

# Coding Root Operations with ICD-10-PCS: Understanding Change, Replacement, and Revision

Save to myBoK

By Ann Barta, MSA, RHIA, CDIP

*Editor's note: This is the ninth in a series of 10 articles discussing the 31 root operations of ICD-10-PCS.*

In this article the *Journal of AHIMA* continues its 10-part Coding Notes series focusing on the 31 root operations in the Medical and Surgical section of ICD-10-PCS. This article will take a more in-depth look at the definitions and applications of the following three root operations:

- Change
- Replacement
- Revision

A similar attribute for these three root operations is that they always involve a device. An article discussing the other three root operations in this group—Insertion, Removal, and Supplement—was published in the January 2014 *Journal of AHIMA*.

## Root Operation 2: Change

The definition for the Change root operation provided in the 2014 ICD-10-PCS Reference Manual is “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.” The root operation Change represents only those procedures where a similar device is exchanged without making a new incision or puncture.

All Change procedures are coded using the approach External. The definition for the External approach provided in the 2014 ICD-10-PCS Reference Manual is “Procedures performed directly on the skin or mucous membrane and procedures performed indirectly by the application of external force through the skin or mucous membrane.”

Example procedures include: percutaneous endoscopic gastrostomy (PEG) tube exchange, exchange of cerebral ventriculostomy drainage tube, tracheostomy tube exchange, and exchange of drainage tube from right hip joint.

## Comparing ICD-9-CM and ICD-10-PCS: Change

The following is an example of how ICD-9-CM and ICD-10-PCS compare in code assignment for Change procedures.

### Tracheostomy Tube Exchange

A ventilator-dependent patient with a tracheostomy tube in place was admitted for pneumonia. During the admission it was necessary to replace the tracheostomy tube. The procedure was performed by exchanging the old tracheostomy tube with a similar tube. It was not necessary to make a new incision during the exchange of the tracheostomy tube.

In ICD-9-CM, the Alphabetic Index main term entry Replacement, subterms, tube, tracheostomy identifies code 97.23. The code descriptor for 97.23 is Replacement of tracheostomy tube and is categorized under category 97, Replacement and removal of therapeutic appliances.

In ICD-10-PCS the root operation for this procedure is Change and the objective of this procedure is to exchange a similar device (tracheostomy tube) without making a new incision or puncture. The Index main term entry is Change device in, Trachea, which directs the coding professional to Table 0B2. The ICD-10-PCS code for this procedure is 0B21XFZ. The

fourth character (1) identifies the body part as the trachea and the fifth character (X) identifies the approach or technique used to reach the operative site as external. The sixth character (F) identifies the device left at the operative site as a tracheostomy device.

## Root Operation R: Replacement

The definition for the Replacement root operation provided in the 2014 ICD-10-PCS Reference Manual is “Putting in or on biological or synthetic material that physically takes the place and/or function of all or a portion of a body part.” The objective of procedures coded to the root operation Replacement is to put in a device that takes the place of some or all of a body part and includes taking out the patient’s natural body part.

By explanation, the body part may have been taken out or replaced, or may be taken out, physically eradicated, or rendered nonfunctional during the Replacement procedure. A Removal procedure is coded for taking out the device used in a previous replacement procedure. Therefore two codes would be assigned if an existing prosthetic device is replaced—a Replacement code and a Removal code.

Example procedures include: right hip replacement; left hip hemiarthroplasty, partial-thickness skin autograft to right lower leg, excision of abdominal aorta with Gore-Tex graft replacement, heart valve replacement, and replacement of cornea.

## Comparing ICD-9-CM and ICD-10-PCS: Replacement

The following is an example of how ICD-9-CM and ICD-10-PCS compare in code assignment for Replacement procedures.

### Total Revision of Right Knee Replacement

The patient had a right total knee replacement performed nine years ago and now presents for a revision of the right total knee replacement. During surgery, the surgeon replaced the femoral, tibial, and patellar components in order to take advantage of the new more durable prosthetic components that were not available when the patient originally had his right knee replaced.

In ICD-9-CM, the Alphabetic main term entry Revision, subterms knee replacement, total (all components) identifies code 00.80. The code descriptor for 00.80 is Revision of knee replacement, total (all components) and is categorized under 00.8, Other knee and hip procedures. ICD-9-CM also provides codes for revision of tibial component only (00.81), revision of femoral component only (00.82), and revision of patellar component only (00.83). If revision of two knee components is performed then the coding professional would code the appropriate two component codes. ICD-9-CM does not differentiate laterality. Therefore, the code would be the same if performed on the left knee rather than the right knee. No additional code is assigned to remove the original knee prosthesis.

