

ICD-10-PCS
General
Code Set Training

2013

Part 1



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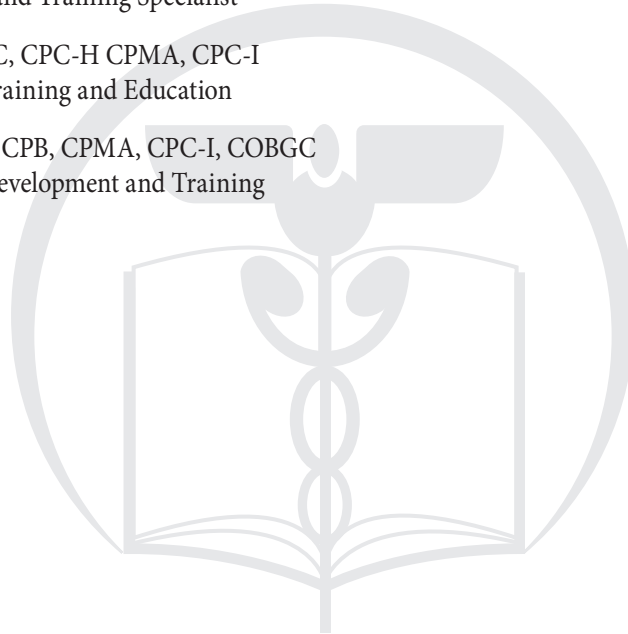
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Objectives

- Introduction and overview
- Understand the characters and values
- Review the code structure and organization of ICD-10-PCS
- Understand how to use the Tables and Index
- Review the fundamental design, uniqueness, and compatibility of ICD-10-PCS
- Successfully complete exercises to build ICD-10-PCS skill

Chapter 1

History, Structure, Tables, and Organization

Introduction

The World Health Organization has maintained the International Classification of Diseases (ICD) for recording cause of death since 1893. It has updated the ICD periodically to reflect new discoveries in epidemiology and changes in medical understanding of disease.

The Centers for Medicare & Medicaid Services (CMS), the agency responsible for maintaining the inpatient procedure code set in the U.S., contracted with 3M Health Information Systems in 1993 to design and develop a procedural classification system that would replace Volume 3 of ICD-9-CM.

ICD-10-PCS was initially released in 1998. It has been updated annually since that time although not in use. Coders need to develop a good working knowledge of Anatomy and Terminology to code in ICD-10-PCS. Developing these skills will help you become a master in ICD-10-PCS.

CODING TIP

Mastering anatomy is imperative. Taking an online brush up course is highly recommended especially if you have never taken any formal anatomy courses.

Supporting ICD-10-PCS is a logical, consistent structure that informs the system as a whole, down to the level of a single code. This means that the process of constructing codes in ICD-10-PCS is also logical and consistent: individual letters and numbers, called “values,” are selected in sequence to occupy the seven spaces of the code, called “characters.” Once the coding system is learned, the process is simplified.

Characters

All codes in ICD-10-PCS are seven characters long. Each character in the seven-character code represents an aspect of the procedure, as shown in the following diagram of characters from the main section of ICD-10-PCS, called medical and surgical.

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

An ICD-10-PCS code is best understood as the result of a process rather than as an assigned number. The coding process consists of assigning values from among the valid choices for that part of the system, according to the rules governing the construction of codes. It is logical and systematic in its coding approach.

CODING TIP

Taking the time now to review the structural outlay of ICD-10-PCS will help you along the way. Take note that code look up is completely different than ICD-9-CM volume 3 is structured. Don't get frustrated, once learned ICD-10-PCS is very logical in its approach.

Values

One of 34 possible values can be assigned to each character in a code: the numbers 0–9 and the alphabet (except I and O, because they are easily confused with the numbers 1 and 0). A finished code looks like the example below.

02103D4

Choosing a specific value for each of the seven characters derives this code. Based on details about the procedure performed, values for each character specifying the section, body system, root operation, body part, approach, device, and qualifier are assigned.

Because the definition of each character is a function of its actual physical position in the code, the same value placed in a different position in the code means something totally different. The value 0 in the first character means something different than 0 in the second character, or 0 in the third character, and so on.

ICD-10-PCS System Organization

ICD-10-PCS is composed of 16 sections, represented by the numbers 0–9 and the letters B–D and F–H. The broad procedure categories contained in these sections range from surgical procedures to substance abuse treatment.

Medical and Surgical Section

The first section, medical and surgical, contains the great majority of procedures typically reported in an inpatient setting. As shown in the previous section discussing ICD-10-PCS code structure, all procedure codes in the medical and surgical section begin with the section value 0.

