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Desk Reference

Coders' Desk Reference for ICD-10-PCS Procedure

Clinical descriptions with answers to your toughest ICD-10-PCS coding questions

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Introduction

Coding is a complicated business. It is not enough to have a current copy of an ICD-10-PCS book—coders must have a firm enough grasp of medical terminology, anatomy, and surgical techniques to be able to translate procedure descriptions in medical records into detailed codes. ICD-10-PCS guidelines state that the physician is not responsible for changing the common procedure terminology he or she uses to document procedures so that it better matches terminology used in the coding system. Rather, the burden is on the coder, who must interpret physicians' procedure descriptions and reflect them in the appropriate ICD-10-PCS codes. The *Coders' Desk Reference for ICD-10-PCS Procedures* addresses this challenge.

This book provides coders, coding managers, medical staff and health care professionals, payers, educators, and students with comprehensive, clear descriptions of procedures. The goal is to enrich users' clinical understanding of surgical procedures and how they relate to the way ICD-10-PCS classifies procedures. The result is improved coding confidence so that code selection becomes more accurate and efficient. The coding guidance in *Coders' Desk Reference for ICD-10-PCS Procedures* is based on the official version of the ICD-10 Procedure Coding System (ICD-10-PCS), effective October 1, 2024. (Please note that this procedure coding reference is intended to be used with an official ICD-10-PCS code book.)

This desk reference is organized by common procedure nomenclature used in the hospital setting, which is linked to the related root operation tables. The procedures are described in layman's terms, translated to ICD-10-PCS root operation terminology, and the corresponding root operation tables are identified.

Detailed descriptions using terminology coders see in medical documents, together with coding clarification and guidance and important instruction regarding ICD-10-PCS conventions, make *Coders' Desk Reference for ICD-10-PCS Procedures* an unparalleled guidebook to code selection.

Important Message: Not all categories, subcategories, or procedures have been represented in this edition of the *Coders' Desk Reference for ICD-10-PCS Procedures*. Additional procedures not part of the 2025 edition will gradually be incorporated into future editions.

ICD-10-PCS Overview

ICD-10-PCS Code Structure

ICD-10-PCS has a multiaxial, seven-character, alphanumeric code structure. Each character contains up to 34 possible values. Each value represents a specific option for the general character definition. The 10 digits Ø–9 and the 24 letters A–H, J–N, and P–Z may be used for each character. The letters O and I are not used so as to avoid confusion with the digits Ø and 1.

An ICD-10-PCS code is the result of a process rather than a single fixed set of digits or alphabetic characters. The process consists of combining semi-independent values from among a selection of values, according to the rules governing the construction of codes. A code is derived by choosing a specific value for each of the seven characters. Based on details about the procedure performed, values are assigned for each character specifying the section, body system, root operation, body part, approach, device, and qualifier. Because the definition of each character is also a function of its physical position in the code, the same letter or number placed in a different position in the code has a different meaning.

The seven characters that make up a complete code have specific meanings that vary for each of the 17 sections of the manual. Procedures are divided into sections that identify the general type of procedure (e.g., Medical and Surgical, Obstetrics, Imaging). The first character of the procedure code always specifies the section. The second through seventh characters have the same meaning within each section but may mean different things in other sections. In all sections, the third character specifies the general type, or root operation, of procedure performed (e.g., Resection, Transfusion, Fluoroscopy), while the other characters give additional information such as the body part and approach.

ICD-10-PCS Index

Codes may be found in the index based on the general type of procedure (e.g., Resection, Transfusion, Fluoroscopy), or a more commonly used term (e.g., appendectomy). For example, the code for percutaneous intraluminal dilation of the coronary arteries with an intraluminal device can be found in the ICD-10-PCS index under "Dilation" or a synonym for dilation (e.g., "Angioplasty"). The index then specifies the first three or four values of the code or directs the user to see another term.

The user can use the alphabetic index to locate the appropriate table containing all the information necessary to construct a procedure code. The PCS tables should always be consulted to find the most appropriate valid code. Coders may choose a valid code directly from the tables; they do not have to consult the index before proceeding to the tables to complete the code.

Main Terms

The alphabetic index reflects the structure of the tables. The index:

- Is based on the value of the third character
- Contains common procedure terms
- Lists anatomic sites
- Uses device terms

The main terms in the alphabetic index are root operations, root procedure types, or common procedure names. The index provides at least the first three or four values of the code, and some entries may provide complete valid codes. However, the user should always consult the appropriate table to verify that the most appropriate valid code has been selected.

For the Medical and Surgical and related sections, the root operation values are used as main terms in the index. The subterms under the root operation main terms are body parts. For the Ancillary section of the code tables, the main terms in the index are the general type of procedure performed.

The second type of term in the index uses common procedure names, such as "appendectomy" or "fundoplication." These common terms are listed as main terms with a "see" reference noting the PCS root operations that are possible valid code tables based on the objective of the procedure.

