Self-Learning

July 2022

1194E-Exploring Key Changes in v2022 of ICD-10-CA/CCI and the Canadian Coding Standards

CIHI

Introduction

The Canadian Institute for Health Information (CIHI) has lots of resources available to help you prepare to use v2022 of the ICD-10-CA and CCI classifications and the *Canadian Coding Standards*.

For some changes, we thought that you might benefit from additional details, guidance or practice. So we created this course that offers you 2 types of learning:

Job aids (JAs) that give you quick guidance about how and when to use the new or changed coding. You may want to print some of these for quick reference.

Self-learning (SL) sections that teach you more about the changes and give you the opportunity to practise and get feedback.

List of changes

Here are the changes in v2022 ICD-10-CA/CCI and the *Canadian Coding Standards* that we'll be exploring in this course.

Click a topic to get started.

- Diastolic and systolic ventricular failure (SL)
- Current versus old injuries (JA)
- Radiofrequency ablation of spinal nerves and facet joints (denervation/rhizotomy) (SL)
- Ventilation, respiratory system, NEC (SL)
- Implantation of internal device, knee joint (JA)
- Transgender breast surgery (SL)
- Push endoscopy (SL)
- Induction agents (JA)

You can also consult the ICD-10-CA and CCI appendices to see a list of the new and disabled codes.

Self-learning

Diastolic and systolic ventricular failure: New codes

We've added fifth-character codes at subcategory I50.1– *Left ventricular failure* to specify left ventricular failure with preserved ejection fraction or with reduced ejection fraction.

I50.1 **Left ventricular failure**

Includes: Cardiac asthma
Left heart failure
Oedema of lung | with mention of heart disease NOS or heart failure
Pulmonary oedema | with mention of heart disease NOS or heart failure

I50.10 **Left ventricular failure with preserved ejection fraction**

Includes: Diastolic heart failure
Heart failure preserved ejection fraction (HFpEF)

I50.11 **Left ventricular failure with reduced ejection fraction**

Includes: Heart failure reduced ejection fraction (HFrEF)
Systolic heart failure

I50.19 **Left ventricular failure, unspecified**

Capturing this additional data will help our health systems

- Monitor and plan services;
- Measure the quality of care for patients with heart failure; and
- Develop and report quality indicators.

Left ventricular failure and ejection fraction clinical details

People often interpret heart failure to mean that the heart is no longer working. However, it actually means that the heart isn't pumping blood as well as it should be.

Left ventricular (or left-sided) heart failure means the left ventricle is weakened and its pumping power is diminished. The left side of the heart has to work harder to pump the same amount of blood.

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What is ejection fraction?

Ejection fraction, expressed as a percentage, measures how much blood the left ventricle pumps out with each contraction. It indicates how well the heart is pumping out blood and can help diagnose and track stages of heart failure.

For example, an ejection fraction of 45% means that with each heartbeat, the left ventricle pushes out 45% of the total amount of blood it contains.

Diagnostic testing, such as a cardiac catheterization or an echocardiogram, measures the ejection fraction and may reveal one of the following ejection fraction–related scenarios:

Heart failure with preserved ejection fraction (HFpEF)

With preserved ejection fraction, the left ventricle pumps out a normal amount of blood.

A patient with heart failure can have a normal ejection fraction, also referred to as

- Diastolic heart failure;
- Heart failure with diastolic dysfunction; or
- Heart failure with preserved ejection fraction (HFpEF).

Heart failure with reduced ejection fraction (HFrEF)

With reduced ejection fraction, the left ventricle pumps out a reduced amount of blood. Heart failure with reduced ejection fraction is also referred to as

- Systolic heart failure; or
- Heart failure with systolic dysfunction.

You classify left ventricular heart failure with preserved ejection fraction and that with reduced ejection fraction based on the physician's documentation of the clinical diagnosis (e.g., heart failure with preserved ejection fraction, diastolic heart failure, heart failure with reduced ejection fraction, systolic heart failure) and not on the ejection fraction percentage.

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Finding the codes in the alphabetical index

We've enhanced the alphabetical index to help you locate and use the new codes:

Failure, failed
. . .
– heart (acute) (sudden) (senile) I50.9
. . .
– – diastolic (preserved ejection fraction) I50.10
. . .
– – left ventricular I50.19
– – – with
– – – – preserved ejection fraction I50.10
– – – – reduced ejection fraction I50.11
. . .
– – preserved ejection fraction (HFpEF) I50.10
– – reduced ejection fraction (HFrEF) I50.11
. . .
– – systolic (reduced ejection fraction) I50.11
. . .
– ventricular (see also Failure, heart) I50.9
– – left I50.19
. . .
– – – with
– – – – preserved ejection fraction I50.10
– – – – reduced ejection fraction I50.11

Dysfunction
. . .
– heart I51.8
– – with failure (see Failure, heart)

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Let's practise

Work through the following scenarios to practise assigning the correct ICD-10-CA code.

Scenario 1

A patient presents for implantation of a loop recorder as part of a clinical trial. This patient is known to have heart failure with diastolic dysfunction.

Which ICD-10-CA code should you assign for the diagnostic statement "heart failure with diastolic dysfunction"?

☐ I50.10 Left ventricular failure with preserved ejection fraction

☐ I50.11 Left ventricular failure with reduced ejection fraction

☐ I50.19 Left ventricular failure, unspecified

Scenario 2

A patient is admitted to the acute coronary care unit from the emergency department because of prolonged central ischemic sound chest pain. The patient undergoes a left heart catheterization, left ventricular angiography and bilateral coronary arteriography.

The findings of the procedures show the left ventricle to be grossly dilated, with severe generalized left ventricular systolic dysfunction and an estimated ejection fraction less than 15%.

The final diagnosis is "severe coronary disease with very severe left ventricular failure."

Which ICD-10-CA code should you assign for the diagnosis "left ventricular failure" since the procedure report specifies systolic dysfunction?

☐ I50.10 Left ventricular failure with preserved ejection fraction

☐ I50.11 Left ventricular failure with reduced ejection fraction

☐ I50.19 Left ventricular failure, unspecified

Scenario 3

A patient is referred for a repeat cardiac catheterization. The patient presents with worsening shortness of breath and has multiple medical problems, including chronic atrial fibrillation, hypertension, hyperlipidemia and type 2 diabetes. They have a history of myocardial infarction with stenting of the right coronary artery (RCA) and the left anterior descending artery (LAD).

The findings show that the left ventricle (LV) is dilated, exhibiting moderately severe diffuse hypokinesis and an estimated ejection fraction of 35%. There's a new critical 80% stenosis in the right mid RCA and 90% stenosis at the junction of the mid and distal LAD. In view of these findings, the clinician performs a double vessel percutaneous coronary intervention. The patient will require medical therapy for their LV dysfunction.

Which ICD-10-CA code should you assign for the diagnosis "left ventricular (LV) dysfunction"?

