

ICD-10-PCS  
General  
**Code Set Training**

2013

**Part 2**



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## Clinical Examples Used in this Book

AAPC believes it is important in training and testing to reflect as accurate a coding setting as possible to students and examinees. All examples and case studies used in our study guides and exams are *actual*, *redacted* office visit and procedure notes donated by AAPC members.

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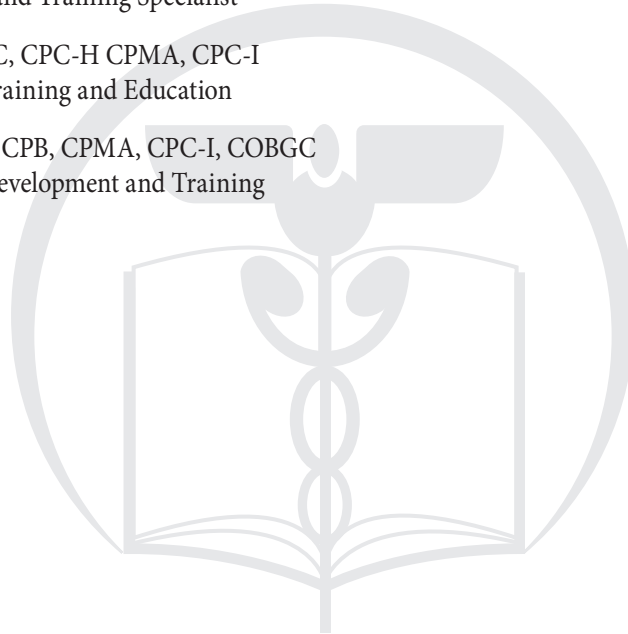
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## Chapter 2

### ICD-10-PCS Official Draft Guidelines

In order to understand ICD-10-PCS coding, it is important to become familiar with the guidelines. Following are the ICD-10-PCS Official Draft Guidelines for 2012 for the Medical and Surgical section. The guidelines for Obstetrics will be listed in the Chapter 3. The Official Guidelines (along with the conventions) can be found at [www.cms.hhs.gov/icd10](http://www.cms.hhs.gov/icd10).

#### Medical and Surgical Section Guidelines (section 0)

##### B2. Body System

###### *General guidelines*

###### B2.1a

The procedure codes in the general anatomical regions body systems should only be used when the procedure is performed on an anatomical region rather than a specific body part (eg, root operations Control and Detachment, drainage of a body cavity) or on the rare occasion when no information is available to support assignment of a code to a specific body part.

*Example:* Control of postoperative hemorrhage is coded to the root operation Control found in the general anatomical regions body systems.

###### B2.1b

Body systems designated as upper or lower contain body parts located above or below the diaphragm respectively.

*Example:* Vein body parts above the diaphragm are found in the Upper Veins body system; vein body parts below the diaphragm are found in the Lower Veins body system.

##### B3. Root Operation

###### *General guidelines*

###### B3.1a

In order to determine the appropriate root operation, the full definition of the root operation as contained in the PCS Tables must be applied.

###### B3.1b

Components of a procedure specified in the root operation definition and explanation are not coded separately. Procedural steps necessary to reach the operative site and close the operative site are also not coded separately.

*Example:* Resection of a joint as part of a joint replacement procedure is included in the root operation definition of Replacement and is not coded separately. Laparotomy performed to reach the site of an open liver biopsy is not coded separately.

###### *Multiple procedures*

###### B3.2

During the same operative episode, multiple procedures are coded if:

- a. The same root operation is performed on different body parts as defined by distinct values of the body part character.

*Example:* Diagnostic excision of liver and pancreas are coded separately.

- b. The same root operation is repeated at different body sites that are included in the same body part value.

*Example:* Excision of the sartorius muscle and excision of the gracilis muscle are both included in the upper leg muscle body part value, and multiple procedures are coded.

- c. Multiple root operations with distinct objectives are performed on the same body part.

*Example:* Destruction of sigmoid lesion and bypass of sigmoid colon are coded separately.

- d. The intended root operation is attempted using one approach, but is converted to a different approach.

*Example:* Laparoscopic cholecystectomy converted to an open cholecystectomy is coded as percutaneous endoscopic Inspection and open Resection.

#### *Discontinued procedures*

##### B3.3

If the intended procedure is discontinued, code the procedure to the root operation performed. If a procedure is discontinued before any other root operation is performed, code the root operation Inspection of the body part or anatomical region inspected.

*Example:* A planned aortic valve replacement procedure is discontinued after the initial thoracotomy and before any incision is made in the heart muscle, when the patient becomes hemodynamically unstable. This procedure is coded as an open Inspection of the mediastinum.

#### *Biopsy followed by more definitive treatment*

##### B3.4

If a diagnostic Excision, Extraction, or Drainage procedure (biopsy) is followed by a more definitive procedure, such as Destruction, Excision, or Resection at the same procedure site, both the biopsy and the more definitive treatment are coded.

*Example:* Biopsy of breast followed by partial mastectomy at the same procedure site, both the biopsy and the partial mastectomy procedure are coded.

#### *Overlapping body layers*

##### B3.5

If the root operations Excision, Repair, or Inspection are performed on overlapping layers of the musculoskeletal system, the body part specifying the deepest layer is coded.

*Example:* Excisional debridement that includes skin and subcutaneous tissue and muscle is coded to the muscle body part.

*Bypass procedures*

## B3.6a

Bypass procedures are coded by identifying the body part bypassed “from” and the body part bypassed “to.” The fourth character body part specifies the body part bypassed from, and the qualifier specifies the body part bypassed to.

