Instructions for use
The following coverage policy applies to health benefit plans administered by Cigna. Coverage policies are intended to provide guidance in interpreting certain standard Cigna benefit plans and are used by medical directors and other health care professionals in making medical necessity and other coverage determinations. Please note the terms of a customer’s particular benefit plan document may differ significantly from the standard benefit plans upon which these coverage policies are based. For example, a customer’s benefit plan document may contain a specific exclusion related to a topic addressed in a coverage policy.

In the event of a conflict, a customer’s benefit plan document always supersedes the information in the coverage policy. In the absence of federal or state coverage mandates, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of:
1. The terms of the applicable benefit plan document in effect on the date of service
2. Any applicable laws and regulations
3. Any relevant collateral source materials including coverage policies
4. The specific facts of the particular situation

Coverage policies relate exclusively to the administration of health benefit plans. Coverage policies are not recommendations for treatment and should never be used as treatment guidelines.

This evidence-based medical coverage policy has been developed by eviCore, Inc. Some information in this coverage policy may not apply to all benefit plans administered by Cigna.

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# CMM-311 ~ Knee Arthroplasty - Total and Partial

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CMM-311.1 Definition

Knee arthroplasty is a surgical procedure, which attempts to reconstruct or replace a malformed or degenerated knee joint with internal hardware. Total knee arthroplasty (TKA) involves surgical reconstruction or replacement of the entire knee joint as a result of bicompartamental or tricompartmental involvement. Partial knee arthroplasty involves surgical reconstruction or replacement of one joint surface of the knee joint as a result of unicompartmental involvement. Total or partial knee revision involves surgical reconstruction or replacement due to failure or complications of previous knee arthroplasty.

The Modified Outerbridge Classification is a system that has been developed for judging articular cartilage injury to the knee. This system allows delineation of varying areas of chondral pathology, based on the qualitative appearance of the cartilage surface, and can assist in identifying those injuries that are suitable for repair techniques. The characterization of cartilage in this system is as follows:

- Grade I - Softening with swelling
- Grade II - Fragmentation and fissuring less than one square centimeter (1 cm$^2$)
- Grade III - Fragmentation and fissuring greater than one square centimeter (1 cm$^2$)
- Grade IV - Subchondral bone exposed.

The Kellgren-Lawrence Grading System is a radiographic grading system that has been developed for describing osteoarthritic changes to the knee. When used, the radiographic findings are typically reported within one of the following categories:

- Grade I – Doubtful narrowing of joint space and possible osteophytic lipping
- Grade II – Definite osteophytes and possible narrowing of joint space
- Grade III – Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis, and possible deformity of bone contour
- Grade IV – Large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour.

Non-surgical care, with regard to the treatment of the knee, is defined as any non-surgical treatment, which has been demonstrated in the scientific literature as efficacious and/or is considered a standard of care in the treatment of knee pain. The types of treatment involved can include, but are not limited to: relative rest/activity modification, physiotherapy modalities, supervised therapeutic exercise, oral medications, bracing, and/or injections (steroid and/or viscosupplementation).
CMM-311.2 General Guidelines

The determination of medical necessity for the performance of knee arthroplasty (total or partial) is always made on a case-by-case basis.

CMM-311.3 Indications and Non-Indications

Partial Knee Arthroplasty

Partial (medial, lateral, or patellofemoral unicompartmental) knee arthroplasty is considered **medically necessary** when **ALL** of the following criteria have been met:

- Chronic, severe, disabling pain for at least three (3) months in duration
- Loss of knee function which interferes with the ability to carry out age appropriate activities of daily living and/or demands of employment
- Diagnostic imaging and/or arthroscopy confirms severe unicompartmental degenerative arthritis evidenced by EITHER of the following:
  - Large osteophytes, marked narrowing of joint space, severe sclerosis and deformity of bone contour (i.e., Kellgren-Lawrence Grade IV)
  - Exposed subchondral bone (i.e., Modified Outerbridge Grade IV)
- Intact, stable ligaments, in particular the anterior cruciate ligament
- Knee arc of motion (full extension to full flexion) greater than 90°
- Failure of non-surgical management.

Partial (medial, lateral, or patellofemoral unicompartmental) knee arthroplasty is considered **not medically necessary** for any other indication, including the following:

- Severe patellofemoral joint arthritis (when unicompartmental arthroplasty to be performed is medial or lateral) and severe medial or lateral compartment degenerative changes (when unicompartmental arthroplasty is to be performed of the patellofemoral joint), evidenced by ANY of the following:
  - Exposed subchondral bone (i.e., Modified Outerbridge Grade IV)
  - Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis, and possible deformity of bone contour (i.e., Kellgren-Lawrence Grade III)
  - Large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour (i.e., Kellgren-Lawrence Grade IV)
- Tibial or femoral shaft deformity that would result in malalignment of the component
- Radiographic evidence of medial or lateral subluxation
- Flexion contracture greater than 15°
- Varus deformity greater than 15°
- Valgus deformity greater than 20°
• inflammatory arthropathy
• active local or systemic infection
• severe loss of musculature, neuromuscular compromise or vascular deficiency in the affected limb, rendering the procedure unjustifiable
• osteoporosis or other osseous abnormalities which would increase the likelihood of a poor surgical outcome
• severe lack of collateral ligament integrity leading to joint instability.

