Learning and Using ICD-10-PCS

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In this article Steven J. Steindel, PhD, FACMI, offers an overview of the elements that make ICD-10-PCS so different from its ICD-9 predecessor. Once coders crest the PCS learning curve—including a new approach to code development and new concepts for coding anatomy and physiology—most will find the new code set adds clarity with little or no loss in efficiency, he writes. (For a review of ICD-10-CM, see Steindel's article "Taking ICD-10-CM in Parts."

On October 1, 2013, healthcare providers must begin reporting HIPAA claims using the ICD-10 counterparts to the current ICD-9 code sets. In presenting these code sets two points come to the forefront: the code structure has changed and the number of codes has drastically increased. This article reviews those changes as a foundation for learning and using ICD-10-PCS.

(Coding examples that appear throughout this article are based on the 2009 code set.)

The Basics

ICD-10-PCS is intended to replace ICD-9 volume 3 for facility reporting of inpatient procedures. Current Procedural Terminology (CPT) is still used for all outpatient procedures. Healthcare Common Procedural Coding System (HCPCS) is still used as before. Common procedures that are not unique to the inpatient setting, such as laboratory tests and educational sessions, were omitted from PCS.

ICD-10-PCS is a totally new coding system designed to better accommodate the rapidly changing world of procedures. The code system was developed in the 1990s, but use of the continually updated codes will start almost 20 years later. Outside of a pilot study focused on ease of use, little practical knowledge exists concerning the ease or efficacy of coding procedures in the code set. While the Centers for Medicare and Medicaid Services maintains cross-codes to ICD-9 volume 3, as will be explained, these tables are not intended for direct coding.

ICD-10-PCS provides a multi-axial design to the codes and is similar in design to Logical Observation Identifiers Names and Codes (LOINC). The seven-character alphanumeric code starts with a fixed character designating the section. The other six characters vary according to the preceding character.

For example, for a code in section 0 (Medical and Surgical), the codes that follow are body system, root operation, body part, approach, device, and qualifier. The actual set of codes for each succeeding character is fixed by the preceding one.

Table 1 offers an example from the Medical and Surgical section showing how the codes are defined. For the example shown here, 127 operational codes are defined in the 2009 published code set.

Table 1. Coding Table Portion from ICD-10-PCS Medical and Surgical Section

0: MEDICAL AND SURGICAL G: ENDOCRINE SYSTEM B: EXCISION: Cutting out or off, without replacement, a portion of a body part			
Body Part Character 4	**Approach Character 5**	**Device Character 6**	**Qualifier Character 7**
0 Pituitary Gland 1 Pineal Body 2 Adrenal Gland, Left 3 Adrenal Gland, Right 4 Adrenal Glands, Bilateral 6 Carotid Body, Left	0 Open 3 Percutaneous 4 Percutaneous Endoscopic	Z No Device	X Diagnostic Z No Qualifier

7 Carotid Body, Right 8 Carotid Bodies, Bilateral 9 Para-aortic Body B Coccygeal Glomus C Glomus Jugulare D Aortic Body F Paraganglion Extremity G Thyroid Gland Lobe, Left H Thyroid Gland Lobe, Right L Superior Parathyroid Gland, Right M Superior Parathyroid Gland, Left N Inferior Parathyroid Gland, Right P Inferior Parathyroid Gland, Left Q Parathyroid Glands, Multiple R Parathyroid Gland			

Table 2 offers a similar table from the Imaging section showing the changes in axis definitions.

Table 2. Coding Table Portion from ICD-10-PCS Imaging Section

This example from the Imaging section shows the changes in axis definitions.

B: IMAGING F: HEPATOBILIARY SYSTEM AND PANCREAS 4: ULTRASONOGRAPHY: Real time display of images of anatomy or flow information developed from the capture of reflected and attenuated high frequency sound waves			
Body Part Character 4	**Contrast Character 5**	**Qualifier Character 6**	**Qualifier Character 7**
0 Bile Ducts 2 Gallbladder 3 Gallbladder and Bile Ducts 5 Liver 6 Liver and Spleen 7 Pancreas C Hepatobiliary System, All	Z None	Z None	Z None

Anatomy is an important component of ICD-10-PCS codes and appears as both the second axis and fourth axis in both of these examples. A specific set of codes (table 3) appears in the second axis for the anatomical section. Universally specific codes are not used for body parts when they appear in other axial position; they vary with section. For example 0, 1, and 2 are used for right, left and bilateral breast(s) respectively in Imaging and Radiation Oncology, while the codes T, U and V are used in Medical and Surgical. ICD-10-PCS, like ICD-10-CM, stresses laterality. However, unlike -CM, ICD-10-PCS requires the use of laterality because “unspecified” is not an anatomical option.

