Canadian Coding Standards For ICD-10-CA and CCI 2004

ICD-10-CA/CCI

Canadian Institute for Health Information
Institut canadien d'information sur la santé

Canadian Coding Standards for ICD-10-CA and CCI 2004

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Introduction

The Canadian Coding Standards for ICD-10-CA and CCI, 2004 have been developed by CIHI in consultation with the various provinces and territories, for use with The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada (ICD-10-CA) and the Canadian Classification of Health Interventions (CCI).

The coding standards are intended to supplement ICD-10-CA (Volumes 1 and 2) and CCI (Volumes 3 and 4) 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 the use of ICD-10-CA and CCI.

Revisions to the coding standards will be made on a regular basis to keep pace with changing health care information needs. Coding standards relating to ambulatory care coding have been incorporated into the current Version 2004.

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.**

Coding Standards for Ambulatory Care

Coding of Main and Other Problems for Ambulatory Care Visits

In effect 2002

The first listed diagnosis code on the abstract is termed the "Main Problem" and it is selected by determining from the documentation provided within the health record:

- Definitive (formulated) diagnostic statement
- Symptom, sign or abnormal test result
- Specific reason for encounter (e.g. follow-up exam, treatment, observation for suspected condition or pre-operative assessment)

Always code to the greatest degree of specificity supported by documentation. Diagnosis typing does not apply to ambulatory care coding. Any diagnoses sequenced following the "Main Problem" are referred to as "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".

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

An external cause code may also 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.

An external cause code from chapter XX must be assigned when the Main Problem is coded to any injury from chapter XIX. A code for place of occurrence must also be assigned as directed by the inpatient 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. 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 other partner

Specific Reason for Encounter

- **Follow up examinations** for patients are coded as per the coding standard for ambulatory care 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 chronic renal failure 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**

The categories Z03-Z04 should be used 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**

If no definite diagnosis has been established by the end of an ambulatory care visit, then the information that permits the greatest degree of specificity and knowledge about the condition that necessitated care or investigation should be recorded as the "Main Problem". This may be a sign, an abnormal test result or a symptom.

Do not code diagnoses documented as *probable, suspected, questionable, query, rule out, working or differential* as the Main or Other Problem for ambulatory care visits. 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)	Haemoptysis
3.GY.10.VA	Xray, thoracic cavity NEC, without contrast.

- **Preoperative assessment**

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

A second code describing the underlying reason (diagnosis or condition) for the assessment may be assigned 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
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 of left 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**

Codes from all sections of CCI may be applicable in an ambulatory care setting.

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

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

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

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 (Main Intervention)	Computerized tomography [CT], lung NEC, without enhancement

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 (Main Intervention)	Specimen collection of blood by venous puncture (for diagnostic testing), total body

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

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

At a minimum, interventions reported must include all codes that are currently utilized in the DPG™ or CACS grouping methodology.

Special instructions on codes from Sections 2 and 3

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

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

Refer to List of Procedures in the DPG and CACS directories.
Check also for any provincially mandated diagnostic interventions.

Coding of Ambulatory Care Visits for Rehabilitative Services

In effect 2002

A code from the category Z50—Care involving use of rehabilitation procedures, may be used as the "Main Problem" when it is a reason for the ambulatory care visit. These codes may be used for 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.

If a person is referred solely for physical therapy (Care involving use of rehabilitation procedures), assign:

Z50.1 (Main Problem)	Care involving use of rehabilitation procedures, Other physical therapy.

A second code may be assigned as an "Other Problem" to identify the underlying disorder.

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

Z50.1 (Main Problem)	Care involving use of 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

In effect 2002

For routine follow-up visits to complete treatment (begun at an earlier date) or to examine post-treatment status 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
- Z47 Other orthopaedic follow-up care
- Z48 Other surgical follow-up care

A second code may be assigned, if applicable, as an "Other Problem" to indicate the history of a disease or disorder.

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
C50.9^ (Other Problem)	Malignant neoplasm breast part unspecified—treatment not yet complete.
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 in for an undisplaced fracture of the ankle due to a fall on ice 6 weeks ago.

Z47.8 (Main Problem)	Other specified orthopaedic 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 Ambulatory Care Visits for Chemotherapy/Radiation Therapy

In effect 2002

When a patient's ambulatory care visit is solely for the purpose of chemotherapy or radiation therapy, the "Main Problem" must be coded to one of the following:

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

The specific condition for which the chemotherapy is being given may be coded as an "Other Problem".

Example: Patient admitted for Chemotherapy 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

Example: AIDS patient admitted for initiation of Chemotherapy.

Z51.2 (Main Problem)	Other chemotherapy
B24 (Other Problem)	Human immunodeficiency virus [HIV] disease

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

CCI codes for systemic chemotherapy for neoplastic disease can be found within rubric 1.ZZ.35.^^—Pharmacotherapy, total body NEC. For example, the antineoplastic drug Vincristine administered by injection would be coded to 1.ZZ.35.HA-M3.

General Coding Standards

Diagnosis Typing Definitions

In effect 2001, amended 2002, 2003, 2004

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. All diagnoses or conditions identified on the DAD must be assigned a diagnosis type.

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 should be selected. If no diagnosis was made, the main symptom, abnormal finding or problem should be selected as the MRDx.

Comorbidities

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.

Consider the following in determining whether a condition qualifies as a comorbidity.

1. To support a determination of significance, there must be documented evidence in the physician's notes 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

2. 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
   - the condition persists post procedurally for at least 96 hours.

Some signs, symptoms and conditions may occur in the post procedural period but are NOT on their own regarded as post procedural comorbidities. Further information may be found in the Canadian Coding Standards for ICD-10-CA and CCI. Examples of such conditions are:

- anaemia
- confusion
- headache
- difficulty walking
- paraesthesia
- vomiting
- cough
- cardiac arrhythmia
- electrolyte imbalances
- abnormal blood pressure reading
- nausea
- urinary retention
- flatulence
- dysuria

3. Diagnoses that are only listed on the Front Sheet, Discharge Summary, Death Certificate, History & Physical or pre-operative anesthetic consults qualify as a Diagnosis Type 3—Secondary Diagnosis. If there is 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.

4. Nurses notes, pathology reports, laboratory reports, autopsy reports, medication profiles, radiological investigations, nuclear imaging, and other similar investigations are valuable tools for identifying the appropriate diagnosis code. To be classified as comorbidities, these diagnoses must be supported by documentation as identified in number 1.

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 (1)—Pre-admit Comorbidity

A Diagnosis Type (1) is a condition that existed pre-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.

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

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.

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

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

Diagnosis Type (4)—Morphology Codes

Diagnosis Type (4), morphology codes are derived from ICD-O codes describing the type and behaviour of neoplasm.

Diagnosis Type (5)—Provincially Defined

Diagnosis Type (9)—External Cause of Injury Code

A diagnosis Type (9) is an external cause of injury code. It is 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. Category U99, Type of activity, is optional.

Diagnosis Type (0)

Diagnosis Type (0) is reserved for newborn coding. In order for babies born by cesarean section to be grouped appropriately one of these codes must either be the MRDx or a diagnosis type (0): Z38.01, Z38.31, Z38.61, Z38.63, Z38.65, Z38.67, Z38.69 or P03.4.

Diagnosis Type (0) is also used to identify insignificant conditions that do not affect the newborn's treatment or length of stay.

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 and increased monitoring within the 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)

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 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)**	Hypokalaemia

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.

I50.0	**(M)**	Congestive heart failure
J44.1	**(1)**	Chronic obstructive pulmonary disease with acute exacerbation, unspecified.
E87.6	**(3)**	Hypokalaemia, (coding optional)

Diagnoses of Equal Importance

In effect 2001

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.

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" diagnoses, select the latter condition.

Example: If the physician lists two diagnoses—Cerebrovascular accident and cerebral hemorrhage, coders are directed to select the more specific diagnosis as the MRDx.

I61.9	(M)	Intracerebral hemorrhage, unspecified

Using Diagnostic Test Results in Coding

In effect 2003

Laboratory, X-ray, pathology and other diagnostic results should only be used where 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.

S72.010	(M)	Closed fracture of base of femoral neck (cervicotrochanteric)
W01	(9)	Fall on same level from slipping, tripping and stumbling
U98.5	(9)	Place of occurrence, trade and service area (grocery store)

Example: Patient's chart documentation showed that she was admitted for removal of a skin lesion, the pathology report showed "solar keratosis".

L57.0	(M)	Actinic keratosis (Includes: solar keratosis)

Examples of inappropriate application of diagnostic tests:

- Microbiology report positive for micro-organism growth but no documentation in physician's notes identifying diagnosis or treatment for urinary tract infection.
- CT scan reveals adhesions of the abdomen, but no documentation in physician's notes identifying it as the cause of abdominal pain.

Acute and Chronic Conditions

In effect 2001

Where the most responsible diagnosis is recorded as being both acute/subacute and chronic, and ICD-10-CA provides separate categories or subcategories for each, but not for the combination, the category for the acute condition should be coded first.

Example:

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

Code acute cholecystitis (K81.0) as the MRDx. The code for chronic cholecystitis (K81.1) may be used as an optional additional code.

When an appropriate combination is provided, only one code should be used.

Example:

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

Impending or Threatened Conditions

In effect 2003

If a threatened/impending condition is documented but did not occur during the episode of care, then the coder should refer to the index to determine if the condition is indexed as impending or threatened under the main term or sub-term. If such an index entry exists, then assign the appropriate code. If such an entry does not exist, then the condition described as impending or threatened should not be coded.

For example, in case of impending gangrene of the leg which did not eventuate 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 precursor condition, such as arteriosclerosis with ulceration.

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)

Example: Threatened Abortion

O20.003	(M)	Threatened abortion

Underlying Symptoms or Conditions

In effect 2001, amended 2003

When a patient presents with a symptom or condition, and during that episode of care the underlying disease or disorder is identified, then the underlying disease or disorder is assigned as the MRDx and the symptom or condition may be coded based on the facility's data needs but must be assigned a diagnosis type 3.

Example: Patient presented with seizures. CT scan taken at the time revealed a large brain tumour. 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 (an optional diagnosis)

Example: 66-year-old patient was admitted through the emergency department with chest pain. She had no history of coronary artery disease. During her stay, work up was done and patient was diagnosed as having coronary artery disease. Her chest pain was attributed to an episode of unstable angina.

I25.10	(M)	Atherosclerotic heart disease, native coronary artery
I20.0	(1)	Unstable angina (See coding standard on "Angina")
R07.4	(3)	Chest pain, unspecified (an optional diagnosis)

If a patient presents with a symptom or condition, and the underlying disease or disorder is known at the time of admission, and only the symptom or condition is being treated, then that should be assigned as the MRDx. The underlying disease may be coded as a secondary diagnosis.

Example: Mr. T was re-admitted 4 weeks following his brain surgery for removal of a malignant lesion. Patient presented 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 Diagnosis (Q)

In effect 2001, amended 2003, 2004

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

Example: Chest pain. Query MI.

R07.4	(M)	Chest pain, unspecified
(Q)I21.9	(3)	Acute myocardial infarction, unspecified

If, after an episode of health care, the MRDx is still recorded by the physician as "suspected", "questionable", etc., and there is no further information or clarification, the suspected diagnosis must be coded as if it were established. Use the prefix "Q" in these circumstances whenever available.

Example: Query Peptic ulcer

(Q) K27.9	(M)	Peptic ulcer, unspecified as acute or chronic, without haemorrhage or perforation

The category Z03—Medical observation and evaluation for suspected diseases and conditions, applies to suspected diagnoses that have been ruled out after investigation.

Example: Myocardial Infarction—ruled out

Z03.4	Observation for suspected myocardial infarction

Sequelae

In effect 2001

ICD-10-CA provides a number of categories entitled "Sequelae of..." (B90-B94, E64.-, E68, I69, O97, T90-T98, Y85-Y89) which may be used to indicate conditions no longer present as the cause of a current problem undergoing treatment or investigation. When coding sequelae and their causes, code the presenting condition first followed by the code for the sequelae of the underlying condition. This will be an optional additional code and must be assigned a diagnosis type (3).

For this code to apply, it is sufficient that the causal condition be described as "old", "no longer present" or "late effect of". There is no defined minimum time interval.

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: Late effect of leprosy. (Sequelae code could possibly be MRDx if this is the only recorded diagnosis.)

B92(M)	Sequelae of leprosy

Sequelae of Injuries

When coding sequelae of injuries, the condition being treated is assigned as the MRDx and the sequelae code is given a diagnosis type (3). There is no specific time limit for assigning a particular condition to sequelae of an injury, in most cases. Coders are encouraged to read all notes at block headings and chapter headings where guidance is provided regarding time frames.

Example: 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

Admissions From Emergency Room

In effect 2003

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. The diagnoses on each abstract must accurately reflect circumstances for or treatment provided during that episode of care. For coding of emergency visits, refer to the specific ambulatory care standards within the ICD-10-CA and CCI Standards.

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.

Emergency Visit		
S22.300 (Main)		Fracture of rib, closed
W01		Fall on same level from slipping, tripping and stumbling
U98.5		Place of occurrence, trade and service area
Inpatient Stay		
Z60.2	(M)	Living alone
S22.300	(3)	Fracture of rib, closed
W01	(9)	Fall on same level from slipping, tripping and stumbling
U98.5	(9)	Place of occurrence, trade and service area

If documentation within the medical record substantiates that the patient was admitted to complete the treatment started in the ER, and this condition is most responsible for the patient's stay in hospital, the identified condition must be recorded as the MRDx. If 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.

Emergency Visit		
I24.0 (Main)		Coronary thrombosis not resulting in myocardial infarction
Inpatient Stay		
I24.0	(M)	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

Selection of Interventions to Code From Section 1

In effect 2001, amended 2003

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. 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. However, there are some exceptions to this rule of thumb. The following codes affect CMG™ assignment and therefore must be captured in the DAD:

1.LZ.37.HH-GB	Installation of external appliance, circulatory system NEC percutaneous cardiopulmonary bypass
1.LZ.37.LA-FP	Installation of external appliance, circulatory system NEC extracorporeal blood salvage device
1.LZ.37.LA-GB	Installation of external appliance, circulatory system NEC extracorporeal circulation device [cardiopulmonary bypass]
1.LZ.37.LA-QM	Installation of external appliance, circulatory system NEC extracorporeal membrane oxygenator [ECMO]

It is mandatory to code mechanical ventilation if the duration is >96 hours. The following two codes affect PIx assignment if the duration of the ventilation is >96 hours.:

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"

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.

If a patient is intubated prior to admission, begin counting the duration from the time of admission. If a patient were transferred (discharged) while intubated, the duration would end at the time of transfer (discharge).

For patients who begin on (endotracheal) 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 following codes are examples of those numbered higher than "50" that are not mandatory and may be used at the discretion of the facility:

1.PM.52.^^	Drainage, bladder, NEC
1.PM.54.^^	Management of internal device, bladder, NEC
1.PM.55.^^	Removal of device, bladder, NEC

Used mostly to describe urinary catheterization, the above rubric is optional for all facilities.

Repairs of skin wound (80) are not mandatory unless they are the principal procedure.

For the complete list of non-operative procedures that affect CMG assignment, please refer to Appendix C of the 2003 CMG/Plx Directory.

Mandatory Attributes

In effect 2003, amended 2004

Mandatory attributes exist at the following rubrics to ensure parity of data collection from ICD-9-CM and CCP to CCI:

1.BF.59.^^	Destruction, sympathetic nerves
1.FU.87.^^	Excision partial, thyroid gland
1.FU.89.^^	Excision total, thyroid gland
1.GJ.77.^^	Bypass with exteriorization, trachea
1.GT.85.^^	Transplant, lung NEC
*1.GZ.31.^^	Ventilation, respiratory system NEC
1.HD.53.^^	Implantation of internal device, endocardium
1.HZ.53.^^	Implantation of internal device, heart NEC
1.IJ.50.^^	Dilation, coronary arteries
1.IJ.55.^^	Removal of device, coronary arteries
1.IJ.57.^^	Extraction, coronary arteries
1.IJ.76.^^	Bypass, coronary arteries
1.NK.87.^^	Excision partial, small intestine
1.NM.87.^^	Excision partial, large intestine
1.NV.89.^^	Excision total, appendix
1.OA.87.^^	Excision partial, liver
1.PB.87.^^	Excision partial, adrenal gland
1.PB.89.^^	Excision total, adrenal gland
1.QM.89.^^	Excision total, testis
1.RB.89.^^	Excision total, ovary NEC
1.RF.51.^^	Occlusion, fallopian tube NEC
1.RF.59.^^	Destruction, fallopian tube NEC
1.RF.89 ^^	Excision total, fallopian tube NEC

1.RS.80.^^	Repair, vagina NEC
1.SC.75.^^	Fusion, spinal vertebrae
1.SC.89.^^	Excision total, spinal vertebrae
1.SQ.53.^^	Implantation of device, pelvis
*1.SY.80.^^	Repair, muscles of the chest and abdomen
*1.VA.53.^^	Implantation of internal device, hip joint
*1.VG.53.^^	Implantation of internal device, knee joint
1.WJ.87.^^	Excision partial, tarsometatarsal joints, metatarsal bones and metatarsophalangeal joints [forefoot]
1.YM.74.^^	Fixation, breast
1.YM.79.^^	Repair by increasing size, breast
1.YM.87.^^	Excision partial, breast
1.YM.88.^^	Excision partial with reconstruction, breast
1.YM.89.^^	Excision total, breast
1.YM.90.^^	Excision total with reconstruction, breast
1.YM.91.^^	Excision radical, breast
1.YM.92.^^	Excision radical with reconstruction, breast
2.AZ.02. ^^	Assessment, mental health
2.NM.70.^^	Inspection, large intestine
2.NM.71.^^	Biopsy, large intestine
2.ZZ.02.^^	Assessment (examination), total body
5.CA.90.^^	Selective fetal reduction
6.AA.10.^^	Counselling, mental health
6.AA.30.^^	Therapy, mental health

Attributes at the rubrics marked with an asterisk also affect CMG™ and/or Plx™ assignment.

Selection of Interventions to Code From Sections 2 and 3

In effect 2001

Codes from Sections 2 and 3 are not all mandatory and 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.

Exception:
Cardiac catheterization, (3.IP.10.^^) is known to affect CMG™ assignment. It is recommended that this be recorded whenever catheterization is the applicable approach. See coding standard on "Diagnostic Imaging Interventions".

Selection of Interventions to Code From Section 5

In effect 2002

Interventions from Section 5 must be coded when applicable if the generic intervention number $\geq$ 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 Labour.
This intervention must be coded when applicable even though the generic intervention number is "30".

Codes from the blocks 5.FB.^^—5 FT.^^—Diagnostic Fetal Interventions are those performed on the fetus prior to delivery. Any intervention performed on the neonate after delivery should be classified from 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)

Codes from blocks 5.LB.^^—5.MD.^^ Interventions During Labour and Delivery are to be selected for classifying interventions that occur during the intrapartum phase (from the time labour begins until complete expulsion of the fetus).

Composite Codes in CCI

In effect 2001

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 may involve 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.
Note: The vagotomy would only be a separate code when it is performed alone.

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

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: 1.GE.91.VB-XX-G Excision radical, larynx using pedicled distant flap [eg. myocutaneous flap] with modified radical neck dissection

Multiple Codes in CCI

In effect 2001

If more than one intervention is performed during the same episode of care and there is no composite code (qualifier) to cover this combination, multiple codes must be assigned. 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 must not be considered exhaustive.

Combined Diagnostic and Therapeutic Interventions

In effect 2001

When an intervention is done for both diagnostic and therapeutic purposes, the therapeutic intervention supersedes the diagnostic and two codes are not required.

Exception:
Coronary angioplasty and coronary angiography performed with cardiac catheterization as an approach. Cardiac catheterization is captured using a qualifier for the angiography code in section 3. To ensure appropriate CMG™ assignment, it is necessary to record this code on the abstract. See coding standard on "Diagnosis Imaging Interventions".

The intent of an excisional biopsy is therapeutic as well as diagnostic. The lesion has to be excised and a firm diagnosis established by pathology. The therapeutic intervention takes precedence and a code from section 2 must not be assigned. An excisional biopsy is coded to a "partial excision" at the appropriate anatomy site.

Example: Excisional biopsy of breast

1.YM.87.^^ Excision partial, breast

Incisional biopsies involve removal of a tissue sample for diagnosis purposes only. These are coded in Section 2 to the generic intervention "biopsy" at the appropriate anatomy site.

Example: Renal biopsy
2.PC.71.^^ Biopsy, Kidney

Example: Lung biopsy done by percutaneous needle aspiration.
2.GT.71.HA Biopsy, lung, using percutaneous (needle) approach

Aspiration of fluids from a body cavity may have both a diagnostic and a therapeutic value. Procedures like pleurocentesis are coded to the therapeutic intervention of "drainage".

Example: 1.GV.52.^^ Drainage, pleura

If the planned intervention was a diagnostic one but was subsequently changed to a therapeutic intervention, only the therapeutic component of the procedure must be coded.

Example: If an explorative laparotomy on a trauma victim ends up as a total splenectomy only the splenectomy must be coded.

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

If a biopsy and a therapeutic ablative intervention are performed at the same site, during the same operative episode, the biopsy must not be coded.

Example: Frozen section of biopsy of thyroid revealed malignancy, total thyroidectomy performed.

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

Cancelled Interventions

In effect 2001

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

If the patient's surgery is cancelled due to administrative reasons, it is coded in ICD-10-CA from Chapter XXI—Factors influencing health status and contact with health services.

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

If the surgery is cancelled due to a contraindication and the patient is discharged, it is again coded in ICD-10-CA to Chapter XXI—Factors influencing health status and contact with health services.

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

If 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, the contraindication/post-admit comorbidity would also be coded as the MRDx.

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.

I21.0	(M)	Acute transmural (Q-wave) myocardial infarction of anterior wall
I21.0	(2)	Acute transmural (Q-wave) myocardial infarction of anterior wall
Z53.0	(3)	Procedure not carried out because of contraindication
M16.9	(3)	Coxarthrosis, unspecified

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".

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, CIHI will accept the word "CANCELLED" in the code section (Group 11, Field 2) of the intervention line in the abstract. The word "CANCELLED" must be left justified, so that the last character will be a blank, and must be entered as upper case letters.

Example:

Date **Intervention Code**

2	0	0	2	0	4	0	1	C	A	N	C	E	L	L	E	D	

The above standard is applicable when absolutely nothing has been done to the patient. See also coding standards on "Cancelled Interventions" and "Abandoned Interventions".

Please check with your provincial ministry of health for any policies that might apply to the coding of cancelled day surgery procedures.

Abandoned Interventions

In effect 2001

Abandoned interventions (Section 1 and 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.
A status attribute "A" may be applied to the planned intervention code only if the intervention actually performed was one of the following:

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

Example: If 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.^^	Inspection, abdominal cavity
1.NM.89.^^	Excision total, large intestine (with 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). If a therapeutic intervention is abandoned after the anesthetic is administered, code the anesthetization as the principal procedure. Then the planned intervention may be coded with the status attribute "A" for abandoned.

Example: Patient was prepped for open total cholecystectomy. After administration of general anesthesia, patient developed atrial fibrillation. Surgery was abandoned and anesthesia reversed.

1.ZZ.11. ^^	Anesthetization, total body
1.OD.89.^^	Excision total, gall bladder (with status attribute "A")

Change of Plans During an Intervention

In effect 2001

Sometimes during the course of an intervention, there may be change of plans and a different intervention is performed to the one originally intended. 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

The intended therapeutic procedure has no clinical significance and must be not recorded on the abstract.

Converted Interventions

In effect 2001

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: A laparoscopic cholecystectomy switched to an open cholecystectomy.

1.OD.89.LA Excision total, gall bladder, open approach (with status attribute "C")

Failed Interventions

In effect 2002, amended 2003

An intervention may be deemed as "failed" if upon termination of the procedure, the expected outcome is either poor or not achieved entirely. A failed procedure is a completed intervention (not having been abandoned—see coding standard for "Abandoned Interventions"), but the results are equivocal or disastrous. In such circumstances, code the intervention as having been completed.

Example: Failed Common bile duct exploration (CDE) 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 common bile duct exploration**.

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

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.IL.35.HA-C1—Pharmacotherapy (local), vessels of heart, percutaneous injection approach, using an anticoagulant agent. If a drug is administered via a venous approach it must be considered as systemic pharmacotherapy. If 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 induction of labour (category O61), failed trial of labour following previous caesarean section (subcategory O66.4) and failed application of vacuum extractor and forceps (subcategory O66.5) are captured by ICD-10-CA and do not lend themselves to this coding standard. Manual, medical or other induction is successful if labour begins. Induction can only be termed "failed" if labour does not ensue. Success or failure of the induction is not dependent on the type of delivery that follows.

Revised Interventions

In effect 2003

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.
- The current intervention is a re-visitation 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	Implantation of prosthetic device, pelvis, single component [e.g. cup] with bone graft and cement (In this example, the current intervention is a partial "redo" of an intervention performed previously.)
Status attribute R (Mandatory)	
Location attribute L (Mandatory)	Note: Two mandatory attributes present at this rubric.

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	Implantation of internal device, knee joint, uncemented, using tri component prosthetic device [medial, lateral and patellofemoral] (In this example, the current intervention is a complete "redo" of an intervention performed previously.)
Status attribute R (Mandatory)	
Location attribute R (Mandatory)	Note: Two mandatory attributes present at this rubric.

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 of prosthesis without tissue, using open approach (In this example, the current intervention is a complete "redo" of an intervention performed previously.)
Status attribute R (Mandatory)	
Location attribute L	

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 Status attribute R **Location attribute UP** (Mandatory)	Repair, muscles of the chest and abdomen, using open approach and using combined sources of tissue [e.g. mesh with autograft] (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 xray). 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 Status attribute R Location attribute R	Fusion, MTP bone/joints, using wire and (bone) autograft (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.)
1.SQ.58.LA-XX-A	Procurement, pelvis, bone graft (from living donor)

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, (only anatomic sites OW—Surgically Constructed Sites in Digestive & Biliary Tract and PV—Surgically Created Sites in Urinary Tract) as these are always by nature revisions in themselves and attribute "R" is not available.

- Diagnostic interventions (Section 2). Biopsies are repeated to discover if any new pathology has returned to a site. Inspections resulting in no further intervention—e.g. a post-operative exploratory laparoscopy. This may not be termed "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. The status attribute "S" would be applicable 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.

For 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. Code:

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

Another child with a cleft face anomaly has had the major portion of her face repaired but is now presenting for cleft palate repair. Code:

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

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

In effect 2001, amended 2003

Endoscopic interventions are widely performed and may be either diagnostic or therapeutic in their intent. If the intent is diagnostic only, it is classified to "Inspection" of that site. It is then coded in CCI from Section 2—Other Diagnostic Interventions. Inspections are coded 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)

If a diagnostic biopsy is performed along with the inspection, then only the diagnostic biopsy is coded.

Example: Colonoscopy with biopsy of lesion in transverse colon.

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

If the endoscope goes beyond the site of the biopsy, then both the biopsy and the inspection are coded.

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)

If the endoscopic intervention has both diagnostic and therapeutic components to it, the therapeutic intervention takes precedence over the diagnostic intervention. In the CCI this is then coded from Section 1—Physical and Physiological Therapeutic Interventions.

Example: Colonoscopy with polypectomy of large intestine.

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

If 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)

Diagnostic Imaging Interventions

In effect 2001

Diagnostic imaging studies performed in conjunction with therapeutic interventions may be coded to meet facility and/or provincial requirements. CCI provides combination categories in Section 3, so coders are encouraged to pay careful attention to the anatomic sites visualized during the imaging interventions.

Example:	3.OE.^^	Bile ducts alone
Example:	3.OJ.^^	Pancreas alone
Example:	3.OG.^^	Biliary ducts with Pancreas

Intra-operative diagnostic imaging is captured using the status attribute "I". The "code also" note will prompt coders to use any additional intervention codes where applicable.

Example: Open cholecystectomy with intra-operative cholangiogram.

1.OD.89.^^	Excision total, gall bladder
3.OE.10.^^	X-ray, bile ducts (with status attribute "I")

Cardiac catheterization is captured using a code from section 3. To ensure appropriate CMG™ assignment, it is necessary to record this code on the abstract.

Example: Coronary angioplasty and coronary arteriography performed via left heart catheterization.

1.IJ.50.^^	Dilation, coronary arteries
3.IP.10.VX	X-ray, heart with coronary arteries via left heart catheterization with fluoroscopy using (retrograde) percutaneous intra arterial approach (with status attribute "I")

Chapter I—Certain Infectious and Parasitic Diseases

Infections

In effect 2001

When coding an infection, if the causative organism is not known, the infection is coded by site.

Example: N39.0 Urinary tract infection, site not specified

If the causative organism is known, it may be classified in one of three ways:

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

Example:

B37.3		Candidiasis of vulva and vagina
N77.1	(3)	Vaginitis in infectious and parasitic diseases classified elsewhere

2. Using a combination code

Example: J02.0 Streptococcal pharyngitis

3. Using two codes, the first identifying the locally manifesting disease and the second identifying the infectious organism involved in the infection if it is identified. The infectious agent is classified to B95–B97.

Example: Acute cystitis due to Escherichia coli

N30.0	(M)	Acute cystitis
B96.2	(3)	Escherichia coli as the cause of diseases classified to other chapters

If only the organism is known and the site is not specified, the infection is coded to the infection of an unspecified site of a specified organism.

Example: A49.0 Staphylococcal infection, unspecified

B95–B97 Bacterial, viral and other infectious agents

These codes are not to be used as the MRDx. These categories are provided for use as supplementary or additional codes to identify the infectious agent or organism in diseases classified elsewhere.

Drug Resistant Microorganisms

In effect 2003

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 the difference between colonization and infection?

Colonization means that Methicillin Resistant Staphylococcus Aureus (MRSA) 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, but the patient will not have an actual infection. Treatment for colonization without symptoms of infection is not usually necessary, but carriers 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 Methicillin Resistant Staphylococcus Aureus (MRSA) infection it means that MRSA is making the person sick.

Facilities that choose to record information on carriers of drug-resistant microorganisms must note that a carrier or suspected carrier of Methicillin Resistant Staphylococcus Aureus (MRSA) who does not have a documented current infection should be assigned only one code. This must be recorded as a secondary diagnosis.

Z22.30 (3) Carrier of drug-resistant microorganism
Includes: suspected carrier

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), (1) or (2)		Infection and inflammatory reaction due to hip prosthesis
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
U00.0	(3)	Infection with methicillin-resistant Staphylococcus aureus [MRSA]
Z29.0	(3)	Isolation (optional, additional code)

What is Vancomycin Resistant Enterococcus (VRE)?

Enterococcus is a common, gram-positive bacterium. The commonest infections caused by enterococci are urinary tract infections, wound infections, bacteremia, endocarditis and meninigitis. 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 Enterococci (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.

Facilities that choose to record information on carriers of drug-resistant microorganisms must note that a carrier or suspected carrier of Vancomycin Resistant Enterococci (VRE) who does not have a documented current infection should be assigned only one code. This must be recorded as a secondary diagnosis.

Z22.30 (3) Carrier of drug-resistant microorganism
Includes: suspected carrier

Septicemia

In effect 2001

A diagnosis of septicemia can neither be assumed nor ruled out on the basis of laboratory values alone. Negative or inconclusive blood cultures do not preclude a diagnosis of septicemia in a patient with clinical evidence of the condition. A code for septicemia is assigned only when the physician makes a diagnosis of septicemia.

When there is evidence in the chart of more than one positive blood culture, increase in temperature and treatment with antibiotics, the physician must be consulted for verification of the diagnosis of septicemia.

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

O03-O07	Pregnancy with abortive outcome
O08.0	Genital tract and pelvic infection following abortion and Ectopic and molar pregnancy
O75.3	Other infection during labour
O85	Puerperal sepsis
T80.2	Infections following infusion, transfusion and therapeutic injection
T81.4	Infection following a procedure, not elsewhere classified

An additional code from category A40- Streptococcal septicemia or A41- Other septicemia, should be used to indicate the organism. This should be assigned a diagnosis type 3. Also assign an external cause code from the range Y60-Y84.9 if relevant.

Example: Post-operative E. coli septicemia following total colectomy.

T81.4	(2)	Infection following a procedure, not elsewhere classified
A41.50	(3)	Septicemia due to 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).

Human Immunodeficiency Virus (HIV) Disease

In effect 2001

HIV disease is classified in ICD-10-CA to Chapter 1. Code B24 Human Immunodeficiency Virus (HIV) disease is assigned to identify patients with AIDS. Additional codes from other chapters in ICD-10-CA should be assigned when possible to identify the specific conditions associated with AIDS.

When coding admissions for AIDS related reasons, the code B24 must be designated as the MRDx. The manifestation code must be coded and sequenced immediately following B24. HIV cases are grouped according to the diagnosis that is placed in the second position on the abstract. This should be the condition that was being treated in hospital. There must be at least one manifestation of AIDS recorded as a diagnosis type (1) but other manifestations may be assigned diagnosis type (3) if not treated during the current episode of care.

Candidiasis in AIDS patients may be found in vagina, skin and lungs. This condition is classified to B24 with an additional code from category B37 Candidiasis. In some circumstances, an additional code from B37 is listed as a dagger code and an additional code to identify the manifestation is also required.

Example: AIDS with Candidiasis of vagina

B24	(M)	Human Immunodeficiency virus [HIV] disease
B37.3	(1)	Candidiasis of vulva and vagina
N77.1	(3)	Vaginitis in infectious and parasitic diseases classified elsewhere

Example: AIDS with PCP pneumonia

B24	(M)	Human Immunodeficiency virus [HIV] disease
B59	(1)	Pneumocystosis
J17.3	(3)	Pneumonia in parasitic diseases

The following codes may be assigned when HIV infection is asymptomatic or undiagnosed:

- Asymptomatic HIV infection is classified under Z21
- Contact or exposure to HIV is Z20.6
- Laboratory evidence of HIV is found under R75
- HIV counseling is assigned to Z71.7
- Screening for HIV is assigned to Z11.4

Codes R75, Z21 and B24 are mutually exclusive and should not be listed together on the same episode of care. R75 relates to patients who have an inconclusive HIV test. It should not be assigned as the MRDx.

Patients who are admitted and discharged on the same day for primary prophylactic chemotherapy for HIV infection may be classified under Z29.2—Other prophylactic chemotherapy.

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 HIV infection status

A patient who has previously been identified as having AIDS may present with diagnoses and conditions that are unrelated to the HIV disease. The presenting conditions would then be appropriately assigned as the MRDx for that admission.

Example: Patient with AIDS fell and sustained a closed Colles' fracture.

S52.500	(M)	Colles' fracture, closed
W19	(9)	Unspecified fall
B24	(3)	Human Immunodeficiency virus [HIV] disease

Cytomegalovirus Infection (CMV) **In effect 2003**

The cytomegalovirus is everywhere. Actively infected people may shed the virus in their urine or saliva for months. Cytomegalovirus infection (CMV) also spreads from one person to another through, semen, vaginal secretions, blood, and breast milk. Transmission most often occurs when you touch these body fluids with your hands, then absorb them through your nose or mouth. People can also become infected with CMV through sexual intercourse, blood transfusions, and transplanted organs; in addition, babies can also become infected before or during birth, or through breast-feeding.

Once CMV enters the body, it stays for life. A virus that is in the body but not causing illness is latent or "sleeping." Most healthy people infected with CMV never have CMV-related diseases. However, certain conditions such as pregnancy, older age, drugs taken to suppress immunity (e.g. drugs given to transplant patients), or a disease that weakens immunity (e.g. HIV infection) can reactivate or "wake" the virus. Once the virus is reactivated, it can cause severe diseases such as:

- CMV retinitis—an eye disease that causes blurred vision and blindness
- ulcers in the esophagus or lower intestine (CMV colitis/CMV esophagitis)
- diseases in the central nervous system (CMV encephalitis)

Cytomegalovirus infection before birth may cause a miscarriage, stillbirth, or the death of the newborn.

A healthy person who is infected may feel ill and have a fever. If a person receives a transfusion of blood containing the cytomegalovirus, symptoms may begin 2 to 4 weeks later. These symptoms include a fever lasting 2 to 3 weeks and sometimes inflammation of the liver (hepatitis), possibly with jaundice. The number of lymphocytes, a type of white blood cell, may increase. Occasionally, a rash develops.

A person whose immune system is impaired and who is infected with cytomegalovirus is particularly likely to develop a severe infection; such a person may become very ill and die. In people with AIDS, CMV is the most common opportunistic infection. It infects the retina of the eye (retinitis), causing blindness. CMV infection of the brain (encephalitis) or ulcers of the intestine or esophagus may also develop in this group of patients. People who receive an organ transplant infected with cytomegalovirus are at high risk of dying, because as part of the transplantation process they receive drugs to suppress their immune system.

Example: Patient with advanced AIDS was seen and treated for CMV retinitis.

B24	(M)	Human immunodeficiency virus [HIV] disease
B25.8	(1)	Other cytomegaloviral diseases
H30.9	(3)	Chorioretinal inflammation, unspecified

Example: Patient diagnosed with CMV pneumonitis.

B25.0†	(M)	Cytomegaloviral pneumonitis
J17.1*	(3)	Pneumonia in viral diseases classified elsewhere

Viral Hepatitis

In effect 2002

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 up 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 and does not manifest symptoms but harbours the organism and 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 (faeco-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.

ICD-10-CA category for classifying this form of viral hepatitis 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 on from the 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 category for classifying this form of viral hepatitis is
B16 Acute hepatitis B

When a "history of Hepatitis B" is documented, it should not be assumed that the patient is a carrier of Hepatitis B and therefore it is not coded.

Documentation of "Hepatitis B positive" without any indication of an infectious process should be coded to 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 code for classifying this form of viral hepatitis is
B17.1 Acute hepatitis C

When "history of hepatitis C" is documented, coders should check with the clinician to determine if the patient is actually a carrier. Where consultation is not possible, assign the code for carrier of viral hepatitis C (Z22.51).

When ambiguous terms such as "hepatitis C" or "hepatitis C positive" are recorded on the chart and the patient has symptoms of hepatitis C, coders should check with the physician to determine if the disease is at the acute or chronic stage. Where consultation is not possible, assign the code B18.2—Chronic viral hepatitis C.

When the patient is asymptomatic and ambiguous terms such as "hepatitis C" or "hepatitis C positive" is recorded, assign the code for carrier of viral hepatitis C (Z22.51).

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 code for classifying this form of viral hepatitis is
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.