EXAMPLE:

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical	Tendons	Excision	Lower Arm and Wrist, Right	Open	No Device	No Qualifier
0	L	B	5	0	Z	Z

Medical and Surgical Related Sections

Sections 0–9 of ICD-10-PCS comprise the medical and surgical related sections. These sections include obstetrical procedures, administration of substances, measurement and monitoring of body functions, and extracorporeal therapies, as listed in the table below.

Section value	Description
0	Medical and Surgical
1	Obstetrics
2	Placement
3	Administration
4	Measurement and Monitoring
5	Extracorporeal Assistance and Performance
6	Extracorporeal Therapies
7	Osteopathic
8	Other Procedures
9	Chiropractic

Table 1

In sections 1 and 2, all seven characters define the same aspects of the procedure as in the medical and surgical section.

Codes in sections 3–9 are structured for the most part like their counterparts in the medical and surgical section, with a few exceptions. For example, in sections 5 and 6, the fifth character is defined as duration instead of approach, as in this code for intra-aortic balloon pump (IABP):

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body System	Character 5 Duration	Character 6 Function	Character 7 Qualifier
Extracorp. Assist. and Performance	Physiological Systems	Assistance	Cardiac	Continuous	Output	Balloon Pump
5	A	0	2	2	1	0

Additional differences include these uses of the sixth character:

- Section 3 defines the sixth character as substance.
- Sections 4 and 5 define the sixth character as function.
- Sections 7 through 9 define the sixth character as method.

Ancillary sections: Sections B–D and F–H comprise the ancillary sections of ICD-10-PCS. These six sections include imaging procedures, nuclear medicine, and substance abuse treatment, as listed in table 2.

Section value	Description
B	Imaging
C	Nuclear Medicine
D	Radiation Oncology
F	Physical Rehabilitation and Diagnostic Audiology
G	Mental Health
H	Substance Abuse Treatment

Table 2

The definitions of some characters in the ancillary sections differ from that seen in previous sections. In the imaging section, the third character is defined as type, and the fifth and sixth characters define contrast and contrast/qualifier respectively, as in the CT scan example below.

Character 1 Section	Character 2 Body System	Character 3 Type	Character 4 Body Part	Character 5 Contrast	Character 6 Qualifier	Character 7 Qualifier
Imaging	Central Nervous	Computerized Tomography	Brain	High Osmolar	Unenhanced And Enhanced	None
B	0	2	0	0	0	Z

Additional differences include:

- Section C defines the fifth character as radionuclide.
- Section D defines the fifth character as modality qualifier and the sixth character as isotope.
- Section F defines the fifth character as type qualifier and the sixth character as equipment.
- Sections G and H define the third character as a type qualifier.

The complete ICD-10-PCS is presented in three parts: the Index, the Tables, and the List of Codes.

Index

Main terms

The ICD-10-PCS Index can be used to access the Tables. The Index mirrors the structure of the Tables, so it follows a consistent pattern of organization and use of hierarchies.

The Index is organized as an alphabetic lookup. Two types of main terms are listed in the Index:

- Based on the value of the third character
- Common procedure terms

For the medical and surgical and related sections, the root operation values are used as main terms in the Index. In other sections, the values representing the general type of procedure performed, such as nuclear medicine or imaging type, are listed as main terms.

For the medical and surgical and related sections, values such as excision, bypass, and transplantation are included as main terms in the index. The applicable body system entries are listed beneath the main term, and refer to a specific table. For the ancillary sections, values such as fluoroscopy and positron emission tomography are listed as main terms.

CODING TIP

Most of the codes for day-to-day use are found in the medical and surgical sections and the root operation values are used as the main terms in the Index.

In the example below, the index entry “bypass” refers to the medical and surgical section tables for all applicable body systems, including anatomical regions and central nervous system.

Bypass

by Body System
 Peritoneal Cavity 0W1G
 Spinal Canal 001U

The body system listings may be followed by entries for specific body parts, as in the excerpt below. In the root operations change, insertion, removal, and revision, the device entries follow the body system listings:

by Body Part
 Artery
 Axillary
 Left 03160
 Right 03150
 Brachial
 Left 03180
 Right 03170
 Common Carotid
 Left 031J0
 Right 031H0

Common Procedure Terms

The second type of term listed in the Index uses procedure names, such as “appendectomy” or “fundoplication.” These entries are listed as main terms, and refer to a table or tables from which a valid code can be constructed, as shown in the following example:

Cholecystectomy

see Excision, Gallbladder 0FB4

see Resection, Gallbladder 0FT4

Tables

Tables are organized in a series, beginning with section 0, medical and surgical, and body system 0, central nervous, and proceeding in numerical order. Sections 0–9 are followed by sections B–D and F–H. The same convention is followed within each table for the second through the seventh characters—numeric values in order first, followed by alphabetical values in order.