Table 3. PCS Anatomy Codes when used in as the Second Axis

A specific set of codes appears in the second axis for the anatomical section. Universally specific codes are not used for body parts when they appear in other axial position; they vary with section.

0 Central Nervous System 2 Heart 3 Upper Arteries 4 Lower Arteries 5 Veins 7 Lymphatic System 8 Eye 9 Ear, Nose, Mouth and Throat

B Respiratory System
D Gastrointestinal System
F Hepatobiliary System and Pancreas
G Endocrine System
H Skin, Subcutaneous Tissue and Breast
L Connective Tissue
N Skull and Facial Bones
P Non-Axial Upper Bones
Q Non-Axial Lower Bones
R Axial Skeleton, Except Skull and Facial Bones
T Urinary System
U Female Reproductive System
V Male Reproductive System
W Anatomical Regions
Y Fetus and Obstetrical

The codes used within Medical and Surgical may vary depending on the code of axis 2. To illustrate, the codes T, U and V refer to spinal meninges, spinal canal and spinal cord and not the breast when used to describe procedures for the central nervous system.

ICD-10-PCS has its own way of describing anatomy. Table 4 shows the standard anatomical parts that correspond to the femoral artery grouping. The code set divides the upper and lower body at the diaphragm. In most cases that has little difference except when trying to identify anatomical parts of the great arteries and veins or the spinal cord as they cross the diaphragm.

Table 4. PCS Anatomical Groupings

This table shows the standard anatomical parts that correspond to the femoral artery grouping. The code set divides the upper and lower body at the diaphragm.

ICD-10-PCS Term	Common Anatomical Term
Femoral Artery, Right	Circumflex iIliac artery
Femoral Artery, Left	Circumflex iliac artery
Femoral Artery, Right	Deep femoral artery
Femoral Artery, Left	Deep femoral artery
Femoral Artery, Right	Descending genicular artery
Femoral Artery, Left	Descending genicular artery
Femoral Artery, Right	External pudendal artery
Femoral Artery, Left	External pudendal artery
Femoral Artery, Right	Superficial epigastric artery
Femoral Artery, Left	Superficial epigastric artery

Axis 3 of the two examples defines the procedure type. ICD-10-PCS defines 108 procedures types (operations) whose applicability vary by section. The definitions of each code are quite precise, and application can be somewhat problematic. For example, excision is defined as “cutting out or off, without replacement, a portion of a body part” while resection is “cutting out or off, without replacement, all of a body part.” If a surgical procedure involves the removal of part of one body part and all of another (e.g., thyoridecomy with removal of local lymph nodes), how is it coded? The basic answer is that multiple codes are applied.

An Overview of Use

Although the Centers for Medicare and Medicaid Services has developed crosswalks from ICD-9 volume 3 to ICD-10-PCS, they are not intended for direct use in coding. The varied assignments for each axis make code such matching difficult. For example, the volume 3 code 06.1 (Diagnostic procedures on thyroid and parathyroid glands) corresponds to 73 codes in ICD-10-PCS:

- 06.11, Closed [percutaneous] [needle] biopsy of thyroid gland (10 codes)
- 06.12, Open biopsy of thyroid gland (5 codes)
- 06.13, Biopsy of parathyroid gland (36 codes)
- 06.19, Other diagnostic procedures on thyroid and parathyroid glands (22 codes) and cover procedure types (operations) including Drainage, Excision, Inspection, and Revision.

All of the drainage operations involve different anatomical parts of the thyroid and correspond to 06.11. Parathyroid procedures have many codes because six anatomical locations are assigned. Fifty-one of the codes end in an X qualifier code, indicating that they are diagnostic; the remainder indicate “no qualifier.” Given this complexity, it is necessary to assign ICD-10-PCS codes directly.

ICD-10-PCS codes should be derived based on the operative reports and medical notes. For example, if the operative report indicates a fine-needle aspiration biopsy of the left lobe of the thyroid, a coder would consult a table similar to that of Table 1 above for Medical and Surgical (0): Endocrine System (G). The coder would select Drainage (9), note the left lobe of the thyroid gland (G), show it was Percutaneous Endoscopic approach consistent with a fine-needle aspiration (4), without a drainage device (Z), and conducted for diagnostic purposes (X). The resulting codes thus would be 0G9G4ZX.