*Example:* Bypass from stomach to jejunum, stomach is the body part and jejunum is the qualifier.

## B3.6b

Coronary arteries are classified by number of distinct sites treated, rather than number of coronary arteries or anatomic name of a coronary artery (eg, left anterior descending). Coronary artery bypass procedures are coded differently than other bypass procedures as described in the previous guideline. Rather than identifying the body part bypassed from, the body part identifies the number of coronary artery sites bypassed to, and the qualifier specifies the vessel bypassed from.

*Example:* Aortocoronary artery bypass of one site on the left anterior descending coronary artery and one site on the obtuse marginal coronary artery is classified in the body part axis of classification as two coronary artery sites and the qualifier specifies the aorta as the body part bypassed from.

## B3.6c

If multiple coronary artery sites are bypassed, a separate procedure is coded for each coronary artery site that uses a different device and/or qualifier.

*Example:* Aortocoronary artery bypass and internal mammary coronary artery bypass are coded separately.

*Control vs. more definitive root operations*

## B3.7

The root operation Control is defined as, “Stopping, or attempting to stop, postprocedural bleeding.” If an attempt to stop postprocedural bleeding is initially unsuccessful, and to stop the bleeding requires performing any of the definitive root operations Bypass, Detachment, Excision, Extraction, Reposition, Replacement, or Resection, then that root operation is coded instead of Control.

*Example:* Resection of spleen to stop postprocedural bleeding is coded to Resection instead of Control.

*Excision vs. Resection*

## B3.8

PCS contains specific body parts for anatomical subdivisions of a body part, such as lobes of the lungs or liver and regions of the intestine. Resection of the specific body part is coded whenever all of the body part is cut out or off, rather than coding Excision of a less specific body part.

*Example:* Left upper lung lobectomy is coded to Resection of Upper Lung Lobe, Left rather than Excision of Lung, Left.

*Excision for graft*

## B3.9

If an autograft is obtained from a different body part in order to complete the objective of the procedure, a separate procedure is coded.

*Example:* Coronary bypass with excision of saphenous vein graft, excision of saphenous vein is coded separately.

*Fusion procedures of the spine*

## B3.10a

The body part coded for a spinal vertebral joint(s) rendered immobile by a spinal fusion procedure is classified by the level of the spine (eg thoracic). There are distinct body part values for a single vertebral joint and for multiple vertebral joints at each spinal level.

*Example:* Body part values specify Lumbar Vertebral Joint, Lumbar Vertebral Joints, 2 or More and Lumbosacral Vertebral Joint.

## B3.10b

If multiple vertebral joints are fused, a separate procedure is coded for each vertebral joint that uses a different device and/or qualifier.

*Example:* Fusion of lumbar vertebral joint, posterior approach, anterior column and fusion of lumbar vertebral joint, posterior approach, posterior column are coded separately.

## B3.10c

Combinations of devices and materials are often used on a vertebral joint to render the joint immobile. When combinations of devices are used on the same vertebral joint, the device value coded for the procedure is as follows:

- If an interbody fusion device is used to render the joint immobile (alone or containing other material like bone graft), the procedure is coded with the device value Interbody Fusion Device
- If bone graft is the *only* device used to render the joint immobile, the procedure is coded with the device value Nonautologous Tissue Substitute or Autologous Tissue Substitute
- If a mixture of autologous and nonautologous bone graft (with or without biological or synthetic extenders or binders) is used to render the joint immobile, code the procedure with the device value Autologous Tissue Substitute

*Examples:* Fusion of a vertebral joint using a cage style interbody fusion device containing morsellized bone graft is coded to the device Interbody Fusion Device. Fusion of a vertebral joint using a bone dowel interbody fusion device made of cadaver bone and packed with a mixture of local morsellized bone and demineralized bone matrix is coded to the device Interbody Fusion Device. Fusion of a vertebral joint using both autologous bone graft and bone bank bone graft is coded to the device Autologous Tissue Substitute.

*Inspection procedures*

## B3.11a

Inspection of a body part(s) performed to achieve the objective of a procedure is not coded separately.

*Example:* Fiberoptic bronchoscopy performed for irrigation of bronchus, only the irrigation procedure is coded.

### B3.11b

If multiple tubular body parts are inspected, the most distal body part inspected is coded. If multiple non-tubular body parts in a region are inspected, the body part that specifies the entire area inspected is coded.

*Examples:* Cystoureteroscopy with inspection of bladder and ureters is coded to the ureter body part value.

Exploratory laparotomy with general inspection of abdominal contents is coded to the peritoneal cavity body part value.

### B3.11c

When both an Inspection procedure and another procedure are performed on the same body part during the same episode, if the Inspection procedure is performed using a different approach than the other procedure, the Inspection procedure is coded separately.

*Example:* Endoscopic Inspection of the duodenum is coded separately when open Excision of the duodenum is performed during the same procedural episode.

### *Occlusion vs. Restriction for vessel embolization procedures*

#### B3.12

If the objective of an embolization procedure is to completely close a vessel, the root operation Occlusion is coded. If the objective of an embolization procedure is to narrow the lumen of a vessel, the root operation Restriction is coded.

*Examples:* Tumor embolization is coded to the root operation Occlusion, because the objective of the procedure is to cut off the blood supply to the vessel.

Embolization of a cerebral aneurysm is coded to the root operation Restriction, because the objective of the procedure is not to close off the vessel entirely, but to narrow the lumen of the vessel at the site of the aneurysm where it is abnormally wide.