☐ I50.10 Left ventricular failure with preserved ejection fraction

☐ I50.11 Left ventricular failure with reduced ejection fraction

☐ I51.8 Other ill-defined heart diseases

Check your answers

Scenario 1

Answer: I50.10 Left ventricular failure with preserved ejection fraction

Rationale: Heart failure with diastolic dysfunction is synonymous with heart failure with preserved ejection fraction, so you assign I50.10 *Left ventricular failure with preserved ejection fraction*, as shown in the alphabetical index lookup:

Failure, failed
. . .
– heart (acute) (sudden) (senile) I50.9
– – diastolic (preserved ejection fraction) I50.10
. . .
– – preserved ejection fraction (HFpEF) I50.10

Scenario 2

Answer: I50.11 Left ventricular failure with reduced ejection fraction

Rationale: Heart failure with systolic dysfunction is synonymous with heart failure with reduced ejection fraction, so you assign I50.11 *Left ventricular failure with reduced ejection fraction*, as shown in the alphabetical index lookup:

Failure, failed
. . .
– heart (acute) (sudden) (senile) I50.9
. . .
– – left ventricular I50.19
– – – with
– – – – preserved ejection fraction I50.10
– – – – reduced ejection fraction I50.11
. . .
– – systolic (reduced ejection fraction) I50.11
. . .

Scenario 3

Answer: I51.8 Other ill-defined heart diseases

Rationale: There is no documentation showing that the left ventricular dysfunction progressed to left ventricular heart failure, so you assign I51.8 *Other ill-defined heart diseases*, as shown in the alphabetical index lookup:

Dysfunction
. . .
– heart I51.8
– – with failure (see Failure, heart)

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Job aid

Current versus old injuries: New exception

We've added this exception to the coding standard *Current Versus Old Injuries* to clarify what to do when the classification does not provide a choice between current or old traumatic injury, especially when it comes to rotator cuff tears:

Exception

When an injury is documented as being related to a traumatic event and the classification does not provide a choice to classify the injury as current or old, assign the code for traumatic regardless of the timeline.

Coding tips/key points to consider

When coding traumatic injuries, remember these points:

- When the classification **does not require** you to choose between a current traumatic injury and an old injury, follow the alphabetical index and assign a code for traumatic.

  Tear, torn (traumatic) (see also Wound, open) T14.1
  – rotator cuff (complete) (incomplete) (nontraumatic) M75.1
  – – **traumatic** (tendon) S46.0
  – – – capsule S43.401

- When the classification **does require** you to choose between a current traumatic injury and an old injury, review the *Current Versus Old Injuries* coding standard. The coding standard provides time frames for when a traumatic injury is considered current or old.

  Tear, torn (traumatic) (see also Wound, open) T14.1
  – meniscus (knee) (**current injury**) S83.2
  – – nontraumatic (degenerative) M23.3
  – – **old** (anterior horn) (lateral) (medial) (posterior horn) M23.2

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Self-learning

Radiofrequency ablation of spinal nerves and facet joints (denervation/rhizotomy): Concept movement and new codes

Before v2022, it wasn't clear that radiofrequency ablation of the **spinal nerves** (denervation/rhizotomy) (including the dorsal rami or ganglion to the sacroiliac joint) was classified to 1.AW.59.^^ *Destruction, spinal cord*. In addition, radiofrequency ablation of the nerves (denervation/rhizotomy) that innervate the cervical and spinal facet joints was incorrectly classified to the generic intervention Repair (80).

So we've made the following changes in CCI to provide clarification and correct the error:

- Added inclusion terms at 1.AW.59.^^ *Destruction, spinal cord* to clarify that denervation, radiofrequency ablation/neurotomy and rhizotomy of the **spinal nerves** (including the dorsal rami or ganglion to the sacroiliac joint) are classified at this rubric.
- Moved the facet joint denervation and rhizotomy of the atlas and axis and that of the spinal vertebrae procedure from the generic intervention Repair (80) to the generic intervention Destruction (59). This applies to anatomy sites SA — atlas and axis and SC — spinal vertebrae.
- Added the new rubric 1.SA.59.^^ *Destruction, atlas and axis* with the new code 1.SA.59.HA-AW *Destruction, atlas and axis using percutaneous (needle) approach with radiofrequency* to correctly classify facet joint denervation and rhizotomy of the nerves that innervate the facet joint of the atlas and axis.
- Deleted 1.SA.80.HA-AW Repair, atlas and axis using percutaneous approach and radiofrequency probe because the code is not clinically relevant.
- Moved the facet joint denervation and rhizotomy of the spinal vertebrae procedure to rubric 1.SC.59.^^ *Destruction, spinal vertebrae*.
- Deleted 1.SC.80.HA-AW Repair, spinal vertebrae using percutaneous approach and radiofrequency probe because the code is not clinically relevant.

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Clinical details

What is radiofrequency ablation of the spinal nerves?

Radiofrequency ablation is a minimally invasive procedure that involves heating part of a nerve that transmits pain signals using a radiofrequency needle; this creates a heat lesion that prevents the nerve from sending pain signals to the brain (denervation/neurotomy). Also called radiofrequency denervation or rhizotomy, a surgeon performs this on the lateral branch nerves of the dorsal rami ganglion to the sacroiliac joint.

What is radiofrequency ablation of the spinal facet joint?

Facet joints are small joints at the back of the spine that help keep it straight. These joints can become damaged for several reasons, including rheumatoid arthritis and injury. The damaged joints may press on the nerves and cause pain. Also called radiofrequency denervation or rhizotomy, a surgeon performs this procedure on the nerves that innervate the facet joint.

The surgeon directs a needle, guided by fluoroscopy, toward the medial branch nerves that transmit pain from the facet joints. They insert an electrode through the needle and pass a small amount of electrical current next to the target nerve. Once they confirm the target nerve, they create a heat lesion on the nerve using radiofrequency ablation.

Before April 1, 2022	Effective April 1, 2022
1.AW.59.^^ Destruction, spinal cord *Includes:* Chordotomy Commissurotomy, midline Cordotomy Creation, lesion, spinal cord, [e.g. at Dorsal root entry zone: DREZ] Myelotomy [midline] Rhizotomy, spinal cord	1.AW.59.^^ Destruction, spinal cord *Includes:* Chordotomy Commissurotomy, midline Cordotomy Creation, lesion, spinal cord, [e.g., at Dorsal root entry zone: DREZ] **Denervation, spinal nerve (dorsal rami or ganglion) to sacroiliac joint** Myelotomy [midline] **Radiofrequency ablation/neurotomy, spinal nerve (dorsal ramus and branches to sacroiliac joint)** Rhizotomy, spinal cord **(dorsal rami or ganglion) (nerve roots)** **Note:** The new *Includes* notes are in bold.

