>
<td>Singleton, born in hospital, delivered by cesarean</td>
</tr>
</tbody>
</table>

**Example:** Term infant delivered vaginally. The physician has documented mild jaundice. No other abnormalities are noted. Phototherapy was not administered.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z38.00</td>
<td>Singleton, born in hospital, delivered vaginally</td>
</tr>
<tr>
<td>P59.9</td>
<td>Neonatal jaundice, unspecified (optional)</td>
</tr>
</tbody>
</table>

**Rationale:** Jaundice that is documented but not actively treated i.e. no phototherapy was administered, may only be coded as a type 0 diagnosis. Coding jaundice in this instance is optional.

**Related Intervention**

1. **YZ.12.JA-DQ** *Therapy, skin NEC, using ultraviolet light.*
Confirmed Sepsis and Risk of Septicemia in the Neonate

Neonatal sepsis may be defined as an invasive bacterial infection occurring in the first 28 days of life. Early-onset neonatal sepsis is clinically apparent within 6 hours of birth in over 50% of cases; the great majority present within the first 72 hours of life. Late-onset neonatal sepsis usually presents after 4 days of age and includes nosocomial-acquired infections.

Risk factors for invasive neonatal infection include:

- preterm labor
- premature rupture of membranes
- signs of maternal infection
- multiple birth with delay in delivery of subsequent infant(s)
- prolonged rupture of membranes
- maternal carriage of group B streptococcus infection
- previous baby with invasive group B streptococcal disease

Neonates who have one or more of the above risk factors but no symptoms may have a diagnosis of “risk of sepsis” and be treated by prophylactic antibiotics (generally for 2–3 days) or kept in hospital for further observation.

When sepsis has been confirmed in a neonate, assign a code from P36.– *Bacterial sepsis of newborn*. Assign an additional code, optionally, as a diagnosis type (0), from category P00–P04 *Fetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery* if the infection is a result of a maternal condition.

When the diagnosis is documented by the physician as “probable sepsis”, “presumed sepsis”, “clinical sepsis” or “culture-negative sepsis”, at the time of discharge, code the condition as confirmed septicemia.

Ensure that a code from category P36.– *Bacterial sepsis of newborn* is not assigned when the sepsis is “ruled out”.

When any of the following descriptors for sepsis/septicemia are used on the record of a neonate:

- ?Sepsis
- Questionable sepsis
- Query sepsis
- Possible sepsis
- Rule out sepsis

return the record to the responsible physician for clarification prior to code assignment as these statements cannot be coded as sepsis.

Base code decisions on physician documentation and not on blood culture results.
When neonates at risk of sepsis have no documented sepsis or when neonatal sepsis was suspected but ruled out, classify the case as follows:

- If the neonate is observed only and prophylactic antibiotic treatment for sepsis is not initiated, assign the Z03.8 Medical observation and evaluation for other suspected diseases and conditions as a significant diagnosis type (M, 1, 2, W, X or Y).
- If the neonate is given prophylactic antibiotic treatment, assign Z29.2 Need for other prophylactic chemotherapy as a significant diagnosis type (M, 1, 2, W, X or Y).

When any of the above codes apply on the birth admission, assign Z38.– Liveborn infants according to place of birth as diagnosis type (0).

Note: The requirement to return the record to the physician for clarification as indicated above is an exception to the coding standard entitled Suspected Conditions/Query/Uncertain Diagnosis (Q). In the case of neonatal sepsis, seek physician clarification to determine if the case should be classified as confirmed or probable sepsis versus a case of observation for a suspected condition.

**Example:**

Mom has prolonged rupture of membranes with chorioamnionitis. Infant is delivered vaginally at term and admitted to neonatal intensive care unit (NICU) for observation. Blood cultures are drawn and antibiotics are started. Blood cultures come back positive for streptococcus. Diagnosis is stated as streptococcal septicaemia.

- P36.1 (M) Sepsis of newborn due to other and unspecified streptococci
- P02.7 (O) Fetus and newborn affected by chorioamnionitis
- Z38.00 (O) Singleton, born in hospital, delivered vaginally

**Rationale:** When antibiotics are given, assign Z29.2. P01.1 is added to show baby was at risk but is type (0) because baby did not have infection.
**Example:** Infant delivered vaginally at 36 weeks. Mom had premature rupture of membranes for greater than 24 hours prior to the delivery. Baby was febrile and therefore admitted to NICU for 2 days for probable sepsis. He was started on a course of antibiotics for 7 days. The result of a blood culture was negative.

Discharge Diagnosis: “Probable Sepsis”

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P36.9</td>
<td>Bacterial sepsis of newborn, unspecified (M)</td>
</tr>
<tr>
<td>P07.3</td>
<td>Other preterm infants (O)</td>
</tr>
<tr>
<td>Z38.00</td>
<td>Singleton, born in hospital, delivered vaginally (O)</td>
</tr>
</tbody>
</table>

**Rationale:** A “Q” is not placed in front of the code in this case as a diagnosis of “probable” in neonatal sepsis is an indication that the diagnosis is made on the basis of clinical findings only. Lab results may not provide confirmation in all cases of neonatal sepsis.

**Note:** Z03.8 *Observation for other suspected diseases and conditions* is for use in limited circumstances on records of otherwise healthy newborns who are at risk for an abnormal condition, which requires study, but after examination and observation, it is determined that there is no need nor further treatment or medical care.
### Adverse Reactions Versus Poisonings

**In effect 2002, amended 2006**

Classify conditions resulting from drugs, medicinal agents, and other chemical or biological agents as either an “adverse effect” or as a “poisoning”.

Presume poisonings to be accidental when it is not stated as intentional self-harm.

Classify poisonings from illicit drug use as accidental unless there is clear documentation of suicidal or homicidal intent.

Identify separately, all drugs involved in a poisoning.

<table>
<thead>
<tr>
<th>Adverse Reactions</th>
<th>Poisonings</th>
</tr>
</thead>
<tbody>
<tr>
<td>An adverse reaction may occur when a substance is taken as prescribed by a physician. This means that the correct substance was administered appropriately. It could be referred to as follows:</td>
<td>A poisoning is a condition that results when a substance/medicine is taken when:</td>
</tr>
<tr>
<td>• Allergic reaction</td>
<td>• It is not prescribed by a physician</td>
</tr>
<tr>
<td>• Accumulative effect of the drug</td>
<td>• The dosage is altered from prescription</td>
</tr>
<tr>
<td>• Hypersensitivity to a drug</td>
<td>• It is a non medicinal substance</td>
</tr>
<tr>
<td>• Iatrogenic</td>
<td>Qualifying cases</td>
</tr>
<tr>
<td>• Idiosyncratic reaction</td>
<td>• Self medication with non-prescription drugs</td>
</tr>
<tr>
<td>• Interaction between 2 medications</td>
<td>• Prescribed drug taken with non-prescription drug</td>
</tr>
<tr>
<td>• Paradoxical reaction</td>
<td>• Any medication taken with alcohol</td>
</tr>
<tr>
<td>• Synergistic reaction</td>
<td>• Drug overdose</td>
</tr>
<tr>
<td>• Toxicity</td>
<td><strong>Instructions for coding:</strong></td>
</tr>
</tbody>
</table>

Assign a code to describe the reaction/manifestation. Sequence the reaction/manifestation code first followed by an external cause code taken from the drug table under the column “adverse effect in therapeutic use”.

Locate the poisoning codes in the first column of the Table of drugs. Sequence the poisoning code first followed by the manifestation code, the external cause code and the place of occurrence code.
**Example:** Mother found her 8-year old son playing at home with candy coated ibuprofen tablets. A count of the tablets showed 10 tablets were missing. He admitted swallowing the “candy”. He was taken to the emergency room where his chief complaint was stomachache.

T39.3 (M) Poisoning by nonopioid analgesics, antipyretics and antirheumatics—Other nonsteroidal anti-inflammatory drugs [NSAID]

R10.4 (3) Other and unspecified abdominal pain

X40 (9) Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics

U98.0 (9) Place of occurrence, home

**Example:** Mr. B was a patient newly diagnosed with cervical spondylosis. His physician prescribed “Painfree” (a nonsteroidal anti-inflammatory drug) 25 mg tablet to be taken once daily. Patient presented at Emergency the following day complaining of nausea and vomiting that started 30 minutes after the first dose was taken. The emergency physician noted the reaction and changed his medication.

R11.3 (M) Nausea with vomiting

Y45.3 (9) Other nonsteroidal anti-inflammatory drugs [NSAID] causing adverse effects in therapeutic use

**Example:** Digoxin toxicity—Patient experienced ventricular tachycardia.

I47.2 (M) Ventricular tachycardia

Y52.0 (9) Cardiac-stimulant glycosides and drugs of similar action primarily affecting the cardiovascular system causing adverse effects in therapeutic use

**Rationale:** Although physicians often record “digoxin toxicity” as a diagnosis, there is usually additional documentation indicating the specific manifestation of the toxicity. Classify the case to the more specific condition (see also the coding standard entitled Specificity). When more specific documentation is not provided, assign T88.7 Unspecified adverse effect of drug or medicament.

**Example:** Patient admitted with a drug overdose from a combination of heroin and acetaminophen.

T40.1 (M) Poisoning by heroin

X42 (9) Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified

T39.1 (1) Poisoning by 4-Aminophenol derivatives

X40 (9) Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics

Classify conditions resulting from noncompliance with therapy to a code describing the manifestation followed by Z91.1 Personal history of noncompliance with medical treatment and regimen as a diagnosis type (3).
When a condition is documented as due to noncompliance with therapy or self-directed discontinuance of a drug, it is neither a poisoning nor an adverse effect.

**Example:** A 17-year old patient, who has had asthma for several years, developed status asthmaticus due to failure of the patient to comply with his medication regimen.

- J45.01 (M) Predominantly allergic asthma with stated status asthmaticus
- Z91.1 (3) Personal history of noncompliance with medical treatment and regimen

---

**Skull Fracture and Intracranial Injury**

For fractures of the skull associated with an intracranial injury, sequence the intracranial injury first followed by an additional code for the fracture.

**Example:** Traumatic subarachnoid hemorrhage with closed fracture of base of skull. Patient suffered a brief loss of consciousness. No other injuries.

- S06.610 (M) Traumatic subarachnoid hemorrhage, without open intracranial wound, with brief loss of consciousness.
- S02.100 (1) Fracture of base of skull, closed.
Open Wounds

Open wounds include animal bites, cuts, lacerations, avulsion of skin and subcutaneous tissue and puncture wounds with or without penetrating foreign body. They do not include traumatic amputations or avulsions that involve deeper tissue e.g. muscle.

Classify an open wound communicating with a fracture to the open fracture. Do not assign an additional code for the open wound.

Example: Patient suffered a large open wound of the thigh with a fracture of the shaft of the femur visible in the wound.
S72.301 Fracture of shaft of femur, open

Classify an open wound as “complicated” when it includes any of the following:
- Delayed healing
- Delayed treatment
- Foreign body
- Major infection (except that following treatment)

Example: Patient had an open wound to his forearm due to being struck in the arm by a hockey stick while playing street hockey in his driveway. He delayed seeking treatment and a significant infection has set in.
S51.91 (M) Open wound of forearm, part unspecified, complicated
W21.02 (9) Striking against or struck by hockey stick
U98.0 (9) Place of occurrence, home
Includes: Private driveway to home
Rationale: Both an infection and delayed treatment are present in this case.

Once a wound has been definitively treated (cleansed and sutured), classify a subsequent infection at the site to T81.4 Infection following a procedure, not elsewhere classified. This is true regardless of the cause of infection.

Example: A patient is readmitted for treatment of a wound infection. He had suffered an open wound of his arm that was treated by cleansing and suturing one day previously.
T81.4 (M) Infection following a procedure, not elsewhere classified
Y83.8 (9) Other surgical procedures
Rationale: Primary closure of a wound is not performed if the physician believes that the level of contamination from the injury is likely to result in an infection. This is a judgment call that is affected by many factors including the length of time between injury and treatment. Since the patient’s open wound was definitively treated (cleansed and sutured) and now the patient presents with a wound infection, this is classified as an infection following a procedure.
Fractures—Closed Versus Open

In effect 2001, amended 2006

Classify a fracture not documented as closed or open as closed

**Example:** Documentation of injury says only “fracture humerus”.

S42.390 Fracture of unspecified part of humerus, closed

Classify separately, any open wound in the vicinity of a closed fracture.

An open fracture involves an open wound down into and exposing the fracture site, or the broken bone end extends through the skin surface. When an open wound occurs at the vicinity of a fracture without exposed bone, the fracture is considered closed.

**Example:** Patient sustained a closed fracture of the shaft of the femur, as well as a surface laceration of the thigh.

S72.300 Fracture of shaft of femur, closed
S71.10 Open wound of thigh, uncomplicated

See also the coding standard entitled *Open Wounds*.

Treatment of Fractures

In effect 2001

When a fracture site involves a joint, select the appropriate intervention code from the joint site, not from the bone site.

**Example:** Fixation of an intertrochanteric fracture of the femur with an intramedullary nail—open approach

1.VC.74.LA-LQ Fixation femur with intramedullary nail using open approach

**Example:** Fixation of a fracture of the neck of femur with an intramedullary nail—open approach

1.VA.74.LA-LQ Fixation hip joint with an intramedullary nail—open approach

See also the coding standard entitled *Joint Fracture Reduction, Fixation and Fusion*. 
Dislocations

Classify dislocations not indicated as closed or open as closed.

Code a “fracture dislocation” of a site as a fracture.

Code simple dislocation of vertebrae as follows:

- S13.1 Dislocation of cervical vertebra
- S23.1 Dislocation of thoracic vertebra
- S33.1 Dislocation of lumbar vertebra

For any multiple dislocations of a single type of vertebrae use the code only once.

Example: Dislocation of second and third cervical vertebrae
S13.1 Dislocation of cervical vertebra

Injury to Blood Vessels

When there is an injury to blood vessels due to a fracture, open wound or other injury, assign an additional code to indicate the injury to the blood vessel.

Example: Patient sustained closed fracture of shaft of femur with rupture of the common femoral artery.
S72.300 Fracture of shaft of femur, closed
S75.0 Injury of femoral artery

Rationale: Sequencing will depend on the circumstances documented in the chart.

See also the coding standard entitled Sequencing Multiple Injuries for Severity.
Significant Injuries

For classification purposes, consider the following types of injuries to be significant:
- fractures,
- dislocations,
- amputations,
- second and third degree burns,
- first degree burns meeting the criteria for a significant diagnosis type,
- injuries to nerves, blood vessels, muscles/tendons and internal organs.

Assign a diagnosis type (M), (1), (2), (W), (X) or (Y) to significant injuries.

This list is not intended to indicate a hierarchy of severity. See also the coding standard entitled *Sequencing Multiple Injuries for Severity*.

Crush Injuries

Code all significant injuries associated with a crush injury as comorbid conditions.

Assign an additional code, as a diagnosis type (3), to identify the crushing injury. When multiple body regions are involved in a crush injury, select the crushing injury code from the rubric T04.– *Crushing injuries involving multiple body regions*.

When crush syndrome is documented with compromised renal function, assign T79.5 *Traumatic anuria* as a comorbid diagnosis type.

See also the coding standard entitled *Code Assignment for Multiple Types of Injury Involving Multiple Body Regions*.

**Example:** Patient had his hand crushed between two heavy objects in a hotel kitchen, sustaining open fractures of his second and third metacarpals.

- S62.371 (M) Fracture of multiple sites of other metacarpal bones, open
- S67.8 (3) Crushing injury of hand
- W23 (9) Caught, crushed, jammed or pinched in or between objects
- U98.5 (9) Place of occurrence, trade and service area

**Example:** Patient sustained a closed Grade IV injury to his liver, as well as a shattered spleen due to a crushing injury to his abdomen sustained when he was crushed against a wall by a van as it backed up.

- S36.130 (M) Parenchymal liver disruption involving 25 to 75% hepatic lobe, or 1 to three segments (Grade IV) without open wound into cavity.
- S36.040 (1) Hilar vascular laceration resulting in completely shattered spleen (Grade V), without open wound into cavity.
- S38.1 (3) Crushing injury of other and unspecified parts of abdomen, lower back and pelvis.
- V03.0 (9) Pedestrian injured in collision with car, pick-up truck or van, nontraffic accident
Example: Patient was a passenger crushed in a train derailment accident sustaining an open fracture of the shaft of the humerus, open fracture of 3 ribs, contusion of the heart with open thoracic wound, closed contusion of the liver and spleen, as well as a closed fracture of the ilium.

S26.801 (M) Contusion and hematoma of heart with open wound into thoracic cavity
S42.301 (1) Fracture of shaft of humerus NOS, open
S22.401 (1) Multiple fractures of 2–4 ribs, open
S36.150 (1) Injury of liver or gallbladder, liver hematoma NOS without open wound into cavity
S36.090 (1) Injury of spleen, hematoma NOS without open wound into cavity
S32.300 (1) Fracture of ilium, closed
T04.7 (3) Crushing injuries of thorax with abdomen, lower back and pelvis with limb(s)
T06.8 (3) Other specified injuries involving multiple body regions
V81.7 (9) Occupant of railway train or railway vehicle injured in derailment without antecedent collision

Bilateral Injuries

When identical, significant injuries occur bilaterally, classify the injuries using the same ICD-10-CA code twice.

Example: Patient had lacerations to his quadriceps muscles of both thighs due to a sharp ceremonial sword falling from a museum display into his lap.

S76.10 (M) Laceration of quadriceps muscle and tendon
S76.10 (1) Laceration of quadriceps muscle and tendon
W26 (9) Contact with knife, sword or dagger
U 98.2 (9) Place of occurrence, school other institution and public area

Example: Closed fracture of shaft of femur, right and left.

S72.300 Fracture of shaft of femur closed
S72.300 Fracture of shaft of femur closed
(Assign external cause and place of occurrence codes)

Exception: Do not code identical burns of bilateral sites twice; the category T31.—Burns classified according to extent of body surface involved encompasses this aspect.

Classify bilateral fractures to bones of which there is only one in the body (e.g. mandible, maxilla) to one code indicating multiple fracture.

Example: Fracture of ramus (mandible) left side and right side.

S02.670 Multiple mandibular fracture sites, closed
Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Causes

Burns and Corrosions

The term “burn” covers thermal burns, friction burns and scalds by non-caustic liquids and vapors. Also included are burns caused by electrical heating appliances, electricity, flame, hot objects, lightening and radiation. Corrosions are burns caused by caustic substances like acids or alkalis. Sunburns are classified in L55.

In ICD-10-CA, burns and corrosions are described as occurring in “degrees”. This terminology relates to the thickness of the burn. First-degree equates to erythema only. It is also called a superficial burn. A second-degree burn involves epidermal loss and blistering. It is also called a partial thickness burn. Third-degree burns involve full thickness skin loss and/or deep necrosis of any underlying tissue.

Burns and corrosions of the external body surface are specified by site in categories T20–T25. Inclusion terms at each category level will help to ensure accurate code selection. Burns confined to the eye and internal organs are classified in block T26–T28.

T29 category classifies burns and corrosions of multiple body regions and T30 is used to classify burns and corrosions of body region, unspecified. T31 and T32 are categories used to capture the extent of the body surface area involved in the burn or corrosion.

<table>
<thead>
<tr>
<th>Code burns of varying degrees at one site to the deepest degree at that site.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example:</strong> First, second and third degree burns of the chest wall</td>
</tr>
<tr>
<td>T21.3 Burn of third degree of trunk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code an evolving burn to the greatest degree to which it progresses.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example:</strong> Patient was admitted with second-degree burns to the left arm (ten percent body surface area) due to scalding with boiling water from a cooking pot while at home. Documentation reveals the burn evolved to third degree burn.</td>
</tr>
<tr>
<td>T22.3 (M) Burn of third degree of shoulder and upper limb, except wrist and hand</td>
</tr>
<tr>
<td>T31.12 (1) Proportion of burn that is third degree—10–19%</td>
</tr>
<tr>
<td>X12 (9) Contact with other hot fluids</td>
</tr>
<tr>
<td>U98.0 (9) Place of occurrence, home</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code burns described as “non-healing” or “necrotic” as current burns.</th>
</tr>
</thead>
<tbody>
<tr>
<td>When a patient is readmitted for burn treatment that includes grafting or debridement, classify the burn as a current burn.</td>
</tr>
</tbody>
</table>
When a patient is admitted for a complication of a burn that has healed, code the subsequent problem resulting from the burn, e.g. scar contractures.
When a patient is admitted for reconstructive surgery for a healed burn assign Z42.– Follow-up care involving plastic surgery
When a patient is admitted for change of burn dressings, assign as the MRDx or Main Problem Z48.0 Attention to surgical dressings and sutures. Assign an additional code, optionally, as a diagnosis type (3), to identify the burn itself.

See also the coding standards entitled *Current Versus Old Injuries* and *Coding of Ambulatory Care Visits for Follow-up Examination or Care.*

**Example:** A patient suffered multiple burns to his body in a house fire 7 months previously. He is re-admitted for z-plasty of a scar contracture of his right wrist. He also still has an area of non-healing, third degree burn with necrosis of his left buttock, which accounts for less than 1% of body surface.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L90.5</td>
<td>Scar conditions and fibrosis of skin</td>
</tr>
<tr>
<td>T95.2</td>
<td>(3) Sequelae of burn, corrosion and frostbite of upper limb (optional)</td>
</tr>
<tr>
<td>Y86</td>
<td>(9) Sequelae of other accidents (optional)</td>
</tr>
<tr>
<td>T21.3</td>
<td>(1) Burn of third degree of trunk</td>
</tr>
<tr>
<td>T31.01</td>
<td>(1) Burns involving less than 10% of body surface with less than10% third degree burns</td>
</tr>
<tr>
<td>X00</td>
<td>(9) Exposure to uncontrolled fire in building or structure</td>
</tr>
<tr>
<td>U98.0</td>
<td>(9) Place of occurrence, home</td>
</tr>
</tbody>
</table>

When failure or rejection of a xenograft or homograft occurs at a treated burn site, assign a code from category T86.84– *Failure and Rejection of soft tissue (skin, muscle, fascia, tendon, mucosa) graft/flap.*

When rejection or failure of a patient’s own grafted tissue (autograft) to a burn site occurs, assign T85.7 *Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts.*
**Extent of Body Surface Area Involved in Burn Injury**  
In effect 2001, amended 2006

When a code from T20–T29 is assigned, assign a mandatory additional code, as a comorbid diagnosis type, from the category:

- **T31.–** Burns classified according to extent of body surface involved or
- **T32.–** Corrosions classified according to extent of body surface involved.

Ensure that the diagnosis type for T31.– or T32.– matches the diagnosis type of the code for the burn or corrosion in terms of pre-admit or post admit comorbidity.

Select only one code from within the categories T31.– and T32.–.

Categories T31 and T32 may both apply to a single case, but only one code from each category may be used.

**Example:** First (5% Body surface affected [BSA]), second (10% BSA) and third (15% BSA) degree burns of the trunk.

- **T21.3** (M) Burn of third degree of trunk
- **T31.32** (1) Burns involving 30–39% of body surface with 10–19% third degree burns

Assign also:
- external cause code
- place of occurrence code

**Rationale:** T31.32 is mandatory with T21.3. Diagnosis type for T31.32 is assigned a pre-admit comorbidity type. If the burn was a post-admit comorbidity, T31.32 would also be assigned a post-admit comorbidity diagnosis type. Only one code can be selected from T31.–.