Use Reference

The index also lists anatomic sites from the Body Part Key and device terms from the Device Key. These terms are listed with "use" references, which are additional references to the terms located in the appendix keys. The term provided is the body part value or device value to be selected when constructing a procedure code using the code tables. This type of index reference does not direct the user to another term in the index, but provides guidance regarding character value selection. Therefore, "use" references generally do not refer to specific valid code tables.

ICD-10-PCS Code Tables

ICD-10-PCS contains 17 sections of code tables organized by general type of procedure. Each table is composed of rows that specify the valid combinations of code values. In most sections of the coding system, the upper portion of each table contains a description of the first three characters of the procedure code. In the Medical and Surgical section, for example, the first three characters contain the name of the section, the body system, and the root operation performed. The four columns in the table specify the last four characters. In the Medical and Surgical section, they are labeled body part, approach, device and qualifier, respectively. Each row in the table specifies the valid combination of values for characters 4 through 7. All seven characters must be specified to form a valid code.

Note that the code must be constructed with a combination of values within the same row of the table. A combination of values from different rows of the same table will result in an invalid code.

How to Use *Coders' Desk Reference for ICD-10-PCS Procedures*

Coders' Desk Reference for ICD-10-PCS Procedures is divided into convenient sections for easy use. The basic format of the book provides clinical coding support with illustrations, narratives, and other resources that help the user work from the medical record. The book begins with special chapters that provide detailed information on coding guidelines and conventions relating to ICD-10-PCS procedure coding, as well as common abbreviations, acronyms, symbols, eponyms, and surgical terms found in the medical record. It then follows the organization of ICD-10-PCS, looking at procedures and their associated ICD-10-PCS root operation tables. Due to the significant expansion of the number of ICD-10-PCS codes, it is impossible to include a description of every procedure. Included are representative examples of procedures, organized by section and subsection.

List of Illustrations

This is a list of illustrations by procedure name with a cross-reference to the appropriate page.

ICD-10-PCS Official Guidelines for Coding and Reporting 2025

For the new coder, and even for the veteran, this chapter provides an overview and detailed instructions on ICD-10-PCS coding guidelines and conventions.

ICD-10-PCS Root Operation Definitions

This resource is a compilation of all root operations in the Medical and Surgical, Medical and Surgical-Related, and Ancillary sections as well as the New Technology section of the ICD-10-PCS manual. It provides a definition and in some cases a more detailed explanation of the root operation to better reflect its purpose or objective. Examples of related procedures may also be provided.

Abbreviations, Acronyms, and Symbols

The medical profession has its own shorthand for documentation. Here, acronyms, abbreviations, and symbols commonly seen on operative reports or medical charts are listed for easy reference.

Procedure Eponyms

In the medical record, procedures are often documented by their common name or eponym (such as Billroth's operation I). Eponyms honor the developer of a procedure or test but do little to clarify what the procedure is. ICD-10-PCS does not cross-reference eponyms even though they are commonly noted in medical documentation. Our editors have researched the procedure eponyms in the volume 3 index of the ICD-9 book and identified the associated ICD-10-PCS three- and sometimes four-character tables. The three-character description references the root operation and body system; the four-character description specifies the root operation and body part, when applicable.

Surgical Terms

Operative reports contain words and phrases that not only communicate the importance and urgency of surgery, but also describe the techniques. The *Coders' Desk Reference for ICD-10-PCS Procedures* glossary of surgical terms includes the terms operative reports most commonly use to describe techniques and tools.

Procedures

The first section of the desk reference, Medical and Surgical, contains the majority of procedures typically reported in an inpatient setting.

The next section is Medical and Surgical-Related sections, with subsections as listed below:

- Obstetrics
- Placement
- Administration
- Measurement and Monitoring
- Extracorporeal or Systemic Assistance and Performance
- Extracorporeal or Systemic Therapies
- Osteopathic
- Other Procedures
- Chiropractic

Next is the Ancillary section, which contains subsections for Imaging, Nuclear Medicine, and Radiation Therapy. Codes in these sections contain character values for contrast, modality qualifier, and equipment.

Last is the New Technology section, which contains codes identifying procedures requested via the new technology application process, and codes that capture new technologies not currently classified in ICD-10-PCS.

This section may include medical and surgical procedures, medical and surgical-related procedures, or ancillary procedures that are currently designated as new technology.

Alphabetic Index

The "Alphabetic Index" enables the user to look up a procedure by principal procedure or keyword, such as "Bypass," followed by descriptive terms, such as "Extracranial-Intracranial." "*See also*" notes are cross-referenced terms within the desk reference that provide additional information.

