CODEX

CODING DECODED

INTRODUCTION TO ICD-10-PCS CODES

International Classification of Diseases, 10th Revision, Procedure Coding System

Medical Coding Training Notes

CODING DECODED

1. Purpose & Code Structure

Purpose

ICD-10-PCS codes are used to document **“In-Patient Medical Procedures.”**

ICD-10-PCS Code Book

The comprehensive manual containing all procedural coding systems used in healthcare.

Code Structure

Each ICD-10-PCS code consists of 7 characters, each representing specific information about the procedure:

Character	Represents
1	Section
2	Body System
3	Root Operation
4	Body Part
5	Approach
6	Device
7	Qualifier

2. Worked Examples

Example 1 — Code: 0BTC4ZZ

Character	Value	Meaning
1st	0	Section (Medical and Surgical)
2nd	B	Body System (Respiratory System)
3rd	T	Root Operation (Resection)
4th	C	Body Part (Right Upper Lobe of Lung)
5th	4	Approach (Percutaneous)
6th	Z	Device (No Device Used)
7th	Z	Qualifier (No Qualifier)

The ICD-10-PCS code 0BTC4ZZ represents an excision of the right upper lobe of the lung, performed using a percutaneous approach, with no device used.

Example 2 — Code: 027034Z

Character	Value	Meaning
1st	0	Section (Medical and Surgical)
2nd	2	Body System (Heart and Great Vessels)
3rd	7	Root Operation (Dilation)
4th	0	Body Part (Coronary Artery, One Site)
5th	3	Approach (Percutaneous)
6th	4	Device (Intraluminal Device)
7th	Z	Qualifier (No Qualifier)

The ICD-10-PCS code 027034Z represents a percutaneous dilation (expansion) of a single coronary artery site, with the placement of an intraluminal device — drug-eluting (such as a stent), and no additional qualifiers.

3. Character 1 — Sections in ICD-10-PCS

The first character identifies the general procedure type (section).

0 — Medical and Surgical *Surgical interventions across body systems.* **Example:** Excision of liver	**1 — Obstetrics** *Pregnancy and childbirth procedures.* **Example:** Delivery of a fetus	**2 — Placement** *Device/material placement procedures.* **Example:** Insertion of urinary catheter
3 — Administration *Substance introduction procedures.* **Example:** Chemotherapy infusion (IV)	**4 — Measurement/Monitoring** *Physiological assessments.* **Example:** ECG monitoring	**5 — Extracorporeal Assistance** *External body procedures.* **Example:** Continuous cardiac output monitoring
6 — Extracorporeal Therapies *External therapeutic procedures.* **Example:** Hemodialysis	**7 — Osteopathic** *Osteopathic techniques.* **Example:** Cranial osteopathic treatment	**8 — Other Procedures** *Miscellaneous procedures.*
9 — Chiropractic *Chiropractic techniques.* **Example:** Spinal adjustment of lumbar	**B — Imaging** *Diagnostic imaging procedures.* **Example:** MRI of the brain	**C — Nuclear Medicine** *Radioactive substance procedures.* **Example:** PET scan of the heart

D — Radiation Therapy *Therapeutic radiation treatments.* **Example:** Radiation therapy for prostate	**F — Rehabilitation** *Physical therapy and audiology.* **Example:** Gait training therapy	**G — Mental Health** *Psychiatric/psychological care.* **Example:** Individual counseling
H — Substance Abuse Treatment *Addiction treatment procedures.* **Example:** Detoxification services	**X — New Technology** *Tracks cutting-edge treatments and collects data to evaluate their use and effectiveness.* **Example:** Insertion of a leadless pacemaker	

4. Character 2 — Body System Values

Character 2 in ICD-10-PCS identifies the body system involved in the procedure. Below are the key body system groups and their codes (Section 1 Body Systems Values):

Nervous System (0–1)

- **0 — Central Nervous:** Brain tumor excision (00BB0ZZ)
- **1 — Peripheral Nervous:** Nerve repair (01Q60ZZ)

Circulatory System (2–7)

- **2 — Heart/Great Vessels:** Coronary bypass (021009)
- **3 — Upper Arteries:** Carotid angioplasty (03C03ZZ)
- **4 — Lower Arteries:** Femoral bypass (04104Z9)
- **5 — Upper Veins:** Central line insertion (05HM33Z)
- **6 — Lower Veins:** Saphenous repair (06Q30ZZ)
- **7 — Lymphatic/Hemic:** Lymph node biopsy (07B60ZX)

Head and Neck (8–C)

- **8 — Eye:** Cataract extraction (08BP0ZZ)
- **9 — Ear/Nose/Sinus:** Tympanoplasty (09Q60ZZ)
- **B — Respiratory:** Lung lobectomy (0BB20ZZ)
- **C — Mouth/Throat:** Tonsillectomy (0CTP0ZZ)