**Note:** Burn diagrams that describe the patient’s total injury may help coders to select the appropriate code from these categories.
Assignment of Most Responsible Diagnosis (MRDx) in Multiple Burns

In the presence of multiple burns of several sites, select the burn site of the most severe degree as the MRDx.

In the case of burns of multiple sites of the same degree, select the site with the larger body surface as the MRDx.

All parameters remaining the same, select burns requiring grafting over burns not requiring grafting, as the MRDx.

**Example:** Second-degree burns of forearm and palm of hand and first-degree burn of face.

- T22.2 (M) Burn of second degree of shoulder and upper limb, except wrist and hand
- T23.2 (1) Burn of second degree of wrist and hand
- T20.1 (1) Burn of first degree of head and neck

Assign also:
- percent of body surface area (BSA) burned code
- external cause code
- place of occurrence code

**Rationale:** Burns of the forearm is selected as the MRDx over the first degree burn of face due to greater severity and selected over the burn of palm of hand due to larger body surface area.

Burns of Multiple Body Regions

When documentation of specific sites of burns is provided, assign separate codes for each burn site.

Assign T29.– *Burns and corrosions of multiple body regions*, as a comorbid diagnosis type only when specific documentation of sites is not provided.

Assign T29.– *Burns and corrosions of multiple body regions*, optionally, as a diagnosis type (3), to facilitate data retrieval.

**Example:** Burn of third degree of left thigh and foot.

- T24.3 (M) Burn of third degree of hip and lower limb, except ankle and foot
- T25.3 (1) Burn of third degree of ankle and foot
- T29.3 (3) Burns of multiple regions, at least one burn of third degree mentioned

Assign also:
- percent of body surface area (BSA) burned code
- external cause code
- place of occurrence code
Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Causes

Burns and Corrosions From Local Applications and Irradiation

In effect 2001, amended 2003, 2006

When a burn results from radiation therapy, assign a code to identify the burn by site, followed by a code from T31.– and an external cause code to indicate radiation in therapeutic use.

Assume the burn is an adverse affect in therapeutic use unless there is clear documentation of radiation overdose, in which case assign Y63.2 Overdose of radiation given during therapy.

Example: Patient experienced burn to chest wall as a result of radiation therapy for lung cancer, during the current episode of care.

T21.0 (2) Burn of unspecified degree of trunk
T31.00 (2) Burns involving less than 10% of body surface with 0% or unspecified third degree burns
Y84.2 (9) Radiological procedure and radiotherapy as a cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

Sequencing Multiple Injuries for Severity

In effect 2001, amended 2006

When there are multiple injuries, sequence the most severe (or life threatening) first.

See also the coding standard entitled Diagnoses of Equal Importance.

Example: Patient was admitted following a motor vehicle accident with third degree burns of his head and neck (body surface area 11%) requiring extensive skin grafting, along with a lacerated muscle of the wrist requiring suturing and debridement, and traumatic amputation of two fingers.

T20.3 (M) Burn of third degree of head and neck
T31.12 (1) Total body surface involved in burn (any degree) 10–19%, percentage that was third degree, 10–19%
S66.90 (1) Injury of unspecified muscle and tendon at wrist and hand level, laceration (sutured following debridement)
S68.2 (1) Traumatic amputation of two or more fingers alone (complete) (partial)

Assign also:

> external cause code

Rationale: Third degree burns would be considered the most severe and life threatening.
When superficial (skin) injuries occur concomitantly with more severe injuries of the same body region, code only the more severe injuries.

**Example:** Patient was admitted with a fracture of the olecranon process. There was also multiple bruising and abrasions in the area.

S52.000 Fracture of olecranon process of ulna

Assign also:
- external cause code
- place of occurrence code

**Code significant injuries to the greatest level of specificity possible, even if this requires selection of more than one code from the same category.**

See also the coding standards entitled *Significant Injuries* and *Specificity*.

**Exception:** Do not assign multiple codes for fractures of single bones (see also the coding standard entitled *Bilateral Injuries*).

**Example:** Patient was admitted following open fracture of bones of his hand, specified as neck of first metacarpal, the proximal phalanx, and a closed fracture of his third metacarpal.

S62.221 (M) Fracture of neck of first metacarpal bone, open
S62.501 (1) Fracture of proximal phalanx (thumb), open
S62.310 (1) Fracture of shaft of other metacarpal bone (2nd and 3rd), closed

Assign also:
- external cause code
- place of occurrence code
## Code Assignment for Multiple Superficial Injuries

In effect 2006

Use combination categories to describe multiple and/or bilateral superficial injuries of the same body region.

<table>
<thead>
<tr>
<th>Code Assignment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use just one code to identify multiple open wounds.</td>
<td></td>
</tr>
</tbody>
</table>

Choose from the following:

- S01.7– of head
- S11.7– of neck
- S21.7– of thorax
- S31.7– of lower back and pelvis
- S41.7– of shoulder and upper arm
- S51.7– of forearm
- S61.7– of wrist and hand
- S71.7– of hip and thigh
- S81.7– of lower leg
- S91.7– of ankle and foot
- T01.– of multiple body regions (see fourth digit for body site combinations)

Use just one code to identify multiple superficial wounds.

Choose from the following:

- S00.7– of head
- S10.7– of neck
- S20.7– of thorax
- S30.7– of lower back and pelvis
- S40.7– of shoulder and upper arm
- S50.7– of forearm
- S60.7– of wrist and hand
- S70.7– of hip and thigh
- S80.7– of lower leg
- S90.7– of ankle and foot
- T00.– of multiple body regions (see fourth digit for body site combinations)
Code Assignment for Multiple Types of Injury Involving Single Body Region

When there are two or more significant types of injuries involving a single body region, code each injury to the greatest level of specificity indicated in the documentation and sequence in order of severity.

The following codes can be used as a flag to identify cases with multiple significant injuries. If used, they must be assigned diagnosis type (3):

- S09.7 (3) Multiple injuries of head
- S19.7 (3) Multiple injuries of neck
- S29.7 (3) Multiple injuries of thorax
- S36.7 (3) Multiple injuries of intra-abdominal organs
- S37.7 (3) Multiple injuries of pelvic organs
- S39.7 (3) Multiple injuries of intra-abdominal with pelvic organs
- S49.7 (3) Multiple injuries of shoulder and upper arm
- S59.7 (3) Multiple injuries of forearm
- S69.7 (3) Multiple injuries of wrist and hand
- S79.7 (3) Multiple injuries of hip and thigh
- S89.7 (3) Multiple injuries of lower leg
- S99.7 (3) Multiple injuries of ankle and foot

See also the coding standard entitled *Significant Injuries*.

More than one type of significant injury occurring in the same body region is considered “multiple” injuries of that body region.

**Example:** Patient admitted following snowmobile accident where he was the driver. He sustained an open trochanteric fracture of the femur, a non-contiguous laceration of the gluteus maximus, injury to several blood vessels and the sciatic nerve at the thigh level.

- S72.191 (M) Unspecified trochanteric fracture, open
- S74.00 (1) Laceration of sciatic nerve at hip and thigh level
- S76.00 (1) Laceration of muscle and tendon of hip
- S75.7 (1) Injury of multiple blood vessels at hip and thigh level
- S79.7 (3) Multiple injuries of hip and thigh
- V86.50 (9) Driver of snowmobile injured in nontraffic land accident

**Rationale:** These injuries are all considered significant for assignment of the multiple injuries code for a single body region. Since the documentation does not provide further specification of the blood vessel injuries, S75.7 is assigned.
Ensure that the S–9.7 *Multiple injuries of — codes are not assigned to identify multiple injuries when one significant injury occurs with one or more superficial wounds.*

**Example:** Patient was admitted following a construction site accident where his hand was injured in machinery. He sustained a closed fracture of the distal phalanx of his index finger and lacerations of his thumb, palm and middle finger.

S62.610 (M) Fracture of distal phalanx of finger
S61.70 (3) Multiple open wounds of wrist and hand, uncomplicated
W31 (9) Contact with other and unspecified machinery
U98.6 (9) Place of occurrence, industrial and construction area

**Rationale:** The multiple superficial injuries are captured using the combination code S61.70 (see also the coding standard entitled *Code Assignment for Multiple Superficial Injuries.* However, S69.7 *Multiple injuries of wrist and hand* is not assigned since there is only one type of significant injury in this case.
Code Assignment for Multiple Types of Injury Involving Multiple Body Regions

Whenever there are two or more significant types of injuries involving multiple body regions, code each injury to the greatest level of specificity indicated in the documentation and sequence injuries in order of severity.

T06.8 Other specified (multiple) injuries involving multiple body regions, can be used as a flag to identify cases with multiple significant injuries involving multiple body regions. If used, it must be assigned diagnosis type (3).

When T06.8 is assigned, a code from S–9.7 is not required.

Example: The driver of a snowmobile injured in a traffic accident sustained multiple injuries to multiple body regions: a LeFort 3 fractured maxilla, subdural hematoma with a 65 minute loss of consciousness, open wound of abdomen with contusion of the pancreas, laceration of duodenum and bile duct, closed fracture C6 vertebra, open fractures of upper end of humerus and of clavicle.

S06.520 (M) Traumatic subdural hemorrhage with moderate loss of consciousness (>1 hour)
S36.201 (1) Hematoma of pancreas, with open wound into cavity
S36.421 (1) Laceration of duodenum with bile duct or duodenopancreatic complex injury
S02.431 (1) Fracture of malar and maxillary bones, LeFort 3, unilateral
S12.210 (1) Fracture of C5–C7 vertebra, closed
S42.281 (1) Fracture of other part of upper end of humerus, open
S42.011 (1) Fracture of shaft of clavicle, open
T06.8 (3) Other specified injuries involving multiple body regions
V86.00 (9) Driver of snowmobile injured in traffic accident

Note: Any abstract where multiple codes begin with the letter “S” and the second digit changes indicate the code T06.8 may be assigned because the second digit refers to the different body regions. For instance, S06 + S44 = multiple types of significant injury involving multiple body regions.

Note: Neither superficial injuries (third digit = “0”) nor open wounds (third digit = “1”) are considered significant types of injury for the purposes of assignment of this multiple injury code. However, certain open wounds or superficial injuries could qualify as comorbid conditions.
Coding Nonspecific Multiple Injuries for Emergency Room Visits

When documentation does not permit assignment of specific injury codes for significant injuries, assign a multiple injury code as the Main Problem for emergency room visit abstraction.

See also the coding standards entitled *Sequencing Multiple Injuries for Severity*.

**Example:** A passenger of a car was injured when a bus struck the vehicle in which she was riding. She sustained severe multiple injuries to several body regions. Patient was transferred to a trauma centre before the diagnostic work-up was completed.

| T06.8 | Multiple types of injuries to multiple body regions (e.g. fractures, spinal cord damage, internal organs lacerated, intra-cavity hemorrhage, limb amputation) |
| V44.6 | Car occupant, passenger, injured in collision with heavy transport vehicle or bus, traffic accident |

Early Complications of Trauma

When a trauma complication, such as a hemorrhage or infection, follows medical/surgical procedures intended to repair the injured site, select the appropriate code from the range of categories T80 to T88 Complications of surgical and medical care, not elsewhere classified.

**Example:** Patient was admitted with a dehiscence of the surgically repaired open wound of his forearm.

| T81.3 (M) | Disruption of operation wound, not elsewhere classified |
| Y83.8 (9) | Other surgical procedures |

**Exception:** In a patient with multiple trauma, shock may be assumed to be due to the trauma. Assign code T79.4 *Traumatic shock* unless the physician clearly states another cause.

**Example:** Patient with severe multiple injuries experiences shock from the administration of anesthetic administered for repair of injuries interventions.

| T88.2 | Shock due to anesthesia |
| ➢ External injury code as appropriate to surgical intervention |
Current Versus Old Injuries

Classify injuries as current or old according to the following definitions:

A CURRENT INJURY is one for which the repair has just begun, is proceeding, or has yet to be completed.

An OLD INJURY is one in which the repair has been completed. However, following the repair, functionality has failed to return and thus continuing treatment is required to address this unexpected and unanticipated healing complication.

Start

During this admission, has it been documented if the injury has been diagnosed as having occurred within past 365 days or is tx ongoing?

Yes

Is this a skin, muscle or tendon injury?

Yes

Is treatment sought < 14 days post injury?

Yes

Code as a current injury

No

Code as an old injury

No

Code as an old injury

Is initial (planned) treatment of injury still underway (includes multi-stage plan)?

Yes

Code as a current injury

No

Code as an old injury

This would apply if the initial treatment plan failed to obtain adequate outcomes, causing the need for a new course of treatment during this admission. For instance, due to infection, failure to regain adequate functionality or any scarring which is unexpected and requires another course of treatment.

Note: This diagram does not apply to iatrogenic injuries.
Mr. A fell twisting his knee while skiing. A week later he presented to the Emergency Department because of continued pain and swelling. He was diagnosed with a tear of his medial meniscus and was discharged to await surgical booking.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>S83.20</td>
<td>Tear of medial cartilage or meniscus of knee, current</td>
<td>Classify as a current injury because the patient sought treatment within 14 days.</td>
</tr>
</tbody>
</table>

The same patient in the above example returned to the hospital for menisectomy. It is now 21 days since the original injury.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>S83.20</td>
<td>Tear of medial cartilage or meniscus of knee, current</td>
<td>Classify as a current injury because initial treatment is still underway.</td>
</tr>
</tbody>
</table>

Six months ago, Mrs. S fell twisting her knee while skiing. At that time she was seen in emergency and diagnosed with a partial tear of medial meniscus. She was discharged with instructions for rest and ice to the injured area. She now complains of pain in her knee with certain activity and is admitted for meniscectomy. The diagnosis is torn posterior horn, medial meniscus.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>M23.22</td>
<td>Derangement of posterior horn of medial meniscus due to old tear or injury</td>
<td>This is classified as an old injury because the original course of treatment has been completed but resulted in a failure to regain functionality.</td>
</tr>
</tbody>
</table>

Select the current injury code as MRDx on all subsequent admissions for treatment of the original injury (possibly involving multi-staged interventions).

SM fractured the shaft of his right radius while playing ball at school. He was seen in ER where a closed reduction was performed and a cast was applied. The patient was sent home and asked to return to fracture clinic a week later. At this time, a repeat X-ray showed that the fracture had not maintained its reduction and now the patient was admitted for an open reduction and internal fixation by an orthopedic surgeon.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>S52.300</td>
<td>Fracture of shaft of radius, closed</td>
<td></td>
</tr>
<tr>
<td>W21.00</td>
<td>Striking against or struck by ball</td>
<td></td>
</tr>
<tr>
<td>U98.2</td>
<td>Place of occurrence, school other institution and public area</td>
<td></td>
</tr>
</tbody>
</table>

MVA victim with a fractured skull had a cranial flap inserted in the abdominal cavity to maintain lividity. He is now admitted for removal of a cranial flap from his abdominal cavity and closure of the skull defect with the autologous flap.

**Example:**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>S02.001</td>
<td>Fracture of vault of skull, open</td>
<td></td>
</tr>
<tr>
<td>V89.2</td>
<td>Person injured in unspecified traffic motor-vehicle accident</td>
<td></td>
</tr>
</tbody>
</table>
For encounters that are strictly for follow up care or aftercare (e.g. dressings, examinations, and castings) assign a code from Chapter XXI. Assign an additional code to describe the injury, optionally as a diagnosis type (3).

Assign a code from the block T90 – T98 Sequelae of injuries, of poisoning and of other consequences of external causes to describe the underlying nature of the old injury, optionally, as a diagnosis type (3).

**Example:**
- Patient was seen in clinic for removal of sutures following abdominal surgery.
  - Z48.0 (M) Attention to surgical dressings and sutures

**Example:**
- Patient presents with pain of the knee joint due to old injury of the knee.
  - M25.96 (M) Pain in joint, lower leg
  - T93.9 (3) Sequelae of unspecified injury of lower limb (optional)
  - Y89.9 (9) Sequelae of unspecified external cause (optional)

See also the coding standard entitled *Coding of Ambulatory Care Visits for Follow-up Examination or Care*.

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### Post-Procedural Conditions and Complications


Categories are provided in Chapter XIX (T80–T88) for certain complications related to surgical and other procedures, e.g. surgical wound infections, mechanical complications of implanted devices, shock, etc. Most body-system chapters also contain categories for conditions that occur either as a consequence of specific procedures and techniques or as a result of the removal of an organ, e.g. postmastectomy lymphedema syndrome, postirradiation hypothyroidism. Complications may develop during the current episode of care, after discharge or transfer, or even years later.

**Step 1: Determine the relationship of the condition to the intervention**

Apply the following definitions to conditions arising following an intervention:

- A condition arising within 96 hours of an intervention is considered an *early complication*. In this time frame a cause/effect relationship between the condition and the intervention is assumed and an external cause code is mandatory.

- A condition arising after 96 completed hours of the intervention and stated by the physician to be due to the procedure (with no upper time limit) is considered a *late complication*. In this case a cause/effect relationship has been established and an external cause code is mandatory.

- A significant condition arising after 96 hours of the intervention but before the end of the fifteenth day post surgery with no documented evidence of the condition arising as a result of the intervention is considered a *post-procedural condition*. A cause/effect relationship has not been established and an external cause code is not assigned.
Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Causes

**Example:** Patient develops ileus requiring nasogastric intubation 2 days following a gastrojejunostomy.

- K91.3 (2) Postoperative intestinal obstruction
- Y83.2 (9) Surgical operation with anastomosis, bypass or graft as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

**Rationale:** This is an early complication, a cause/effect relationship is assumed and an external cause code is required.

**Example:** Patient develops pneumonia 6 days following a total hip replacement. The diagnosis is stated as “postoperative” pneumonia.

- J95.88 (2) Other post-procedural respiratory disorders
- J18.9 (3) Pneumonia, unspecified
- Y83.1 (9) Surgical operation with implant of artificial internal device as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

**Rationale:** This is greater than 96 hours, however the physician has documented a cause/effect relationship by stating “postoperative”. This is a late complication and an external cause code is required.

**Example:** Patient develops pneumonia 8 days after a radical hysterectomy. There is no documentation in the chart to support that the pneumonia was related to the intervention.

- J95.88 (2) Other post-procedural respiratory disorders
- J18.9 (3) Pneumonia, unspecified

**Rationale:** The pneumonia is occurring in the post-procedural period of 15 days, therefore, it is a post-procedural condition and is still coded to J95.88. An external cause code is not applied in this case because there is no documented evidence linking the condition to the intervention. If the pneumonia had occurred greater than 15 days and was not stated as due to the procedure it would simply be coded to J18.9.

**Example:** Patient is readmitted to hospital 20 days following a mastectomy with wound infection.

- T81.4 (M) Infection following a procedure, not elsewhere classified
- Y83.6 (9) Removal of other organ (partial) (total) as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

**Rationale:** For certain conditions there is an obvious and direct cause/effect relationship between the condition and the procedure. In such cases, there is no time limit for coding the condition as a post-procedural complication.

**Note:** When it is clear from the chart documentation that a condition occurring in the postprocedural period of 15 days is not related to the intervention, it would not be coded as a post-procedural complication or condition. For example, the condition may be a worsening of the very condition being treated or an exacerbation of a pre-existing condition.
Step 2: Locate the Correct Code in the Index

Search the Alphabetic Index first.

Search for the lead term for the specific condition and then search for a subterm of postprocedural, postoperative, due to a surgical procedure, complicating surgery, etc.

**Example:** Postoperative wound infection

- Infection
  - postoperative wound T81.4

**When there is no lead term for the condition, search for all possible synonyms.**

**Example:** Blocked V-P shunt

- Block—no subterm for shunt, device, postoperative etc. Proceed to:
- Blockage (see also Obstruction). Proceed to:
  - Obstruction
    - device, implant or graft (see Complications, by site and type) T85.6
    - ventricular intracranial shunt T85.0

**When a lead term for the condition cannot be located or when there is no applicable “postoperative” subterm, proceed to the lead term Complications. Look for a subterm for the specific procedure or for the body system affected.**

**Example:** Postoperative pleural effusion following coronary artery bypass graft (CABG)

- Effusion—no subterm for postoperative. Proceed to (after exhausting all synonyms):
  - Complications
    - respiratory J98.9
    - postoperative J95.9
    - specified NEC J95.88

**Example:** Postoperative cystic duct bile leak resulting in biloma 5 days post gallbladder surgery.

- Leak, leakage—no applicable subterm
- Biloma—lead term does not exist. Proceed to:
  - Complications
    - surgical procedure
    - digestive system K91.9
    - functional disorder NEC K91.8
    - specified NEC K91.8
When there are two subterms for a condition, one directing the condition be coded to a T code and one directing that the condition be coded to a body-system code, select the T code when the condition is an early complication and the body-system code when the condition is a late complication.

**Example:** Postoperative cardiac arrest

Arrest, arrested
  − cardiac I46.9
  − – complicating
  − – – surgery T81.8 *(select this code for an early complication)*
  − – postoperative I97.8 *(select this code for a late complication)*
  − – – long term effect of cardiac surgery I97.1 *(select this code for a late complication)*

When there are applicable subterms for both the condition itself and postoperative, give priority to the postoperative subterm.

**Example:** Postoperative pulmonary embolism

Embolism (septic) I74.9
  − pulmonary (artery) (vein) I26.9
  − postoperative T81.7 *(select this code)*

When all else fails proceed as follows:

Select a code from T80–T88 for:

- early complications of medical procedure,
- mechanical complications.

Select a code from the appropriate system chapter for:

- late complications,
- functional complications.

**Note:** A functional complication is a disturbance of normal function of a body system. For example, an arrhythmia is a (functional) heart disturbance and malabsorption is a (functional) gastrointestinal disturbance. Functional disturbances are often the consequence of certain procedures. For example, a radical mastectomy may result in lymphedema because the normal function of the lymphatic system has been disturbed.

Functional disturbances of the heart include any condition classifiable to I44–I50 (see the Alphabetic Index for Disturbance, heart, functional).
Step 3: Add Specificity—To Precisely Identify the Nature of the Complication or Condition

When the code title of a post-procedural condition or a complication of surgery or medical care does not fully describe the problem, assign an additional code, optionally, as a diagnosis type (3), to provide more detail regarding the nature of the condition.

Example: Mr. G complains of severe post-operative pain in his hip following hip arthroplasty. No dislocation or displacement is identified on X-ray. Follow up is arranged with a pain management specialist.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T84.8</td>
<td>Other complications of internal orthopedic prosthetic devices, implants and grafts NEC</td>
</tr>
<tr>
<td>M25.55</td>
<td>Pain in joint, pelvic region and thigh (optional code)</td>
</tr>
<tr>
<td>Y83.1</td>
<td>Surgical operation with implant of artificial internal device</td>
</tr>
</tbody>
</table>

Step 4: Connect the Complication/Condition to the Intervention—External Cause

To identify a cause/effect relationship between a complication or condition and a medical or surgical procedure, assign an external cause code from Chapter XX (code range Y40 to Y84):

Mandatory, when:
- The complication or condition arises <96 hours post-procedure. These are early complications and the cause/effect relationship is assumed.
- The complication or condition involves the operative wound site.
- Organ failure or rejection occurs (regardless of timeframe).
- Mechanical complication is involved (regardless of timeframe).
- Medical misadventure is involved.
- The physician states a causal relationship exists between condition and procedure. The cause/effect relationship is established.

