



Date: *January 1st, 2021*

Topic: Removal and revision of Knee devices (tibial component)

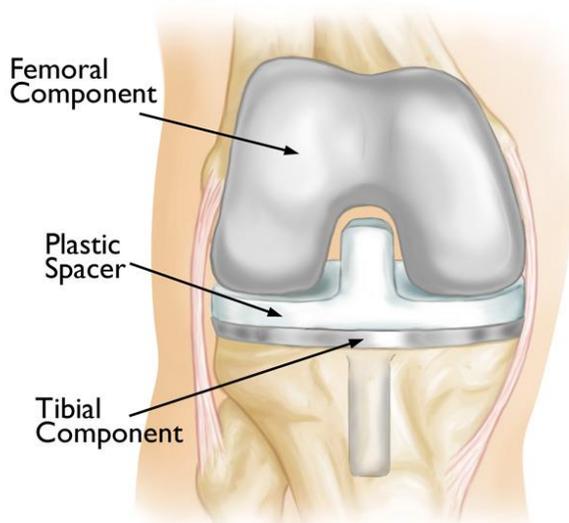
To fully understand the correct PCS codes selection for these types of surgeries, we need to review the definitions of the most common used root operations and implant components

Root operations for knee replacements:

- **Replacement:** 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
- **Removal:** taking out or off a device from a body part
- **Revision:** Correcting to the extent possible a portion of a malfunctioning device or the position of a displaced device
- **Supplement:** putting in or on biologic or synthetic material that physically reinforces and/or augments the function of a portion of a body part

Implant components for Knee replacements:

- **Femoral component:** Metal implant that covers the end of the distal femur.
- **Tibial component:** Includes both the metal base plate and the modular polyethylene bearing surface. Some designs do not have the metal portion, and instead, the polyethylene attaches directly to the bone. For additional stability, the metal portion of the component may have a stem that inserts into the center of the tibia bone.
- **Patellar component:** Metal backed Polyethylene patellar component.





Scenario #1 Revision of tibial component

Question:

The patient previously underwent a left total knee replacement, but the tibial component has now come loose. At surgery, the joint is exposed and inspected with no evidence of infection. The loose tibial component is then **re-cemented** to the underlying bone. How is this procedure coded?

Answer:

0SWW0JZ Revision of synthetic substitute in left knee joint, tibial surface, open

For our first scenario, the tibial component was not removed as it was only re-cemented to the underlying bone. This would meet the definition of **Revision**.

Scenario #2 Replacement of tibial liner

Question:

The patient presented with an infected internal left knee joint prosthesis and underwent arthrotomy of left knee, tricompartmental synovectomy, and tibial polyethylene component exchange with anterior stabilizing insert. The existing polyethylene tibial component was removed. Posterior compartment synovectomy was performed, and a larger polyethylene tibial component with anterior stabilization (tibial tray) insert was implanted. According to research, a mobile bearing knee (rotating platform knee) indicates that the polyethylene liner is not fixed but is free to rotate on a smooth tibial tray. The ICD-10-PCS does not provide a device value for tibial tray. Would it be appropriate to use the root operation "Supplement" along with the device value "Liner"? Coding Clinic Fourth Quarter 2016, pages 111-112 advised to use the root operation "Supplement" for the replacement of a hip joint liner. What are the correct ICD-10-PCS codes for this case?

Answer:

Assign the following ICD-10-PCS codes:

0SPW0JZ	Removal of synthetic substitute from left knee joint, tibial surface, open approach, for the removal of the tibial component
0SRW0JZ	Replacement of left knee joint, tibial surface with synthetic substitute, open approach, for the placement of the new tibial joint component

The stabilization tray **is part of the tibial surface knee replacement prosthesis**. In ICD-10-PCS, the stabilization tray is not coded separately when the entire tibial surface prosthesis is replaced. Similarly, a joint liner would not be coded separately when the entire femoral or tibial surface prosthesis is also replaced. If, however, only the liner is exchanged, the root operation "Supplement" is coded rather than "Replacement."