ICD-10-CA code for classifying this form of viral hepatitis is
B17.2 Acute hepatitis E

Hepatitis complicating pregnancy, childbirth or the puerperium

O98.4 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 for obstetric patient with carrier status.[1]

[1] Extracted from NCCH ICD-10-AM, July 2000, Specialty Standards.

Chapter II—Neoplasms

Testing for Evidence of Cancer—Abnormal Blood Values

In effect 2002, amended 2003

Prostate Specific Antigen (PSA)

PSA is a laboratory test that is done to measure or monitor the levels of prostate specific antigen in the bloodstream. The level of prostate specific antigen may rise in men who have prostate cancer, BPH, or infection in the prostate.

If test results suggest that cancer may be present, the man will need to have a biopsy. During the biopsy, the doctor removes tissue samples from the prostate, usually with a needle.

If a patient comes in for a biopsy of the prostate due to an abnormal PSA, and review of the chart fails to show any recorded diagnosis, the coder is directed to use Z12.5—Special screening examination for neoplasm of prostate.

Cancer Antigen (CA 125)

A laboratory test for elevated cancer antigen (CA 125) measures the presence of cell surface glycoprotein, which is present in 80% of cases of epithelial ovarian cancer. Because CA 125 rates may be elevated in several other benign conditions, it is generally used only for those women who already have significant symptoms indicative of ovarian cancer. Often an ovarian mass will be detectable on ultrasound.

If a woman comes in for a laparoscopic biopsy of an ovarian mass due to an abnormal CA 125 serum value and documentation reveals no significant finding—the ovaries are "normal", the coder is directed to use:

Z12.8—Special screening examination for neoplasms of other sites.

This should be a very rare occurrence; ovarian cysts, endometriosis or pelvic inflammatory disease (PID) commonly cause elevated CA 125 when ovarian cancer is not found to be present.

Carcinoma In Situ

In effect 2001, amended 2002

Many in situ neoplasms are regarded as being located within a continuum of morphological change between dysplasia and invasive cancer.

Cervical intraepithelial neoplasia (CIN) is a precancerous condition of the uterine cervix marked by abnormal growth of the epithelial tissue on the surface of the cervix. The cellular changes in the cervix may remain superficial for long periods of time before progression into invasive cancer. CIN refers to a spectrum or continuum of changes. The grading system used ranks the level of dysplastic development or atypia present in the cells as applied to cervical biopsy

CIN Grade I	N87.0—Mild cervical dysplasia
CIN Grade II	N87.1—Moderate cervical dysplasia
Severe cervical dysplasia	N87.2—Severe cervical dysplasia, NEC
CIN Grade III	D06.9—Carcinoma in situ of cervix, unspecified (with or without mention of severe dysplasia)

Similar coding coding standards apply to:
VIN—Vulvar intra-epithelial neoplasia
VAIN—Vaginal intra-epithelial neoplasia
PIN—Prostatic intra-epithelial neoplasia

VIN Grade I	N90.0—Mild vulvar dysplasia
VIN Grade II	N90.1—Moderate vulvar dysplasia
Severe vulvar dysplasia	N90.2—Severe vulvar dysplasia, NEC
VIN Grade III	D07.1—Carcinoma in situ of vulva (with or without mention of severe dysplasia)

VAIN Grade I	N89.0—Mild vaginal dysplasia
VAIN Grade II	N89.1—Moderate vaginal dysplasia
Severe vaginal dysplasia	N89.2—Severe vaginal dysplasia, NEC
VAIN Grade III	D07.2—Carcinoma in situ of vagina (with or without mention of severe dysplasia)

PIN Grade I	N40—Hyperplasia of prostate
PIN Grade II	N40—Hyperplasia of prostate
PIN Grade III	D07.5—Carcinoma in situ of prostate

Related Intervention

Colposcopy is a widely used method to check the cervix for abnormal areas. The doctor applies a vinegar-like solution to the cervix and then uses an instrument much like a microscope (called a colposcope) to look closely at the cervix.

This is coded in CCI to “Inspection, Vagina”.

2.RS.70.CA	Inspection, vagina, using per orifice approach

Primary Neoplasm With Metastasis

In effect 2001

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

Multiple Independent Primary Neoplasms

In effect 2001

For inpatient coding each primary neoplasm should be coded separately. However, to provide easy data retrieval, code C97 Malignant neoplasms of independent (primary) multiple sites may be used as an additional code with diagnosis type (3) to show that multiple independent primary neoplasms were present.

Secondary Neoplasms

In effect 2001

When treatment is directed toward a secondary site only, the secondary neoplasm should be coded as the MRDx, even though the primary malignancy may still be present. The primary neoplasm (or history of) must be coded as an additional code with a diagnosis type reflecting the impact on the hospital stay.

Malignant Neoplasm Without Specification of Site

In effect 2001

Code C80 Malignant neoplasm without specification of site is a unique category in that it applies to both primary and secondary malignancies. This is a very vague category, which should be used only when documentation within the health record and query of attending physicians yields no other option. A diagnosis of carcinomatosis may be coded to C80, if the physician has not listed the metastatic sites. If the sites are listed, they should be coded individually.

Example: Eaton-Lambert syndrome

C80†	Malignant neoplasm without specification of site
G73.1*(3)	Eaton-Lambert syndrome

Neoplasms Arising in Lymphatic Tissue

In effect 2001

Neoplasms that arise in lymphatic and hematopoietic tissues spread by cells circulating throughout the body rather than by direct metastasis or direct extension. If there is documentation of more than one site within either of these systems, code each site as a separate primary.

Inclusion notes at the category level may indicate applicable morphology codes for that category.

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. The type of leukemia would be coded to the appropriate C91.– to C95.– code and would most likely be assigned a diagnosis type (3).

Malignant Neoplasms of the Liver and Intrahepatic Bile Ducts

In effect 2002

In ICD-10-CA, there is no longer any category for "Malignant neoplasms of the liver, not specified as primary or secondary". As with other types of cancer, malignant neoplasms of the liver, not specified whether primary or secondary are assumed to be primary.

This should be coded as C22.9—Malignant neoplasm of liver unspecified

Specificity in Coding of Neoplasms

In effect 2001

Wherever feasible, use of the fourth, and fifth digits should be as specific as possible for coding malignant neoplasms. The use of the fourth digit (.9—unspecified) should be avoided.

Neoplasms Extending Into Adjacent Tissue

In effect 2002

Invasion refers to the infiltration and active destruction of surrounding tissue, while remaining connected with the original site of the malignancy. Neoplasms that have invaded adjacent sites or have extensions into adjacent sites must be coded to the point of origin.

Example: Pancreatic malignancy extending to the duodenum.

C25.9 Malignant neoplasm pancreas part unspecified

Malignant neoplasms of ectopic tissue

Malignant neoplasms of ectopic tissue are to be coded to the site mentioned, e.g. ectopic pancreatic malignant neoplasms are coded to the anatomic site pancreas, unspecified.

C25.9 Malignant neoplasm pancreas, part unspecified

Related Interventions

Destruction or excision of aberrant/ectopic tissue
The excision or destruction of aberrant (or ectopic) tissue of a gland or an organ should be coded to that anatomy site even though the tissue is found outside it and at a distance from it. The most common types of aberrant tissue found away from gland or organ are adrenal, endometrial and parathyroid.

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

1.RM.59.DA-GX Destruction, uterus and surrounding structures, using endoscopic approach and device NEC

If desired, a location attribute indicating that the tissue is aberrant "AT" may be selected to accompany the intervention code.

Neoplasms With Overlapping Boundaries (Contiguous Sites) **In effect 2001**

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

Example: Carcinoma of esophagus and stomach is specifically indexed to C16.0—Malignant neoplasm of cardia.

Example: Carcinoma of the tip and ventral surface of the tongue should be assigned to C02.8. Both the codes for tip and ventral surface fall within the same 3-character category and the point of origin cannot be determined.

Example: Carcinoma of the tip of the tongue extending to involve the ventral surface should be coded to C02.1, as the point of origin, the tip, is known and stated.

A neoplasm that overlaps two or more contiguous sites of separate 3-digit category may also be coded with a distinct single code. Coders are directed to the notes at the level of Chapter II—Neoplasms, where they will find a list of applicable .8 categories.

Example: Carcinoma of overlapping sites of the stomach and small intestine is coded to C26.8. Carcinoma of the stomach is C16.-; carcinoma of the small intestine is C17.-. Since the point of origin overlaps the two sites otherwise classified at different 3-character categories, the code for overlapping lesion of the digestive tract is assigned.

Admissions Following Diagnosis of Cancer

In effect 2001

Patients are often admitted for definitive surgery, follow up examinations and treatments, after the diagnosis of cancer has been made. There are general coding standards to follow in these cases.

Definitive surgery includes removal of a neoplasm and/or surrounding tissue. Therefore, a patient admitted for surgery to remove tissue from the site of previous excision of the neoplasm should be coded to a MRDx of primary malignancy, even though the pathology report may be negative for malignancy. In such cases, the physician most often documents the diagnosis as malignancy in accordance with the initial biopsy. The coder should accept this diagnosis although it is not supported by the pathology report.

Example: Mrs. X had needle biopsy of a breast lump as a day surgery procedure. The pathology report showed carcinoma. Patient was then admitted for lumpectomy. Pathology was negative for malignancy. The case would be coded to carcinoma of breast as the MRDx.

Complications of Malignant Disease

In effect 2001, amended 2003

Patients may be admitted for complications of either the malignancy or the treatment for the malignancy.

As a rule, if a patient is admitted solely to treat a specific complication, then the complication should be coded as the MRDx.

Some common complications include:

- bacterial sepsis A40.- or A41.- (if organism identified)
- chemotherapy induced neutropenia D70.0 with Y43.1, Y43.2 or Y43.3 (drugs causing adverse effects in therapeutic use)
- dehydration E86.0
- hypercalcemia E83.5

The malignancy may also be coded as a secondary diagnosis type (3).

Side effects of treatment such as chemotherapy should be coded as the MRDx if they are the cause for admission. On a patient's initial admission for cancer treatment, side effects of chemotherapy may be coded as post admission comorbidities, diagnosis type (2), if they are treated and are the cause of additional hospital services.

Observation for Suspected Malignant Neoplasm

In effect 2001

Code Z03.1 Observation for suspected malignant neoplasm is used to describe an admission for observation of a patient who presents with symptoms but tests prove negative for malignancy. This code is used to classify a patient who is under observation for a suspected malignancy that is subsequently ruled out. The key factor in choosing this code is the admission outcome: the patient needs no further treatment or medical care.

Personal and Family History of Malignant Neoplasms Using Z-Codes Correctly

In effect 2001, amended 2002

A code from the category Z85—Personal history of malignant neoplasm should never be recorded, as the MRDx. Codes from this category should always be assigned an optional diagnosis type 3.

Personal history of a neoplasm (Z-code) should only be assigned when:

- 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.

Category Z85—Personal history of malignant neoplasm may not be assigned for history of a secondary malignancy. The instructional notes listed under each subcategory refer to specific code ranges for primary malignancy categories. Secondary malignancies are excluded from the range of codes.

Example: A patient who underwent radical prostatectomy presents with bone metastases.

C79.5	Secondary malignant neoplasm of bone and bone marrow
Z85.4	Personal history of malignant neoplasm of genital organs

Follow up examinations for patients with a history of a malignancy should be assigned an MRDx from the category Z08—Follow-up examination after treatment for malignant neoplasm.

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	(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 the bladder (optional)

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

C67.9	(M)	Malignant neoplasm of bladder, unspecified
8010/3	(4)	Carcinoma NOS (Optional to code)
Z08.1	(3)	Follow-up examination after radiotherapy for malignant neoplasm (Optional code)
Z85.5	(3)	Personal history of malignant neoplasm of urinary tract

Family History of Malignant Neoplasm

Codes for "Family history of malignant neoplasm" are found in category Z80.^. This category is never used as the MRDx. These codes are sometimes used to denote a reason why an examination or prophylactic surgery was performed.

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

In effect 2001

The category Z08.- is used when a patient is admitted for follow-up investigations and/or treatments and no disease is found.

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

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

Z08.0	(M)	Follow-up examination after surgery for malignant neoplasm
Z85.5	(3)	Personal history of malignant neoplasm of urinary tract
2.PM.70.BA		Inspection, bladder, using endoscopic per orifice approach

Prophylactic Organ Removal

In effect 2001

Admission for surgical removal of organs or tissue related to risk of or treatment for malignancy is coded to the category Z40—Prophylactic surgery.

Example: A patient is admitted for prophylactic bilateral orchidectomy following a previous resection of carcinoma of the prostate.

Z40.08	(M)	Prophylactic removal of other organ
Z85.4	(3)	Personal history of malignant neoplasm of genital organs
1.QM.89.^^		Excision total, testis (approach coded with qualifiers) Location attribute B for Bilateral

Example: A patient with a personal history of breast cancer (no residual disease) elects to have the remaining breast removed.

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)

Recurrent Malignancies

In effect 2002

If the primary malignancy previously eradicated from the same organ or tissue has recurred, it must be coded as primary malignancy of the stated site, using the appropriate code from C00-C75.

A code from category Z85.^ may be used to show personal history of neoplasm of the site. The two codes when used together would be indicative to end-users of the recurrence of a primary malignancy.

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 mastectomy scar.

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

Admissions for Chemotherapy and/or Radiation Therapy—Treatment for Malignancy

In effect 2001

These are coded within category Z51—Other medical care. The appropriate codes describing the present malignancy status (active and historical malignancies) may be coded as diagnosis type (3).

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

Z51.1	(M)	Chemotherapy session for neoplasm
C34.01	(3)	Malignant neoplasm of left main bronchus

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

Z51.0	(M)	Radiotherapy session
C50.99	(3)	Malignant neoplasm of breast, part unspecified, unspecified side

If chemotherapy or radiation therapy is given during the admission in which the definitive surgical treatment occurs, the malignancy should be coded as the MRDx, and the code Z51.- may be used as an additional optional diagnosis.

The interventions used to code chemotherapy are:

- 1.ZZ.35.^^ (with the drug identified by the qualifiers) for systemic or total body chemotherapy
- 1.^^.35.^^ for local pharmacotherapy of particular anatomical sites (with the appropriate anatomy alpha character in the second field and the drug identified by the qualifiers)

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
1.AN.87.SE-AG		Excision partial, brain, burr hole technique for access, with laser
1.AA.35.HA-MO		Pharmacotherapy, local, meninges and dura mater of brain, percutaneous [needle] approach, using antineoplastic agent NEC

The procedure code for radiation therapy is:

- 1.^^.27.^^ (with the specified anatomy site in the second field and the type of radiation in the qualifier field).

Example: 1.FU.27.JA-DC Radiation, thyroid gland, using cobalt 60

Admissions for brachytherapy (implant of radioactive materials) should not be confused with admissions for radiation therapy. When a patient receives a radioactive implant as a treatment for a malignancy, the malignancy should be coded as the MRDx. The procedure would then be coded as 1.^^.26.^^ with the anatomy alpha characters in the second field and the qualifiers showing the approach and type of implant.

Example: Cancer of the prostate gland. Patient admitted for endoscopic per orifice interstitial implantation of radioactive material.

C61(M)	Malignant neoplasm of prostate
1.QT.26.BA-EB	Brachytherapy, prostate, endoscopic per orifice approach, using interstitial radioactive implant

Therapeutic and Diagnostic Interventions Relevant to Neoplasm Coding

In effect 2001

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.

Therapeutic Interventions

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: 1.NM.59.BA-AG Destruction, large intestine, using endoscopic per orifice approach and laser
Includes: Debulking [neoplasm], large intestine

When a neoplasm is excised locally, with a margin of normal tissue, this is coded to rubric 1.^^.87.^^ Excision partial, body site. This is one of the most frequently selected rubrics for surgical treatment of neoplasms.

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. This intervention is coded as a partial excision of the anatomic site involved.

There may be skin grafting to the surgical defect (still within the same rubric)

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

1.^^.89.^^ Excision total, body site

When a neoplasm is excised by removing an entire body part (except amputations), this rubric is used. Again, a component of repair of the surgical defect site may be captured within this rubric.

Example: Simple total mastectomy with grafting of defect

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

1.^^.88.^^ Excision partial, with reconstruction, body site

There are four body sites which use this important rubric: Eyelid (CX), Esophagus (NA), Vulva (RW) and Breast (YM). This rubric includes an excision not as extensive as a radical excision, but with reconstructive surgery included, such as muscle flap repairs or prosthetic implants.

1.^^.91.^^ Excision radical, body site

In CCI, a radical excision does not [most often] mean a total excision of a body part, but rather an extensive partial excision which includes adjacent body structures and requires complex repair of the wide surgical defect. This rubric is often used for definitive surgical treatment of large malignant neoplasms.

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]

Diagnostic Interventions

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

2.^^.70.^^ Inspection, body site

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

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

2.^^.71.^^ Biopsy, body site

Biopsies are done in many ways: endoscopically, per orifice, needle aspiration, via open incision, etc. The intent must be to sample the tissue or neoplasm. If a complete excision of the neoplasm or abnormal tissue is done, with a margin of healthy tissue, this is coded to Excision partial, body site (see notes above).

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

Thalassemias are a group of inherited disorders resulting from an imbalance in the production of one of the four chains of amino acids that make up hemoglobin. Thalassemias are categorized according to the chain affected. As per the Merck Manual, the two main types are alpha-thalassemia (alpha chain is affected) and beta-thalassemia (the beta-chain is affected).

The alpha-thalassemias can be generally categorized as:

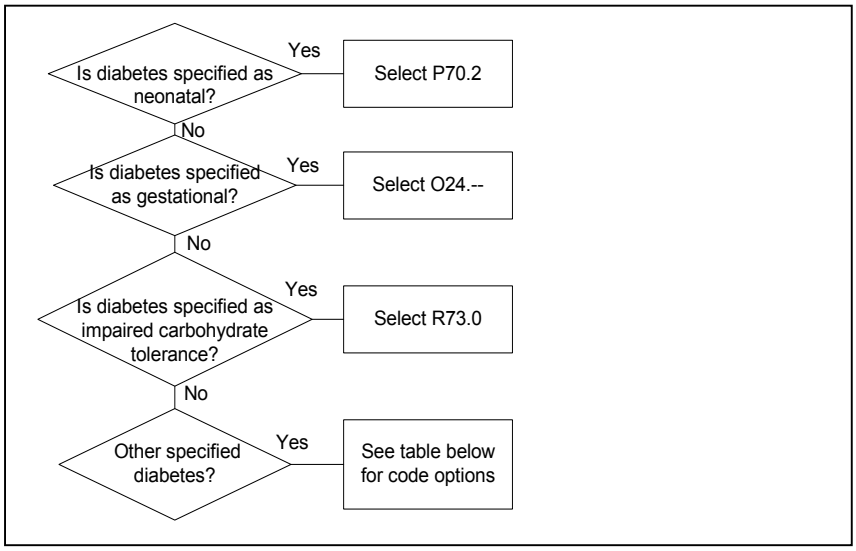
- Silent Carrier
- Alpha Thalassemia Trait
- Hemoglobin H Disease
- Hemoglobin H-Constant Spring
- Alpha Thalassemia Major

Manifestations of H-Constant Spring Disease include moderate to severe anemia with frequent febrile illnesses and viral infections, jaundice and splenomegaly. A total splenectomy may be performed as these patients are at risk for splenic and portal vein thrombosis. Blood transfusions may be required.

The code for H-Constant Spring Disease is D56.0—Alpha thalassaemia.

Chapter IV—Endocrine, Nutritional and Metabolic Diseases

Diabetes Mellitus (E10-E14)



Types of complication in diabetes	Type 1 diabetes mellitus	Type 2 diabetes mellitus	Other diabetes mellitus (Includes: MODY, NIDDMY)	Diabetes (mellitus), unspecified (type)
With hyperosmolarity	---	E11.0--	E13.0--	E14.0--
With acidosis	E10.1--	E11.1--	E13.1--	E14.1--
With renal complication	E10.2--	E11.2--	E13.2--	E14.2--
With ophthalmic complication	E10.3--	E11.3--	E13.3--	E14.3--
With neurological complication	E10.4--	E11.4--	E13.4--	E14.4--
With circulatory complication	E10.5--	E11.5--	E13.5--	E14.5--
With other specified complication	E10.6--	E11.6--	E13.6--	E14.6--
With multiple complications (e.g. foot ulcer)	E10.7--	E11.7--	E13.7--	E14.7--
Without (mention of) complication	E10.9--	E11.9--	E13.9--	E14.9--

General Classification Principles for Coding of Diabetes Mellitus

In effect 2001

Conditions stated as "diabetic" or "due to diabetes" can be classified to "with complication" categories in E10-E14.

The diabetes code(s) with fourth characters 2–7 require an additional code from other chapters to fully describe the condition. The codes E10.9--, E11.9--, E13.9-- and E14.9-- can be used alone.

Note: The following material is provided as a reference only and is not meant to supersede physician or other health care provider documentation.

Types of Diabetes Mellitus

The World Health Organization is currently revising the classification of diabetes mellitus to better reflect current internationally accepted diagnostic criteria and terminology. Canada, Australia and the United States have already accepted the international criteria and modified their versions of ICD-10 accordingly. Diabetes is now divided into four groups: type 1, type 2, other specific types, and gestational diabetes. This new classification includes conditions that commonly occur WITH diabetes mellitus. These conditions may or may not have been caused by the diabetes.

Type 1 Diabetes mellitus (E10.-)

Previously referred to as insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes. "Although it may occur at any age, type 1 DM most commonly develops in childhood or adolescence and is the predominant type of DM diagnosed before age 30. This type of diabetes accounts for 10 to 15% of all cases of DM and is characterized clinically by hyperglycemia and a propensity to diabetic ketoacidosis (DKA). The pancreas produces little or no insulin."[2]

"Commonly but not always, diabetes appears abruptly (i.e. over days or weeks in previously healthy non-obese children or young adults; in older age groups it may have a more gradual onset."[3] Type 1 diabetes is believed to have a long asymptomatic pre-clinical stage often lasting years, during which pancreatic beta cells are gradually destroyed. When the clinical stage is reached, insulin therapy is required initially. However, a so-called "honeymoon period" may develop, during which time smaller doses, (or even no insulin therapy) may be required because of partial recovery of beta cell function.

Brittle diabetics are type 1 diabetics who exhibit frequent, rapid swings in glucose levels without apparent cause.[4]

Type 2 Diabetes mellitus (E11.-)

Previously referred to as non-insulin dependent diabetes mellitus (NIDDM). "Type 2 diabetes is usually the type of diabetes diagnosed in patients >30 years, but it also occurs in children and adolescents. It is characterized clinically by hyperglycemia and insulin resistance. DKA is rare. Although most patients 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)."[5] Treatment by insulin therapy does not determine the type of diabetes and is not evidence of insulin dependency.[6]

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[2] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg 165.

[3] Cecil Textbook of Medicine 21st edition edited by Lee Goldman M.D.; J. Claude Bennett, M.D. W.B Saunders Company 2000 pg 1263

[4] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg 173.

[5] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg 165.

[6] Abstracted from the Australian Coding Standards—Volume 5 of ICD-10-AM 2nd edition.

Other specified diabetes mellitus (E13.-)
Refers to a variety of conditions that consist mainly of specific, genetic forms of diabetes, or diabetes associated with other disease or drug use.[7] An example is maturity onset diabetes of the young (MODY). Genetic research has provided new insights into the pathogenesis of MODY, which was formerly included as a form of Type 2 diabetes. Other examples include disease of the exocrine pancreas (e.g. pancreatitis, cystic fibrosis), endocrinopathies (e.g. Cushing's syndrome).[8]

Diabetes mellitus in pregnancy (O24.-)
Gestational diabetes mellitus is carbohydrate intolerance of variable severity with onset or first recognition during the current pregnancy. Pregnancy is a metabolic stress test for diabetes; women who fail the test and develop gestational diabetes may be obese, hyperinsulinemic, and insulin-resistant or thin and relatively insulin-deficient. Thus, this disorder is a heterogenous syndrome.[9]

Understanding Level of Control in Diabetes Mellitus
Diabetes of any type can become inadequately controlled. ICD-10-CA has added a mandatory 6th digit to all diabetes codes to indicate the level of control. Diabetes is classified primarily by type, secondarily by whether or not it is accompanied by complications affecting other body systems, and thirdly by whether it is adequately or inadequately controlled by the current treatment regime. The coding standard for selecting the appropriate 6th digit is based on criteria from the Canadian Diabetic Association 1998 Clinical Practice Guidelines for the Management of Diabetes in Canada. The clinical values are as follows:

Adequate control	
• with diet or oral agents • with insulin	➢ Fasting blood sugar $\leq$10 mmol/L ➢ Post cibum [pc] glucose level (within two hours of meal) $\leq$14 mmol/L ➢ Glycated Hb <140% of upper limit
Inadequate control	
• with diet or oral agents and insulin ***not*** used to stabilize • with diet or oral agents but adequately controlled ***with*** insulin • with insulin	➢ Fasting blood sugar >10 mmol/L ➢ Post cibum [pc] glucose level (within two hours of meal) >14 mmol/L ➢ Glycated Hb $\geq$ 140% of upper limit

[7] Canadian Diabetes Association 1998 Clinical Practice Guidelines for the Management of Diabetes in Canada

[8] Cecil Textbook of Medicine 21st edition edited by Lee Goldman M.D.; J. Claude Bennett, M.D. W.B Saunders Company 2000 pg 1263

[9] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg 2041.

Diagnosis Typing of Diabetes Mellitus

In effect 2001

Any diagnosis code from the range E10 to E14 must be typed as either a "Most Responsible Diagnosis" (M) or a comorbid condition (1) whenever there is a single episode of inadequate control of the condition. This means that there is evidence of a fasting blood sugar >10 mmol/L or post cibum blood sugar level (2 hours following meal) >14 mmol/L. Diabetes mellitus should never be assigned a diagnosis type (2).

Selecting the Appropriate 6th Digit From the Diabetes Tables

In effect 2001

Physician documentation should always be the first source with regard to the level of control for a particular patient. When documentation does not provide this information, the laboratory reports should be checked for blood sugar levels that are specified in the table above. As these values are high in the range, a single blood sugar value at this level or higher constitutes inadequate control. When blood sugar levels are maintained lower than these values, the patient's diabetes is considered to be under adequate control. The 6th digit "9" for level of control unspecified should be used rarely and would apply only when there is no documentation of the level of control at all and no blood sugar levels present on the chart.

Example: 54-year-old female presents with chest pain. She has been a type 2 diabetic for many years but manages well on Diabeta. Fasting blood sugars during admission were well within an acceptable range.

R07.4	(M)	Chest pain, unspecified
E11.900	(3)	Type 2 Diabetes without (mention of) complication, adequately controlled with diet or oral agents

Example: 61-year-old male with type 2 diabetes admitted for treatment of an inguinal hernia. He is usually well controlled with diet, however following surgery, he had an episode of nausea and vomiting and one fasting blood sugar was reported as 11 mmol/L. He required insulin to bring these values under control.

K40.9	(M)	Unilateral or unspecified inguinal hernia, without obstruction or gangrene
R11.3	(3)	Nausea with vomiting
E11.903	(1)	Type 2 Diabetes mellitus without (mention of) complication, inadequately controlled with diet or oral agents but adequately controlled with insulin

Example: 45-year-old male with known longstanding type1 diabetes mellitus presents for hemodialysis due to progression of diabetic nephropathy. PC glucose levels ranged from 10-12 mmol/L while in hospital and his insulin treatment will remain the same.

E10.211 (M) Type 1 Diabetes mellitus with established diabetic nephropathy, adequately controlled with insulin

N08.3 (3) Glomerular disorders in diabetes mellitus (E10-E14† with common fourth character .2)

Example: 70-year-old male admitted with uncontrolled type 2 diabetes. While in hospital he was seen by the Diabetic education staff and taught how to eat properly to keep his diabetes under control.

E11.902 (M) Type 2 Diabetes mellitus without (mention of) complication, inadequately controlled with diet or oral agents (and insulin not used to stabilize)

Example: 50-year-old female with type 2 diabetes fairly well controlled with oral agents admitted to hospital for a hysterectomy for uterine fibroids. She was extremely nervous about the upcoming surgery and there was some concern about whether or not her diabetes would be controlled at an optimal level following surgery. She was given one dose of insulin as a prophylactic measure.

D25.9 (M) Leiomyoma of uterus, unspecified
E11.900 (3) Type 2 Diabetes mellitus without (mention of) complication, adequately controlled with diet or oral agents

Note: Even though this patient was given insulin, the 6th digit of "0" is selected due to the fact that the diabetes remained adequately controlled.

Example: Type 2 DM adequately controlled with insulin during this admission, however history states that patient was initially only on oral medication, then 3 years ago, started on insulin.

E11.901 (M) Type 2 Diabetes mellitus without (mention of) complication, adequately controlled with insulin

Diabetes Without Mention of Complication

In effect 2001, amended 2003

E10.9.--, E11.9--, E13.9.-- or E14.9.-- should not be recorded on the same abstract as another code between the range of E10.1-- to E14.7-- inclusive.

Example: Parents brought this 8-year-old boy in complaining that he has started "wetting" his bed. The physician diagnosed the patient with Juvenile Diabetes based on lab tests.

E10.90^ Type 1 Diabetes mellitus without (mention of) complication, level of control would be selected based on the laboratory values. (See directions in the classification).

Example: Patient is a newly diagnosed Type 2 diabetic admitted for inadequate control of his blood sugar. Insulin was not used during this admission to stabilize the patient's condition. Dietetic counseling was provided and the patient was sent home on oral medication and an appointment with the Diabetes Clinic.

E11.902 Type 2 Diabetes Mellitus without (mention of) complication, inadequately controlled with diet or oral agents (and insulin not used to stabilize)

Note: Diabetes mellitus must be clearly documented by the physician before it can be coded. Coders must always refer to laboratory values on the patient's chart and compare the results with values identified within the classification for assigning the last digit of the diabetes code.

Borderline Diabetes

In effect 2003

According to the Canadian Diabetes Association[10] "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. Difficulty arises from assuming that "borderline" diabetes is not as important as "real" diabetes, or assuming that treatment can be less careful than for "true" diabetes.

Diabetes is diagnosed when blood sugar levels are higher than an accepted normal range. The simplest rules to remember are: it is not normal to have a fasting blood glucose level over 7.0 mmol/L, or a random (anytime of day) sugar that is greater than 11.1 mmol/L. A diagnosis of diabetes may be made by a physician when two blood glucose level readings are found above these ranges. Therefore, a person with blood glucose levels of 20 mmol/L has diabetes, just as does the person with blood glucose of 12 mmol/L.

[10] This coding standard was approved in its entirety by the Canadian Diabetic Association in July 2002.

There are two leading goals of diabetes treatment: to get rid of the symptoms that come when blood glucose levels are high (such as thirst, frequent urination and blurred vision), and to prevent any complications from the diabetes. Someone with blood glucose levels just high enough to fit the definition of diabetes may not have any symptoms at all, and this is the person who is often labeled as having "borderline" diabetes.

Unfortunately, complications from diabetes can occur even without any symptoms of high blood glucose and in this regard diabetes can be very devious. It's not uncommon for an individual to develop major foot ulcer or kidney trouble without realizing that the blood glucose levels were causing any harm. Diabetes Type 2 can change in severity as time goes on. For instance, when blood glucose levels slowly creep higher the body will gradually adapt itself, and there may be no warning symptoms until the blood glucose has been quite high for many months.

Example: Consider Mrs. X, a 40 year-old obese woman who was diagnosed with Type 2 diabetes mellitus, then worked hard at following the meal plan, started to exercise every day and lost a significant amount of weight. The blood glucose levels on her meter are now all within the 4 to 6 mmol/L range. In this instance, her diabetes has become well controlled but it did not go away. Mrs. X would need to continue to be active and follow her meal plan in order to maintain her blood glucose level within this range. **Note: Diabetes never really goes away, although it can be very well controlled.**

E11.900	Type 2 diabetes mellitus without (mention of) complication, Adequately controlled* with diet or oral agents.

Part of the misunderstanding about being "borderline" is the assumption that blood glucose levels are the only abnormality in diabetes. There are many changes that go along with a diagnosis of type 2 diabetes that may not depend on the sugar level at all. There can be high blood pressure, increased total cholesterol and triglycerides (blood fats), low levels of HDL ("good") cholesterol; high insulin levels; increased resistance of muscle and liver to the effects of insulin. These abnormalities may not all go back to normal even if blood glucose levels are well controlled. Patients, therefore, should continue to have appropriate treatment.[11]

Impaired Glucose Tolerance

Impaired glucose tolerance (IGT) describes a state where the blood glucose levels are not fully within the diabetes ranges noted above, but neither are they quite normal. This condition is diagnosed using an oral glucose tolerance test: a drink of sugar is given on an empty stomach, and blood glucose levels are tested every half-hour for two hours. When the blood glucose levels after the sugar drink are moderately elevated, then the person has impaired glucose tolerance. This isn't borderline diabetes but rather a "between" condition where up to five percent of people with IGT can progress to true diabetes (usually type 2) each year.

[11] MacManus, R. (reviewed 2001), Diabetes Dialogue, Spring 1996. Borderline Diabetes

Even without going on to type 2 diabetes, a diagnosis of IGT has some concerns of its own. Many people with this will be at risk for high blood pressure, high cholesterol and triglyceride levels, heart and blood vessel disease, and a higher risk of death than people with lower blood glucose levels.

In ICD-10-CA, impaired glucose tolerance is included under R73.0—Abnormal glucose tolerance test along with other terms like chemical diabetes, latent diabetes and prediabetes.

Acute Complications of Diabetes

In effect 2001

If acidosis is present assign a code from E10.1--. E11.1--, E13.1--, or E14.1--Diabetes with acidosis.

Diabetic ketoacidosis (DKA) (usually in Type 1 diabetics) may herald the onset of type 1 diabetes but most often (>80%) occurs in previously diagnosed diabetics as a result of intercurrent illness, an inappropriate reduction in insulin dosage or missed injections. The two main clinical features of DKA are hyperglycemia and hyperketonemia.[12] Type 2 DM patients rarely have DKA.

Nonketotic hyperglycemic-hyperosmolar coma (NKHHC) "is a syndrome characterized by hyperglycemia, extreme dehydration, and hyperosmolar plasma leading to impaired consciousness, sometimes accompanied by seizures." It is a complication of Type 2 diabetes and has a mortality rate of over 50%.[13] Even though stated in the title, do not assume that NKHHC refers to an actual comatose state unless the physician clearly documents this. As mentioned in the definition, hyperosmolarity is usually accompanied by an altered state of consciousness or seizures.

Chronic Complications of Diabetes

In effect 2001, amended 2003

The fourth character of the diabetes mellitus codes (range E10-E14) identifies the systemic manifestation. Each of these categories requires an additional code to further identify the specific manifestation even if the title of the appropriate rubric appears to include it. The diabetes code tables are set up in such a way that the code choices follow the progression of the disease process beginning with the mildest form of a given chronic complication and followed by more severe stages.

[12] Cecil Textbook of Medicine 21st edition edited by Lee Goldman M.D.; J. Claude Bennett, M.D. W.B Saunders Company 2000 pg 1277

[13] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg179.

Diabetic nephropathy develops in about one third of patients with Type 1 diabetes mellitus and in a smaller percentage of patients with type 2 diabetes mellitus. The codes for this diagnosis have a common 4th digit of 2 across the types of diabetes and the 5th digits are arranged by severity. Incipient diabetic nephropathy is the beginning stage of renal disease. This may then progress to established diabetic nephropathy and in some cases, is eventually followed by end stage renal disease (ESRD). See coding standard on "Diabetic Nephropathy".

Example:	E10.211	(M)	Type 1 DM with established diabetic nephropathy, adequately controlled with insulin
	N08.3*	(3)	Glomerular disorders in diabetes mellitus (E10-E14† with common fourth character .2)

Example:	E11.283	(M)	Type 2 DM with other specified renal complication, inadequately controlled with diet or oral agents but adequately controlled with insulin
	N17.9	(3)	Acute renal failure, unspecified

Diabetic retinopathy eventually develops in about 85% of all diabetics. Background retinopathy does not significantly alter vision, but it can eventually lead to proliferative retinopathy with retinal detachment or hemorrhage, which can cause blindness.[14] "Advanced non-proliferative lesions occur if retinal ischemia becomes more severe, including intraretinal microvascular abnormalities, dilated capillaries that are very permeable, and venous irregularities. They compose the 'pre-proliferative phase' of retinopathy, which predicts a high risk for proliferative retinopathy within 1 to 2 years."[15]

Diabetic cataracts occur at a younger age and progress more rapidly to a mature opacity. Young people with IDDM occasionally develop snowflake or metabolic cataracts. Poor control of the diabetes may be a predisposing factor. A diabetic cataract is characterized by bilateral white punctate or snowflake anterior and posterior subcapsular opacity 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. The opacity may lessen or resolve with improved glycemic control.

E1-.35^—Diabetes mellitus with cataract should only be assigned when the physician states a causal relationship between the cataract and diabetes. It may be documented as "diabetic cataract" or "cataract due to diabetes". See coding standard on "Diabetic Cataracts".

Symptomatic, potentially disabling **diabetic neuropathy** affects nearly 50% of all diabetic patients.

[14] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg 1168.

[15] Cecil Textbook of Medicine 21st edition edited by Lee Goldman M.D.; J. Claude Bennett, M.D. W.B Saunders Company 2000 pg 1280

The mononeuropathies are isolated lesions affecting the cranial or peripheral nerves and are painful and distressing but tend to resolve over time.

Distal (symmetrical) sensorimotor neuropathy is the most common manifestation of diabetic neuropathy and involves all somatic nerves but has a distinct predilection for distal sites (e.g. feet and hands).

Autonomic neuropathy produces a wide range of problems and has a poor prognosis. Neuropathic lesions may result in abnormalities of the cardiovascular system, skin, gastrointestinal tract, bladder, and sexual function.

Patients with cardiovascular autonomic neuropathy are more likely to have silent myocardial ischemia or infarction. Defective heart rate and blood pressure response to exercise could also lead to an acute cardiac event.