Optional, when >96 hours post-procedure and:
- Disturbance of normal function of body system occurs.
- The title of the code clearly expresses that the condition is a result of an intervention or care, as in the following examples:
  - Postgastric surgery syndromes (K91.1)
  - Postlaminectomy syndrome NEC (M96.1)
  - Postmastectomy lymphoedema syndrome (I97.2)
  - Postsurgical blind-loop syndrome (K91.2)
**Example:** Mrs. W had a heart valve replacement with a mechanical valve. Following the surgery she was admitted to ICU and ventilated overnight. She was taken off the ventilator the next afternoon. Initially, she was doing well but she took a turn for the worse on postoperative day 3, went into acute pulmonary insufficiency and had to be re-ventilated.

J95.1   (2)  Acute pulmonary insufficiency following thoracic surgery
Y83.1   (9)  Surgical operation with implant of artificial internal device as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

**Rationale:** Open-heart surgery involves entering the thoracic cavity.

**Example:** Mrs. W develops cardiac insufficiency as a result of a prosthetic mitral valve implanted 4 years ago and is readmitted for redo mitral valve replacement.

I97.1   (M)  Other functional disturbances following cardiac surgery
I50.9   (3)  Heart failure, unspecified

**Exceptions:** Transient post-procedural signs and symptoms (see also the coding standard entitled Post-procedural Signs and Symptoms).

Acute myocardial infarctions that are early complications of surgery (see also the coding standard entitled Acute Myocardial Infarction).

Stroke occurring as an early complication of surgery (see also the coding standard entitled Strokes, Cerebrovascular Accidents (CVA) and Transient Ischemic Attacks (TIA)).

See also the coding standards entitled Post-Operative Atrial Fibrillation, Post-operative Heart Failure and Cardiac Arrest.
Complications of Surgical and Medical Care, NEC

T81 Complications of procedures, not elsewhere classified

Select a code from the range T81.0–T81.82 to classify complications of surgical procedures that are not identified within a specific body system chapter.

These may include:

- Post operative hemorrhage or hematoma
- Shock during or resulting from a procedure
- Accidental puncture and laceration during a procedure
- Disruption of operation wound
- Infection following a procedure
- Foreign body accidentally left in body cavity or operation wound following a procedure
- Acute reaction to foreign substance accidentally left during a procedure
- Vascular complications following a procedure

In Canada, the subcategory T81.8 has been expanded to provide the following specific codes:

- T81.80 Complication of inhalation therapy
- T81.81 Emphysema (subcutaneous) resulting from a procedure
- T81.82 Persistent postoperative fistula
- T81.88 Other complications of procedures, not elsewhere classified

Example: Patient presented to the emergency room with incisional pain. Patient had been discharged two weeks prior to this visit following an open cholecystectomy. Following a physical examination, the physician documented a “stitch granuloma”.

T81.88 Other complications of procedures, not elsewhere classified

Y83.6 Surgical operation with removal of other organ (partial) (total) as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

T88 Other complications of surgical and medical care, not elsewhere classified

Select a code from category T88.– Other complications of surgical and medical care, not elsewhere classified, to classify any complications specific to certain medical and surgical interventions.

Select codes from the subcategory levels T88.0–T88.7 must be assigned when capturing specific complications of:

- Immunizations
- Administration of anesthetic
- Unspecified adverse effect of drug or medicament
Select T88.8 *Other specified complications of surgical and medical care, not elsewhere classified* for complications due to any of the following:

- Phototherapy
- Ultrasound therapy
- Electroshock therapy
- Local applications of fomentations, plasters, etc., not specified as a burn
- Paraffinoma

**Example:** The patient is a 12-year old boy who was brought back to the emergency room, complaining of swelling of fingers and tightness of his wrist cast. A review of the chart showed that he had the cast put on the day before. The physician documented “edema due to tight cast”. The cast was changed and the patient was discharged.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T88.8</td>
<td>Complication of surgical and medical care, unspecified</td>
</tr>
<tr>
<td>R60.0</td>
<td>Localized edema</td>
</tr>
<tr>
<td>Y84.8</td>
<td>Other medical procedures as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure</td>
</tr>
</tbody>
</table>
Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Causes

**Post-Procedural Signs and Symptoms**

| When a sign or symptom classifiable to Chapter XVIII develops following an intervention and |
| ➢ The physician documentation indicates it requires management beyond routine postoperative care, or it persists for at least 96 hours |
| ➢ Is not attributed to any other cause and |
| ➢ Is due to or a direct result of the procedure |
| assign a code for the sign or symptom, as a diagnosis type (2), followed by an external cause code indicating a complication of the procedure. |
| When the sign or symptom does not meet the above criteria assign a code, optionally, as a diagnosis type (3), with no external cause code indicating a complication of a procedure. |

The following table lists signs and symptoms commonly expected and unavoidable in the post-procedural period; they should not be classified as comorbidities unless they meet the criteria above.

| ➢ flatulence | ➢ nausea |
| ➢ confusion | ➢ paresthesia |
| ➢ cardiac bruit | ➢ urinary retention |
| ➢ friction rub | ➢ vomiting |
| ➢ headache | ➢ cough |
| ➢ elevated blood-pressure reading | ➢ hyperventilation |
| ➢ painful respiration | ➢ abdominal tenderness |
| ➢ pain, specific site | ➢ dysphagia |
| ➢ difficulty walking | ➢ dysuria |

**Example:**
Patient was admitted for elective resection of an abdominal aortic aneurysm. The physician noted concern regarding post-operative nausea and vomiting continuing for 5 days post-op. Gravol and IV fluid orders were maintained for 6 days.

I71.4 (M) Abdominal aortic aneurysm, without mention of rupture
R11.3 (2) Nausea with vomiting
Y83.2 (9) Surgical operation with anastomosis, bypass or graft as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

**Example:**
Patient was admitted for elective inguinal hernia repair. On the day after surgery, he developed urinary retention. This responded well to an in-out catheterization and an increased fluid intake. There were no further complaints and the patient was discharged the following day as per his discharge plan.

K40.9 (M) Unilateral or unspecified inguinal hernia, without obstruction or gangrene
R33 (3) Retention of urine (optional)

**Rationale:**
The condition was not persistent, was not documented as post-procedural, and did not require significant treatment. Coding the retention is optional and if coded, must be diagnosis type (3). An external cause code is not assigned.

See also the coding standard entitled *Using Diagnostic Test Results in Coding.*
Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Causes

Rejection/Failure of Transplanted Organs, Grafts and Flaps

In effect 2002, amended 2006

When the source of an organ or tissue is another person (homograft) or animal (xenograft) and a complication of the organ, graft or flap is failure or absolute rejection, select a code from the category T86.– Failure and rejection of transplanted organs and tissues.

Do not use category T86 when the original source of the graft or flap is the patient’s own body (autograft).

Example: Patient admitted with kidney transplant (homograft) rejection.

T86.100 (M) Kidney transplant rejection
Y83.0 (9) Surgical operation with transplant of whole organ as the cause of abnormal reaction of the patient, or later complication, without mention of misadventure at the time of the procedure

Example: Patient is admitted for management of infection and necrosis of myocutaneous breast flap.

T85.7 (M) Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts
Y83.2 (9) Surgical operation with anastomosis, bypass or graft, as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

Rationale: Category T86 is not used when a flap is sourced from the patient’s own body.

For rejection/failure and complications of grafts for treatment of burns, see also the coding standard entitled Burns and Corrosions.

When a condition is documented as affecting the transplanted organ or tissue, but cannot be classified as either failure or rejection, code the condition with a code from category Z94.– Transplanted organ and tissue status.

When it is unclear from the documentation whether the condition is a result of failure/rejection or a disease process, seek clarification from the physician.

Certain conditions, such as pre-existing chronic hepatitis C virus infection, may affect the transplanted organ and not be a result of the transplant itself. Other conditions, such as cancer arising in a transplanted organ or tissue may be due to long term immunosuppression of the patient. These are not classified as failure or rejection of the transplanted organ.

Example: Mr. M had a liver transplant due to damage from chronic hepatitis C virus infection two years ago. He has developed hepatitis C infection damage in his transplanted liver.

B18.2 Chronic viral hepatitis C
Z94.4 Liver transplant status

Example: Patient developed renal cell carcinoma in a transplanted kidney five years post transplant.

C64 Malignant neoplasm of kidney, except renal pelvis
Z94.0 Kidney transplant status
**Complications of Devices, Implants or Grafts**

There are basically three major categories to classify complications of devices:

<table>
<thead>
<tr>
<th>Mechanical Complications</th>
<th>Infection/Inflammation</th>
<th>Other Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakdown</td>
<td></td>
<td>Embolism</td>
</tr>
<tr>
<td>Displacement</td>
<td></td>
<td>Fibrosis</td>
</tr>
<tr>
<td>Fracture (broken prosthesis)</td>
<td></td>
<td>Hemorrhage</td>
</tr>
<tr>
<td>Leakage</td>
<td></td>
<td>Pain</td>
</tr>
<tr>
<td>Malfunction</td>
<td>(Code also the organism, if applicable)</td>
<td>Stenosis</td>
</tr>
<tr>
<td>Malposition</td>
<td></td>
<td>Stricture</td>
</tr>
<tr>
<td>Obstruction</td>
<td></td>
<td>Thrombosis</td>
</tr>
<tr>
<td>Perforation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protrusion</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

No time limit has been assigned to complications categorized in T82–T85. These codes may be used at any time after the graft; implant or prosthetic device has been inserted. Clear physician documentation is necessary for assignment of all complications of prosthetic devices, implants and grafts.

See also the coding standard entitled *Rejection/Failure of Transplanted Organs, Grafts and Flaps*.

Assign a code from categories T82–T85 for conditions described as complications attributable to devices, implants and grafts.

- **T82.** *Complications of cardiac and vascular prosthetic devices, implants and grafts*
- **T83.** *Complications of genitourinary prosthetic devices, implants and grafts*
- **T84.** *Complications of internal orthopedic devices, implants and grafts*
- **T85.** *Complications of other internal devices, implants and grafts*

When an infectious organism has been identified, assign an additional code, optionally as a diagnosis type (3), from B95–B97 to identify the infectious agent.

**Example:** Patient is admitted for revision of his total hip replacement prosthesis due to loosening and displacement of the hardware.

- **T84.03 (M)** Mechanical complication of hip prosthesis
- **Y83.1 (9)** Surgical operation with implant of artificial internal device, as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
When a complication of a device, implant or graft does not fully describe the problem, assign an additional code, optionally as a diagnosis type (3), to provide more detail regarding the nature of the condition. Sequence (sandwich) the code between the complication code and the external cause code.

**Example:** Pain in right hip from hip prosthesis. No dislocation or displacement identified on X-rays.

- T84.8 (M) Other complications of internal prosthetic devices, implants and grafts
- M25.55 (3) Pain in joint, pelvic region and thigh
- Y83.1 (9) Surgical operation with implant of artificial internal device as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure

When a mechanical complication occurs as a result of the breakdown or malfunction of the device being implanted, select an external cause code from the range Y70–Y82. Medical devices associated with adverse incidents in diagnostic and therapeutic use.

**Example:** This 85-year old gentleman had an implanted defibrillator that went off while he was walking home. It continued going off more than 6 times prior to admission. The doctor’s final diagnosis was ventricular tachycardia due to malfunctioning defibrillator.

- T82.1 (M) Mechanical complication of cardiac electronic device
- I47.2 (3) Ventricular tachycardia
- Y71.2 (9) Cardiovascular devices associated with adverse incidents, prosthetic and other implants, materials and accessory devices.

**Sequencing and Typing of Complications**

See also the coding standard entitled *Diagnosis Typing Definitions.*

When a complication or condition meets the criteria for a post admit comorbidity, assign diagnosis type (2) to the code for the complication or condition.

**Example:** Patient was admitted for definitive surgical treatment (of his esophageal neoplasm). He suffered a stroke after the procedure.

- C15.2 (M) Malignant neoplasm abdominal esophagus
- I64 (2) Stroke, not specified as hemorrhage or infarction
- Y83.2 (9) Surgical operation with anastomosis, bypass or graft (following esophagectomy) as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
When a complication of care arising after admission meets the criteria for Most Responsible Diagnosis, assign it as both the MRDx and diagnosis type (2).

See also the coding standard entitled *Diagnosis Typing Definitions*.

**Example:** Patient with menorrhagia, admitted for a hysterectomy, suffers a stroke postoperatively. She remains in SICU for two weeks.

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I64</td>
<td>(M)</td>
<td>Stroke, not specified as hemorrhage or infarction</td>
</tr>
<tr>
<td>N92.4</td>
<td>(1)</td>
<td>Excessive bleeding in the premenopausal period (admitted for a hysterectomy)</td>
</tr>
<tr>
<td>I64</td>
<td>(2)</td>
<td>Stroke, not specified as hemorrhage or infarction</td>
</tr>
<tr>
<td>Y83.6</td>
<td>(9)</td>
<td>Removal of other organ (partial) (total) as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure</td>
</tr>
</tbody>
</table>

When a complication of care is of a minor nature and does not meet the criteria for a comorbidity, code it optionally as a diagnosis type (3).

See also the coding standard entitled *Diagnosis Typing Definitions*.

**Example:** Patient experiences syncope immediately following withdrawal of blood for testing.

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R55</td>
<td>(3)</td>
<td>Syncope and collapse</td>
</tr>
<tr>
<td>Y84.7</td>
<td>(9)</td>
<td>Blood-sampling</td>
</tr>
</tbody>
</table>

When a complication of care occurs post-discharge (e.g. after the patient returns home) and results in readmission to hospital for management of the condition, assign the complication as the most responsible diagnosis (MRDx).

**Example:** A patient had an abdominal hysterectomy and was discharged home. She was readmitted with dehiscence of her operative wound.

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T81.3</td>
<td>(M)</td>
<td>Disruption of operation wound, not elsewhere classified</td>
</tr>
<tr>
<td>Y83.6</td>
<td>(9)</td>
<td>Removal of other organ (partial) (total)</td>
</tr>
</tbody>
</table>

See also the coding standard entitled *Post-Procedural Conditions and Complications*. 
Hemorrhage, Perforation or Laceration During Intervention

Intraoperative/Postoperative Hemorrhage

Assign a code indicating intraoperative or postoperative hemorrhage with a comorbid diagnosis type, (M), and/or (2), when blood loss:

- Is documented by the physician as substantial, massive, torrential, or with difficulty gaining control of the hemorrhage, or similar terminology.
- Requires intraoperative consultation by another surgeon/specialty.
- Requires return to the operating room for control of bleeding.
- Results in symptoms such as weakness or anemia, which are documented by the physician as due to hemorrhage.

Assign a code indicating intraoperative or postoperative hemorrhage, optionally as a diagnosis type (3), when:

- Intra- or postoperative hemorrhage is documented as such by the physician, but does not impact length of stay, care, and or monitoring.

Do not code as hemorrhage:

- Blood loss $\geq 1000$ cc with no supporting documentation to indicate intra or postoperative hemorrhage.
- Increased blood loss that would be expected for the type of intervention: repair of ruptured aneurysm, bleeding ulcers, bleeding varices (esophageal, gastric), hip replacement surgery or control of hemorrhage due to trauma, UNLESS physician has documented this as hemorrhage.

Exception: See also the coding standard entitled Postpartum Hemorrhage.

Note: Do not assume that administration of blood or blood products during surgery, or that anemia following surgery is an indication that a hemorrhage has occurred. Blood or blood products are often given during surgery to prevent anemia or after surgery to treat anemia in patients where significant blood loss is expected.

Example: Patient was admitted to hospital for an abdominal hysterectomy. During the intervention, a hemorrhage occurred, documented on the operative report as substantial and with an estimated blood loss of 800 cc. Hemorrhage was controlled and patient stabilized: the intervention was completed without further incident.

T81.0 (2) Hemorrhage and hematoma complicating a procedure, not elsewhere classified

Y60.0 (9) Unintentional cut, puncture, perforation or haemorrhage during surgical and medical care, during surgical operation

1. Data Standardization Committee, Capital Health, Edmonton, Alberta: “Guidelines for Diagnosis Typing for Hemorrhages/Perforations/Lacerations.”
Puncture/Laceration

Assign a code indicating puncture/laceration of an organ during an intervention with a comorbid diagnosis type, (M), and/or (2) when the outcome meets the criteria for significance.

The following are examples of when the outcome would meet the criteria for significance:

- Requires intraoperative consult by another surgeon or specialty.
- Requires a return to the operating room
- Requires significant repair or removal of the damaged organ.
- Is a reason for readmission to hospital.
- Requires postoperative monitoring, care and investigation impacting length of stay.
- Requires an additional, different intervention.

In circumstances where a documented accidental cut/puncture does not meet the criteria for significance, code assignment is optional and, if coded, must be assigned diagnosis type (3). The following circumstances would not meet the criteria for significance:

- Minor repair performed (do not code the intervention)
- No further intervention required such as repair
- No impact on length of stay
- Dissection during cardiac catheterization/angioplasty that is mentioned as an incidental note
- Laceration to the diseased organ being removed

See also the coding standard entitled *Diagnosis Typing Definitions*.

**Example:** Patient has a cholecystectomy during which a tear in the gallbladder occurs with spillage of gallstones. Routine removal with cleanup of gallstones done.

Nil Do not code the tear to the gallbladder. It is being removed as part of the surgery.

**Example:** A 54-year old patient was admitted for ca of the colon. During colectomy, rupture of the splenic capsule was noted and a splenectomy was performed.

T81.2 (2) Accidental puncture and laceration during a procedure, not elsewhere classified

Y60.0 (9) Unintentional cut, puncture, perforation or hemorrhage during surgical and medical care

**Rationale:** The splenic rupture meets the criteria for significance because an additional, different procedure was required.

**Example:** Patient sustains an intraoperative laceration to the kidney during an intra-abdominal lysis of adhesions. An intraoperative consult is requested and provided to ensure viability of the organ. The kidney is repaired with suturing.

T81.2 (2) Accidental puncture and laceration during a procedure, not elsewhere classified

Y60.0 (9) Unintentional cut, puncture, perforation or hemorrhage during surgical and medical care

**Rationale:** This meets the criteria for significance because an intraoperative consult was required.
**Example:** Patient sustains an intraoperative laceration to the bowel during laparoscopic tubal ligation. The surgeon placed two sutures in the bowel for repair with no further consequences.

- **T81.2 (3)** Accidental puncture and laceration during a procedure, not elsewhere classified
- **Y60.0 (9)** Unintentional cut, puncture, perforation or hemorrhage during surgical and medical care

**Rationale:** This accidental laceration requires only minor repair and does not meet the criteria for significance. If coded, it must be assigned a diagnosis type (3). An intervention code to describe the minor repair is not assigned.

---

**Intravascular Foreign Bodies**

When a catheter guidewire (or broken piece), catheter tip, angioplasty balloon fragment or other broken part of a therapeutic vascular device is inadvertently left in a blood vessel as a result of an intervention, assign a code from category T81.5– *Foreign body accidentally left in body cavity or operation wound following a procedure*

Select the relevant external cause code from the category Y61.– *Foreign object accidentally left in body during surgical and medical care*

**Example:** Patient had a central line insertion and the guidewire for the catheter was inadvertently left behind in the superior vena cava. Under ultrasound guidance, the guidewire was removed using a gooseneck snare inserted into the internal jugular vein by the radiologist.

- **T81.59 (2)** Unspecified complication due to foreign body accidentally left in body cavity or operation wound following a procedure
- **Y61.6 (9)** Foreign object accidentally left in body during surgical and medical care, during aspiration, puncture and other catheterization
- **1.IS.56.GR-GX** Removal of foreign body, vena cava (superior and inferior) using percutaneous transluminal approach and device NEC [e.g. pigtail snare, gooseneck snare, basket device]
- **3.JY.30.DA** Ultrasound, thoracic vessels NEC (optional to code)

**Status attribute:** I

**Rationale:** The broken fragments or retained guidewires are not therapeutic devices intended to be left in the patient’s body.

**Related Interventions**

The retrieval of wholly intraluminal foreign bodies of blood vessels is classified to intervention 1.^^.56.^^ Removal, foreign body, by anatomy site of blood vessel.

The “Rubric Finder” for Section 1, found in Appendix B of the Version 2006 CCI Folio is an invaluable tool for identifying all the anatomy sites for which this intervention is applicable, i.e. in the sites Heart and Related Structures (H), Great Vessels (I), Upper Vessels (J), and Lower Body Vessels (K).
### Chapter XX—External Causes of Morbidity and Mortality

#### External Cause Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S88.1</td>
<td>Traumatic amputation at level between knee and ankle</td>
</tr>
<tr>
<td>W58</td>
<td>Bitten or struck by crocodile or alligator</td>
</tr>
</tbody>
</table>

**Example:**

- S88.1 (M)
- W58 (9)

#### Place of Occurrence

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T39.3</td>
<td>Poisoning by other nonsteroidal anti-inflammatory drugs [NSAID]</td>
</tr>
<tr>
<td>X40</td>
<td>Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics</td>
</tr>
<tr>
<td>U98.0</td>
<td>Place of occurrence, home</td>
</tr>
</tbody>
</table>

**Example:**

- T39.3 (M)
- X40 (9)
- U98.0 (9)

#### Type of Activity

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S42.490</td>
<td>Fracture of unspecified part of lower part of humerus, closed</td>
</tr>
<tr>
<td>W11</td>
<td>Fall on and from ladder</td>
</tr>
<tr>
<td>U98.5</td>
<td>Place of occurrence, trade and service area</td>
</tr>
<tr>
<td>U99.2</td>
<td>While working for an income (optional)</td>
</tr>
</tbody>
</table>

**Example:**

- S42.490 (M)
- W11 (9)
- U98.5 (9)
- U99.2 (9)
Chapter XXI—Factors Influencing Health Status and Contact
With Health Services

Observation Versus a Follow-up Examination

In effect 2003, amended 2006

Observation

When a patient is admitted for observation or assessment of a documented sign or symptom and:

- the underlying cause is determined, assign a code for the underlying cause
- the underlying cause is not determined and the documentation indicates further follow-up is required, assign a code for the sign or symptom
- an underlying cause is ruled out with documentation indicating no further follow-up is required, assign a code from Z03.– *Medical observation and evaluation for suspected diseases and conditions*

**Example:**

Patient presents with an elevated prostate specific antigen (PSA) test and is admitted for biopsy for suspected prostate malignancy. After investigation, neoplasm or other pathology is not detected and no further action is required at this time.

Z03.1  (M)  Observation for suspected malignant neoplasm
R76.8  (3)  Other specified abnormal immunological findings in serum

**Example:**

Patient presents with an elevated PSA test. After biopsy, patient is diagnosed with ca of the prostate.

C61  (M)  Malignant neoplasm of prostate

**Example:**

New immigrant was observed by the Immigration Officer to be coughing up blood. Public Health was called and the client was placed in isolation under quarantine. Tuberculosis was not confirmed and the patient will be followed up with X-rays.

R04.2  (M)  Hemoptysis
Z03.0  (3)  Observation for suspected tuberculosis
Z29.0  (3)  Isolation

**Example:**

Child was found by mother next to an empty pill bottle. Mother was uncertain about the number of tablets that were in the bottle. After observation, no ill effects noted.