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Before April 1, 2022	Effective April 1, 2022
Radiofrequency ablation of the nerves (denervation) within the atlas and axis facet joint was classified to generic intervention 80 (Repair): 1.SA.80.HA-AW Repair, atlas and axis using percutaneous approach and radiofrequency probe *Includes:* Radiofrequency denervation, facet joint	Radiofrequency ablation of the nerves (denervation) within the atlas and axis facet joint moved to generic intervention 59 (Destruction) 1.SA.59.HA-AW Destruction, atlas and axis using percutaneous (needle) approach with radiofrequency *Includes*: Radiofrequency ablation, facet joint
Radiofrequency ablation of the nerves (denervation) within the spinal vertebrae facet joint was classified to generic intervention 80 (Repair): 1.SC.80.HA-AW Repair, spinal vertebrae using percutaneous approach and radiofrequency probe *Includes*: Radiofrequency denervation, facet joint	Radiofrequency ablation of the nerves (denervation) within the spinal vertebrae facet joint moved to generic intervention 59 (Destruction): 1.SC.59.HA-AW Destruction, spinal vertebrae using percutaneous (needle) approach with radiofrequency *Includes*: Radiofrequency ablation, facet joint

Finding the codes in the alphabetical index

We've enhanced the alphabetical index to help you locate and use the new codes:

Denervation
– facet joint
– – atlas, axis [C1-C2] 1.SA.59.^^
– – spinal vertebrae 1.SC.59.^^
– – – lumbosacral [L1-S2] 1.SC.59.^^
– nerve, nerves
– – sacroiliac joint 1.AW.59.^^
– – spinal (to sacroiliac joint) 1.AW.59.^^

Rhizotomy (see also Denervation, by site)
– facet joint
– – lumbosacral [L1-S2] 1.SC.59.^^
– – spinal vertebrae 1.SC.59.^^
. . .
– nerve, nerves
– – sacroiliac joint 1.AW.59.^^
– – spinal (to sacroiliac joint) 1.AW.59.^^
– spinal cord (dorsal rami or ganglion) (nerve roots) 1.AW.59.^^

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Let's practise

When reading the details of the operative report, it's important to pay attention to the site where the radiofrequency ablation is performed: spinal nerves of the dorsal rami or ganglion versus the medial branch nerves of the facet joints. This will help you determine the correct CCI code to assign. Work through the following scenarios to practise assigning the correct CCI code.

Scenario 1

A patient presents for radiofrequency ablation of the dorsal root ganglion. The pre-operative and post-operative diagnoses are chronic right L5 radiculopathy.

Procedure: An image intensifier is placed at the AP view. It is evident that the L4–L5 and L5-S1 intervertebral discs are degenerative with a loss of height and endplate reactive changes. Skin is anesthetized with lidocaine 1%. A 15-cm 18-gauge cannula with a bent tip is placed in the tunnel view under the pedicle of L5. The patient reports having a vague sensation in the buttocks but no radiation down the leg. At this position, the sensory stimulation is performed. The patient reports having corresponding paresthesia at L5 dermatome at 1 volt. Sensory stimulation elicits corresponding motor response at 2.34 volts. This is considered an accurate placement for the dorsal root ganglion avoiding ventral fibers. Injection of 1 mL of Omnipaque reveals no vascular spread and distribution of the L4–L5 dorsal root ganglion existing root and epidural spread. After injection of 1 mL of 1% preservative-free lidocaine, radiofrequency is performed for 5 minutes with the temperature of 45 degrees and 80 volts of power. After completion of the procedure, an additional 1 mL of lidocaine is injected and the cannula is removed. The patient tolerates the procedure well.

Which CCI code would you assign for the radiofrequency of the dorsal root ganglion?

- ☐ 1.AW.59.HA-X7 Destruction, spinal cord percutaneous approach using chemical cautery agent [e.g. glycerol]
- ☐ 1.AW.59.HA-AW Destruction, spinal cord percutaneous approach using radiofrequency probe
- ☐ 1.SC.59.HA-AW Destruction, spinal vertebrae using percutaneous (needle) approach with radiofrequency
  Location (mandatory): LB — Lumbar

Scenario 2

The patient presents for percutaneous radiofrequency facet rhizotomy of the L3–L4 to L5–S1 and sacroiliac joints. The pre-operative and post-operative diagnoses are persistent back pain.

Procedure: The patient is taken to the operating room and satisfactory intravenous sedation is conducted. The skin of the tender points is localized and local anesthesia is applied. The needle is placed under fluoroscopy, in the middle of the facet joint on each side. Stimulation is done, then the lesion is conducted for 90 seconds at 95 degrees. The patient tolerates the procedure well.

Which CCI code would you assign for radiofrequency facet rhizotomy of the lumbosacral and sacroiliac joints?

- ☐ 1.AW.59.HA-AW Destruction, spinal cord percutaneous approach using radiofrequency probe
- ☐ 1.SC.59.HA-AW Destruction, spinal vertebrae using percutaneous (needle) approach with radiofrequency
  Location (mandatory): LS — Lumbosacral
- ☐ 1.SA.59.HA-AW Destruction, atlas and axis using percutaneous (needle) approach with radiofrequency

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Scenario 3

The patient presents for a left L4–L5 and L5–S1 radiofrequency rhizotomy. The pre-operative and post-operative diagnoses are facet arthropathy.

Procedure: The patient is brought into the operating room and placed on the table in the prone position. Using an 18-gauge radiofrequency needle, the targets are identified at the intersection of the L4–L5 transverse process and superior articular process along with the sacral ala of the L5–S1 level. The surgeon starts at the L4–L5 level and, with the assistance of fluoroscopy and local anesthesia, advances the needle to the target site. The same protocol is followed for the L5–S1 level. Motor stimulation is used up to 1.5, which does not demonstrate any leg movement. A lesion is then made for 90 seconds at 80 degrees. The needles are removed and the patient tolerates the procedure well.

Which CCI code would you assign for lumbosacral radiofrequency rhizotomy?

- ☐ 1.SC.59.HA-AW Destruction, spinal vertebrae using percutaneous (needle) approach with radiofrequency
  Location (mandatory): LS — Lumbosacral
- ☐ 1.SA.59.HA-AW Destruction, atlas and axis using percutaneous (needle) approach with radiofrequency
- ☐ 1.AW.59.HA-AW Destruction, spinal cord percutaneous approach using radiofrequency probe

Check your answers

Scenario 1

Answer: 1.AW.59.HA-AW Destruction, spinal cord percutaneous approach using radiofrequency probe

Rationale: The procedure performed is radiofrequency ablation of the dorsal root ganglion. 1.AW.59.^^ *Destruction spinal cord* includes radiofrequency ablation of the spinal nerve, specifically that of the dorsal rami or ganglion nerves (denervation) of the spinal cord.

Scenario 2

Answer: 1.SC.59.HA-AW Destruction, spinal vertebrae using percutaneous (needle) approach with radiofrequency

Rationale: The procedure performed is percutaneous radiofrequency facet rhizotomy L3–L4 to L5–S1 and sacroiliac joints. Radiofrequency rhizotomy of the nerves that innervate the facet joints (denervation) within the spinal vertebrae is classified to 1.SC.59.^^ *Destruction, spinal vertebrae*. Specifically, 1.SC.59.HA-AW includes “radiofrequency ablation, facet joint.” You would also assign the mandatory location attribute LS — Lumbosacral.