Autonomic pseudomotor dysfunction is characterized by distal anhidrosis, truncal and facial sweating, heat intolerance and on occasion gustatory sweating. Altered gastrointestinal function is frequent. The most common symptom is constipation but the most distressing is diarrhea. Gastroparesis may lead to bloating or nausea and vomiting. Bladder dysfunction leads to infrequent urination, incomplete emptying, dribbling and overflow incontinence and residual urine volumes may cause urinary tract infection. Impaired sexual function is characterized in males by impotence and retrograde ejaculation.[16]

Example:	E11.429†		Type 2 DM with autonomic neuropathy, level of control unspecified
	G99.0*	(3)	Autonomic neuropathy in endocrine and metabolic diseases
	K59.1	(3)	Functional diarrhoea

Example:	E10.401†		Type 1 DM with mononeuropathy, adequately controlled with insulin
	G59.0*		Diabetic mononeuropathy
	G58.7	(3)	Mononeuritis multiplex

[16] Cecil Textbook of Medicine 21st edition edited by Lee Goldman M.D.; J. Claude Bennett, M.D. W.B Saunders Company 2000 pg 1283

Diabetic Nephropathy

In effect 2002

Diabetes Mellitus can result in degenerative damage to the kidneys particularly at the capillary level in the glomeruli. The diabetes code tables are set up in such a way that the code choices generally follow the progression of the disease process beginning with the mildest form of a given chronic complication going on to the more severe stages.

Diabetic nephropathy develops in about one third of Type 1 DM patients and in a smaller percentage of Type 2 DM patients. The codes have a common 4th digit of 2 across all types of diabetes. The 5th digits are arranged by severity. Incipient diabetic nephropathy is the beginning stage of the renal disease and this may then progress to established diabetic nephropathy and finally to end stage renal disease.

The asterisk code for diabetic nephropathy identified in the Alphabetical Index is N08.3* —Glomerular disorders in diabetes mellitus (E10-E14† with common fourth character.2)

When the disease has progressed to end stage renal failure, an additional code for the renal failure should also be assigned.

Example: Patient with type 1 diabetic nephropathy (level of control unspecified) is in hospital for insertion of a peritoneal dialysis catheter. The plan is to treat his end stage renal disease with peritoneal dialysis.

Z49.0	(M)	Preparatory care for dialysis
E10.229	(3)	Type 1 Diabetes mellitus with end-stage renal disease [ESRD], level of control unspecified
N08.3*	(3)	Glomerular disorders in diabetes mellitus
N18.0	(3)	End-stage renal disease

Renal insufficiency, NOS has been indexed to unspecified renal failure. ICD-10-CA classifies chronic renal impairment and chronic renal insufficiency as chronic renal failure.

Example: Patient with diabetes mellitus type 1 is diagnosed with renal insufficiency as a manifestation of his diabetic nephropathy. Oral medication was used to control his blood sugar levels. He was referred to a nephrologist for monitoring and treatment of his renal disease.

E10.220	(M)	Type 1 Diabetes mellitus with end-stage renal disease [ESRD], Adequately controlled with diet or oral agents
N08.3*	(3)	Glomerular disorders in diabetes mellitus
N19	(3)	Unspecified renal failure

Example: Type 1 diabetes mellitus (controlled on insulin) with diabetic nephropathy and secondary hypertension.

E10.291	(M)	Type 1 Diabetes mellitus with renal complication, unspecified, adequately controlled with insulin
N08.3*	(3)	Glomerular disorders in diabetes mellitus
I15.10	(3)	Benign or unspecified hypertension secondary to other renal disorders

Example: Chronic renal failure due to type 1 diabetic nephrotic syndrome. Diabetes controlled with insulin.

E10.221	(M)	Type 1 Diabetes mellitus with end-stage renal disease [ESRD], adequately controlled with insulin
N08.3*	(3)	Glomerular disorders in diabetes mellitus
N18.8	(3)	Other chronic renal failure

Diabetic Cataracts

In effect 2002

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 IDDM 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 states a causal relationship between the cataract and diabetes. It may be documented as "diabetic cataract" or "cataract due to diabetes".

When a causal relationship is not documented, cataracts in diabetic patients should be assigned the appropriate cataract code and E1-.90 ^—Diabetes mellitus without (mention of) complication. (Selection of the sixth digit is dependent on chart documentation.) This may be reported as an additional diagnosis when the focus of treatment is the cataract.

Example: Mrs. X is an elderly lady who has been a type 2 diabetic for fifteen years has been having blurred vision for the past year. Nuclear sclerotic cataracts are present bilaterally. The fundi are basically clear with no active diabetic retinal changes. She is scheduled for left cataract extraction with lens implant.

H25.11 (M)	Senile nuclear cataract
E11.909 (3)	Type 2 diabetes mellitus without (mention of) complication, level of control unspecified

Example: Mike is a 30-year-old type 1 diabetic who has developed a diabetic cataract in the right eye. He does not have adequate control of his diabetes and his insulin will be adjusted.

E10.354 (M)	Type 1 Diabetes mellitus with cataract, Inadequately controlled with insulin
H28.0* (3)	Diabetic cataract

Diabetes With Circulatory Complications

In effect 2001

Poorly controlled hyperglycemia over the years often leads to the development of microvascular and macrovascular complications which, indeed, may be diagnosed even before the diabetes in some patients.

Amputation of a lower limb for severe peripheral vascular disease, intermittent claudication and gangrene is still relatively common.[17] ICD-10-CA has a new category for circulatory complications that includes those that involve peripheral angiopathy as well as conditions such as diabetic cardiomyopathy. Whenever a person with (diagnosed) diabetes is being treated for:

- Diabetic peripheral vascular disease [PVD], use .50- with the appropriate rubric (E10–E14) and I79.2*

Example:

E10.509		Type I diabetes mellitus with peripheral angiopathy, level of control unspecified
I79.2*	(3)	Peripheral angiopathy in diseases classified elsewhere

- Diabetic (atherosclerotic) gangrene, use .51- with the appropriate rubric (E10–E14) and I70.2
- Diabetic cardiomyopathy NOS, use .58- with the appropriate rubric (E10–E14) and I43.8*

Diabetic Cardiomyopathy Treated by Heart Transplant

Diabetic cardiomyopathy is newly classified using the dagger and asterisk convention in ICD-10-CA. In our current casemix grouping methodology, this change in the classification may cause anomalous CMG assignment as it did using ICD-9-CM or ICD-9.

[17] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg168.

Whenever a heart transplant is performed for diabetic cardiomyopathy, sequence the codes as follows:

E10-E14 with .58-	(M)	Diabetes mellitus with other specified circulatory complication
I43.8*	(3)	Cardiomyopathy in other diseases classified elsewhere

Diabetic Arthropathy

In effect 2001, amended 2003

Joint problems are important causes of morbidity in DM. The major predisposing factor is the diabetic polyneuropathy. Alterations in proprioception lead to an abnormal pattern of weight bearing and sometimes lead to the development of Charcot's joints.[18] The conditions listed under "other skin and subcutaneous complications" with the common 4th character of .6 are recognized complications of diabetes.

Joint Replacement for Osteoarthritis and Diabetic Arthropathy

Diabetic polyneuropathy predisposes the diabetic to joint problems—particularly in the foot—since it frequently leads to abnormal joint loading. When a diabetic is admitted for a joint replacement it may not be assumed that the arthropathy is purely diabetic in etiology. Other factors such as obesity may also be involved and neurogenic (Charcot's) arthropathy is, in its early stages, often confused with osteoarthritis. The only occasion that it is correct to use .60- with a rubric from E10–E14 is when the physician has clearly stated that the arthropathic disorder is diabetic in origin.

Anytime a patient is diagnosed with diabetic osteoarthritis, this should also be classified as a "secondary osteoarthritis". This is extremely important for national arthritis statistics.

Example: A diabetic is diagnosed with diabetic osteoarthropathy/osteoarthritis of the knee and a total knee replacement is performed. The correct sequence of the diagnosis codes is:

E10–E14 with .60-	(M)	Diabetes mellitus with musculoskeletal and connective tissue complication
M14.2*	(3)	Diabetic arthropathy
M17.5	(3)	Other secondary gonarthrosis

Example: A diabetic is diagnosed with osteoarthritis of the knee but there is no clear statement that the diabetes is the only underlying cause. The correct sequence of the diagnosis codes is:

M17.9	(M)	Gonarthrosis, unspecified
E10–E14 with .90-	(3)	Diabetes mellitus without (mention of) complication

[18] The Merck Manual, 17th edition, Mark H. Beers, Robert Berkow, ed. Merck Research Laboratories, Whitehouse Station, N.J., 2000, pg169.

Diabetic Foot

In effect 2001, amended 2003

The **"diabetic foot"** results from a complex interplay of factors and for this reason; the diabetic foot is classified to multiple complications with a common 4th character of .7. (E10.7--, E11.7--, E13.7--, E14.7--). "To varying degrees, the diabetic foot is characterized by chronic sensorimotor neuropathy, autonomic neuropathy, and poor peripheral circulation; visual loss may also contribute to difficulties with self care." [19]

When diabetic foot is documented, assign the following codes:

E1*.70*-	Diabetes with multiple complications (plus 6th digit to indicate level of control)
L97.-	Ulcer of lower limb, not elsewhere classified

Diabetes With Other Specified Multiple Complications

The use of the code E10.78- should be reserved for use when classifying diabetic patients with multiple manifestations that are <u>not</u> being actively treated in the current episode of care. To allow for accurate retrieval of information about diabetes, manifestations <u>receiving</u> treatment should be classified using the appropriate 4th character of the diabetic code.

Example: An 80-year-old female is admitted for a fractured hip following a fall after tripping over a rug in her home. This patient has had Type 2 diabetes for many years along with diabetic pre-proliferative retinopathy, constant microalbuminuria and evidence of cranial nerve palsy. She was treated with an open reduction of the femur and after a week of bed rest slowly began ambulating.

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, home
U99.9	(9)	During unspecified activity
E11.780	(3)	Type 2 diabetes with other multiple complications, adequately controlled with diet or oral agents
N39.1	(3)	Persistent proteinuria, unspecified
H35.0	(3)	Background retinopathy and retinal vascular changes
G59.0	(3)	Diabetic mononeuropathy

[19] Cecil Textbook of Medicine 21st edition edited by Lee Goldman M.D.; J. Claude Bennett, M.D. W.B Saunders Company 2000 pg 1283

Example: This 80-year-old type 2 diabetic was admitted for diabetic end-stage renal disease and treated with hemodialysis and was seen in consultation for her diabetic gastroparesis to determine if a hemigastrectomy was necessary. She had previously been treated with oral agents alone, but on this admission, insulin was necessary to control her hyperglycemia as a fasting blood sugar of 12 was reported on one occasion.

E11.223†	(M)	Type 2 diabetes with end-stage renal disease [ESRD], inadequately controlled with diet or oral agents but adequately controlled with insulin
N08.3*	(3)	Glomerular disorders in diabetes mellitus (E10-E14† with common fourth character.2)
N18.0	(3)	End-stage renal disease
E11.423†	(1)	Type 2 diabetes with autonomic neuropathy, inadequately controlled with diet or oral agents but adequately controlled with insulin
G99.0*	(3)	Autonomic neuropathy in endocrine and metabolic diseases
K31.8	(3)	Other specified diseases of stomach and duodenum

Dehydration

In effect 2002

Dehydration must be clearly documented before it can be coded. Dehydration, without gastroenteritis or diarrhea as the underlying cause, is typed as M, 1 or 2 if the electrolyte balance is severe enough to warrant rehydration with intravenous fluids.

Example: An elderly man, living alone, is found in a state of confusion and dehydration. He improves significantly following intravenous fluid treatment and is sent home with homecare to visit three times a week.

E86.0	(M)	Dehydration
R41.0	(3)	Disorientation, unspecified

Example: A child is admitted through emergency after having been retrieved from a car where his uncle left him for two hours in intense heat. He is suffering dehydration and heat prostration and is treated with intravenous fluids and cooling baths. Social work has been notified.

T67.4	(M)	Heat exhaustion due to salt depletion
E86.0	(1)	Dehydration
Y06.8	(9)	Neglect and abandonment, by other specified persons

* No place of occurrence or activity code is required with Y06.-

If dehydration results in mild electrolyte imbalance and it is documented but not treated with intravenous fluids, it should not be coded as a significant comorbid diagnosis. Because aggressive treatment is not directed to the condition, it is optional to code it at all. If it is coded, a diagnosis type 3 must be assigned.

Example: A type 1 diabetic is admitted to stabilize his condition. He has a random blood sugar > 14mmol/L on admission and is considered inadequately controlled with his Diabeta protocol. He is given insulin twice and responds to this treatment well with fasting and random blood sugar levels well within the adequate range. The physician documents dehydration and prescribes an increase in oral fluids.

E10.903	(M)	Type 1 diabetes mellitus without (mention of) complication, inadequately controlled with diet or oral agents but adequately controlled with insulin
E86.0	(3)	Dehydration (Optional code)

See also coding standard on "Gastroenteritis and Diarrhoea".

Medium Chain Acyl-CoA Dehydrogenase Deficiency

In effect 2003

Medium chain acyl-CoA dehydrogenase (MCAD) is a tetrameric flavoprotein essential for the beta-oxidation of medium chain fatty acids. MCAD deficiency (MCADD) is an inherited error of fatty acid metabolism.

This condition must be coded to E71.3 Disorders of fatty-acid metabolism.

Chapter V—Mental and Behavioural Disorders

Postpartum Depression

In effect 2001

The category F53 includes only mental disorders associated with the puerperium that commence within six weeks of delivery. Postpartum depression is classified to F53.0—Mild mental and behavioural disorders associated with the puerperium, not elsewhere classified. This does not require any additional code from Chapter XV.

Chapter VI—Diseases of the Nervous System

Intracranial Resection of Lesions or Neoplasms

In effect 2001

Debulking a Space-Occupying Lesion

Not every intracranial neoplasm can be completely excised. (Sometimes the neurological defect would be so severe as to outweigh the benefits of total eradication of the neoplasm.) When an intramarginal excision of a lesion is performed it is frequently termed a "debulking" of a tumour—this is not a biopsy—and it is often performed using an ultrasonic aspirator. Common names for this frequently used tool are "Cavitron" and Cavitronic ultrasonic aspirator [CUSA].

Following this intralesional 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.

Duraplasty and Cranioplasty Following Intracranial Resection

To gain access to the brain, the cranium and dura must be incised. While raising/closing of a cranial flap and incising/reapproximating dura are considered an integral part of any invasive intracranial intervention, there are two occasions when it becomes necessary to code a concomitant cranial and dural repair.

1) The cranioplasty is so extensive it involves the use of a plate/screw device (1.EA.80.^^)
2) The duraplasty is so extensive it involves a dural graft (1.AA.80.^^)

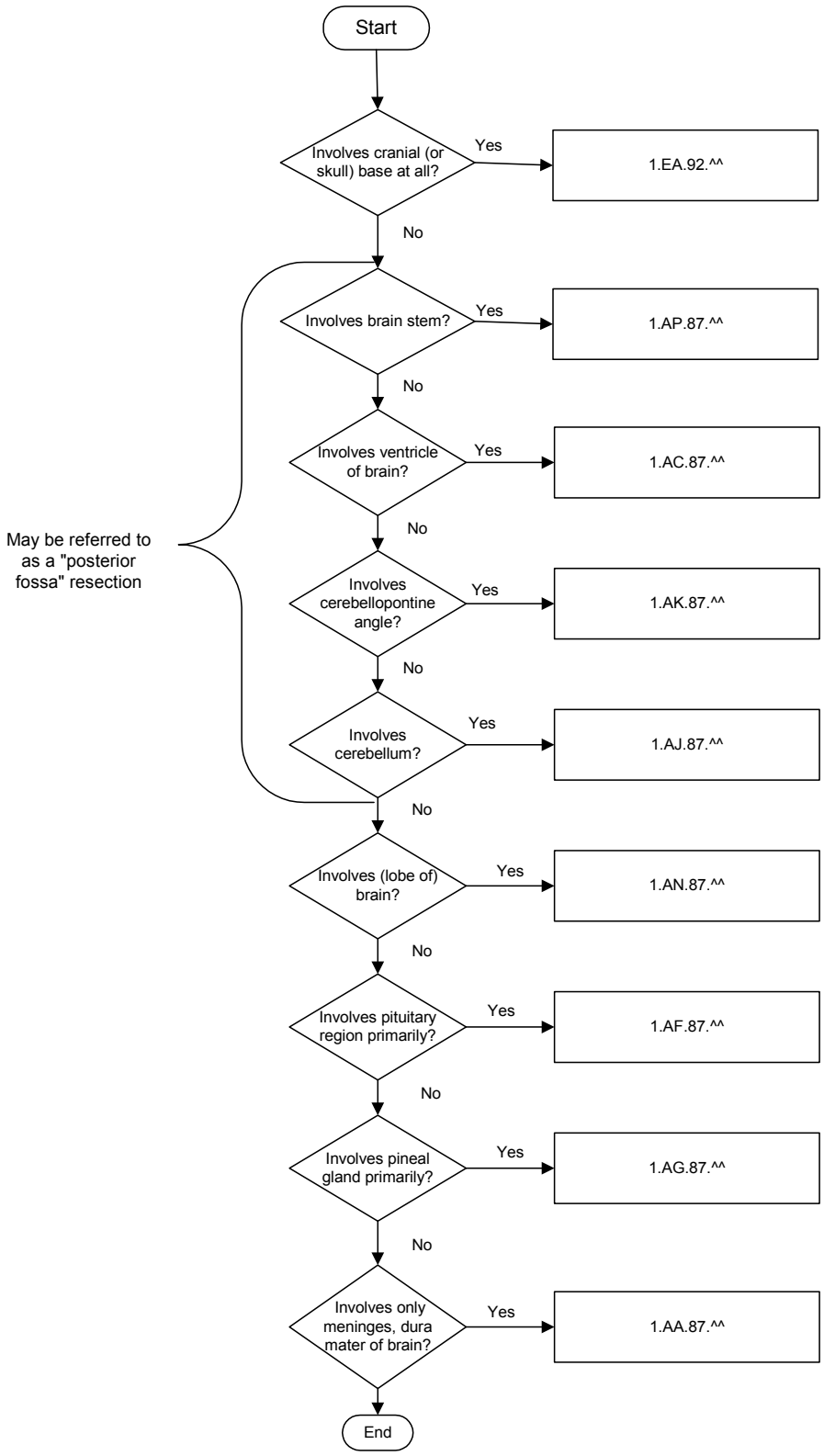
Neither of these situations is a normal expectation of intracranial surgery and to properly reflect the extensive defect closure, separate codes are required when applicable.

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.

The following code finder is also provided as a quick reference during coding of resections that overlap regions of the brain:

Code Finder


Start
Involves cranial (or skull) base at all?
Yes
1.EA.92.^^
No
Involves brain stem?
Yes
1.AP.87.^^
No
Involves ventricle of brain?
Yes
1.AC.87.^^
No
Involves cerebellopontine angle?
Yes
1.AK.87.^^
No
Involves cerebellum?
Yes
1.AJ.87.^^
No
May be referred to as a "posterior fossa" resection
Involves (lobe of) brain?
Yes
1.AN.87.^^
No
Involves pituitary region primarily?
Yes
1.AF.87.^^
No
Involves pineal gland primarily?
Yes
1.AG.87.^^
No
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

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 the catheters over the course of its installation. With any long-term indwelling catheter system, it is also quite common to replace it in its entirety, especially in a growing child.

Partial Revision

When part of a shunt system is being "revised", this will be coded to one of the following, depending on the originating site of drainage (where the blockage lies):

1.AC.54.^^ Management of internal device, ventricles of brain (e.g. ventriculo-)
1.AP.54.^^ Management of internal device, brain stem (e.g. syringo-)
1.AX.54.^^ Management of internal device, spinal canal (e.g. -thecal)

Note that the qualifier portion of the code will identify in what region of the body the shunt terminates.

Complete Revision

When the entire shunt system is being removed and another system is reinstalled, two codes must be used in order to identify this type of "revision". The principal intervention is the insertion of the new system and the secondary intervention is the removal of the old system. Once again, depending on the originating site of drainage (where the blockage lies), this will be coded as per one of the following code sets:

1.AC.52.^^ Drainage, ventricles of brain (e.g. ventriculo-)
1.AC.55.^^ Removal of device or appliance, ventricles of brain

1.AP.52.^^ Drainage, brain stem (e.g. syringo-)
1.AP.55.^^ Removal of device or appliance, brain stem

1.AX.52.^^ Drainage, spinal canal (e.g. –thecal)
1.AX.55.^^ Removal of device or appliance, spinal canal

Seizures

In effect 2001, amended 2003

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 approved by the World Health Organization.

Common Terminology for Seizure Disorders	ICD-10-CA Code	ICD-10-CA Code Description
Simple partial seizure *Includes: focal or local seizures (no loss of consciousness), Jacksonian seizure, somatosensory or somatomotor seizure*	G40.1	Localized related (focal)(partial) epilepsy & epileptic syndromes with simple partial seizures
Complex partial seizure *Includes: focal or local seizures with a loss of consciousness, psychomotor or psychosensory seizures*	G40.2	Localized related (focal)(partial) epilepsy & epileptic syndromes with complex partial seizures
Generalized absence seizure *Includes: petit mal seizure*	G40.7	Petit mal, unspecified, without grand mal seizures
Myoclonic seizure *Includes: Myoclonic epilepsy with ragged red fibres (MERRF)*	G40.4	Other generalized epilepsy & epileptic syndromes
Tonic seizure	G40.3	Generalized epilepsy & epileptic syndromes
Clonic seizure	G40.3	Generalized epilepsy & epileptic syndromes
Tonic—clonic seizure *Includes: grand mal seizure*	G40.6	Grand mal seizures, unspecified (with or without petit mal)
Atonic (akinetic) seizure	G40.3	Generalized epilepsy & epileptic syndromes
Seizures not otherwise specified which are induced by alcohol, drugs, stress, sleep deprivation or photosensitivity	G40.5	Special epileptic syndromes
Epileptic seizure, not otherwise specified *Includes: Epileptic convulsion NOS*	G40.9	Epilepsy unspecified
Febrile seizure	R56.0	Febrile convulsions
Infantile seizure NOS	R56.8	Other and unspecified convulsions
Newborn seizure	P90	Convulsions of newborn
Seizure NOS *Includes: Convulsion NOS* *Seizure disorder NOS*	R56.8	Other and unspecified convulsions

Note: A patient with a known (epileptic) seizure disorder who, during admission, suffers <u>continuous</u> 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.

When selecting a code from the category G41—Status epilepticus, another code from the category G40—Epilepsy, is not necessary.

Code also: any associated condition or external cause of the seizure activity.

Neurological Deficits Following a Stroke

In effect 2002

A "sequela" or "late effect" of a disease is a current condition that was caused by a previously occurring condition. There is no time limit as to when a sequela code may be used. The residual condition (sequela) may be apparent early in the process, such as neurological deficits occurring following a cerebral infarction. [20] All neurological deficits, such as paralysis, dysphagia, aphasia, urinary incontinence and fecal incontinence, affecting the management and treatment of the patient during the acute care phase of the condition may be coded as comorbid conditions.

Criteria used for assignment of the following symptom codes are as follows:

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.

R15 Faecal incontinence—may be assigned a diagnosis type 1 when it is still present at discharge or persists for at least 7 days.

R32 Unspecified urinary incontinence—may be assigned a diagnosis type 1 when it is still present at discharge or persists for at least 7 days.

ICD-10-CA has enhanced the category G81—Hemiplegia for greater specificity in type of hemiplegia and dominant versus non-dominant side affected. Please note that for primary coding as MRDx, this category is to be used only when hemiplegia (complete) (incomplete) is reported without further specification, or is stated to be old or longstanding but of an unspecified cause. The category is also for use in multiple coding to identify these types of hemiplegia resulting from any cause.

Example: 67-year-old patient admitted to nursing home with diagnosis of hemiplegia of dominant side.

G81.90	(M)	Hemiplegia of unspecified type of dominant side

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
I69.4	(3)	Sequelae of stroke, not specified as hemorrhage or infarction

The category "I69—Sequelae of Cerebrovascular disease", is to be used to indicate conditions in (I60-I67) as the cause of sequelae, themselves classified elsewhere. The "sequelae" include conditions specified as such or as late effects, or those present one year or more after onset of the causal condition.

[20] Extracted from NCCH ICD-10-AM, July 2000, General Standards for Diseases.

The code I69—Sequelae of Cerebrovascular disease may not be assigned alone. It should always be preceded by a code indicating a late effect manifestation, a sequela. It should be assigned a diagnosis type 3.

Example: Patient admitted for treatment of focal seizure disorder—a late effect of his stroke.

G40.0	(M)	Localization-related (focal)(partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset
I69.4	(3)	Sequelae of stroke, not specified as hemorrhage or infarction

Example: Six months post-stroke a person is admitted to hospital with aspiration pneumonia which is queried to be secondary to dysphagia which is still present despite rehabilitation efforts.

J69.0	(M)	Aspiration pneumonia
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)	Fracture hip unspecified, closed
G81.99	(3)	Hemiplegia, unilateral (not specified as dominant/non-dominant side
I69.4	(3)	Sequelae of stroke, not specified as hemorrhage or infarction
W01	(9)	Fall on same level from slipping, tripping and stumbling
U98.0	(9)	Place of occurrence, at home

See coding standard on "Strokes, Cerebrovascular Accidents and Transient Ischemic Attacks" in Chapter IX—Diseases of the Circulatory System, for more information and examples.

Chapter VII—Diseases of the Eye and Adnexa

Cataracts

In effect 2001

Cataracts should be coded with as much specificity as is possible to derive from the documentation to the range at H25–H28.

- After cataract is classified to H26.4.
- Cataracts in a diabetic patient should not be classified as "diabetic cataract" unless specified as such by the physician. When stated as such, assign the diabetes code first (E10.–E14 with common 4th and 5th characters .35) along with the code for diabetic cataract H28.0*. See coding standard on "Diabetic Cataracts".

The intervention code for a cataract extraction is 1.CL.89.^^ and in most instances only one code is required for the extractions done with a concomitant insertion of a lens prosthesis. The appropriate qualifier is selected for the technique of extraction (e.g. phacoemulsification) and type of lens implant (e.g. rigid or folded lens).

Example:	H25.1	Senile nuclear cataract
	I.CL.89.VR-LN	Excision total, lens, phacoemulsification technique, with insertion of rigid lens prosthesis, posterior chamber

Chapter VIII—Diseases of the Ear and Mastoid Process

Mastoidectomy

In effect 2001

A mastoidectomy need not be coded unless performed alone for indications such as a subperiosteal abscess or mastoiditis. When a mastoidectomy is done to gain access to a deeper site to perform a definitive intervention, it is considered an approach and does not have to be coded.

Example: 1.DK.87.QR Partial excision of the middle ear in order to remove a cholesteatoma, using transmastoidal [mastoidectomy] approach, without use of tissue

Example: 1.DM.53.LL Implantation of a multichannel cochlear implant

Chapter IX—Diseases of the Circulatory System

Rheumatic Heart Disease

In effect 2001

Rheumatic fever with or without rheumatic heart disease is classified to Chapter IX—Diseases of the circulatory system.

ICD-10-CA assumes that certain mitral valve disorders of unspecified etiology are rheumatic in origin. Coders are directed to pay special attention to include notes at categories I05, I07 and I08. The alphabetical index will also guide the coders to the correct code. Mitral stenosis is always presumed to be of rheumatic origin and is coded to I05.0 Mitral stenosis (rheumatic). Mitral insufficiency has to be specified as rheumatic in the documentation to be assigned I05.1 or else it is coded as I34.0 Mitral (valve) insufficiency, non-rheumatic.

Mitral, tricuspid and multiple valve diseases are assumed to be due to rheumatic disease. If there is documentation of more than one heart valve condition, one of which is presumed to be rheumatic, then all are classified as rheumatic.

Aortic valve disease is assumed to be non-rheumatic unless otherwise specified or mentioned in combination with mitral valve disease.

Related Intervention

Trans-esophageal echocardiogram (TEE) aids in the evaluation of cardiac valves. TEE is classified to 3.IP.30.^^ Ultrasound of heart with coronary arteries. An additional code 3.ID.30.^^ Ultrasound of aorta, NEC, must also be used for evaluation of the aorta, if that was performed. The status attribute "I" is used to capture the intra-operative TEE.

Hypertension and Associated Conditions

In effect 2001, amended 2002

Hypertension should be coded when so diagnosed by the physician. It is not coded based on elevated blood pressure readings only.

Benign essential hypertension may sometimes be documented as essential hypertension, primary hypertension, hypertensive vascular disease, arterial hypertension, systemic hypertension and systolic hypertension or simply as hypertension. If a physician states "the patient has a history of hypertension", it is also to be coded as benign hypertension. This is classified in ICD-10-CA to the code I10.0 Benign Hypertension.

Malignant hypertension is classified to I10.1. This form of hypertension is sometimes described as "accelerated" or "necrotizing" hypertension.

ICD-10-CA does not use a single combination code for hypertensive heart and/or renal diseases. Two codes must be used to adequately capture these conditions, a hypertension code and a manifestation code for the heart failure and/or renal failure.

Cardiac conditions that are associated with essential hypertension could be cardiac hypertrophy, arrhythmia, cardiac ischemia and more commonly congestive heart failure. Physicians commonly use terminology such as "due to hypertension" or "hypertensive" to link the two. If diagnostic statements on the chart mention both conditions independently, a causal relationship must not be assumed. A physician must document a causal relationship between the cardiac condition and hypertension for the coder to assign I11—Hypertensive heart disease.

For further information and examples see coding standard on "Heart Failure/Cardiac Insufficiency" under subheading "Hypertension and Heart Failure".

I12—Hypertensive renal disease, is assigned to cases where hypertension is present with chronic renal failure (not acute renal failure), unspecified renal failure, unspecified contracted kidney, arteriosclerotic nephritis, nephropathy and nephrosclerosis. In the case of renal disease a causal relationship is presumed and does not have to be so stated by the physician. Any other renal disease stated as due to hypertension can also be coded here. An additional code must be assigned for any renal failure that is being treated.

Example: Chronic renal failure and hypertension (cause presumed)

I12	Hypertensive renal disease
N18.9	Chronic renal failure, unspecified

Example: Acute renal failure with hypertension

N17.9	Acute renal failure, unspecified
I10.0	Benign hypertension

I13—Hypertensive heart and renal disease code assumes that a causal relationship exists between the hypertension and the cardiac and renal disease.

I15—Secondary hypertension is the direct result of another disease process. If a renal pathology were the cause of the hypertension, it would be coded to I15.

Any hypertension associated with the pregnant state is classified to the block O10–O16.

When coding cerebrovascular disease with hypertension, the cerebrovascular disease is positioned first.

Example: Occlusion of basilar artery with hypertension

I65.1	Occlusion and stenosis of basilar artery
I10.-	Essential (primary) hypertension

Heart Failure/Cardiac Insufficiency

In effect 2002

Heart failure (cardiac or cardiorespiratory failure) designated as post surgical, due to or occurring during a procedure or complicating surgery must be looked up in the alphabetical index under the lead term "Failure" and sub-term "heart".

Failure
– Heart (acute) (sudden) I50.9
––Complicating
––– Surgery T81.8
– Cardiorespiratory (see also Failure, heart) R09.2
––Specified, during or due to a procedure T81.8
– ––long term effect of cardiac surgery I97.1

Heart failure, as specified above, is an early complication (see definition below) of a procedure and must be coded to:

T81.88 (2) Other complications of procedures, not elsewhere classified
I50.- (3) Heart failure with the appropriate fourth digit.
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)

When the heart failure is an early complication, an external cause code must be assigned. In this case, there is a definite cause-effect relationship between the surgery performed and the specified heart failure. Documentation within the medical record must support the cause-effect relationship.

AN EARLY COMPLICATION is one that occurs in the immediate post/peri-operative period i.e. while the patient is in the operating room/intervention room or during the postoperative monitoring period of 96 hours that is counted from the time patient leaves the operating room/intervention room. An external cause code must be assigned. In this case, there is a definite cause-effect relationship between the surgery performed and the specified complication.

Example: Following surgery, patient was taken to ICU for post-operative monitoring where she developed 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)

A specified heart failure occurring during hospitalization, after 96 hours following a surgical procedure but within 15 days of the intervention, should be coded to

I97.8—Other post-procedural disorders of circulatory system, NEC. Or to
I97.1—Other functional disturbances following cardiac surgery depending on the surgical intervention the event occurred after.

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.

I97.8	(2)	Other postprocedural disorders of circulatory system, not elsewhere classified
I50.0	(3)	Congestive heart failure External cause code not required

External cause code not required, as the condition is a late complication. It arose > 96 hours after the patient 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 relationship to the procedure if the condition occurs any time after 96 hours of the intervention.

If the responsible physician recorded the specified heart failure as being "Postprocedural" or "Postoperative" on the patient's chart, the condition having manifested itself after the postoperative monitoring period of 96 hours, it would be classified as a late complication. It must be assigned one of the following codes.

I97.8—Other post-procedural disorders of circulatory system, NEC
I97.1—Other functional disturbances following cardiac surgery

In this case, there is a definite cause-effect relationship between the surgery performed and the specified heart failure. Documentation within the medical record supports the cause-effect relationship and therefore an external cause code would also be required.

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 postprocedural congestive heart failure that developed on day 6 following surgery.

I97.8	(2)	Other postprocedural disorders of circulatory system, not elsewhere classified
I50.0	(3)	Congestive heart failure
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 (Required code)

If the specified heart failure or cardiac insufficiency is a long-term effect of cardiac surgery or is due to the presence of a cardiac prosthesis, it should be coded to

I97.1 Other functional disturbances following cardiac surgery

Example: Mr. F, a 72 year-old man, has been admitted for treatment of heart failure. 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)

Heart failure complicating obstetric surgery and procedures must be coded using

O75.4—Other complications of obstetric surgery and procedures
I50.-—Heart failure (additional, optional code)

Hypertension and Heart Failure

ICD-10-CA does not use a single combination code for hypertensive heart disease with heart failure. Two codes must be used to adequately capture these conditions, a hypertensive heart disease code and a code for the heart failure.

When heart failure is associated with essential hypertension physicians commonly use terminology such as "due to hypertension" or "hypertensive" to link the two. If diagnostic statements on the chart mention both conditions independently, a causal relationship may not be assumed. A physician must document a causal relationship between heart failure and hypertension for the coder to assign I11 or I13. The associated cardiac failure must then be coded separately with a diagnosis type (1) and sequenced following the hypertensive heart disease code.

Example: Congestive heart failure due to hypertension (cause stated).

I11	Hypertensive heart disease
I50.0	Congestive heart failure

Example: Cardiomegaly and hypertension (no cause-effect stated).

I10.0	Benign Hypertension
I51.7	Cardiomegaly

Atrial Fibrillation

In effect 2002, amended 2003

Atrial fibrillation is an abnormally fast and highly irregular heartbeat and is classified as a functional disturbance. 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

Atrial fibrillation is classified in the subcategory I48.0. All conditions classified in categories I44 to I50 are functional disturbances of the heart. If they occur postprocedurally, these are classified in ICD-10-CA to the category

I97—Postprocedural disorders of circulatory system, not elsewhere classified.
All Cardiac arrhythmias fall under the umbrella of functional disturbances of the heart. To locate the correct code for these select the lead term "Disturbance" and sub-term "heart (functional)". See coding standard on "Postprocedural Conditions and Complications".

A FUNCTIONAL DISTURBANCE 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. The word "functional" is sometimes printed in brackets because it is treated as a non-essential modifier according to ICD-10 coding conventions.

When atrial fibrillation occurs following open-heart surgery it should be coded as follows:

I97.1 (2)	Other functional disturbances following cardiac surgery
I48.0 (3)	Atrial fibrillation
Y83.- (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

There is no time limit specified for using this code. It can be used if 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 following interventions not classified as cardiac surgery it should be coded as follows:

I97.8 (2) Other postprocedural disorders of circulatory system, not elsewhere classified
I48.0 (3) Atrial fibrillation
Y83.- (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

The external cause codes are being recommended by CIHI to show a relationship to an intervention and to identify the type of procedure the condition arose after. For example was it following renal dialysis or a hip replacement?

If the condition occurs in the post-operative period but the chart documentation indicates it as being unrelated to the procedure, then no external cause code is necessary.

If atrial fibrillation occurs during the postoperative/postprocedural period (after the post-operative monitoring is complete i.e. 96 hours after non-cardiac surgery and before completion of the fifteenth postoperative day), anxiety or stress generally brings on the episode. Coders will find no documented cause and effect relationship to the surgery. It should then be coded as follows:

I97.8 (2) Other postprocedural disorders of circulatory system, not elsewhere classified
I48.0 (3) Atrial fibrillation

Atrial fibrillation often occurs in people with various types of heart disease. Atrial fibrillation may also result from an inflammation of the heart's covering (pericarditis), chest trauma or surgery, pulmonary disease, and certain medications. It must be assigned a diagnosis type 3. If atrial fibrillation is treated in its own right, then a determination of MRDx, Type 1 or Type 2 must be made.

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.

If 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 recommended rubric for code selection is 1.HZ.09.^^—Stimulation, heart NEC

Ablation destroys the heart tissue that causes the arrhythmia. The tissue can be destroyed either by percutaneous catheterization 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 Destruction, cardiac conduction system. The cardiac catheterization is captured as the approach in qualifier 1.

1.HH.59.GP-AW—Destruction, cardiac conduction system, using percutaneous transluminal approach and radiofrequency ablation
1.HH.59.LA-AD—Destruction, cardiac conduction system, using open approach and cryoprobe
1.HH.59.LA-AW—Destruction, cardiac conduction system, using open approach and radiofrequency [catheter ablation of His bundle or accessory pathways]

Angina

In effect 2001, amended 2002

I20—Angina pectoris
A clinical syndrome due to myocardial ischemia characterized by precordial discomfort or pressure, typically precipitated by exertion and relieved by rest or sublingual nitroglycerin.

I20.0—Unstable Angina
(Acute Coronary Insufficiency; Preinfarction Angina; Crescendo Angina; Intermediate Syndrome) Unstable Angina is characterized by a progressive increase in anginal symptoms, new onset of rest or nocturnal angina, or onset of prolonged angina. Often, a diagnosis of "angina" will be all that is documented on the face sheet of the Health Record. An emergency admission will generally reflect an unstable angina but the attending physician should be queried as to the specific type otherwise the coder must choose I20.9—Angina Pectoris, unspecified.

If the final diagnosis in the chart does not specify whether angina is stable or unstable, it is coded to **I20.9—Angina Pectoris, unspecified**.

Select the more specific code when documentation allows it.

Example:	I20.0	Unstable angina
Example:	I20.88	Other forms of angina pectoris Includes: stable angina

Note: Angina may only be coded as a significant diagnosis (MRDx, type 1, type 2 or transfer diagnosis) when there is a documented episode of angina at admission or at any given time during the hospital stay.

Chronic Ischemic Heart Disease

In effect 2001, amended 2002

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 is only used for atherosclerotic cardiovascular disease (ASCVD) if it is so documented by the physician. In advanced disease, ASHD is often accompanied by angina.