The following examples use the medical and surgical section to describe the organization and format of the ICD-10-PCS tables.

The medical and surgical section (first character 0) is organized by its 31 body system values. Each body system subdivision in the medical and surgical section contains an introductory table that lists the possible values for the remaining characters, given that body system.

The Tables section is what is used to construct complete and valid codes. Based on the first three values of the code provided in the Index, the corresponding table can be located. The tables and characters are arranged by number, then by letter for each character.

The root operation tables consist of four columns and a varying number of rows, as in the following example of the root operation Bypass, in the Central Nervous body system.

Section Body System Root Operation

0: MEDICAL AND SURGICAL			
0: CENTRAL NERVOUS			
1: BYPASS: Altering the route of passage of the contents of a tubular body part			
Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
6 Cerebral Ventricle	0 Open	7 Autologous Tissue Substitute J Synthetic Substitute K Nonautologous Tissue Substitute	0 Nasopharynx 1 Mastoid Sinus 2 Atrium 3 Blood Vessel 4 Pleural Cavity 5 Intestine 6 Peritoneal Cavity 7 Urinary Tract 8 Bone Marrow B Cerebral Cisterns
U Spinal Canal	0 Open	7 Autologous Tissue Substitute J Synthetic Substitute K Nonautologous Tissue Substitute	4 Pleural Cavity 6 Peritoneal Cavity 7 Urinary Tract 9 Fallopian Tube

The values for characters 1–3 are provided at the top of each table. Four columns contain the applicable values for characters 4–7, given the values in characters 1–3.

A table may be separated into rows to specify the valid choices of values in characters 4–7. A code built using values from more than one row of a table is not a valid code.

There are many tables in ICD-10-PCS besides the tables used to construct the codes. The appendices in the ICD-10-PCS manual contain many helpful tables.

Appendix A contains a table that defines all root operations in the ICD-10-PCS manual. It lists not only the definition, but also an explanation and example(s) for each root operation.

Appendix B contains a comparison table of medical and surgical root operations. The tables are constructed according to the purpose of the root operation. For example, one table indicates all procedures that take out some or all of a body part. It also lists examples.

Appendix C is a body part key. This is a very helpful tool to help match a specific body part to a descriptor in ICD-10-PCS. It is listed in alphabetic order.

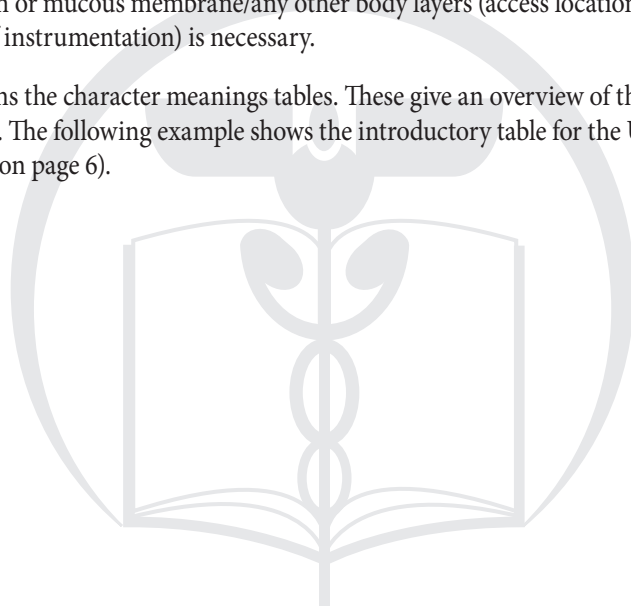
Appendix D is a device key and aggregation table. Similar to the body part key, it matches a device to a descriptor in ICD-10-PCS. But there are two tables in the appendix. The first is the match as

described previously. The second table crosswalks specific device character value definitions for specific root operation in a specific body system to the more general device character value to be used when the root operation covers a wide range of body parts and the device character represents an entire family of devices.

Appendix E contains type and type qualifier definitions for Sections B–H. It is like the tables in Appendix A.

Appendix F has the components of the Medical and Surgical approach definitions. These tables indicate the “pieces” that make up an approach. It defines the access location necessary, the method, and type of instrumentation needed to meet the definition for a specific approach in the Medical and Surgical section of ICD-10-PCS. For example, in order to perform an open approach, cutting (method) of the skin or mucous membrane/any other body layers (access location) without instrumentation (types of instrumentation) is necessary.