Scenario 3

Answer: 1.SC.59.HA-AW Destruction, spinal vertebrae using percutaneous (needle) approach with radiofrequency

Rationale: The patient presented with facet arthropathy and underwent a lumbosacral radiofrequency rhizotomy. Rhizotomy of the nerves that innervate the facet joints within the lumbosacral spinal vertebrae is classified to 1.SC.59.^^ *Destruction, spinal vertebrae*. Specifically, 1.SC.59.HA-AW includes “radiofrequency ablation, facet joint.” You would also assign the mandatory location attribute LS — Lumbosacral.

Self-learning

Ventilation, respiratory system, NEC: New mandatory status attribute

To support development of a pan-Canadian reporting system for organ donation and transplantation data, we're developing 2 key performance indicators: the potential donor rate and the missed potential donor referral rate. To support this, we've created a new status attribute that identifies the time between when ventilation ended and the time of death.

Clinical details

Tissue damage or dysfunction occurs when there is a lack of oxygen. That's why a key criterion for identifying potential organ donors is identifying whether the patient was on respiratory ventilation at or less than 24 hours from their time of death.

Affected rubrics

1.GZ.31.^^ Ventilation, respiratory system NEC

Mandatory status attribute

Note: The values below are to capture the time from when the ventilation ended to the time of death.

0 Not applicable: discharged alive

V1 Ventilation at time of death or ended less than 3 hours before time of death

V2 Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death

V3 Ventilation ended equal to or greater than 6 hours to less than 24 hours before time of death

V9 Ventilation ended equal to or greater than 24 hours before time of death

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Coding tips/key points to consider

- There is no change in direction to the code assignment for classifying ventilation, respiratory system NEC. Per the list of **Additional mandatory CCI codes for ambulatory care**, it's mandatory for you to assign codes for both invasive and non-invasive ventilation (1.GZ.31.^^) for ambulatory care. Per the list of **Additional mandatory CCI codes for acute inpatient care**, it's mandatory for you to assign codes for ventilation, respiratory system NEC, invasive approach (1.GZ.31.CA-^^, 1.GZ.31.CR-ND and 1.GZ.31.GP-ND) for acute inpatient care. The coding standard *Invasive Ventilation* provides direction for minimum code assignment. You may code additional episodes as directed by your facility or jurisdiction.
- You must apply a value of 0 — Not applicable: discharged alive to 1.GZ.31.^^ when the discharge or visit disposition indicates that the patient was discharged or transferred alive.
- You must apply a value of V1, V2, V3 or V9 when the discharge or visit disposition is one of the following:

  DAD Disposition

  66 Died While on Pass/Leave

  67 Suicide out of Facility

  72 Died in Facility

  73 Medical Assistance in Dying (MAID)

  74 Suicide in Facility

  08 Cadaveric Donor

  NACRS Visit Disposition

  72 Died in Facility

  73 Medical Assistance in Dying (MAID)

  74 Suicide in Facility
- When there are multiple codes from 1.GZ.31.^^ recorded on the abstract, calculate the status attribute for only the last episode of ventilation prior to death and apply the same value to each 1.GZ.31.^^ code assigned. For the status attribute value, calculate the number of hours from when the last episode of ventilation prior to death ended to when the patient was pronounced dead. You don't have to calculate the status attribute separately for each episode of ventilation.

Let's practise

Work through the following scenarios to practise assigning the correct CCI code.

Scenario 1

Day 1: The patient is admitted in respiratory failure. Staff begin mechanical ventilation when the patient is admitted to the intensive care unit at 15:00.

Day 12: The patient continues on mechanical ventilation and the physician performs a tracheostomy. They change the ventilation approach to intubation through tracheostomy at 12:20.

Day 20: The patient is weaned and successfully removed from the ventilator at 11:00.

Day 25: The patient has another episode of respiratory failure. Staff start ventilation at 10:30.

Day 27: Staff remove the patient from the ventilator at 14:00. The patient later suffers a cardiac arrest. Attempts at resuscitation are unsuccessful. The time of death is recorded as 18:20.

Which set of mandatory CCI codes and attribute values for ventilation should you assign for this scenario?

☐ 1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation

1.GZ.31.CR-ND Ventilation, respiratory system NEC invasive per orifice with incision approach for intubation through tracheostomy and positive pressure (p. ex., CPAP, BIPAP, VPPI)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation

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☐ 1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation

1.GZ.31.CR-ND Ventilation, respiratory system NEC invasive per orifice with incision approach for intubation through tracheostomy and positive pressure (p. ex., CPAP, BIPAP, VPPI)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation
1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

☐ 1.GZ.31.CR-ND Ventilation, respiratory system NEC invasive per orifice with incision approach for intubation through tracheostomy and positive pressure (p. ex., CPAP, BIPAP, VPPI)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation

1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

Scenario 2

Day 1: A patient is admitted following an all-terrain vehicle accident. In the emergency department, the physician determines that the patient has a bilateral subarachnoid hemorrhage, a subdural and epidural hemorrhage, and multiple skull fractures. They place the patient on non-invasive ventilation. Following admission, the physician intubates and ventilates the patient at 22:30 and then transfers them to the intensive care unit at 23:15.

Day 2: 2 independent physicians assess the patient and determine that they are brain dead. The physicians determine that the time of brain death is 16:57. Staff take the patient to the operating room at 11:35 the following morning for organ procurement.

Which set of mandatory CCI codes and attribute values for ventilation should you assign for this scenario?

☐ **Emergency department visit**
1.GZ.31.CB-ND Ventilation, respiratory system NEC non-invasive approach positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V3** — Ventilation ended equal to or greater than 6 hours to less than 24 hours before time of death
Extent: 0 — Not applicable [use only for non-invasive ventilation]

Inpatient visit
1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V1** — Ventilation at time of death or ended less than 3 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

☐ **Emergency department visit**
1.GZ.31.CB-ND Ventilation, respiratory system NEC non-invasive approach positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V1** — Ventilation at time of death or ended less than 3 hours before time of death
Extent: 0 — Not applicable [use only for non-invasive ventilation]

Inpatient visit
1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V1** — Ventilation at time of death or ended less than 3 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

☐ **Emergency department visit**
1.GZ.31.CB-ND Ventilation, respiratory system NEC non-invasive approach positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **0** — Not applicable: discharged alive
Extent: 0 — Not applicable [use only for non-invasive ventilation]

Inpatient visit
1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V1** — Ventilation at time of death or ended less than 3 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

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Scenario 3

Day 1: The patient is admitted for a coronary artery bypass graft. For the surgery, the anesthesiologist administers general anesthetic. The surgeon intubates and ventilates the patient at 09:00. Following surgery, they transfer the patient to the surgical intensive care unit at 13:30 while still on the ventilator.