Digestive and Endocrine (D–G)

- **D — Gastrointestinal:** Colonoscopy with polypectomy (0DB98ZX)
- **F — Hepatobiliary/Pancreas:** Cholecystectomy (0FB40ZZ)
- **G — Endocrine:** Thyroidectomy (0GT00ZZ)

Musculoskeletal System

- **H — Skin and Breast:** Excision of skin lesion (0HBX0ZZ)
- **J — Subcutaneous Tissue/Fascia:** Drainage of subcutaneous tissue (0J9M0ZZ)
- **K — Muscles:** Muscle biopsy (0K9U0ZZ)
- **L — Tendons:** Tendon repair (0L8T0ZZ)
- **M — Bursae and Ligament:** Repair of knee

Reproductive and Urinary (T–U–V)

- **T — Urinary:** Nephrectomy (0TB00ZZ)
- **U — Female Reproductive:** Hysterectomy (0UT90ZZ)
- **V — Male Reproductive:** Prostatectomy (0VT00ZZ)

ligament (0MQN0ZZ)

- **N — Head and Facial Bones:** Excision of facial bone (0NBB0ZZ)
- **P — Upper Bones:** Open reduction of humerus fracture (0PSN04Z)
- **Q — Lower Bones:** Internal fixation of femur fracture (0QSP04Z)

Anatomical Regions (W–Y)

- **W — General:** Chest wall incision (0W9G0ZZ)
- **X — Upper Extremities:** General anatomical region
- **Y — Lower Extremities:** General anatomical region

5. Character 3 — Root Operations in ICD-10-PCS

Taking Out Body Parts

- **Excision:** Partial removal, e.g., breast lumpectomy (0HBV0ZZ)
- **Resection:** Complete removal, e.g., lung lobectomy (0BTF0ZZ)
- **Extraction:** Pulling/stripping, e.g., D&C (10D17ZZ)

Destruction & Detachment

- **Destruction:** Eradicating without replacement, e.g., ablation (0H5L0ZZ)
- **Detachment:** Cutting out/off without replacement, e.g., amputation (0Y6J0Z2)

Removing Matter

- **Drainage:** Removing fluids, e.g., thoracentesis (0W9B30Z)
- **Extirpation:** Removing solids, e.g., kidney stone (0TC00ZZ)
- **Fragmentation:** Breaking matter, e.g., lithotripsy (0TF78ZZ)

Transplant & Reattachment

- **Transplantation:** Moving organ from donor, e.g., kidney transplant (0TY00Z0)
- **Reattachment:** Restoring detached parts, e.g., finger reattachment (0MQX0ZZ)
- **Transfer:** Relocating tissue, e.g., skin graft (0HRXXZZ)
- **Reposition:** Moving a body part to its normal location

Tubular Alterations

- **Occlusion:** Closing passages, e.g., tube ligation
- **Dilation:** Expanding lumens, e.g., angioplasty (047K0ZZ)
- **Bypass:** Rerouting passage, e.g., CABG
- **Restriction:** Partial closure, e.g., gastric banding (00DV64CZ)

Cutting Operations

- **Division:** Separation procedures, e.g., cordotomy (0NT00ZZ)
- **Release:** Freeing from constraints, e.g., adhesion lysis (0DN80ZZ)

Device Operations

- **Insertion:** Putting in non-biological device, e.g., central line insertion
- **Replacement:** Putting in device that replaces a body part, e.g., hip (0SRB0JZ)
- **Supplement:** Putting in non-biological device to support function, e.g., herniorrhaphy using mesh
- **Change:** Exchanging device w/out cutting/puncturing, e.g., drainage tube change
- **Removal:** Taking out device, e.g., central line removal
- **Revision:** Correcting a malfunctioning/displaced device, e.g., revision of pacemaker insertion

Examination Procedures

- **Inspection:** Visual/manual exploration, e.g., laparoscopy (0WJG0ZZ)
- **Map:** Locating electrical impulses/functional areas, e.g., cardiac mapping (02K00ZZ)

Repair Operations

- **Control:** Stopping bleeding, e.g., (0W3G0ZZ)
- **Repair:** e.g., herniorrhaphy (0WQF0ZZ)

6. Character 4 — Body Part Value

Definition

- It identifies the specific anatomical site or structure where the procedure is being performed.
- Examples include organs, bones, joints, and vascular structures.

Coding Considerations

- Body parts are divided based on the body system selected in the 2nd character.
- Some body parts might have multiple subdivisions; for example, the colon can be divided into ascending, descending, transverse, etc.
- If a procedure involves multiple body parts, the code should reflect the most specific part involved.