Appendix G contains the character meanings tables. These give an overview of the codes for an entire system in one place. The following example shows the introductory table for the Urinary system.(this is the first sentence on page 6).



The following example shows the introductory table for the Urinary system.

Table 3. Introductory table of values for the medical and surgical section urinary body system (characters 3–7)

0: Medical and Surgical

T: Urinary System

Character 3 Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
1 Bypass	0 Kidney, Right	0 Open	0 Drainage Device	0 Allogeneic
2 Change	1 Kidney, Left	3 Percutaneous	2 Monitoring Device	1 Syngeneic
5 Destruction	2 Kidneys, Bilateral	4 Percutaneous Endoscopic	3 Infusion Device	2 Zooplastic
7 Dilation	3 Kidney Pelvis, Right	7 Via Natural or Artificial Opening	7 Autologous Tissue Substitute	3 Kidney Pelvis, Right
8 Division	4 Kidney Pelvis, Left	8 Via Natural or Artificial Opening Endoscopic	C Extraluminal Device	4 Kidney Pelvis, Left
9 Drainage	5 Kidney	X External	D Intraluminal Device	6 Ureter, Right
B Excision	6 Ureter, Right		J Synthetic Substitute	7 Ureter, Left
C Extirpation	7 Ureter, Left		K Nonautologous Tissue Substitute	8 Colon
D Extraction	8 Ureters, Bilateral		L Artificial Sphincter	9 Colocutaneous
F Fragmentation	9 Ureter		M Stimulator Lead	A Ileum
H Insertion	B Bladder		Y Other Device	B Bladder
J Inspection	C Bladder Neck		Z No Device	C Ileocutaneous
L Occlusion	D Urethra			D Cutaneous
M Reattachment				X Diagnostic
N Release				Z No Qualifier
P Removal				
Q Repair				
R Replacement				
S Reposition				
T Resection				
U Supplement				
V Restriction				
W Revision				
X Transfer				
Y Transplantation				

Table 3

List of Codes

Although not contained in the ICD-10-PCS manual, the ICD-10-PCS List of Codes is a resource that displays all valid codes in alphanumeric order. Each entry begins with the seven-character code, followed by the full text description. The code descriptions are generated using rules that produce standardized, complete, and easy-to-read code descriptions.

ICD-10-PCS Fundamentals

ICD-10-PCS is fundamentally different from ICD-9-CM in its structure, organization, and capabilities. It was designed and developed to adhere to recommendations made by the National Committee on Vital and Health Statistics (NCVHS). It also incorporates input from a wide range of organizations, individual physicians, health care professionals, and researchers.

Several structural attributes were recommended for a new procedure coding system. These attributes include the following:

- Multiaxial structure
- Completeness
- Expandability

Multiaxial Structure: The key attribute that provides the framework for all other structural attributes is multiaxial code structure. Multiaxial code structure makes it possible for the ICD-10-PCS to be complete, expandable, and to provide a high degree of flexibility and functionality.

CODING TIP

Multiaxial refers to “more than one axis” or developing on more than a single line.

As mentioned earlier, ICD-10-PCS codes are composed of seven characters. Each character represents a category of information that can be specified about the procedure performed. A character defines both the category of information and its physical position in the code.

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

A character’s position can be understood as a semi-independent axis of classification that allows different specific values to be inserted into that space, and whose physical position remains stable. Within a defined code range, a character retains the general meaning that it confers on any value in that position. For example, the fifth character retains the general meaning “approach” in sections 0–4 and 7–9 of the system. Any specific value in the fifth character will define a specific approach, such as Open.

Each group of values for a character contains all of the valid choices in relation to the other characters of the code, giving the system completeness. In the fifth character, for example, each significantly distinct approach is assigned its own approach value and all applicable approach values are included to represent the possible versions of a procedure.

Each group of values for a character can be added to as needed, giving the system expandability. If a significantly distinct approach is used to perform procedures, a new approach value can be added to the system.

Each group of values is confined to its own character, giving ICD-10-PCS a stable, predictable readability across a wide range of codes. In sections 0–4 and 7–9 of the system, for example, the fifth character always represents the approach.

ICD-10-PCS' multiaxial structure houses its capacity for completeness, expandability, and flexibility, giving it a high degree of functionality for multiple uses.

Completeness

Completeness is considered a key structural attribute for a new procedure coding system. The specific recommendation for completeness includes these characteristics:

- A unique code is available for each significantly different procedure.
- Each code retains its unique definition. Codes are not reused.

In Volume 3 of ICD-9-CM, procedures performed on many different body parts using different approaches or devices may be assigned to the same procedure code. In ICD-10-PCS, a unique code can be constructed for every significantly different procedure. This vastly enhances the data capturing process.