### *Release procedures*

#### B3.13

In the root operation Release, the body part value coded is the body part being freed and not the tissue being manipulated or cut to free the body part.

*Example:* Lysis of intestinal adhesions is coded to the specific intestine body part value.

### *Release vs. Division*

#### B3.14



If the sole objective of the procedure is freeing a body part without cutting the body part, the root operation is Release. If the sole objective of the procedure is separating or transecting a body part, the root operation is Division.

*Examples:* Freeing a nerve root from surrounding scar tissue to relieve pain is coded to the root operation Release. Severing a nerve root to relieve pain is coded to the root operation Division.

#### *Reposition for fracture treatment*

B3.15

Reduction of a displaced fracture is coded to the root operation Reposition and the application of a cast or splint in conjunction with the Reposition procedure is not coded separately. Treatment of a nondisplaced fracture is coded to the procedure performed.

*Examples:* Putting a pin in a nondisplaced fracture is coded to the root operation Insertion.

Casting of a nondisplaced fracture is coded to the root operation Immobilization in the Placement section.

#### *Transplantation vs. Administration*

B3.16

Putting in a mature and functioning living body part taken from another individual or animal is coded to the root operation Transplantation. Putting in autologous or nonautologous cells is coded to the Administration section.

*Example:* Putting in autologous or nonautologous bone marrow, pancreatic islet cells or stem cells is coded to the Administration section.

## **B4. Body Part**

### *General guidelines*

B4.1a

If a procedure is performed on a portion of a body part that does not have a separate body part value, code the body part value corresponding to the whole body part.

*Example:* A procedure performed on the alveolar process of the mandible is coded to the mandible body part.

B4.1b

If the prefix “peri” is combined with a body part to identify the site of the procedure, the procedure is coded to the body part named.

*Example:* A procedure site identified as perirenal is coded to the kidney body part.

### *Branches of body parts*

B4.2

Where a specific branch of a body part does not have its own body part value in PCS, the body part is coded to the closest proximal branch that has a specific body part value.

*Example:* A procedure performed on the mandibular branch of the trigeminal nerve is coded to the trigeminal nerve body part value.

#### *Bilateral body part values*

##### B4.3

Bilateral body part values are available for a limited number of body parts. If the identical procedure is performed on contralateral body parts, and a bilateral body part value exists for that body part, a single procedure is coded using the bilateral body part value. If no bilateral body part value exists, each procedure is coded separately using the appropriate body part value.

*Example:* The identical procedure performed on both fallopian tubes is coded once using the body part value Fallopian Tube, Bilateral. The identical procedure performed on both knee joints is coded twice using the body part values Knee Joint, Right and Knee Joint, Left.

#### *Coronary arteries*

##### B4.4

The coronary arteries are classified as a single body part that is further specified by number of sites treated and not by name or number of arteries. Separate body part values are used to specify the number of sites treated when the same procedure is performed on multiple sites in the coronary arteries.

*Examples:* Angioplasty of two distinct sites in the left anterior descending coronary artery with placement of two stents is coded as Dilation of Coronary Arteries, Two Sites, with Intraluminal Device.

Angioplasty of two distinct sites in the left anterior descending coronary artery, one with stent placed and one without, is coded separately as Dilation of Coronary Artery, One Site with Intraluminal Device, and Dilation of Coronary Artery, One Site with no device.

#### *Tendons, ligaments, bursae and fascia near a joint*

##### B4.5

Procedures performed on tendons, ligaments, bursae and fascia supporting a joint are coded to the body part in the respective body system that is the focus of the procedure. Procedures performed on joint structures themselves are coded to the body part in the joint body systems.

*Example:* Repair of the anterior cruciate ligament of the knee is coded to the knee bursae and ligament body part in the bursae and ligaments body system. Knee arthroscopy with shaving of articular cartilage is coded to the knee joint body part in the Lower Joints body system.

#### *Skin, subcutaneous tissue and fascia overlying a joint*

##### B4.6

If a procedure is performed on the skin, subcutaneous tissue or fascia overlying a joint, the procedure is coded to the following body part:

- Shoulder is coded to Upper Arm
- Elbow is coded to Lower Arm
- Wrist is coded to Lower Arm

- Hip is coded to Upper Leg
- Knee is coded to Lower Leg
- Ankle is coded to Foot

### *Fingers and toes*

#### B4.7

If a body system does not contain a separate body part value for fingers, procedures performed on the fingers are coded to the body part value for the hand. If a body system does not contain a separate body part value for toes, procedures performed on the toes are coded to the body part value for the foot.

*Example:* Excision of finger muscle is coded to one of the hand muscle body part values in the Muscles body system.

## **B5. Approach**

### *Open approach with percutaneous endoscopic assistance*

#### B5.2

Procedures performed using the open approach with percutaneous endoscopic assistance are coded to the approach Open.

*Example:* Laparoscopic-assisted sigmoidectomy is coded to the approach Open.

### *External approach*

#### B5.3a

Procedures performed within an orifice on structures that are visible without the aid of any instrumentation are coded to the approach External.

*Example:* Resection of tonsils is coded to the approach External.

#### B5.3b

Procedures performed indirectly by the application of external force through the intervening body layers are coded to the approach External.

*Example:* Closed reduction of fracture is coded to the approach External.

### *Percutaneous procedure via device*

#### B5.4

Procedures performed percutaneously via a device placed for the procedure are coded to the approach Percutaneous.