Z03.6  (M)  Observation for suspected toxic effect from ingested substance

When the patient presents for examination and observation under other circumstances and there is no documented condition to code and patient requires no further medical care or follow-up assign a code from category Z04.– *Examination and observation for other reasons* as the MRDx.

**Example:**

A patient involved in an MVA was brought to Emergency for observation. Following X-rays it was determined the patient suffered no injuries and was discharged.

Z04.1  (M)  Examination and observation following transport accident

**Rationale:**

Note that no External cause code is assigned as there were no injuries.

See also the coding standards entitled *Coding of Main and Other Problems for Ambulatory Care Visits* and *Underlying Symptoms or Conditions.*
Follow-Up Examination

When major treatment has been completed and the patient is admitted subsequently for surveillance and assessment and there is no recurrence of the treated condition, select one of the following as the MRDx:

- Z08.– Follow-up examination after treatment for malignant neoplasm; or
- Z09.– Follow-up examination after treatment for conditions other than malignant neoplasms.

Assign an additional code indicating a personal history of the condition for which treatment is completed, optionally, as a diagnosis type (3).

When the follow-up examination reveals that the original condition has recurred or another related condition has been identified at this visit, assign a code for the condition as the MRDx.

Assign an additional code from one of the following categories:

- Z08.– Follow-up examination after treatment for malignant neoplasm; or
- Z09.– Follow-up examination after treatment for conditions other than malignant neoplasms optionally as a diagnosis type (3).

Example: A male patient was admitted for a cystoscopy for follow-up of bladder cancer previously treated by radiation therapy. There was no recurrence of the malignancy. Trabeculation of bladder was noted.

Z08.1 (M) Follow-up examination after radiotherapy for malignant neoplasm
Z85.5 (3) Personal history of malignant neoplasm of urinary tract
N32.8 (3) Other specified disorders of bladder (optional)

Rationale: Trabeculation of the bladder is neither recurrence nor a related condition. It is optional to code, and if coded, is a diagnosis type (3).

Example: Mrs. X is a 45-year old patient with a history of kidney stones. Four years ago, she underwent extracorporeal shock wave lithotripsy (ESWL) and has been stone free since. A stone analysis done at that time showed them to be calcium oxalate. She is on magnesium supplement prophylaxis, to avoid forming any more stones. At this visit to the stone clinic, she had no complaints. Her 24-hour urine tests and abdominal ultrasound are negative.

Mrs. X will continue to be under surveillance by Dr. R in the stone clinic and has been asked to continue her magnesium supplement. She will be seen again in 12 months.

Z09.8 (M) Follow-up examination after other treatment for other conditions
Z87.4 (3) Personal history of diseases of the genitourinary system

Example: Patient admitted for cystoscopy for follow-up of bladder cancer previously treated by radiation therapy. Carcinoma of the bladder was detected.

C67.9 (M) Malignant neoplasm of bladder, unspecified
Z85.5 (3) Personal history of malignant neoplasm of urinary tract (optional)
Z08.1 (3) Follow-up examination after radiotherapy for malignant neoplasm (optional)

See also the coding standard entitled Coding of Ambulatory Care Visits for Follow-up Examination or Care.
Screening for Specific Diseases

Screening is the early detection/diagnosis of a disease such as cancer through testing a person who does not yet have recognized symptoms or obvious signs of the condition. Screening does not include examination of individuals who have previously been treated for a condition. Ideally, screening detects a condition before it becomes serious, and when it is usually easily treatable or preventable.

Some examples of screening programs include:

- **Mammography** to detect breast cancer for all women of a certain age (e.g. 50–74 in ON; 40–79 in BC) or who have risk factors.
- **Pap test** for all women who are, or ever have been, sexually active.
- **Fecal occult blood testing, colonoscopy or sigmoidoscopy, or double contrast barium enema** to detect colon cancer for all persons over 50 years and persons under 50 who have risk factors (e.g. family history).
- **Tuberculin skin test** to detect tuberculosis for certain populations such as health care workers, correctional institution workers and immigrants.

### When a patient undergoes a screening examination, assign a code from category Z11.–, Z12.– or Z13.– *Special screening examination* as the MRDx.

**When the condition, or a sign of the condition for which the patient is screened is found:**

- assign a code for the condition or sign as the MRDx, and
- assign a code from Z11, Z12 or Z13, optionally, as a diagnosis type (3) as required to meet local data collection requirements.

Assign an additional code, optionally as a diagnosis type (3) to identify any circumstances indicating the screening group to which the patient belongs (e.g. family history)

Assign an additional code, optionally, as a diagnosis type (3), to identify any incidental findings noted at the time of the exam.

### Example:

A 52-year old female patient with no evidence of breast signs or symptoms comes to the breast clinic for mammogram. No abnormalities were found.

Z12.3 (M) Special screening examination for neoplasm of breast

### Example:

A 60-year old female patient with no breast signs or symptoms comes to the breast clinic for mammogram. A suspicious area is found in the upper outer quadrant.

R92 (M) Abnormal findings on diagnostic imaging of breast

Z12.3 (3) Special screening examination for neoplasm of breast (optional)

### Example:

A 60-year old female patient has detected a lump in her right breast on self-examination. She is referred for mammography by her family physician. The mammogram confirmed a lesion in her breast.

N63 (M) Unspecified lump in breast

**Rationale:**

As the patient presented with a sign of breast cancer, the mammogram in this case does not qualify as a screening test.
Example: Patient with no known complaint is admitted as a day surgery patient for a screening colonoscopy due to a family history of colon cancer. No abnormalities were detected.

- Z12.1 (M) Special screening examination for neoplasm of intestinal tract
- Z80.0 (3) Family history of malignant neoplasm of digestive organs

Example: Patient with no known complaint is admitted as a day surgery patient for a screening colonoscopy due to a family history of colon cancer. Internal hemorrhoids were noted.

- Z12.1 (M) Special screening examination for neoplasm of intestinal tract
- Z80.0 (3) Family history of malignant neoplasm of digestive organs
- I84.2 (3) Internal hemorrhoids without complication (optional)

Example: Patient with no known complaint, but with a family history of colon cancer, presents for a screening colonoscopy. Upon examination, a lesion is noted and biopsied, which is shown to be adenocarcinoma of the sigmoid colon.

- C18.7 (M) Malignant neoplasm of sigmoid colon
- Z12.1 (3) Special screening examination for neoplasm of intestinal tract (optional)
- Z80.0 (3) Family history of malignant neoplasm of digestive organs (optional)

Example: Patient with a positive family history for colon cancer undergoes a screening colonoscopy. An adenomatous polyp is found in the sigmoid colon. Polypectomy is performed.

- D12.5 (M) Benign neoplasm of sigmoid colon
- Z80.0 (3) Family history of malignant neoplasm of digestive organs
- Z12.1 (3) Special screening examination for neoplasm of intestinal tract (optional)

Rationale: Patient is being screened for neoplastic disease (malignant or benign), which is found. Adenomatous polyps in the colon have a malignant potential.
When a patient previously diagnosed with a malignancy has an encounter for care solely for the administration of chemotherapy, assign Z51.1 *Chemotherapy session for neoplasm* as the MRDx.

Assign an additional code to identify the malignant condition as a diagnosis type (3).

See also the coding standard entitled *Admissions for Chemotherapy, Brachytherapy and/or Radiation Therapy—Treatment for Malignancy*.

Assign Z51.2 *Other chemotherapy* when the patient has an encounter for care solely for chemotherapy (pharmacotherapy) to treat conditions other than malignant neoplasms.

Assign an additional code to identify the disease condition, optionally, as a diagnosis type (3).

**Example:** Patient with bursitis of the elbow is seen in ambulatory care solely for administration of IV therapy to treat that condition.

Z51.2 (M) Other chemotherapy
M70.3 (3) Other bursitis of elbow (optional)

**Example:** Patient with AIDS is seen in ambulatory care solely for administration of antiretroviral pharmacotherapy.

Z51.2 (M) Other chemotherapy
B24 (3) Human immunodeficiency virus [HIV] disease

When a patient is admitted solely for the insertion of a vascular access device (VAD) for treatment of an existing condition, assign Z51.88 *Other specified medical care NEC* as the MRDx.

Classify any encounter solely for attention to an indwelling vascular access device to Z45.2 *Adjustment and management of vascular access device*.

Assign an additional code to identify the disease condition, optionally, as a diagnosis type (3).

**Example:** Insertion of a VAD to administer antineoplastic agents for treatment of leukemia.

Z51.88 (M) Other specified medical care NEC
C95.9 (3) Leukemia, unspecified
1.IS.53.GR-LF Implantation of internal device, vena cava (superior and inferior) vascular access device with external lumen using percutaneous transluminal venous approach (e.g. peripherally inserted central catheter [PICC])
Admission for Blood Transfusion

When a patient is admitted solely for a blood transfusion, assign Z51.3 Blood transfusion without reported diagnosis.
Assign an additional code to identify the disease condition, optionally, as a diagnosis type (3).

Example: Patient with thalassemia major admitted every 6 weeks for a blood transfusion.
Z51.3 (M) Blood transfusion without reported diagnosis
D56.9 (3) Thalassemia, unspecified
Rationale: These patients are generally seen on a regular or recurrent basis for continued therapy.

Example: Patient with leukemia is admitted for further assessment of the disease. During hospitalization the patient receives a blood transfusion as part of the treatment.
C95.9 (M) Leukemia, unspecified
Rationale: As the patient was not admitted solely to receive a blood transfusion, Z51.3 is not assigned

Boarder Babies and Boarder Mothers

When a patient is admitted for early postpartum care and her healthy newborn is also admitted as a “boarder baby”:

- Assign Z76.2 Healthy supervision and care of other healthy infant and child, when supervision and care of the healthy infant is carried out by the nursing staff.
- Assign Z76.3 Healthy person accompanying sick person, when the mother is providing all care for the infant herself.

Example: Patient is admitted for early postpartum care accompanied by her healthy newborn son, who receives care and supervision by nursing staff. (Baby’s chart)
Z76.2 (M) Healthy supervision and care of other healthy infant and child

Example: Patient is admitted for early postpartum care accompanied by her healthy newborn son, who rooms in with his mother and who provides all care for the infant. (Baby’s chart)
Z76.3 (M) Healthy person accompanying sick person
When a baby is ill and a mother is admitted in order to provide care and supervision of her sick infant, assign Z76.3 Healthy person accompanying sick person as the MRDx for the mother’s chart.

Example: A sick newborn is admitted who requires breast-feeding, and due to distance and family circumstances, the healthy mother (well companion or boarder mother) is also admitted to care for her infant. (Mother’s chart)

Z76.3 (M) Healthy person accompanying sick person
Z39.1 (3) Care and examination of lactating mother (optional)

Rationale: This code is applicable to any healthy person whose only reason in hospital, is to accompany a sick person. In this case, it applies to a healthy mother. In this case scenario, Z39.1 may be added as an optional, diagnosis type (3) code in order to describe the breastfeeding component.
Chapter XXIII—Provisional Codes for Research and Temporary Assignment

Systemic Inflammatory Response Syndrome (SIRS)  

In effect 2006

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K85.9</td>
<td>Acute pancreatitis, unspecified</td>
</tr>
<tr>
<td>U97</td>
<td>Systemic Inflammatory Response Syndrome (SIRS)</td>
</tr>
<tr>
<td>T21.3</td>
<td>Burn of third degree of trunk</td>
</tr>
<tr>
<td>T31.22</td>
<td>Burns involving 20–29% of body surface with 10–19% third degree burns</td>
</tr>
<tr>
<td>X00</td>
<td>Exposure to uncontrolled fire in building or structure</td>
</tr>
<tr>
<td>U98.0</td>
<td>Place of occurrence, home</td>
</tr>
<tr>
<td>U97</td>
<td>Systemic Inflammatory Response Syndrome (SIRS)</td>
</tr>
<tr>
<td>Y83.2</td>
<td>Surgical operation with anastomosis, bypass or graft as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure</td>
</tr>
</tbody>
</table>

Example: Mrs. X, a 45-year old woman admitted to Internal Medicine with acute pancreatitis. She was transferred to ICU four days later with signs of systemic infection. The ICU physician documented systemic inflammatory response syndrome. Timely treatment with antibiotics was instituted and the patient’s condition did not progress to sepsis.

Example: Mr. W, a 52-year old man admitted to the burn ICU with his trunk being severely burned when his house burned down. He had 25% body surface area involved in the burn with 15% of the body surface area having 3rd degree burns. Patient was sleeping in the basement at the time of the fire. A week after admission, the physician documented systemic inflammatory response syndrome in the progress notes. The patient was treated as per burn protocol, which included antibiotics.

Example: Mr. P, a 65-year old man admitted to ICU following CABG. The ICU physician documented systemic inflammatory response syndrome in the progress notes. Patient was monitored closely and postoperative infection was ruled out.
**Example:** Mr. Y, a 73-year old man admitted to ICU with bronchopneumonia. The ICU physician documented systemic inflammatory response syndrome. The following day physician’s note stated that the patient had generalized sepsis.

- A41.9 (M) Septicemia, unspecified
- J17.0* (3) Pneumonia in bacterial diseases classified elsewhere

**Example:** Mr. SH, a 35-year old trauma patient was in ICU for several days. He showed signs of SIRS and a urinary tract infection that progressed to septic shock. He went into acute renal failure and hepatic failure. The patient subsequently expired.

- A41.9 (2) Septicemia, unspecified
- N17.9 (2) Acute renal failure, unspecified
- K72.9 (2) Hepatic failure, unspecified

**Example:** Mr. M., a 67-year old man admitted to ICU following a peri-operative myocardial infarction. Patient had partial nephrectomy for renal carcinoma. The ICU physician documented systemic inflammatory response syndrome in the progress notes. Patient was monitored closely and postoperative infection was ruled out. However, the patient’s status continued to deteriorate and final diagnosis was acute respiratory distress syndrome (ARDS).

- I21.9 (2) Acute myocardial infarction, unspecified
- U97 (2) Systemic inflammatory response syndrome (SIRS)
- J80 (2) Adult respiratory distress syndrome
- Y83.6 (9) Removal of other organ (partial) as the cause of abnormal reaction of the patient, or of later complication, without mention of misadventure at the time of the procedure
Appendix A—Resources

Drug Resistant Microorganisms

What is Methicillin Resistant Staphylococcus Aureus (MRSA)?

*Staphylococcus aureus*, often referred to simply as “staph,” is a bacterium commonly found on the skin of healthy people. Occasionally, staph can get into the body and cause an infection. This infection can be minor (such as pimples, boils, and other skin conditions) or serious (such as blood infections or pneumonia). Methicillin is an antibiotic commonly used to treat staph infections. Although methicillin is very effective in treating most staph infections, some staph bacteria have developed resistance to methicillin and can no longer be killed by this antibiotic. These resistant bacteria are called methicillin-resistant *Staphylococcus aureus*, or MRSA. They can be found on the skin, in the nose, and in blood and urine.

Methicillin Resistant Staphylococcus Aureus (MRSA) infection usually develops in hospital patients who are elderly or very sick, or who have an open wound (such as a bedsore) or a tube (such as a urinary catheter) going into their body. Although MRSA is resistant to many antibiotics and often difficult to treat, a few antibiotics can still successfully cure Methicillin Resistant Staphylococcus Aureus (MRSA) infections.

What is Vancomycin Resistant Enterococcus (VRE)?

*Enterococcus* is a common, gram-positive bacterium. The most common infections caused by enterococci are urinary tract infections, wound infections, bacteremia, endocarditis and meningitis. Enterococci also frequently colonize open wounds and skin ulcers.

Vancomycin is the antibiotic used for the treatment of serious infections caused by enterococci. Like with Methicillin Resistant Staphylococcus Aureus (MRSA), patients can be either “colonized” or “infected” with Vancomycin Resistant Enterococci (VRE) and both are sources for nosocomial infection. The most frequent sites for colonization are in the stool, perineum, anus, axilla, umbilicus, wounds, Foley catheters, and colostomy sites. Vancomycin Resistant Enterococcus (VRE) can be spread directly by patient-to-patient contact or indirectly via hands of personnel, contaminated environmental surfaces or patient care equipment. Treatment of Vancomycin Resistant Enterococci (VRE) infection is difficult due to a very limited range of antibiotics available. Those people found to be harmlessly colonized by Vancomycin Resistant Enterococci (VRE) need no special treatment and over a period of time these people become spontaneously clear of VRE.

What is the Difference Between Colonization and Infection?

Colonization means that MSRA or VRE is present on or in the body without causing illness. Patients will have no signs or symptoms of infection caused by the organism. A microbiology report may indicate the presence of MRSA or VRE, but the patient will not have an actual infection, however, they are carriers. Treatment of carriers without symptoms of infection is not usually necessary, but they may sometimes be treated with special antibiotic ointments to the nose and/or washing with special antibacterial preparations.

On the other hand, if a patient has a MSRA or VRE infection it means that MRSA or VRE is making the person sick.
What is Decolonization?
Decolonization is the elimination of MRSA carrier state through use of infection control measures and/or antibiotics. This decreases the risk of transmission to high-risk individuals (immunocompromised or otherwise highly susceptible persons) or to others in an outbreak situation.

Viral Hepatitis
Viral hepatitis is an inflammatory and necrotic disease of liver cells. Viruses A, B, C, D and E may result in acute viral hepatitis. Acute viral hepatitis infections with viruses B, C and D may progress to chronic viral hepatitis.

Viral hepatitis that lasts for more than 6 months is generally defined as “chronic”, however, this definition is arbitrary. Chronic viral hepatitis is a variable progressive disease that ultimately results in cirrhosis and hepatic failure. The diagnosis of chronic viral hepatitis can only be determined following a liver biopsy.

Patients with chronic viral hepatitis often have abnormal liver function tests. An indication of chronic viral hepatitis is a raised level of alanine transaminase, although this may also be due to other causes such as alcohol. Generally, patients with chronic viral hepatitis are followed biannually with blood tests and ultrasounds. Neonates of mothers who have chronic hepatitis B or are hepatitis B carriers are at risk of transmission and should be immunized soon after birth (within 24 hours), whereas there is no equivalent vaccination available for neonates of mothers who have chronic hepatitis C or are hepatitis C carriers. These neonates have approximately 5% risk of infection.

Generally, after recovery from an infection with an organism, a person will develop antibodies to the pathogenic organism. Antibodies to certain infectious diseases can also be produced by vaccination. In these vaccinated people, future blood tests demonstrating the antibodies will indicate past infection or immunization. Such people are not regarded as “carriers”. A carrier is a person who has hepatitis B, C or D virus and/or antibodies in his or her blood, does not manifest symptoms, but may infect others. Because the virus is present in the blood, it can be transmitted to others. It is important to understand the distinction between a person who is a carrier of an infectious disease (an infection risk) and a person whose antibody results indicate past infection or immunization to an infectious disease (not an infection risk). The role of antibody tests in distinguishing between carrier status and past infection varies depending on the infection.

Hepatitis A
Hepatitis A is a disease which is quite contagious and is transmitted enterically (fecal-oral route). Transmission within families is common. In developing countries, the usual source of infection is faecal contamination of drinking water.
The hepatitis A virus (HAV) is detected by two antibody tests:
1. IgM antibody: positive result indicates recent infection.
2. IgG antibody (anti-HA): positive result indicates past infection (previous exposure to HAV) or immunity through vaccination.

HAV is never a chronic infection. There is no known carrier state and HAV plays no role in chronic active hepatitis or cirrhosis.

The ICD-10-CA category for classifying Hepatitis A is:
B15 Acute hepatitis A

Hepatitis B
Hepatitis B may manifest as an acute illness and may progress to a chronic infection. The hepatitis B virus (HBV) is transmitted by infected body secretions such as blood and blood products, transplanted tissue, saliva, urine, semen and cervical secretions. Most adults make a full recovery and are left with immunity for life. However, in up to 10% of cases, following an acute infection, patients will become asymptomatic carriers of HBV or develop chronic active viral hepatitis (5%). There are estimated to be about 300 million HBV carriers worldwide.

ICD-10-CA categories for classifying Hepatitis B are:
B16 Acute hepatitis B
B18.0 Chronic viral hepatitis B with delta-agent
B18.1 Chronic viral hepatitis B without delta-agent
Z22.50 Carrier of viral hepatitis B

Hepatitis C
Hepatitis C may manifest as an acute illness and may progress to a chronic infection. The hepatitis C virus (HCV) is transmitted parenterally (e.g. transfusions, injection drug abuse, occupational exposure to blood or blood products). Recovery rates from hepatitis C virus (HCV) infection is much lower than in hepatitis B virus infection. Generally it is known that up to 90% will progress to a chronic infection.

Hepatitis C differs from hepatitis B in that a patient with hepatitis C will have the virus for the rest of their lives as either an acute or chronic infection or as an asymptomatic carrier. A positive hepatitis C antibody test indicates hepatitis C infection. A polymerase chain reaction (PCR) assay can also be conducted; a positive result supports the diagnosis of chronic hepatitis C infection. However, a negative PCR result does not necessarily mean that there is no chronic infection as the virus may still be present in small amounts and not detected in the blood sample.

ICD-10-CA categories for classifying Hepatitis C are:
B17.1 Acute hepatitis C
B18.2 Chronic viral hepatitis C
Z22.51 Carrier of viral hepatitis C
Hepatitis D

The hepatitis D virus (HDV) can only occur in the presence of HBV, never alone. It occurs as either a co-infection with acute hepatitis B or a super infection in established chronic hepatitis B. The HDV is spread mainly parenterally (e.g. by needles and blood). It is also referred to as the delta agent.

ICD-10-CA codes for classifying Hepatitis D are:

B17.0  Acute delta-(super) infection of hepatitis B carrier
Z22.58 Carrier of other viral hepatitis is to be assigned only when there is no sign of active hepatitis D disease (hepatitis D carrier state).

Hepatitis E

The hepatitis E virus (HEV) is transmitted enterically (fecal-oral route). It is endemic in South-East Asia, countries of the Soviet region, India, mid-east Africa and Central America. Large epidemics with person-to-person spread have been known to occur. The normal course of infection seems to be acute and a relatively benign illness, except in pregnancy.

HEV is never a chronic infection. There is no known carrier state and HEV plays no role in chronic active hepatitis or cirrhosis.

The ICD-10-CA code for classifying Hepatitis E is:

B17.2  Acute hepatitis E

Hepatitis Complicating Pregnancy, Childbirth or the Puerperium

O98.4– Viral hepatitis complicating pregnancy, childbirth and the puerperium is assigned where acute hepatitis A, acute or chronic hepatitis B, acute or chronic hepatitis C, acute or chronic hepatitis D or Hepatitis E complicates the pregnancy, childbirth or puerperium. This code is not assigned when the obstetric patient is a carrier. Assign a code from the category Z22.5– Carrier of viral hepatitis for an obstetric patient with carrier status.1

Diabetes Mellitus

Diabetes mellitus is a chronic disease in which the body does not make, or does not properly use, insulin. Insulin is the hormone that helps the body use the energy from sugar, starches and other foods. Glucose is a form of sugar produced when the body digests carbohydrates (sugars and starches). Glucose is the body’s major fuel for the energy it needs. When insulin is absent or ineffective, the blood glucose (blood sugar) level increases and the patient is hyperglycemic.