ICD-10-PCS Root Operation Definitions

0 Medical and Surgical

ICD-10-PCS Value		Definition	
Ø	Alteration	Definition:	Modifying the anatomic structure of a body part without affecting the function of the body part
		Explanation:	Principal purpose is to improve appearance
		Examples:	Face lift, breast augmentation
1	Bypass	Definition:	Altering the route of passage of the contents of a tubular body part
		Explanation:	Rerouting contents of a body part to a downstream area of the normal route, to a similar route and body part, or to an abnormal route and dissimilar body part. Includes one or more anastomoses, with or without the use of a device.
		Examples:	Coronary artery bypass, colostomy formation
2	Change	Definition:	Taking out or off a device from a body part and putting back an identical or similar device in or on the same body part without cutting or puncturing the skin or a mucous membrane
		Explanation:	All CHANGE procedures are coded using the approach EXTERNAL
		Examples:	Urinary catheter change, gastrostomy tube change
3	Control	Definition:	Stopping, or attempting to stop, postprocedural or other acute bleeding
		Explanation:	None
		Examples:	Control of post-prostatectomy hemorrhage, control of intracranial subdural hemorrhage, control of bleeding duodenal ulcer, control of retroperitoneal hemorrhage
4	Creation	Definition:	Putting in or on biological or synthetic material to form a new body part that to the extent possible replicates the anatomic structure or function of an absent body part
		Explanation:	Used for gender reassignment surgery and corrective procedures in individuals with congenital anomalies
		Examples:	Creation of vagina in a male, creation of right and left atrioventricular valve from common atrioventricular valve
5	Destruction	Definition:	Physical eradication of all or a portion of a body part by the direct use of energy, force, or a destructive agent
		Explanation:	None of the body part is physically taken out
		Examples:	Fulguration of rectal polyp, cautery of skin lesion
6	Detachment	Definition:	Cutting off all or a portion of the upper or lower extremities
		Explanation:	The body part value is the site of the detachment, with a qualifier if applicable to further specify the level where the extremity was detached
		Examples:	Below knee amputation, disarticulation of shoulder
7	Dilation	Definition:	Expanding an orifice or the lumen of a tubular body part
		Explanation:	The orifice can be a natural orifice or an artificially created orifice. Accomplished by stretching a tubular body part using intraluminal pressure or by cutting part of the orifice or wall of the tubular body part.
		Examples:	Percutaneous transluminal angioplasty, internal urethrotomy
8	Division	Definition:	Cutting into a body part, without draining fluids and/or gases from the body part, in order to separate or transect a body part
		Explanation:	All or a portion of the body part is separated into two or more portions
		Examples:	Spinal cordotomy, osteotomy
9	Drainage	Definition:	Taking or letting out fluids and/or gases from a body part
		Explanation:	The qualifier DIAGNOSTIC is used to identify drainage procedures that are biopsies
		Examples:	Thoracentesis, incision and drainage
B	Excision	Definition:	Cutting out or off, without replacement, a portion of a body part
		Explanation:	The qualifier DIAGNOSTIC is used to identify excision procedures that are biopsies
		Examples:	Partial nephrectomy, liver biopsy
C	Extirpation	Definition:	Taking or cutting out solid matter from a body part
		Explanation:	The solid matter may be an abnormal byproduct of a biological function or a foreign body; it may be imbedded in a body part or in the lumen of a tubular body part. The solid matter may or may not have been previously broken into pieces.
		Examples:	Thrombectomy, choledocholithotomy
D	Extraction	Definition:	Pulling or stripping out or off all or a portion of a body part by the use of force
		Explanation:	The qualifier DIAGNOSTIC is used to identify extractions that are biopsies

Procedure Eponyms

Eponym	Description	ICD-10-PCS Table Reference
Abbe	Vaginal construction — creation of vaginal canal (vaginoplasty) without graft or prosthesis	**ØUQG** Repair Vagina
Abbe	Vaginal construction — creation of vaginal canal (vaginoplasty) with graft or prosthesis	**ØUUG** Supplement Vagina
AbioCor®	Implantation of total internal biventricular heart replacement system	**Ø2RK** Replacement Ventricle, Right **Ø2RL** Replacement Ventricle, Left
Aburel	Intra-amniotic injection of abortifacient for abortion	**1ØA** Abortion Pregnancy
Adams	Excision of palmar fascia for release of Dupuytren's contracture	**ØJB** Excision Subcutaneous Tissue and Fascia
Adams	Advancement of round ligament(s) of uterus	**ØUS9** Reposition Uterus
Adams	Crushing of nasal septum	**Ø9SM** Reposition Nasal Septum
AESOP®	Robotic assisted procedures — Automated Endoscopic System for Optimal Positioning	**8EØ** Other Procedures Physiological Systems and Anatomical Regions
Albee	Bone peg, femoral neck Graft for slipping patella Sliding inlay graft, tibia	**ØQU** Supplement Lower Bones
Albert	Arthrodesis, knee	**ØSG** Fusion Lower Joints
Aldridge (-Studdiford)	Urethral sling	**ØTSD** Reposition Urethra
Alexander	Shortening of round ligaments of uterus	**ØUS9** Reposition Uterus
Alexander-Adams	Shortening of round ligaments of uterus	**ØUS9** Reposition Uterus
Almoor	Extrapetrosal drainage	**Ø99** Drainage Ear, Nose, Sinus
Altemeier	Perineal rectal pull-through operation	**ØDTP** Resection Rectum
Ammon	Dacryocystotomy incision (for drainage) of a lacrimal sac	**Ø89** Drainage Eye
Anderson	Tibial lengthening	**ØQ8** Division Lower Bones **ØQR** Replacement Lower Bones **ØQU** Supplement Lower Bones
Anderson-Hynes	Dismembered pyeloplasty	**ØTQ** Repair Urinary System
Anel	Dilation of lacrimal duct	**Ø87X** Dilation Lacrimal Duct, Right **Ø87Y** Dilation Lacrimal Duct, Left
Arslan	Fenestration of inner ear	**Ø9QD** Repair Inner Ear, Right **Ø9QE** Repair Inner Ear, Left
Asai	Laryngoplasty	**ØCQS** Repair Larynx **ØCRS** Replacement Larynx **ØCUS** Supplement Larynx
Baffes	Interatrial transposition of venous return	**Ø2U5** Supplement Atrial Septum
Baffle	Atrial/interatrial/intra-atrial transposition of venous return	**Ø2U5** Supplement Atrial Septum
Baldy-Webster	Uterine suspension	**ØUS9** Reposition Uterus
Bankart	Capsular repair into glenoid, for shoulder dislocation	**ØRS** Reposition Upper Joints
Bardenheurer	Ligation of innominate artery	**Ø3L2** Occlusion Innominate Artery
Barkan	Goniotomy with/without goniopuncture	**Ø89** Drainage Eye
Barr	Transfer of tibialis posterior tendon	**ØLX** Transfer Tendons
Barsky	Closure of cleft hand	**ØXQJ** Repair Hand, Right **ØXQK** Repair Hand, Left
Bassett	Radical vulvectomy with inguinal lymph node dissection	**ØUTM** Resection Vulva **Ø7B** Excision Lymphatic and Hemic Systems **Ø7T** Resection Lymphatic and Hemic Systems
Bassini	Inguinal hernia repair (herniorrhaphy)	**ØYQ** Repair Anatomical Regions, Lower Extremities
Batch-Spittler-McFaddin	Amputation—knee disarticulation	**ØY6** Detachment Anatomical Regions, Lower Extremities