Interventions such as Percutaneous Transluminal Coronary Angioplasty (PTCA) and Coronary Artery Bypass Graft (CABG) are aimed at treating the coronary atherosclerosis. Therefore, the atherosclerotic heart disease should be coded as the most responsible diagnosis, rather than any accompanying angina.

Example: Patient with coronary atherosclerosis was admitted for elective Coronary Artery Bypass Graft (CABG). On the second postoperative day, he experienced unstable angina prolonging his length of stay in the Coronary Care Unit (CCU).

I25.19	(M)	Atherosclerotic heart disease of unspecified typed of vessel, native
I20.0	(2)	or graft
Y83.2	(9)	Unstable angina
		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

Diagnosis typing will always depend upon the circumstances of the individual case and whether a course of treatment was directed at the unstable angina. 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: Patient is admitted for an elective Percutaneous Transluminal Coronary Angioplasty (PTCA) to treat his Atherosclerotic Heart Disease (ASHD). He has a history of angina but no evidence during this admission. The Percutaneous Transluminal Coronary Angioplasty (PTCA) is successful and patient is discharged within 2 days, following post-intervention observation.

I25.19	(M)	Atherosclerotic heart disease of unspecified type of vessel, native
I20.9	(3)	or graft
		Angina pectoris, unspecified

Example: Patient with known coronary atherosclerosis presented with unstable angina to the Emergency Room. He was subsequently admitted and went on to have a Coronary Artery Bypass Graft (CABG).

I25.19	(M)	Atherosclerotic heart disease of unspecified type of vessel, native
I20.0	(1)	or graft
		Unstable angina

Note: Angina may only be coded as a significant diagnosis (MRDx, type 1, type 2 or transfer diagnosis) when there is a documented episode of angina at admission or at any given time during the hospital stay.

If coronary artery bypass grafts become occluded, thrombosed or stenosed, they are coded to T82.8—Other complications of cardiac and vascular prosthetic devices, implants and grafts. However, if the grafted artery has become stenosed or blocked due to an atheroma, it would be indicative of a natural process of the disease rather than a complication of the bypass graft itself. Coders are encouraged to seek physician clarification before assigning a code for the post Coronary Artery Bypass Graft (CABG) occlusion or stenosis. See coding standard on "Complications of Coronary Artery Bypass Grafts."

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 should be coded (e.g. saphenous vein or radial artery) whenever a separate incision is made to obtain it. See coding standard on "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.

Code also any cardiopulmonary bypass or endarterectomy performed. **Cardiopulmonary bypass still affects CMG assignment**. Other procedures such as hypothermia, cardioplegia and chest tube insertions are an inherent part of the bypass surgery and do not need to be coded separately.

Complications of Coronary Artery Bypass Grafts (CABGs) In effect 2002

Complications of Coronary Artery Bypass Grafts (CABGs) that generally occur following surgery may include postoperative hypertension, cardiac arrhythmias, hemorrhage and wound infections (of either the sternal wound or the procurement area, e.g. leg or arm). Cerebrovascular accidents may also occur. When coding these please refer to the Coding standard on "Post procedural conditions and complications".

If coronary artery bypass grafts become occluded, thrombosed or stenosed, they are coded to T82.8—Other complications of cardiac and vascular prosthetic devices, implants and grafts. However, if the grafted artery has become stenosed or blocked due to an atheroma, it would be indicative of a natural process of the disease rather than a complication of the bypass graft.

Coronary artery bypass grafts (usually using the patient's own saphenous vein or internal mammary artery) may become totally or partially occluded after CABG surgery for one or more of the following reasons:

- Thrombus (clot) formation is a major cause of total graft occlusion during the first year following Coronary Artery Bypass Graft (CABG) surgery. Most occur within one month of surgery. Thrombus formation infrequently occurs in the graft after one year postoperatively.

- Atherosclerosis represents the process where yellowish plaques containing cholesterol are deposited in the lining of the bypass graft. Atherosclerotic changes occur usually one year after surgery and often after five years or more. Patients with elevated blood cholesterol often get atherosclerotic changes.

Revision of Coronary Artery Bypass Grafts (CABGs) performed after one month of the original surgery would usually indicate a thrombus formation; i.e. the grafted artery has become blocked by a clot. This is an "Other" complication of the graft and is coded to T82.8.—Other complications of cardiac and vascular prosthetic devices, implants and grafts. However, if the graft occludes a year or more after the initial procedure, it is likely that there is a natural progression of the disease. The cardiac disease or condition requiring re-do, should then be selected as the MRDx.

Occlusion of a Coronary Artery Bypass Graft (CABG) within one month post-op could likely be due to "technical error" in the original operative procedure and should be coded to a mechanical complication of the graft. If documentation is imprecise, refer to the responsible physician for clarification.

Acute Myocardial Infarct

In effect 2001, amended 2003

The acute phase of a myocardial infarct is designated as 28 days (4 weeks) in ICD-10-CA, after which it is a chronic condition. This is a change from the previous classification.

A myocardial infarct of overlapping sites is classified to the myocardial infarct of "other sites" category.

I21.40-I21.49—Acute sub endocardial myocardial infarction category should be used to capture Non-Q-Wave Myocardial Infarctions. The expansions are site specific.

I22.^ Subsequent myocardial infarction is used to capture a repeat infarction within the acute phase of the initial infarct or an extension of the initial infarct also occurring within the 28-day period. An extension of a myocardial infarction should be classified here as well.

Category I23 Other complications following acute myocardial infarction is for specific complications that may occur following the acute myocardial infarction. These complications occur within the acute phase (usually 2–7 days post MI). If these complications occur concurrently with the infarction, they are included in the acute myocardial infarction code, and do not warrant an additional code.

Other terms used to describe acute ischemic heart disease may be missed MI, aborted MI or averted MI. These diagnoses may be assigned an appropriate code from the category I24.

I25.2—Old myocardial infarction, is essentially a "history of" code, even though it is not included in the Z code chapter. It should be assigned as an additional, code only if both of the following criteria apply:

- the "old" myocardial infarction occurred more than four weeks (28 days) ago;
- the patient is currently **not** receiving care (observation, evaluation or treatment) for their "old" myocardial infarction[21]

Myocardial infarction described as "chronic" or with duration of more than four weeks (28 days) from onset and for which the patient is currently receiving acute care (observation, evaluation, or treatment) is classified to I25.8—Other forms of chronic ischaemic heart disease.

Related Interventions

Patients presenting with acute cardiac ischemia may be given thrombolytic agents such as Streptokinase or Urokinase. The intent is to achieve a re-perfusion of the heart by thrombolysis. The administration of the thrombolytic agent by intravenous infusion is coded in CCI using 1.ZZ.35.HA-C1—Pharmacotherapy, total body NEC, percutaneous approach [intramuscular, intravenous, subcutaneous, intradermal], using antithrombotic agent.

Note: If a drug is administered via a venous approach it must be considered as systemic pharmacotherapy. If the drug is injected into an artery, it should always be coded to local pharmacotherapy.

Other interventions carried out to re-open coronary arteries blocked by plaque and thrombus are:

1.IJ.50.^^ Dilation, coronary arteries (angioplasty)
Balloon angioplasty is done using a cardiac catheter using a percutaneous transluminal approach. The surgeon may also insert an endovascular stent. This is secured in place by deploying the balloon. The stent is captured in the qualifier field. The number of arteries dilated/ballooned is captured by the extent attribute.

1.IJ.57.^^ Extraction, coronary arteries (endarterectomy)
Atherectomy may also be done via a percutaneous transluminal approach using laser or a burr device attached to the cardiac catheter. If a balloon angioplasty was done concomitantly, it does not have to be coded.

When a therapeutic procedure is performed using cardiac catheterization approach, coders must read the instructions carefully to determine which diagnostic procedures require additional codes to be recorded. Both the above examples require that any thrombolytic therapy and concomitant angiography be coded.

[21] Extracted from NCCH ICD-10-AM, July 2002, Circulatory System.

Myocardial Infarctions Occurring in the Post-Operative and Peri-Operative Period

In effect 2002

A myocardial infarction complicating surgery or occurring in the immediate post-operative or 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) is coded to I21.^ with a significant diagnosis type 2. An external cause code from either category Y83 or Y84 must be recorded to identify any relationship to the procedure.

Note: Myocardial Infarction is not a functional disturbance of the heart. It denotes a localized area of ischemic necrosis of the myocardium produced by 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.

Example: Mrs. W. is a 63 year-old woman who was brought in for elective total abdominal hysterectomy. While in 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 sub endocardial 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

A myocardial infarction occurring during hospitalization, in the post-procedural period (i.e. > 96 hours following completion of the surgical intervention) should be recorded as a post-admit comorbid condition. In this case, if there is no documented relationship between the myocardial infarction and the surgical intervention, an external cause code is not required.

Example: Mr. M is a 58 year-old man who underwent a radical prostatectomy. Seven days post surgery, he developed severe chest pains. He was diagnosed as having sustained an acute myocardial infarction

I21.9	(2)	Acute myocardial infarction, unspecified

Cardiac Arrest

In effect 2002

Cardiac or cardio-respiratory arrest (I46.0 and I46.9), not occurring as a post procedural event, should only be coded if a resuscitative intervention is undertaken.

Example: A 40-year-old man arrested in ER. CPR was initiated and was successful. The patient reverted to Normal Sinus Rhythm.

I46.0 Cardiac arrest with successful resuscitation

Example: A 52-year-old lady had a cardiac arrest. Code blue was called. CPR was started. Resuscitation efforts were subsequently stopped and the patient was declared dead at 21:00 hours.

I46.9 Cardiac arrest, unspecified

The code **I46.1—Sudden cardiac death, so described** will be very rarely seen in an acute care setting. The physician has to document it as specified by the title for any case to be assigned this code.

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

Cardiac arrest occurring as an expected terminal event in hospital should not be coded. When the physician documents "cardiac arrest" to indicate an inpatient death, and the underlying cause or contributing condition is known, and no resuscitation is attempted, **NO** code from the category I46 is assigned to the case. The underlying cause or contributing condition is coded. Cardiac arrest as an unexpected postprocedural event may be coded to either I97.1 or I97.8 regardless of whether or not resuscitation has been undertaken. Symptoms of cardiac arrest such as hypotension or bradycardia are not coded.

Example: An AIDS patient was terminally ill. There was a "Do not resuscitate" (DNR) order on the chart. The patient arrested at 11:45 and was pronounced dead subsequently.

B24 Human Immunodeficiency virus [HIV] disease

Do not code cardiac arrest. Code only the underlying condition.

Cardiac Arrest—Complicating Procedure or Immediate Post-Procedural Recovery

A cardiac arrest complicating surgery has been indexed in ICD-10-CA. It is strongly recommended that coders follow the alphabetical index for accurate data collection.

Arrest, arrested

– cardiac I46.9
––complicating
––– surgery T81.8
––postoperative I97.8
––– long term effect of cardiac surgery I97.1

A cardiac arrest complicating surgery (cardiac or noncardiac), i.e. occurring in the immediate post/peri-operative 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) is coded to:

T81.88 (2)—Other complications of procedures, not elsewhere classified.

In this case, there is a definite link between the surgery performed and the cardiac arrest. Documentation in the medical record must support the cause-effect relationship. An appropriate external cause code must also be recorded.

Example: Patient was admitted for an elective splenectomy and had a cardiac arrest in the Operating Room following termination of the surgery. A code blue was called and patient was resuscitated successfully. The patient was then transferred to CCU under the care of a cardiologist.

T81.88	(2)	Other complications of procedures, not elsewhere classified
I46.0	(3)	Cardiac arrest with successful resuscitation
Y83.6	(9)	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

Cardiac Arrest—Unexpected Post-Procedural Event

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), should be coded to:

I97.8 (2)	Other post-procedural disorders of circulatory system, NEC
I46.0 (3)	Cardiac arrest with successful resuscitation

(See index entry noted above under the heading Cardiac Arrest—Complicating procedure or immediate post-procedural recovery.) In this case there is no relationship between the arrest and the surgical intervention. An external cause code is not required.

The external cause codes are recommended to identify any relationship or link to a procedure. If a condition occurs in the postprocedural period but is not related to the intervention, no external cause code is necessary.

Example: Patient came in to have elective hip replacement. On day 5 following surgery, when the nurse went in to take the vital signs, patient was found dead in bed. Physician stated cardiac arrest on the death certificate.
It was an unexpected terminal event and the arrest occurred in the post-operative period (late complication).

I97.8	(2)	Other post-procedural disorders of circulatory system, NEC
I46.9	(3)	Cardiac arrest, unspecified

When the code title of a postprocedural condition or a complication of surgery or medical care does not fully describe the problem (e.g. cardiac arrest), facilities may choose to add an additional code to provide more detail regarding the nature of the condition. This additional code must always be assigned a diagnosis type 3.

Note: Coders may not use a code from category I97 and T81.88 to capture the same cardiac arrest.

Related Interventions

Cardiopulmonary Resuscitation (CPR) is classified to **1.HZ.30.^^—Resuscitation, heart**
If CPR is followed by defibrillation the only code required is
1.**HZ.09.^^—Stimulation, heart, NEC**.

CPR involving open cardiac massage requires only **1.HZ.09.LA-CJ**

Capturing cardiopulmonary resuscitation as an intervention will be a facility decision.

Cardiac Catheterizations

In effect 2001

Patients suffering from unstable angina may undergo an elective diagnostic angiogram of the coronary arteries done via a heart catheterization. This is coded in CCI from section 3.

3.IP.10.^^ X-ray heart with coronary arteries
Cardiac catheterization will still affect CMG™ assignment and it is mandatory to capture the catheterization in the approach/technique qualifier field whenever this approach is used for any intervention.

Example: Cardiac catheterization for coronary angiogram followed by percutaneous transluminal coronary angioplasty (balloon), circumflex branch, left coronary artery treated with alteplase infusion.

1.IJ.50.GQ-BD	Dilation coronary artery, percutaneous approach using balloon dilator
1.IL.35.HH-C1	Infusion of thrombolytic agent into coronary artery
3.IP.10.VX	Coronary arteriography, left heart catheterization, with fluoroscopy using a percutaneous approach.

Pacemakers

In effect 2001

People with abnormalities in their cardiac conduction system are candidates for pacemaker insertion. Pacemakers sense the heart beat and then pace it. They also may have the capability of monitoring the heart's own conduction system and pace only when the system fails. The basic components of a pacemaker system include a pulse generator and an electrode.

When a pacemaker is inserted the intent is "implantation" of a device. It is coded as 1.HZ.53.^^ Implantation of internal device, heart, NEC.

The type of device and the approach are captured in the qualifier category. The insertion of pacemaker includes the insertion of the epicardial or endocardial leads thus eliminating the need for an additional code.

The endocardial leads may be removed with subsequent replacement done using a percutaneous transvenous approach. This is coded in CCI to 1.HD.53.GR—JA Implantation of internal device, endocardium. Repositioning or adjustment of the endocardial leads will be captured as 1.HD.54.^^ Management of internal device, endocardium.

Mechanical complications of pacemakers are coded to T82.1—Mechanical complication of cardiac electronic device, and may include displacement of cardiac pacemaker electrodes and pacemaker generator malfunction. The appropriate external cause code for this would be Y83.1—Surgical procedure 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 procedure.

Patients requiring only a pacemaker battery change or reprogramming of pacemaker are coded in ICD-10-CA to Z45.0 Adjustment and management of cardiac pacemaker.

1.HZ.54.LA-NJ Management of internal device heart, NEC
Includes the replacement of pacemaker generator/battery.

2.HZ.07.^^ Analysis/evaluation heart is the code to be used for the following:

- Programming or reprogramming of a cardiac pacemaker
- Adjustment of the cardiac pacemaker
- Electronic analysis of the cardiac pacemaker
- Assessment of the cardiac pacemaker function with or without programming

Z95.0—Presence of cardiac pacemaker is used as the status code.

Aneurysms

In effect 2001

Aneurysms are treated surgically in five ways:
1. Repair (reinforcement of the aneurysm wall).
2. Repair with graft insertion
3. Resection with graft replacement
4. Clipping
5. Filipuncture or wiring

Coders are required to review the operative report to find out if the aneurysm is incised and a synthetic graft is sewn in that place and it is then covered with the residual sac of the aneurysm. This constitutes repair with graft insertion and is coded to either 1.KA.80.^^, 1.ID.80.^^ , 1.IC.80.^^ or to another site depending on the location of the graft/aneurysm.

If an aortic aneurysm is excised and the aortic segment is replaced with a tubular or bifurcated Dacron (or other) graft, the intervention is a resection with graft replacement. It is coded to 1.KA.87.^^, 1.ID.87.^^ or 1.IC.87.^^—partial excision of the aortic segment location as specified in the operative report.

Aneurysms of cerebral and precerebral arteries are often surgically treated by clipping or clamping them. The generic intervention would be "occlusion"(51).

Surgical treatment of an aneurysm by filipuncture or wiring is coded to the generic intervention "destruction"(59).

Cerebral Hemorrhage

In effect 2001

Cerebral hemorrhage is classified to the rubrics I60-I62. Coders are encouraged to look for documentation regarding the specific site of the hemorrhage and then to select an appropriate code.

Related Interventions

1.JW.51.^^—Occlusion, intra-cranial vessels is the intervention code used for "clipping of intra-cranial aneurysm". Coders are directed to follow the code also instructions to determine if a second code is necessary. Embolization of an intra-cranial vessel would go to the same rubric with a different set of qualifiers. If an aneurysm is reinforced at the area of the rupture it is classified as a repair of the intra-cranial vessel to I.JW.80.^^.

Intra-cerebral hemorrhage can occur with patients who are hypertensive and have arteriosclerotic cerebral vessels. Evacuation of the hematoma is classified under "drainage" and coded to 1.AN.52.^^ with the technique identified in the qualifier.

Occlusion and Stenosis of Cerebral/Pre-Cerebral Vessels

In effect 2001

Occlusion due to embolus or thrombus and stenosis, narrowing or complete or partial obstruction resulting in cerebral infarction is coded to the category I63. If it has not resulted in a cerebral infarct, it is coded to the category I65 or I66 depending on whether the occlusion is that of a cerebral artery or a pre-cerebral artery. Coders are encouraged to search the documentation and code to the highest level of specificity.

Related Intervention

Atheromatous plaques are removed from the carotid artery routinely. It is coded to 1.JE.57.LA-GX Extraction, carotid artery. The qualifier captures the operative approach, and the use of tissue and/or stent. The location attribute will indicate the site of the intervention and the status attribute can be used to capture a revision of the procedure.

Strokes, Cerebrovascular Accidents (CVAs) and Transient Ischemic Attacks (TIAs)

In effect 2001, amended 2002, 2003

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.[22]

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.

[22] Cecil's Textbook of Medicine, 21st edition, edited by Lee Goldman and J. Claude Bennett, 2000 pg. 2099

Example: Mr. X is a 47-year-old gentleman who presented to the Emergency Department because of a recent onset of slurred speech and right arm weakness. The patient's blood pressure at that time was 240/140 mmHg. He was admitted with a diagnosis of stroke and enrolled in the stroke protocol. Repeat CT scan of his head showed multiple infarcts present in the right CCA territory as well as on the left MCA territory.

I63.9	(M)	Cerebral infarction, unspecified

Intracerebral hemorrhage affects vessels within the brain itself, while subarachnoid hemorrhage affects arteries at the brain's surface, just below the protective arachnoid membrane.

When coding strokes, review the chart for the specific cause of the stroke. When the type of disease and its site of origin are known, this should be coded to the greatest precision possible from the block I60-I69.

If the underlying cause of the stroke is known to be a vascular syndrome of the brain, an additional code should be selected from the category G46. For example:

I61.3 (M)	Intracerebral hemorrhage in brain stem
G46.3*(3)	Brain stem stroke syndrome

When no specific information is available, either of the following codes may be assigned:

I64	Stroke, not specified as hemorrhage or infarction
G45.9	Transient cerebral ischaemic attack, unspecified

The category "I69—Sequelae of cerebrovascular disease", is to be used to indicate conditions in (I60-I67) as the cause of sequelae, themselves classified elsewhere. The "sequelae" include conditions specified as such or as late effects, or those present one year or more after onset of the causal condition.

The code I69—Sequelae of cerebrovascular disease may not be assigned alone. It should always be preceded by a code indicating a late effect manifestation, a sequela. I69 should be assigned a diagnosis type 3. See coding standard on "Neurological Deficits Following a Stroke".

Example: Patient admitted for treatment of focal seizure disorder (simple partial seizures)—a late effect of his stroke.
Note: diagnosis easily located in table within coding standard on "Seizures".

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

Current (Stroke) Event

The stroke is considered to be a current condition (classifiable to I60-I68) during the initial episode of care for the stroke, which includes both the acute care hospitalization and any subsequent transfer for rehabilitation to another facility to continue treatment of the associated neurological deficits.

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 ADL (activities of daily living) and to improve speech. Deficits are dominant-sided hemiplegia and aphasia.

Z50.8	(M)	Rehabilitation in activities of daily living (ADL)
I63.9	(3)	For cerebral infarction occurring two weeks ago
G81.90	(3)	With neurological deficit of dominant-sided hemiplegia
R47.0	(3)	With aphasia

Extension of a Cerebral Infarct or Stroke

Extension of a cerebral infarct or stroke must be coded as another stroke or cerebral infarct using a code from the categories I60-I64 based on level of specificity available in the patient's chart. If this event occurs during the patient's hospital stay, it may be assigned a diagnosis type 2.

Old (Stroke) Event

The stroke is considered to be an old event when there:

- Are no longer any neurological deficits present. (Select Z86.7 "Personal history of diseases of the circulatory system" to describe this situation, if desired.)
- Still remains a residual effect from the stroke—which has been previously treated—that continues to contribute to another disease process or continuing neurological deficit.

Example: Six months post-stroke a person is admitted to hospital with aspiration pneumonia which is queried to be secondary to dysphagia which is still present despite rehabilitation efforts.

J69.0	(M)	Aspiration pneumonia
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)	Fracture hip unspecified, closed
G81.99	(3)	Hemiplegia, unilateral (not specified as dominant/non-dominant side
I69.4	(3)	Sequelae of stroke, not specified as hemorrhage or infarction
W01	(9)	Fall on same level from slipping, tripping and stumbling
U98.0	(9)	Place of occurrence, at home

Related Interventions

Once stroke is suspected, a computed tomography scan (CT scan) or magnetic resonance imaging (MRI) scan is 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. This "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.

Other aggressive treatment options may be:

Intracranial angioplasty	1.JW.50.^^—Dilation, intracranial vessels;
Intracranial thrombectomy	1.JW.57.^^—Extraction, intracranial vessels; or
Bypass, IC to IC vessels	1.JW.76.^^—Bypass, intracranial vessels

Extensive occupational and rehabilitation assessment and therapy codes exist in CCI. They are not normally considered mandatory for routine data collection.

For example, gait training is coded in CCI to 1.VZ.02.^^—Exercise, leg NEC.

Peripheral Vascular Disease

In effect 2001

Peripheral vascular disease usually refers to atherosclerosis of the peripheral arteries. This is assigned to I70.2—Atherosclerosis of arteries of extremities. Common manifestations of advanced atherosclerosis of the extremities may be ischemia of the limbs, ulcers and gangrene. Diabetic peripheral vascular disease without gangrene is coded to the MRDx from the E10-E14 category with common 4th and 5th characters .50 and an asterisk code I79.2*—Peripheral angiopathy in diseases classified elsewhere. Diabetic peripheral vascular disease with gangrene is classified to E10-E14 with common 4th and 5th characters .51. Atherosclerotic gangrene is an inclusion at I70.2.

Related Interventions

Percutaneous transluminal angioplasty (PTA) with or without stent insertion—coding of arteriograms performed with the angioplasty is optional.

Endarterectomy is sometimes done locally to improve outflow.

A bypass graft may also be performed for revascularization of a limb. If an artery or vein bypassed, it is coded to the anatomic site in which it originates. The terminating site of the graft is captured in qualifier 1.

Example: Aorto-femoral bypass graft using saphenous vein—originates in the aorta

I.KA.76.MZ-XX-A	Aorto-femoral bypass graft using saphenous vein
1.KR.58.LA	Procurement, saphenous vein (Coded as a separate incision was used to obtain the graft. See coding standard on "Procurement or Harvesting of Tissue for Closure, Repair or Reconstruction".)

Amputation may be performed if attempts at revascularization fail. The intervention is classified to "amputation" if an incision is made through a bone and to "disarticulation" if 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.

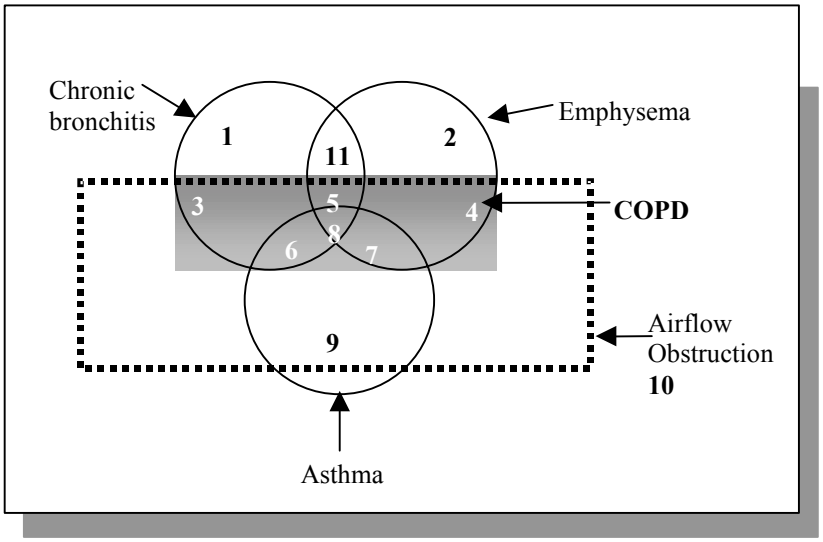
Chapter X—Diseases of the Respiratory System

Chronic Obstructive Pulmonary Disease

In effect 2001, amended 2002

Chronic Obstructive Pulmonary Diseases are a group of common chronic respiratory disorders that are progressive in nature and lead to degeneration and obstruction in the airways of the lungs.

Schema of Chronic Obstructive Pulmonary Disease[23]



KEY:

1	Chronic bronchitis
2	Emphysema
3	Chronic bronchitis with obstruction = COPD
4	Emphysema with obstruction = COPD
5	Chronic bronchitis and emphysema with obstruction = COPD
6	Chronic bronchitis and asthma with obstruction = COPD
7	Emphysema and asthma with obstruction = COPD
8	Chronic bronchitis, emphysema and asthma with obstruction = COPD
9	Asthma
10	Airflow obstruction
11	Chronic bronchitis and emphysema

[23] Extracted from NCCH ICD-10-AM, July 2000, Respiratory System.

Chronic Obstructive Pulmonary Diseases (COPD) stated as such or described as one of the conditions listed below is classified to J44.-

- Chronic asthmatic bronchitis
- Chronic emphysematous bronchitis
- Chronic bronchitis with emphysema
- Chronic bronchitis with airway obstruction
- Chronic obstructive asthma
- Chronic obstructive bronchitis
- Chronic obstructive tracheobronchitis

Codes for asthma, chronic bronchitis and emphysema should not be assigned when the condition is classified to J44.-

Example: COPD emphysema

J44.8	Other specified Chronic Obstructive Pulmonary Disease

Example: COPD asthma

J44.8	Other specified Chronic Obstructive Pulmonary Disease

Example: Asthma

J45.90	Asthma unspecified, without stated status asthmaticus

Example: Asthma with documented status asthmaticus

J45.91	Asthma unspecified, with stated status asthmaticus

Acute Severe Asthma is another term for status asthmaticus.

When a patient with COPD presents with a lower respiratory tract infection, it is classified to J44.0. The specific infection should also be coded with diagnosis typing depending upon the circumstance and focus of treatment. See coding standard on "Pneumonia in patients with COPD".

COPD with an acute exacerbation is classified to J44.1.

COPD, NOS without mention of acute lower respiratory tract infection or acute exacerbation is coded to J44.9—Chronic Obstructive Pulmonary Disease, Unspecified.

Acute exacerbation of chronic obstructive bronchitis is not coded to acute bronchitis, rather it is coded to J44.1—Chronic obstructive pulmonary disease with acute exacerbation, unspecified.

J20.9 is the code used to classify acute bronchitis.

Acute on chronic bronchitis is coded as follows:
J20.9—Acute Bronchitis, unspecified
J42—Unspecified chronic Bronchitis

Emphysema is classified in category J43.

Coders are instructed to follow the Index look up and read the "include" notes carefully when coding these lung diseases.

Pneumonia in Patients With Chronic Obstructive Pulmonary Disease (COPD)

In effect 2002

An acute exacerbation of COPD is defined as an acute clinical deterioration in a patient's respiratory status due to a worsening of the underlying COPD. Respiratory tract infections or respiratory irritants like tobacco fumes, paint fumes, barbecue smoke etc. may trigger an acute exacerbation of COPD.

Patients with COPD are generally considered a high risk for pneumonia—a lower respiratory tract infection of the lung parenchyma. 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.

ICD-10-CA has many more combination codes than its predecessor does. If these combination categories are appropriately used, international comparability will be maintained. In ICD-10-CA there is no implied relationship between COPD and Pneumonia. When a patient has COPD with superimposed pneumonia, this may have an impact upon the LOS and treatment. Whenever COPD presents with pneumonia as the major reason for hospitalization, it ought to be coded using the combination code provided by ICD-10-CA, followed by the specific type of pneumonia.

Chronic obstructive pulmonary disease with acute exacerbation, unspecified, is coded to J44.1. The exacerbation of the COPD does not require any additional code to reflect the acute component of this condition. Similarly in "Chronic obstructive pulmonary disease with acute lower respiratory infection—(J44.0)" an additional code is not generally required to reflect the infective component of this code. This could be a viral infection or simply stated as a "chest infection" or an "infective exacerbation of COPD". However, if the infective component is specified and is a condition in its own right, such as pneumonia, acute bronchitis or acute bronchiolitis, an additional code must be used to specify the type of infection for epidemiological purposes. This condition must then be assigned a diagnosis type 1.

Example: A patient from a nursing home presented to Emergency with community acquired pneumonia. He has a long-standing history of COPD.

J44.0	(M)	Chronic obstructive pulmonary disease with acute lower respiratory infection
J18.9	(1)	Pneumonia, unspecified

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 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: Patient is a 72 year-old man with a history of COPD. He was brought in experiencing shortness of breath, wheezing and tachycardia. He was diagnosed with acute exacerbation of COPD triggered by paint fumes. Patient's home was being painted.

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

Asthma

In effect 2002, amended 2003

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.

Status asthmaticus is a severe asthma attack where there is profound and intractable bronchospasm. It is a life-threatening condition with prolonged bronchiolar spasm and this 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".

One combination code is used to capture asthma with or without status asthmaticus.

J45.90 Asthma, unspecified, without stated status asthmaticus
J45.91 Asthma, unspecified, with stated status asthmaticus

Chronic obstructive asthma or chronic (obstructive) asthmatic bronchitis should be assigned a code from category J44.

In ICD-10-CA all pediatric cases of asthma, not otherwise specified, will default to extrinsic asthma. Childhood asthma should be coded to J45.0—Predominantly allergic asthma. Coders may use the range 0–16 years when assigning a code for childhood asthma.

Example: An eighteen-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

Example: A nineteen-year-old young 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. (Initial onset of symptoms)

J45.90 (M) Asthma, unspecified, without stated status asthmaticus

Respiratory Failure

In effect 2002

Respiratory failure can be classified as acute or chronic and must be coded using category J96. This condition is only a significant diagnosis when the respiratory failure occurs during an episode of care either before any surgical intervention has taken place or after15 days following any surgical intervention.

J96.0 Acute respiratory failure
J96.1 Chronic respiratory failure
J96.9 Respiratory failure, unspecified

Acute respiratory distress syndrome (ARDS) is a syndrome of severe respiratory failure associated with pulmonary infiltrates. This condition originates from a number of insults involving damage to the alveolocapillary membrane with subsequent fluid accumulation within the airspaces of the lung.

A number of clinical conditions are associated with development of acute respiratory distress syndrome (ARDS). Sepsis and the systemic inflammatory response syndrome (SIRS) are the most common predisposing factors associated with development of ARDS. Severe traumatic injury (especially multiple fractures), severe head injury, and pulmonary contusion are strongly associated with development of ARDS. Multiple transfusions, salt-water aspiration, smoke inhalation and overdose of narcotics is also associated with ARDS.

ARDS is classified to the category J80.
J80 Adult respiratory distress syndrome

Do not use an additional code for respiratory failure when the code J80 is assigned to capture ARDS. Respiratory failure is an inherent part of ARDS.

Cardio-respiratory failure or respiratory arrest is coded to
R09.2 Respiratory arrest

Respiratory failure, specified as having taken place during an intervention or due to a procedure, occurring either in the operating room/intervention room or during the immediate post-operative monitoring period (i.e. 96 hours following patient's departure from the operating room/intervention room) is coded as follows:

J95.88 (2) Other postprocedural respiratory disorders
J96.0 (3) Acute respiratory failure
Y83.^ (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)

Respiratory failure occurring during hospitalization, in the postprocedural period (after the 96-hour post-operative monitoring is completed but within 15 completed days of the intervention) should be coded to:

J95.88 (2) Other postprocedural respiratory disorders
J96.0 (3) Acute respiratory failure

In this case there may be no established relationship between the respiratory failure and the surgical intervention documented in the chart. Coders may not assume any relationship to the procedure and therefore assignment of the external cause code is not required.

If the responsible physician recorded acute respiratory failure as being "Postprocedural" on the patient's chart and the condition manifested itself after the postoperative monitoring period of 96 hours was complete, it would still be classified as a late complication. However, in this case, there is a definite cause-effect relationship between the surgery performed and the respiratory failure. Documentation within the medical record will support the cause-effect relationship and therefore an external cause code is required. The following codes would be selected.

J95.88 (2) Other postprocedural respiratory disorders
J96.0 (3) Acute respiratory failure
Y83.^ (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)

Pulmonary Insufficiency

Pulmonary insufficiency is coded to the codes J95.1, J95.2 or J95.3. The codes J95.1 and J95.2 must always be accompanied by an external cause code to show the relationship to the procedure it occurred after.

J95.1 Acute pulmonary insufficiency following thoracic surgery
J95.2 Acute pulmonary insufficiency following non-thoracic surgery
J95.3 Chronic pulmonary insufficiency following surgery

Pleural Effusion in Conditions Classified Elsewhere

In effect 2002, amended 2003

J91* Pleural effusion in conditions classified elsewhere

The World Health Organization has identified an etiology/manifestation relationship (dagger and asterisk) only between filariasis and pleural effusion. Coders must not assume an etiology/manifestation relationship for pleural effusion in any other condition. Do not assign the code J91* for pleural effusion in congestive heart failure or other condition.

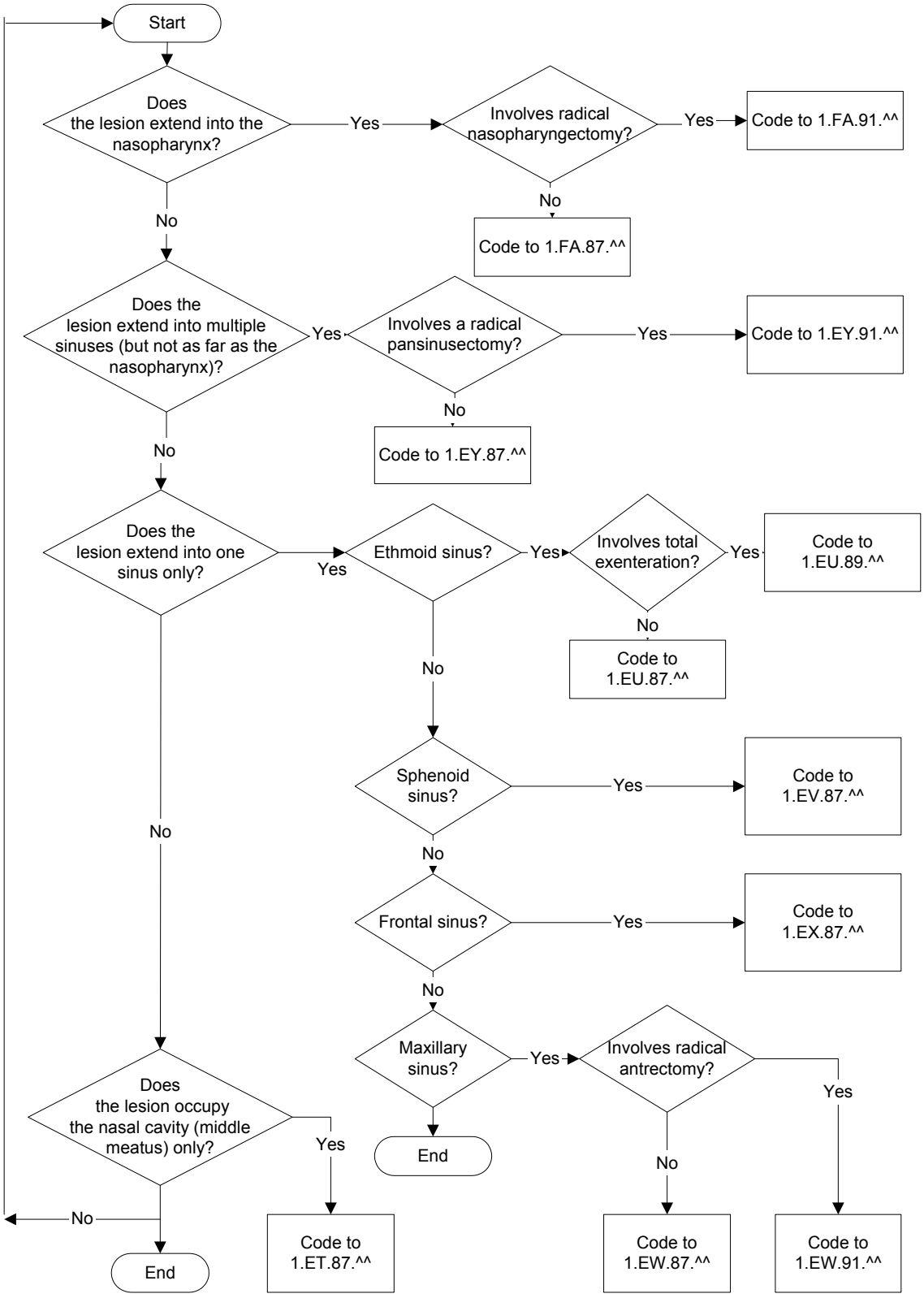
Filariasis (a parasitic disease that causes damage to the lymphatic valve system and results in a blockage of the lymphatics) with a manifestation of Chylothorax.
B74.9 Filariasis, unspecified
J91* Pleural effusion in conditions classified elsewhere

Related Intervention

Therapeutic thoracentesis or pleurocentesis may be performed to relieve the symptoms of pleural effusion. This intervention is coded to the rubric 1.GV.52.^^—Drainage, pleura. An appropriate qualifier must be selected based on the physician documentation.