In ICD-10-PCS the root operation for this procedure is Replacement as the objective of the procedure is to put in synthetic material that physically takes the place and function of the previously placed prosthesis. The Index main term entry is Replacement, Joint, Knee, Right which directs the coding professional to Table 0SR. The ICD-10-PCS code for this procedure is 0SRC0JZ. Similar to ICD-9-CM, ICD-10-PCS differentiates a total replacement versus replacement of only some of the knee components. In ICD-10-PCS the component(s) of the knee, as well as laterality, being replaced are captured by the fourth character, body part, of the code. Therefore, unlike ICD-9-CM, ICD-10-PCS captures whether the procedure was performed on the left versus the right knee. An additional code for Removal of the original prosthesis is also required in ICD-10-PCS (0SPC0JZ).

## Root Operation W: Revision

The definition for the Revision root operation provided in the 2014 ICD-10-PCS Reference Manual is “Correcting, to the extent possible, a malfunctioning or displaced device.” The root operation Revision is coded when the objective of the procedure is to correct the position or function of a previously placed device, without taking the entire device out and putting in a whole new device in its place. Revision can include correcting a malfunctioning device by taking out and/or putting in part, but not all, of the device.

Example procedures include: repositioning of Swan-Ganz catheter in superior vena cava, taking out loose screw and putting larger screw in fracture repair plate, right fibula, revision of left hip replacement with readjustment of the prosthesis, and adjustment of the position of the pacemaker lead in the left atrium.

## Comparing ICD-9-CM and ICD-10-PCS: Revision

The following is an example of how ICD-9-CM and ICD-10-PCS compare in code assignment for Revision procedures.

### Revision of Displaced Right Ventricle Lead

A patient had a dual chamber pacemaker inserted two months ago for treatment of sick sinus syndrome. The lead in the right ventricle has become dislodged and the patient underwent an adjustment of this lead. The patient was taken to the operating room where a percutaneous adjustment of the lead in the right ventricle was performed without incident.

In ICD-9-CM, the Alphabetic Index main term Reposition, subterms, cardiac pacemaker, electrodes identifies code 37.75. The code descriptor for 37.75 is Revision of leads (electrodes) and is categorized under category 37, Other operations on heart and pericardium. This code is used to revise leads for various types of pacemakers and defibrillators. Additionally, ICD-9-CM does not provide distinct codes for the various approaches used to perform this procedure.

The correct root operation for this procedure in ICD-10-PCS is Revision as the objective of this procedure is to correct, to the extent possible, the dislodged or displaced lead. The Alphabetic Index main term is Revision of device in, Heart, which directs the coding professional to Table 02W. The ICD-10-PCS procedure code for this procedure is 02WA3MZ. Similar to ICD-9-CM, the ICD-10-PCS code for this procedure is used for the revision of any cardiac lead. The fifth character for the approach does provide distinct values for the various approaches used to perform this procedure. In this case, the fifth character is assigned the value of 3, identifying a percutaneous approach.

## References

Centers for Medicare and Medicaid Services. "2014 Code Tables and Index." 2013.  
<http://www.cms.gov/Medicare/Coding/ICD10/2014-ICD-10-PCS.html>.

Centers for Medicare and Medicaid Services. "2014 ICD-10-PCS Official Guidelines for Coding and Reporting." 2013.  
<http://www.cms.gov/Medicare/Coding/ICD10/Downloads/PCS-2014-guidelines.pdf>.

Centers for Medicare and Medicaid Services. "2014 ICD-10-PCS Reference Manual." 2013.  
<http://www.cms.gov/Medicare/Coding/ICD10/2014-ICD-10-PCS.html>.

### Read More

#### Previous Root Operation Installments Available

[www.ahima.org](http://www.ahima.org)

To access previous *Journal of AHIMA* articles, including the first eight installments of this 10-part series on ICD-10-PCS root operations, visit AHIMA's HIM Body of Knowledge.

Ann Barta ([ann.barta@ahima.org](mailto:ann.barta@ahima.org)) is a director of HIM practice excellence at AHIMA.

#### Article citation:

Barta, Ann. "Coding Root Operations with ICD-10-PCS: Understanding Change, Replacement, and Revision" *Journal of AHIMA* 85, no.2 (February 2014): 64-66.

## Driving the Power of Knowledge

Copyright 2022 by The American Health Information Management Association. All Rights Reserved.