Within each section, a character defines a consistent component of a code, and contains all applicable values for that character. The values define individual expressions (open, percutaneous) of the character's general meaning (approach) that are then used to construct unique procedure codes.

Because all approaches by which a procedure is performed are assigned a separate approach value in the system, every procedure which uses a different approach will have its own unique code. This is true of the other characters as well. The same procedure performed on a different body part has its own unique code, the same procedure performed using a different device has its own unique code, and so on.

Coronary Bypass Example

In the case of the coronary artery bypass graft (CABG), ICD-9-CM contains a total of nine codes to describe different versions of the procedure. These codes specify the version based on one aspect of the procedure, and the aspect defined is not consistent for all nine codes. Four of the codes specify the number of coronary arteries bypassed, four specify the source of the new blood flow, and one is an “unspecified” choice.

By contrast, ICD-10-PCS components can be combined to produce 34 unique codes defining all significantly different versions of the comparable CABG procedure. All 34 codes specify the same four aspects of the procedure: the number of coronary artery sites bypassed, the approach to the procedure site, the type of graft if used, and the origin of the bypass (source of the new blood flow). The differences are summarized in the table below.

CODING TIP

Working with physicians on documentation styles that will allow appropriate coding selections is an important part of the transition to ICD-10.

Comparison of CABG procedure codes

ICD-9-CM Volume 3	ICD-10-PCS
36.11 Aortocoronary bypass of one coronary artery (1 of 4 codes)	021009W Bypass coronary artery, one site to aorta with autologous venous tissue, open approach(1 of 8 codes)
36.15 Single internal mammary-coronary artery bypass (1 of 2 codes)	02100Z8 Bypass coronary artery, one site to right internal mammary, open approach (1 of 16 codes)
36.17 Abdominal-coronary artery bypass (1 of 2 codes)	02100AF Bypass coronary artery, one site to abdominal artery with autologous arterial tissue, open approach (1 of 10 codes)
36.10 Aortocoronary bypass for heart revascularization, not otherwise specified (1 of 1 code)	No equivalent ICD-10-PCS codes all contain a minimum level of specificity

Table 4

Unique Definitions

Because ICD-10-PCS codes are constructed of individual values rather than lists of fixed codes and text descriptions, the unique, stable definition of a code in the system is retained. New values may be added to the system to represent a specific new approach or device or qualifier, but whole codes by design cannot be given new meanings and reused.

Expandability

Expandability was also recommended as a key structural attribute. The specific recommendation for expandability includes these characteristics:

- Accommodate new procedures and technologies.
- Add new codes without disrupting the existing structure.

ICD-10-PCS is designed to be easily updated as new codes are required for new procedures and new techniques. Changes to ICD-10-PCS can all be made within the existing structure, because whole codes are not added. Instead, one of two possible changes is made to the system:

- A new value for a character is added as needed to the system.
- An existing value for a character is added to a table(s) in the system.

Structural Integrity

ICD-10-PCS allows unique new codes to be added to the system because values for the seven characters that make up a code can be combined as needed. The system can evolve as medical technology and clinical practice evolve, without disrupting the ICD-10-PCS structure.

ICD-10-PCS Additional Characteristics

Standardized Terminology

ICD-10-PCS possesses several additional characteristics in response to government and industry recommendations. These characteristics are:

- Standardized terminology within the coding system
- Standardized level of specificity
- No diagnostic information
- No explicit “not otherwise specified” (NOS) code options
- Limited use of “not elsewhere classified” (NEC) code options

Words commonly used in clinical vocabularies may have multiple meanings. This can cause confusion and result in inaccurate data. ICD-10-PCS is standardized and self-contained. Characters and values used in the system are defined in the system.

For example, the word “excision” is used to describe a wide variety of surgical procedures. In ICD-10-PCS, the word “excision” describes a single, precise surgical objective, defined as “Cutting out or off, without replacement, a portion of a body part.”

The terminology used in ICD-10-PCS is standardized to provide precise and stable definitions of all procedures performed. This standardized terminology is used in all ICD-10-PCS code descriptions.

CODING TIP

Standardized terminology means that certain procedures that have been named with eponyms or common procedure names can only be looked up by the actual name of the procedure. This will mean querying your physician and having a good medical dictionary at hand while coding. This change will require thought on how to look up commonly named procedures much differently than how we were taught. No eponyms or common procedure names.

