



Kaiser Foundation Health Plan of Washington

Clinical Review Criteria

Total Knee Arthroplasty

- Knee Arthroplasty (Level of Care)
- Knee Arthroplasty Medical Necessity Criteria

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Criteria

For Medicare Members

Source	Policy
CMS Coverage Manuals	None
National Coverage Determinations (NCD)	None
Local Coverage Determinations (LCD)	<p>Total Knee Arthroplasty (L36577) –Not subject to medical necessity review, refer to Inpatient versus Ambulatory/Outpatient Level of Care for inpatient requests of codes 27438, 27446 or 27447</p> <p>**Effective 01/01/2022—The following knee revision codes- 27486, 27487, 27488 are listed in the Medicare inpatient only (IPO) list and should not be reviewed for ambulatory or outpatient status.</p> <p>Total Knee Arthroplasty (TKA) Removal from the Medicare Inpatient-Only (IPO) List and Application of the 2-Midnight Rule</p>
Local Coverage Article (LCA)	None
MLN Matters Article	Total Knee Arthroplasty (TKA) Removal from the Medicare Inpatient-Only (IPO) List and Application of the 2-Midnight Rule

For Non-Medicare

I. Level of Care

Inpatient Total Knee Arthroplasty (for ambulatory/outpatient requests, proceed to II.)

- A. For elective total knee replacement (27438, 27446, 27447) or revision/replacement of a knee arthroplasty (27486, 27487, or 27488) to be approved as inpatient, **ONE of the following** criteria must be met:
 1. Bilateral knee replacement
 2. Coexisting neurologic condition (such as multiple sclerosis, hemiparesis, severe Parkinson's, or other neurologic conditions that would likely seriously affect ambulation) where the expected length of stay is planned to be longer than 2 midnights; **OR**
 3. Meets indications on the [Elective Surgical Procedure Level of Care policy](#)

If the patient qualifies for inpatient status, must also meet the following:

II. Non-Medicare only request for ALL Total Knee Arthroplasty (includes ambulatory & inpatient) must meet the Medical Necessity Criteria:

- A. Total knee and unicompartmental (partial) arthroplasty may be considered medically necessary for degenerative joint disease when **ALL of the following** are met:
 1. Treatment is needed because of functional disabling pain of at least 3 months duration which interferes with the ability to carry out activities of daily living

AND

2. Radiographic imaging or arthroscopic evidence of moderate or severe osteoarthritis as evidenced by **ONE of the following**:
 - a. Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone contour (Kellgren-Lawrence Grade 3)
 - b. Large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour (Kellgren-Lawrence Grade 4)
 - c. Exposed subchondral bone (full thickness cartilage loss with underlying bone reactive changes) noted on arthroscopy or MRI (Outerbridge Grade IV)

AND

3. Patients must have three months of non-operative, conservative treatment as demonstrated by a trial of one or more of the following medications:
 - a. Non-steroidal anti-inflammatory drugs (oral or topical)
 - b. Acetaminophen
 - c. Intra-articular injection of corticosteroids as appropriate

AND

4. A trial of Physical Therapy* in the last 12 months, which should include some of the following features:
 - a. Supervised Physical therapy, attendance at >75% of sessions
 - b. Flexibility and muscle strengthening exercises
 - c. Reasonable restriction of activities

**If Physical Therapy is not appropriate, the medical record must clearly document why such an approach is not reasonable.*

AND

5. All patients who meet the above criteria to undergo standard elective surgery must also meet **ALL of the following**:
 - a. BMI < 35: if BMI is > 35, optimization efforts must be documented, demonstrating active attempts towards weight loss as shown by sustained weight loss over 3-6 months OR stagnant weights despite documented active participation in a weight loss or exercise program. Formal nutritional counseling must be documented. If optimization attempts are unsuccessful, the surgeon and patient may proceed if there is documentation of understanding of the risks through shared decision making. However, BMI > 40 is a relative contraindication. Despite not achieving this BMI, if the provider has documented adequate efforts to improve these parameters, the case will be reviewed on a case-by-case basis by a medical director.
 - b. No diabetes, or diabetes with HbA1c < 7.5 (with the presence of heart disease, no lower than 7.5). Members who have an A1C >7.5 must actively be involved with medical management and demonstrate a reduction in A1c over 3-6 months. If optimization attempts are unsuccessful, the surgeon and patient may proceed if there is documentation of understanding of the risks through shared decision making. A1c > 8.0 is a relative contraindication. Despite not achieving this A1c, if the provider has documented adequate efforts to improve these parameters, the case will be reviewed on a case-by-case basis by a medical director.
 - c. Members who use nicotine/tobacco must be actively involved in a nicotine cessation program and must be nicotine/tobacco-free for a minimum of 30 days prior to surgery or have a 90% reduction in nicotine/tobacco use. If nicotine/tobacco reduction attempts are unsuccessful, the surgeon and patient may proceed if there is documentation of understanding of the risks through shared decision making. No changes in nicotine/tobacco use is a relative contraindication.
- B. Knee arthroplasty may **ALSO be considered medically necessary**, after failure of nonoperative interventions, for the following diagnoses:
 - Distal femur fracture repair in a patient with osteoporosis
 - Failure of a previous proximal tibial or distal femoral osteotomy
 - Hemophilic arthroplasty
 - Limb salvage for malignancy
 - Posttraumatic knee joint destruction
 - Avascular necrosis (osteonecrosis) of tibial or femoral condyle
 - Inflammatory Arthritis

***Kellgren-Lawrence Classification of Osteoarthritis**

Grade	Description
grade 0 (none)	definite absence of x-ray changes of osteoarthritis
grade 1 (doubtful)	doubtful joint space narrowing and possible osteophytic lipping
grade 2 (minimal)	definite osteophytes and possible joint space narrowing
grade 3 (moderate)	moderate multiple osteophytes, definite narrowing of joint space and some sclerosis and possible deformity of bone ends
grade 4 (severe)	large osteophytes, marked narrowing of joint space, severe sclerosis and definite deformity of bone ends

Osteoarthritis is deemed present at grade 2 although of minimal severity.