Type 1 Diabetes Mellitus (E10.–)

The cause of Type 1 diabetes is unknown. It is the result of an autoimmune process in which the body’s immune system attacks and destroys the insulin producing cells of the pancreas. The failure of the beta cells to produce insulin prevents glucose from entering the cells of the body to provide fuel. When glucose cannot enter the cells, it builds up in the blood and the body’s cells literally starve to death. People with Type 1 diabetes must take daily insulin injections and regularly monitor their blood sugar levels.

Type 1 diabetes can cause different problems, but there are three key complications:

1. **Hypoglycemia** (low blood sugar; sometimes called an insulin reaction) occurs when blood sugar drops too low (see also the coding standard entitled *Hypoglycemia in Diabetes Mellitus*).

2. **Hyperglycemia** (high blood sugar) occurs when blood sugar is too high, and can be a sign that diabetes is not well controlled (see also the coding standard entitled *Diabetes Mellitus and Hyperglycemia*).

3. **Ketoacidosis** (diabetic coma) is loss of consciousness due to untreated or under-treated diabetes (see also the coding standard entitled *Coma in Diabetes Mellitus*).

Type 2 Diabetes Mellitus (E11.–)

Type 2 diabetes mellitus, which is related to insulin resistance (lack of the ability of the body to respond to insulin appropriately), is the most common form of diabetes. In Type 2 diabetes, either the body does not produce enough insulin or the cells ignore the insulin. When glucose builds up in the blood instead of going into cells, it can cause the cells to be starved for energy. Over time, high blood glucose levels may result in hyperglycemia and other complications such as accelerated atherosclerosis, neuropathy, nephropathy, and retinopathy.

“Although most Type 2 diabetics are treated with diet, exercise and oral drugs, some patients intermittently or persistently require insulin to control hyperglycemia and prevent non-ketotic hyperglycemic-hyperosmolar coma (NKHHC).”\(^2\) Treatment by insulin is not an indicator of the type of diabetes. Type 2 diabetes is considered as insulin requiring diabetes if the patient needs insulin therapy, while Type 1 diabetes mellitus is considered as insulin dependent diabetes.

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Other Specified Diabetes Mellitus (E13.–)

Other specified types, previously called secondary diabetes, are caused by other illness or medications that result in destruction of pancreatic beta cells or development of peripheral insulin resistance. The most common are diseases of the pancreas that destroy the pancreatic beta cells (e.g. hemochromatosis, pancreatitis, cystic fibrosis, pancreatic cancer), hormonal syndromes that interfere with insulin secretion (e.g. pheochromocytoma) or cause peripheral insulin resistance (e.g. acromegaly, Cushing syndrome, pheochromocytoma), and diabetes induced by drugs (e.g. phenytoin, glucocorticosteroids, estrogens). Genetic research has provided new insights into the pathogenesis of MODY (maturity-onset diabetes of young), which was formerly included as a form of Type 2 diabetes. A review of the literature shows that other specified types of diabetes may account for 1% to 2% of all diagnosed cases of diabetes.

Just as patients with Type 2 diabetes do not become Type 1 diabetics, or vice versa, patients with a type of diabetes classifiable to E13.– do not become Type 1 or Type 2 diabetics.

Diabetes Mellitus in Pregnancy (O24.5–O24.8)

This pregnancy-related form of diabetes occurs when high levels of hormones cause cells to become less sensitive to insulin. Gestational diabetes occurs in about 2%–5% of all pregnancies, and disappears when pregnancy is over. Women who have had gestational diabetes are at increased risk for later developing Type 2 diabetes mellitus.

Borderline Diabetes—A Misnomer

According to the Canadian Diabetic Association, “borderline” diabetes doesn’t exist, although the term seems to be used quite frequently. In general, it appears to be a common expression meaning that a person has mild diabetes, or perhaps that the treatment is only diet and exercise. Another misunderstanding about being “borderline” may be the assumption that blood glucose levels are just slightly elevated in a diabetic.

Impaired Glucose Tolerance (IGT) [R73.0 Abnormal Glucose Tolerance Test]

A diagnostic statement of IGT indicates a prediabetic state, which is associated with insulin resistance and closely related to Type 2 diabetes. It occurs when the blood glucose level is higher than normal, but not high enough to be classified as diabetes. IGT is detected through the same Oral Glucose Tolerance Test that is used to detect diabetes. People with IGT have a 1 in 3 chance of developing Type 2 diabetes within 10 years, but this can be minimized through healthy eating and physical activity.

Complications of Diabetes

Diabetic complications can be classified broadly as micro-vascular or macro-vascular disease. Micro-vascular complications include neuropathy, nephropathy, and vision disorders (e.g. retinopathy, glaucoma, cataract and corneal disease). Macro-vascular complications include conditions such as heart disease and stroke.

Common Microvascular Complications of Diabetes Mellitus

Diabetic Nephropathy
Diabetic nephropathy is kidney damage, usually due to changes in small blood vessels leading to the filtering system of the kidney or to the smaller blood vessels within the filtering system itself, caused by a persistently high blood sugar level from diabetes. The damaged nephrons allow proteins that normally would stay in the blood to pass into the urine.

Diabetic nephropathy is the most common cause of kidney failure. There are no symptoms in the early stages of diabetic nephropathy. A small amount of protein in the urine (microalbuminuria) is the first sign of kidney damage. As damage to the kidneys progresses, larger amounts of protein spill into the urine (macro-albuminuria) and blood pressure rises. When damage to the blood vessels continues over time, kidney failure develops.

Diabetic Retinopathy
Retinopathy is the non-inflammatory impairment of the retina. Diabetic retinopathy occurs when the small blood vessels in the retina become swollen, often leaking fluid, or when new tiny blood vessels grow that block the retina. Diabetic retinopathy is a common cause of blindness in adults.

Additionally, new tiny blood vessels may form across the retina (neo-vascularization). These blood vessels are extremely fragile and may break and bleed easily, resulting in the formation of fibrous (scar) tissue around them. This causes the vision to be obscured and may ultimately cause retinal detachment (where scar tissue pulls the retina away from where it should be). This often causes the sudden loss of sight in one eye.

Related Intervention
The treatment for retinopathy is usually a form of laser treatment called pan-retinal laser photocoagulation, which is normally done under local anesthetic. In this form of laser treatment, bursts of a laser beam directed at the retina can destroy the new, abnormal blood vessels and prevent the retina detaching. It has been shown to reduce severe visual loss significantly if treatment is undertaken early. In CCI, this is coded to 1.CN.59.LA-AG Destruction, retina, using laser.

Diabetic Neuropathy
Diabetic neuropathy is the loss of the function of peripheral nerves in people with diabetes. There are many theories as to why diabetics develop this condition. It may be due to the nerves having increased levels of glucose (sugar), which leads to dysfunction of the normal pathways that utilize the glucose for energy. Another possibility is that the blood supply to the nerves is compromised, which causes them not to function properly.

The symptoms of diabetic neuropathy can include increased but abnormal sensations such as pain or burning, or decreased sensation like numbness. Diabetic neuropathy typically affects the longest nerves first, and so it is most common in the feet. Loss of pain and/or temperature sensation can predispose the diabetic patient to foot ulcers—they can bump their foot and not even realize there is an open wound until the wound has already become infected.
Many other nerves can be affected in diabetics. The nerves that make the eyes move may be affected so a diabetic may develop double vision. The optic nerve can be affected with subsequent loss of vision.

The autonomic nervous system can over-function or under-function. This can cause diabetics to have too much or too little sweating, incontinence or retention of urine, diarrhea or constipation, sexual problems (including erectile dysfunction), problems with the pupils reacting to light changes and even fainting spells.

**Peripheral Circulatory Complications**

Diabetic vascular disease refers to hardening of the arteries throughout the body because of diabetes. Peripheral arterial disease (PAD) is hardening and narrowing of the arteries (atherosclerosis) that supply blood to the arms, legs, and other parts of the body. It results in reduced blood flow to those parts of the body. The arteries in the legs are most often affected. As an artery is narrowed by atherosclerosis, the leg muscles do not get enough blood, especially during increased activity when more blood is required. The main symptom of peripheral arterial disease in the leg is a tight or squeezing pain in the calf, foot, thigh, or buttock that occurs during exercise (such as walking up a hill or a flight of stairs, running, or simply walking a few steps). This pain is called intermittent claudication.

**Related Interventions**

PAD treatment may consist of a minimally invasive procedure called **angioplasty and stenting** [1.KG.50.\(^{\text{c}}\) *Dilation, arteries of leg NEC*]. In an angioplasty, a long, thin, flexible tube called a catheter is inserted into a tiny incision above an artery in the leg and is guided through the arteries to the blocked area. Once there, a special balloon attached to the catheter is inflated and deflated several times. The balloon pushes the plaque in the artery against the artery walls, widening the vessel. A tiny mesh-metal tube called a stent may then be placed into the narrowed area of the artery to keep it open. The stent remains permanently in the artery.

**Bypass** surgery creates a detour around any narrowed or blocked sections of the artery [1.KG.76.\(^{\text{c}}\) *Bypass, arteries of leg NEC*]. The blood then flows, bypassing the blocked part of the artery. Sometimes the blockage itself can be removed with a procedure called an **endarterectomy** [1.KG.57.\(^{\text{c}}\) *Extraction, arteries of leg NEC*]. **Amputations** [generic intervention 93] of the lower extremity may also be performed in patients with advanced multiple diabetic complications.

**Macro-Vascular Complications of Diabetes Mellitus**

Chronic hyperglycemia or persistent high glucose levels allow glucose to react with certain components of the blood. When this happens, the by-products of these reactions tend to attach themselves on the wall of the major blood vessels. The lumen (space) of the blood vessel narrows down and this decreases the blood flow to the various organs. Since larger blood vessels are involved these complications are referred to as macro-vascular complications. The common macro-vascular complications are cardiac and cardiovascular complications and cerebral vascular diseases.
Diabetic Cataracts

Cataracts in a diabetic patient should not be assumed to be “diabetic” unless specified as such.

Diabetic cataracts occur at a younger age and progress more rapidly to a mature opacity. Young people with Type 1 diabetes occasionally develop snowflake or metabolic cataracts. Poor control of the diabetes may be a predisposing factor. True diabetic cataracts are characterized by bilateral white punctate or snowflake anterior and posterior subcapsular opacities of the lens. This condition is usually preceded by a sudden and progressive myopia. It is due to an increased accumulation of sorbitol, fructose, and glucose in the lens. These opacities may lessen or resolve with improved glycemic control.

E1–.35 *Diabetes mellitus with cataract* should only be assigned when the physician documents this type of cataract. It may be recorded as “diabetic cataract” or “cataract due to diabetes”.

Diabetes Mellitus and Hyperglycemia

In simple terms, “diabetes control” means keeping blood glucose levels within—or close to—the normal range. Glucose is the major source of energy for the body’s cells. When glucose can’t be transferred into cells from the bloodstream, glucose builds up in the blood. Hyperglycemia is the medical term for having too much sugar in the blood. Patients with diabetes are hyperglycemic when their blood glucose is not well controlled. Hence, a positive glucose tolerance test (R73.0 *Abnormal glucose tolerance test*) or unspecified hyperglycemia (R73.9 *Hyperglycemia, unspecified*) must not be coded on cases being classified to the range E10–E14. Marked hyperglycemia may lead to a coma, a critical situation requiring immediate hospitalization (see also the coding standard entitled *Coma in Diabetes Mellitus*).

Hyperglycemia in hospitalized people with diabetes contributes to increased mortality and morbidity by increasing the susceptibility to infection and lengthening hospital stays. A review of published studies indicates that elevated glucose levels increase postsurgical infection rates, reduce the ability to heal, contribute to increased cardiac morbidity and mortality, increase intensive care unit admissions, and increase lengths of stay. Hence, it is required that coders always assign code R73.8–2 when there is evidence of blood glucose level of greater than 14.0 mmol/L. Any acceptable glucose monitoring system may be used for testing of blood glucose and the patient could be fasting or otherwise.

Monitoring of blood glucose concentrations is a standard part of diabetes management. The methods by which this measurement is done have changed dramatically in the past several years. It is recognized that there will be some discrepancy between results of point of care testing for glucose and those of the same sample tested in the clinical laboratory. These differences occur for both physiologic and analytic reasons and exist regardless of the type of glucose monitoring system used. Results obtained during a hospital visit by any method of monitoring or testing blood glucose levels used by physicians and hospitals can be used for assigning a code from the subcategory R73.8– *Other evidence of elevated blood glucose levels*. 
Hypoglycemia in Diabetes Mellitus

Hypoglycemia, according to the Canadian Diabetic Association’s definition, is a condition in which blood glucose levels drop too low. Symptoms may include sweating, trembling, hunger, dizziness, moodiness, confusion and blurred vision. A low blood glucose level can occur when the blood glucose drops below a certain level (usually less than 4 mmol/L). Not eating enough food, missing or delaying a meal, exercising without taking the necessary precautions, taking too much insulin or drinking alcohol, causes hypoglycemia. Severe low blood glucose may cause confusion, disorientation and/or seizures.

Hypoglycemia can also be called insulin shock or insulin reaction. Severe hypoglycemia is dangerous. Very low blood sugar seriously affects the brain’s ability to reason or use good judgment. If the blood sugar levels continue to plummet to a dangerously low level, the brain is seriously impaired and consciousness is usually lost. Permanent brain changes and death can result if emergency treatment for advanced hypoglycemia is not given.

Coma in Diabetes Mellitus

Diabetic Coma—Hypoglycemia

When blood sugars become too low a loss of consciousness can result. This can advance to coma. Hypoglycemia starves the brain of glucose energy and this lack of energy can cause symptoms ranging from headache and mild confusion to loss of consciousness, seizure and coma. Severe hypoglycemia is dangerous. Very low blood sugar seriously affects the brain’s ability to reason or use good judgment.

Diabetic Coma—Hyperglycemia—Associated With Diabetic Ketoacidosis (DKA) or Diabetic Hyperosmolar Syndrome (DHS)

Diabetic coma is a life-threatening condition. Either diabetic ketoacidosis or diabetic hyperosmolar syndrome can lead to diabetic coma. If blood sugar levels become too high, this can also result in a loss of consciousness. In some cases, this can advance to coma.

Diabetic ketoacidosis (DKA) is characterized by hyperglycemia, metabolic acidosis, and increased circulating total body ketone concentration caused by the buildup of by-products of fat metabolism. DKA occurs mainly in those who have Type 1 diabetes mellitus. Sometimes, it can occur in those who have Type 2 diabetes mellitus.

Hyperosmolar hyperglycemic nonketotic coma (HHNC) is characterized by hyperglycemia, hyperosmolarity, and an absence of significant ketosis. HHNC most commonly develops in patients with diabetes who have some concomitant illness that leads to a reduced fluid intake for example an infection like pneumonia and urinary tract infection (UTI).
Diabetes Mellitus and Multiple Complications

Diabetic Ulcers
Neuropathy and peripheral artery disease occur very commonly in the diabetic patient and are often encountered together. These two entities are mainly responsible for ulcers in diabetic patients. A diabetic foot ulcer is an open sore that most commonly occurs on the bottom of the foot. People who use insulin are at a higher risk of developing a foot ulcer, as are patients with diabetes-related kidney, eye, and heart disease. Being overweight and using alcohol and tobacco also play a role in the development of foot ulcers.

Ulcers form due to a combination of factors, such as lack of feeling in the foot, poor circulation, foot deformities, irritation (such as friction or pressure), and trauma. Vascular disease can complicate a foot ulcer, reducing the body’s ability to heal and increasing the risk for an infection. Elevations in blood glucose can reduce the body’s ability to fight off a potential infection and also slow the healing process.

Diabetes Mellitus and the Pregnant State
Dr. Ian Blumer, in his book *Diabetes for Canadians for Dummies*, states: “Gestational diabetes is defined as diabetes diagnosed during pregnancy. The great majority of the time it resolves as soon as the baby is born.” Changing hormones and weight gain are part of a healthy pregnancy. But both changes make it hard for the body to keep up with its need for insulin.

Causes of Gestational Diabetes
- The body needs more energy than usual during pregnancy so more insulin is required to move glucose into the cells to provide energy.
- The placenta produces other hormones during pregnancy and some of these hormones can block the action of insulin in the body, causing “insulin resistance” to develop.
- Though insulin requirement is greater in all women during pregnancy, for some, the pancreas is not able to produce enough insulin for the body’s needs, so high levels of glucose remain in the blood stream and this is called gestational diabetes.
- It usually takes many weeks before the amount of insulin produced is not enough, so gestational diabetes does not appear until the middle of pregnancy.

Other Problems in Pregnancy Associated With Diabetes Mellitus
Most women with gestational diabetes can safely have a full term pregnancy and have a normal labor, but there may be some pregnancy-associated problems due to the diabetes.
- Pregnancy induced hypertension (PIH) also known as pre-eclampsia—high blood pressure caused by pregnancy is fairly common when a mother has diabetes. It usually goes away soon after the birth of the baby.
- Infections, such as bladder infections are also fairly common during pregnancy, but are more common when the mother has diabetes.
- If the mother’s blood sugar is not well controlled during the pregnancy there is an increased risk of miscarriage or still birth.
Strokes, Cerebrovascular Accidents (CVA) and Transient Ischemic Attacks (TIA)

A stroke is the sudden death of brain cells in a localized area due to inadequate blood flow. A stroke occurs when blood flow is interrupted to part of the brain. Without blood to supply oxygen and nutrients, and to remove waste products, brain cells quickly begin to die. Depending on the region of the brain affected, a stroke may cause paralysis, speech impairment, loss of memory and reasoning ability, coma, or death. A stroke is also sometimes called a brain infarct or a cerebrovascular accident (CVA) lasting more than 24 hours. A transient ischemic attack (TIA), by contrast, is defined arbitrarily as a similar neurological deficit lasting less than 24 hours. In the past, the defined time limit for a TIA was one hour but the time limit was expanded for practical purposes.5

A stroke involves either an ischemic or a hemorrhagic event, which causes damage to the brain. Cerebral thrombosis and cerebral embolism are caused by blood clots that block an artery supplying the brain, either in the brain itself or in the neck. Subarachnoid hemorrhage and intracerebral hemorrhage occur when a blood vessel bursts around or in the brain.

Cerebral thrombosis occurs when a blood clot, or thrombus, forms within the brain itself, blocking the flow of blood through the affected vessel. Clots most often form due to “hardening” (atherosclerosis) of brain arteries.

Cerebral embolism occurs when a blood clot from elsewhere in the circulatory system breaks free. If it becomes lodged in an artery supplying the brain, either in the brain or in the neck, it can cause a stroke.

Intracerebral hemorrhage affects vessels within the brain itself, while subarachnoid hemorrhage affects arteries at the brain’s surface, just below the protective arachnoid membrane.

Comorbid conditions and life style choices predispose patients undergoing any kind of surgery to a stroke event. It is impossible to determine which factor caused the event. Researchers have identified five risk factors for stroke post CABG. They are age, history of the following: hypertension, diabetes previous stroke and the presence of carotid bruit.

Studies have shown that stroke complicates the postoperative course in 1% to 6% of patients undergoing coronary revascularization. This may be due to a predisposition (risk factors) or it may be due to a piece of plaque that becomes loose (before? or after? surgery), traveling to the brain and precipitating the stroke. Because these patients are almost always at risk for a stroke anyway, the most that can be said with any certainty is that the stroke is a postoperative event. Since you can never know if this is a complication of the surgical procedure or a natural progression (possibly expedited) of a disease process culminating in a sudden acute event, a postoperative stroke is not classified to I97.8 Other postprocedural disorders of circulatory system, not elsewhere classified.

Atrial Fibrillation

Atrial fibrillation is an abnormally fast and highly irregular heartbeat and is classified as a functional disturbance when it occurs following cardiac surgery. Atrial fibrillation and flutter are abnormal heart rhythms in which the atria, or upper chambers of the heart, are contracting out of synchronization with the ventricles, or lower chambers of the heart. In atrial fibrillation, the atria “quiver” chaotically and the ventricles beat irregularly. In atrial flutter, the atria beat regularly and faster than the ventricles.

In most cases, the cause of atrial fibrillation and flutter can be found, but sometimes the cause is not documented. Causes of these heartbeat abnormalities include:

- Many types of heart disease
- Stress and anxiety
- Caffeine
- Alcohol
- Tobacco
- Diet pills
- Some prescription and over-the-counter medications
- Open-heart surgery

Lobar Pneumonia

There are two main kinds of pneumonia as determined by the method of lung involvement. When the inflammation affects an entire lobe of a lung it is called lobar pneumonia. When the inflammation is scattered here and there throughout the lungs, often with bilateral involvement, it is called bronchopneumonia, or bronchial pneumonia.

The organism in lobar pneumonia is usually a pneumococcus (Streptococcus pneumoniae), although other pathogens may also be the cause. Lobar pneumonia may develop suddenly in young, apparently well individuals, but the most susceptible are adults especially alcoholics and vagrants.

Bronchopneumonia may be caused by bacteria or viruses and most often is secondary to an infection or to some agent that has lowered the individual’s resistance to disease. This is the more common form of pneumonia and is more common in the very young and the very old. Sometimes, the organism that is causing the pneumonia cannot be identified.
Asthma

Asthma is a disease in which inflammation of the airways causes airflow into and out of the lungs to sometimes be restricted. When an asthma attack occurs, the muscles of the bronchial tree become tight and the lining of the air passages swells, reducing airflow and producing the characteristic wheezing sound. Mucus production is increased.

Most people with asthma have periodic wheezing attacks separated by symptom-free periods. Some asthmatics have chronic shortness of breath with episodes of increased shortness of breath. Asthma attacks can last minutes to days, and can become dangerous if the airflow becomes severely restricted.

Diagnostic Colonoscopic Interventions

The term “colonoscopy” means looking inside the colon. The main instrument that is used to look inside the colon is the colonoscope, which is a long, thin, flexible tube with a tiny video camera and a light on the end. By adjusting the various controls on the colonoscope, the gastroenterologist can carefully guide the instrument in any direction to look at the inside of the colon. The high quality picture from the colonoscope is shown on a TV monitor, and gives a clear, detailed view.

Colonoscopy is more precise than an X-ray. This procedure also allows other instruments to be passed through the colonoscope. These may be used, for example, to painlessly remove a suspicious-looking growth or to take a biopsy for further analysis. In this way, colonoscopy may help to avoid surgery or to better define what type of surgery may need to be done.

Colonoscopy is a safe and effective way to evaluate problems such as blood loss, pain, and changes in bowel habits such as chronic diarrhea or abnormalities that may have first been detected by other tests. Colonoscopy can also identify and treat active bleeding from the bowel.

Colonoscopy is also an important way to check for colon cancer and to treat colon polyps—abnormal growths on the inside lining of the intestine. Polyps vary in size and shape and, while most are not cancerous, some may turn into cancer. However, it is not possible to tell just by looking at a polyp if it is malignant or potentially malignant. This is why colonoscopy is often used to remove polyps; a technique called a polypectomy.