As a result, ICD-10-PCS code descriptions do not include eponyms or common procedure names. Two examples from ICD-9-CM are 22.61, *Excision of lesion of maxillary sinus with Caldwell-Luc approach*, and 51.10, *Endoscopic retrograde cholangiopancreatography [ERCP]*. In ICD-10-PCS, physicians’ names are not included in a code description, nor are procedures identified by common terms or acronyms such as appendectomy or CABG. Instead, such procedures are coded to the root operation that accurately identifies the objective of the procedure.

The procedures described in the preceding paragraph by ICD-9-CM codes are coded in ICD-10-PCS according to the root operation that matches the objective of the procedure. Here the ICD-10-PCS equivalents would be Excision and Inspection. By relying on the universal objectives defined in root operations rather than eponyms or specific procedure titles that change or become obsolete, ICD-10-PCS preserves the capacity to define past, present, and future procedures accurately using stable terminology in the form of characters and values.

No Combination Codes

With rare exceptions, ICD-10-PCS does not define multiple procedures with one code. This is to preserve standardized terminology and consistency across the system. Procedures that are typically performed together but are distinct procedures may be defined by a single “combination

code” in ICD-9-CM. An example of a combination code in ICD-9-CM is 28.3, *Tonsillectomy with adenoidectomy*.

A procedure that meets the reporting criteria for a separate procedure is coded separately in ICD-10-PCS. This allows the system to respond to changes in technology and medical practice with the maximum degree of stability and flexibility.

Standardized Level of Specificity

In ICD-9-CM, one code with its description and includes notes may encompass a vast number of procedure variations while another code defines a single specific procedure. ICD-10-PCS provides a standardized level of specificity for each code, so that each code represents a single procedure variation.

The ICD-9-CM code 39.31 *Suture of artery* does not specify the artery, whereas the codes 38.40 through 38.49 *Resection of artery with replacement* provides a fourth-digit subclassification for specifying the artery by anatomical region (thoracic, abdominal, etc.).

In ICD-10-PCS, the codes identifying all artery suture and artery replacement procedures possess the same degree of specificity. The ICD-9-CM examples above coded to their ICD-10-PCS equivalents would use the same artery body part values in all codes identifying the respective procedures.

In general, ICD-10-PCS code descriptions are much more specific than their ICD-9-CM counterparts, but sometimes an ICD-10-PCS code description is actually less specific. In most cases this is because the ICD-9-CM code contains diagnosis information. The standardized level of code specificity in ICD-10-PCS cannot always take account of these fluctuations in ICD-9-CM level of specificity. Instead, ICD-10-PCS provides a standardized level of specificity that can be predicted across the system.

Diagnosis Information Excluded

Another key feature of ICD-10-PCS is that information pertaining to a diagnosis is excluded from the code descriptions.

ICD-9-CM often contains information about the diagnosis in its procedure codes. Adding diagnosis information limits the flexibility and functionality of a procedure coding system. It has the effect of placing a code “off limits” because the diagnosis in the medical record does not match the diagnosis in the procedure code description. The code cannot be used even though the procedural part of the code description precisely matches the procedure performed.

Diagnosis information is not contained in any ICD-10-PCS code. The diagnosis codes, not the procedure codes, will specify the reason the procedure is performed.

NOS Code Options Restricted

ICD-9-CM often designates codes as “unspecified” or “not otherwise specified” codes. By contrast, the standardized level of specificity designed into ICD-10-PCS restricts the use of broadly applicable NOS or unspecified code options in the system. A minimal level of specificity is required to construct a valid code.

In ICD-10-PCS, each character defines information about the procedure and all seven characters must contain a specific value obtained from a single row of a table to build a valid code. Even values

such as the sixth-character value Z, no device and the seventh-character value Z, no qualifier, provide important information about the procedure performed.

Limited NEC Code Options

ICD-9-CM often designates codes as “not elsewhere classified” or “other specified” versions of a procedure throughout the code set. NEC options are also provided in ICD-10-PCS, but only for specific, limited use.

In the medical and surgical section, two significant “not elsewhere classified” options are the root operation value Q, Repair and the device value Y, Other device.

The root operation Repair is a true NEC value. It is used only when the procedure performed is not one of the other root operations in the medical and surgical section.

Other device, on the other hand, is intended to be used to temporarily define new devices that do not have a specific value assigned, until one can be added to the system. No categories of medical or surgical devices are permanently classified to other device.

ICD-10-PCS Applications

ICD-10-PCS code structure results in qualities that optimize the performance of the system in electronic applications, and maximize the usefulness of the coded health care data. These qualities include:

- Optimal search capability
- Consistent character definitions
- Consistent values wherever possible
- Code readability

Some have argued that in the world of the electronic health record the classification system as we know it is outdated or, that classification doesn't matter because a computer is able to find a code with equal ease whether the code has been generated at random or is part of a classification scheme. While this may be true from an IT perspective, assignment of randomly generated code numbers makes it impossible to aggregate data according to related ranges of codes. This is a critical capability for providers, payers, and researchers to make meaningful use of the data.