Medical and Surgical

Abdominoplasty

Body System
Anatomical Regions, General

PCS Root Operation
Alteration
Repair
Supplement

Root Operation Table
ØW0 Anatomical Regions, General, Alteration
ØWQ Anatomical Regions, General, Repair
ØWU Anatomical Regions, General, Supplement

Body Part
Abdominal Wall

Approach
Open
External (Repair, Stoma)

Device
Autologous Tissue Substitute (Alteration, Supplement)
Synthetic Substitute (Alteration, Supplement)
Nonautologous Tissue Substitute (Alteration, Supplement)
No Device (Alteration, Repair)

Qualifier
Stoma
No Qualifier

Description
An abdominoplasty is a repair of the abdominal wall, which is classified to the body system "General Anatomical Regions" in PCS. Anatomically, the abdominal wall is subdivided into two general regions: the anterolateral and the posterior abdominal wall. It is composed of three tissue layers: skin, superficial fascia, and muscle. Surgical procedures on the abdominal wall involve all three of these tissue layers. Abdominoplasty may be performed for either cosmetic or medical purposes.

Alteration
Alteration involves modifying an anatomic structure without affecting the function of the body part. The root operation Alteration identifies procedures that are cosmetic in nature. Use of this root operation requires diagnostic confirmation that the abdominoplasty is being performed to improve appearance.

Abdominoplasty performed for cosmetic reasons may also be referred to as a "tummy tuck." The procedure involves removing excess skin and underlying subcutaneous tissue and abdominal fat as well as tightening and restoring abdominal musculature. A cosmetic abdominoplasty may also involve reinforcement of the abdominal wall with biological or synthetic material, which is reported with the appropriate device value.

Focus Point
A cosmetic abdominoplasty (abdominal panniculectomy) that involves only the removal of excess skin, underlying subcutaneous tissue, and fat, without muscle tightening, is assigned a code from table ØJ0.

Repair
The root operation Repair involves restoring a body part, in this case the abdominal wall, to its normal anatomic structure and function. Repair is primarily used when an injury to the abdominal wall requires layered suture repair. Repair of the abdominal wall may also be required for stoma complications, such as a parastomal hernia. When the repair of the abdominal wall is focused on a stoma, the qualifier Stoma is reported.

Focus Point
Do not report the root operation Repair when mesh is used to reinforce a repair of the abdomen. See *the root operation Supplement.*

Supplement
When the abdominal wall is repaired and biological or synthetic material is used to reinforce or augment the repair, the correct root operation is Supplement. A common procedure classified to this root operation is the repair of a hernia involving the abdominal wall using mesh to reinforce the repair. Mesh may also be used in the repair of complex abdominal wall anomalies.

Focus Point
Do not report the root operation Supplement when biological or synthetic material is used but the objective of the procedure is solely cosmetic in nature. In this case, the correct root operation is Alteration and the biological or synthetic material used to reinforce the abdominal wall is captured using the appropriate device value. All methods, approaches, and devices used to improve appearance are coded as Alteration.