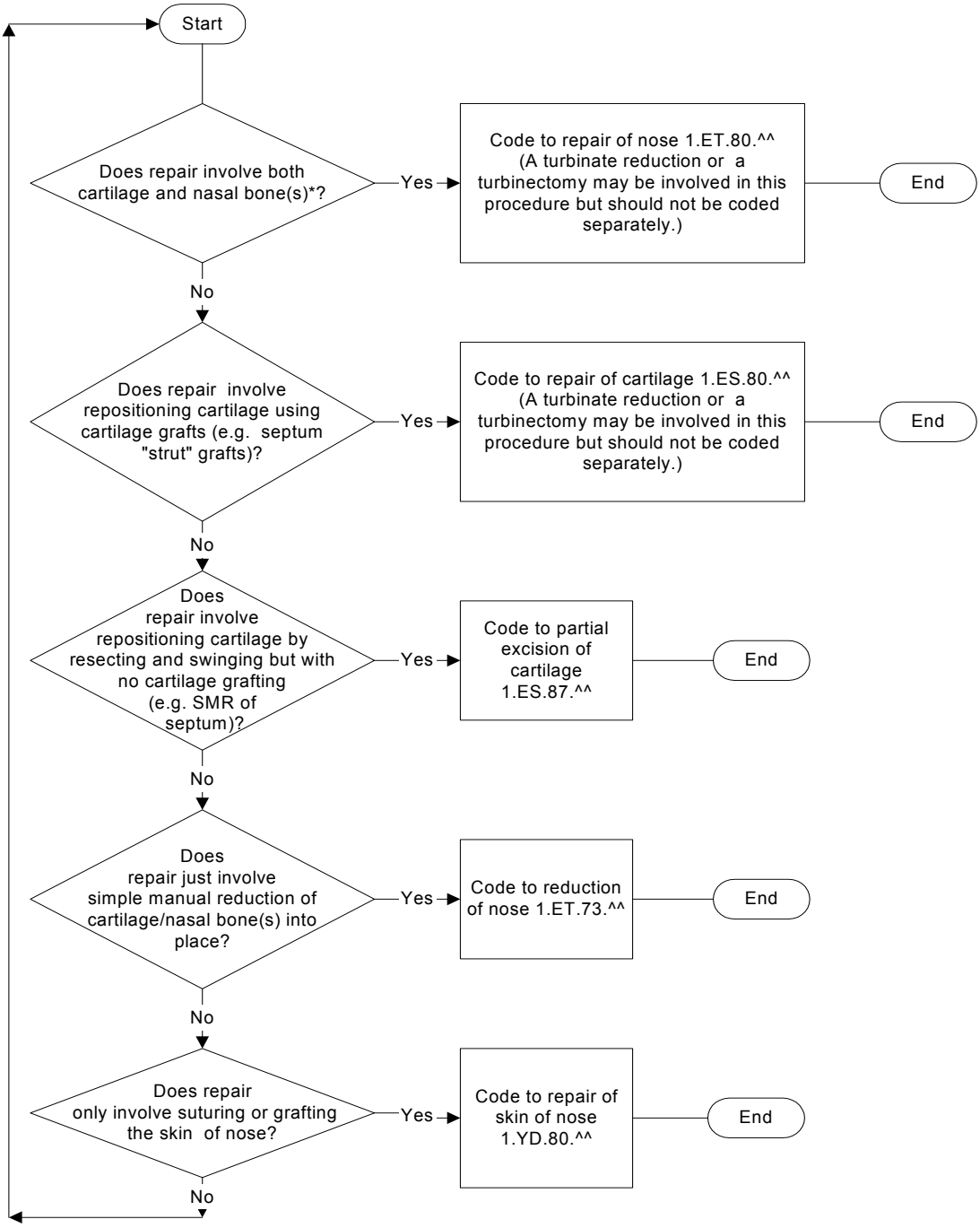
Resection of Space-Occupying Lesion (Polyps) of Nose

In effect 2002



Nasal Repairs

In effect 2002



Chapter XI—Diseases of the Digestive System

Hernias

In effect 2001, amended 2003

Hernias are classified to the block K40-K46 within the digestive system except for Q79.0—Congenital diaphragmatic hernia and Q40.1—Congenital hiatus hernia.

A hernia with both obstruction and gangrene is classified to a hernia with gangrene.

A hernia is a defect in the muscles of the chest or abdominal wall or of the diaphragm. As such, in CCI all chest and abdominal hernia interventions are located within the musculoskeletal system. Diaphragmatic hernia interventions are located within the respiratory system.

See rubrics 1.SY.80—Repair, muscles of the chest and abdomen and 1.GX.80—Repair, diaphragm.

When coding herniorrhaphy in CCI, the status code selection will capture whether the procedure was any of the following:

R	Revision
DS	Delayed secondary (repair occurring > 14 days post-trauma)
DP	Delayed primary (repair occurring 2–14 days post-trauma)
A	Abandoned after onset
C	Converted (from endoscopic to open approach)

Refer to coding standard on "Revised Interventions" when coding the status attribute as "R".

Currently the status attribute field will accept any one of the above. Should users of CCI encounter scenarios where more than one applies, it will be up to the facility to make a choice from the selection.

The location attribute, which identifies the type of hernia, is mandatory when coding hernia repairs of the chest and abdominal wall. The bilaterality of the procedure is captured here as well. Look for a "pink" location attribute. The casemix grouper loops for this information to assign the case to the correct CMG.

CIHI recommends coding any concomitant contra-lateral exploration (2.OT.70.^^) done with a unilateral hernia repair. 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, as this would enable him to find small hernias that could be repaired at the same time.

Gastroenteritis and Diarrhoea

In effect 2001, amended 2002

Gastroenteritis is an inflammation of the stomach and the intestines. Diarrhoea NOS is classified to gastroenteritis. When coding gastroenteritis or diarrhoea, it is recommended to reference the lead terms "enteritis, gastroenteritis and diarrhoea" as they are classified synonymously.

ICD-10-CA classifies gastroenteritis according to its cause.

Example:

A00-A09	Gastroenteritis in infectious diseases
K52.2	Allergic gastroenteritis—a reaction to food or drink
K52.1	Toxic gastroenteritis—a reaction to medicinal or other agents
K52.0	Gastroenteritis due to radiation
K52.9	Non infective gastroenteritis

All gastroenteritis NOS should be coded to K52.9—Noninfective gastroenteritis and colitis, unspecified, and it should never be presumed to be infectious unless so documented by the responsible physician.

Gastritis, duodenitis and gastroduodenitis without mention of gastroenteritis are classified to the category K29—Gastritis and duodenitis.

Irritable bowel syndrome (IBS) associated with diarrhoea is coded to:
K58.0 Irritable bowel syndrome with diarrhoea

Irritable bowel syndrome (IBS) without diarrhoea as a symptom is captured as:
K58.9 Irritable bowel syndrome without diarrhoea

Functional diarrhoea is coded to K59.1; but if it occurs following gastrointestinal surgery it is coded to K91.8—Other postprocedural disorders of digestive system, not elsewhere classified. Functional diarrhoea is a sign of a lower GI tract abnormality. Functional diarrhoea is a non-specific symptom and often cannot be attributed to any cause in particular—see excludes at category K59.

In admissions for treatment of gastroenteritis and dehydration, sequence gastroenteritis as the most responsible diagnosis. The dehydration must be coded as a significant pre-admit comorbid condition, (diagnosis type 1) if the electrolyte imbalance is severe enough to warrant treatment with intravenous fluids and the physician clearly documents these fluids are intended to redress "dehydration". See coding standard on "Dehydration".

Example: A seventy-four year old woman is admitted to hospital from a nursing home after three days of gastroenteritis; she is now dehydrated 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

If the dehydration is mild and is treated instead with increased oral intake of fluids and close monitoring of input/output, this is not considered a significant comorbid condition and must be typed as a secondary diagnosis (type 3).

Example: A four-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)	Diarrhoea and gastroenteritis of presumed infectious origin
E86.0	(3)	Dehydration

Gastrointestinal Bleeding

In effect 2001, amended 2003

When a diagnosis of gastrointestinal bleed is documented, coders are urged to review the medical record and/or consult with the physicians to seek a more definite diagnosis.

For some gastrointestinal diseases, combination codes are provided in ICD-10-CA to identify the presence of bleeding.

Example: Acute gastritis with hemorrhage

K29.0	Acute haemorrhagic gastritis

Example: Irreducible, bleeding internal hemorrhoids

I84.1	Internal hemorrhoids with other complications

If a specific diagnostic code includes gastrointestinal bleeding then a code from the range K92.0–K92.2 may be assigned as optional secondary codes only.

Example: Hematemesis due to bleeding esophageal varices

I85.0	(M)	Bleeding esophageal varices
K92.0	(3)	Hematemesis (optional code)

If gastrointestinal bleeding is not an inherent part of the disease or if it is significant in the management of the patient, an additional gastrointestinal hemorrhage code should be assigned for the pre or post admit comorbid condition as the case may be. The disease being treated should be sequenced first.

If a specific diagnostic code does not include gastrointestinal bleeding, then a code from the range "K92.0—K92.2" must be assigned to identify the type of GI bleed.

Example: Patient admitted with severe melena due to diverticulitis.

K57.9	(M)	Diverticular disease of intestine, part unspecified, without perforation or abscess
K92.1	(1)	Melena

When a patient presents for investigation (e.g. endoscopy) of a gastrointestinal bleed due to documentation of a history of bleeding, a code may be selected from category K92—Other diseases of digestive system, even if no bleeding occurs during the current episode of care.

Example: Gastrointestinal Bleeding

K92.2	Gastrointestinal hemorrhage, unspecified

Hepatitis and Alcoholic Cirrhosis of the Liver

In effect 2001

K76.6 Portal hypertension, R18 Ascites, and K83.1 Obstruction of bile duct, related to hepatitis and alcoholic cirrhosis of the liver may be coded as a type (1) diagnoses if they significantly affect the care and management of the patient.

Bleeding Esophageal Varices

In effect 2003

The code for bleeding esophageal varices can be used as the MRDx or another significant diagnosis type, if that condition was the focus of treatment.
I85.0 Oesophageal varices with bleeding

Esophageal varices that are associated with liver disorders classified in K70—Alcoholic liver disease, K71—Toxic liver disease and K74—Fibrosis and cirrhosis of liver must be coded using the dagger asterisk convention. In such cases assign a code from the categories K70, K71 or K74 followed by the asterisk code:
I98.2*—Oesophageal varices in diseases classified elsewhere

Example: Patient with known alcoholic cirrhosis of the liver presented for this episode of care with Upper Gastro-intestinal bleed. Endoscopy showed bleeding esophageal varices.

I85.0	(M)	Oesophageal varices with bleeding
K70.3	(3)	Alcoholic cirrhosis of liver
I98.2*	(3)	Oesophageal varices in diseases classified elsewhere

Related Interventions

In endoscopic therapy, an endoscope (a device with a light that can look inside of a body cavity) is used. 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.59.BA-X7—Destruction, esophagus, using endoscopic per orifice approach and chemical cautery agent [e.g. ethanol, adrenaline, hypertonic solution]

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 chemocautery agent

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

TIPS (Transjugular intrahepatic portosystemic shunt) 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

Inflammatory Bowel Disease

In effect 2001

Chronic idiopathic inflammatory diseases of the bowel include (K51) ulcerative colitis and (K50) Crohn's disease. If the exact nature of the disease is unclear in the medical record it should be assigned to K52.8-Other specified noninfective gastroenteritis and colitis.

Related Interventions

Pharmacotherapy—1.ZZ.35.^^
Total parenteral nutrition—1.LZ.35.^^
Partial colectomy—1.NM.87.^^

As a general rule of thumb, facilities should code most interventions having an intervention number greater than 50. Exceptions to this rule are stated in the general coding standard on "Selection of Interventions to Code".

Gastrointestinal Anastomoses

In effect 2001

Anastomosis and/or stoma formation may often accompany extensive gastrointestinal surgery involving removal of part of the alimentary tract. Anastomoses are often described as end-to-end, side-to-side or side-to-end. These do not require an additional code in CCI. Anastomoses and stoma formations are captured as part of the CCI code using the appropriate qualifier. A "code also" note will direct the user to code a temporary ileostomy that is done to promote healing of the anastomosis where appropriate.

Patients admitted for a planned closure of an ileostomy or a colostomy are assigned a code from the category Z43—Attention to artificial openings.

Artificial opening status only, without need for any care is classified to category Z93—Artificial opening status.

K91.4 Colostomy and enterostomy malfunction is the subcategory that classifies all the colostomy and enterostomy malfunctions like hemorrhage and infections.

Colonoscopic Interventions

In effect 2003

The term "colonoscopy" means looking inside the colon. It is a procedure performed by a gastroenterologist or a surgeon.

The colon, or large bowel, is the last portion of the digestive or GI tract. It starts at the caecum, which attaches to the end of the small intestine, and it ends at the rectum and anus. The colon is a hollow tube, about five feet long, and its main function is to store unabsorbed food products prior to their elimination.

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.

A shorter version of the colonoscope is called a sigmoidoscope, an instrument used to screen the lower part of the large bowel only. The colonoscope, however, is long enough to inspect all of the large bowel and even part of the small intestine.

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.

The blocks at the relevant anatomic sites for use when coding diagnostic interventions performed by the physician are:

2.NK.^^.^^	Diagnostic Interventions on the Small Intestine
Includes:	Small bowel
	Duodenum
	Jejunum and ileum
	Meckel's diverticulum

2.NM.^^.^^	Diagnostic Interventions on the Large Intestine
Includes:	Ascending colon
	Caecum
	Diaphragmatic flexure
	Hepatic flexure
	Sigmoid flexure
	Colon [right, left, NOS]
	Transverse colon
	Descending colon
	Ileo-caecal valve
	Iliopelvic colon
	Splenic flexure
	Sigmoid colon

2.NQ.^^.^^ Diagnostic Interventions on the Rectum
Includes: Pelvirectal juncture

When both therapeutic and diagnostic interventions are performed at the same anatomic site, only the therapeutic intervention must be coded. See coding standard titled "Combined Diagnostic and Therapeutic Interventions".

Example: Mr. B. presented with abdominal pain. With a provisional diagnosis of colonic polyps, the patient was brought in for a colonoscopy and possible polypectomy. The scope was advanced through the rectum and sigmoid colon and at the ascending colon a few large pedicled polyps were seen. Polyps were snared and removed. Electrocoagulation was used to stop any bleeding that occurred. The rest of the colon was inspected and appeared normal. (Though the scope was advanced beyond the site of the polypectomy, it is not required to code the inspection of the remainder of the large intestine.)

1.NM.87.BA Excision partial, large intestine, using endoscopic per orifice approach (or via stoma)

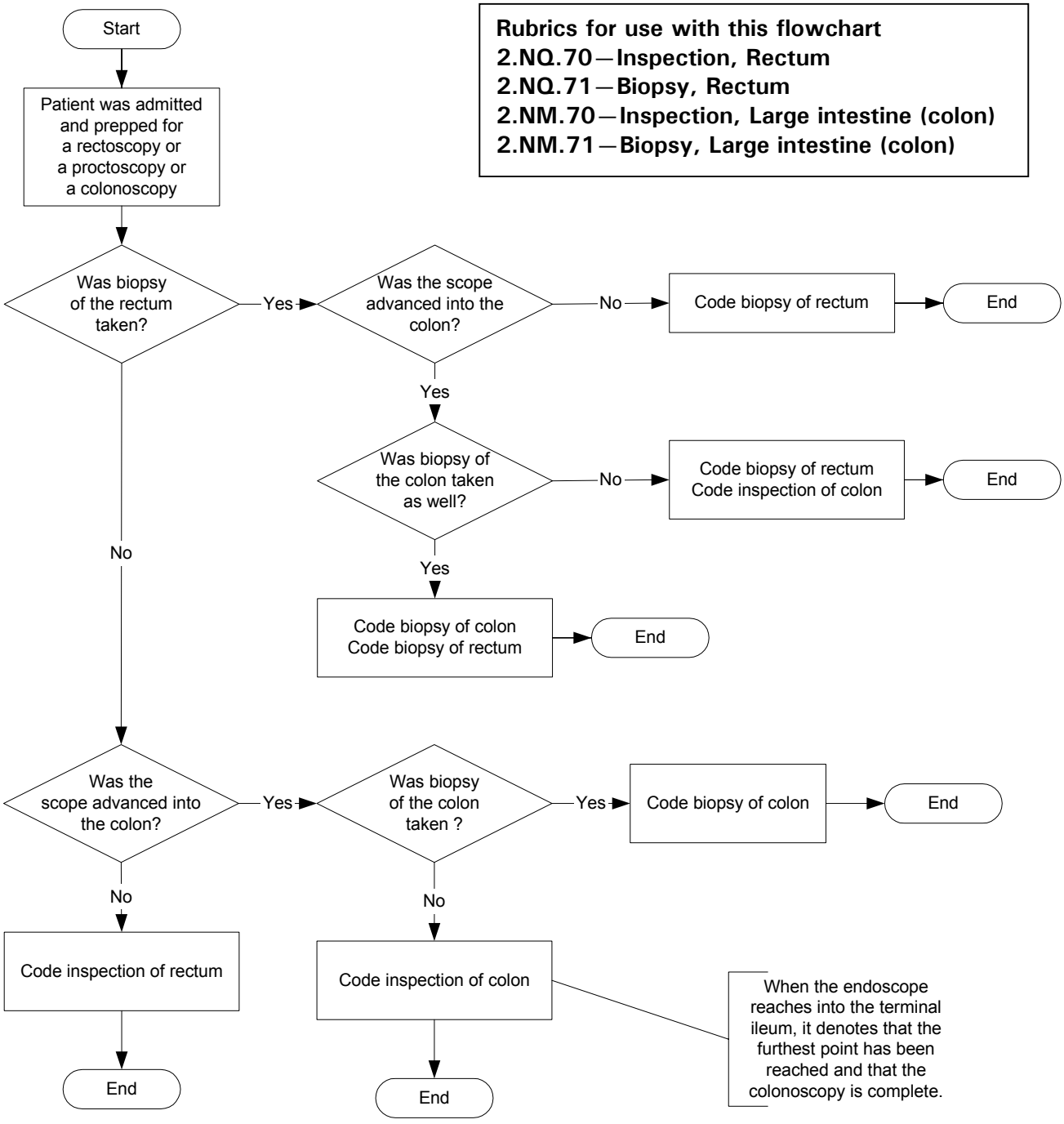
When two diagnostic interventions are performed at two separate anatomic sites during the same operative episode, the intervention in which tissue was procured for the purpose of obtaining a pathological diagnosis is sequenced first.

Example: Ms. W. presented with lower gastrointestinal bleeding. She was prepped and a colonoscopy was carried out. A rectal biopsy was taken at a suspicious lesion. The scope was advanced through the large intestine till the ileo-caecal valve. The colon appeared normal.

2.NQ.71.BA Biopsy rectum, using endoscopic per orifice approach
2.NM.70.BA Inspection, large intestine, using endoscopic per orifice approach (or via stoma)

Note: When biopsies are taken from separate anatomic sites during the same operative episode, the biopsy of the deepest site taken must be sequenced first.

Diagnostic Endoscopic Interventions Performed on the Lower Gastro-Intestinal Tract

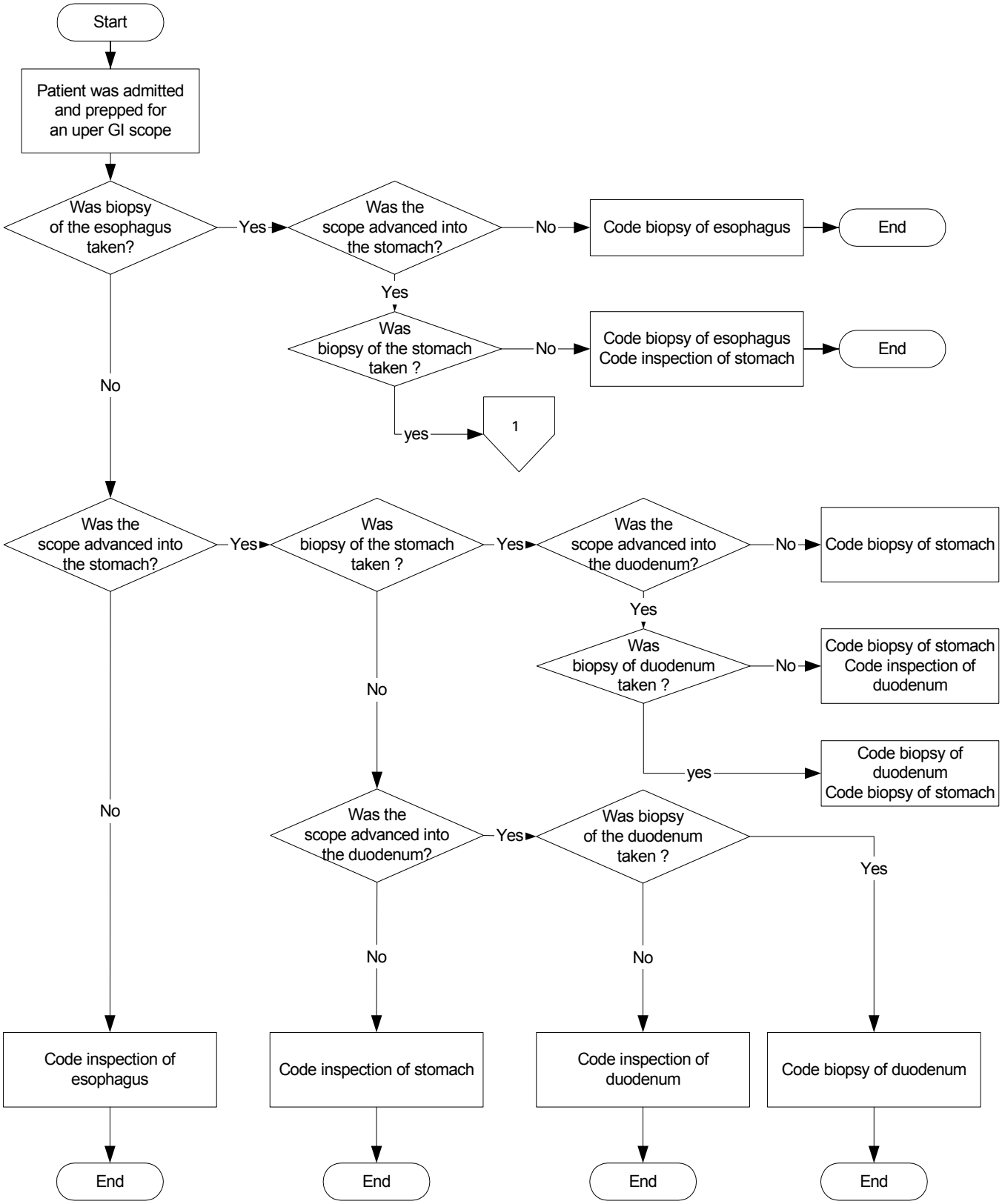


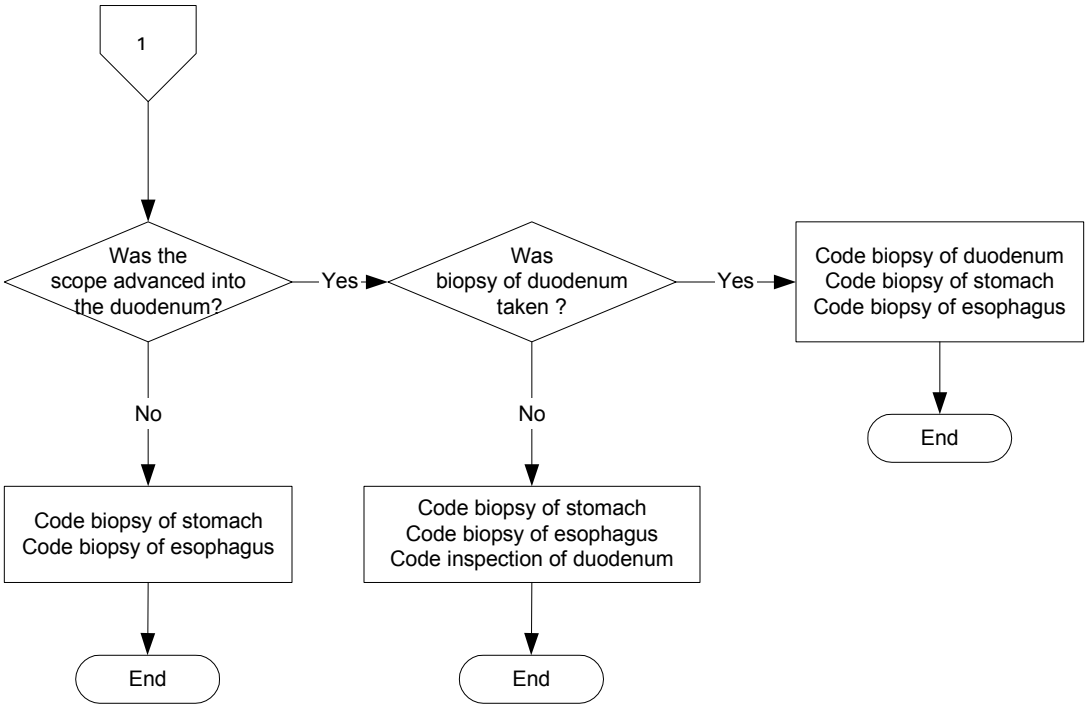
Note: On the rare occasion, when the physician advances the scope into the terminal ileum with the intention of inspecting that site or takes a biopsy of the terminal ileum, either the inspection or the biopsy of the small intestine must be recorded. Incidental entry into the terminal ileum should not be coded as an inspection.

Diagnostic Esophagogastroduodenoscopy (EGD)

In effect 2003

This flowchart spans over 2 pages





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)

Note: When biopsies are taken from separate anatomic sites during the same operative episode, the biopsy of the deepest site taken must be sequenced first.

Chapter XII—Diseases of the Skin and Subcutaneous Tissue

Cellulitis

In effect 2001, amended 2003

Cellulitis is a diffuse, inflammatory process that affects the skin. It may result from soft tissue injuries such as punctures, lacerations or from ulcers. While cellulitis typically presents as pain, redness and edema, coders may not assume from the symptoms alone that cellulitis is present. A physician must specifically state the diagnosis to be "cellulitis" before a code from L03 Cellulitis can be selected.

An additional code may be used to identify the causative organism, (for instance B95.1 Streptococcus group B) and it would be sequenced to follow the appropriate code from L03.

Sequencing Soft Tissue Wound Infections With cellulitis

A "dirty" soft tissue injury commonly may present with or subsequently develop an infection, which is typically treated with a course of oral antibiotics as well as wound management involving débridement, any reapposition and topical dressing. Cellulitis may be present. If the course of treatment only involves *oral antibiotics*, the cellulitis is presumed to be a comorbid condition while the soft tissue injury is considered to be the most responsible diagnosis.

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 débridement, topical dressing and a course of oral antibiotics.

S81.91	(M)	Open wound of lower leg, part unspecified, complicated
L03.11	(1)	Cellulitis of lower limb
W17	(9)	Other fall from one level to another
U98.8	(9)	Other specified place of occurrence

If the course of treatment involves *intravenous antibiotics*, the cellulitis is presumed to be the most responsible diagnosis and the soft tissue injury is recorded as an additional diagnosis. Refer to the diagnosis typing definitions for proper designation of a diagnosis type.

Example: While in the park walking her dog and attempting to break up a dogfight, a woman was bitten on the hand by one of the dogs approximately 36 hours ago. 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.

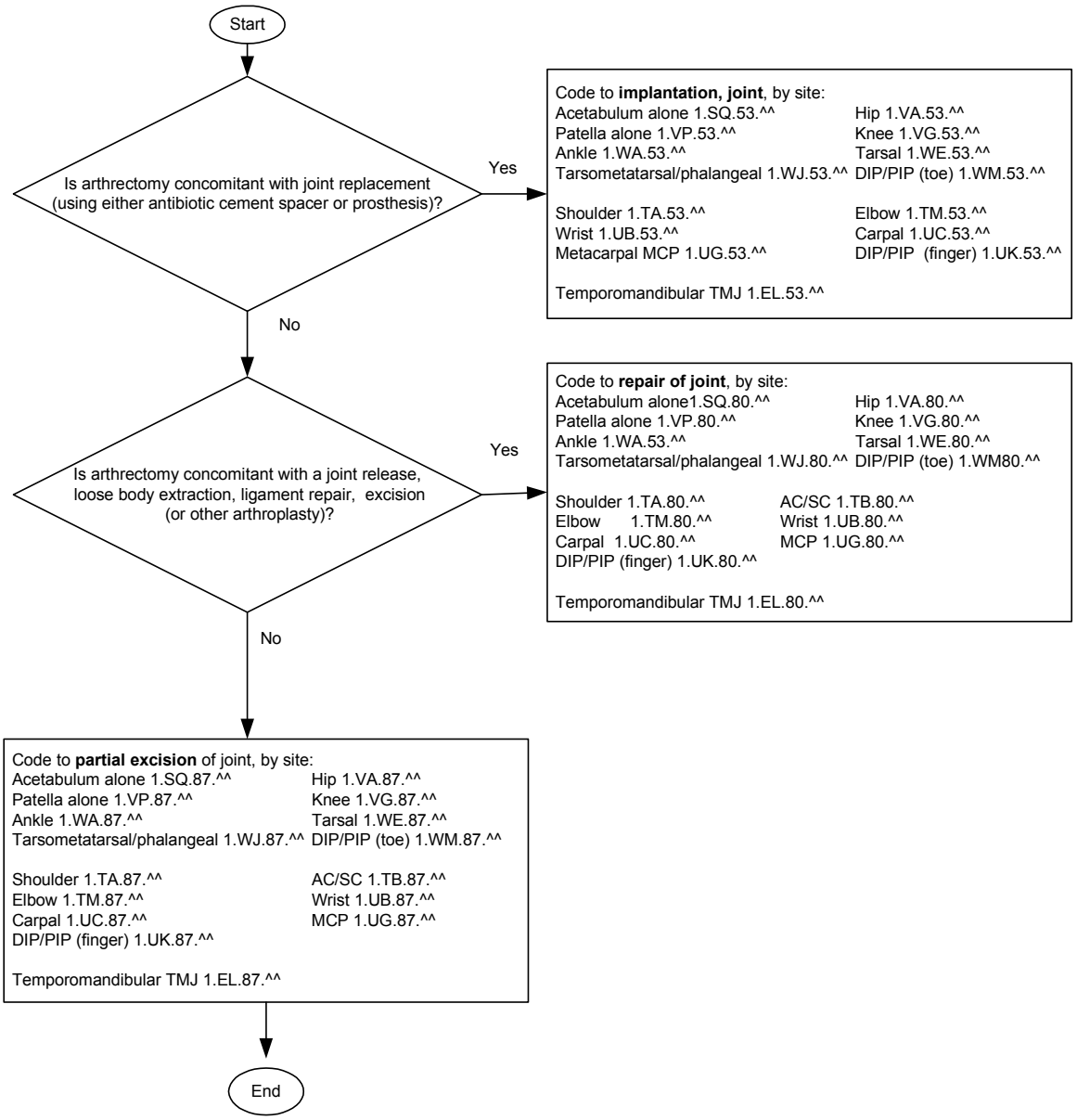
L03.10	(M)	Cellulitis of upper limb
S61.91	(3)	Open wound of hand, complicated
W54	(9)	Dog bite
U98.8	(9)	Other specified place of occurrence

Cellulitis has been classified in ICD-10-CA by site. When coding any open wound with "cellulitis", consider as a complicated open wound. Do not assume cellulitis to be an indicator of "Post-traumatic wound infection". Only when the physician has established a diagnosis of Post-traumatic wound infection, must the case be coded to T79.3—Post-traumatic wound infection, not elsewhere classified.

Chapter XIII—Diseases of the Musculoskeletal System and Connective Tissue

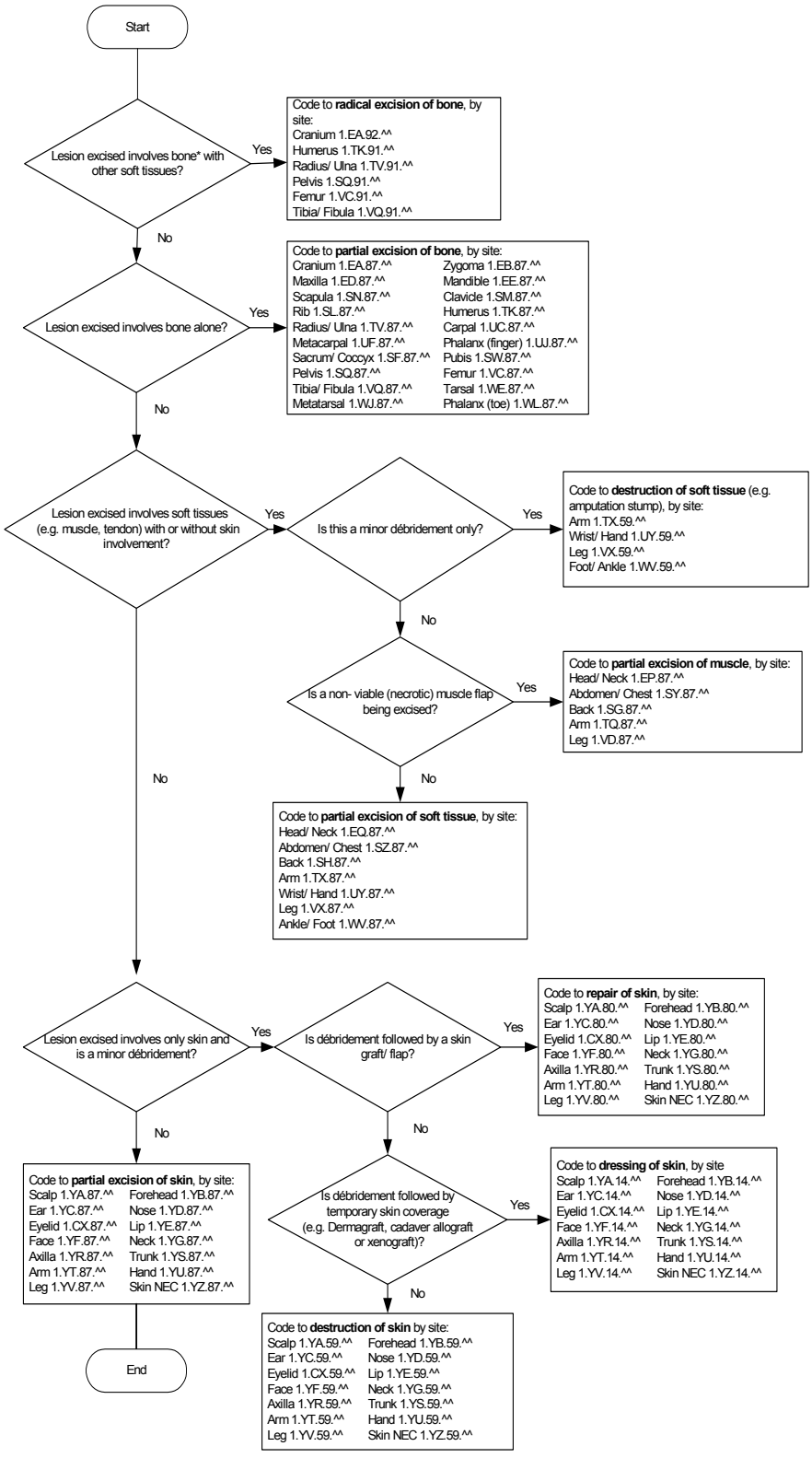
Arthrectomy and Arthroplasty

In effect 2001



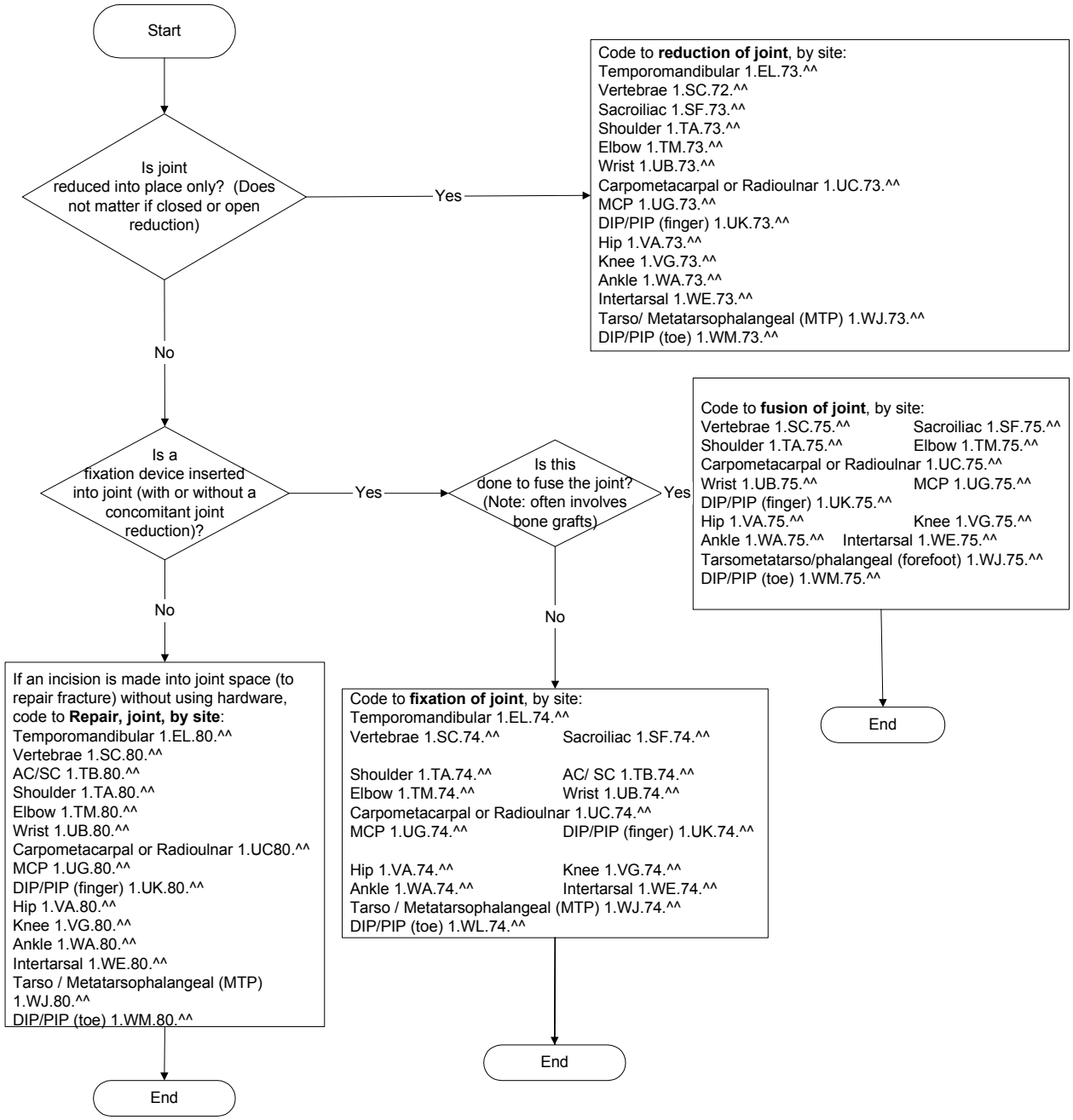
Excision (of Lesion) of Bone, Soft Tissue and Skin

In effect 2001



Joint Fracture Reduction, Fixation and Fusion

In effect 2001, amended 2002



Pathological Fractures

In effect 2001

Also known as compression or "spontaneous" fractures, these occur in bones and joints weakened by pre-existing disease. If there is no known traumatic injury to account for the fracture or if the physician clearly states the fracture is a result of an underlying disease (such as neoplasm, osteoporosis, Paget's disease or an endocrine disorder) it is correct to identify the fracture as pathological. A separate code identifying the underlying disease that precipitated the fracture must be assigned with a diagnosis type (3) if the disease is not explicitly stated in the code title.