Optimal Search Capability

ICD-10-PCS is designed for maximum versatility in the ability to aggregate coded data. Values belonging to the same character as defined in a section or sections can be easily compared, since they occupy the same position in a code. This provides a high degree of flexibility and functionality for data mining.

For example, the body part value 6, Stomach, retains its meaning for all codes in the medical and surgical section that define procedures performed on the stomach. Because the body part value is dependent for its meaning on the body system in which it is found, the body system value D, Gastrointestinal, must also be included in the search.

A person wishing to examine data regarding all medical and surgical procedures performed on the stomach could do so simply by searching the code range below.

0D*6***

Consistent Characters and Values

In the previous example, the value 6 means Stomach only when the body system value is D, Gastrointestinal. In many other cases, values retain their meaning across a much broader range of codes. This provides consistency and readability.

For example, the value 0 in the fifth character defines the approach Open and the value 3 in the fifth character defines the approach Percutaneous across sections 0–4 and 7–9, where applicable. As a result, all open and percutaneous procedures represented by codes in sections 0–4 and 7–9 can be compared based on a single character—approach—by conducting a query on the code ranges below.

[0–4,7–9]**0** vs. [0–4,7–9]**3**

Adding specific values can progressively refine searches. For example, one could search on a body system value or range of body system values, plus a body part value or range of body part values, plus a root operation value or range of root operation values.

To refine the search above, one could add the body system value for Gastrointestinal and the body part value for Stomach to limit the search to open vs. percutaneous procedures performed on the stomach:

0D*60** vs. 0D*63**

To refine the search even further and limit the comparison to open and percutaneous biopsies of the stomach, one could add the third-character value for the root operation Excision and the seventh-character qualifier Diagnostic, as below.

0DB60*X vs. 0DB63*X

Stability of characters and values across vast ranges of codes provides the maximum degree of functionality and flexibility for the collection and analysis of data. The search capabilities demonstrated above function equally well for all uses of health care data: investigating quality of care, resource utilization, risk management, conducting research, determining reimbursement, and many others.

Because the character definition is consistent, and only the individual values assigned to that character differ as needed, meaningful comparisons of data over time can be conducted across a virtually infinite range of procedures.

Code Readability

ICD-10-PCS resembles a language in the sense that it is made up of semi-independent values combined by following the rules of the system, much the way a sentence is formed by combining words and following the rules of grammar and syntax. As with words in their context, the meaning of any single value is a combination of its position in the code and any preceding values on which it may be dependent.

For example, in the medical and surgical section, a body part value is always dependent for its meaning on the body system in which it is found. It cannot stand alone as a letter or a number and be meaningful. A fourth-character value of 6 by itself can mean 31 different things, but a fourth-character value of 6 in the context of a second-character value of D means one thing only—Stomach.

On the other hand, a root operation value is not dependent on any character but the section for its meaning, and identifies a single consistent objective wherever the third character is defined as root operation. For example, the third-character value T identifies the root operation resection in both the medical and surgical and obstetrics sections.

The approach value also identifies a single consistent approach wherever the fifth character is defined as approach. The fifth-character value 3 identifies the approach percutaneous in the medical and surgical section, the obstetrics section, the administration section, and others.

The sixth-character device value or seventh-character qualifier value identifies the same device or qualifier in the context of the body system where it is found. Although there may be consistencies across body systems or within whole sections, this is not true in all cases. Values in their designated context have a precise meaning, like words in a language.

As seen in the code example, which began this training, 0LB50ZZ represents the text description of the specific procedure “Excision of right lower arm and wrist tendon, open approach.” Since ICD-10-PCS values in context have a single, precise meaning, a complete, valid code can be read and understood without its accompanying text description, much like one would read a sentence.

The following pages define each character using the code 0LB50ZZ *Excision of right lower arm and wrist tendon, open approach* as an example. This example comes from the medical and surgical section of ICD-10-PCS.

Character 1: Section

The first character in the code determines the broad procedure category, or section, where the code is found. In this example, the section is medical and surgical. 0 is the value that represents medical and surgical in the first character.

Code structure: medical and surgical section	The following pages define each character using the code 0LB50ZZ, “Excision of right lower arm and wrist tendon, open approach” as an example. This example comes from the medical and surgical section of ICD-10-PCS.
Character 1: Section	The first character in the code determines the broad procedure category, or section, where the code is found. In this example, the section is medical and surgical. 0 is the value that represents medical and surgical in the first character.