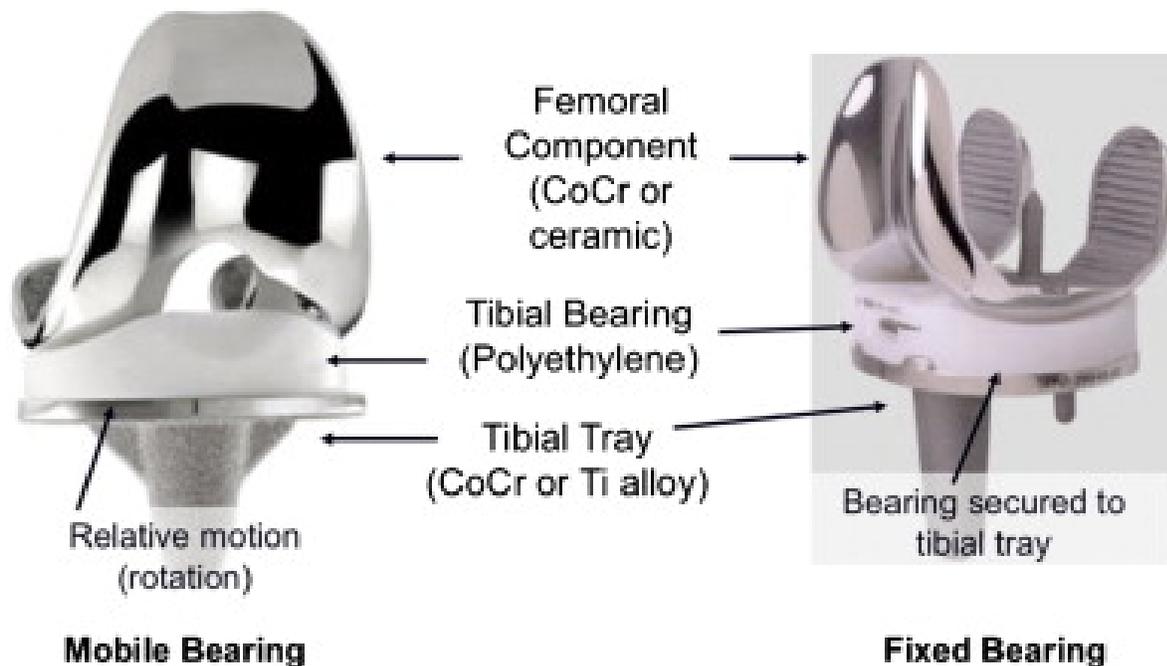


For our second scenario, Since ICD-10-PCS considers the “stabilization tray” as being considered part of the tibial surface replacement prosthesis, we code this as **Replacement**
 If only the liner would’ve been replaced, the correct root operation would be **Supplement**

What are tibial stabilization trays? How does it affect our PCS selection?

There are two types of tibial polyethylene inserts that are used in knee replacements. The ICD-10-PCS coding clinic in our second scenario referred to a “mobile-bearing implant”, which is also known as a rotating platform since it is designed to allow patients a few degrees of greater rotation. We also have a fixed-bearing implant, which the polyethylene liner is attached firmly to the metal implant.

When we have a revision scenario, it’s important to understand the device that they are replacing. A simple polyethylene liner vs a tibial component selection will affect your DRG from 487 “Knee procedures” to 468 “Revision of HIP or KNEE replacement”.





Coding Connection

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References:

*ICD-10-CM/PCS Coding Clinic, **Second Quarter ICD-10 2018** Pages: 16-17 Effective with discharges: June 6, 2018 – Exchange of tibial polyethylene component with stabilizing insert*

*ICD-10-CM/PCS Coding Clinic, **Fourth Quarter ICD-10 2016** Pages: 110-112 Effective with discharges: October 1, 2016 – Removal and revision of hip and knee devices*

<https://orthoinfo.aaos.org/en/treatment/knee-replacement-implants/>