**Total Knee Arthroplasty (Replacement)**

Total knee arthroplasty (replacement) is considered **medically necessary** when **ALL** of the following criteria have been met:

- Chronic severe, disabling pain for at least three (3) months in duration
- loss of knee function which interferes with the ability to carry out age appropriate activities of daily living and/or demands of employment
- diagnostic imaging and/or arthroscopy confirms severe bicompartmental or tricompartmental degenerative arthritis evidenced by EITHER of the following:
  - large osteophytes, marked narrowing of joint space, severe sclerosis and deformity of bone contour (i.e., Kellgren Lawrence Grade IV)
  - exposed subchondral bone (i.e., Modified Outerbridge Grade IV)
- knee arc of motion greater than 50°
- failure of non-surgical management.

Total knee arthroplasty (replacement) is considered **not medically necessary** for any other indication, including the following:

- Active local or systemic infection
- severe loss of musculature, neuromuscular compromise or vascular deficiency in the affected limb, rendering the procedure unjustifiable
- osteoporosis or other osseous abnormalities that cannot be optimally managed prior to surgery and which would increase the likelihood of a poor surgical outcome
- joint instability due to a lack of collateral ligament integrity, not amenable to surgical correction
- greater than 30 degrees of fixed varus or valgus deformity, not amenable to surgical correction.
Total Knee Revision

Total knee revision is considered **medically necessary** for an individual who has previously undergone a partial or total knee arthroplasty when **BOTH** the following criteria have been met:

- loss of knee function which interferes with the ability to carry out age appropriate activities of daily living and/or demands of employment
- **EITHER** of the following:
  - unexplained pain for greater than six (6) months unresponsive to non-surgical management.
  - chronic, severe, disabling pain and the presence of **ANY** of the following:
    - fracture or dislocation of the patella
    - instability of the components
    - aseptic loosening
    - periprosthetic infection
    - periprosthetic fracture

Total knee revision is considered **not medically necessary** for any other indication, including the following:

- active local or systemic infection
- poor bone quality
- limited quadriceps or extensor function
- poor skin coverage
- poor vascular status.

CMM 311.4 Experimental, Investigational, or Unproven

Based on a lack of scientific evidence of efficacy and safety, the following are considered experimental, investigational or unproven:

- bicompartmental knee arthroplasty
- bi-unicompartmental knee arthroplasty
- knee replacement procedures customized to the individual, including ANY of the following:
  - customized templates, and/or instrumentation
  - customized knee implant
  - gender specific implant
- minimally invasive knee replacement
- focal resurfacing of a single knee joint defect
- unicompartmental free-floating (un-fixed) interpositional device
### CMM-311.5 Procedure (CPT®) Codes

This guideline relates to the CPT® code set below. Codes are displayed for informational purposes only. Any given code’s inclusion on this list does not necessarily indicate prior authorization is required.

<table>
<thead>
<tr>
<th>CPT®</th>
<th>Code Description/Definition</th>
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<tbody>
<tr>
<td>27437</td>
<td>Arthroplasty, patella; without prosthesis</td>
</tr>
<tr>
<td>27438</td>
<td>Arthroplasty, patella; with prosthesis</td>
</tr>
<tr>
<td>27440</td>
<td>Arthroplasty, knee, tibial plateau</td>
</tr>
<tr>
<td>27441</td>
<td>Arthroplasty, knee, tibial plateau; with debridement and partial synovectomy</td>
</tr>
<tr>
<td>27442</td>
<td>Arthroplasty, femoral condyles or tibial plateau(s), knee</td>
</tr>
<tr>
<td>27443</td>
<td>Arthroplasty, femoral condyles or tibial plateau(s), knee; with debridement and partial synovectomy</td>
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<tr>
<td>27445</td>
<td>Arthroplasty, knee, hinge prosthesis (e.g., Walldius type)</td>
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<tr>
<td>27446</td>
<td>Arthroplasty, knee, condyle and plateau; medial OR lateral compartment</td>
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<tr>
<td>27447</td>
<td>Arthroplasty, knee, condyle and plateau; medical AND lateral compartments with or without patella resurfacing (total knee Arthroplasty)</td>
</tr>
<tr>
<td>27486</td>
<td>Revision of total knee Arthroplasty, with or without allograft; 1 component</td>
</tr>
<tr>
<td>27487</td>
<td>Revision of total knee Arthroplasty, with or without allograft; femoral and entire tibial component</td>
</tr>
<tr>
<td>27488</td>
<td>Removal of prosthesis, including total knee prosthesis, methylmethacrylate with or without insertion of spacer, knee</td>
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This list may not be all inclusive and is not intended to be used for coding/billing purposes. The final determination of reimbursement for services is the decision of the health plan and is based on the individual’s policy or benefit entitlement structure as well as claims processing rules.

### CMM-311.6 References