The sample code looks like this so far:

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical						
0						

Character 2: Body System

The second character defines the body system—the general physiological system or anatomical region involved. Examples of body systems include Lower Arteries, Central Nervous System, and Respiratory System. In this example, the body system is Tendons represented by the value L.

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical	Tendons					
0	L					

Character 3: Root Operation

The third character defines the root operation, or the objective of the procedure. Some examples of root operations are Bypass, Drainage, and Reattachment. In the sample code below, the root operation is Excision. When used in the third character of the code, the value B represents Excision.

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical	Tendons	Excision				
0	L	B				

Character 4: Body Part

The fourth character defines the body part or specific anatomical site where the procedure was performed. The body system (second character) provides only a general indication of the procedure site. The body part and body system values together provide a precise description of the procedure site.

Examples of body parts are Kidney, Tonsils, and Thymus. In this example, the body part value is 5, Lower Arm and Wrist, Right. When the second character is L, the value 5 when used in the fourth character of the code represents the right lower arm and wrist tendon.

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical	Tendons	Excision	Lower Arm and Wrist, Right			
0	L	B	5			

Character 5: Approach

The fifth character defines the approach, or the technique used to reach the procedure site. Eight different approach values are used in the medical and surgical section to define the approach. Examples of approaches include Open and Percutaneous Endoscopic.

In the sample code below, the approach is Open and is represented by the value 0.

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical	Tendons	Excision	Lower Arm and Wrist, Right	Open		
0	L	B	5	0		

Character 6: Device

Depending on the procedure performed, there may be a device left in place at the end of the procedure. The sixth character defines the device. Device values fall into four basic categories:

- Grafts and Prostheses
- Implants
- Simple or Mechanical Appliances
- Electronic Appliances

In this example, there is no device used in the procedure. The value Z is used to represent No Device, as shown below.

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical	Tendons	Excision	Lower Arm and Wrist, Right	Open	No Device	
0	L	B	5	0	Z	

Character 7: Qualifier

The seventh character defines a qualifier for the code. A qualifier specifies an additional attribute of the procedure, if applicable.

Examples of qualifiers include Diagnostic and Stereotactic. Qualifier choices vary depending on the previous values selected. In this example, there is no specific qualifier applicable to this procedure, so the value is No Qualifier represented by the letter Z.

Character 1 Section	Character 2 Body System	Character 3 Root Operation	Character 4 Body Part	Character 5 Approach	Character 6 Device	Character 7 Qualifier
Medical and Surgical	Tendons	Excision	Lower Arm and Wrist, Right	Open	No Device	No Qualifier
0	L	B	5	0	Z	Z

0LB50ZZ is the complete specification of the procedure Excision of right lower arm and wrist tendon, open approach.

Test Yourself #1

1. Who was contracted to develop ICD-10-PCS?
 2. What year was PCS originally completed?
 3. All codes in ICD-10-PCS have how many characters?
 4. The first character in the code determines the broad _____ category, or _____, where the code is found.
 5. The _____ character defines the body part, or specific anatomical site where the procedure was performed.
 6. ICD-10-PCS is composed of _____ sections.
 7. All procedure codes in the medical and surgical section begin with the section value _____.
 8. Sections 1–9 of ICD-10-PCS comprise the _____ and _____-related sections
 9. In sections 1 and 2, all _____ characters define the same aspects of the procedure as in the medical and surgical section.
 10. The complete ICD-10-PCS is presented in three parts: _____, _____, _____.
 11. The key attribute that provides the framework for all other structural attributes is _____ code structure.
 12. A character's position can be understood as a _____ of classification that allows different specific values to be inserted into that space, and whose physical position remains stable.
 13. Because ICD-10-PCS codes are constructed of _____ values rather than lists of fixed codes and text descriptions, the unique, stable definition of a code in the system is retained.
 14. ICD-10-PCS was updated in _____ to include an appropriate range of codes for the PICVA procedure (16 possible codes).
 15. ICD-10-PCS can be easily expanded without disrupting the _____ of the system.
 16. ICD-10-PCS is _____ and self-contained.
 17. ICD-10-PCS code descriptions do not include _____ or common procedure names.
 18. ICD-10-PCS preserves the capacity to define _____, _____, and _____ procedures accurately using stable terminology in the form of characters and values.
 19. A procedure that meets the reporting criteria for a _____ procedure is coded separately in ICD-10-PCS.
 20. Information pertaining to a _____ is excluded from the code descriptions.
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