Day 2: The next day, the physician extubates the patient at 11:00 and transfers them to the nursing unit.

Day 4: The patient suffers a stroke. Following discussion with the family, staff put comfort measures in place.

Day 6: The patient passes away peacefully at 16:00.

Which mandatory CCI code and mandatory attribute value should you assign for this scenario?

☐ 1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **0** — Not applicable: discharged alive
Extent: CN — Continuous but less than 96 hours of invasive ventilation

☐ 1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V9** — Ventilation ended equal to or greater than 24 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation

☐ 1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V9** — Ventilation ended equal to or greater than 24 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

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Check your answers

Scenario 1

Answer:

1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation

1.GZ.31.CR-ND Ventilation, respiratory system NEC invasive per orifice with incision approach for intubation through tracheostomy and positive pressure (p. ex., CPAP, BIPAP, VPPI)
Status: **V2** — Ventilation ended equal to or greater than 3 hours to less than 6 hours before time of death
Extent: EX — Extended continuous of 96 hours (or more) of invasive ventilation

Rationale:

Per the *Invasive Ventilation* coding standard, at a minimum, you must assign a code(s) from 1.GZ.31.^^ *Ventilation, respiratory system NEC* to classify

1. The 1 episode that reflects the longest duration (extent attribute) when a patient is extubated and subsequently requires another episode of the same invasive ventilation; and
2. Each approach when 1 invasive approach (such as endotracheal intubation) is changed to another invasive approach (such as tracheostomy).

The discharge disposition is 72 *Died in Facility*. In this case, there were 3 episodes of ventilation, but you only need to assign codes to the 2 that are mandatory. The first and last episodes of ventilation were both via invasive approach. You're required to assign 1 code to reflect the episode with the longest duration. You're required to assign a code for the second episode of ventilation to identify the change in approach. It's optional to assign a code for the last episode in this case. The status attribute denotes the time from when the ventilation ended to the time of death. But it may not always be possible for you to attach it to the specific episode of ventilation. So you must assign the same attribute to all episodes of 1.GZ.31.^^. You apply status attribute V2 because the ventilation episode ended 4 hours and 20 minutes (i.e., greater than 3 hours but less than 6 hours) before time of death.

Scenario 2

Answer:

Emergency department visit: 1.GZ.31.CB-ND Ventilation, respiratory system NEC non-invasive approach positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **0** — Not applicable: discharged alive
Extent: 0 — Not applicable [use only for non-invasive ventilation]

Inpatient visit: 1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V1** — Ventilation at time of death or ended less than 3 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

Rationale:

It's mandatory for you to assign a code from 1.GZ.31.^^ *Ventilation, respiratory system NEC* on the NACRS abstract. The visit disposition is 06 *Admit to reporting facility as inpatient to special care unit or operating room from ambulatory care visit functional centre*. So you must apply the status attribute value 0 — Not applicable: discharged alive.

For the acute inpatient visit, the discharge disposition is 72 *Died in Facility*. The discharge date and time is completed on the pronouncement of brain death, even when the patient remains on life support pending organ procurement. In this case, the time of death is the time the patient is pronounced brain dead, **not** the time the patient is removed from ventilation. You apply status attribute V1 because ventilation ended at time of death.

Scenario 3

Answer:

1.GZ.31.CA-ND Ventilation, respiratory system NEC invasive per orifice approach by (endotracheal) intubation and positive pressure (e.g. CPAP, BIPAP, IPPV)
Status: **V9** — Ventilation ended equal to or greater than 24 hours before time of death
Extent: CN — Continuous but less than 96 hours of invasive ventilation

Rationale: The discharge disposition is 72 *Died in Facility*. Even though the patient was not on a ventilator at or near the time of death, you apply status attribute V9 because the patient was on a ventilator at some point during their stay and was extubated greater than 24 hours before the time of death.

Job aid

Implantation of internal device, knee joint: Amended note and new extent attribute values

We've reviewed rubric 1.VG.53.^^ *Implantation of internal device, knee joint* in collaboration with the Canadian Joint Replacement Registry (CJRR), and we've made the following changes to simplify code selection and to allow the identification of and distinction between the different types of bicompartmental knee replacements:

- No longer count the plastic support (meniscal) bearing as a separate component in a partial (unicompartmental) knee replacement.
- Expanded extent attribute 2 — Bicompartmental medial with lateral: bicondylar knee replacement to uniquely identify either the medial with lateral or medial (or lateral) with patellofemoral compartment.

CCI enhancements

Partial (unicompartmental) knee replacement

We've modified the note at 1.VG.53.^^ *Implantation of internal device, knee joint* to instruct you to **not** count the plastic support (meniscal) bearing as a separate component when used in a partial (unicompartmental) knee replacement.

Before v2022, in a partial (unicompartmental) knee replacement, we counted up to 3 prosthetic components: the tibial component, the femoral component and the plastic support (meniscal) bearing. Since the plastic support (meniscal) bearing is considered part of the tibial component, we no longer count it as a separate component.

Here's how you now classify a partial knee replacement using a tibial component, femoral component and plastic support (meniscal) bearing:

Before April 1, 2022	Effective April 1, 2022
1.VG.53.LA-PP-^ Implantation of internal device, knee joint **tri** component prosthetic device Extent attribute values: 1A, 1B or 1C	1.VG.53.LA-PN-^ Implantation of internal device, knee joint **dual** component prosthetic device Extent attribute values: 1A, 1B or 1C

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Bicompartmental knee replacement: Extent attribute

A bicompartmental knee replacement is a type of resurfacing where the surgeon replaces 2 of the 3 compartments of the knee joint (medial, lateral or patellofemoral), preserving the third. We expanded extent attribute 2 — Bicompartmental, medial with lateral: bicondylar to uniquely identify the compartments involved in a bicompartmental knee replacement.

Before April 1, 2022	Effective April 1, 2022
2 Bicompartmental, medial with lateral: bicondylar	**2A** Bicompartmental, medial with lateral: bicondylar **2B** Bicompartmental, medial with patellofemoral: bicondylar **2C** Bicompartmental, lateral with patellofemoral: bicondylar **2D** Bicompartmental, unspecified

Coding tips/key points to consider

- We now consider the plastic support bearing as part of the tibial component. Do not count the plastic support (meniscal) bearing as a separate component when it's used for a partial (unicompartmental) knee replacement.
- When a bicompartmental knee replacement involves the medial with lateral compartment, the applicable extent attribute is 2A — Bicompartmental, medial with lateral: bicondylar.
- When a bicompartmental knee replacement involves either the medial or the lateral compartment with the patellofemoral compartment, the applicable extent attribute is 2B — Bicompartmental, medial with patellofemoral: bicondylar **or** 2C — Bicompartmental, lateral with patellofemoral: bicondylar.
- We've incorporated these changes into the course 91E-Knee Joint Replacement, available in CIHI's Learning Centre.