Example:	M84.45	(M)	Pathological fracture not elsewhere classified, pelvic region and thigh
	M88.8	(3)	Paget's disease of other bones

The dagger/asterisk convention comes into effect when coding the fracture in neoplastic disease. When a fracture is due to a neoplasm, the neoplasm code is sequenced first as the most responsible diagnosis (or as a type 1) and the pathological fracture code is sequenced to follow it and recorded as a type 3 diagnosis. This is because there is a presumption that the neoplasm is the primary focus of care.

Example:	C40.2†	(M)	Malignant neoplasm long bones of lower limb
	M90.7*	(3)	Fracture of bone in neoplastic disease
	9182/3	(4)	Fibroblastic osteosarcoma (morphology coding is optional)

Example:	C79.5	(M)	Secondary malignant neoplasm of bone and bone marrow
	M49.5	(3)	Collapsed vertebrae in diseases classified elsewhere
	Z85.3	(3)	Personal history of malignant neoplasm of breast (removed)
	8010/6	(4)	Metastatic carcinoma NOS (morphology coding is optional)

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:	M80.95	(M)	Unspecified osteoporosis with pathological fracture, pelvic region and thigh

A code from this category (M80.-) may not be selected if the actual cause of the fracture is trauma. Assign the appropriate code from chapter XIX and also assign a code to identify the existing osteoporosis from category M81 Osteoporosis without pathological fracture.

Example:	S32.000	(M)	Fracture of lumbar vertebra, L1 level, closed
	M81.0	(3)	Postmenopausal osteoporosis
	W10	(9)	Fall on stairs
	U98.0	(9)	Place of occurrence, home

Stress Fractures

In effect 2001, amended 2002

Also known as "fatigue" or "march" fractures, stress fractures 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. If the stress fracture is located in the vertebrae, assign M48.4- Fatigue fracture of vertebra; for any other site, assign M84.3- Stress fracture, not elsewhere classified.

An exception is made for a stress fracture in osteoporotic bone, which should always be assigned to osteoporosis with pathological fracture (M80.-).

In cases where there is a stress fracture of one or more vertebrae in osteoporotic bone, assign fifth digit "8" to indicate the site "vertebrae".

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

Example: A long-distance runner with secondary osteoporosis (underlying hyperthyroidism) is found to have stress fractures of the 2nd, 3rd and 4th metatarsal bones.

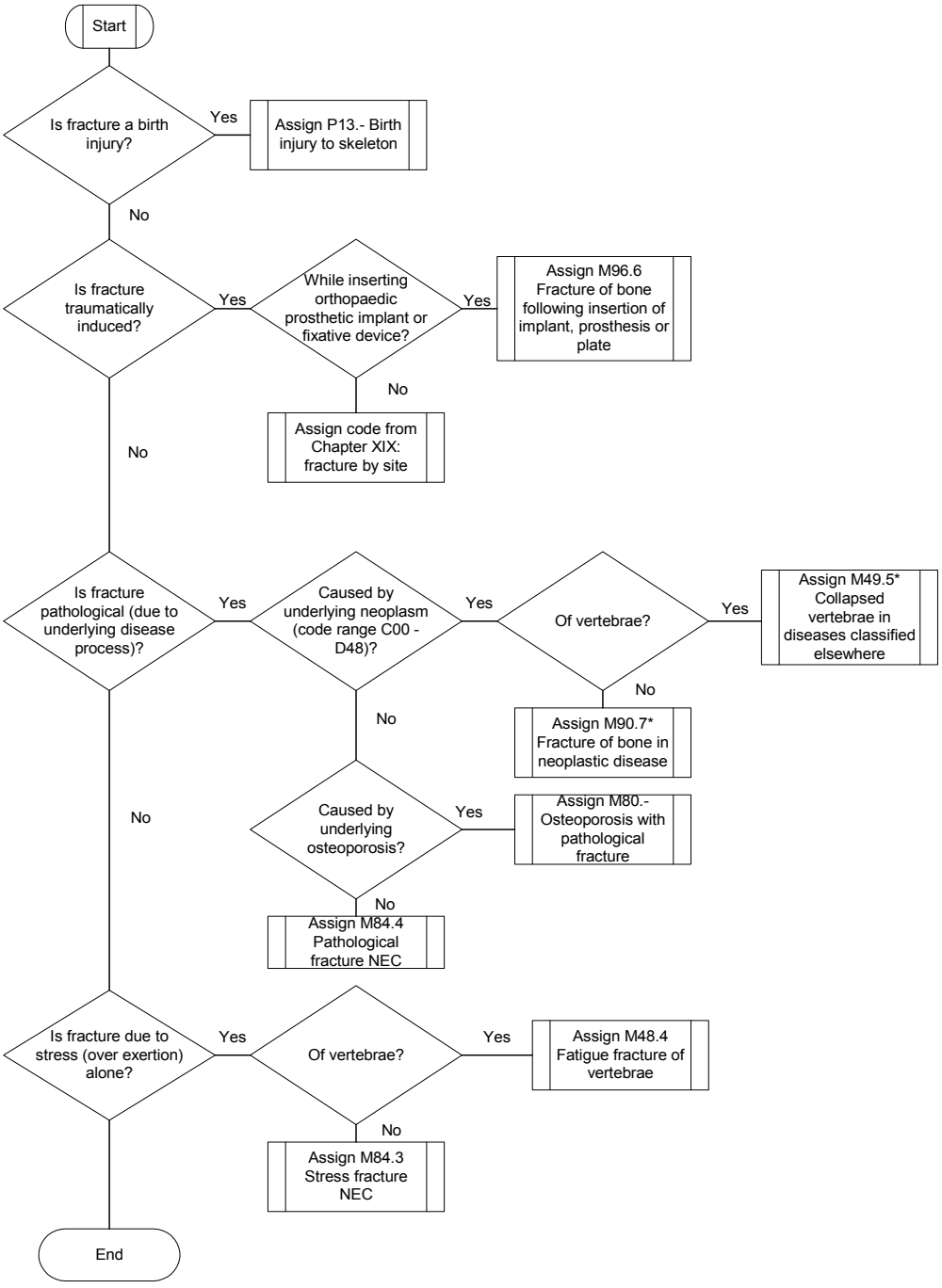
M80.87	(M)	Osteoporosis (secondary to endocrine disorder) with pathological fracture of ankle and foot (includes: MTP and IP joints)
E05.9	(3)	Thyrotoxicosis unspecified (Includes: hyperthyroidism NOS)

Related Intervention

Fusion of the spine would be coded to 1.SC.75.^^—Fusion, spinal vertebrae
The surgical approach and the device and grafts used for fusion are captured as the qualifiers. The location attribute will capture the anatomic location of the fracture.
The extent attribute will capture the number of levels actually fused.

Fractures

In effect 2001



* These codes are manifestation codes and require the use of an additional code for the underlying disease (dagger code).

Chapter XIV—Diseases of the Genitourinary System

Hypertensive Renal Disease

In effect 2001

There is an assumed causal relationship between chronic renal failure and hypertension. If hypertension and chronic or unspecified renal failure is documented this should be coded to I12—Hypertensive renal disease. I12 should be coded first, followed by a code from either category N18 or N19 to specify the type of renal failure.

Hypertensive renal disease with hypertensive heart failure is coded to I13 Hypertensive heart and renal disease. Other codes describing the type of renal failure (N18–N19) and/or heart failure (I50.-) should be applied. I13 must be positioned first.

Hypertension and acute renal failure do not have a cause and effect relationship. If the two occur together both I10 Essential (primary) hypertension and N17.- Acute renal failure are assigned. The order of the codes depends upon which condition is being treated.

Example: Chronic renal failure and hypertension
A causal relationship is assumed.

I12	Hypertensive renal disease
N18.9	Chronic renal failure, unspecified

Example: Hypertension with atrophy of kidney

I12	Hypertensive renal disease
N26.0	Atrophy of kidney (senile, terminal)

Example: Acute renal failure with renal medullary necrosis and hypertension

N17.2	Acute renal failure with medullary necrosis
I10.0	Benign hypertension

Genitourinary Conditions Requiring Surgical Intervention

In effect 2003

The effect of labour and delivery on the female pelvis is a common cause of a cystocele or a urethrocele. Symptoms commonly associated with a cystocele may 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 urethrovesical 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.

Included in this rubric are the following surgical procedures:

Repair, pelvic floor
Colpoperineorrhaphy
Colpoplasty
Colpoperineoplasty
Correction, cystocele, rectocele
Repair, pelvic floor (levator sling, perineal muscles)
Suture, vagina
Vaginoplasty (with or without suspension)
Vulvovaginoplasty
Culdoplasty (e.g. McCall)
A & P repair
Colporrhaphy (A & P) with or without amputation of the cervix

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.

Example: Examination revealed anterior vaginal walls to be extremely lax. An elective anterior colporrhaphy, to take care of her cystocele, was scheduled. A transverse incision was made in the vaginal attachments to the cervix anteriorly. Mucosa was dissected bilaterally and the vesical vaginal fascia was dissected and stripped clear. This was sutured under the bladder for support with interrupted 2-0 Vicryl suture starting from near the introitus and towards the vaginal vault. The excess mucosa was excised and then tacked to the fascia underneath with interrupted 0 chromic catgut. The incision was approximated and an indwelling catheter was inserted.

N81.1	(M)	Cystocele
1.RS.80.CA		Repair, vagina, vaginal approach, using sutures only (with location attribute "AN")

Female Stress Incontinence

When stress incontinence is the main indication for the surgical intervention, repair is usually directed toward the urethrovesical angle where urethropexy is attained. This "Fixation of the bladder neck" should be classified to 1.PL.74.^^. 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.

The rubric 1.PL.74—Fixation, bladder neck, includes the following:

Sling, pubovaginal
Cystourethropexy [urethropexy]
Colposuspension, Burch
Operation, Marshall Marchetti (Kranz)
Suspension, vesicourethral, with fixation into symphysis pubis
Suspension, vesicourethral, with fixation into Cooper's ligament
Suspension, vaginal needle technique
Urethrovesical suspension [suprapubic or retropubic]
Stabilization, bladder neck
Suspension, bladder neck (e.g. Raz procedure)
Colpourethropexy
Plication, bladder neck (e.g. Kelly)
Anterior colporrhaphy with suture of bladder neck (for symptomatic cystocele)
Anterior urethropexy

Example: Patient with urinary incontinence and cystocele treated surgically with Burch Procedure and repair of the cystocele.

N39.3	(M)	Stress incontinence
N81.1	(1)	Cystocele
1.PL.74.PK		Fixation, bladder neck, open [retropubic] approach using sutures
1.RS.80.LA		Repair, vagina, open approach using sutures only (with location attribute "AN")

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". Included at this rubric are the following:

Colpoperineorrhaphy
Colpoplasty
Colpoperineoplasty
Correction, cystocele, rectocele
Repair, pelvic floor (levator sling, perineal muscles)
Suture, vagina
Vaginoplasty (with or without suspension)
Vulvovaginoplasty
Culdoplasty (e.g. McCall)
A & P repair
Colporrhaphy (anterior and posterior) with or without amputation of the cervix

Enteroceles

An enterocele 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 that restores the normal shape and support of the vaginal vault. A code from the rubric 1.RS.74—Fixation, Vagina must be selected as well.

Example: Patient presented with a vaginal wall eversion with an associated enterocele. She had a previous vaginal hysterectomy several years before. She was brought in for an elective abdominal sacro-colpopexy and a repair of the enterocele.

The bladder peritoneum was dissected down off the underlying vaginal vault. Three sutures of 0 Prolene were placed across the upper anterior vaginal vault and three sutures of 0 Prolene were placed across the posterior vaginal vault. Marlex mesh was cut and tied down to the vaginal vault. Then the presacral space was opened up. A Moschcowitz enterocele repair was done with Marlex mesh and a single purse string suture of 0 Vicryl.

N99.3	(M)	Prolapse of vaginal vault after hysterectomy
N81.5	(1)	Vaginal enterocele
1.RS.74.LA-XX-N		Fixation, vagina NEC, open [retropubic] approach, using synthetic tissue [e.g. mesh]
1.RS.80-LA-XX-N		Repair, vagina NEC, open [retropubic] approach, using synthetic tissue [e.g. mesh] (with location attribute "AX")

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.

Continuous Ambulatory Peritoneal Dialysis (CAPD) Peritonitis

In effect 2001, amended 2002, 2003

Continuous ambulatory peritoneal dialysis (CAPD) peritonitis or dialysis-associated peritonitis is an acute or chronic inflammation of the peritoneum that occurs in people receiving peritoneal dialysis. 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)

K65.0	Acute peritonitis
Z99.2	Dependence on renal dialysis, Renal dialysis status

Example: Peritonitis due to peritoneal dialysis catheter exit site infection

T85.7	Infection and inflammatory reaction due to other internal prosthetic device, implants and grafts.
K65.9	Peritonitis, unspecified
Y84.1	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

Example: Peritoneal dialysis catheter exit site infection—no peritonitis

T85.7	Infection and inflammatory reaction due to other internal prosthetic device, implants and grafts.
Y84.1	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

In all three examples, if the organism has been identified, it may be classified using the block B95-B97 with a diagnosis type 3.

Chapter XV—Pregnancy, Childbirth and the Puerperium

Chapter XV is Divided Into the Following Blocks:	
Pregnancy with abortive outcome	(O00-O08)
Oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium	(O10-O16)
Other maternal disorders predominantly related to pregnancy	(O20-O29)
Maternal care related to the fetus and amniotic cavity and possible delivery problems	(O30-O48)
Complications of labour and delivery	(O60-O75)
Complications predominantly related to the puerperium	(O85-O92)
Other obstetric conditions, not elsewhere classified	(O95-O99)
Persons encountering health services in circumstances related to reproduction	(Z30-Z39)

Gestational Age

In effect 2001

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.

Pre-term

Less than 37 completed weeks (less than 259 days) of gestation.

Term

From 37 completed weeks to less than 41 completed weeks.

Post-term

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

In effect 2001

For the purposes of this classification, trimesters shall be defined as follows:

- First trimester is less than and including the 13th week of gestation ($\leq$ 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)

Intrauterine Death

In effect 2001

If gestation is longer than 20 completed weeks, the retention of the dead fetus is considered an intrauterine death.

O36.4—Intrauterine death (missed delivery) (stillbirth).

Pregnancy With Abortive Outcome

In effect 2001, amended 2004

O03–O08 Pregnancy with abortive outcome

Pregnancy with an abortive outcome is classified into categories O03–O08. The primary axis is the type of abortion with the fourth-digit axis indicating any associated complication(s).

Example: 003.4 Spontaneous abortion, incomplete, without complication

O04 Medical abortion

Induced terminations have some additions to the code options. The term "legally induced abortion" has been changed to read "medical abortion" but the diagnosis code does not indicate the method used to terminate the pregnancy. This is a broad category encompassing the diagnosis code for both surgical and pharmacologically induced abortions.

All medical abortions or planned terminations of pregnancy, regardless of gestational age, must be classified using the O04–O07 range of rubrics on the mother's abstract. When terminations are performed later on 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. The reason for the termination of pregnancy must also be coded (e.g. anencephalic fetus) on the *mother's* abstract.

If the termination results in a livebirth, then category 004 Medical Abortion must be selected for the mother's abstract along with Z37.0 Single live birth to indicate that the abortion resulted in a live birth. Some facilities may register this live birth as a newborn, thus generating an abstract, and then P96.4 Termination of pregnancy, fetus and newborn must be selected as the MRDx on the newborn abstract. A code describing any associated congenital anomalies would also be selected as an additional comorbidity. A code from category Z38 may also be selected.

Example: Medical abortion treated with a suction curettage.

O04.9	Medical abortion, complete or unspecified, without complication
5.CA.89.GC	Surgical termination of pregnancy, aspiration and curettage, vaginal approach

Example: Medical abortion for fetal anencephaly
Labor successfully induced with vaginal insertion of prostaglandin.
Fetus did not show any signs of life.

Mother's abstract:

O04.9	(M)	Medical abortion, complete or unspecified without complication.
O35.009	(I)	Maternal care for (suspected) fetal anencephaly
5.CA.88.YA-I2		Pharmacological termination of pregnancy, using oxytocin and per orifice approach

If the case above had a stillbirth abstract generated, the following codes would apply:

P96.4	(M)	Termination of pregnancy, fetus and newborn
Q00.0	(1)	Anencephaly

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	(I)	Maternal care for (suspected) fetal anencephaly
Z37.0	(3)	Single live birth.
5.CA.88.YA-I2		Pharmacological termination of pregnancy, using oxytocin and percutaneous approach.

If the case above had a newborn abstract generated, the following codes would apply:

P96.4	(M)	Termination of pregnancy, fetus and newborn
Q00.0	(1)	Anencephaly
Z38.00	(0)	Singleton, born in hospital, delivered vaginally.

O05 Other abortion

The category for "unspecified abortion" has been removed from ICD-10-CA, however, a new option entitled "other abortion" has been added. Types of abortions that would fit into this new code are those that are self-inflicted, or those that occur following trauma or an amniocentesis.

O07 Failed attempted abortion

The code for "failed attempted abortion" should be used only if the method of termination chosen does not result in terminating the pregnancy and there is still a viable fetus within the uterus.

Abortion With Remaining Fetus

In effect 2001

This condition should be classified to O31.1 Continuing pregnancy after abortion of one fetus or more.

Complications Following Abortion and Ectopic and Molar Pregnancy

In effect 2001, amended 2003

A code from the category O08 must be used as the MRDx only if the episode of care is solely for the treatment of a complication, e.g. a current complication of a previous abortion. It may be used as an optional additional code with categories O00–O02 to identify associated complications and with categories O03–O07 to give fuller details of the complication. The inclusion terms provided at subcategories of O08 should be referred to when assigning the fourth character subcategories of O03–O07.

Note: The fourth digit (subcategory) has been provided for use with O03–O06 and O08. A distinction is made between episodes of care at which a disease or injury and resulting complications or manifestations are treated together—"current episode"—and an episode of care for complications or manifestations of diseases or injuries treated previously—"subsequent episode".

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*** (see first two examples below) and ***an episode of care for a complication of the abortion or ectopic and molar pregnancy treated previously*** (see third example below).

Example: Ruptured tubal pregnancy with shock. (Initial episode of care)

O00.1 (M)	Tubal pregnancy
O08.3	Shock following abortion and ectopic and molar pregnancy (see diagnosis typing standards for appropriate assignment)

Example: Incomplete spontaneous abortion with perforation of uterus. (Initial episode of care)

O03.3 (M)	Spontaneous abortion, incomplete, with other and unspecified complications
O08.6	Damage to pelvic organs and tissues following abortion and ectopic and molar pregnancy (see diagnosis typing standards for appropriate assignment)

Example: Mrs. S. had a spontaneous abortion and underwent a 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. (No other code required since the abortion was performed during a previous episode of care.)

O08.0 (M)	Genital tract and pelvic infection following abortion and ectopic and molar pregnancy

Streptococcal Group B Infection/Carrier in Pregnancy

In effect 2003

Infections due to group B streptococci (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 labour, to ensure that the organism is not passed onto the baby during birth.

If no prophylactic treatment is given assign:
Z22.38 Carrier of other specified bacterial diseases

If prophylactic treatment is given assign:
Z22.38 Carrier of other specified bacterial diseases
Z29.2 Other prophylactic chemotherapy

If there is documentation of a genitourinary tract infection due to Streptococcus Group B, assign:
O23.90- Other and unspecified genitourinary tract infection in pregnancy
Includes: Genitourinary tract infection in pregnancy NOS
B95.1 Streptococcus, group B, as the cause of diseases classified to other chapters

Delivery in a Completely Normal Case

In effect 2001

Z37.0—Outcome of delivery, single live birth, is the code that must be used as the MRDx for any spontaneous delivery without complication. There must be a corresponding intervention code selected from CCI for every normal delivery.

Includes: 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)

Certain obstetrical procedures do not contraindicate 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. A code from rubric Z37.- Outcome of delivery, must be coded for all deliveries. Z37.0 Single live birth, may be the most responsible diagnosis as specified above, but when a code from O10–O99 is applicable, the outcome of delivery should be added as a diagnosis type (3).

Some of the CCI codes used for deliveries are:

5.MD.50.^^ Manually assisted vaginal delivery
5.MD.53.^^ Forceps traction and rotation
5.MD.54.^^ Vacuum traction
5.MD.55.^^ Combination of vacuum and forceps delivery
5.MD.56.^^ Breech Delivery
5.MD.60.^^ Cesarean section

Selection of the Sixth Digit in Obstetrical Coding

In effect 2001

In ICD-10-CA, the episode of care is identified by the sixth-digit sub-classification. Certain obstetric conditions occur only at one point within an obstetric period. For example, placenta previa occurs only in the antepartum period. Other obstetric conditions, such as hypertension, may be present at any time throughout the pregnancy and persist into the puerperium.

It is essential to identify:

- The period (antepartum, intrapartum or postpartum) in which the patient is receiving care for a specific condition, and
- Whether or not delivery occurs within that episode of care

The sixth digit sub-classification (denoting the episode of care) has been applied where appropriate to categories O10–O99.

The sixth digit categories are as follows:

1 Delivered, with or without mention of antepartum condition

Antepartum condition with delivery
Delivery NOS
Intrapartum obstetric condition
Pregnancy, delivered

} with or without mention of antepartum or intrapartum complication during current episode of care

2 Delivered, with mention of postpartum complication

Delivery
Pregnancy, delivered

} with mention of postpartum or puerperal complication during the current episode of care

3 Antepartum condition or complication

Antepartum obstetric condition, not delivered during the current episode of care

4 Postpartum condition or complication

Postpartum or puerperal obstetric condition or complication following delivery that occurred:
during previous episode of care
outside hospital with subsequent admission for observation or care

9 Unspecified as to episode of care

Cannot be used as a sixth digit for inpatient coding when the episode of care results in delivery; however, in coding abortion, a code from the O10-O99 series with a sixth digit of "9" may be assigned as an additional code to describe the obstetrical condition present.

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. There are certain combinations of sixth digits that are illogical for the same episode of care:

1 only, or with 2, but never with 3, 4 or 9
2 only, or with 1, but never with 3, 4 or 9
3 only, never with 1, 2, 4 or 9
4 only, never with 1, 2, 3 or 9

Differing sixth digits may be used on the obstetric codes when a patient delivers and has both an antepartum and a postpartum condition.

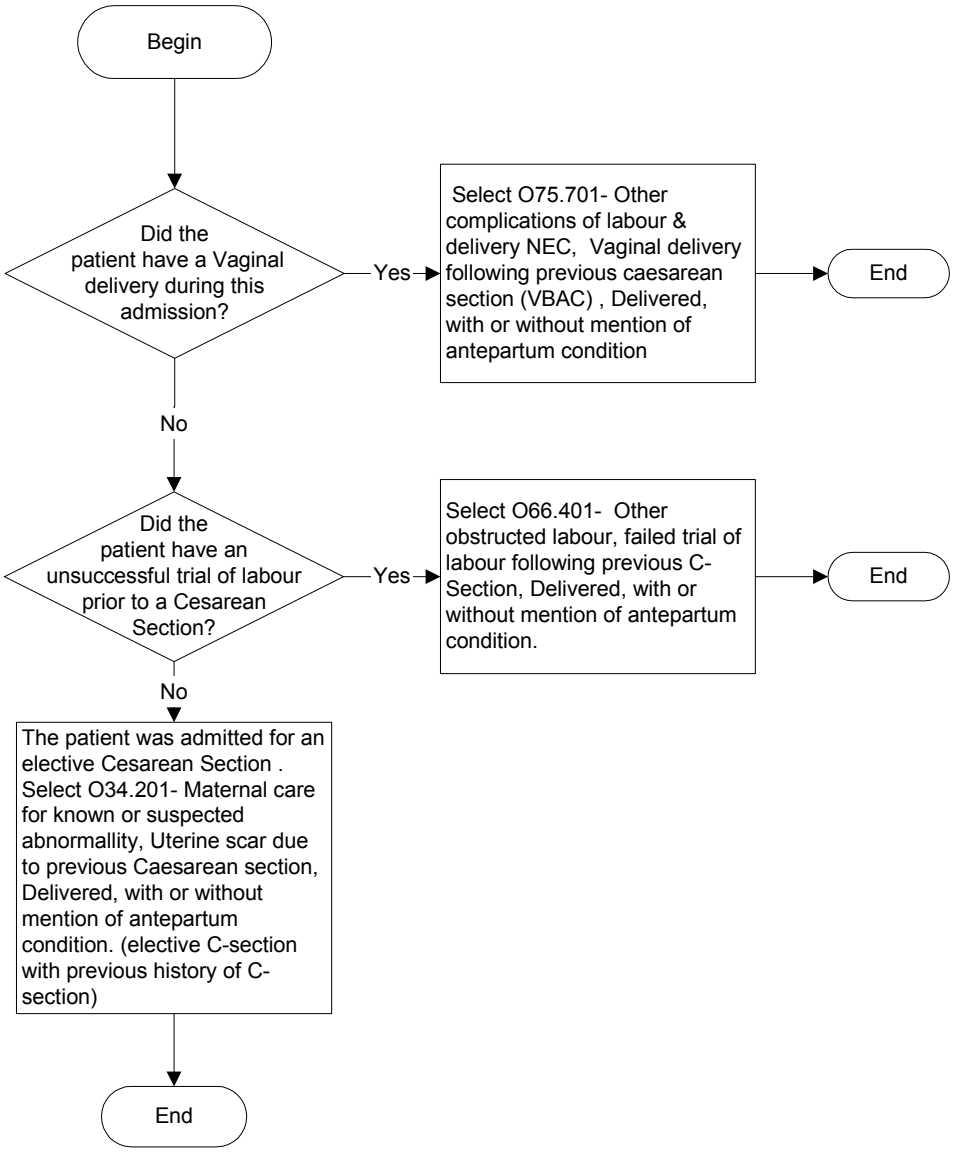
Example: Patient admitted in labour. Twins delivered. Subsequent postpartum hemorrhage on the second day followed by deep phlebothrombosis.

O30.001	(M)	Twin pregnancy, delivered
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

Remember to read all inclusions and exclusions carefully. ICD-10-CA has some separate categories for conditions that may occur either antepartum or postpartum (e.g. phlebothrombosis)

Delivery With History of Previous Cesarean Section

In effect 2003



Sequencing Obstetrical Diagnoses Codes

In effect 2001

If an episode of care includes non-instrumental, 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.

Example: Patient admitted with gestational hypertension, treated with bed rest and delivered baby boy on day 6 of admission. Patient had a first-degree laceration of the perineum.

O13.001	(M)	Gestational [pregnancy-induced] hypertension without significant proteinuria delivered, with or without mention of antepartum condition
O70.001	(1)	First degree laceration
Z37.0	(3)	Single live birth

In cases within the expected length of stay where a cesarean section or instrumentation has been used (i.e. forceps or vacuum), a diagnosis stating the indication for the intervention should be the most responsible diagnosis.

Diabetes Mellitus in Pregnancy

In effect 2001

All types of diabetes (pre-existing or gestational) occurring during pregnancy are classified to this rubric. Appropriate assignment of the fifth digit follows the same coding standards as those pertaining to the categories E10–E14 Diabetes Mellitus. Please refer to the diabetes coding standards section in Chapter IV for further information. Patients with diabetes are more apt to develop pre-eclampsia and eclampsia. If the patient record indicates that either condition is present, assign an additional code. A code from the block E10-E14 is also required to capture any specific diabetic complication that may be present.

Example: Patient with gestational diabetes admitted for induction.

O24.491	Diabetes mellitus arising in pregnancy, level of control unspecified, delivered with or without mention of antepartum condition.

Maternal Care Related to the Fetus, Amniotic Cavity and Possible Delivery Problems

In effect 2001

O32–O34 are to be used when the mother is diagnosed with these conditions *prior* to the onset of labour. When labour has begun but becomes obstructed due to one of these conditions, the case should be classified to a code from the range O64–O66 Obstructed Labour. There are no longer two codes required to properly classify obstructed labour. One code from the O64–O66 range is sufficient.

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)	Twins, both liveborn

Example: 26-year-old primigravida with known twin pregnancy admitted in early labour. 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 labour 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)	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 Caesarean section, delivered with or without mention of antepartum condition.
Z37.0	(3)	Single live birth

Example: 27-year-old multigravida admitted in active labour at 6 cm dilation. This patient has a history of a previous cesarean section but wished for a trial of labour in the hope of delivering vaginally. After several hours of labour, it became apparent that vaginal delivery was not going to occur and a cesarean section was carried out.

O66.401	(M)	Other obstructed labour, failed trial of labour following previous caesarean, delivered with or without mention of antepartum condition.
Z37.0	(3)	Single live birth

Example: 27-year-old multigravida admitted in active labour at 6 cm dilation. This patient has a history of a previous cesarean section but wished for a trial of labour. After two more hours of labour, she successfully delivered a female fetus vaginally.

O75.701	(M)	Other complications of labour and delivery, vaginal delivery following previous caesarean section, delivered with or without mention of antepartum condition
Z37.0	(3)	Single live birth

Premature Rupture of Membranes

In effect 2001

Premature rupture of membranes (O42.-) should be coded when there is spontaneous rupture of the amniotic sac within 24 hours prior to the onset of contractions. Codes within the rubric are selected by the length of time between rupture of the membranes and the onset of labour with a second axis of term or preterm gestational age at the time of rupture.

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 labour.

O42.121	(M)	Full-term premature rupture of membranes, onset of labour after 24 hours, 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

In effect 2001

Category O60 should be used when the delivery of an infant occurs before completion of 37 weeks of pregnancy. Labour may be spontaneous or induced and followed by vaginal or surgical deliveries. See coding standard on "Pregnancy with Abortive Outcome"

Long Labour

In effect 2001

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.

Obstructed Labour

In effect 2001, amended 2002

- Labour that obstructs or blocks a vaginal delivery—the patient must be in labour before a code from the block O64-O66 is assigned.
- Code if the physician states that labour was obstructed or if the Alphabetical Index leads to an obstructed labour code (e.g. POP [persistent occipitoposterior])
- Look for documentation of obstructed labour when emergency cesarean section is done for maternal indications.
- Failure to progress NOS, is not necessarily obstructed labour. It is an addition to the inclusions at O62.2--.
- Using an additional code for failure to progress is not necessary when coding a condition from O64-O66.

Example: Pregnancy, at term delivered, with obstructed labour due to transverse lie.

O64.801	(M)	Obstructed labour due to other malposition and malpresentation, Delivered, with or without mention of antepartum condition
Z37.0	(3)	Single live birth

Example: Pregnancy, at term delivered, with obstructed labour due to breech presentation. A cesarean section is performed (unplanned).

O64.101	(M)	Obstructed labour due to breech presentation, Delivered, with or without mention of antepartum condition
Z37.0	(3)	Single live birth

When maternal care is administered prior to the commencement of labour a code should be selected from the appropriate rubric in the O31–O34 range. No obstructed labour code is applicable.

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 labour.

O32.101	(M)	Maternal care for breech presentation, Delivered, with or without mention of antepartum condition
Z37.0	(3)	Single live birth

An obstructed labour may sometimes end in a vaginal delivery.

The obstructing factor may be resolved prior to a normal vaginal delivery by version and/or rotation at time of delivery or by certain maneuvers. A code from the range O64-O66 may be selected for the obstruction as a complication of labour. An additional intervention code for the procedure leading to the resolution of the obstructed labour prior to vaginal delivery should also be assigned.

Labour and Delivery Complicated by Fetal Stress

In effect 2001

The category O68 Labour and delivery complicated by fetal stress [distress] has four codes under it that are in agreement with the statement issued by the SOGC in its August 1997 policy statement from the Task Force on Cerebral Palsy and Neonatal Asphyxia.

O68.0— Labour and delivery complicated by fetal heart rate anomaly
Includes:

Fetal:

- bradycardia
- heart rate irregularity
- tachycardia
- non-reassuring fetal heart rate

O68.1— Labour and delivery complicated by meconium in amniotic fluid
This diagnosis is now coded here rather than to an abnormal finding code, as was the case with previous classifications.
Excludes: With fetal heart rate anomaly (O68.2--)

O68.2— Labour and delivery complicated by fetal heart rate anomaly with meconium in amniotic fluid
068.3— Labour and delivery complicated by evidence of fetal asphyxia

The diagnosis of fetal asphyxia must be substantiated by a documented, abnormal acid-base status on the basis of cordocentesis, fetal scalp sampling, cord blood pH, pCO2, etc. Without this evaluation, the diagnosis should be coded as "suspected" fetal asphyxia.

SOGC suggested values for fetal asphyxia:
umbilical cord arterial pH $<=7.0$
umbilical cord arterial base deficit ≥ 16/mmol/L

Fetal distress that is noted prior to the onset of labour is classified to category 036.3–.

Postpartum Hemorrhage

In effect 2001

Postpartum hemorrhage should be coded when documented by an obstetrician/clinician/midwife.

The criteria for assigning a diagnosis code from the category O72 include:
Vaginal delivery ≥ 500 cc blood loss during third stage of labour, in immediate postpartum period or after first 24 hours following delivery.
Cesarean delivery ≥ 1000 cc blood loss or if so stated by the physician when the estimated blood loss is <1000 cc.

Blood loss occurring during the first 24 hours following delivery is early postpartum hemorrhage. When it is caused by a retained or trapped placenta it is classified to O72.0—Third-stage hemorrhage. Other causes, such as uterine atony, are classified to O72.1—Other immediate postpartum hemorrhage.

Blood loss occurring between 24 hours and six weeks after delivery is late postpartum hemorrhage and is classified to:
O72.2—Delayed and secondary postpartum hemorrhage.

Complications of Anesthesia During Labour and Delivery

In effect 2001

The code to classify maternal complications arising from the administration of a general or local anesthetic, analgesic or other sedation is selected by the stage of the pregnancy.

029 Complications of anesthesia during pregnancy
074 Complications of anesthesia during labour and delivery
089 Complications of anesthesia during the puerperium

Complications Related to the Puerperium

In effect 2001

Categories O88—Obstetric embolism; O91—Infections of breast associated with childbirth; and O92—Other disorders of breast and lactation associated with childbirth, include the listed conditions even if they occur during pregnancy and childbirth. It is essential to pay particular attention to inclusions and exclusions in the obstetrical chapter.

Obstetrical Interventions

In effect 2001

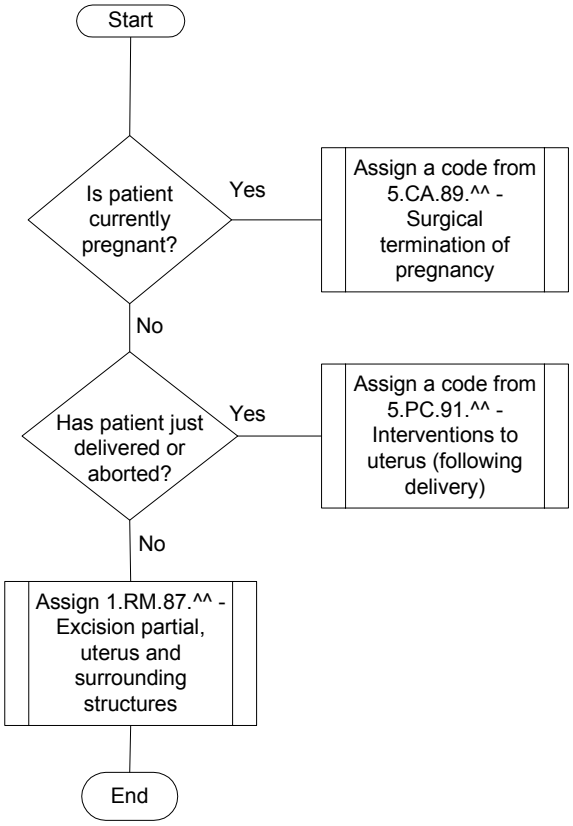
The obstetrical section (Section 5) of CCI is divided into blocks defined by the stages of pregnancy. The major blocks, as defined in the table of contents, are antepartum interventions, fetal interventions, interventions pertaining to labour and delivery, and lastly postpartum interventions.

Block 5.AB.^^–5.CA.^^ antepartum interventions contains diagnostic, therapeutic and supportive interventions that occur before labour begins.

Dilation and Curettage

In effect 2001

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.



Latent and Active Labour

In effect 2001

Rubrics from the block 5.LC.^^ should be selected only when documentation specifically supports the use of these codes. Labour with subsequent delivery within the episode of care should be assumed to be *active* 5.LD.^^ unless stated as latent.