Body Part Key Concepts

- ICD-10-PCS provides tables that list body parts based on the root operation and body system.
- Each body part is represented by an alphanumeric character (0–9, A–Z).

Coding Guidelines

Situation	Coding Approach
Bilateral code available	Use a single code
Separate left and right values	Assign two separate codes
General “multiple” body part exists	Use the provided multiple option

Situation	Coding Approach
Documentation unclear	Query the provider

Example

When the documentation mentions bilateral, but no bilateral value is available, use the separate left and right values instead.

7. Character 5 — Approach Value Reference

The fifth character in the ICD-10-PCS code identifies the approach used during a procedure.

Value	Description	Definition	Example Procedures
0 — Open	Open Approach	Cutting through the skin or mucous membrane to expose the procedure site	Open Heart Surgery, Open Appendectomy
3 — Percutaneous	Needle Puncture	Accessing the procedure site by puncturing the skin or mucous membrane without an incision	Needle Biopsy, Angioplasty via Catheter, Fine Needle Aspiration
4 — Percutaneous Endoscopic	Scope-Guided	Procedure performed through a small incision using an endoscope or laparoscope	Arthroscopy
7 — Via Natural or Artificial Opening	Through Orifice	Procedure performed via a natural opening without visualization	Nasogastric Tube Insertion, Foley Catheter Placement
8 — Via Natural or Artificial Opening Endoscopic	Scope Through Orifice	Using an endoscope through a natural opening	EGD (Esophagogastroduodenoscopy), Colonoscopy, Bronchoscopy
F — Via Natural or Artificial Opening with Percutaneous Endoscopic Assistance	Combination Approach	Using a scope through a natural opening while also making a percutaneous incision	Laparoscopic-Assisted Vaginal Hysterectomy (LAVH)
X — External	External Procedures	Procedure is performed directly on the body surface or indirectly by applying force	Fracture Reduction, Cast Application, Wound Debridement

8. Approach: Practice Scenarios

Apply the approach values above to the following real-world procedure scenarios.

Scenario 1: Open Cholecystectomy (Gallbladder Removal via Open Incision)

Procedure Description: A patient undergoes an open cholecystectomy due to gallstones. The surgeon makes an incision in the abdomen to directly visualize and remove the gallbladder.

Approach: Open (Character = 0)

Scenario 2: Percutaneous Liver Biopsy

Procedure Description: A physician performs a needle biopsy of the liver using ultrasound guidance, making a small puncture through the skin to obtain a tissue sample.

Approach: Percutaneous (Character = 3)

Scenario 3: Laparoscopic Appendectomy

Procedure Description: A patient undergoes a laparoscopic appendectomy using a small percutaneous incision and an endoscope to visualize and remove the appendix.

Approach: Percutaneous Endoscopic (Character = 4)

Scenario 4: Colonoscopy with Biopsy

Procedure Description: A gastroenterologist performs a colonoscopy by inserting an endoscope through the rectum and advancing it through the colon to take a biopsy.

Approach: Via Natural or Artificial Opening Endoscopic (Character = 8)

Scenario 5: Urinary Catheter Insertion

Procedure Description: A nurse inserts a Foley catheter into a patient's bladder through the urethra.

Approach: Via Natural or Artificial Opening (Character = 7)

Scenario 6: Closed Reduction of a Shoulder Dislocation

Procedure Description: A patient presents with a dislocated shoulder, and the physician performs an external manipulation to relocate the joint without surgical incision.

Approach: External (Character = X)

Scenario 7: Laparoscopic-Assisted Vaginal Hysterectomy

Procedure Description: A surgeon performs a hysterectomy using a combination of vaginal access and laparoscopic (percutaneous endoscopic) assistance.

Approach: Via Natural or Artificial Opening with Percutaneous Endoscopic Assistance (Character = F)

9. Character 6 — Device

The 6th character in the ICD-10-PCS code structure represents the **Device**, which refers to any medical device left in place after the procedure is completed. If no device remains, a default value of “Z” (No Device) is used.

Examples: implant, prosthesis, or other object

Device Type	Example Use Case
Biological Implant	Heart valve replacement
Synthetic Implant	Hip joint prosthesis
Intraluminal Device	Stents (vascular, biliary, ureteral)
Fixation Device	Internal fixation devices (plates, screws)
Drainage Device	Chest tubes, Foley catheters
Other Devices	Drug-eluting implants, neurostimulators

General Rules for Device Coding

1. Permanent Devices: Only devices left in the body post-procedure should be coded.
2. Temporary devices: The instruments used during the procedure (e.g., surgical instruments, endoscopes, sutures) are not coded.
3. Device Value “Z” (No Device): If no device remains, the code should reflect Z for “No Device.”
4. Multiple Devices: If multiple devices are implanted during the same procedure, additional procedure codes may be required.
5. Device Revision or Removal: If the procedure involves the revision or removal of an existing device, the root operations “Revision” or “Removal” should be selected accordingly.