Coding Guidance
AHA: 2017, 3Q, 8; 2014, 4Q, 38

Cerclage, Cervical

Body System
Female Reproductive System

PCS Root Operation
Restriction

Root Operation Table
ØUV Female Reproductive System, Restriction

Body Part
Cervix

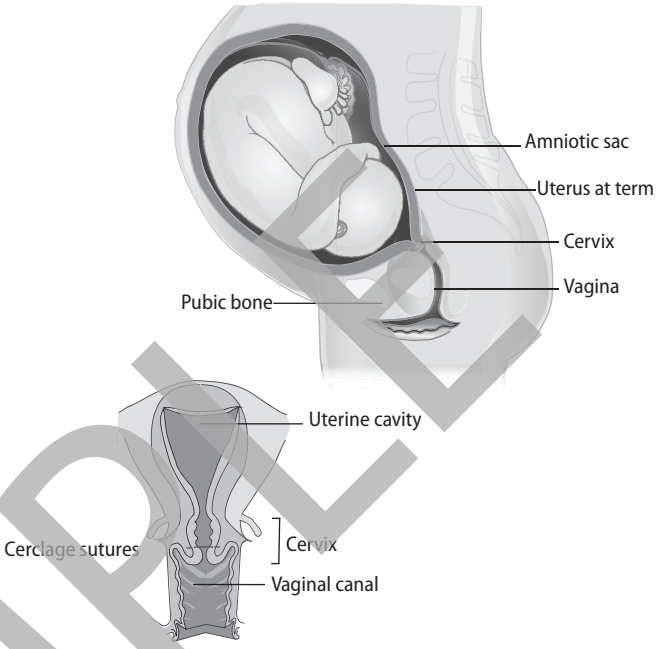
Approach
Open
Percutaneous
Via Natural or Artificial Opening

Device
Extraluminal Device
Intraluminal Device
No Device

Description
Cerclage of the cervix is performed to prevent miscarriage by reinforcing weak cervical muscles in a patient with a history of cervical incompetence, short cervical length, or cervical insufficiency. The cerclage may be performed prior to pregnancy or in early pregnancy, usually between weeks 12 and 16.

Cerclage may be performed transabdominally, but the most common approach is vaginal Via Natural or Artificial Opening. In vaginal cerclage, the physician inserts a speculum into the vagina to view the cervix of a pregnant or nonpregnant patient. A thick, nondissolvable suture or a thin wire is threaded around the cervix and secured to reinforce the cervical muscles and prevent cervical dilation. In McDonald cerclage, the cervix is grasped and a purse-string stitch is placed around the high endo-cervix, near to the internal os (opening) to close it. In the Shirodkar operation, the suture is buried under incisions in the vaginal mucosa and cinched to secure closure of the os. In some cases, a thin piece of fascia or other nondissolvable material may be placed instead of a wire or suture. This would be reported as an Intraluminal Device, as would a device such as a cerclage pessary placed around the cervical os within the vaginal canal (lumen).

An Open abdominal approach for cerclage may be used in instances such as traumatic cervical laceration, congenital shortening of the cervix, previous failed vaginal cerclage, or advanced cervical effacement. In abdominal cervical cerclage, a small abdominal incision just above the pubic hairline gives the physician access to the peritoneal space, and a band is placed around the cervix at the level of the internal os to prevent spontaneous abortion from an incompetent cervix. The abdominal incision is closed with sutures. In some cases, a thin piece of fascia or other nondissolvable material may be placed instead of a wire or suture. In such cases, report an Extraluminal Device around the external surface of the cervix.



Although it remains in place after the surgery, the suture typically placed during cerclage is considered a surgical supply rather than a device. If material other than a wire or suture is placed, report Extraluminal Device or Intraluminal Device.

Focus Point
Because the cervical os is not completely closed off, restriction is the correct root operation for cervical cerclage. The root operation Restriction describes, "Partially closing an orifice or the lumen of a tubular body part."

Focus Point
Wires and sutures placed in cervical cerclage are considered surgical supplies and are not considered devices. Removal of cervical cerclage in these cases is reported with root operation Extirpation.

Coding Guidance
AHA: 2015, 3Q, 25

Fusion, Cervical Spine, Posterior (PCF)

See also Fusion, Cervical Spine, Anterior (ACF)

Body System
Upper Joints

PCS Root Operation
Fusion

Root Operation Table
ØRG Upper Joints, Fusion

Body Part
Occipital-Cervical Joint
Cervical Vertebral Joint
Cervical Vertebral Joints, 2 or more
Cervicothoracic Vertebral Joint

Approach
Open
Percutaneous
Percutaneous Endoscopic

Device
Autologous Tissue Substitute
Synthetic Substitute
Nonautologous Tissue Substitute

Qualifier
Posterior Approach, Posterior Column

Description
Spinal fusion, also known as spinal arthrodesis, fuses together one or more vertebral joints with bone graft, allograft implants or dowels, graft-filled titanium cages, and spacers, and in some cases is supplemented by screws, plates, and rods. Graft-filled titanium cages or spacers, referred to as Interbody Fusion devices in ICD-10-PCS, are specifically used for fusions of the anterior spinal column and are not an option for posterior column fusions. Spinal arthrodesis may be performed to treat conditions such as herniated discs or degenerative, traumatic, or congenital lesions; or to stabilize fractures or dislocations of the spine. Codes identify the specific body parts for a single vertebral joint or multiple vertebral joints at each spine level where the procedure is performed (cervical, thoracic, or lumbar), the approach, and the spinal column fused (anterior, posterior) as well as devices.