*Example:* Fragmentation of kidney stone performed via percutaneous nephrostomy is coded to the approach Percutaneous.

## B6. Device

### *General guidelines*

#### B6.1a

A device is coded only if a device remains after the procedure is completed. If no device remains, the device value No Device is coded.

#### B6.1b

Materials such as sutures, ligatures, radiological markers and temporary post-operative wound drains are considered integral to the performance of a procedure and are not coded as devices.

#### B6.1c

Procedures performed on a device only and not on a body part are specified in the root operations Change, Irrigation, Removal and Revision, and are coded to the procedure performed.

*Example:* Irrigation of percutaneous nephrostomy tube is coded to the root operation Irrigation of indwelling device in the Administration section.

### *Drainage device*

#### B6.2

A separate procedure to put in a drainage device is coded to the root operation Drainage with the device value Drainage Device.

## Medical and Surgical

This provides the much needed reference material for the root operations in the medical and surgical section of ICD-10-PCS. The vast majority of codes reported in an inpatient setting are found in this section.

### Medical and Surgical Tables by Body System

The medical and surgical tables are divided by body system. Body systems for medical and surgical section codes are specified as the second character in PCS. There are 31 body systems recognized:

00	Central Nervous System
01	Peripheral Nervous System
02	Heart and Great Vessels
03	Upper Arteries
04	Lower Arteries
05	Upper Veins
06	Lower Veins
07	Lymphatic and Hemic Systems
08	Eye
09	Ear, Nose, Sinus
0B	Respiratory System
0C	Mouth and Throat

0D	Gastrointestinal System
0F	Hepatobiliary System and Pancreas
0G	Endocrine System
0H	Skin and Breast
0J	Subcutaneous Tissue and Fascia
0K	Muscles
0L	Tendons
0M	Bursae and Ligaments
0N	Head and Facial Bones
0P	Upper Bones
0Q	Lower Bones
0R	Upper Joints
0S	Lower Joints
0T	Urinary System
0U	Female Reproductive System
0V	Male Reproductive System
0W	Anatomical Regions, General
0X	Anatomical Regions, Upper Extremities
0Y	Anatomical Regions, Lower Extremities

### Root Operations

Root operations for medical and surgical section codes are specified in the third character in PCS. There are 31 different root operations recognized. They identify the objective of the procedure and each one carries a precise definition.

First, a table presents all root operations in the medical and surgical section, organized into logical groups. Following the table are definitions of each root operation, presented in the order shown in the table. Material on each root operation includes:

- Definition, explanation, and examples of the root operation
- Coding notes as needed
- A representative procedure excerpt for each root operation, followed by the correct code for the procedure. The code is provided in table excerpt format, along with explanatory notes as needed
- Coding exercises that provide example procedures and their corresponding ICD-10-PCS codes, with explanatory notes as needed

## Root Operation Groups

The medical and surgical root operations are divided into groups that share similar attributes. These groups, and the root operations in each, are listed in the table below.

Root Operation	Objective of Procedure	Site of Procedure	Example
Root operations that take out some/all of a body part			
Excision	Cutting out/off without replacement	Some of a body part	Breast lumpectomy
Resection	Cutting out/off without replacement	All of a body part	Total mastectomy
Detachment	Cutting out/off without replacement	Extremity only, any level	Amputation above elbow
Destruction	Eradicating without replacement	Some/all of a body part	Fulguration of endometrium
Extraction	Pulling out or off without replacement	Some/all of a body part	Suction D&C
Root operations that take out solids/fluids/gases from a body part			
Drainage	Taking/letting out fluids/gases	Within a body part	Incision and drainage
Extirpation	Taking/cutting out solid matter	Within a body part	Thrombectomy
Fragmentation	Breaking solid matter into pieces	Within a body part	Lithotripsy
Root operations involving cutting or separation only			
Division	Cutting into/separating a body part	Within a body part	Neurotomy
Release	Freeing a body part from constraint	Around a body part	Adhesiolysis
Root operations that put in/put back or move some/all of a body part			
Transplantation	Putting in a living body part from a person/animal	Some/all of a body part	Kidney transplant
Reattachment	Putting back a detached body part	Some/all of a body part	Reattach severed finger
Transfer	Moving, to function for a similar body part	Some/all of a body part	Skin transfer flap
Reposition	Moving, to normal or other suitable location	Some/all of a body part	Move undescended testicle
Root operations that alter the diameter/route of a tubular body part			
Restriction	Partially closing orifice/lumen	Tubular body part	Gastroesophageal fundoplication
Occlusion	Completely closing orifice/lumen	Tubular body part	Fallopian tube ligation
Dilation	Expanding orifice/lumen	Tubular body part	Percutaneous transluminal coronary angioplasty (PTCA)
Bypass	Altering route of passage	Tubular body part	Coronary artery bypass graft (CABG)

Root Operation	Objective of Procedure	Site of Procedure	Example
Root operations that always involve a device			
Insertion	Putting in non-biological device	In/on a body part	Central line insertion
Replacement	Putting in device that replaces a body part	Some/all of a body part	Total hip replacement
Supplement	Putting in device that reinforces or augments a body part	In/on a body part	Abdominal wall herniorrhaphy using mesh
Change	Exchanging device w/out cutting/puncturing	In/on a body part	Drainage tube change
Removal	Taking out device	In/on a body part	Central line removal
Revision	Correcting a malfunctioning/displaced device	In/on a body part	Revision of pacemaker insertion
Root operations involving examination only			
Inspection	Visual/manual exploration	Some/all of a body part	Diagnostic cystoscopy
Map	Locating electrical impulses/functional areas	Brain/cardiac conduction mechanism	Cardiac electrophysiological study
Root operations that include other repairs			
Repair	Restoring body part to its normal structure	Some/all of a body part	Suture laceration
Control	Stopping/attempting to stop postprocedural bleed	Anatomical region	Post-prostatectomy bleeding
Root operations that include other objectives			
Fusion	Rendering joint immobile	Joint	Spinal fusion
Alteration	Modifying body part for cosmetic purposes without affecting function	Some/all of a body part	Face lift
Creation	Making new structure for sex change operation	Perineum	Artificial vagina/penis

## Root Operations that Take Out Some or All of a Body Part

Five root operations represent procedures for taking out or otherwise eradicating some or all of a body part. These root operations are listed in the pages that follow.