Self-learning

Transgender breast surgery: New notes

We've noticed that some coders have been mistakenly classifying transgender breast surgery to partial excision or total excision. To help address this data quality issue and clarify how you classify transgender breast surgery, we've added notes to the following rubrics:

- 1.YM.78.^^ Repair by decreasing size, breast
- 1.YM.79.^^ Repair by increasing size, breast
- 1.YM.87.^^ Excision partial, breast
- 1.YM.89.^^ Excision total, breast

CCI enhancements

We've added 3 inclusion notes at

1.YM.78.^^ Repair by decreasing size, breast

Includes: Female to male (FTM) transgender chest masculinization

Subcutaneous mastectomy for transgender female to male chest masculinization

Transgender female to male (chest contouring) mastectomy

We've added 3 inclusion notes at

1.YM.79.^^ Repair by increasing size, breast

Includes: Breast construction for transgender male to female chest feminization

Male to female (MTF) mammoplasty

Male to female (MTF) transgender breast augmentation

We've added 3 exclusion notes at

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

Excludes: Female to male (FTM) transgender chest masculinization (see 1.YM.78.^^)

Subcutaneous mastectomy for transgender female to male chest masculinization (see 1.YM.78.^^)

Transgender female to male (chest contouring) mastectomy (see 1.YM.78.^^)

We've added 3 exclusion notes at

1.YM.89.^^ Excision total, breast

Excludes: Female to male (FTM) transgender chest masculinization (see 1.YM.78.^^)

Subcutaneous mastectomy for transgender female to male chest masculinization (see 1.YM.78.^^)

Transgender female to male (chest contouring) mastectomy (see 1.YM.78.^^)

Coding tips/key points to consider

Breast surgery is performed on transgender patients who want to change their current appearance to match their gender.

Some coders were classifying transgender breast surgery to a code from rubric 1.YM.87.^^ *Excision partial, breast* or rubric 1.YM.89.^^ *Excision total, breast* because the surgeon described the intervention as a mastectomy. You assign the codes at rubrics 1.YM.87.^^ and 1.YM.89.^^ when the excision of breast tissue is to remove disease, such as a tumor. So you should not use these codes for transgender breast surgery.

You should always search the CCI tabular list using terms that describe the intent of the intervention or the generic type of action performed and the anatomy site the intervention is performed on. For transgender surgery where the size of the breast is *decreased* (female-to-male breast surgery), search for "repair by decreasing size, breast." For surgery where the size of the breast is *increased* (male-to-female breast surgery), search for "repair by increasing size, breast."

Let's practise

Work through the following scenarios to practise assigning the correct CCI code.

Scenario 1

A patient presents for a bilateral subcutaneous mastectomy. The pre-operative and post-operative diagnoses are gender dysphoria. The procedure performed is a bilateral subcutaneous mastectomy with free nipple and free areolar graft.

Procedure: Through a peri-areolar incision, maintaining the nipple and areola on a laterally based pedicle, an appropriate area of skin is de-epithelialized and the areola is incised. Dissection is carried down to the level of the deep fascia and the glandular tissue is undermined. The excess glandular tissue is excised, creating a laterally based flap for the nipple and areolar complex. It is similar on both sides. 79 grams is removed from the left breast and 65 grams from the right breast. This provides good symmetry. The areola is advanced into position and secured in layers with 3-0 Monocryl and 3-0 Quill. The pedicle is further contoured to maximize the appearance to provide symmetry.

Which CCI code would you assign for the subcutaneous mastectomy?

Scenario 2

A patient presents for a bilateral mastectomy. The pre-operative and post-operative diagnoses are bilateral infiltrating ductal carcinoma, breast.

Procedure: The patient is prepped for a bilateral mastectomy. An elliptical incision is made surrounding the right nipple areolar complex. Superior and inferior flaps are raised up to the clavicle and down to the level of the inframammary fold. The surgeon then continues the dissection medially to the lateral border of the sternum and laterally to the anterior border of the latissimus dorsi. The right breast is then removed (512 grams) from the chest wall in a medial to lateral direction using electrocautery. The pectoralis fascia is removed with breast tissue. Once the right breast is completely removed, it is oriented with a long stitch lateral and short stitch superior and passed off. The wound is irrigated with sterile water and then a #7 Jackson Pratt drain is inserted through the inferior flap. Adequate hemostasis using electrocautery is achieved. The incision is closed with interrupted 3-0 Vicryl subcutaneous stitches and skin clips. The same procedure is performed on the left breast, removing 509 grams.

Which CCI code would you assign for the bilateral mastectomy?

Scenario 3

A patient presents for a bilateral mastectomy. The pre-operative and post-operative diagnoses are transgender dysphoria.

Procedure: The patient is prepped for a bilateral mastectomy with nipple areolar complex (NAC) reduction. Peri-areolar tissue is de-epithelialized. A superior flap is elevated at what is felt to be appropriate thickness according to the rest of the chest wall up to the top of the breast gland. It is then dissected medially and laterally. The inferior flaps including NAC are elevated and taken down to the inframammary fold and dissected circumferentially. Then the breast gland is removed off the pectoralis fascia. Adjustments are made for adequate symmetry, and 303 grams is excised from the left breast and 287.7 grams from the right breast. A thorough inspection is made for adequate hemostasis. Once hemostasis is fully achieved, wounds are closed with layered 3-0 Vicryl and 3-0 Monocryl. The NAC is placed into a centralized position. Right and left breasts are done in identical and sequential fashion.

Which CCI code would you assign for the bilateral mastectomy?

Check your answers

Scenario 1

Answer: 1.YM.78.VQ Repair by decreasing size, breast, using circum peri areolar (keyhole, lollipop) excisional technique

Rationale: The intent of the intervention is to modify the patient's physical appearance and anatomy to align with the patient's gender. So you classify this bilateral subcutaneous mastectomy to repair by decreasing size.

Scenario 2

Answer: 1.YM.89.LA Excision total, breast, using open approach

Rationale: The intent of the intervention is to remove diseased tissue (infiltrating ductal carcinoma). So you classify this bilateral mastectomy to total excision.

Scenario 3

Answer: 1.YM.78.VQ Repair by decreasing size, breast, using circum peri areolar (keyhole, lollipop) excisional technique

Rationale: The intent of the intervention is to modify the patient's physical appearance and anatomy to align with the patient's gender. So you classify this bilateral mastectomy to repair by decreasing size.

Self-learning

Push endoscopy: New optional location attribute, inclusion term and change in direction

Before v2022, it wasn't possible to identify a push endoscopy that was performed **without** using a balloon enteroscope. There was and still is no unique CCI code for this intervention.

So to identify a push endoscopy when it's performed **without** using a balloon enteroscope, we've added a new optional location attribute at rubrics 2.NK.70.^^ *Inspection, small intestine* and 2.NK.71.^^ *Biopsy, small intestine*. We've also added an inclusion term to make it clear that a push endoscopy is included at these rubrics.