The goal of posterior cervical fusion is to stabilize the spine, reducing pain and deformity. Posterior cervical fusion may also be performed in conjunction with anterior cervical spinal fusion, usually when multiple levels are involved. It may be performed with or without a posterior laminectomy for decompression, and with or without instrumentation such as metal screws and rods. Screws and rods are usually used to add stability and increase fusion success rates.

The patient is placed under general anesthesia and positioned in the prone (lying on the stomach) position. Using an Open approach, a small incision is made in the midline of the back of the neck, the muscles are dissected and retracted off the lamina, and the vertebrae and facet joints are exposed. The surgeon uses a high-speed burr to perform a laminectomy, cutting a trough of bone, and thickened ligaments and/or bone spurs may be removed, decompressing the spinal cord and/or nerve roots. Herniated or degenerated disc material may also be removed. The soft tissue and cartilage of the facet joints are removed, and the surfaces are prepared for the bone graft by burring, allowing surface area for growth of bone.

Autologous Tissue Substitute bone graft may be obtained from the iliac crest, or Synthetic Substitute bone graft or Nonautologous Tissue donor graft may be used. The bone graft material is packed into the facet joints. The back muscles are then released over the bone graft, using tension to hold the bone graft in place. Instrumentation such as wires, screws, and plates, or screws and rods may be added to hold the vertebrae together in a natural position, preventing facet motion and increasing the success of the fusion. After the spine is stabilized, the wound area is irrigated with sterile water containing antibiotics. The deep fascial layer and subcutaneous layers are closed with sutures, and the skin is closed with sutures or staples. Temporary drains may be inserted in the surgical wound to prevent fluid buildup. A sterile bandage is applied.

Focus Point
Discectomy is usually performed with spinal fusion surgery. Report an additional code for the discectomy procedure, using root operation Excision for a partial discectomy and Resection for a total discectomy.

Focus Point
Additional procedures such as laminectomy, foraminotomy, and excision of thickened ligaments performed to decompress the cervical spinal cord and/or spinal nerves in conjunction with posterior cervical spinal fusion are reported separately as Release, Cervical Spinal Cord and/or Release, Cervical Nerve, based on which structures (spinal cord or nerve roots) are decompressed. The root operation Release meets the objective of removing the lamina, bone spurs (foramina), or ligaments to complete the decompression.

Report only one code for any procedures done to Release a single body part. If both spinal cord and spinal nerves are decompressed, two codes can be reported using Release, Cervical Spinal Cord and Release, Cervical Nerve. Multiple procedures guideline B3.2b applies only when the procedure is performed on separate and distinct body parts.

Focus Point
Bone graft harvested from the local incision is not reported separately. However, if a separate incision is required to harvest the graft, such as from the iliac crest, this may be reported in addition to the primary procedure (fusion). This is consistent with ICD-10-PCS guideline B3.9.

Focus Point
When multiple devices are used, code to the highest value listed highest to lowest (with the same approach, body part, and qualifier):

- *Interbody Fusion Device (with bone graft or bone graft substitute)*
- *Autologous Tissue Substitute (alone or with nonautologous and/or with synthetic material)*
- *Nonautologous Tissue Substitute (alone or with synthetic)*
- *Synthetic Tissue Substitute*

When multiple vertebral joints are fused, each vertebral joint that uses a different device and/or a different qualifier is coded separately. See *guidelines B3.10b and B3.10c.*

Focus Point
When the spinal fusion procedure is performed through two separate approaches—both anterior and posterior—requiring that the patient be repositioned, two codes are reported: one for the anterior approach through the front of the neck and one for the posterior approach through the back of the neck.

Focus Point
Reporting placement of bone morphogenic protein (BMP) placed during a spinal fusion is optional and at the discretion of the facility. It is reported with a code from the Administration section (3E0).

Coding Guidance
AHA: 2023, 2Q, 25; 2022, 2Q, 23; 2019, 2Q, 19; 2018, 1Q, 8; 2018, 1Q, 22; 2017, 2Q, 23; 2016, 2Q, 17; 2015, 2Q, 21; 2014, 3Q, 9, 30; 2014, 2Q, 6-8; 2013, 3Q, 25; 2013, 1Q, 21, 29

Valvotomy (Valvulotomy)

Body System
Heart and Great Vessels

PCS Root Operation
Dilation
Release

Root Operation Table
Ø27 Heart and Great Vessels, Dilation
Ø2N Heart and Great Vessels, Release

Body Part
Aortic Valve
Mitral Valve
Pulmonary Valve
Tricuspid Valve

Approach
Open
Percutaneous
Percutaneous Endoscopic

Device
Intraluminal Device, Drug-eluting (Dilation)
Intraluminal Device (Dilation)
No Device

Description
Valvotomy is an operation used to restore blood flow through a valve that is abnormally narrowed due to stenosis, scarring, inflammation, or congenital deformity. A percutaneous balloon dilation procedure is most commonly performed.