Root Operation	Objective of Procedure	Site of Procedure	Example
Excision	Cutting out/off without replacement	Some of a body part	Breast lumpectomy
Resection	Cutting out/off without replacement	All of a body part	Total mastectomy
Detachment	Cutting out/off without replacement	Extremity only, any level	Amputation above elbow
Destruction	Eradicating without replacement	Some/all of a body part	Fulguration of endometrium
Extraction	Pulling out or off without replacement	Some/all of a body part	Suction D&C

Excision is coded when a portion of a body part is cut out or off using a sharp instrument. All root operations that employ cutting to accomplish the objective allow the use of any sharp instrument, including but not limited to:

- Scalpel
- Wire
- Scissors
- Bone saw
- Electrocautery tip

**Coding Note:** Bone marrow and endometrial biopsies are not coded to the endometrial biopsies root operation Excision. They are coded to Extraction, with the qualifier Diagnostic.

## Resection

Resection is similar to Excision, except Resection includes all of a body part, or any subdivision of a body part that has its own body part value in ICD-10-PCS, while Excision includes only a portion of a body part.

**Coding Note:** When an entire lymph node chain is cut out, the appropriate root operation is Resection. When a lymph node(s) is cut out, the root operation is Excision.



## Detachment Qualifiers

The specific qualifiers used for Detachment are dependent on the body part value.

Body Part	Qualifier Value	Definition
Upper Arm and Upper Leg	0	HIGH: Amputation at the proximal portion of the humerus or femur
	1	MID: Amputation at the middle portion of the shaft of the humerus or femur
	2	LOW: Amputation at the distal portion of the shaft of the humerus or femur
Hand and Foot	0	Complete
	4	Complete 1st Ray
	5	Complete 2nd Ray

## Destruction

Destruction	Definition	Physical eradication of all or a portion of a body part by the direct use of energy, force or a destructive agent
5	Explanation	None of the body part is physically taken out
	Examples	Fulguration of rectal polyp, cauterization of skin lesion

## Root operations that take out solids/fluids/and gases from a body part.

Root Operation	Objective of Procedure	Site of Procedure	Example
Drainage	Taking/letting out fluids/gases	Within a body part	Incision and drainage
Extirpation	Taking/cutting out solid matter	Within a body part	Thrombectomy
Fragmentation	Breaking solid matter into pieces	Within a body part	Lithotripsy

## Drainage

The root operation Drainage is coded for both diagnostic and therapeutic drainage procedures.

When drainage is accomplished by putting in a catheter, the device value drainage device is coded in the sixth character.

## Extirpation

Extirpation represents a range of procedures where the body part itself is not the focus of the procedure. Instead, the objective is to remove solid material such as a foreign body, thrombus, or calculus from the body part.

### CODING TIP

This type of language is new to most coders. Extirpation means to totally destroy.

### **Fragmentation**

Fragmentation is coded for procedures to break up, but not remove, solid material such as a calculus or foreign body. This root operation includes both direct and extracorporeal Fragmentation procedures.

### **Division**

The root operation Division is coded when the objective of the procedure is to cut into, transect, or otherwise separate all or a portion of a body part.

When the objective is to cut or separate the area around a body part, the attachments to a body part, or between subdivisions of a body part that are causing abnormal constraint, then the root operation Release is coded instead.

### **Release**

The objective of procedures represented in the root operation Release is to free a body part from abnormal constraint. Release procedures are coded to the body part being freed. The procedure can be performed on the area around a body part, on the attachments to a body part, or between subdivisions of a body part that are causing the abnormal constraint.

### **Transplantation**

A small number of procedures is represented in the root operation Transplantation and includes only the body parts currently being transplanted.

Qualifier values specify the genetic compatibility of the body part transplanted.

### **Reattachment**

Procedures coded to Reattachment include putting back a body part that has been cut off or avulsed.

Nerves and blood vessels may or may not be reconnected in a Reattachment procedure.

### **Transfer**

The root operation Transfer is used to represent procedures where a body part is moved to another location without disrupting its vascular and nervous supply.

In select musculoskeletal body systems, a qualifier is used to specify procedures involving composite tissue transfers, such as musculocutaneous flap transfer.

### **Reposition**

Reposition represents procedures for moving a body part to a new location.

The range of Reposition procedures includes moving a body part to its normal location, or moving a body part to a new location to enhance its ability to function.

### **Root Operations that Alter the Diameter/Route of a Tubular Body Part**

Tubular body parts are defined in ICD-10-PCS as those hollow body parts that provide a route of passage for solids, liquids, or gases.

They include the cardiovascular system, and body parts such as those contained in the gastrointestinal tract, genitourinary tract, biliary tract, and respiratory tract.