Reference: Pai, V., Knipe, H. Kellgren and Lawrence system for classification of osteoarthritis. Reference article, Radiopaedia.org. (accessed on 29 Mar 2022) <https://doi.org/10.53347/rID-27111>

Outerbridge

Outerbridge 0: Cartilage is normal

Outerbridge 1: Cartilage shows chondromalacia,

Outerbridge 2: Cartilage shows partial thickness fibrillation

Outerbridge 3: Cartilage shows deep fibrillation

Outerbridge 4: Full thickness cartilage loss

If requesting these services, please send the following documentation to support medical necessity:

- Last 6 months of clinical notes from requesting provider &/or specialist, including a history & physical
- If the orthopedist has a patient who does not meet one of the criteria above but has determined that the procedure should be performed in an inpatient setting, the orthopedist can submit a separate explanation with the request that will be reviewed by clinical staff on a case-by-case basis.
- If a patient is approved for ambulatory status under the prior authorization request but ends up staying longer than expected, the inpatient claim could be adjusted to inpatient if deemed appropriate.

The following information was used in the development of this document and is provided as background only. It is provided for historical purposes and does not necessarily reflect the most current published literature. When significant new articles are published that impact treatment option, Kaiser Permanente will review as needed. This information is not to be used as coverage criteria. Please only refer to the criteria listed above for coverage determinations.

Background

Joint replacement surgery has been performed on millions of people over the past several decades and has proved to be an important medical advancement in the field of orthopedic surgery. The hip and knee are the two most commonly replaced joints. The knee is the largest joint in the body and includes the lower end of the femur, the upper end of the tibia and the patella. The knee joint has three compartments, the medial, the lateral and the patellofemoral. The surfaces of these compartments are covered with articular cartilage and are bathed in synovial fluid. The bones of the knee joint work together, allowing the knee to function smoothly.

The most common reason for total knee replacement surgery is arthritis of the knee joint. Types of arthritis include:

- osteoarthritis,
- rheumatoid arthritis and
- traumatic arthritis (arthritis which occurs as a result of injury).

Arthritis causes a severe limitation in the activities of daily living (ADLs), including difficulty with walking, squatting, and climbing stairs. Pain is typically most severe with activity and patients often have difficulty getting mobilized when seated for a long time. Other findings include chronic knee inflammation or swelling not relieved by rest, knee stiffness, lack of pain relief after taking non-steroidal anti-inflammatory medications and failure to achieve symptom improvement with other conservative therapies such as steroid injections and physical therapy.

Osteonecrosis and malignancy are additional reasons to proceed with total knee replacement surgery. The use of TKR in patients with malignancy must be weighed against considerations of life expectancy and possible

alternative procedures to relieve pain. The goal of total knee replacement surgery is to relieve pain and improve or increase patient function.

Occasionally, there may be a need to perform a reoperation on a previous total knee replacement. This is often referred to as a revision total knee.

Circumstances that lead to the need for a revision Total Knee Arthroplasty continued disabling pain, continued decline in function which can be attributed to failure of the primary joint replacement. Failure can be due to infection involving the joint, substantial bone loss in the structures supporting the prosthesis, fracture, aseptic loosening of the components and wear of the prosthetic components.

Applicable Codes

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

Total Knee:

CPT® or HCPC Codes	Description
27438	Arthroplasty, patella; with prosthesis
27446	Arthroplasty, knee, condyle and plateau; medial OR lateral compartment
27447	Arthroplasty, knee, condyle and plateau; medial AND lateral compartments with or without patella resurfacing (total knee arthroplasty)
27486	Revision of total knee arthroplasty, with or without allograft; 1 component
27487	Revision of total knee arthroplasty, with or without allograft; femoral and entire tibial component
27488	Removal of prosthesis, including total knee prosthesis, methylmethacrylate with or without insertion of spacer, knee

***Note:** Codes may not be all-inclusive. Deleted codes and codes not in effect at the time of service may not be covered.

**To verify authorization requirements for a specific code by plan type, please use the [Pre-authorization Code Check](#).

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Date Created	Date Reviewed	Date Last Revised
05/03/2022	05/03/2022 ^{MPC} , 05/02/2023 ^{MPC}	05/15/2023

^{MPC} Medical Policy Committee

Revision History	Description
05/03/2022	MPC approved to adopt criteria for Inpatient-Total Knee for non-Medicare members. Requires 60-day notice, effective date 10/01/2022.
06/21/2022	Added clarification around Medicare inpatient only list
09/15/2022	Updated criteria effective date to 10/25/2022.
10/13/2022	Added preexisting inpatient criteria for total knee.
10/18/2022	Moved Medicare IPO applicable codes up under Medicare Criteria for more clarity
02/06/2023	Add clarification on when Medicare IPO list of codes was updated 1/1/2022.
03/24/2023	Clarified Level of Care requirement for Medicare and Non-Medicare members.
05/15/2023	Clarified PT episode of care timeframe