A similar thyroid tissue biopsy would differ only in that it is an excision and other approaches (Open or Percutaneous) are possible.

The pilot study referenced earlier showed that people learned the technique quickly and, depending on the variety of procedures encountered, showed little if any loss of efficiency after mastering the learning curve.

Coding Parts

Many procedures are composed of multiple parts, and ICD-10-PCS has specific, and sometimes complex, rules regarding how to code these. A bronchoscopy is a simple example. The basic code is 0BJ(1)8ZZ where (1) is for the deepest anatomical location explored during the procedure. It is assumed all locations above also were explored.

A bit more complex is a partial thyroidectomy. A coder new to ICD-10-PCS may assume this may be coded as excision of the thyroid, but ICD-10-PCS gives anatomical codes for each lobe and the whole. If the partial thyroidectomy involved removal of the entire right lobe, the procedure would be coded as a resection of the right lobe. If part of the left lobe was also removed, the best code selection would be a resection of the right and excision of the left lobe.

Coders representing a complex procedure such an organ transplant that involves preliminary steps, in this case removal of the existing organ, can assume that is part of the final code. If any complex procedure is not completed, such as exploratory surgery followed by intervention if warranted, code selection should reflect the maximum level actually done.

Coding the Whipple

Pancreaticoduodenectomy, commonly called a Whipple procedure, is a complex surgical procedure involving multiple abdominal organs. It has a unique ICD-9 code of 52.7. It has no corresponding ICD-10-PCS code. The procedure be best described by multiple ICD-10-PCS codes representing the specific organ parts that are excised, as no organ is totally removed (a resection). The approach is currently always open and involves no devices or qualifiers.

Just knowing this information can establish a basic ICD-10-PCS code: 0(1)B(2)0ZZ. The first option is needed because the pancreas, bile duct, and gall bladder are located in the F section of the Medical and Surgical codes, while the other gastrointestinal organs are found in G. The second option represents the specific organs excised. The pancreas is always one, so the code 0FBG0ZZ would most likely lead the list of procedures. Note that in this case the anatomical code is for the entire pancreas, and the excision operative code is the sole indication that only the head of the pancreas usually is involved.

Other organs generally affected are the distal portion of the stomach (0DB60ZZ) and the first and second parts of the duodenum (0DB90ZZ). It is also common to remove the common bile duct (0F790ZZ) and gallbladder (0F740ZZ). Hence, complex procedures involving multiple systems will require many ICD-10-PCS codes representing what was actually done to the patient.

Coding New Methods

ICD-10-PCS was developed in the 1990s and covers the then-new technique of laparoscopic surgery. Common procedures now in use involving interventional radiology or robotics are not readily accommodated. The coding index shows that the accepted code for the insertion of a cardiac stent is a Dilation operation involving a Percutaneous Endoscopic approach but gives no indication of radiographic involvement. It is not clear that extending this analogy is appropriate for other interventional radiology procedures such as a repair of a brain aneurysm involving the placement of coils or needle aspirations under radiographic control. Similarly, new robotic devices are handled crudely in the Other Procedure (8) section only. Both would benefit by the introduction of new approaches or qualifiers.

Conclusion

The preceding examples illustrate that selecting the correct PCS code requires a greater knowledge of anatomy and physiology than is required under ICD-9. The degree of new knowledge required will depend on the coder's personal knowledge and the speciality areas he or she codes.

Regardless, ICD-10-PCS terms differ from standard terminology enough that coders must crest a learning curve before they can effectively convert common patient notes to PCS terms. For example, a repair of inguinal hernia is anatomically located in the Inguinal Region found in the Medical and Surgical Section Y (Anatomical Regions, Lower Extremities), which for some may not be intuitive.

Further, ICD-10-PCS has very precise definitions for operations that sometimes make the correct choice difficult. For example, coders first approaching the code set may not consider a fine-needle aspiration biopsy drainage.

With use, however, most coders likely will learn common axis terms as they move from section to section. They will then be able to look at codes and interpret the meaning position by position. Regardless, most coders will need to refer to reference material for coding, and many computerized coding aids will be available.

Most coders will find that ICD-10-PCS is different but not difficult. The actual efficiency of producing a code will be dependent on the complexity of the procedure and the clarity of the provider's notes. That is one way that the new code set does not differ from the old one.

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