### **Restriction**

The root operation Restriction is coded when the objective of the procedure is to narrow the diameter of a tubular body part or orifice.

Restriction includes both intraluminal or extraluminal methods for narrowing the diameter.

### **Occlusion**

The root operation Occlusion is coded when the objective of the procedure is to close off a tubular body part or orifice.

Occlusion includes both intraluminal or extraluminal methods of closing off the body part. Division of the tubular body part prior to closing it is an integral part of the Occlusion procedure.

#### **CODING TIP**

Occlusion means to completely close an orifice or the lumen of a tubular body part such as a fallopian tube. A lumen refers to the cavity or channel within a tubular structure.

### **Dilation**

The root operation Dilation is coded when the objective of the procedure is to enlarge the diameter of a tubular body part or orifice.

Dilation includes both intraluminal or extraluminal methods of enlarging the diameter. A device placed to maintain the new diameter is an integral part of the Dilation procedure, and is coded to a sixth-character device value in the Dilation procedure code.

### **Bypass**

Bypass is coded when the objective of the procedure is to reroute the contents of a tubular body part.

The range of Bypass procedures includes normal routes such as those made in coronary artery bypass procedures, and abnormal routes such as those made in colostomy formation procedures.

## Root Operations that Always Involve a Device

Root Operation	Objective of Procedure	Site of Procedure	Example
Insertion	Putting in non-biological device	In/on a body part	Central line insertion
Replacement	Putting in device that replaces a body part	Some/all of a body part	Total hip replacement
Supplement	Putting in device that reinforces or augments a body part	In/on a body part	Abdominal wall herniorrhaphy using mesh
Change	Exchanging device w/out cutting/puncturing	In/on a body part	Drainage tube change
Removal	Taking out device	In/on a body part	Central line removal
Revision	Correcting a malfunctioning/displaced device	In/on a body part	Revision of pacemaker insertion

### CODING TIP

A change in your current thought process is needed here to be successful.

### Insertion

The root operation Insertion represents those procedures where the sole objective is to put in a device without doing anything else to a body part.

Procedures typical of those coded to Insertion include putting in a vascular catheter, a pacemaker lead, or a tissue expander.

### Replacement

The objective of procedures coded to the root operation Replacement is to put in a device that takes the place of some or all of a body part.

Replacement encompasses a wide range of procedures, from joint replacements to grafts of all kinds.

### Supplement

The objective of procedures coded to the root operation Supplement is to put in a device that reinforces or augments the functions of some or all of a body part.

Supplement includes a wide range of procedures, from hernia repairs using mesh reinforcement to heart valve annuloplasties and grafts such as nerve grafts that supplement but do not physically take the place of the existing body part.

### Change

The root operation Change represents only those procedures where a similar device is exchanged without making a new incision or puncture.

Typical Change procedures include exchange of drainage devices and feeding devices.

**Removal**

Removal represents a much broader range of procedures than those for removing the devices contained in the root operation Insertion.

A procedure to remove a device is coded to Removal if it is not an integral part of another root operation, and regardless of the approach or the original root operation by which the device was put in.

**Revision**

Revision is coded when the objective of the procedure is to correct the positioning or function of a previously placed device.

A complete re-do of the original root operation is coded to the root operation performed.

**Inspection**

The root operation Inspection represents procedures where the sole objective is to examine a body part.

Procedures that are discontinued without any other root operation being performed are also coded to Inspection.

**Mapping**

Mapping represents a very narrow range of procedures.

Procedures include only cardiac mapping and cortical mapping.

**Other Repairs**

Control is used to represent a small range of procedures performed to treat postprocedural bleeding. If performing Bypass, Detachment, Excision, Extraction, Reposition, Replacement, or Resection is required to stop the bleeding, then Control is not coded separately.

**Coding Note:** Control includes irrigation or evacuation of hematoma done at the operative site. Both irrigation and evacuation may be necessary to clear the operative field and effectively stop the bleeding.

The root operation Repair represents a broad range of procedures for restoring the anatomic structure of a body part such as suture of lacerations. Repair also functions as the “not elsewhere classified (NEC)” root operation, to be used when the procedure performed does not meet the definition of one of the other root operations. Fixation devices are included for procedures to repair the bones and joints.

**Other Operations**

A limited range of procedures is represented in the root operation Fusion, because fusion procedures are by definition only performed on the joints. Qualifier values are used to specify whether a vertebral joint fusion is anterior or posterior.

Alteration is coded for all procedures performed solely to improve appearance. All methods, approaches, and devices used for the objective of improving appearance are coded here.

**Coding Note:** Because some surgical procedures can be performed for either medical or cosmetic purposes, coding for Alteration requires diagnostic confirmation that the surgery is in fact performed to improve appearance.

Creation is used to represent a very narrow range of procedures. Only the procedures performed for sex change operations are included here.

**Coding Note:** Harvesting autograft tissue

If a separate procedure is performed to harvest autograft tissue, it is coded to the appropriate root operation in addition to the harvest.

## Body Part

The body part for medical and surgical section codes are specified in the fourth character in PCS. The body part identifies the specific part of the body system on which the root operation was performed, such as lower arm and wrist, right. Tubular body parts are defined in ICD-10-PCS as those hollow body parts that provide a route of passage for solids, liquids, or gases. They include cardiovascular system, gastrointestinal system, genitourinary system, biliary tract, and respiratory tract.