The optional location attribute gives jurisdictions or facilities the option to identify a push endoscopy when it's performed **without** using a balloon enteroscope and to distinguish it from an esophagogastroduodenoscopy (EGD).

Clinical details

What is a push endoscopy?

A push endoscopy (also referred to as a push enteroscopy) is a procedure that allows inspection of the upper small intestine (jejunum). It can reach further into the small intestine than a standard upper gastrointestinal (GI) endoscopy. It's performed when there's a suspected abnormality that may be causing recurrent or persistent symptoms, such as abdominal pain, diarrhea or bleeding.

How is a push endoscopy performed?

The most common way to perform a push endoscopy is to use an endoscope that's longer than the endoscope typically used to perform an EGD. In most instances, the surgeon uses a pediatric colonoscope to reach beyond the duodenum.

The surgeon advances the endoscope via the mouth (antegrade approach) into the esophagus, stomach and past the duodenum, going as far as possible. Normally, a push endoscopy ends at the proximal jejunum. However, depending on the patient's anatomy, it may reach into the ileum (lower part of the small intestine). The surgeon stops when the scope reaches its end or it cannot be advanced any more due to looping of the small intestine.

The other less common way to perform a push endoscopy is using a balloon device with a special enteroscope. Use of a balloon device–assisted enteroscope requires specialized training. This technique is sometimes documented as single balloon enteroscopy (SBE) or double balloon enteroscopy (DBE). SBE and DBE are most commonly performed via the mouth (antegrade approach) and allow visualization of the entire small bowel up to the terminal ileum. However, the surgeon may also perform SBE and DBE via the rectum (retrograde approach), when inspection of the entire small bowel to the terminal ileum cannot be achieved via the mouth (antegrade approach).

CCI enhancements

New inclusion term

We've added a new inclusion term at rubrics 2.NK.70.^^ *Inspection, small intestine* and 2.NK.71.^^ *Biopsy, small intestine* to clarify that a "push endoscopy" and "push endoscopy with biopsy" are included at these rubrics.

2.NK.70.^^ Inspection, small intestine

Includes: Colonoscopy with ileoscopy
Double balloon enteroscopy
Duodenoscopy
Esophagogastroduodenoscopy (EGD)
Exploration, small intestine (open, laparoscopic)
Ileoscopy
Jejunoscopy
Push endoscopy

2.NK.71.^^ Biopsy, small intestine

Includes: Colonoscopy with biopsy of ileum
Push endoscopy with biopsy

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New optional location attribute

We've created a **new** optional location attribute at rubrics 2.NK.70.^^ *Inspection, small intestine* and 2.NK.71.^^ *Biopsy, small intestine*.

Location attribute

Note: Select the furthest anatomical site. For example, push endoscopy, apply location attribute J to denote jejunum.

D Duodenum
I Ileum
J Jejunum
U Unqualified, not applicable or unknown

Change in direction

Before v2022, in our answers to coding questions, we advised you to classify a push endoscopy that was performed via the mouth using a colonoscope to "best fit" codes:

- 2.NK.70.BC-BK Inspection, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) **balloon enteroscope**

  or

- 2.NK.71.BC-BK Biopsy, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) **balloon enteroscope**

We gave this best fit direction as an interim solution, so that all push endoscopy procedures could be identified, regardless of the device used.

However, since a push endoscopy using a balloon enteroscope is limited to facilities that have the specialized devices and requires special training, we didn't want to continue with the best fit direction.

Now, you will classify a push endoscopy that is performed via the mouth using a colonoscope to device qualifier "gastroscope" and your facility or jurisdiction will advise if it wants you to apply the new location attribute.

CCI code assignment

When a **push endoscopy is performed via the mouth using a colonoscope**, assign 1 of the following codes with device qualifier BA-BL gastroscope and apply 1 of the optional location attributes indicating the furthest site visualized:

- 2.NK.70.BA-BL Inspection, small intestine using endoscopic per orifice approach (or via stoma) and **gastroscope**
  Location (optional): J — Jejunum or I — Ileum
- 2.NK.71.BA-BL Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and **gastroscope**
  Location (optional): J — Jejunum or I — Ileum

Important: Although a push endoscopy is most commonly performed via the mouth using a colonoscope, **do not** choose the device qualifier BA-BJ colonoscope. 2.NK.70.BA-BJ *Inspection, small intestine using endoscopic per orifice approach (or via stoma) and colonoscope* and 2.NK.71.BA-BJ *Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and colonoscope* identify a colonoscopy with ileoscopy.

Important: From a national perspective, it's optional to apply the new location attribute. However, some facilities and jurisdictions may issue a directive making it mandatory to apply the location attribute I — Ileum or J — Jejunum when a patient undergoes a push endoscopy. This allows them to distinguish in the data between a push endoscopy that's performed via the mouth using a colonoscope and an EGD.

When coding a **push endoscopy using a balloon enteroscope**, the optional location attribute identifies the furthest site inspected or biopsied (if your facility or jurisdiction has issued direction to do so). Use 1 of these CCI codes to uniquely identify a push endoscopy that's performed using balloon enteroscope:

- 2.NK.70.BC-BK Inspection, small intestine using **antegrade (via mouth)** endoscopic per orifice approach and (double) **balloon enteroscope**
- 2.NK.70.BD-BK Inspection, small intestine using **retrograde (via rectum)** endoscopic per orifice approach and (double) **balloon enteroscope**
- 2.NK.71.BC-BK Biopsy, small intestine using **antegrade (via mouth)** endoscopic per orifice approach and (double) **balloon enteroscope**
- 2.NK.71.BD-BK Biopsy, small intestine using **retrograde (via rectum)** endoscopic per orifice approach and (double) **balloon enteroscope**

Let's practise

Work through the following scenarios describing a push endoscopy. Use CCI v2022 to practise assigning the correct CCI code and applying the optional location attribute.

Scenario 1

A patient undergoes a push enteroscopy via oral approach using a pediatric colonoscope. Visualization is excellent and inspection to proximal jejunum is achieved. Findings: Normal push enteroscopy to the proximal jejunum.

Which CCI code and optional location attribute should you assign for the intervention push enteroscopy to the proximal jejunum using colonoscope?

☐ 2.NK.70.BA-BJ Inspection, small intestine using endoscopic per orifice approach (or via stoma) and colonoscope
Location (optional): J — Jejunum

☐ 2.NK.70.BA-BL Inspection, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope
Location (optional): J — Jejunum

☐ 2.NK.70.BC-BK Inspection, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) balloon enteroscope
Location (optional): J — Jejunum

Scenario 2

A patient presents for a push enteroscopy. Using a standard pediatric colonoscope, the physician inspects the patient's upper gastrointestinal tract to the jejunum. They take biopsies of the jejunum.

Which CCI code and optional location attribute should you assign for the intervention push enteroscopy with biopsy of the jejunum using colonoscope?