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 intraluminal or extraluminal methods. A device placed to maintain the new diameter that remains at the conclusion of the procedure is an integral part of the Dilation procedure and is coded to a sixth-character device value in the Dilation procedure code.

Dilation of the heart valve is performed percutaneously using a balloon-tipped catheter that is guided into the heart from an artery in the arm or the groin. Once in the opening of the valve, the balloon is inflated to enlarge the opening.

Release
Release is the freeing of fused leaflets by incising along the edges of the leaflets or by separating the leaflets with the force of a finger.

Release procedures are coded to the body part being freed and 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.

Focus Point
Typically, balloon dilation is documented as valvuloplasty in an operative report; however, the objective of the procedure is the same.

Focus Point
Release should not be confused with Division. Division involves incising and separating a body part, while Release involves incising restraining tissue such as scar tissue or adhesions.

Focus Point
Commissurotomy (surgical incision of the junction between cusps of a cardiac valve) performed with the objective of dilating the valve is integral to the Dilation procedure and is not reported separately.

Coding Guidance
AHA: 2016, 1Q, 16

Valvuloplasty

See also Wedge Resection, Mitral Valve Leaflet

See also Replacement, Transcatheter Aortic Valve (TAVR)

See also Replacement, Rapid Deployment Aortic Valve (RDAVR)

Body System
Heart and Great Vessels

PCS Root Operation
Dilation
Repair
Replacement
Supplement

Root Operation Table
Ø27 Heart and Great Vessels, Dilation
Ø2Q Heart and Great Vessels, Repair
Ø2R Heart and Great Vessels, Replacement
Ø2U Heart and Great Vessels, Supplement

Body Part
Aortic Valve
Mitral Valve
Pulmonary Valve
Tricuspid Valve
Chordae Tendineae

Approach
Open
Percutaneous
Percutaneous Endoscopic

Device
Intraluminal Device, Drug-eluting (Dilation)
Intraluminal Device (Dilation)
No Device (Dilation, Repair)
Autologous Tissue Substitute (Replacement, Supplement)
Zooplastic Tissue (Replacement, Supplement)
Synthetic Substitute (Replacement, Supplement)
Nonautologous Tissue Substitute (Replacement, Supplement)

Qualifier
Transapical (Replacement, Aortic Valve, Mitral Valve, Pulmonary Valve, Percutaneous, Supplement, Mitral Valve, Percutaneous)
Truncal Valve (Repair, Supplement, Aortic Valve)
Atrioventricular Valve, Left (Repair, Supplement, Mitral Valve)
Atrioventricular Valve, Right (Repair, Supplement Tricuspid Valve)
No Qualifier

Extracorporeal or Systemic Assistance and Performance

Balloon Pump, Intra-aortic (IABP)

Body System
Physiological Systems

PCS Root Operation
Assistance

Root Operation Table
5A0 Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Assistance

Body System
Cardiac

Duration
Intermittent
Continuous

Function
Output

Qualifier
Balloon Pump

Description
Implantation of an intra-aortic pulsation balloon pump (IABP) consists of placing a balloon catheter into the descending thoracic aorta that inflates and deflates with the patient's heartbeat. This pump assists in circulating the blood to the heart and the body, allowing the heart to rest or recover from heart failure, MI, injury, trauma, or shock. This procedure is done to help support the function of the left ventricle of the heart and can also be used during interventional cardiac procedures such as arthrectomies and angioplasties, particularly in high-risk patients.

The left or right femoral artery is exposed in the groin. After the vessel is occluded above and below the proposed insertion site, the artery is opened transversely. Occasionally, the end of a small tube of Gore-Tex may be sewn to the side of the artery. The tip of the balloon catheter is inserted into the artery (or Gore-Tex tube). The clamp occluding the artery upstream is released, and the balloon catheter is advanced to the femoral artery and into the aorta above the level of the kidney arteries, but not beyond the left arm artery. It is connected to a pump, and the pump is turned on. The pump inflates and deflates the balloon during each heartbeat cycle. Inflation of the balloon can be set to trigger intermittently according to the patient's ECG or blood pressure or continuously by a cardiac pacemaker or a pre-set continuous internal rate. The pump may be used for a few hours or up to two weeks.

Focus Point
IABP, like cardiopulmonary bypass, is an exception to the usual practice of not reporting supporting procedures that are components of a larger operation. When a surgical procedure is performed with IABP, it is coded as an additional procedure.

Focus Point
An IABP is neither classified nor coded as a device in ICD-10-PCS. It is not appropriate to assign a code with root operation Insertion when the balloon pump is placed or with the root operation Removal when the pump is disconnected. The use of an IABP is appropriately reported using the root operation Assistance.