## Approach

The approach for medical and surgical section codes is specified in the fifth character in PCS. The approach is defined as the technique used to reach the site of the procedure. There are seven different approaches recognized:

- Open—Cutting through the skin or mucous membrane and any other body layers necessary to expose the site of the procedure
- Percutaneous—Entry, by puncture or minor incision, of instrumentation through the skin or mucous membrane and any other body layers necessary to reach the site of the procedure
- Percutaneous Endoscopic—Entry, by puncture or minor incision, of instrumentation through the skin or mucous membrane and any other body layers necessary to reach and visualize the site of the procedure
- Via Natural or Artificial Opening—Entry of instrumentation through a natural or artificial external opening to reach the site of the procedure
- Via Natural or Artificial Opening, Endoscopic—Entry of instrumentation through a natural or artificial external opening to reach and visualize the site of the procedure
- Via Natural or Artificial Opening with Percutaneous Endoscopic Assistance—Entry of instrumentation through a natural or artificial external opening and entry, by puncture or minor incision, of instrumentation through the skin or mucous membrane and any other body layers necessary to aid in the performance of the procedure
- External—Procedures performed directly on the skin or mucous membrane and procedures performed indirectly by the application of external force through the skin or mucous membrane

The approach is made up of three components:

- Access location
- Method
- Type of instrumentation

**Access Location.** For procedures performed on an internal body part, the access location specifies the external site through which the site of the procedure is reached. There are two general types of access locations:

- Skin or mucous membranes: can be cut or punctured to reach the procedure site. All open and percutaneous approach values use this access location
- External orifices: an external opening. This can be natural (eg, mouth) or artificial (eg, colostomy stoma)

Every approach value except external includes one of these two access locations.

**Method.** For procedures performed on an internal body part, the method specifies how the external access location is entered.

Open method—specifies cutting through the skin or mucous membrane and any other intervening body layers necessary to expose the site of the procedure.

Instrumentation method—specifies the entry of instrumentation through the access location to the internal procedure site. Instrumentation can be introduced by puncture or minor incision, or through an external opening. The puncture or minor incision does not constitute an open approach because it does not expose the site of the procedure.

An approach can define multiple methods. For example, Via Natural or Artificial Opening with Percutaneous Endoscopic Assistance includes both the initial entry of instrumentation to reach the site of the procedure, and the placement of additional percutaneous instrumentation into the body part to visualize and assist in the performance of the procedure.

**Type of Instrumentation.** For procedures performed on an internal body part, Instrumentation means that specialized equipment is used to perform the procedure. Instrumentation is used in all internal approaches other than the basic open approach. Instrumentation may or may not include the capacity to visualize the procedure site. For example, the instrumentation used to perform a sigmoidoscopy permits the internal site of the procedure to be visualized, while the instrumentation used to perform a needle biopsy of the liver does not. The term “endoscopic” as used in approach values refers to instrumentation that permits a site to be visualized.

Procedures performed on the skin or mucous membrane are identified by the External approach (eg, skin excision). Procedures performed indirectly by the application of external force are also identified by the External approach (eg, closed reduction of fracture).

## Device

The device for medical and surgical section codes is specified in the sixth character in PCS. It is used only to specify devices that remain after the procedure is completed. There are four general types of devices:

- Biological or synthetic material that takes the place of all or a portion of a body part (eg, joint prosthesis)
- Biological or synthetic material that assists or prevents a physiological function (eg, IUD)
- Therapeutic material that is not absorbed by, eliminated by, or incorporated into a body part (eg, radioactive material)
- Mechanical or electronic appliances used to assist, monitor, take the place of, or prevent a physiological function (eg, cardiac pacemaker)

While all devices may be removed, some cannot be removed without being replaced with another nonbiological appliance or body part substitute. Specific device values may be coded with the root operations Alteration, Bypass, Creation, Dilation, Drainage, Fusion, Occlusion, Reposition, and Restriction. Specific device values must be coded with the root operations Change, Insertion, Removal, Replacement, and Revision. Instruments used to visualize the procedure site are specified in the approach, not the device, value.

If the objective of the procedure is to put in the device, then the root operation is Insertion. If the device is put in to meet an objective other than insertion, then the root operation defining the underlying objective of the procedure is used, with the device specified in the device character.

For example, if a procedure to replace the hip joint is performed, the root operation Replacement is coded, and the prosthetic device is specified in the device character. Materials that are incidental to a procedure such as clips, ligatures, and sutures are not specified in the device character. Because new devices can be developed, the value Other Device is provided as a temporary option for use until a specific device value is added to the system.

## Qualifier

The qualifier for medical and surgical section codes is specified in the seventh character for PCS. The qualifier contains unique values for individual procedures. For example, the qualifier can be used to identify the destination site in a Bypass.

## ICD-10-PCS Principles

In developing the medical and surgical procedure codes, several specific principles were followed. Following are the guidelines from the ICD-10-PCS manual.

### Composite Terms are Not Root Operations

Composite terms such as colonoscopy, sigmoidectomy, or appendectomy do not describe root operations, but they do specify multiple components of a specific root operation. In ICD-10-PCS, the components of a procedure are defined separately by the characters making up the complete code. And the only component of a procedure specified in the root operation is the objective of the procedure. With each complete code the underlying objective of the procedure is specified by the root operation (third character), the precise part is specified by the body part (fourth character),



and the method used to reach and visualize the procedure site is specified by the approach (fifth character). While colonoscopy, sigmoidectomy, and appendectomy are included in the Index, they do not constitute root operations in the Tables section. The objective of colonoscopy is the visualization and the root operation (character 3) is Inspection. Character 4 specifies the body part, which in this case is part of the colon. These composite terms, like colonoscopy or appendectomy, are included as cross-reference only. The index provides the correct root operation reference. Examples of other types of composite terms not representative of root operations are **partial** sigmoidectomy, **total** hysterectomy, and **partial** hip replacement. Always refer to the correct root operation in the Index and Tables section.

