COMPREHENSIVE MUSCULOSKELETAL MANAGEMENT GUIDELINES
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CMM-311 Knee Arthroplasty – Total & Partial
MedSolutions, Inc. Clinical Decision Support Tool

Common symptoms and symptom complexes are addressed by this tool. Requests for patients with atypical symptoms or clinical presentations that are not specifically addressed will require physician review. Consultation with the referring physician may provide additional insight.
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 tricompartamental involvement. Partial knee arthroplasty involves surgical reconstruction or replacement of one joint surface of the knee joint as a result of unicompartamental 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 cm2)
- Grade III - Fragmentation and fissuring greater than one square centimeter (1 cm2)
- 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).

**The UniSpacer** is a small, kidney shaped insert made of cobalt chrome for patients with early stage osteoarthritis of the knee. The UniSpacer is said to treat isolated, moderate degeneration of the medial compartment (Grade III-IV chondromalacia) with no more than minimal degeneration (Grade I-II chondromalacia; no loss of joint space) in the lateral condyle or patellofemoral compartment. The proposed goals of UniSpacer surgery are to relieve pain and to improve joint stability by restoring ligament tension and normal knee alignment.

**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 Knee Arthroplasty (Replacement):** Partial (unicondylar) knee arthroplasty is considered medically necessary when all of the following criteria have been met:

- Individual has chronic severe, disabling pain for at least 6 months in duration and a documented loss of knee function to the extent which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; *and*
- Individual demonstrates unicondylar degenerative arthritis (Kellgren-Lawrence Grade IV) with joint space narrowing on weight-bearing radiographs or *Modified Outerbridge Classification* Grade IV changes documented by arthroscopy; *and*
- Individual must have intact, stable ligaments, in particular the Anterior Cruciate Ligament; *and*
- Individual’s knee arc of motion (full extension to full flexion) must be greater than 90°; *and*
- Individual has undergone a reasonable course of non-surgical care.
✓ Partial (unicondylar) knee arthroplasty is considered not medically necessary when any of the following criteria are present:

- Individual has severe Grade III or IV patellofemoral joint arthritis (when unicondylar arthroplasty to be performed is medial or lateral); or
- Individual has previously undergone a High Tibial Osteotomy; or
- Individual has a tibial or femoral shaft deformity; or
- Individual demonstrates radiographic evidence of medial or lateral subluxation; or
- Individual demonstrates a flexion contracture greater than 15°; or
- Individual demonstrates a varus deformity greater than 15° or a valgus deformity greater than 20°; or
- Individual has an inflammatory arthropathy; or
- Individual has an active local or systemic infection; or
- Individual demonstrates a severe loss of musculature, neuromuscular compromise or vascular deficiency in the affected limb, rendering the procedure unjustifiable; or
- Individual demonstrates osteoporosis or other osseous abnormalities which would make the likelihood of a poor outcome more probable; or
- Individual demonstrates a severe lack of collateral ligament integrity leading to joint instability.

✓ Based on a lack of scientific evidence of efficacy and safety, bicondylar knee arthroplasty and bi-unicondylar knee arthroplasty as an alternative for total knee replacement is considered experimental, investigational or unproven.

Total Knee Arthroplasty

✓ Total Knee Arthroplasty (Replacement) is considered medically necessary when all of the following criteria have been met:

- Individual has chronic severe, disabling pain for at least 6 months in duration and a documented loss of knee function to the extent which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; and
- Individual demonstrates bicondylar or tricondylar degenerative arthritis (Kellgren-Lawrence Grade IV) with joint space narrowing on weight-bearing radiographs or Modified Outerbridge Classification Grade IV changes documented by arthroscopy; and
- Individual’s knee arc of motion is not limited to 50° or less; and
- Individual has undergone a reasonable course of non-surgical care.
Total Knee Arthroplasty (replacement) is considered not medically necessary when any of the following criteria are present:

- Individual has an active local or systemic infection; or
- Individual demonstrates a severe loss of musculature, neuromuscular compromise or vascular deficiency in the affected limb, rendering the procedure unjustifiable; or
- Individual demonstrates osteoporosis or other osseous abnormalities which would make the likelihood of a poor outcome more probable; or
- Individual demonstrates a severe lack of collateral ligament integrity leading to joint instability; or
- Individual demonstrates over 30 degrees of fixed varus or valgus deformity.

Total Knee Revision

Total Knee Revision is considered medically necessary when the following criteria have been met:

- Individual has previously undergone a partial or total knee arthroplasty and has developed chronic severe, disabling pain and a documented loss of knee function to the extent which interferes with their ability to carry out their age appropriate activities of daily living and/or their demands of employment; and individual demonstrates one of the following:
  - Fracture or dislocation of the patella; or
  - Instability of the components; or
  - Aseptic loosening; or
  - Infection; or
  - Periprosthetic fracture; or
  - Unexplained pain for greater than six (6) months not responsive to non-surgical management.

Total Knee Revision is considered not medically necessary when any of the following criteria are present:

- Individual suffers persistent infection; or
- Individual demonstrates poor bone quality; or
- Individual demonstrates limited quadriceps or extensor function; or
- Individual demonstrates poor skin coverage; or
- Individual has a poor vascular status.

UniSpacer

Based on a lack of scientific evidence of efficacy and safety, the use of the UniSpacer Device is considered experimental, investigational or unproven.
### CMM-311.4 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</td>
</tr>
<tr>
<td></td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>patella resurfacing (total knee Arthroplasty)</td>
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<tr>
<td>27486</td>
<td>Revision of total knee Arthroplasty, with or without allograft; 1 component</td>
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<tr>
<td>27487</td>
<td>Revision of total knee Arthroplasty, with or without allograft; femoral and entire tibial</td>
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<tr>
<td></td>
<td>component</td>
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<td>27488</td>
<td>Removal of prosthesis, including total knee prosthesis, methylmethacrylate with or without</td>
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<td></td>
<td>insertion of spacer, knee</td>
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<tr>
<td>27580</td>
<td>Arthrodesis, knee, any technique</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-311.5 References