Flexible sigmoidoscopy enables the physician to look at the inside of the large intestine from the rectum through the last part of the colon, called the sigmoid or descending colon. Physicians may use the procedure to find the cause of diarrhea, abdominal pain, or constipation. Early signs of cancer in the descending colon and rectum can also be detected. With flexible sigmoidoscopy, the physician can see bleeding, inflammation, abnormal growths, and ulcers in the descending colon and rectum.
**Cellulitis**

Cellulitis is a relatively deep infection, generally resulting from a break in the skin. It involves subcutaneous spaces in addition to the dermis. Some cases of cellulitis appear on areas of trauma, where the skin has broken open, such as the skin near ulcers or surgical wounds. Many times, however, cellulitis occurs where there has been no break in the skin at all. The patient presents with pain, redness, warmth and systemic symptoms such as fever. The affected area appears red and is warm to the touch. Lymphatic drainage is damaged by cellulitis, which renders the area predisposed to subsequent infections.

Cellulitis is typically treated with a course of oral or intravenous (IV) antibiotics as well as wound management involving debridement, any re-apposition and topical dressing.

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**Bilateral Osteoarthritis**

Osteoarthritis (OA) is often called “wear and tear” of the joints. OA causes certain parts of the joints to weaken and break down. Cartilage, the tough elastic material that cushions the ends of the bones, begins to crack and get holes in it. Bits of cartilage can break off into the joint space and irritate soft tissues, such as muscles, and cause problems with movement. Much of the pain of OA is a result of muscles and the other tissues that help joints move (such as tendons and ligaments) being forced to work in ways for which they were not designed, as a result of damage to the cartilage. Cartilage itself does not have nerve cells, and therefore cannot sense pain, but the muscles, tendons, ligaments and bones do. After many years of cartilage erosion, bones may actually rub together. This grinding of bone against bone adds further to the pain. Bones can also thicken and form growths, called spurs or osteophytes, which rub together. Also, when cartilage is weak or damaged, the surrounding bones place extra force on it, and this may cause excessive blood flow (hyperemia) that can cause pain, especially at night.

Damage due to OA progresses slowly over time and may result in several problems. OA commonly affects weight-bearing joints such as hips, knees, feet and spine. However, non-weight bearing joints such as finger joints and the joint at the base of the thumb may be affected as well. It usually does not affect other joints, except when they have been injured or been put under unusual stress.

No one knows for sure what causes OA, although scientists are well on their way to understanding the events that lead to the breakdown of cartilage. Researchers now think that there are several factors that may increase the risk for getting OA. Key risk factors include heredity, excess weight, injury and/or joint damage from another type of arthritis.
Pelvic Relaxation

The effect of labour and delivery on the female pelvis is a common cause of a cystocele or an urethrocele. Symptoms commonly associated with a cystocele include urinary stress incontinence, frequency, or a sensation of vaginal fullness or pressure. Symptoms are aggravated by increased intra-abdominal pressure caused by activity such as prolonged standing, coughing or sneezing. It is important to note that even though stress incontinence is the most common symptom associated with a cystocele, it is not caused by the cystocele and surgical correction of the cystocele alone will not necessarily correct the incontinence. Stress incontinence is due to the relaxation of the surrounding pelvic support structures and the loss of the normal urethrovaginal angle.

Cystoceles

A cystocele is a herniation of the bladder. When a cystocele exists alone, without any other form of genital prolapse, it is rarely repaired surgically unless it is so large that it is the cause of urinary retention or bladder infections. The most common method of cystocele repair is the anterior colporrhaphy which, in CCI, is classified to the rubric 1.RS.80. Repair, vagina NEC.

This repair may require that sutures, grafts or synthetic materials be used to strengthen the vaginal walls and correct protrusion of the bladder. Colporrhaphy may be performed concomitantly with other interventions like vaginal hysterectomy (1.RM.89.CA) when other conditions exist.

Female Stress Incontinence

When stress incontinence is the main indication for the surgical intervention, repair is usually directed toward the urethrovaginal angle where urethropexy is attained. This is classified to 1.PL.74. Fixation of the bladder neck. A variety of techniques are available to elevate the urethra and surrounding fascia and muscular support to a level that restores normal urethral function. Any concomitant repair of any co-existent cystocele should also be coded.

Rectoceles

Rectocele is a rectovaginal hernia caused by damage done to the fibrous connective tissue between the rectum and vagina during childbirth. It may not become problematic until after menopause. Repair of a rectocele is classified to 1.RS.80. Repair, vagina NEC (with location attribute “PS”).

Enteroceles

An entercele is a small bowel herniation into the rectovaginal septum. It is commonly found in women who have had a previous hysterectomy. The peritoneum may be in direct contact with vaginal epithelium due to weakened or absent support structures. Repair of the defect involves reduction of the small bowel and suturing the apex of pubocervical and rectovaginal fascia back together. If this is the only intervention performed, then a code from the rubric 1.RS.80 will adequately capture this. However, this repair of the apical defect is sometimes followed by a vaginal vault suspension. An additional code will then be required to capture the colpopexy or vaginal vault suspension (1.RS.74. Fixation, Vagina) that restores the normal shape and support of the vaginal vault.
Uterine Prolapse

Uterine prolapse is a condition in which the uterus drops below its normal position as a result of damage to or weakness of the uterosacral ligaments. Childbirth, hard physical labour, aging and lack of estrogen support may cause this damage or weakness. Uterine prolapse is often described in degrees where:

- **1st** degree prolapse—cervix remains within the vagina
- **2nd** degree prolapse—cervix protrudes beyond introitus
- **3rd** degree prolapse (complete procidentia)—prolapse with entire uterus outside vulva

The surgical treatment of choice depends on whether or not a functional uterus is still desired. In older women, a hysterectomy may be performed (1.RM.89^^). In many cases, cystocele, rectocele and enterocele are also present along with the genital prolapse and a vaginal repair (1.RS.80.^^) may then be performed concomitantly with the hysterectomy. Younger women who desire future pregnancies may have a uterine suspension performed. This is classified to 1.RM.74.^^ *Fixation, uterus and surrounding structures.*

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Gestational Age

The duration of gestation is measured from the first day of the last normal menstrual period. Gestational age is expressed in completed days or completed weeks (e.g. events occurring 280 to 286 completed days after the onset of the last normal menstrual period are considered to have occurred at 40 weeks of gestation).

Gestational age is frequently a source of confusion, when calculations are based on menstrual dates. For the purposes of calculation of gestational age from the date of the first day of the last normal menstrual period and the date of delivery, it should be borne in mind that the first day is day zero and not day one; days 0–6 therefore correspond to “completed week zero”; days 7–13 to “completed week one”; and the 40th week of actual gestation is synonymous with “completed week 39”. Where the date of the last normal menstrual period is not available, gestational age should be based on the best clinical estimate. In order to avoid misunderstanding, tabulations should indicate both weeks and days.

**Preterm**

Less than 37 completed weeks (less than 259 days) of gestation.

**Term**

From 37 completed weeks to less than 41 completed weeks.
Postterm
A pregnancy has traditionally been considered post-term at 42 completed weeks of gestation or 294 days from the last menstrual period (LMP) (280 days from the date of conception) as it was at this gestational age that risk of adverse fetal and neonatal outcome, and in particular the risk of perinatal death, increased.

It is now believed that the risk of adverse perinatal outcome may increase as early as 41 weeks. Category O48 Prolonged pregnancy, may be selected for a pregnancy which has advanced beyond 41 completed weeks if designated as post dates by physician.

Trimesters
For the purposes of this classification, trimesters shall be defined as follows:
- First trimester is less than and including the 13th week of gestation (≤13 weeks);
- Second trimester is the fourteenth week up to and including the twenty-sixth week (14–26 weeks);
- Third trimester is more than 26 weeks gestation (>26 weeks)

Fetal Asphyxia and Birth Asphyxia
Asphyxia is a condition of impaired gas exchange, which when persistent, leads to progressive hypoxemia. During normal labour, uterine contractions cause temporary reduction in gas exchange. After the contraction, fetal compensation occurs with self-resuscitation, followed by normal perfusion until the next contraction occurs. If these natural physiologic compensatory mechanisms are overwhelmed, hypoxic acidemia ensues. Hypoxic acidemia of a sufficient degree and duration can cause brain damage with resultant neurological sequelae in surviving children, other organ system damage, or intrapartum or neonatal death.

The diagnosis of hypoxic acidemia requires an umbilical cord blood gas analysis with evidence of metabolic acidosis (pH < 7.0 and base deficit > 16 mol/L). The presence of hypoxic acidemia confirms that an episode of fetal asphyxia has occurred. In attempting to predict the likely effect of fetal asphyxia on the newborn, both the severity and duration of the asphyxial insult must be considered. Sampling of fetal scalp blood during labour or of cord blood at birth provides a measure of the severity of metabolic acidosis but not of the duration. A certain proportion of hypoxic acidemia occurs just prior to delivery and is brief in duration. This is very unlikely to cause morbidity or mortality. However, metabolic acidosis may be accompanied by specific neonatal findings, which indicate an asphyxic episode of sufficient intensity that it is likely to cause harm. These indications include multi-organ system dysfunction, neonatal neurologic sequelae such as hypotonia, seizures and coma, and Apgar scores of 0 to 3 for 5 minutes or longer.
Clinical studies indicate that at least half of newborns suffering an asphyxial episode have no short-term or long-term morbidity or mortality. The aim of intrapartum fetal surveillance is to improve fetal outcomes by identifying fetuses with hypoxic acidemia at the point when the process is still completely reversible by intrauterine resuscitation or expedited delivery.

The Society of Obstetricians and Gynecologists of Canada (SOGC) clinical practice guidelines recommend that cord blood gases should be routinely obtained for all deliveries; doing so may help in providing appropriate care for the newborn at birth and in planning subsequent management.⁶

Some of the causes of decreased oxygen before birth or during the birth process (fetal asphyxia) may include:⁷
- Inadequate oxygen levels in the mother’s blood
- Low blood pressure in the mother
- Inadequate relaxation of the uterus during labor preventing the circulation of oxygen to the placenta
- Placental abruption
- Compression of the umbilical cord
- Poor placental function due to post-term pregnancy or maternal conditions such as hypertension (eclampsia or pre-eclampsia), or infection
- Premature or prolonged labor
- Malpresentation
- General anesthesia during cesarean section

Some of the causes that may lower oxygen in the baby after birth (birth asphyxia) include:
- Severe anemia limiting the oxygen carrying ability of the blood
- Low blood pressure or shock
- Respiratory disorders that limit oxygen intake
- Heart or lung disease
- Infection
- Prematurity

⁷ http://www.ucsfhealth.org/childrens/medical_services/critical/asphyxia/
Respiratory Distress of Newborn

“Respiratory distress syndrome (RDS), also called, hyaline membrane disease is a syndrome caused by deficient surfactant manifested clinically by respiratory distress in the preterm infant. RDS almost always occurs in newborns born before 37 wk gestation; the more premature, the greater the chance of developing RDS. Pulmonary surfactant, a mixture of phospholipids and three surfactant lipoproteins, is secreted by type II pneumocytes. The air-fluid interface of the film of water lining the alveoli exerts large forces that cause the alveoli to close if surfactant is deficient. Lung compliance is decreased, and the work of inflating the stiff lungs is increased. If untreated, severe hypoxemia can result in multiple organ failure and death. However, if the newborn’s ventilation is adequately supported, surfactant production will begin and RDS will resolve by 4 or 5 days. Recovery is hastened by treatment with pulmonary surfactant.”

“Transient tachypnea of the newborn (TTN), also called neonatal wet lung syndrome, is respiratory distress with rapid respirations and hypoxemia caused by delayed reabsorption of fetal lung fluid, requiring $O_2$ supplementation. Affected newborns are often born at or close to term. They are likely to have been delivered by cesarean section and may have had perinatal distress. Recovery usually occurs within 2 to 3 days.”

Neonatal Jaundice

Neonatal hyperbilirubinemia, as per The Merck Manual, is diagnosed when laboratory tests show a serum bilirubin concentration > 10 mg/dL (171 µmol/L) in preterm newborns or > 15 mg/dL (257 µmol/L) in full-term newborns. Physiologic jaundice usually is not clinically significant and resolves within 1 week. Phototherapy has proved to be safe and effective in treating hyperbilirubinemia with the aim of preventing potentially toxic bilirubin levels and decreasing the need for exchange transfusion. A maximal effect is obtained by exposing the newborn to visible light in the blue range. However, blue lights prevent detection of cyanosis, so phototherapy using broad-spectrum white light is often preferred.

The Canadian Pediatric Society has published the following table as a guide that physicians may use for initiating phototherapy in the management of hyperbilirubinemia in term newborn infants.

Guidelines for initiation of phototherapy for hyperbilirubinemia in term infants with and without risk factors. Some risk factors include gestational age younger than 37 weeks, birth weight less than 2500 grams, hemolysis, jaundice at younger than 24 hours of age, sepsis and the need for resuscitation at birth.10

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Crush Injuries

Crush injuries are characterized by massive swelling and skin and soft tissue ecchymosis; concomitant degloving injuries are common. Absent pulses are also common. Fractures may or may not be present. Urinalysis may demonstrate hemoglobinuria or myoglobinuria. Treatment usually involves soft tissue decompression, debridement and treatment for shock, as necessary, as well as any fixation of fracture or repair to other organ(s).

Systemic Inflammatory Response Syndrome (SIRS)

Systemic Inflammatory Response Syndrome (SIRS) is a clinical response to an insult, infection or trauma, that includes systemic inflammation, elevated or reduced temperature, rapid heart rate and respiration and elevated white blood count. The medical community recognizes SIRS as a major complication of infection or trauma. SIRS is a condition frequently associated with stays in the Intensive Care Unit (ICU). For patients admitted to the intensive care unit with septicemia, the symptoms of SIRS are generally present. The non-infectious etiologies of SIRS include trauma, burns, bleeding, adrenal insufficiency, anaphylaxis, cardiac tamponade, dissecting or ruptured aortic aneurysm, drug overdose, myocaridal infarction, post cardiopulmonary bypass syndrome and pulmonary embolism.

An insult to the body produces signs and symptoms (e.g. fever and leukocytosis) of a systemic inflammatory response syndrome (SIRS), when infection is the underlying cause of SIRS, the condition is called sepsis. When sepsis is accompanied by dysfunction in one or more vital organs, the condition is called severe sepsis. When severe sepsis is accompanied by hypotension that is refractory to volume infusion, the condition is called septic shock.

The appearance of functional abnormalities in more than one vital organ system in patients with SIRS is called multiple organ dysfunction syndrome (MODS) and is classified as severe sepsis. Several organ systems can be involved along with its associated clinical syndrome. The organs most involved are the lungs, kidneys, cardiovascular system and the central nervous system. Multi-organ dysfunction can progress to multi-organ failure. The most common organ failure (lungs) in this setting is the acute respiratory distress syndrome.

Appendix B—Flagged Interventions

Heart Stimulation/Cardioversion
1.HZ.09.^^ Stimulation, heart NEC

Dialysis
1.PZ.21.^^ Dialysis, urinary system NEC

Radiotherapy
1.^^.27.^^. Radiation, any site

Heart Resuscitation
1.HZ.30.^^ Resuscitation, heart NEC

Mechanical Ventilation (all Extent attributes apply)
1.GZ.31.CA-ND Ventilation, respiratory system NEC, invasive per orifice approach by endotracheal intubation, positive pressure (e.g. CPAP, BIPAP)
1.GZ.31.CR-ND Ventilation, respiratory system NEC, invasive per orifice with incision approach for intubation through tracheostomy, positive pressure (e.g. CPAP, BIPAP)
1.GZ.31.GP-ND Ventilation, respiratory system NEC, invasive percutaneous transluminal approach (e.g. transtracheal jet) through needle, positive pressure (e.g. CPAP, BIPAP)

Parenteral Nutrition
1.LZ.35.HA-C6 Parenteral nutrition, percutaneous injection approach
1.LZ.35.HH-C6 Parenteral nutrition, percutaneous infusion approach
1.LZ.35.HR-C6 Parenteral nutrition, percutaneous transcatheter interosseous approach

Chemotherapy
1.ZZ.35.HA.M^ Pharmacotherapy, total body, percutaneous approach, antineoplastic and immunomodulating agents

Installation of external appliance, circulatory system
1.LZ.37.^-.GB Cardiopulmonary bypass (intraoperative)¹
1.LZ.37.LA-FP Extracorporeal blood salvage device (cell saver) (intraoperative)
1.LZ.37.GP-QM Extracorporeal membrane oxygenator [ECMO]¹

¹. This code is not a flagged intervention, but is a required code.
### Pleurocentesis

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<th>Description</th>
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<td>Drainage pleura, using percutaneous (needle) approach</td>
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<td>1.GV.52.HA-HE</td>
<td>Drainage pleura, using percutaneous catheter (intracostal) with underwater seal drainage system</td>
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<tr>
<td>1.GV.52.HA-TK</td>
<td>Drainage pleura, using percutaneous catheter with suction pump, (under water seal or negative pressure)</td>
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### Paracentesis

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<td>1.OT.52.HA-TS</td>
<td>Drainage, abdominal cavity, using percutaneous (needle) approach and leaving drainage tube in situ</td>
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<td>1.OT.52.HH-D1</td>
<td>Drainage, abdominal cavity, using percutaneous transcatheter approach and anti infective irrigating solution</td>
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<td>1.OT.52.HH-D2</td>
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<td>1.OT.52.HH-D3</td>
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### Feeding Tube

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<td>1.NF.53.^</td>
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<td>1.NK.53.^</td>
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### Vascular Access Device

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### Tracheostomy

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# Appendix C—Coding Standards History of Amendments

## Coding Standards for National Ambulatory Care Reporting System (NACRS)

### Title in 2005—Coding Standards for Ambulatory Care

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<th>Coding Standards</th>
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### General Coding Standards

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<td>Using Diagnostic Test Results in Coding</td>
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<td>Dagger/Asterisk Convention</td>
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<td>Acute and Chronic Conditions</td>
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<td>Impending or Threatened Conditions</td>
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<td>Use Additional Code/Code Separately Instructions</td>
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## Appendix C—Coding Standards History of Amendments

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<td>Admissions From Emergency Room</td>
<td>In effect 2003, amended 2006</td>
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<tr>
<td>Selection of Interventions to Code From Section 1</td>
<td>In effect 2001, amended 2003, moved 2006</td>
<td>Moved to General Coding Standards for CCI—2006.</td>
</tr>
<tr>
<td>Selection of Interventions to Code From Sections 2 and 3</td>
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<td>Moved to General Coding Standards for CCI—2006.</td>
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<tr>
<td>Selection of Interventions to Code From Section 5</td>
<td>In effect 2002, moved 2006</td>
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<td>Composite Codes in CCI</td>
<td>In effect 2001, moved 2006</td>
<td>Moved to General Coding Standards for CCI—2006.</td>
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<td>Multiple Codes in CCI</td>
<td>In effect 2001, moved 2006</td>
<td>Moved to General Coding Standards for CCI—2006.</td>
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<tr>
<td>Combined Diagnostic and Therapeutic Interventions</td>
<td>In effect 2001, moved 2006</td>
<td>Moved to General Coding Standards for CCI—2006.</td>
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<tr>
<td>Revised Interventions</td>
<td>In effect 2003, moved 2006</td>
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<td><strong>General Coding Standards for CCI</strong></td>
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<tr>
<td>Selection of Interventions to Code From Section 1</td>
<td>In effect 2001, amended 2003, 2006</td>
<td>Moved from General Coding Standards—2006.</td>
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<td>Selection of Interventions to Code From Sections 2 and 3</td>
<td>In effect 2001, amended 2006</td>
<td>Moved from General Coding Standards—2006.</td>
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<tr>
<td>Selection of Interventions to Code From Section 5</td>
<td>In effect 2002</td>
<td>Moved from General Coding Standards—2006.</td>
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<tr>
<td>Composite Codes in CCI</td>
<td>In effect 2001</td>
<td>Moved from General Coding Standards—2006.</td>
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<td>Multiple Codes in CCI</td>
<td>In effect 2001, amended 2006</td>
<td>Moved from General Coding Standards—2006.</td>
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<tr>
<td>Procurement of Harvesting of Tissue for Closure, Repair or Reconstruction</td>
<td>In effect 2002</td>
<td>Moved from Chapter XIX—2006.</td>
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<tr>
<td>Combined Diagnostic and Therapeutic Interventions</td>
<td>In effect 2001, amended 2006</td>
<td>Moved from General Coding Standards—2006.</td>
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<tr>
<td>Control of Bleeding</td>
<td>In effect 2002, amended 2006</td>
<td>Moved from Chapter XIX—2006.</td>
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<tr>
<td>Destruction or Excision of Aberrant/Ectopic Tissue</td>
<td>In effect 2006</td>
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<tr>
<td>Debulking of a Space-Occupying Lesion</td>
<td>In effect 2006</td>
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<tr>
<td>Changes of Plans During an Intervention</td>
<td>In effect 2001</td>
<td>Moved from General Coding Standards—2006.</td>
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<tr>
<td>Converted Interventions</td>
<td>In effect 2001</td>
<td>Moved from General Coding Standards—2006.</td>
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<tr>
<td>Revised Interventions</td>
<td>In effect 2003</td>
<td>Moved from General Coding Standards—2006.</td>
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<td><strong>Chapter I—Certain Infectious and Parasitic Diseases</strong></td>
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<tr>
<td>Drug Resistant Microorganisms</td>
<td>In effect 2003, amended 2006</td>
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<td>Condition</td>
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<td>Amended</td>
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<td>Cytomegalovirus</td>
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<tr>
<td>Viral Hepatitis</td>
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<tr>
<td><strong>Chapter II—Neoplasms</strong></td>
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<tr>
<td>Carcinoma In Situ</td>
<td>In effect 2001, amended 2002, deleted 2006</td>
<td>Deleted because change of direction—for Colposcopy, see General Coding Standards for CCI—coding standard on Diagnostic Imaging.</td>
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<tr>
<td>Primary Neoplasm With Metastasis</td>
<td>In effect 2001, amended 2005, 2006</td>
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</tr>
<tr>
<td>Multiple Independent Primary Neoplasms</td>
<td>In effect 2001, amended 2005, 2006</td>
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</tr>
<tr>
<td>Secondary Neoplasms</td>
<td>In effect 2001, amended 2006</td>
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</tr>
<tr>
<td>Malignant Neoplasms of the Liver and Intrahepatic Bile Ducts</td>
<td>In effect 2002, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Specificity in Coding of Neoplasms</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Neoplasms Extending Into Adjacent Tissue</td>
<td>In effect 2002</td>
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<tr>
<td>Neoplasms of Ectopic Tissue</td>
<td>In effect 2006</td>
<td></td>
</tr>
<tr>
<td>Neoplasms With Overlapping Boundaries (Contiguous Sites)</td>
<td>In effect 2001, amended 2006</td>
<td></td>
</tr>
<tr>
<td>Admissions Following Diagnosis of Cancer</td>
<td>In effect 2001, amended 2006</td>
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</tr>
<tr>
<td>Complications of Malignant Disease</td>
<td>In effect 2001, amended 2003, 2006</td>
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</tr>
<tr>
<td>Observation for Suspected Neoplasm</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because this topic is addressed in a coding query database response.</td>
</tr>
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</table>
### Appendix C—Coding Standards History of Amendments