### Root Operations Based on Objective of Procedure

The root operation is based on the objective of the procedures, such as Resection of transverse colon or Dilation of an artery. The assignment of the root operation is based on the procedure actually performed, which may or may not have been the intended procedure. If the intended procedure is modified or discontinued such as excision instead of resection is performed, the root operation is determined by the procedure actually performed. If the desired result is not attained after completing the procedure (ie, the artery does not remain expanded after the dilation procedure), the root operation is still determined by the procedure actually performed.

#### Examples:

- Dilating the urethra is coded as Dilation since the objective of the procedure is to dilate the urethra. If dilation of the urethra includes putting in an intraluminal stent, the root operation remains Dilation and not Insertion of the intraluminal device because the underlying objective of the procedure is dilation of the urethra. The stent is identified by the intraluminal device value in the sixth character of the dilation procedure code.
- If the objective is solely to put a radioactive element in the urethra, then the procedure is coded to the root operation Insertion, with the radioactive element identified in the sixth character of the code.
- If the objective of the procedure is to correct a malfunctioning or displaced device, then the procedure is coded to the root operation Revision. In the root operation Revision, the original device being revised is identified in the device character. Revision is typically performed on mechanical appliances like a pacemaker or materials used in replacement procedures such as a synthetic substitute. Typical revision procedures include adjustment of pacemaker position and correction of malfunctioning knee prosthesis.

### Combination Procedures are Coded Separately

If multiple procedures as defined by distinct objectives are performed during an operative episode, then multiple codes are used. For example, obtaining the vein graft used for coronary bypass surgery is coded as a separate procedure from the bypass itself.

### Redo of Procedures

The complete or partial redo of the original procedure is coded to the root operation that identifies the procedure performed rather than Revision.

**EXAMPLE:**

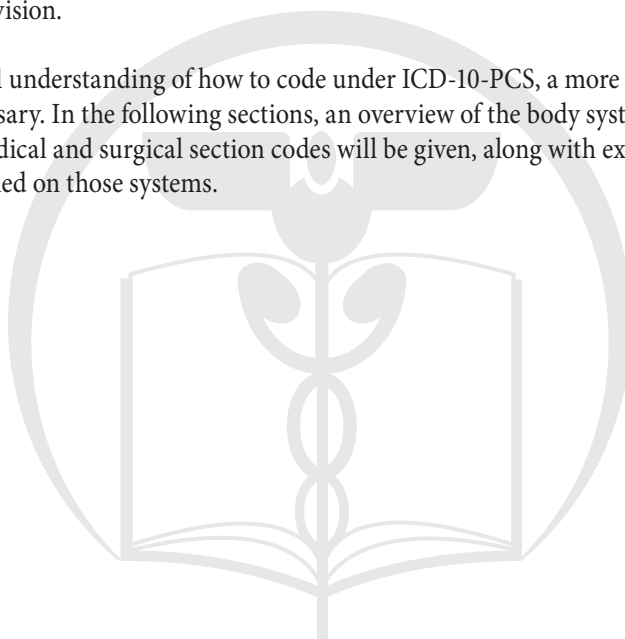
A complete redo of a hip replacement procedure that requires putting in a new prosthesis is coded to the root operation Replacement rather than Revision.

The correction of complications arising from the original procedure, other than device complications, is coded to the procedure performed. Correction of a malfunctioning or displaced device would be coded to the root operation Revision.

**EXAMPLE:**

A procedure to control hemorrhage arising from the original procedure is coded to Control rather than Revision.

In order to get a full understanding of how to code under ICD-10-PCS, a more in-depth knowledge of anatomy is necessary. In the following sections, an overview of the body systems in the second character of the medical and surgical section codes will be given, along with examples of common procedures performed on those systems.



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## Test Yourself #2

1. When the documentation of a procedure does not include a specific body part, the procedure should be coded to; \_\_\_\_\_
  2. Which of the following statements is false? During the same operative session, multiple procedures are coded if:
    - a. The same root operation is performed on different body parts defined by distinct values for each body part
    - b. The same root operation is repeated at different body sites that are included in the same body part value.
    - c. Multiple root operations with distinct objectives are performed on the same body part
    - d. The intended root operation is completed using two different approaches
  3. If a procedure is discontinued before completion, report the code for \_\_\_\_\_  
\_\_\_\_\_
  4. Stopping, or attempting to stop, postprocedural bleeding is coded to the root operation of:  
\_\_\_\_\_
  5. If a portion of a body part is removed (ie, hemicolecotomy) and PCS includes a value for the specific body part for the anatomic subdivision, the root operation and body part value should identify; \_\_\_\_\_
  6. When an autograft is obtained from a different body part in order to complete the objective of the procedure, \_\_\_\_\_
  7. When an inspection and another root operation are performed on the same body part during the same operative session, both the inspection and the root operative procedure are coded when; \_\_\_\_\_
  8. An orthopaedist reduces a fracture and places a cast to maintain the position of the bone during healing. The coder reports root operative procedure(s); \_\_\_\_\_
  9. A value for a device is coded when; \_\_\_\_\_
  10. Procedures performed using the open approach with percutaneous endoscopic assistance are coded to the \_\_\_\_\_ approach.
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