Delivery Interventions

In effect 2001, amended 2002

There must be an intervention code selected from the range 5.MD.50.^^ to 5.MD.60.^^ inclusive, for every delivery. Multiple births all delivered *exactly* the same way may have one delivery code.

Example:	5.MD.50.AA	Single, spontaneous delivery of male fetus, no episiotomy done.
	5.MD.51.ZZ	24-year-old mother delivered this tiny, preterm fetus in her bed without any health care personnel present.
	5.MD.60.AA	Twin gestation at 36 weeks delivered by lower segment cesarean section.
	5.MD.53.KL 5.MD.56.PA	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

Note: 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.

Block 5.PB.^^–5.PD.^^ Postpartum interventions includes codes for interventions performed from the third stage of labour (which includes the time lapse from delivery of the fetus to delivery of the placenta) and lasts until 42 days after delivery. A repair of an obstetrical laceration is classified to surgical repairs, postpartum—5.PC.80.^^. A manual removal of the placenta is classified to other interventions following delivery—5.PC.91.^^.

Artificial rupture of membranes (ARM) performed in the absence of any contractions with the intention of inducing labour may be coded as induction ARM. This may be coded to: 5.AC.30.AP—Induction of labour using artificial rupture of membranes.

Chapter XVI—Certain Conditions Originating in the Perinatal Period

Low Birth Weight

In effect 2001

P05-P08 Disorders related to length of gestation and fetal growth

Term newborns that are specified as "light" or "small" for gestational age should be classified to P05.9—Slow fetal growth, unspecified. Preterm infants specified as "light" or "small" for gestational age should be classified to P07.-. Disorders related to short gestation and low birth weight, not elsewhere classified. WHO guidelines state that priority of assignment should be given to birth weight. Therefore, in cases where neonates are preterm and have a birth weight of less than 2500 grams, the code for low birth weight should be sequenced first.

Low Birth Weight Infants

Associated Conditions	Weight 1000 to 2499 gms	Weight ≤ 999 gms
Term infant ≥ 37 weeks gestation		
Fetal malnutrition	P05.2	-—-
Intrauterine growth restriction	P05.9	-—-
Low birth weight NEC	P07.1	-—-
Preterm infant ≥ 28 weeks but < 37 weeks gestation		
Fetal malnutrition	P07.1 P05.2 P07.3	P07.0 P05.2 P07.3
Intrauterine growth restriction	P07.1 P05.9 P07.3	P07.0 P05.9 P07.3
Low birth weight NEC	P07.1 P07.3	P07.0 P07.3
Extremely preterm infant < 28 weeks gestation		
Fetal malnutrition	P07.1 P05.2 P07.2	P07.0 P05.2 P07.2
Intrauterine growth restriction	P07.1 P05.9 P07.2	P07.0 P05.9 P07.2
Low birth weight NEC	P07.1 P07.2	P07.0 P07.2

Code also any associated maternal cause for low birth weight.

In the cases where the fetus weighs less than 1000 gms but gestation is greater than 28 weeks, the appropriate code for immaturity should be selected.

Example: Male fetus delivered vaginally at 38 weeks gestation with evidence of symmetrical growth restriction.

P05.90	(M)	Symmetric intrauterine growth restriction [IUGR]
Z38.00	(O)	Singleton, born in hospital, delivered vaginally

Example: Female fetus 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 caesarean

Example: Female fetus 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
P07.3	(1)	Other preterm infants
P05.99	(1)	Unspecified intrauterine growth restriction [IUGR]
Z38.01	(0)	Singleton, born in hospital, delivered by caesarean

Fetal Asphyxia and Birth Asphyxia

In effect 2001

P20 Fetal Asphyxia

Fetal asphyxia is defined by the Society of Obstetricians and Gynaecologists of Canada (SOGC) as asphyxia occurring before birth and must be clinically diagnosed before this code is selected. Further detail is provided in the codes to describe when the asphyxia is diagnosed—i.e. before labour, during labour and delivery, or unspecified. These babies may have a 5 minute Apgar score of 0–5 but must have clinical evidence of asphyxia—documented cord pH < = 7.0

P21 Birth Asphyxia

Newborn (birth) asphyxia is defined as that occurring in the neonatal period. These babies have no evidence of fetal asphyxia and may have normal cord blood gases and Apgar scores but suffer an asphyxial insult after birth. This code (P21.9) will be used rarely.

Respiratory Distress of Newborn

In effect 2001

The diagnosis respiratory distress syndrome of newborn (P22.0) should likely be used only when the drug Surfactant is given to a newborn. This medication is administered to infants in hospitals offering the highest level of care to neonates, sometimes called level 3 or tertiary care institutions, including neonatal transfers from level 1 and 2 facilities.

If an infant receives Surfactant at either hospital, the diagnosis is Respiratory Distress syndrome. This code will be assigned to the Newborn and Neonate Major Problem Diagnosis, which is MCC 15. However, an infant with this condition born at a hospital without a special care nursery requires immediate transfer and may, in fact, be transferred or expire prior to receiving Surfactant. When the physician has clearly documented Respiratory Distress Syndrome, it should be classified to P22.0 even if Surfactant has not been administered prior to the transfer or death.

If Surfactant is not administered within a special care nursery, the alternative diagnosis would probably be transitory tachypnea (P22.1). Transitory tachypnea and respiratory distress should never be coded together. In brief, transitory tachypnea plus Surfactant equals respiratory distress syndrome of newborn while transitory tachypnea without the administration of Surfactant is transitory tachypnea.

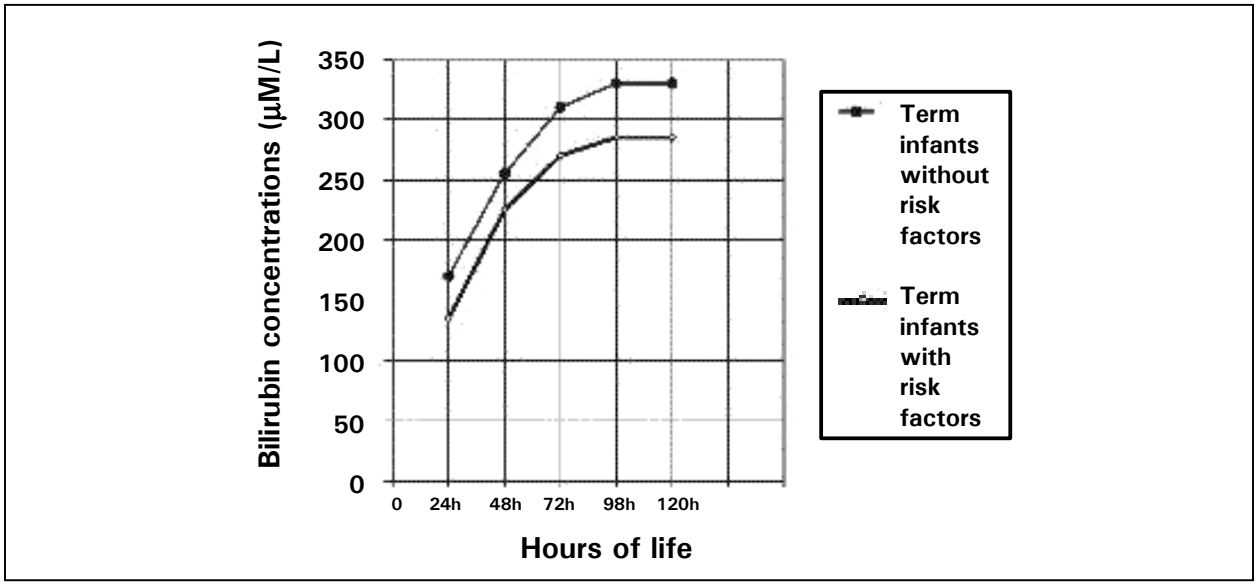
Note: Transitory tachypnea and respiratory distress should never be coded together to capture the same condition.

Neonatal Jaundice

In effect 2002

Neonatal hyperbilirubinemia, as per The Merck Manual, is diagnosed when laboratory tests show a serum bilirubin concentration > 10 mg/dL in preterm newborns or > 15 mg/dL in full-term newborns. Physiologic jaundice usually is not clinically significant and resolves within 1 wk. 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.

It is recommended to use a code for neonatal jaundice only when newborn charts have documented evidence of jaundice and/or elevated bilirubin with associated treatment by phototherapy or exchange transfusion. The Canadian Paediatric 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 g, hemolysis, jaundice at younger than 24 h of age, sepsis and the need for resuscitation at birth.

Reprinted with permission from the Canadian Paediatric Society position statement *Approach to the management of hyperbilirubinemia in term newborn infants* (FN 98-02), published in Paediatrics & Child Health (1999 4(2):161-64 and on the CPS website.

When coding jaundice associated with other conditions such as prematurity, Rh incompatibility, or bruising, follow the index to lead you to the appropriate jaundice code. Using jaundice as the lead term and "fetus or newborn" as secondary terms, you will find conditions commonly associated with neonatal jaundice listed in the index.

Jaundice that was documented but not actively treated in the healthy newborn, i.e. no phototherapy was administered, may only be coded as an optional diagnosis type. Abstracting of such information is left to the discretion of the facility.

Example: Physician states "Jaundice" and phototherapy was given.

P59.9 Neonatal jaundice, unspecified

Example: Preterm infant with hyperbilirubinemia, treated with phototherapy.

P59.0 Neonatal jaundice associated with preterm delivery

Related Intervention

1.YZ.12.JA-DQ—Therapy, skin NEC, using ultraviolet light.

Neonatal Sepsis

In effect 2002

A newborn may be predisposed to neonatal sepsis by certain obstetric complications like:

- premature rupture of membranes (PROM) occurring 12–24 hours before birth
- maternal bleeding (placenta previa, abruptio placentae)
- toxemia
- precipitous delivery
- maternal infection

Neonatal sepsis, ruled out by a negative blood culture may not be coded despite administration of prophylactic antibiotic therapy. Facilities may choose to assign the following optional type (0) diagnosis to track prophylactic antibiotic therapy.
Z29.2—Other prophylactic chemotherapy (Includes Prophylactic antibiotic therapy)

Babies with suspected sepsis are often admitted to NICU and have an extended LOS but a review of the chart shows that they are normal newborns as the suspected condition has been ruled out. Facilities may choose to assign the following code to track these cases.
Z03.8—Observation for other suspected diseases and conditions
This is an additional, optional code that must be assigned a diagnosis type (0).

Chapter XVII—Congenital Malformations, Deformations and Chromosomal Abnormalities

Congenital Anomalies

In effect 2001

Congenital anomalies are conditions that have been present in the patient since birth but may not manifest themselves until months or years later. Consequently, codes from this chapter may be used to classify conditions relating to a child or an adult depending on when the anomaly was identified. It is important to distinguish between congenital and acquired anomalies for coding purposes.

Examples:	Q62.4	Agenesis of ureter
	Z90.6	Acquired absence of other organs of urinary tract

See the alphabetical index as follows:
Absence
ureter (congenital) Q62.4
– acquired Z90.6

In some cases a condition may only occur as a congenital anomaly and will be specified as such in the alphabetical index as follows:

Hyperplasia
– kidney (congenital) Q63.3

Chapter XVIII—Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified

Incidental Findings

In effect 2001, amended 2002

Incidental findings on reports like EKG, echocardiography, etc., should only be coded if the abnormalities noted therein are considered to be clinically significant and are documented as such.

Presyncope

In effect 2003

Presyncope describes the symptoms people experience before they faint. The most common symptoms include light-headedness or vertigo. CIHI recommends that you code presyncope, NOS to R42—Dizziness and giddiness.

Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Causes

Adverse Reactions Versus Poisonings

In effect 2002

Adverse Reactions	Poisonings
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: • Allergic reaction • Accumulative effect of the drug • Hypersensitivity to a drug • Iatrogenic • Idiosyncratic reaction • Interaction between 2 medications • Paradoxical reaction • Synergistic reaction • Toxicity To capture an adverse reaction, code the reaction/manifestation along with an external cause code taken from the drug table under the column "adverse effect in therapeutic use".	A condition that results when a substance/medicine is taken when • It is not prescribed by a physician • Dosage is altered from prescription • It is a non medicinal substance Poisoning codes are located in the first column of the Table of drugs. The poisoning code must be sequenced first followed by the manifestation code, the external cause code and the place of occurrence code. Qualifying cases • Self medication with non-prescription drugs • Prescribed drug taken with non-prescription drug • Any medication taken with alcohol • Drug overdose

Note:

- All drugs involved in the poisoning must be coded.
- Poisoning is presumed to be accidental when not stated as intentional self harm
- Poisoning from illicit drug use is generally classified as accidental, except when suicidal or homicidal intent is clearly documented.
- If a condition develops from noncompliance with therapy or discontinuance of a drug, it is neither a poisoning, nor an adverse effect. Code instead to manifestation followed by Z91.1—Personal history of noncompliance with medical treatment and regimen

Example: Seizure due to noncompliance with medical treatment

R56.8	(M)	Seizure (convulsive), NOS
Z91.1	(3)	Personal history of noncompliance with medical treatment and regimen

- A non-prescription drug is one that is not prescribed by a physician but taken on the patient's own initiative and it is available over the counter. This is not to be confused with medication available over the counter but prescribed by a physician. A condition caused by the use of such prescribed over the counter medication would then be coded as an adverse reaction.

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 returned to the physician's office the following day complaining of nausea and vomiting that started 30 minutes after the first dose was taken.

R11.3	(M)	Nausea with vomiting
Y45.3	(9)	Other nonsteroidal anti-inflammatory drugs [NSAID]

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

Skull Fracture and Intra-Cranial Injury

In effect 2001

Fractures of the skull associated with an intra-cranial injury are coded first to the intra-cranial injury 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.

S06.610	Traumatic subarachnoid hemorrhage, without open intra-cranial wound, with brief loss of consciousness.
S02.100	Fracture of base of skull, closed.

Open Wounds

In effect 2001

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.

For an open wound to be classified as "complicated", it must include any one or more of the following:

- Delayed healing
- Delayed treatment
- Foreign body
- Major infection

An open wound communicating with a fracture is coded to the open fracture. No additional code for open wound is required.

Fractures—Closed Versus Open

In effect 2001

A fracture not indicated as closed or open should be classified as closed.

If a diagnosis indicates both an open and closed fracture of the same site, the code for the open fracture only should be assigned.

A fracture may not be qualified as "open" if there is a superficial wound present in the vicinity of a closed fracture. The closed fracture and the superficial wound would then be assigned two separate injury codes.

Terms that indicate that a fracture is open (with or without delayed healing) are:

Compound	Infected
Missile	Puncture
With foreign body	Fracture requiring debridement

Terms that indicate that a fracture is closed (with or without delayed healing) are:

Comminuted	impacted
Depressed	linear
Elevated	march
Fissured	simple
Fracture NOS	slipped epiphysis
Greenstick	spiral

The terms "condyle," "coronoid process," "ramus," and "symphysis" indicate the portion of the bone fractured, not the name of the bone involved.

Treatment of Fractures

In effect 2001

Treatment of fractures depending upon the severity and the site of the fracture could include immobilization, reduction, fixation or even a combination.

Example: Closed reduction of fracture and application of cast to wrist joint for Colles' fracture

1.UB.73.JA	Closed reduction, wrist joint
1.UB.03.JA-FQ	Immobilization of wrist joint using cast

Fracture sites that involve a joint are classified to an intervention of the joint and not of the bone.

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

Dislocations

In effect 2001

A closed dislocation may also be described as simple, complete, partial, uncomplicated or dislocation NOS.

An open dislocation is sometimes referred to as compound, infected or one with a foreign body.

Dislocations not indicated as closed or open should be classified as closed.

A fracture dislocation of a site is coded as a fracture.

Simple dislocation of vertebrae are coded 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

In effect 2001

When there is an injury to blood vessels due to fracture, open wound or other injury, use an additional code to indicate the injury to the blood vessel.

Example: Closed fracture of shaft of femur with rupture of common femoral artery

S72.300	Fracture of shaft of femur, closed
S75.0	Injury of femoral artery

Control of Bleeding

In effect 2002

The control of bleeding can be accomplished by more than one intervention in CCI.

More invasive:
- (80) Repair to the site by re/apposition (suturing)
- (52) Drainage (of hematoma)

Less invasive:
- (13) Cauterization (destruction of bleeding points at the site)
- (13) Topical application of pressure or treatment agents at the site
- (13) Local instillation/injection of anti-hemorrhagic agents at the site

While the first two methods for controlling bleeding: "repair" and "drainage" are specific interventions in CCI, the last three methods are considered among the techniques for the generic intervention concept "control of bleeding".

Hemorrhaging blood vessels

Control of bleeding for a damaged or transected blood vessel is classified as either a "repair" if suturing or grafting is required or as "control of bleeding" if embolization, compression or hemostasis alone is required.

For illustration purposes, note the qualifier options at 1.KV.13.^^ and 1.KV.80.^^:

1.KV.13.^^ Control of bleeding, artery NEC

Includes: Vaso/angiotripsy
Compression, artery
Embolization, artery
Hemostasis, artery

Excludes: that done with surgical repair of artery (see Repair, artery by site)
Systemic pharmacotherapy for control of bleeding (see 1.ZZ.35.^^)

1.KV.13.HA-C2	using percutaneous (needle) injection of antihemorrhagic agent Includes: aminocaproic acid, aprotinin, phytonadione, thrombin, coagulation factor VIII
1.KV.13.JA-C2	using direct external application of antihemorrhagic agent
1.KV.13.JA-GN	using mechanical device [e.g. angiotribe]
1.KV.13.JN	using direct manual pressure [e.g. external compression]

and

1.KV.80.^^ Repair, artery NEC

1.KV.80.LA	using open approach
1.KV.80.LA-XX-A	using open approach and autograft
1.KV.80.LA-XX-K	using open approach and homograft

Hemorrhaging of an internal organ

If a blood vessel outside of an organ has been transected and is being repaired, code it to the blood vessel, not the organ:

Example: Knife wound to the abdomen results in a transected hepatic artery, which is repaired using an autograft.

1.KE.80.LA-XX-A Repair, abdominal arteries, by open approach and autograft

If, on the other hand, the abdominal organ itself was damaged and is bleeding from within, code the control of bleeding to the organ.

Example: Knife wound to the abdomen results in damage to the liver with bleeding from within, and chemical cautery is used to control the bleeding.

1.OA.13.LA-X7 Control of bleeding, liver, using open approach and chemical cautery agent

Tonsil/adenoid tissue, thyroid, spleen and liver

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. Inclusion terms direct coders to the generic intervention "control of bleeding" for these particular anatomy sites. It is recommended that institutions capture this intervention even though the generic intervention number is a 13. For example:

Typing "repair spleen" in the advanced query will take you to the inclusion term at:

1.OB.13.^^ Control of bleeding, spleen
Includes: Splenorrhaphy (with or without splenic artery ligation)
Splenoplasty
Repair, spleen

Fractures Due to Crushing Injury

In effect 2001

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."[24] Treatment usually involves soft tissue decompression, débridement and treatment for shock, as necessary, as well as any fixation of fracture or repair to other organ(s).

Sequence the code for the fracture(s) first and record it as the most responsible or type 1 diagnosis as appropriate, followed by the crush injury code, documented as a secondary type 3 diagnosis.

Example:	S62.370	(M)	Fracture (closed) of 2nd and 3rd metacarpal bones
	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 (eg. hotel kitchen)

Internal Organ Crushing Injury

In effect 2001

Sequence the code for the internal organ injury(s) first, typed as either the most responsible or type 1 diagnosis as appropriate, followed by the code for the crush injury, typed as a secondary diagnosis type (3).

Example:	S36.110	(M)	Grade II subcapsular liver hematoma, without open wound into cavity.
	S36.040	(1)	Hilar vascular laceration resulting in completely shattered spleen (grade V on American Injury Scale).
	S38.1	(3)	Crushing injury of other and unspecified parts of abdomen, lower back and pelvis.
	V03.0	(9)	Pedestrian injured in collision with van, non-traffic (eg. squeezed between van and wall as van backed up).

Particularly with abdominal injury, "crush syndrome" may occur seriously compromising renal function. If documented, assign code T79.5 Traumatic anuria.

[24] Current Emergency Diagnosis and Treatment, fourth edition, edited by Charles E. Saunders and Mary T. Ho, Appleton and Lange, Norwalk Connecticut, 1992 pp 77-78.

Bilateral Injuries

In effect 2002

Any significant injuries that occur bilaterally may be captured using the same ICD-10-CA code twice.

Note: The following are considered to be significant injuries: fracture, dislocation, amputation, burn, crush and injuries to nerves, blood vessels, muscles/tendons and internal organs.

Cases with identical bilateral fractures should be assigned the same fracture code twice, once for each of the fractures.

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

Fracture of right and left side of a single bone may not be captured twice.

Example: Fracture of ramus (mandible) left side and right side. This must be coded as a multiple mandibular fracture.

S02.670	Multiple closed mandibular fracture sites

Multiple Body Sites Involved in Crushing Injury

In effect 2001

Code each injury as per the multiple trauma coding convention, sequencing the most life-threatening injury first followed by all other major injuries as type (1) diagnoses. Assign a single code from the rubric T04 Crushing injuries involving multiple body regions as a diagnosis type (3):

.0 head with neck
.1 thorax with abdomen, lower back and pelvis
.2 multiple regions of upper limb(s)
.3 multiple regions of lower limb(s)
.4 multiple regions of upper with lower limb(s)
.7 thorax with abdomen, lower back and pelvis with limb(s)
.8 other combinations of body regions
.9 multiple crush injuries NOS

Burns and Corrosions

In effect 2001

The term "burn" covers thermal burns, friction burns and scalds by non-caustic liquids and vapours. 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.

Burns of one site that exhibit multiple degrees (first, second and third degrees) are to be coded to the most severe burn of that site.

Example: First, second and third degree burns of the chest wall

T21.3 Burn of third degree of trunk

An evolving burn is coded to the greatest degree it evolves to. Review of documentation will show that sometimes a burn initially stated to be a second degree burn may evolve and within a few days the physician will change his documentation to say that the burn is one of a third degree. This burn will then be coded to the degree it has evolved to, i.e. to the third degree.

Inhalation burns are coded to T27.0 to T27.3—Burns of the respiratory tract.

Smoke inhalation without any internal burn of the respiratory tract is coded to T59.8—Toxic effect of other specified gases, fumes and vapours.

Non-healing burns are considered to be current burns and may also be described as "necrotic burns". Any subsequent admissions for burn treatment including grafting and debridement are coded to the current burn of the specified site. This does not include admissions for treatment of complications of burns, any reconstructive surgery or the treatment of sequelae like scar contractures.

Any admissions for change of burn dressings must be coded to the MRDx of Z48.0—Attention to surgical dressings and sutures and the appropriate burn code should be assigned as an additional diagnosis and assigned a diagnosis type (3).

With any burn and/or corrosion injury code, it is mandatory to assign an external cause code and a place of occurrence code.

Burns are often treated with debridement and grafting. Some of the complications of grafts are infection, rejection or failure. The appropriate code for these complications is T86.84—Failure, rejection or infection of skin grafts.

Extent of Body Surface Area Involved in Burn Injury

In effect 2001

T31 and T32 are categories used to classify the percentage of body surface area involved in a burn or corrosion injury. Use of this code is mandatory if a burn/corrosion injury from categories T20-T25 is coded. A third degree burn is regarded as a significant condition and codes from categories T31 and T32 must be assigned a significant diagnosis type (1, 2, W, X and Y). Burn diagrams may help coders to select the code in this category that accurately reflects the patient's total injury.

Example: First (5% Body surface affected (BSA)), second (10% BSA) and third (15% BSA) degree burns of the trunk.

T21.3	Burn of third degree of trunk
T31.32	Burns involving 30-39% of body surface with 10-19% third degree burns

Assign also:
- an external cause code
- a place of occurrence code

Assignment of MRDx in Multiple Burns

In effect 2001

In the presence of multiple burns of several sites, the most severe burn site is assigned as the MRDx. In case of burns of multiple sites of the same degree, the site with the larger body surface area takes precedence as the MRDx. All parameters remaining same, burns requiring grafting take precedence over burns not requiring treatment with a graft.

Example: Second-degree burns of forearm and palm of hand and first-degree burn of face.

T22.2	Burn of second degree of shoulder and upper limb, except wrist and hand (MRDx selected 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
T23.2	Burn of second degree of wrist and hand
T20.1	Burn of first degree of head and neck

Assign also:
- percent of body surface area (BSA) burned code
- an external cause code
- a place of occurrence code

Burns of Multiple Body Regions

In effect 2001

Separate codes should be assigned for burns of each site whenever possible. The use of category T29.—Burns and corrosions of multiple body regions on its own is not recommended for inpatient coding, if documentation of specific sites is present on the patient's record. To facilitate retrieval of information, institutions may use a code from the T29 category as an additional code diagnosis type (3). T29 may only be selected as the MRDx for emergency visit coding and for inpatient coding when there is no further documentation to support the use of more specific codes.

Example: Burn of third degree of left thigh and foot

T24.3	Burn of third degree of hip and lower limb, except ankle and foot.
T25.3	Burn of third degree of ankle and foot
T29.3	Burns of multiple regions, at least one burn of third degree mentioned.

Assign also:

- Percent of body surface area (BSA) burned code
- External cause of Injury code
- Place of occurrence code

Burns and Corrosions From Local Applications and Irradiation

In effect 2001, amended 2003

Significant burns and corrosions resulting from therapeutic procedures are classified to burn or corrosion by site and assigned a diagnosis type (M), (2), (W), (X) or (Y) with the external cause code reflecting the circumstances of the therapeutic procedure. A code from categories T31–T32 must also be assigned to identify percentage of body surface involved.

Corrosions resulting from local application of a chemical in therapeutic use would be classified as an adverse reaction in therapeutic use.

Example:

T20.5	(M)	Corrosion of first degree of head and neck
T32.00	(1)	Corrosions involving less than 10% of body surface with 0% or unspecified third degree corrosions
Y56.4	(9)	Keratolytics, keratoplastics and other hair treatment drugs and preparations causing adverse effect in therapeutic use

Burns resulting from radiation therapy would be classified to the burn by site followed by a code from T31.- and an external cause code to indicate radiation in therapeutic use. Unless there is clear evidence of overdose (Y63.2 Overdose of radiation given during therapy), assume adverse effect in therapeutic use.

Example:	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.

Burns resulting from excessive heat in local therapy would be classified to burn by site followed by a code from T31.- and an external cause code to indicate the overdose of heat therapy.

Example:	T25.2	(2)	Burn of second degree of ankle and foot
	T31.00	(2)	Involving less than 10% of body surface with 0% or unspecified third degree burns
	Y63.5	(9)	Inappropriate temperature in local application and packing

Sequencing Multiple Injuries for Severity

In effect 2001

When there are multiple injuries, code the most severe (or life threatening) first. Most often, head injuries—to the brain or cranium—precede injuries to internal organs within the chest and abdominal cavity. Traumatic amputations, burns, fractures and open wounds, when occurring together, are sequenced based on their severity.

When two or more injuries are of equal severity, assign the injury receiving treatment that consumes the largest portion of hospital resources first, followed by the other injuries.

Example:	T20.2	(M)	Burn of second degree of head and neck (treated with skin grafts)
	S66.90	(1)	Injury of unspecified muscle and tendon at wrist and hand level, laceration (sutured following débridement)
	S68.2	(1)	Traumatic amputation of two or more fingers alone (complete) (partial)

Do not code superficial (skin) injuries when concomitant with more severe injuries of the same body region.

Always code to the greatest level of specificity possible, even if this requires selection of more than one code from the same rubric.

Example:	S62.221	(M)	Fracture of neck of 1st metacarpal bone, open
	S62.501	(1)	Fracture of proximal phalanx (thumb), open
	S62.310	(1)	Fracture of shaft of other metacarpal bone (2nd & 3rd), closed

There are a few exceptions to this general coding rule for multiple injuries.

Exception #1:
Use just one code to identify multiple open wounds.
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)

Exception #2:
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 Single Type of Injury Involving Single or Multiple Body Regions

In effect 2001, amended 2003

With any of the following types of injuries: fracture, dislocation, nerve, blood vessel, muscle/tendon, internal organ, amputation or crush; code each site involved as a diagnosis type (M), (1), (2), (W), (X) or (Y) diagnosis, as appropriate.

If an injury involves multiple sites within a body region and a .7 option for "multiple sites" is available in that rubric, it may be used if desired. For instance, S75.7 Injury of multiple blood vessels at hip and thigh level may be assigned rather than identifying each blood vessel in the hip and thigh. It is equally appropriate to code each blood vessel injured, if desired.

Exception #1:
In a crush injury involving multiple body regions, code each body site involved and also assign a code from rubric T04 as a diagnosis type (3). (See coding standard for crush injuries.)

Exception #2:
In a burn injury involving multiple body regions, code each body site involved and also assign a code from rubric T29 as a diagnosis type (3). (See coding standards for burns.)

Code Assignment for Multiple Types of Injury Involving Single Body Region

In effect 2001

Whenever there are two or more significant types of injuries involving a single body region, follow the coding rules as presented above and sequence injuries in order of severity. In addition, always assign one of the following codes as a 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

The presence of this code on an abstract will be used as a flag in the CIHI database to indicate significant “multiple injuries” for researchers and analysts interested in hospital discharge statistics for trauma in Canada.

The following are considered to be significant types of injuries: fracture, dislocation, injury to nerve, blood vessel, muscle/tendon, internal organ, amputation, burn or crush. More than one type occurring in the same body region will be considered “multiple” injuries of that body region.

Do not classify superficial and open wounds contiguous with just one significant type of injury as “multiple” injuries.

Example:	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

These injuries are all considered "significant" and warrant the assignment of the multiple injuries code for a single body region.

Example:	S66.60	(M)	Injury of multiple flexor muscles and tendons at wrist and hand level
	S61.71	(3)	Multiple open wounds of wrist and hand, complicated (optional coding)
	S61.00	(3)	Open wound of fingers without damage to nail, without complication (excessive coding)
	W31	(9)	Contact with other and unspecified machinery
	U98.6	(9)	Place of occurrence, industrial and construction area

The laceration is not considered a significant injury to the hand. Do not assign S69.7 Multiple injuries of wrist and hand since there is only one type of significant injury noted here. The lacerations do not have to be coded at all if they are only found at the site of the tendon injury.

Code Assignment for Multiple Types of Injury Involving Multiple Body Regions

In effect 2001

Whenever there are two or more significant types of injuries involving multiple body regions, follow the coding rules as presented above and sequence injuries in order of severity. In addition, always assign the following code as a diagnosis type (3), T06.8 Other specified (multiple) injuries involving multiple body regions.

CODING QUALITY TIP: Any abstract where multiple codes begin with the letter "S" and the second digit changes is likely to require the code T06.8 because the second digit refers to the different body regions. For instance, S06 + S44 = multiple types of significant injury involving multiple body regions!

Note that neither superficial injuries (third digit = "0") nor open wounds (third digit = "1") are considered significant types of injury.

Example:

S06.520	(M)	Traumatic subdural hemorrhage with moderate loss of consciousness (> 1 hour)
S02.431	(1)	Fracture of malar and maxillary bones, LeFort 3, unilateral
S36.201	(1)	Hematoma of pancreas, with open wound into cavity
S36.421	(1)	Laceration of duodenum with bile duct or duodenopancreatic complex injury
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

Appropriate Use of Multiple Injury Codes (Fourth Digit 7 Subcategory)

In effect 2003

The World Heath Organization has directed multiple injuries to follow the following instructional note at Chapter level:

> **Note: The principle of multiple coding of injuries should be followed wherever possible. Combination categories for multiple injuries are provided for use when there are insufficient details as to the nature of the individual conditions, or for primary tabulation purposes when it is more convenient to record a single code; otherwise, the component injuries should be coded separately.**

This means that the .7 options available in the injury codes can be used in one of two ways.

1. Code all injuries (e.g. fractures, dislocations, burns, crush injuries) to the greatest level of specificity with significant diagnosis types. A code from the pertinent subcategory specifying a multiple injury (e.g. S92.7—Multiple fractures of foot) may be added as an additional optional code with a diagnosis type (3). In this case the code is meant to be a flag to easily identify patients with multiple injuries.

Example: Patient admitted following a car accident in which she sustained several injuries. Three of the injuries documented were open fracture of the shaft of femur; injury of the femoral artery and injury to the greater saphenous vein at the level of the femur.

S75.0	(1)	Injury of femoral artery
S75.2	(1)	Injury of greater saphenous vein at hip and thigh level
S75.7	(3)	Injury of multiple blood vessels at hip and thigh level (optional)
S72.301	(1)	Fracture of shaft of femur, open
S79.7	(3)	Multiple injuries of hip and thigh

2. When not convenient to code every individual injury (e.g. for emergency coding or with multiple traumas), facilities may choose in some cases to use the .7 options as a significant diagnosis type and the individual injuries that it would have flagged must then not be recorded on the abstract.

Example: A 67 year-old man was brought into the emergency department after being knocked down and attacked by a dog in the park. Dog's owner did not have the animal on a leash. Patient sustained fairly deep open wounds of the nose, cheek and lip.

S01.70	(M)	Multiple open wounds of head, uncomplicated (Individual injuries must not be recorded as significant diagnoses)

Coding Nonspecific Multiple Injuries for Emergency Room Visits and Hospital Inpatient Discharges

In effect 2001, amended 2002

The multiple injury codes may be utilized as the Main Problem for Emergency Room visit abstraction.

Example

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

The multiple injury codes should not be typed as the MRDx for hospital inpatient discharge abstraction, except when the documentation does not provide enough specificity to identify each injury type and body region involved.

Example The same patient, as in the previous example, was admitted to hospital for stabilization. He was brought to the operating room to control bleeding but died on the operating table. This is now a coroner's case. No discharge summary detailing the individual injuries is available at time of abstraction.

T06.8	(M)	Multiple types of injuries to multiple body regions (e.g. fractures, spinal cord damage, internal organs lacerated, intra-cavity hemorrhage, limb amputation)
V44.6	(9)	Car occupant, passenger, injured in collision with heavy transport vehicle or bus, traffic accident

CODING QUALITY TIP: These cases should be reviewed to determine whether more precise code assignment is warranted—particularly if cause of death becomes known following an autopsy—as it may then be possible to correct code assignment to adhere to the general rule.

Early Complications of Trauma

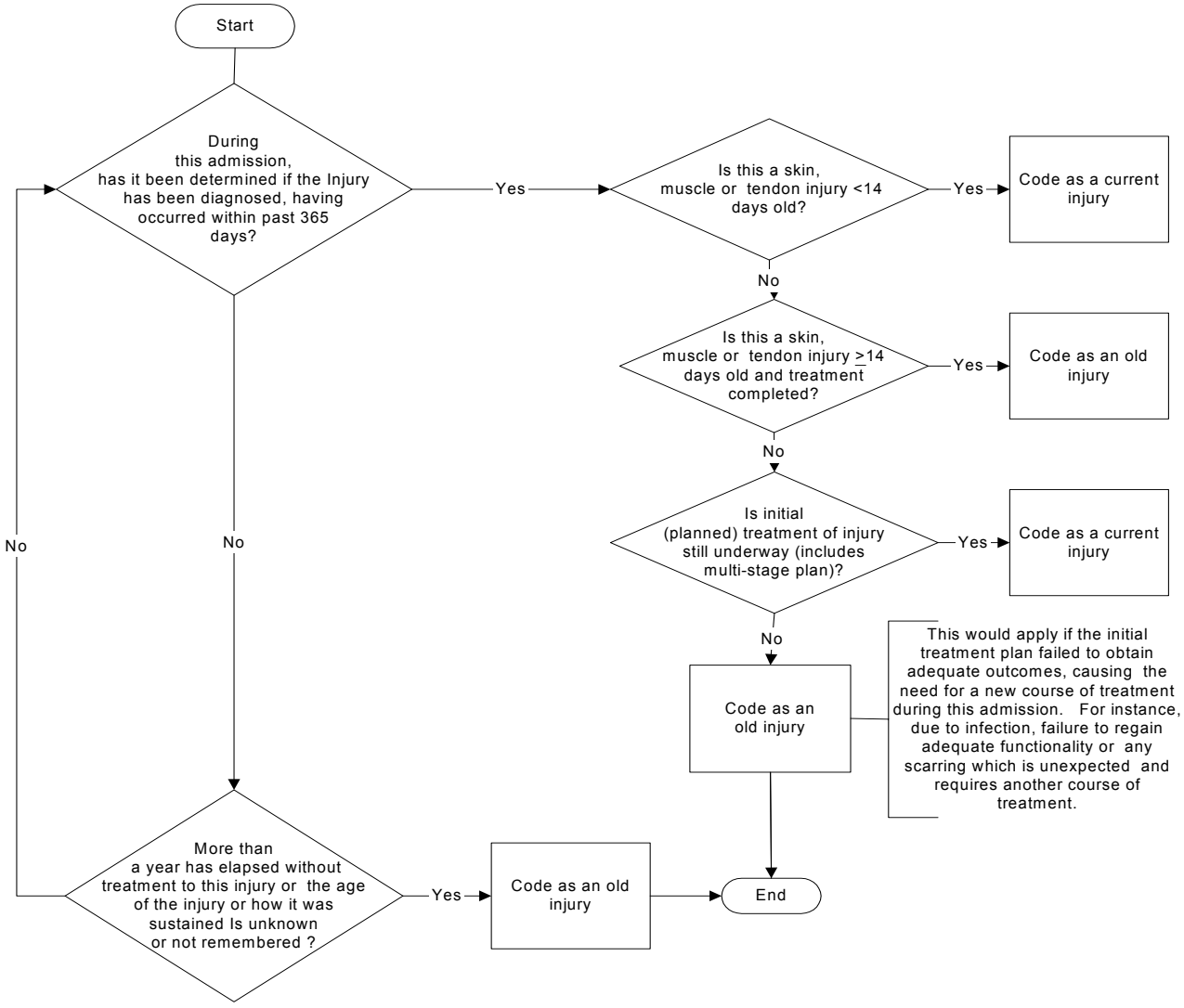
In effect 2001

Some of the most commonly experienced early complications in multiple traumas have been placed together in a single category, T79—Certain early complications of traumas, not elsewhere classified. 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".

Exception:
In a patient with multiple traumas, shock may be assumed to be due to the trauma (assign code T79.4—Traumatic shock) unless the physician clearly states another cause—for example, shock due to anaesthetic (code to T88.2—Shock due to anesthesia).

Current Versus Old Injuries

In effect 2001, amended 2002



Encounters strictly for follow up care (e.g. dressings, examinations, and castings) require only a code from chapter XXI. It is optional to also code the current injury with a diagnosis type 3.