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<tbody>
<tr>
<td>Admission for Follow-up Examination After Completed Treatment for Malignant Neoplasm</td>
<td>In effect 2001</td>
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<tr>
<td>Prophylactic Organ Removal</td>
<td>In effect 2001, amended 2006</td>
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<tr>
<td>Recurrent Malignancies</td>
<td>In effect 2002</td>
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</tr>
<tr>
<td>Admissions for Chemotherapy, Brachytherapy and/or Radiation Therapy—Treatment for Malignancy</td>
<td>In effect 2001, amended 2006</td>
<td>Title in 2005—Admissions for Chemotherapy and/or Radiation Therapy—Treatment for Malignancy. Title in 2001—Admissions Specifically for Chemotherapy and/or Radiation Therapy.</td>
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<tr>
<td>Therapeutic and Diagnostic Interventions Relevant to Neoplasm Coding</td>
<td>In effect 2001, amended 2006</td>
<td>Title in 2001—Surgical and Diagnostic Interventions Relevant to Neoplasm Coding.</td>
</tr>
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</table>

### Chapter III—Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism

| Hemoglobin H Constant Spring Disease | In effect 2003, deleted 2006 | Deleted because this topic is addressed in a coding query database response. |

### Chapter IV—Endocrine, Nutritional and Metabolic Diseases

| General Classification Principles for Coding of Diabetes Mellitus | In effect 2001, amended 2005, deleted 2006 | Deleted to coincide with changes to ICD-10-CA codes. |
| Diagnosis Typing of Diabetes Mellitus | In effect 2001, amended 2005, deleted 2006 | Deleted to coincide with changes to ICD-10-CA codes. |
| Selecting the Appropriate 6th Digit From the Diabetes Tables | In effect 2001, deleted 2005 | |
| Borderline Diabetes | In effect 2003, amended 2005, deleted 2006 | Deleted to coincide with changes to ICD-10-CA codes. |
| Acute Complications of Diabetes | In effect 2001, deleted 2006 | Deleted to coincide with changes to ICD-10-CA codes. |
### Appendix C—Coding Standards History of Amendments

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<thead>
<tr>
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<th>Effective Dates</th>
<th>Deleted Reason</th>
</tr>
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<tbody>
<tr>
<td>Diabetes With Circulatory Complications</td>
<td>In effect 2001, amended 2005, deleted 2006</td>
<td>Deleted to coincide with changes to ICD-10-CA codes.</td>
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<tr>
<td>Diabetic Foot and Multiple Complications of Diabetes Mellitus</td>
<td>In effect 2001, amended 2003, 2005, deleted 2006</td>
<td>Deleted to coincide with changes to ICD-10-CA codes. Title in 2004—Diabetic Foot.</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>In effect 2006</td>
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<tr>
<td>Diabetes Mellitus and Hyperglycemia</td>
<td>In effect 2006</td>
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<tr>
<td>Hypoglycemia in Diabetes Mellitus</td>
<td>In effect 2006</td>
<td></td>
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<tr>
<td>Coma in Diabetes Mellitus</td>
<td>In effect 2006</td>
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<tr>
<td>Diabetes Mellitus as a Post Admit Comorbidity</td>
<td>In effect 2006</td>
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<tr>
<td>Diabetes Mellitus and the Pregnant State</td>
<td>In effect 2006</td>
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<tr>
<td>Medium Chain Acyl-CoA Dehydrogenase Deficiency</td>
<td>In effect 2003, deleted 2006</td>
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<table>
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<tr>
<td>Postpartum Depression</td>
<td>In effect 2001, deleted 2006</td>
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<table>
<thead>
<tr>
<th>Condition</th>
<th>Effective Dates</th>
<th>Deleted Reason</th>
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<tbody>
<tr>
<td>Intracranial Resection of Lesions or Neoplasms</td>
<td>In effect 2001, amended 2006</td>
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</tr>
<tr>
<td>Seizures</td>
<td>In effect 2001, amended 2003, 2006</td>
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</tr>
<tr>
<td>Neurological Deficits Following a Stroke</td>
<td>In effect 2002, amended 2006</td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td>In effect 2001, deleted 2002</td>
<td>Moved to Chapter IX. See coding standard on Strokes, Cerebrovascular Accidents and Transient Ischemic Attacks.</td>
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</table>
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<table>
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<tr>
<th>Condition</th>
<th>Status</th>
<th>Reason for Amendment</th>
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<td>Cataracts</td>
<td>In effect 2001, deleted 2006</td>
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<table>
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<th>Condition</th>
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<td>Mastoidectomy</td>
<td>In effect 2001, amended 2005, deleted 2006</td>
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<table>
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<tr>
<th>Condition</th>
<th>Status</th>
<th>Reason for Amendment</th>
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<tr>
<td>Rheumatic Heart Disease</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Angina Versus Coronary Atherosclerosis</td>
<td>In effect 2001, deleted 2002</td>
<td>See Chapter IX, coding standard on Angina.</td>
</tr>
<tr>
<td>Angina Pectoris</td>
<td>In effect 2001, deleted 2002</td>
<td>See Chapter IX, coding standard on Angina.</td>
</tr>
<tr>
<td>Complications of Coronary Artery Bypass Grafts (CABG)</td>
<td>In effect 2002, amended 2006</td>
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</tr>
<tr>
<td>Cardiac Arrest</td>
<td>In effect 2002, amended 2005, 2006</td>
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<tr>
<td>Cardiac Catheterizations</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because change of direction—see General Coding Standards for CCI—coding standard on Diagnostic Imaging.</td>
</tr>
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### Appendix C—Coding Standards History of Amendments

<table>
<thead>
<tr>
<th>Condition</th>
<th>Effective Dates</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Pacemakers</td>
<td>In effect 2001, deleted 2006</td>
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<tr>
<td>Cerebral Hemorrhage</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Occlusion and Stenosis of Cerebral/Pre-Cerebral Vessels</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Aneurysms</td>
<td>In effect 2001, amended 2006</td>
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<tr>
<td>Post-Operative Heart Failure</td>
<td>In effect 2002, amended 2006</td>
<td>Title in 2005—Heart Failure/Cardiac Insufficiency.</td>
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<td>Thrombolytic Therapy</td>
<td>In effect 2006</td>
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### Chapter X—Diseases of the Respiratory System

<table>
<thead>
<tr>
<th>Condition</th>
<th>Effective Dates</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Lobar Pneumonia</td>
<td>In effect 2006</td>
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<tr>
<td>Pneumonia in Patients with Chronic Obstructive Pulmonary Disease (COPD)</td>
<td>In effect 2002, amended 2005, 2006</td>
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</tr>
<tr>
<td>Respiratory Failure</td>
<td>In effect 2002, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Pleural Effusion in Conditions Classified Elsewhere</td>
<td>In effect 2002, amended 2003, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
</tr>
<tr>
<td>Resection of Space-Occupying Lesion (Polyps) of Nose</td>
<td>In effect 2002</td>
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<tr>
<td>Nasal Repairs</td>
<td>In effect 2002</td>
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<tr>
<td>Mechanical Ventilation</td>
<td>In effect 2006</td>
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#### Chapter XI—Diseases of the Digestive System

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<tbody>
<tr>
<td>Bleeding Esophageal Varices</td>
<td>In effect 2003, amended 2005, 2006</td>
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<tr>
<td>Gastrointestinal Bleeding</td>
<td>In effect 2001, amended 2003, 2006</td>
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<tr>
<td>Hepatitis and Alcoholic Cirrhosis of the Liver</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up. Also, this topic is addressed in a coding query database response.</td>
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<tr>
<td>Inflammatory Bowel Disease</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because it only addressed diagnosis typing.</td>
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<tr>
<td>Gastrointestinal Anastomosis</td>
<td>In effect 2001, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up. Also, there has been an ICD-10-CA change to K91.4 for Version 2006. The CCI code also notes, direct the user appropriately.</td>
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<tr>
<td>Diagnostic Esophagogastroduodenoscopy (EGD)</td>
<td>In effect 2003</td>
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<tr>
<td>Diagnostic Colonoscopic Interventions</td>
<td>In effect 2003, amended 2006</td>
<td>Title in 2005—Colonoscopic Interventions.</td>
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#### Chapter XII—Diseases of the Skin and Subcutaneous Tissue

| Cellulitis                               | In effect 2001, amended 2003, 2006 |                         |

#### Chapter XIII—Diseases of the Musculoskeletal System and Connective Tissue

| Meniscus/Ligament Tear                   | In effect 2001, deleted 2002        | See Chapter XIX, coding standard on Current Versus Old Injuries. |
| Arthrectomy and Arthroplasty             | In effect 2001                      |                         |
| Excision (of Lesion) of Bone, Soft Tissue and Skin | In effect 2001 |                         |
### Appendix C—Coding Standards History of Amendments

<table>
<thead>
<tr>
<th>Condition</th>
<th>Status</th>
<th>Notes</th>
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<tr>
<td>Stress Fractures</td>
<td>In effect 2001, amended 2002, deleted 2006</td>
<td>Deleted because flow chart for Fractures was combined with coding standards on Pathological Fractures and Stress Fractures, to complete one specific coding standard for Fractures. Title in 2001—Pathological and Stress Fractures.</td>
</tr>
<tr>
<td>Fractures</td>
<td>In effect 2001, amended 2006</td>
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<td>Bilateral Osteoarthritis</td>
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<td>Hypertensive Renal Disease</td>
<td>In effect 2001, amended 2005, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Genitourinary Conditions Requiring Surgical Intervention</td>
<td>In effect 2003, deleted 2006</td>
<td>Deleted because not required. Follow the alphabetic index or tabular look-up.</td>
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<tr>
<td>Menorrhagia as the Most Responsible Diagnosis (MRDx)</td>
<td>In effect 2006</td>
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<tr>
<td>Gestational Age</td>
<td>In effect 2001, deleted 2006</td>
<td>Moved to Appendix A—2006.</td>
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<tr>
<td>Trimesters</td>
<td>In effect 2001, deleted 2006</td>
<td>Moved to Appendix A—2006.</td>
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<tr>
<td>Intrauterine Death</td>
<td>In effect 2001, amended 2006</td>
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</tr>
<tr>
<td>Abortion With Remaining Fetus</td>
<td>In effect 2001, amended 2006</td>
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</tr>
<tr>
<td>Complications Following Abortion, Ectopic or Molar Pregnancy</td>
<td>In effect 2001, amended 2003</td>
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<thead>
<tr>
<th>Condition</th>
<th>Effective Dates</th>
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<tbody>
<tr>
<td>Streptococcal Group B Infection/Carrier in Pregnancy</td>
<td>In effect 2003</td>
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<tr>
<td>Delivery in a Completely Normal Case</td>
<td>In effect 2001, amended 2006</td>
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<tr>
<td>Selection of the Sixth Digit in Obstetrical Coding</td>
<td>In effect 2001, amended 2006</td>
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<tr>
<td>Delivery With History of Previous Cesarean Section</td>
<td>In effect 2003, amended 2005, 2006</td>
</tr>
<tr>
<td>Sequencing Obstetrical Diagnoses Codes</td>
<td>In effect 2001, amended 2006</td>
</tr>
<tr>
<td>Diabetes Mellitus in Pregnancy</td>
<td>In effect 2001, amended 2006</td>
</tr>
<tr>
<td>Maternal Care Related to the Fetus, Amniotic Cavity and Possible Delivery Problems</td>
<td>In effect 2001</td>
</tr>
<tr>
<td>Pre-Term Delivery</td>
<td>In effect 2001, amended 2006</td>
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<tr>
<td>Long Labor</td>
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<tr>
<td>Obstructed Labor</td>
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<tr>
<td>Labor and Delivery Complicated by Fetal Stress</td>
<td>In effect 2001, amended 2006</td>
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<tr>
<td>Postpartum Hemorrhage</td>
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<tr>
<td>Complications of Anesthesia During Labor and Delivery</td>
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<tr>
<td>Complications Related to the Puerperium</td>
<td>In effect 2001, deleted 2006</td>
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<tr>
<td>Obstetrical Interventions</td>
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<tr>
<td>Dilation and Curettage</td>
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<tr>
<td>Latent and Active Labor</td>
<td>In effect 2001, deleted 2006</td>
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<tr>
<td>Interventions Associated With Delivery</td>
<td>In effect 2001, amended 2002, 2006</td>
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<th>Effective Dates</th>
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<tr>
<td>Low Birth Weight</td>
<td>In effect 2001, amended 2005, 2006</td>
</tr>
<tr>
<td>Fetal Asphyxia and Birth Asphyxia</td>
<td>In effect 2001, amended 2006</td>
</tr>
<tr>
<td>Category</td>
<td>In Effect</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Respiratory Distress of Newborn</td>
<td>In effect 2001, amended 2006</td>
</tr>
<tr>
<td>Neonatal Jaundice</td>
<td>In effect 2002, amended 2006</td>
</tr>
<tr>
<td>Confirmed Sepsis and Risk of Septicemia in the Neonate</td>
<td>In effect 2006</td>
</tr>
<tr>
<td><strong>Chapter XVII—Congenital Malformations, Deformations and Chromosomal Abnormalities</strong></td>
<td></td>
</tr>
<tr>
<td>Congenital Anomalies</td>
<td>In effect 2001, deleted 2006</td>
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<td><strong>Chapter XVIII—Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified</strong></td>
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<td>Incidental Findings</td>
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<td>Adverse Reactions Versus Poisonings</td>
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<td>Control of Bleeding</td>
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<td>Post-Procedural Signs and Symptoms</td>
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<td>Rejection/Failure of Transplanted Organs, Grafts and Flaps</td>
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### Appendix C—Coding Standards History of Amendments

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<td>Observation Versus a Follow-up Examination</td>
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<td>Admission for Administration of Pharmacotherapy</td>
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<td>Systemic Inflammatory Response Syndrome (SIRS)</td>
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## Appendix D—Mandatory Attributes in CCI
(in effect 2006)

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Appendix E—Classification Edits

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Diagnosis Edits

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<td>Type 9 Diagnosis Missing</td>
<td>10 00 56</td>
<td>J95.1 or J95.2 is coded. A corresponding type 9 diagnosis (external cause of morbidity and mortality, Chapter XX) was not recorded. The first blank diagnosis occurrence is set to <em>zzzzzz</em> and the diagnosis type to 9. If there are no available blank diagnosis occurrences, only the error message is issued. The system defaults the field to z. The data originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Incorrect coding of N18, N19 and N26</td>
<td>10 00 57</td>
<td>If the diagnosis code I10 at the 3 digit level is coded as any diagnosis type, diagnosis codes N18, N19 and N26 at the 3 digit level as any diagnosis type cannot be coded on the same abstract. The system defaults the field to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Incorrect coding of N18, N19 and N26</td>
<td>10 00 58</td>
<td>If the diagnosis code I11 at the 3 digit level is coded as any diagnosis type, diagnosis codes N18, N19 and N26 at the 3 digit level as any diagnosis type cannot be coded on the same abstract. The system defaults the field to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Incorrect coding of K92.0–K92.2</td>
<td>10 00 60</td>
<td>If a diagnosis code of A09, I98.20, K22.6, K25.0, K25.2, K25.4, K25.6, K26.0, K26.2, K26.4, K26.6, K27.0, K27.2, K27.4, K27.6, K28.0, K28.2, K28.4, K28.6 or K29.0, K31.80, K55.20, K63.80 is coded as any diagnosis type, a diagnosis code of K92.0 or K92.1 or K92.2 cannot be coded as diagnosis type M, 1, 2, 3, W, X or Y on the same abstract. This is possible double coding. This is a warning message only. No change is made to the original data recorded on the abstract.</td>
</tr>
<tr>
<td>Incorrect coding of A41/J13–J15, J18</td>
<td>10 00 61</td>
<td>Dagger/asterisk convention. Index entry pneumonia/in/septicemia supports coding A41 with J17*. This is a warning message only. No change is made to the original data recorded on the abstract.</td>
</tr>
<tr>
<td>Incorrect coding of E86.0 dehydration</td>
<td>10 00 62</td>
<td>E86.0 as MRDX is coded along with a K52 or A09 at the 3 digit level or A02.0, A05.9, A07.2, A08.0–A08.5, J10.8 or J11.8 with any diagnosis type. This is possible non-compliance with the coding standard (Gastroenteritis and Diarrhea). This is a warning message only. No change is made to the original data recorded on the abstract.</td>
</tr>
<tr>
<td>Invalid combination of obstetrical 6th digits</td>
<td>10 00 63</td>
<td>If multiple obstetrical diagnosis codes have a first digit “O” coded, the 6th digits of all the obstetrical codes must be the same, with the exception of 6th digits of 1 and 2 which may appear on the same abstract. This is a warning message only. No change is made to the original data recorded on the abstract.</td>
</tr>
<tr>
<td>T20–T29 Coded Diagnosis missing</td>
<td>10 00 64</td>
<td>Diagnosis codes T20–T29 coded at the 3 digit level as any diagnosis type were recorded but, diagnosis codes T31 or T32 were not. The system defaults the field to zzzzz in the first available occurrence.</td>
</tr>
<tr>
<td>Incorrect coding</td>
<td>10 00 65</td>
<td>A diagnosis code of E10 to E14 is coded at the 3 digit level as any diagnosis type. Diagnosis code R40.29 as diagnosis type 1, 2, 3, W, X or Y cannot be coded on the same abstract. This is a warning message only. No change is made to the original data recorded on the abstract.</td>
</tr>
<tr>
<td>Invalid combination diagnosis codes</td>
<td>10 00 66</td>
<td>O75.701, O66.401 and O34.201 are mutually exclusive codes. Only one of the three can be recorded on an abstract. This is a warning message only. No change is made to the original data recorded on the abstract.</td>
</tr>
<tr>
<td>Incorrect coding of J44.0–J44.9</td>
<td>10 00 67</td>
<td>Diagnosis codes J44.0, J44.1, J44.8 and/or J44.9 coded as diagnosis type M, 1, 2, 3, W, X or Y cannot be coded on the same abstract. The system defaults all J44 diagnosis codes to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Incorrect coding of S02.6</td>
<td>10 00 68</td>
<td>Multiple diagnosis codes of S02.6 were recorded. The 7th digit for all S02.6 codes must be the same. The system defaults all S02.6 codes to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Multiple T31 Diagnoses</td>
<td>10 00 69</td>
<td>Multiple T31 codes at the 3 digit level cannot be coded on the same abstract. This is non-compliant with the coding standard (Extent of Body Surface Area Involved in Burn Injury). The system defaults all T31 diagnosis codes to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Multiple T32 Diagnoses</td>
<td>10 00 70</td>
<td>Multiple T32 codes at the 3-digit level cannot be coded on the same abstract. This is non-compliant with the coding standard (Extent of Body Surface Area Involved in Burn Injury). The system defaults all T32 diagnosis codes to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Incorrect coding of I50 and J81</td>
<td>10 00 71</td>
<td>Diagnosis code of I50 at the 3 digit level as diagnosis type M, 1, 2, 3, W, X or Y, cannot appear on the same abstract as code J81 at the 3 digit level as diagnosis type M, 1, 2, 3, W, X or Y. The system defaults the J81 diagnosis code to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
</tbody>
</table>
### Incorrect coding of A40–A41 and U97 (SIRS)

**10 00 72**

Diagnosis codes of A40 to A41 at the 3 digit level as any diagnosis type, cannot appear on the same abstract as code U97 at the 3 digit level as diagnosis type M, 1, 2, 3, W, X or Y. The system defaults the U97 diagnosis code to z. The data as originally recorded on the abstract appears under “Old Data”.

### Incorrect coding of E15

**10 00 73**

Diagnosis codes of E10 to E14 at the 3-digit level as any diagnosis type cannot appear on the same abstract as code E15 as any diagnosis type. The system defaults the E15 diagnosis code to z. The data as originally recorded on the abstract appears under “Old Data”.

### Incorrect coding of S02

**10 02 61**

If the MRDX is S02 coded at the 3 digit level, diagnosis code S06 at the 3 digit level cannot be recorded as type 1, 2, 3, W, X or Y on the same abstract. The system defaults the most responsible diagnosis to z. The data as originally recorded on the abstract appears under “Old Data”.

### Diagnosis must be Type 3

**10 02 81**

Code is not valid as a significant diagnosis type. The system defaults the diagnosis code to z. The data originally recorded on the abstract appears under “Old Data”.

### Diagnosis must be Type 0 or 3 or 6

**10 02 82**

Asterisk codes must be entered on the abstract as either diagnosis type 0, 3 or diagnosis type 6. The system defaults the diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

### B24 coded with infect. disease MRDX

**10 02 88**

Coding inconsistent with HIV Coding Standard. Any infectious disease classifiable to A00–B19, B25–B49, B99, C46, C81–C96 or J12–J18 must be considered to be a direct consequence of reported HIV disease. The system defaults MRDX to z. The data as originally recorded on the abstract appears under “Old Data”.

### R75/Z21 coded with B24

**10 02 89**

R75 or Z21 and B24 are mutually exclusive categories and cannot be recorded on the same abstract. The system defaults R75 and Z21 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.
<table>
<thead>
<tr>
<th>Classification Edits</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R73.0 and R73.9 coded with E10–E14</td>
<td>10 02 90</td>
<td>R73.0 and R73.9 and codes with categories E10–E14 are mutually exclusive and cannot be recorded on the same abstract. The system defaults R73.0 and/or R73.9 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Diabetes no complication with other complications</td>
<td>10 02 91</td>
<td>If a diagnosis code from any subcategory—E10.9, E11.9, E13.9, or E14.9 (Diabetes Mellitus with no complication) is coded, there must be no other diagnoses code from E10, E11, E13, or E14 at the 3-digit category level coded on the same abstract. The system defaults E10.9, E11.9, E13.9 or E14.9 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>TIA invalid with stroke</td>
<td>10 02 92</td>
<td>If any one of the codes from the range 160–164 is recorded, code G45.9 (Transient cerebral ischemic attack, unspecified) must not be recorded on the same abstract. The system defaults G45.9 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Both Acute and Chronic conditions</td>
<td>10 02 93</td>
<td>Acute laryngitis (J04) and chronic laryngitis (J37.0) must not both be recorded as significant diagnosis types on the same abstract. The system defaults J37.0 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Both Acute and Chronic conditions</td>
<td>10 02 93</td>
<td>Acute tracheitis (J04.1) and chronic tracheitis (J42) must not both be recorded as significant diagnosis types on the same abstract. The system defaults J42 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
<tr>
<td>Both Acute and Chronic conditions</td>
<td>10 02 93</td>
<td>Acute cholecystitis (K81.0) and chronic cholecystitis (K81.1) must not both be recorded as significant diagnosis types on the same abstract. The system defaults K81.1 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.</td>
</tr>
</tbody>
</table>
| Both Acute and Chronic conditions | 10 02 93 | Acute laryngotracheitis (J04.2) and chronic laryngotracheitis (J37.1) must not both be recorded as significant diagnosis types on the same abstract. The system defaults J37.1 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

| Other diseases with COPD | 10 02 94 | J41, J42, J43, J45, J60–J68, J70 and J44 are mutually exclusive categories and must not be recorded on the same abstract. See directions in Tabular listing and the alphabetical index of ICD-10-CA. The system defaults J41, J42, J43, J45, J60–J68 or J70 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

| Other Respiratory Problems with Adult Respiratory Disease | 10 02 95 | Categories J80 and J96 are mutually exclusive (as per exclusion note at J96) and must not appear on the same abstract. The system defaults J96 to z and the corresponding diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

| Most Responsible Diagnosis and Intervention mismatch | 10 02 97 | If the principal intervention is 1.VG.53 (knee intervention) coded at the 5 digit level, the most responsible diagnosis code M16 Coxarthrosis [arthrosis of hip] at the 3 digit level cannot be coded. The system defaults the most responsible diagnosis to z. The data as originally recorded on the abstract appears under “Old Data”.

| Diagnosis invalid as a Type 2 | 10 04 51 | Diagnoses C00–D48 must not be recorded as a diagnosis type 2. The system defaults diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

| Diagnosis invalid as a Type 2 | 10 04 51 | Codes from the range E10–E11 or E14 (Except E10.63, E11.63 and E14.63) must never be a diagnosis type 2. The system defaults diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.