Examples

1. Total Hip Replacement with Prosthesis (Device Present)

Procedure: The patient undergoes a total hip replacement with the implantation of a synthetic prosthetic hip joint.

2. Coronary Stent Placement (Device Present)

Procedure: Percutaneous coronary intervention with placement of an intraluminal drug-eluting stent in the left anterior descending artery.

3. Percutaneous Drainage of Right Kidney (No Device Left)

Procedure: A percutaneous needle aspiration of a kidney abscess with no catheter left in place.

10. Devices — Autologous, Non-Autologous & Synthetic Substitutes

In ICD-10-PCS, various types of materials can be used to replace, augment, or repair body parts during surgical procedures. These materials are classified into three major categories based on their origin and composition:

1. Autologous Substitute (from the patient's own body)

2. Non-Autologous Substitute (from a donor or another source)
3. Synthetic Substitute (man-made materials)

1. Autologous Substitute (Patient's Own Tissue)

Definition: An autologous substitute refers to tissue or biological material harvested from the same patient, which is then processed or transplanted back into the patient's body.

- **Skin Grafts:** Skin taken from the thigh and used to cover burn wounds elsewhere on the body.

2. Non-Autologous Substitute (Donor or Other Sources)

Definition: A non-autologous substitute refers to biological material obtained from a donor (human or animal) or another external source, rather than from the patient's own body.

- **Donor Heart Valve:** A cadaver heart valve used to replace a damaged heart valve.

3. Synthetic Substitute (Man-Made Materials)

Definition: A synthetic substitute refers to artificial, man-made materials used to replace or augment body structures.

- **Mesh Implants:** Polypropylene mesh used for hernia repair.

11. Character 7 — Qualifiers

The 7th character in the ICD-10-PCS code structure is the **Qualifier**, which provides additional information about the procedure performed. The purpose of the qualifier is to further specify the procedure when required, such as indicating a diagnostic intent, specific techniques, or anatomical details.

- The qualifier is used to provide extra detail about the procedure performed.
- It is not always required; if no additional specificity is needed, the default value “Z” (No Qualifier) is used.
- The qualifier values are specific to the root operation, body part, and procedure type.

Examples of Common Qualifier Values in ICD-10-PCS

Value	Meaning/Use Case	Example Procedure
Z	No Qualifier (default value)	Excision of gallbladder, no qualifier
X	Diagnostic purpose	Colonoscopy with biopsy (diagnostic)
J	Laser technology used	Destruction of lesion using laser
K	Percutaneous endoscopic control	Biopsy with image guidance

12. Applied Example — Building a Full ICD-10-PCS Code

Scenario: Coronary Artery Bypass Graft (CABG)

Procedure: A patient undergoes coronary artery bypass graft (CABG) using the coronary artery.

ICD-10-PCS Code: 02100Z3

Element	Character	Meaning
Section	0	Medical and Surgical
Body System	2	Heart and Great Vessels
Operation	1	Bypass: Altering the route of passage of the contents of a tubular body part

Body Part / Approach / Device / Qualifier Options for Bypass — Heart and Great Vessels (021)

Body Part	Approach	Device	Qualifier
0 Coronary Artery, One Artery 1 Coronary Artery, Two Arteries 2 Coronary Artery, Three Arteries 3 Coronary Artery, Four or More Arteries	0 Open	8 Zooplastic Tissue 9 Autologous Venous Tissue A Autologous Arterial Tissue J Synthetic Substitute K Nonautologous Tissue Substitute	3 Coronary Artery 8 Internal Mammary, Right 9 Internal Mammary, Left C Thoracic Artery F Abdominal Artery W Aorta
0 Coronary Artery, One Artery 1 Coronary Artery, Two Arteries 2 Coronary Artery, Three Arteries 3 Coronary Artery, Four or More Arteries	0 Open	Z No Device	3 Coronary Artery 8 Internal Mammary, Right 9 Internal Mammary, Left C Thoracic Artery F Abdominal Artery
0 Coronary Artery, One Artery 1 Coronary Artery, Two Arteries 2 Coronary Artery, Three Arteries 3 Coronary Artery, Four or More Arteries	3 Percutaneous	4 Intraluminal Device, Drug-eluting D Intraluminal Device	4 Coronary Vein

The highlighted qualifier value "3 — Coronary Artery" was selected because the bypass graft both originates from and terminates at the coronary artery.