Example: Patient was seen in clinic for removal of sutures following abdominal surgery.

Z48.0	Attention to surgical dressings and sutures Includes: Change of dressings, Removal of sutures

Selection of a code from the sequelae of previous injuries (T90–T98) as a type 3 diagnosis to describe the underlying nature of the old injury is optional.

Example: Patient presents with pain of the knee joint due to old injury of the knee.

M25.56	(M)	Pain in joint, lower leg
T93.9	(3)	Sequelae of unspecified injury of lower limb
Y89.9	(9)	Sequelae of unspecified external cause

A CURRENT INJURY is one for which the repair is proceeding or has yet to be completed. The MRDx should remain as the current injury code on subsequent admissions for treatment of the original injury. Subsequent admissions for a multi-staged intervention would be coded to the current injury code.

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.

Post-Procedural Conditions and Complications

In effect 2002, amended 2003

Definitions:

A (FUNCTIONAL) DISTURBANCE 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. The word "functional" is sometimes printed in brackets because it is treated as a non-essential modifier according to ICD-10 coding conventions.

AN EARLY COMPLICATION is one that occurs in the immediate post/peri-operative period i.e. while the patient is in the operating room/intervention room or during the postoperative monitoring period of 96 hours that is counted from the time the patient leaves the operating room/intervention room. An external cause code must be assigned. In this case, there is a definite cause-effect relationship between the surgery performed and the specified complication.

A LATE COMPLICATION is one that occurs after 96 completed hours following patient's departure from the operating room/intervention room subsequent to any surgical procedure. The complication must be specified as "Postprocedural" or "Postoperative" on the patient's chart. In this case, there is a definite documented relationship between the surgery performed and the specified complication. An external cause code would also be required.

A POST PROCEDURAL CONDITION (with no documented evidence of condition arising as a result of or due to the intervention) is one that occurs > 96 hours after the patient leaves the operating room/intervention room and before the end of the fifteenth day post surgery. No external cause code is required.

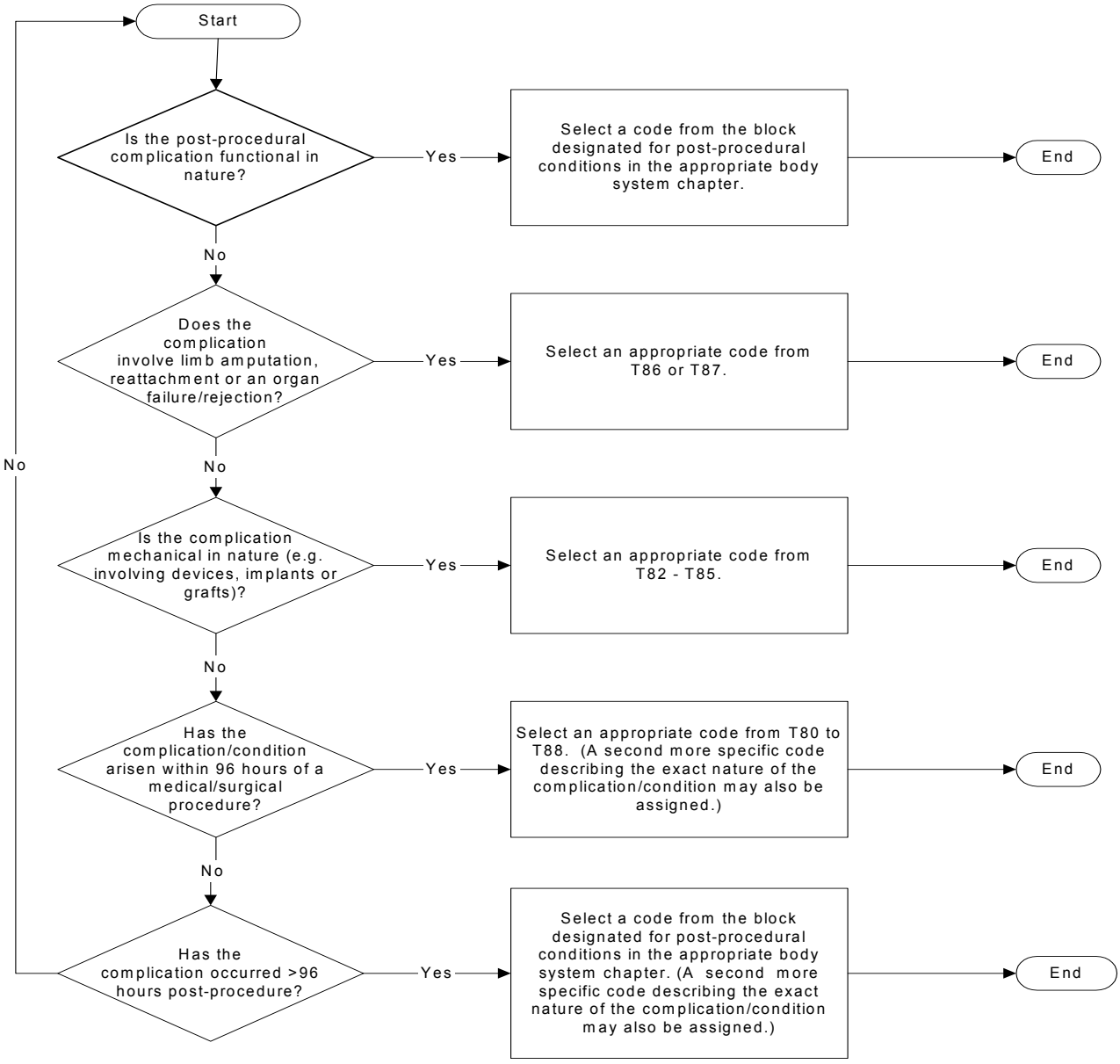
Steps for determining post-procedural conditions and complications

1. When selecting codes for complications that are qualified as being postsurgical, postoperative or postprocedural, *the index look-up is the first step*.
2. Whenever a complication of a procedure is not indexed or is not a synonym of an inclusion or indexed term, proceed as follows:

Code to T80–T88:
- early complications of medical procedure,
- mechanical complications.

Code to the appropriate system chapter:
- late complications
- functional complication

A flowchart has been provided to assist in this process.



Adding Specificity—Precisely Identifying 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, facilities may choose to add an additional code to provide more detail regarding the nature of the condition. This is optional. The additional code must always be assigned as a type 3 diagnosis.

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.

T85.8	(2)	Other complications of internal prosthetic devices, implants and grafts NEC
M25.55	(3)	Pain in joint, pelvic region and thigh (Optional code)
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)

Example: Mrs. W develops pneumonia 6 days after her bladder neck suspension

J95.88	(2)	Other post-procedural respiratory disorders
J18.9	(3)	Pneumonia, unspecified

External Cause—Connecting the Complication/Condition to the Intervention

To identify a causal relationship between a complication or condition and a medical or surgical procedure, an external cause code from chapter XX (code range Y40 to Y84) must be assigned:

Always, if:

- Complication or condition arises <96 hours post-procedure
- 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
- Physician states a causal relationship exists between condition and procedure

Optional, if:

- Disturbance of normal function of body system occurs >96 hours post-procedure

It is unnecessary to supply an external cause code when the title of the code clearly expresses that the condition is a result of an intervention or care, as in the following conditions:

- Postgastric surgery syndromes (K91.1)
- Postlaminectomy syndrome NEC (M96.1)
- Postmastectomy lymphoedema syndrome (I97.2)
- Postsurgical blind-loop syndrome (K91.2)

For coding of myocardial infarctions that are early complications of surgery see coding standard on "Myocardial Infarctions Occurring in the Post-operative and Peri-operative Period".

Complications of Surgical and Medical Care, NEC

In effect 2003

T81—Complications of procedures, not elsewhere classified

Codes from the range T81.0–T81.82 are used for classifying 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 giving rise to 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

If a complication attributed to a surgical procedure is not specifically classified in one of the T81 subcategories, it may be assigned to T81.88.

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

The category T88—Other complications of surgical and medical care, not elsewhere classified, must be used to capture any complications of surgical and medical care.

The codes at 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

Classified under the subcategory T88.8—Other specified complications of surgical and medical care, not elsewhere classified may be 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.

T88.8	(M)	Complication of surgical and medical care, unspecified
R60.0	(3)	Localized edema
Y84.8	(9)	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

Post-Procedural Signs and Symptoms

In effect 2003

Signs or symptoms should only be classified as postprocedural conditions when the physician's documentation indicates any of the following:

- They are still present at discharge.
- They persist postprocedurally for at least 96 hours.
- A more precise diagnosis has not been identified as the cause of the post-procedural sign or symptom.
- That the symptom is due to or a direct result of the procedure.

The following signs and symptoms commonly occur in the postprocedural period. These are classified as a Diagnosis Type (3) unless they meet the above criteria and then they are a Diagnosis Type (2)

➢ flatulence ➢ cardiac arrhythmia ➢ confusion ➢ cardiac bruit ➢ friction rub ➢ headache ➢ elevated blood-pressure reading ➢ painful respiration ➢ pain, specific site ➢ anemia ➢ difficulty walking	➢ nausea ➢ paraesthesia ➢ urinary retention ➢ vomiting ➢ cough ➢ hyperventilation ➢ abdominal tenderness ➢ dysphagia ➢ electrolyte imbalance ➢ dysuria

Assign a diagnosis type 2 to the symptom code and select an appropriate external cause code to identify the persistent postprocedural condition.

Example: Patient was admitted for elective resection of an abdominal aortic aneurysm. His post-operative recovery was uneventful except for persistent "post-operative nausea and vomiting". This responded well to IV fluids and Gravol.

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)
		External cause code (not required)

See coding standard on "Using Diagnostic Test Results in Coding" for additional information.

Rejection/Failure/Infection of Transplanted Organs, Grafts and Flaps

In effect 2002

A special category T86 has been added to ICD-10-CA to track specific problems related to transplanted organs, grafts and flaps. Select codes in this category when the source of the organ/tissue is another person (or animal) and the complication is infection, failure or absolute rejection of that organ, graft or flap.

Example: Patient admitted with kidney transplant rejection.

T86.100	Kidney transplant rejection
Y83.0	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

The codes in the category T86 are not to be used when the original source of the graft or flap is the patient himself/herself. An infected and necrotic myocutaneous breast flap is not coded to T86.841. When the flap is harvested from the patient's own body, it is not classified as a transplant.

Example: An infected and necrotic myocutaneous breast flap.

T85.7	Infection and inflammatory reaction due to other internal prosthetic devices, implants and grafts
Y83.4	Other reconstructive surgery as the cause of abnormal reaction of the patient, or later complication, without mention of misadventure at the time of the procedure

Complications of Devices, Implants or Grafts

In effect 2001, amended 2002

The block T82–T85 contains all the codes describing complications attributed 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 orthopaedic prosthetic devices, implants and grafts
T85 Complications of other internal prosthetic devices, implants and grafts

The sub-category identifies whether it is a mechanical complication, an infection and inflammatory reaction or other complication. With any code used to capture a complication of a device, implant or graft, it is mandatory to use an additional external cause code (Chapter XX) to identify devices involved and details of circumstances. If an infectious organism has been identified, you may use an additional code (B95-B97) to identify infectious agent.

There are basically three major categories to classify complications of devices:

Mechanical Complications	Infection*/Inflammation	Other Complications
Breakdown Displacement Fracture (broken prosthesis) Leakage Malfunction Malposition Obstruction Perforation Protrusion	(Code also the organism, if applicable)	Embolism Fibrosis Hemorrhage Pain Stenosis Stricture Thrombosis

* See also coding standard for "Rejection/Failure/Infection of transplanted organs, grafts and flaps".

When a complication of a device, implant or graft does not fully describe the problem, facilities may choose to add an additional optional code to provide more detail regarding the nature of the condition. This additional code must be assigned a diagnosis type 3.

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

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.

Procurement or Harvesting of Tissue for Closure, Repair or Reconstruction

In effect 2002

Body tissues procured in aid of closing a surgical defect or effecting a repair should be coded whenever a separate incision is made to obtain them.

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
1.YV.58.LA-XX-F	Procurement, skin of leg, of free flap using open approach

If an incision is just enlarged to obtain the tissue, however, there is no need to code the procurement.

Example: A high tibial osteotomy with patellar tendon transfer.

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

In the above example, the procurement should not be coded since a separate incision at another site on the body was not made. Procurements are only coded to reflect the existence of a separate surgical defect (wound), which usually requires its own post-surgical care and monitoring.

CODING TIP: A local flap (for advancement, rotation, and realignment) does not usually involve a separate incision for procurement of the flap. If the tissue qualifier is "E", this probably means that you do not need a procurement code.

Exception:
Whenever a segment of the **intestine** is harvested, it should be coded. 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.

Sequencing and Typing of Complications

In effect 2001

When a significant complication occurs during the episode in which the operation or other care was given, it is most frequently assigned as an additional code with a diagnosis type (2).

Example:	C15.2	(M)	Malignant neoplasm abdominal oesophagus
	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

However, should a complication of care arise (post-admission) which is clearly so serious that it consumes the majority of the resources and is responsible for the greatest length of stay, then it is assigned as both the MRDx and diagnosis type (2).

Example:	I64	(M)	Stroke, not specified as hemorrhage or infarction
	N92.4	(1)	Excessive bleeding in the premenopausal period (admitted for a hysterectomy)
	I64	(2)	Stroke, not specified as hemorrhage or infarction
	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

If the complication of care is of a minor nature only, having no real impact on either resources or length of stay, then it is optional to code it. Assign diagnosis type (3), if coding.

Example:	R55	(3)	Syncope and collapse
	Y84.7	(9)	Blood-sampling

If the complication of care occurs post-discharge (e.g. patient is now at home) and requires hospital admission to manage it, the complication is assigned as the most responsible diagnosis.

Example:	T81.3	(M)	Disruption of operation wound, not elsewhere classified
	Y83.9	(9)	Surgical procedure, unspecified

Chapter XX—External Causes of Morbidity and Mortality

External Cause Codes

In effect 2001

The classification of external causes of injuries, adverse effects and poisoning describes the environmental events, special circumstances and conditions underlying these conditions. External cause codes V00 to Y98 are mandatory additional codes, diagnosis type (9), with any condition classifiable to S00 to T98.

Example 1:	S88.1	(M)	Traumatic amputation at level between knee and ankle
	W58	(9)	Bitten or struck by crocodile or alligator

External cause codes may be used as additional codes to show the external cause of injury with any of the codes from Chapter I to XVIII, if appropriate.

Example 2:	K29.0	(M)	Acute hemorrhagic gastritis
	Y45.3	(9)	Other nonsteroidal anti-inflammatory drugs [NSAID]

Place of Occurrence

In effect 2001

A code from this category (U98) must be used with all accidents and poisonings classifiable to W00–Y34, except Y06 and Y07. U98 should always be assigned a diagnosis type (9).

Transport accidents, neglect and abandonment, maltreatment syndromes, legal interventions, acts of war and medical/surgical misadventures do not require the use of the place of occurrence code.

Type of Activity

In effect 2001

These codes (U99) are provided for optional use as additional information indicating the activity of the injured person at the time the event occurred. These should not be confused with, or be used instead of, the codes to indicate the place of occurrence. Facilities may decide to use this code to capture "type of activity" depending on their own internal data requirements. U99 should always be assigned a diagnosis type (9).

Chapter XXI—Factors Influencing Health Status and Contact With Health Services

Observation versus A Follow-up Examination

In effect 2003

A careful review of the documentation will help coders differentiate between patients undergoing an examination and observation versus a patient visit for a follow-up examination.

Z03–Z04

Z03—Medical observation and evaluation for suspected diseases and conditions includes persons who present some symptoms or evidence of an abnormal condition which requires study, but who, after examination and observation, show no need for further treatment or medical care. A code from this category must not be assigned as the MRDx or the Main Problem if the symptom that prompted the observation has been identified in the chart documentation.

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.

R04.2	(M)	Haemoptysis
Z03.0	(3)	Observation for suspected tuberculosis
Z29.0	(3)	Isolation

Example: Pediatric patient was seen in clinic for behavioural disorders. Initial assessment was inconclusive and patient will be seen again in 4 weeks time.

Z03.2	Observation for suspected mental and behavioural disorders

Example: Myocardial Infarction—ruled out

Z03.4	Observation for suspected myocardial infarction

Z04—Examination and observation for other reasons

Example: Ms. C came in to emergency claiming to be a victim of rape. The physician examined her and a rape kit was completed. She was kept under observation as per protocol.

Z04.4 (M)	Examination and observation following alleged rape and seduction

Note: A simple statement of "rape" on the emergency record does not justify use of the code T74.2—Sexual abuse. To assign this code, there must be sufficient evidence on the chart that the patient was a "rape victim". In all suspected cases default to "alleged rape".

Z08–Z09

Follow-up examination after treatment for malignant neoplasm (Z08) or for other conditions (Z09) are codes used for classifying visits for surveillance and checking up when major treatment has been completed. A history code may be assigned as an optional, additional diagnosis to specify the condition for which the treatment was completed.

If the condition has recurred or another related condition has been identified at this visit, then the above codes must not be used and code for the condition should be assigned.

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	(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

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

C67.9	(M)	Malignant neoplasm of bladder, unspecified
8010/3	(4)	Carcinoma NOS (Optional to code)
Z08.1	(3)	Follow-up examination after radiotherapy for malignant neoplasm
Z85.5	(3)	Personal history of malignant neoplasm of urinary tract

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, 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

Screening for Specific Diseases

In effect 2003

Screening Tests Versus Diagnostic Tests

Screening tests are used to try to detect a disease when there is little or no evidence that a person has the disease. For example, measuring cholesterol levels helps identify the risk of cardiovascular disease, but these tests are performed for people who have no symptoms of cardiovascular disease. To be useful, screening tests must be accurate, be relatively inexpensive, pose little risk, and cause little or no discomfort. These tests may identify the disease or disease precursors in asymptomatic individuals so that early detection and treatment can be provided for those who test positive for the disease.

Diagnostic tests, on the other hand, are used when a disease is suspected. For example, a doctor who suspects serious heart disease might recommend cardiac catheterization. This test would not be a good screening test because it is expensive, can produce side effects, and is uncomfortable. However, all of these drawbacks are outweighed by the need for this test when disease must be evaluated.

Codes from categories Z11, Z12 and Z13 *Special screening examination for…* should be assigned as the MRDx, when a patient is examined (e.g. external manual palpation of breast, X-ray or imaging, endoscopy, biopsy, etc.) for a particular disease or disorder and the disease for which the patient is being screened is **not detected or has never been detected**.

If the disease for which the patient is being screened **is** detected during the screening episode of care, then assign a code for the disease as the MRDx. A code from Z11, Z12 or Z13 is not required with the disease code.

Example: Patient comes in to a " Breast Clinic" to enroll in the Cancer Society's Breast Screening Program".

Z12.3	Special screening examination for neoplasm of breast

Example: Patient with no known complaint comes in as a Day Surgery patient for a screening colonoscopy because of family history of colon cancer.

Z12.1 (M)	Special screening examination for neoplasm of intestinal tract
Z80.0 (3)	Family history of malignant neoplasm of digestive organs

Example: As per the provincial screening protocol, the newborn was tested for. Phenylketonuria (PKU)—a shortage of this enzyme leads to high levels of phenylalanine in the blood. High levels of phenylalanine cause damage to the baby's brain. This usually leads to severe and irreversible mental retardation. (Screening has not been mandated for collection by CIHI.)

Z13.8	Special screening examination for other specified diseases and disorders Includes: Endocrine and metabolic disorders

Special screening examination codes may not be used when:

- The patient has a history of that condition—code "follow-up…"
- A sign or symptom prompted the examination—code "sign or symptom"

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	(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

Admission for Administration of Pharmacotherapy

In effect 2001

When a patient, previously diagnosed with a malignancy, is admitted solely for the purpose of administration of chemotherapy, regardless of the length of stay of the patient in hospital, assign the following code as the MRDx.
Z51.1 Chemotherapy session for neoplasm

Patients admitted solely for chemotherapy to treat conditions other than malignant neoplasms e.g. cytomegalovirus (CMV) retinitis in AIDS, must be assigned the following code as the MRDx.
Z51.2 Other chemotherapy

The disease process may be coded with a diagnosis type (3).

The CCI intervention for systemic chemotherapy is 1.ZZ.35.^^ with the appropriate qualifiers chosen by generic family name of the drug and the route of administration.

Admission for Insertion of a Vascular Access Device (VAD)

In effect 2001

Any encounter solely for the insertion of a vascular device for treatment of an existing condition is coded to the MRDx Z51.8—Other specified medical care. Attention to VAD's is classified to Z45.2—Adjustment and management of vascular access device.

The disease process may be coded with a diagnosis type (3).

Example Insertion of a VAD to administer antineoplastic agents for treatment of leukemia.

Z51.8	(M)	Other specified medical care
C95.9	(3)	Leukemia, unspecified

Admission for Blood Transfusion

In effect 2001

If a patient was seen solely for a transfusion, then the appropriate code selection would be Z51.3—Blood transfusion without reported diagnosis. These patients are generally seen on a regular or recurrent basis for continued therapy. The underlying cause may be added as a diagnosis type (3), secondary.

Example: Patient with thalassemia major admitted every 6 weeks for a blood transfusion

Z51.3	(M)	Blood transfusion without reported diagnosis
D56.9	(3)	Thalassaemia, unspecified

If the patient is being admitted for treatment that includes transfusion, then the condition itself should be coded.

Example: Leukemia patient admitted for further assessment of the disease. Diagnosed as being anemic and received a transfusion during the stay. Assign the code for leukemia as the MRDx.

Boarder Babies

In effect 2001

When a patient is admitted for early postpartum care, the healthy newborn may also be admitted as a boarder baby.

If supervision and care of the healthy infant is carried out by the nursing staff, assign code Z76.2—Health supervision and care of other healthy infant and child.

If the mother is providing all care for the infant herself, select Z76.3—Healthy person accompanying sick person

Appendix A

Ambulatory Care Coding Standards	
Main and Other Problems for Ambulatory Care Visits	**In effect 2002**
Interventions performed during Ambulatory Care Visits	**In effect 2002**
Ambulatory Care Visits for Rehabilitative Services	**In effect 2002**
Ambulatory Care Visits for Follow-up Examination or Care	**In effect 2002**
Ambulatory Care Visits for Rehabilitative Services	**In effect 2002**
General Coding Standards	
Diagnosis Typing Definitions	**In effect 2001, amended 2002, 2003, 2004**
Diagnoses of Equal Importance	**In effect 2001**
Specificity	**In effect 2001, amended 2003**
Using Diagnostic Test Results in Coding	**In effect 2003**
Acute and Chronic Conditions	**In effect 2001**
Impending or Threatened Conditions	**In effect 2003**
Underlying Symptoms or Conditions	**In effect 2003**
Presenting Symptoms of a Diagnosed Condition	**In effect 2001** ➢ Deleted 2003. See new coding standard on Underlying Symptoms or Conditions
Suspected Conditions/Query Diagnoses (Q)	**In effect 2001, amended 2003, 2004** ➢ Title in 2001—Coding of Suspected Conditions
Complications of Medical Care	**In effect 2001** ➢ Deleted 2002. See new coding standard on Postprocedural Conditions and Complications in Chapter XIX
Sequencing and Typing of Complications	**In effect 2001** ➢ Moved to Chapter XIX—2002
Burns and Corrosions from Local Applications and Irradiation	**In effect 2001** ➢ Moved to Chapter XIX—2002
Complications of Specific Devices, Implants or Grafts	**In effect 2001** ➢ Moved to Chapter XIX—2002 ➢ New Title 2002—Complications of Devices
Sequelae	**In effect 2001**
Admissions from Emergency Room	**In effect 2003**
Selection of Interventions to Code from Section 1	**In effect 2001, amended 2003**
Mandatory Attributes	**In effect 2003, amended 2004**
Selection of Interventions to Code from Section 2 and 3	**In effect 2001**
Selection of Interventions to Code from Section 5	**In effect 2002**

Composite Codes in CCI	**In effect 2001**
Multiple Codes in CCI	**In effect 2001**
Combined Diagnostic and Therapeutic Interventions	**In effect 2001**
Cancelled Interventions	**In effect 2001** ➢ Title in 2001—Cancelled Procedures
Cancelled Day Surgery Interventions	**In effect 2001, amended 2002** ➢ Title in 2001—Cancelled Day Surgery
Abandoned Interventions	**In effect 2001** ➢ Title in 2001—Abandoned Procedures
Change of Plans during an Intervention	**In effect 2001** ➢ Title in 2001—Changed surgery
Converted Interventions	**In effect 2001** ➢ Title in 2001—Converted Surgery
Failed Interventions	**In effect 2002, amended 2003**
Revised Interventions	**In effect 2003**
Endoscopic Interventions	**In effect 2001** ➢ Title in 2001—Endoscopies
Diagnostic Imaging Interventions	**In effect 2001** ➢ Title in 2001—Diagnostic Imaging
Chapter I—Certain Infectious and Parasitic Diseases	
Infections	**In effect 2001**
Drug Resistant Microorganisms	**In effect 2003**
Septicemia	**In effect 2001**
Human Immunodeficiency Virus (HIV) Disease	**In effect 2001**
Cytomegalovirus Infection (CMV)	**In effect 2003**
Viral Hepatitis	**In effect 2002**
Chapter II—Neoplasms	
Testing for Evidence of Cancer—Abnormal Blood Values	**In effect 2002, amended 2003**
Carcinoma In Situ	**In effect 2001, amended 2002**
Primary Neoplasm with Metastasis	**In effect 2001**
Multiple Independent Primary Neoplasms	**In effect 2001**
Secondary Neoplasms	**In effect 2001**
Malignant Neoplasm Without Specification of Site	**In effect 2001**
Neoplasms Arising in Lymphatic Tissue	**In effect 2001**
Malignant Neoplasms of the Liver and Intrahepatic Bile Ducts	**In effect 2002**
Specificity in Coding of Neoplasms	**In effect 2001**
Neoplasms Extending into Adjacent Tissue	**In effect 2002**
Neoplasms with Overlapping Boundaries (Contiguous Sites)	**In effect 2001**
Admissions Following Diagnosis of Cancer	**In effect 2001**

Complications of Malignant Disease	**In effect 2001, amended 2003**
Observation for Suspected Malignant Neoplasm	**In effect 2001**
Personal and Family History of Malignant Neoplasm Using Z-Codes Correctly	**In effect 2001, amended 2002** ➢ Title in 2001—History of Malignant Neoplasm
Admission for Follow-up Examination After Completed Treatment for Malignant Neoplasm	**In effect 2001**
Prophylactic Organ Removal	**In effect 2001**
Recurrent Malignancies	**In effect 2002**
Admissions for Chemotherapy and/or Radiation Therapy—Treatment for Malignancy	**In effect 2001** ➢ Title in 2001—Admissions Specifically for Chemotherapy and/or Radiation Therapy
Therapeutic and Diagnostic Interventions Relevant to Neoplasm Coding	**In effect 2001** ➢ Title in 2001—Surgical and Diagnostic Interventions Relevant to Neoplasm Coding
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**
Chapter IV—Endocrine, Nutritional and Metabolic Diseases	
General Classification Principles of Diabetes Mellitus	**In effect 2001**
Diagnosis Typing of Diabetes Mellitus	**In effect 2001**
Selecting the Appropriate 6th Digit from the Diabetes Tables	**In effect 2001**
Diabetes Without Mention of Complication	**In effect 2001, amended 2003**
Borderline Diabetes	**In effect 2003**
Acute Complications of Diabetes	**In effect 2001**
Chronic Complications of Diabetes	**In effect 2001, amended 2003**
Diabetic Nephropathy	**In effect 2002** ➢ Moved here from Chapter XIV—2003
Diabetic Cataracts	**In effect 2002** ➢ Moved here from Chapter VII—2003
Diabetes with Circulatory Complications	**In effect 2001**
Diabetic Arthropathy	**In effect 2001, amended 2003**
Diabetic Foot	**In effect 2001, amended 2003**
Dehydration	**In effect 2002**
Medium Chain Acyl-CoA Dehydrogenase Deficiency	**In effect 2003**
Chapter V—Mental and Behavioural Disorders	
Postpartum Depression	**In effect 2001**
Chapter VI—Diseases of the Nervous System	
Intracranial Resection of Lesions or Neoplasms	**In effect 2001**
Revision of CSF Shunt Systems (Ventricle, Brain Stem, Spinal Canal)	**In effect 2001**

Seizures	**In effect 2001, amended 2003**
Neurological Deficits Following a Stroke	**In effect 2002**
Stroke	**In effect 2001, amended 2002** ➢ Moved to Chapter IX—Circulatory System. See guideline on Strokes, Cerebrovascular Accidents and Transient Ischemic Attacks.
Chapter VII—Diseases of the Eye and Adnexa	
Cataracts	**In effect 2001**
Diabetic Cataracts	**In effect 2002** ➢ Moved to Chapter IV—2003
Chapter VIII—Diseases of the Ear and Mastoid Process	
Mastoidectomy	**In effect 2001**
Chapter IX—Diseases of the Circulatory System	
Rheumatic Heart Disease	**In effect 2001**
Hypertension and Associated Conditions	**In effect 2001, amended 2002**
Heart Failure/Cardiac Insufficiency	**In effect 2002**
Atrial Fibrillation	**In effect 2002, amended 2003**
Angina	**In effect 2001, amended 2002** ➢ Title in 2001—Angina versus Coronary Atherosclerosis & Angina Pectoris.
Angina versus Coronary Atherosclerosis	**In effect 2001, deleted 2002** See Chapter IX guideline on Angina
Angina Pectoris	**In effect 2001, deleted 2002** See Chapter IX guideline on Angina
Chronic Ischemic Heart Disease	**In effect 2001, amended 2002**
Complications of Coronary Artery Bypass Grafts (CABGs)	**In effect 2002**
Acute Myocardial Infarct	**In effect 2001, amended 2003**
Myocardial Infarctions Occurring in the Post-operative and Peri-operative Period	**In effect 2002**
Cardiac Arrest	**In effect 2002**
Cardiac Catheterizations	**In effect 2001**
Pacemakers	**In effect 2001**
Aneurysms	**In effect 2001**
Cerebral Hemorrhage	**In effect 2001**
Occlusion and Stenosis of Cerebral/Pre-Cerebral Vessels	**In effect 2001**
Strokes, Cerebrovascular Accidents (CVAs) and Transient Ischemic Attacks (TIAs)	**In effect 2001, amended 2002, 2003** ➢ Title in 2001—Stroke See Chapter VI—Nervous System.
Peripheral Vascular Disease	**In effect 2001**
Chapter X—Diseases of the Respiratory System	
Chronic Obstructive Pulmonary Disease (COPD)	**In effect 2001, amended 2002**
Pneumonia in Patients with COPD	**In effect 2002**
Asthma	**In effect 2002, amended 2003**

Respiratory Failure	**In effect 2002**
Pleural Effusion in Conditions Classified Elsewhere	**In effect 2002, amended 2003**
Resection of a Space-occupying Lesion (Polyps) of Nose	**In effect 2002**
Nasal Repair	**In effect 2002**
Chapter XI—Diseases of the Digestive System	
Hernias	**In effect 2001, amended 2003**
Gastroenteritis and Diarrhoea	**In effect 2001, amended 2002**
Gastrointestinal Bleeding	**In effect 2001, amended 2003**
Hepatitis and Alcoholic Cirrhosis of the Liver	**In effect 2001**
Bleeding Esophageal Varices	**In effect 2003**
Inflammatory Bowel Disease	**In effect 2001**
Gastrointestinal Anastomoses	**In effect 2001**
Colonoscopic interventions	**In effect 2003**
Diagnostic Esophagogastroduodenoscopy (EGD)	**In effect 2003**
Continuous Ambulatory Peritoneal Dialysis (CAPD) Peritonitis	**In effect 2001, amended 2002** ➢ Moved to Chapter XIV—2003
Chapter XII—Diseases of the Skin and Subcutaneous Tissue	
Cellulitis	**In effect 2001, amended 2003**
Chapter XIII—Diseases of the Musculoskeletal System and Connective Tissue	
Meniscus/Ligament Tear	**In effect 2001, deleted 2002** See Chapter XIX guideline on Current versus Old Injuries
Arthrectomy and Arthroplasty	**In effect 2001**
Excision (of lesion) of bone, Soft Tissue and Skin	**In effect 2001**
Joint Fracture Reduction, Fixation and Fusion	**In effect 2001, amended 2002** Title in 2001—Joint Reduction, Fixation and Fusion
Pathological Fractures	**In effect 2001, amended 2002** Title in 2001—Pathological and Stress Fractures
Stress Fractures	**In effect 2001, amended 2002** Title in 2001—Pathological and Stress Fractures
Fractures	**In effect 2001**
Chapter XIV—Diseases of the Genitourinary System	
Hypertensive Renal Disease	**In effect 2001**
Diabetic Nephropathy	**In effect 2002** ➢ Moved to Chapter IV—2003
Genitourinary Conditions Requiring Surgical Intervention	**In effect 2003**
Continuous Ambulatory Peritoneal Dialysis (CAPD) Peritonitis	**In effect 2001, amended 2002, 2003** ➢ Moved here from Chapter XI—2003

Chapter XV—Pregnancy, Childbirth and the Puerperium	
Gestational Age	**In effect 2001**
Trimesters	**In effect 2001**
Intrauterine Death	**In effect 2001**
Pregnancy with Abortive Outcome	**In effect 2001, amended 2004**
Abortion with Remaining Fetus	**In effect 2001**
Complications Following Abortion, Ectopic or Molar Pregnancy	**In effect 2001, amended 2003**
Streptococcal Group B Infection/Carrier in Pregnancy	**In effect 2003**
Delivery in a Completely Normal Case	**In effect 2001**
Selection of the Sixth Digit in Obstetrical Coding	**In effect 2001**
Delivery with history of Previous Cesarean Section	**In effect 2003**
Sequencing Obstetrical Diagnoses Codes	**In effect 2001**
Diabetes Mellitus in Pregnancy	**In effect 2001**
Maternal Care Related to the Fetus, Amniotic Cavity and Possible Delivery Problems	**In effect 2001**
Premature Rupture of Membranes	**In effect 2001**
Preterm Delivery	**In effect 2001**
Long Labour	**In effect 2001**
Obstructed Labour	**In effect 2001, amended 2002**
Labour and Delivery Complicated by Fetal Stress	**In effect 2001**
Postpartum Haemorrhage	**In effect 2001**
Complications of Anesthesia During Labour and Delivery	**In effect 2001**
Complications Related to the Puerperium	**In effect 2001**
Obstetrical Interventions	**In effect 2001**
Dilation and Curettage	**In effect 2001**
Latent and Active Labour	**In effect 2001**
Delivery Interventions	**In effect 2001, amended 2002**
Chapter XVI—Certain Conditions Originating in the Perinatal Period	
Low Birth Weight	**In effect 2001**
Fetal Asphyxia and Birth Asphyxia	**In effect 2001**
Respiratory Distress of Newborn	**In effect 2001**
Neonatal Jaundice	**In effect 2002**
Neonatal Sepsis	**In effect 2002**
Chapter XVII—Congenital Malformations, Deformations and Chromosomal Abnormalities	
Congenital Abnormalities	**In effect 2001**

Chapter XVIII—Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified	
Incidental Findings	**In effect 2001** Title in 2001—Cardiac Arrhythmias
Presyncope	**In effect 2003**
Chapter XIX—Injury, Poisonings and Certain Other Consequences of External Causes	
Adverse Reactions versus Poisonings	**In effect 2002**
Skull Fracture and Intracranial Injury	**In effect 2001**
Open Wounds	**In effect 2001**
Fractures—Closed versus Open	**In effect 2001**
Treatment of Fractures	**In effect 2001**
Dislocations	**In effect 2001**
Injury to Blood Vessels	**In effect 2001**
Control of Bleeding	**In effect 2002**
Internal Organ Crushing Injury	**In effect 2001**
Bilateral Injuries	**In effect 2002**
Multiple Body Sites Involved in Crushing Injury	**In effect 2001**
Burns and Corrosions	**In effect 2001**
Extent of Body Surface Area Involved in Burn Injury	**In effect 2001**
Assignment of MRDx in Multiple Burns	**In effect 2001**
Burns of Multiple Body Regions	**In effect 2001**
Burns and Corrosions from Local Applications and Irradiation	**In effect 2002, amended 2003**
Sequencing Multiple Injuries for Severity	**In effect 2001**
Code Assignment for Single Type of Injury Involving Single or Multiple Body Regions	**In effect 2001, amended 2003** ➢ Title in 2001—Code Assignment for Single Type of Injury Involving Multiple Body Regions
Code Assignment for Multiple Types of Injury Involving Single Body Region	**In effect 2001**
Code Assignment for Multiple Types of Injury Involving Multiple Body Regions	**In effect 2001**
Appropriate use of Multiple Injury Codes (Fourth Digit 7 Subcategory)	**In effect 2003**
Coding Nonspecific Multiple Injuries for Emergency Room Visits and Hospital Inpatient Discharges	**In effect 2001, amended 2002** ➢ Title in 2001—Typing Multiple Injuries for Emergency Room Visit Versus Hospital Inpatient Discharge
Early Complications of Trauma	**In effect 2001**
Current Versus Old Injuries	**In effect 2001, amended 2002**
Post-procedural Conditions and Complications	**In effect 2002, amended 2003**
Complications of Surgical and Medical Care, NEC	**In effect 2003**

Post-Procedural Signs and Symptoms	**In effect 2003**
Rejection/Failure/Infection of Transplanted Organs, Grafts and Flaps	**In effect 2002**
Complications of Devices, Implants or Graphs	**In effect 2001, amended 2002** ➢ Title in 2001—Complications of Devices
Procurement or Harvesting of Tissue for Closure, Repair or Reconstruction	**In effect 2002**
Sequencing and Typing of Complications	**In effect 2001**
Chapter XX—External Causes of Morbidity and Mortality	
External Cause Codes	**In effect 2001**
Place of Occurrence	**In effect 2001**
Type of Activity	**In effect 2001**
Chapter XXI—Factors Influencing Health Status and Contact With Health Services	
Observation Versus a Follow-up Examination	**In effect 2003**
Screening for Specific Diseases	**In effect 2003**
Admission for administration of Pharmacotherapy	**In effect 2001** ➢ Title in 2001—Admission for Chemotherapy
Admission for Insertion of a Vascular Access Device (VAD)	**In effect 2001**
Admission for Blood Transfusion	**In effect 2001**
Boarder Babies	**In effect 2001**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taking health information further
à l'avant-garde de l'information sur la santé