Appendix E—Classification Edits

Diagnosis invalid as a Type 2
10 04 51
Any code from range I10–I13 (hypertension) must never be recorded as a diagnosis type 2 on the abstract. The system defaults diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

Diagnosis invalid as a Type 2
10 04 51
Diagnosis B24 must not be recorded as a diagnosis type 2. The system defaults diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

Diagnosis invalid as a Type 2
10 04 51
Categories J41–J45 are chronic conditions and must never be recorded as a diagnosis type 2 on the abstract. The system defaults diagnosis type to z. The data as originally recorded on the abstract appears under “Old Data”.

Diagnosis questionable as a Type 3
10 04 52
Diagnosis codes T31 and T32 at the 3-digit level cannot be coded as diagnosis type 3. This is a warning message only. No change is made to the original data recorded on the abstract.

Intervention Edits

<table>
<thead>
<tr>
<th>Error Message</th>
<th>Error Number</th>
<th>Edits</th>
</tr>
</thead>
</table>
| Incorrect coding of 1SC74, 1SC75 and 1SC80 | 11 02 58 | Fusion (1SC75) of spinal vertebrae takes precedence over fixation (1SC74) and repair (1SC80) when performed during the same operative episode. When 1SC74 is coded, an additional code from 1SC80 is not required. The system defaults extra intervention codes to –zzzzzzz– and attributes will be set blank. The data as originally recorded on the abstract appears under “Old Data”.

Location Attribute error for 1SY80 | 11 02 59 | If the MRDx is K40, K41, K42, K43, K45 or K46, (hernia) at the 3-digit level and the principal intervention is 1.SY.80, at the 5-digit level, the intervention location attribute cannot be “0” (Null). The system defaults principal intervention and intervention location attribute to z. The data as originally recorded appear under “Old Data”.
| Delivery Intervention with a Post Partum Diagnosis | 11 02 60 | If there is an obstetrical diagnosis code with a first digit of 0 and a 6th digit of 4 or a diagnosis code of Z39 at the 3 digit level coded, there cannot be a delivery intervention of 5MD50 to 5MD60 at the 5 digit level coded.

The system defaults the intervention and attributes to z. The data as originally recorded on the abstract appears under “Old Data”.

| Invalid CCI/Status A Attribute, Principal Intervention | 11 03 51 | The principal intervention code cannot have a status attribute of A (abandoned).

The system defaults the principal intervention and status attribute to z. The data as originally recorded on the abstract appears under “Old Data”.

### Appendix F—References to Diagnosis Type (3) in Directive Statements

<table>
<thead>
<tr>
<th>Standard</th>
<th>Directive Statement</th>
<th>Mandatory/Optional</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Coding Standards</strong></td>
<td></td>
<td></td>
<td><strong>Dagger Asterisk Convention</strong> Assign diagnosis type (6) or diagnosis type (3) to asterisk codes in accordance with the diagnosis typing definitions.</td>
</tr>
<tr>
<td>Underlying Symptoms or Conditions</td>
<td>When a patient presents with a symptom or condition, and during that episode of care the underlying disease or disorder is identified, assign the underlying disease or disorder as the MRDx. Assign an additional code for the symptom or condition, optionally, as a diagnosis type (3) based on the facility’s data needs.</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
</tr>
<tr>
<td>Sequelae</td>
<td>Code the current condition under investigation or treatment as a significant diagnosis type. Assign codes from categories entitled “Sequelae of...” (B90–B94, E64.-, E68, I69, O97, T90–T98, Y85–Y89), optionally, as a diagnosis type (3) to identify that the current problem as a sequelae.</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
</tr>
</tbody>
</table>
## Chapter I—Certain Infectious and Parasitic Diseases

### Infections

When the causative organism is known, classify the case in one of the following three ways as indicated by the classification:

1. Use the dual classification (dagger/asterisk) with a code specifying the infectious organism followed by the manifestation. Both codes must be used together to identify the infectious disease.
2. Use a combination code.
3. Use two codes, the first identifying the locally manifesting disease and the second identifying the infectious organism. The infectious agent is classified to categories B95–B97. Assignment of codes from categories B95–B97 is optional; if coded, they must be assigned diagnosis type (3).

### Drug Resistant Organisms

When there is documentation of a current infection due to a drug resistant organism, select a code from categories B95–B97 Bacterial, viral and other infectious agents, with diagnosis type (3) to identify the infectious agent, and another code from categories U80–U89 Bacterial agents resistant to antibiotics, with diagnosis type (3) to identify the drug to which the organism is resistant (although optional, capture of infections due to drug-resistant organisms is strongly recommended).
<table>
<thead>
<tr>
<th>Reference</th>
<th>Diagnoses and Descriptions</th>
<th>Optional</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z22.30</td>
<td>Carrier of drug resistant microorganism, optionally, as a diagnosis type (3) to identify carriers of drug-resistant microorganisms (i.e. patients who do not have a documented current infection).</td>
<td>Optional</td>
<td>It identifies another circumstance in the patient that is useful for local data retrieval.</td>
</tr>
</tbody>
</table>
| Septicemia | When a patient has septicemia classified to any of the following:  
- O03–O07 Pregnancy with abortive outcome  
- O08.0 Following abortion and ectopic and molar pregnancy  
- O75.3– Other infection during labor  
- O85.– Puerperal sepsis  
- T80.2 Infections following infusion, transfusions and therapeutic injection  
- T81.4 Infection following a procedure, not elsewhere classified  
- T88.0 Infection following immunization  
Assign assign the appropriate code from the list above as a significant diagnosis type and assign an additional code from categories A40.– Streptococcal septicemia, or A41.– Other septicemia, optionally, as a diagnosis type (3), to indicate the organism. | Optional | This is supplemental information that is useful for local data retrieval. |
| Human Immunodeficiency Virus (HIV) Disease | Assign B24 Human immunodeficiency virus (HIV) disease as the MRDx on admissions for AIDS-related reasons.  
Assign a code for the manifestation being treated and sequence it in the second position immediately following B24.  
Assign diagnosis type (1) to the first listed manifestation. | Optional | It identifies another condition in the patient that is useful for local data retrieval. |
### Appendix F—References to Diagnosis Type (3) in Directive Statements

| Appendix F—References to Diagnosis Type (3) in Directive Statements |
|---|---|---|
| **Assign at least one manifestation of AIDS as a diagnosis type (1). Code other manifestations, optionally, as a diagnosis type 3 when they are not treated during the current episode of care.** | **Mandatory** | **It identifies another condition in the patient that is important from a national planning and research perspective.** |
| **When patients are admitted and discharged on the same day for primary prophylactic chemotherapy for HIV infection, select Z29.2 Other prophylactic chemotherapy as the MRDx with Z21 Asymptomatic human immunodeficiency virus [HIV] infection status as an additional diagnosis type (3).** | **Optional** | **This is supplemental information that is useful for local data retrieval.** |

### Chapter II—Neoplasms

<table>
<thead>
<tr>
<th>Chapter II—Neoplasms</th>
<th>When a patient is diagnosed with multiple independent primaries, code each primary neoplasm separately. In addition, assign C97 Malignant neoplasms of independent (primary) multiple sites with diagnosis type (3).</th>
<th>Optional</th>
<th>This is supplemental information that is useful for local data retrieval.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Multiple Independent Primary Neoplasms</strong></td>
<td>When a patient is diagnosed with documented separate primary invasive neoplasms in the same organ, but of non-contiguous sites, code each separate primary neoplasm. In addition, assign C97 Malignant neoplasms of independent (primary) multiple sites with diagnosis type (3).</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
</tr>
<tr>
<td>Section</td>
<td>Description</td>
<td>Type</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Secondary Neoplasms</td>
<td>When treatment is directed toward a secondary site only, assign the secondary as the MRDx. Assign an additional code, mandatory, to identify the primary site; this will either be a code from Chapter II or a code from Z85.– <em>Personal history of malignant neoplasm</em>. Assign diagnosis type according to the circumstances in the documentation.</td>
<td>Mandatory</td>
<td>It identifies another condition in the patient that is important from a national planning and research perspective.</td>
</tr>
<tr>
<td>Complications of Malignant Disease</td>
<td>When a patient is admitted for treatment of a specific complication of the malignancy, without treatment directed towards the malignancy itself, code the complication as the MRDx. Code the malignancy, optionally, as a diagnosis type (3).</td>
<td>Optional</td>
<td>It identifies another condition in the patient that is useful for local data retrieval.</td>
</tr>
<tr>
<td></td>
<td>When a patient is admitted for management of a side effect of cancer treatment, code the side effect as the MRDx. Code the malignancy as a diagnosis type (3).</td>
<td>Mandatory</td>
<td>It identifies another condition in the patient that is important from a national planning and research perspective.</td>
</tr>
<tr>
<td>Personal and Family History of Malignant Neoplasms</td>
<td>Ensure that a code from the category Z85.– <em>Personal history of malignant neoplasm</em> is never recorded as the MRDx. Assign codes from this category, optionally as a diagnosis type (3).</td>
<td>Optional</td>
<td>It identifies another condition in the patient that is useful for local data retrieval.</td>
</tr>
<tr>
<td></td>
<td>Ensure that codes in category Z80.– <em>Family history of malignant neoplasm</em> are never used as the MRDx. Assign a code from this category, optionally, as diagnosis type (3), to denote a reason for an examination or prophylactic surgery.</td>
<td>Optional</td>
<td>It identifies another condition in the patient that is useful for local data retrieval.</td>
</tr>
</tbody>
</table>
### Recurrent Malignancies

Use a code from categories C00–C75 when a primary malignancy, eradicated from the same organ or tissue, has recurred. Assign an additional code from category Z85.– *Personal history of malignant neoplasm* as a diagnosis type (3).

**Mandatory**

- It identifies another condition in the patient that is important from a national planning and research perspective.

### Admissions for Chemotherapy, Brachytherapy and/or Radiation Therapy—Treatment for Malignancy

When a patient is admitted solely for chemotherapy or radiation therapy, select a code from either:

- Chemotherapy, to Z51.1 *Chemotherapy session for neoplasm*, or
- Radiation therapy, to Z51.0 *Radiotherapy session*

Assign an additional code for the malignant neoplasm as a diagnosis type (3).

**Mandatory**

- It identifies another condition in the patient that is important from a national planning and research perspective.

### Chapter IV—Endocrine, Nutritional and Metabolic Diseases

#### Diabetes Mellitus

Code diabetes mellitus whenever the condition is documented by the physician.

Assign diagnosis type according to the diagnosis typing definitions.

**Mandatory**

- It identifies another condition in the patient that is important from a national planning and research perspective.

#### Other medical care

When an inclusion term in the Diabetes codes is not an asterisk code, assign an additional code, optionally, as a diagnosis type (3), as required to fulfill facility data needs.

**Optional**

- This is supplemental information that is useful for local data retrieval.
### Diabetes Mellitus and Hyperglycemia

When there is evidence of a blood glucose level greater than or equal to 14.0 mmol/L (the highest range), assign R73.8–2 Other evidence of elevated blood glucose level, greater than or equal to 14.0 mmol/L as a diagnosis type (3). Any acceptable glucose monitoring system may be used for testing blood glucose levels (e.g. glucose meter).

Mandatory

This is supplemental information that is important from a national planning and research perspective. It describes severity in terms of level of control.

### Chapter IX—Diseases of the Circulatory System

#### Acute Myocardial Infarction

Assign I25.2 *Old myocardial infarction* (i.e. “history of MI”) optionally, as a diagnosis type 3, only when BOTH of the following criteria apply:
- The previous myocardial infarction occurred more than 4 weeks (28 days) ago; and
- The patient is not currently receiving observation, evaluation, or treatment for the previous myocardial infarction.

Optional

It identifies another condition in the patient that is useful for local data retrieval.

#### Cardiac Arrest

Cardiac Arrest Complicating Surgery

Select T81.88– *Other complications of procedures, not elsewhere classified,* for cardiac arrest complicating surgery (cardiac or non-cardiac), occurring in the immediate post/perioperative period (either in the operating room/intervention room or during the first 96 hours following the patient’s departure from the operating room/intervention room).

Optional

This is supplemental information that is useful for local data retrieval.
### Appendix F—References to Diagnosis Type (3) in Directive Statements

#### F–8 Canadian Coding Standards for ICD-10-CA and CCI for 2006

When the code title of a post procedural condition or a complication of surgery or medical care does not fully describe the problem (e.g. cardiac arrest), assign an additional code, optionally as a diagnosis type (3), to provide more detail regarding the nature of the condition. Sequence the code between the T-code and the External Cause code (“sandwich”).

<table>
<thead>
<tr>
<th>Strokes, Cerebrovascular Accidents (CVA) and Transient Ischemic Attacks (TIA)</th>
<th>Sequelae of Cerebrovascular Disease When there are no longer any neurological deficits present, assign Z86.7 <em>Personal history of diseases of the circulatory system</em>, optionally, as a diagnosis type (3).</th>
<th>Optional</th>
<th>This is supplemental information that is useful for local data retrieval.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulitis</td>
<td>Classify an open wound with associated cellulitis to a “complicated” open wound. When the course of treatment involves intravenous antibiotics, sequence cellulitis as the most responsible diagnosis and record the soft tissue injury as an additional diagnosis. When the course of treatment involves only oral antibiotics, sequence the soft tissue injury as the most responsible diagnosis and the cellulitis as a comorbid condition. Assign an additional code, optionally, as a diagnosis type (3), from range B95–B97 when a causative agent is identified.</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
</tr>
</tbody>
</table>

#### Chapter XII—Diseases of the Skin and Subcutaneous Tissues

**Cellulitis**

Classify an open wound with associated cellulitis to a “complicated” open wound.

When the course of treatment involves intravenous antibiotics, sequence cellulitis as the most responsible diagnosis and record the soft tissue injury as an additional diagnosis.

When the course of treatment involves only oral antibiotics, sequence the soft tissue injury as the most responsible diagnosis and the cellulitis as a comorbid condition.

Assign an additional code, optionally, as a diagnosis type (3), from range B95–B97 when a causative agent is identified.
### Chapter XIII—Diseases of the Musculoskeletal System

| Fractures | When a combination category is not available or when a dagger/asterisk convention is not applicable, assign separate codes for the pathological fracture and the underlying disease that precipitated the fracture. Sequence the code for the pathological fracture first followed by the code for the underlying disease as a mandatory diagnosis type (3). | Mandatory | It identifies another condition in the patient that is important from a national planning and research perspective. |

### Chapter XIV—Diseases of the Genitourinary System

| Continuous Ambulatory Peritoneal Dialysis (CAPD) Peritonitis | When a causal relationship indicating peritonitis due to a dialysis catheter is documented by the physician, classify the peritonitis to T85.7 *Infection and inflammatory reaction due to other internal prosthetic device, implants and grafts.*  
Assign an additional code, optionally as a diagnosis type (3), from range B95–B97 when a causative agent is identified. | Optional | The code for the infectious agent provides supplemental information about the infection. |

### Chapter XV—Pregnancy, Childbirth and the Puerperium

| Pregnancy With Abortive Outcome | When an intended termination results in stillbirth (i.e. gestational age ≥ 20 weeks), the fetus may be registered as a stillbirth by the facility. In this case, select P96.4 *Termination of pregnancy, fetus and newborn* as the MRDx on the stillbirth abstract. Assign a code(s) to describe any associated congenital anomalies as a diagnosis type 3. | Mandatory | It identifies another condition in the patient that is important from a national planning and research perspective. |
Streptococcal Group B Infection/Carrier in Pregnancy

Select code O23.90– Other and unspecified genitourinary tract infection in pregnancy only when there is documented evidence of an active infection. When there is active infection, assign B95.1 Streptococcus, Group B, as the cause of diseases classified to other chapters, optionally, as a diagnosis type 3, to identify the organism.

Assign Z22.38 Carrier of other specified bacterial diseases, optionally, as a diagnosis type 3, to identify GBS carrier state.

When antibiotics are given for prophylaxis to a GBS carrier patient, assign Z29.2 Other prophylactic chemotherapy, optionally, as a diagnosis type 3.

Optional

It identifies another circumstance in the patient that is useful for local data retrieval.

Delivery in a Completely Normal Case

Assign a code from category Z37.– Outcome of delivery, mandatory, for all deliveries.
Ø Select Z37.0– Outcome of delivery, single live birth as the MRDx when a single, spontaneous vaginal delivery without any conditions complicating the pregnancy, childbirth or puerperium occurs.
Ø When any other code from Chapter XV applies to the case, assign the appropriate code from category Z37.–, mandatory, as a diagnosis type (3).

Mandatory

This is supplemental information that is important from a national planning and research perspective.
## Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Cause

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Code Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adverse Reactions</strong></td>
<td>Classify conditions resulting from noncompliance with therapy to a code describing the manifestation followed by Z91.1 <em>Personal history of noncompliance with medical treatment and regimen</em> as a diagnosis type (3).</td>
<td>Optional</td>
<td>It identifies another circumstance in the patient that is useful for local data retrieval.</td>
</tr>
<tr>
<td><strong>Crush Injuries</strong></td>
<td>Code all significant injuries associated with a crush injury as comorbid conditions. Assign an additional code, as a diagnosis type (3), to identify the crushing injury. When multiple body regions are involved in a crush injury, select the crushing injury code from the rubric T04.– <em>Crushing injuries involving multiple body regions</em>.</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
</tr>
<tr>
<td><strong>Burns and Corrosions</strong></td>
<td>When a patient is admitted for change of burn dressings, assign as the MRDx or Main Problem Z48.0 <em>Attention to surgical dressings and sutures</em>. Assign an additional code, as a diagnosis type (3), to identify the burn itself.</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
</tr>
<tr>
<td><strong>Burns of Multiple Body Regions</strong></td>
<td>When documentation of specific sites of burns is provided, assign separate codes for each burn site. Assign T29.– <em>Burns and corrosions of multiple body regions</em>, optionally, as a diagnosis type (3), to facilitate data retrieval.</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
</tr>
<tr>
<td>Appendix F—References to Diagnosis Type (3) in Directive Statements</td>
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<td></td>
<td></td>
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<tr>
<td>---------------------------------------------------------------</td>
<td></td>
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<tr>
<td><strong>Current Versus Old Injuries</strong></td>
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<tr>
<td>For encounters that are strictly for follow up care or aftercare (e.g. dressings, examinations, and castings) assign a code from Chapter XXI. Assign an additional code to describe the injury, optionally as a diagnosis type (3). Assign a code from the block T90—T98 Sequelae of injuries, of poisoning and of other consequences of external causes to describe the underlying nature of the old injury, optionally, as a diagnosis type (3).</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
<td></td>
</tr>
<tr>
<td><strong>Post Procedural Conditions and Complications</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Step 3: Add Specificity—To Precisely Identify the Nature of the Complication or Condition When the code title of a post-procedural condition or a complication of surgery or medical care does not fully describe the problem, assign an additional code, optionally, as a diagnosis type (3), to provide more detail regarding the nature of the condition.</td>
<td>Optional</td>
<td>This is supplemental information that is useful for local data retrieval.</td>
<td></td>
</tr>
<tr>
<td><strong>Post Procedural Signs and Symptoms</strong></td>
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<td></td>
</tr>
</tbody>
</table>
| When a sign or symptom classifiable to Chapter XVIII develops following an intervention and:  
  - the physician documentation indicates it requires management beyond routine post op care, or it persists for at least 96 hours;  
  - is not attributed to any other cause; and  
  - is due to or a direct result of the procedure; | Optional | It identifies another condition in the patient that is useful for local data retrieval. |
### Complications of Devices, Implants or Grafts

<table>
<thead>
<tr>
<th>Complication Category</th>
<th>Code(s)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T82.–</td>
<td>Complications of cardiac and vascular prosthetic devices, implants and grafts</td>
<td></td>
</tr>
<tr>
<td>T83.–</td>
<td>Complications of genitourinary prosthetic devices, implants and grafts</td>
<td></td>
</tr>
<tr>
<td>T84.–</td>
<td>Complications of internal orthopedic devices, implants and grafts</td>
<td></td>
</tr>
<tr>
<td>T85.–</td>
<td>Complications of other internal orthopedic devices, implants and grafts</td>
<td></td>
</tr>
</tbody>
</table>

When an infectious organism has been identified, assign an additional code, optionally as a diagnosis type (3), from B95–B97 to identify the infectious agent.

### Optional Information

This is supplemental information that is useful for local data retrieval.

When the sign or symptom does not meet the above criteria assign a code, optionally, as a diagnosis type (3), with no external cause code indicating a complication of a procedure.
### Appendix F—References to Diagnosis Type (3) in Directive Statements

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Optional</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sequencing and Typing of Complications</strong></td>
<td>When a complication of care is of a minor nature and does not meet the criteria for a comorbidity, code it optionally as a diagnosis type (3).</td>
<td>Optional</td>
<td>It identifies another condition in the patient that is useful for local data retrieval.</td>
</tr>
</tbody>
</table>
| **Hemorrhage, Laceration or Perforation During Intervention** | Assign a code indicating intraoperative or postoperative hemorrhage, optionally as a diagnosis type (3), when:  
- Intra- or postoperative hemorrhage is documented as such by the physician, but does not impact LOS, care, and or monitoring. | Optional | It identifies another condition in the patient that is useful for local data retrieval. |
| **Chapter XXI—Factors Influencing Health Status and Contact with Health Services** | **Observation Versus a Follow-Up Examination**  
When major treatment has been completed and the patient is admitted subsequently for surveillance and assessment and there is no recurrence of the treated condition, select one of the following as the MRDx:  
- Z08.– *Follow-up examination after treatment for malignant neoplasm*; or  
- Z09.– *Follow-up examination after treatment for conditions other than malignant neoplasms*.  
Assign an additional code indicating a personal history of the condition for which treatment is completed, optionally as a diagnosis type (3). | Optional | It identifies another condition in the patient that is useful for local data retrieval. |
### When the follow up examination reveals that the original condition has recurred or another related condition has been identified at this visit, assign a code for the condition as the MRDx.

Assign an additional code from one of the following categories:
- **Z08.**—*Follow-up examination after treatment for malignant neoplasm*; or
- **Z09.**—*Follow-up examination after treatment for conditions other than malignant neoplasms* optionally as a diagnosis type (3).

| Optional | It identifies another condition in the patient that is useful for local data retrieval. |

### Screening for Specific Diseases

When the condition, or a sign of the condition for which the patient is screened is found:
- Assign a code for the condition or sign as the MRDx.
- Assign a code from Z11, Z12 or Z13 optionally, as a diagnosis type (3) as required to meet local data collection requirements.

Assign an additional code, optionally as a diagnosis type (3) to identify any circumstances indicating the screening group to which the patient belongs (e.g. family history).

Assign an additional code, optionally as a diagnosis type (3), to identify any incidental findings noted at the time of the exam.

| Optional | It identifies another condition in the patient that is useful for local data retrieval. |