Coding Guidance
AHA: 2022, 3Q, 23; 2021, 2Q, 12; 2018, 2Q, 3; 2013, 3Q, 18

Bypass, Cardiopulmonary

Body System
Physiological Systems

PCS Root Operation
Performance

Root Operation Table
5A1 Extracorporeal or Systemic Assistance and Performance, Physiological Systems, Performance

Body System
Cardiac

Duration
Continuous

Function
Output

Qualifier
No Qualifier

Description
Cardiopulmonary bypass, also known as artificial heart and lung or pump oxygenator, is a form of extracorporeal (situated or occurring outside the body) circulation utilized to temporarily perform the complete functions of the heart and lungs during surgery and maintain the circulation of blood and the oxygen content of the body.

In cardiopulmonary bypass (CPB), venous blood is diverted to a heart-lung machine, which mechanically pumps and oxygenates the blood on a continuous basis temporarily so the heart can be bypassed while an open procedure on the heart or coronary arteries is performed. Roller or centrifugal pumps push the patient's venous blood through a membrane oxygenator to perform the gas exchange usually performed by the lungs, and then the blood is returned to the patient's arterial flow. During bypass, the lungs are deflated and immobile, and the heart is motionless and bloodless. CPB is performed under systemic hypothermia, reducing the risk of ischemia.

Focus Point
Cardiopulmonary bypass is an exception to the usual practice of not reporting supporting procedures that are components of a larger operation. When a surgical procedure is performed with cardiopulmonary bypass, it is coded as an additional procedure.

Focus Point
Qualifier value J Automated, is used to identify the usage of automated devices for mechanical chest compressions.

Coding Guidance
AHA: 2016, 1Q, 27; 2015, 4Q, 22; 2014, 3Q, 16, 20; 2014, 1Q, 10; 2013, 3Q, 18

Mental Health

Biofeedback

Body System
None

PCS Root Type
Biofeedback

Root Operation Table
GZC Mental Health, Biofeedback

Type Qualifier
Other Biofeedback

Description
Biofeedback involves a person learning to influence autonomic or involuntary nervous system responses and physiologic responses that are normally regulated voluntarily because his or her control has been affected by trauma or disease. The patient learns through monitoring to associate body responses with related stimuli and how to control those responses. Biofeedback helps regulate body processes such as heart rate, blood pressure, temperature, and muscle tension, and is considered effective in the treatment of migraine headaches, high blood pressure, incontinence, Raynaud's syndrome, and anticipatory nausea due to chemotherapy.

Common forms of biofeedback therapy include electromyography (EMG) for muscle tension measurement, thermal biofeedback for skin temperature measurement, and electroencephalography (EEG) for brain wave activity measurement.

The clinician prepares the patient with electrodes attached to the skin or handheld sensors. The electrodes or sensors measure information (feedback) about the body (bio) such as skin temperature, blood pressure, muscle tension, or brain wave activity and send signals that are displayed on a monitor. The clinician then leads the patient through mental exercises that teach the patient how certain thought processes, stimuli, and actions affect these physiological responses. The treating clinician works with the patient to learn to recognize and manipulate these responses through relaxation and awareness techniques. Through trial and error, biofeedback helps the patient to use thoughts to control the body.

Electroconvulsive Therapy

Body System
None

PCS Root Type
Electroconvulsive Therapy

Root Operation Table
GZB Mental Health, Electroconvulsive Therapy

Type Qualifier
Unilateral-Single Seizure
Bilateral-Single Seizure
Other Electroconvulsive Therapy

Description
Electroconvulsive therapy (ECT), formerly known as electroshock therapy or shock treatment, is the intentional initiation of a seizure used to treat certain mental illnesses. ECT is often used to combat chronic or profound major depression, especially psychotic or intractable manic forms, and for people who cannot take antidepressants. Electric current is used to trigger a seizure, which causes changes in the brain that improve symptoms related to mental health conditions.

Following administration of a general anesthetic and a muscle relaxant, electrodes are placed on one or both sides of the patient's head. Bilateral electrode placement passes the electric current across the whole brain. Unilateral electrode placement passes the current across one hemisphere of the brain. Using an ECT machine, a measured electrical dose is applied for about a second to commence seizures, with the seizures typically lasting 30 seconds to a minute. EEG and EKG monitors follow the seizure activity and heart rhythm while the patient sleeps through the therapy. The patient awakens a few minutes later. Multiple sessions may be needed to complete treatment.

Focus Point
An additional code for the EEG or EKG should be appended according to multiple procedures guideline B3.2c.

Intervention, Crisis

Body System
None

PCS Root Type
Crisis Intervention

Root Operation Table
GZ2 Mental Health, Crisis Intervention

Type Qualifier
None

Description
Crisis intervention (therapy) provides supportive therapy to help a patient overcome assault, violence, or other trauma. Crisis intervention is aimed at reducing the intensity of the reaction to the crisis, developing more effective coping skills, and helping the patient recover from the crisis.

The therapist provides individual psychotherapy in an office or outpatient facility using supportive interactions, suggestion, persuasion, reality discussions, re-education, behavior modification techniques, reassurance, and occasionally medication. These interactions are done with the goal of gaining further insight and affecting behavior change or support through understanding. The technique and type of therapy may vary in accordance with the patient's circumstances.

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