☐ 2.NK.71.BA-BJ Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and colonoscope
Location (optional): J — Jejunum

☐ 2.NK.71.BA-BL Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope
Location (optional): J — Jejunum

Scenario 3

Operation performed: Double balloon enteroscopy

Description of procedure: Following administration of the general anesthetic, the patient is placed in the left lateral decubitus position. The physician inserts the double balloon enteroscope into the oropharynx and advances it into the proximal jejunum. They advance the Fujinon double balloon enteroscope to approximately the ileum. There is evidence of multiple areas in the ileum that appear to be somewhat flattened with coarsening features of the villi. The physician takes biopsies.

Which CCI code and optional location attribute should you assign for the intervention double balloon enteroscopy with biopsy of the ileum?

☐ 2.NK.71.BA-BL Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope
Location (optional): I — Ileum

☐ 2.NK.71.BC-BK Biopsy, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) balloon enteroscope
Location (optional): I — Ileum

☐ 2.NK.71.BD-BK Biopsy, small intestine using retrograde (via rectum) endoscopic per orifice approach and (double) balloon enteroscope
Location (optional): I — Ileum

Scenario 4

A patient is seen in the endoscopy unit and undergoes a single balloon enteroscopy to the terminal ileum.

Which CCI code and optional location attribute should you assign for the intervention single balloon enteroscopy to the terminal ileum?

☐ 2.NK.70.BA-BL Inspection, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope
Location (optional): I — Ileum

☐ 2.NK.70.BC-BK Inspection, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) balloon enteroscope
Location (optional): I — Ileum

☐ 2.NK.70.BD-BK Inspection, small intestine using retrograde (via rectum) endoscopic per orifice approach and (double) balloon enteroscope
Location (optional): I — Ileum

Check your answers

Scenario 1

Answer: 2.NK.70.BA-BL Inspection, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope

Location (optional): J — Jejunum

Rationale: You classify a push endoscopy to the proximal jejunum without balloon assistance to inspection, small intestine with approach and device qualifier BA-BL. The CCI code and the location attribute J identify that this intervention is a push endoscopy without balloon assistance.

Scenario 2

Answer: 2.NK.71.BA-BL Biopsy, small intestine using endoscopic per orifice approach (or via stoma) and gastroscope

Location (optional): J — Jejunum

Rationale: You classify a push endoscopy with biopsy and without balloon assistance to biopsy, small intestine with approach and device qualifier BA-BL. The CCI code and the location attribute J identify that this intervention is a push endoscopy with biopsy without balloon assistance.

Scenario 3

Answer: 2.NK.71.BC-BK Biopsy, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) balloon enteroscope

Location (optional): I — Ileum

Rationale: You classify a double balloon enteroscopy (antegrade approach) with biopsy of the ileum to biopsy, small intestine with approach and device qualifier BC-BK. The CCI code identifies that this intervention is a balloon-assisted push enteroscopy with biopsy. The location attribute identifies that the furthest site inspected is the ileum.

Scenario 4

Answer: 2.NK.70.BC-BK Inspection, small intestine using antegrade (via mouth) endoscopic per orifice approach and (double) balloon enteroscope

Location (optional): I — Ileum

Rationale: You classify a single balloon enteroscopy (antegrade approach) to the terminal ileum to inspection, small intestine with approach and device qualifier BC-BK. The CCI code identifies that this intervention is a push enteroscopy with balloon assistance. The location attribute identifies that the furthest site inspected is the ileum.

Job aid

Induction agents: Added, modified and disabled codes and qualifiers

While CIHI was developing the Low-Risk Caesarean Section health indicator, a clinician in our Expert Clinical Advisory Group gave us feedback on the best way to classify induction agents. To classify induction agents more appropriately, we've renamed the agent qualifier **I2 — and oxytocic agent** to **I2 — and uterotonic agent**.

We've also significantly changed the classification of the uterotonic agent misoprostol. Health care providers can use and administer misoprostol in various ways, which affects the way you classify it. Before v2022, misoprostol was classified solely as an antacid agent. With v2022, when a health care provider uses misoprostol in specific obstetrical interventions (e.g., induction), you classify it as a uterotonic agent.

To stay current with induction agent terminology, we've made the following changes:

- Added and modified CCI codes and qualifiers to classify misoprostol and other uterotonic agents more appropriately.
- Added new induction approaches for misoprostol.
- Disabled codes that are no longer clinically relevant.

Clinical details

What is a uterotonic agent?

Uterotonic agents are drugs that produce adequate uterine contraction. Health care providers use them to induce or augment labor, facilitate uterine contractions for abortion procedures and assist in other gynecological interventions. Different types of uterotonic agents that are commonly used are oxytocins (e.g., syntocinon), ergot alkaloids (e.g., ergometrine) and prostaglandins (e.g., misoprostol). Since oxytocin is a type of uterotonic, and uterotonics in general may be used for these purposes, the agent qualifier is more appropriately named "and uterotonic agent."

What is misoprostol?

Misoprostol is a synthetic prostaglandin E_1 analogue that health care providers use to prevent and treat stomach ulcers, induce labor and abortion, ripen the cervix and treat postpartum hemorrhage. Health care providers can use this drug as an antacid agent for non-obstetrical interventions or use it as a uterotonic agent for specific obstetrical procedures (e.g., induction).

CCI enhancements

Modified qualifiers to identify uterotonic agents

We've modified codes at the following CCI Section 5 — Obstetrical and Fetal Interventions rubrics to identify the updated terminology change at qualifier I2 — and uterotonic agent:

- 5.AC.30.^^ Induction of labour
- 5.CA.88.^^ Pharmacological termination of pregnancy
- 5.LD.31.^^ Augmentation of labour
- 5.PC.20.^^ Postpartum pharmacotherapy

New code to identify oral administration of uterotonic agent

We've also added a new code at rubric 5.LD.31.^^ *Augmentation of labour* to identify oral administration of a uterotonic agent (e.g., misoprostol):

5.LD.31.CA-I2 Augmentation of labour using oral administration of uterotonic agent

Includes: Use of oral prostaglandin (e.g. misoprostol)

Disabled codes

At the following rubrics, we've disabled codes with the qualifier A2 — antacids, as this is no longer clinically relevant:

Disabled codes	Code descriptions
5.AC.30.CK-A2	Induction of labour using per orifice (intra vaginal) administration of antacids [e.g., misoprostol]
5.CA.24.CK-A2	Preparation by dilating cervix (for), termination of pregnancy per orifice approach and antacid treatment [e.g., misoprostol]
5.CA.88.AL-A2	Pharmacological termination of pregnancy combined types of approaches antacid treatment
5.CA.88.CA-A2	Pharmacological termination of pregnancy, oral approach antacid treatment
5.CA.88.CK-A2	Pharmacological termination of pregnancy per orifice approach antacid treatment
5.CA.88.HA-A2	Pharmacological termination of pregnancy, percutaneous approach [e.g., intravenous, injection into intraamniotic or extra-amniotic sac] antacid treatment

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Induction agents

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