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Revised: 12/15/22

Subject: Knee Arthroplasty

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions	Related Guidelines
Other	References	Updates			

DESCRIPTION:

Arthroplasty describes the surgical replacement and or reconstruction of a joint with implanted devices when the joint has been damaged by an arthritic or traumatic process. A normal knee functions as a hinge joint between the femur and the tibia. The surfaces where these bones meet can become worn out over time, due to arthritis or other conditions, which can cause pain and swelling.

Total knee arthroplasty (TKA) replaces and reconstructs all articular joint surfaces. In some cases, only one surface within the knee develops arthritis with associated pain and functional loss. In these cases, a partial knee replacement (PKA) may be necessary to remove and reconstruct only the damaged region of the knee.

Unicompartmental knee arthroplasty (UKA) is also called partial replacement, hemiarthroplasty, unicondylar knee or bicondylar knee arthroplasty. This procedure involves reconstruction of either the medial or lateral weight bearing compartment of the knee, and/or the patellofemoral joint.

Revision arthroplasty describes surgical reconstruction due to failure or complication of a previous arthroplasty. In some cases, the knee prosthesis may wear out or loosen. If loosening is painful, a revision surgery may be necessary. In this procedure some or all of the components of the original replacement prosthesis are removed and replaced with new ones.

POSITION STATEMENT:

General criteria for elective knee arthroplasty

Elective knee arthroplasty **meets the definition of medical necessity** when **ALL** of the following are met:

- Knee pain with documented loss of function, which may include painful weight bearing, painful or inadequate range of motion to accomplish age-appropriate activities of daily living (ADLs) and/or employment, and painful mechanical catching, locking, or popping
- Medically stable with no uncontrolled comorbidities (e.g., diabetes)
- Does not have an active local or systemic infection
- Does not have an active, untreated drug dependency (including but not limited to narcotics, opioids, muscle relaxants) unless engaged in treatment program
- Has good oral hygiene and does not have major dental work scheduled or anticipated (ideally within one year of joint replacement), due to increased post-surgical infection risk
- Efforts have been made to ensure the surgical candidate is optimally informed and prepared for surgery

Clinical notes should address:

- Symptom onset, duration, and severity
- Loss of function and/or limitations
- Type and duration of non-operative management modalities
- Discussion with candidate regarding decision making and timing

***Non-operative management must include at least 2 of the following, unless otherwise specified:**

- Rest or activity modifications/limitations
- Weight reduction with elevated BMI
- Protected weight-bearing with cane, walker or crutches
- Brace/orthosis
- Physical therapy modalities
- Physician-supervised exercise program (including home exercise program)
- Pharmacologic treatment: oral/topical NSAIDS, acetaminophen, or analgesics
- Intra-articular injection(s)

NOTE: All requests for TKA, UKA, or revision TKA require documentation in the medical record that information regarding the potential risks, benefits, and complications specific to these procedures was provided to the member.

Total Knee Arthroplasty (TKA)

Total knee arthroplasty (TKA) **meets the definition of medical necessity** when the following criteria are met:

- Extensive disease or damage due to rheumatoid arthritis, post-traumatic arthritis (e.g., previous proximal tibia or distal femur fracture causing subsequent arthritis), fracture, avascular necrosis

confirmed by imaging (radiographs, MRI or other advanced imaging), or radiographs (X-rays) demonstrate bone-on-bone articulation, **AND**

- Persistent pain and documented loss of function with any of the above (**NOTE:** There is no indication to perform TKA in those with severe disease and no symptoms)

OR

When **ALL** of the following are met:

- Pain due to advanced osteoarthritis (Kellgren-Lawrence** grade 3 or grade 4 degeneration) that is persistent and severe, and/or has documented loss of function that has been present for at least 3 months resulting in a diminished quality of life
- Failure of at least 3 months of non-operative management
- Physical exam findings demonstrate one or more of the following:
 - Tenderness
 - Swelling/effusion
 - Limited range of motion (decreased from uninvolved side or as compared to a normal joint)
 - Flexion contracture
 - Palpable or audible crepitus
 - Instability and/or angular deformity
- Radiographic findings show evidence of advanced arthritic changes, described as Kellgren-Lawrence grade 3 or grade 4 degeneration, or described as X-rays demonstrating advanced changes such as severe narrowing or bone-on-bone compartment collapse, subchondral sclerosis, osteophyte formation and/or bony deformity [**NOTE:** The severity of knee osteoarthritis is commonly determined with weight-bearing radiographs; however, if severe arthritic changes such as bone on bone joint space narrowing are noted on non-weight-bearing images, further weight-bearing images are not required.]
- No corticosteroid injection into the joint within 12 weeks of surgery

Absolute contraindications for total knee arthroplasty:

- Active infection (local or remote). If a local or remote infection is documented in the history, records should clearly demonstrate that the previous infection had been treated and symptoms have resolved or that the candidate has no clinical signs or symptoms of the previous infection at the time of the operation.
- Any corticosteroid injection into the joint within 12 weeks of surgery

Relative contraindications for total knee arthroplasty:

- Prior infection at site (unless aspiration with cultures and serology [CBC with differential, ESR, CRP] demonstrates no infection)

- **NOTE:** If prior infection at site, tissue biopsies should be sent intra-operatively to exclude latent/dormant infection
- Documented allergy to any proposed component
- BMI > 40, without attempts at weight loss or discussion of increased risk conferred by BMI
- Severe peripheral vascular disease
- Compromised soft tissue envelope
- Uncontrolled comorbidities

Unicompartmental Knee Arthroplasty (UKA) [Partial Knee Arthroplasty (PKA)]

Medial or lateral UKA/PKA **meets the definition of medical necessity** when **ALL** of the following are met:

- At least 3 months of pain localized to the medial or lateral compartment
- Failure of at least 3 months of non-operative management
- Total arc of motion (goniometer) > 90 degrees
- Normal ACL or stable reconstructed ACL per physical exam test
- Standing, weight-bearing radiographs demonstrate only unicompartmental disease (with or without patellofemoral involvement), described as Kellgren-Lawrence** grade 3 or 4 degeneration
- Contracture < or equal to 10 degrees upon physical exam (goniometer)
- Angular deformity < or equal to 10 degrees and passively correctable to neutral upon physical exam (goniometer)
- No corticosteroid injection into the joint within 12 weeks of surgery

NOTE: All requests for UKA in individuals with chronic, painless effusion and extensive radiographic arthritis will be evaluated on a **case by case basis**.

Contraindications for medial or lateral UKA/PKA:

- Any corticosteroid injection into the joint within 12 weeks of surgery
- Local or systemic active infection
- Inflammatory arthritis
- Angular deformity or contracture greater than indicated range
- Significant arthritic involvement of opposite knee compartment
- ACL instability
- Poor bone quality or significant osteoporosis or osteopenia
- Meniscectomy of the opposite compartment, involving > 25% of meniscus
- Stiffness greater than indicated range of motion

Patellofemoral UKA/PKA **meets the definition of medical necessity** when **ALL** of the following are met:

- Failure of prior patellofemoral unloading procedures (e.g., Maquet, Fulkerson)
- Failure of at least 3 months of non-operative management
- Standing, AP, or PA weight-bearing radiographs demonstrate only unicompartamental disease of the patellofemoral joint, described as Kellgren-Lawrence** grade 3 or grade 4 degeneration (joint space narrowing, osteophyte formation, sclerosis and/or subchondral cystic changes), with no evidence of medial or lateral arthritis

OR

When **ALL** of the following are met:

- At least 6 months of isolated patellar/anterior knee pain
- Patellar/anterior knee pain that is exacerbated by stairs, inclines, transfers or prolonged sitting
- Reproducible patellofemoral pain upon physical exam
- No ligamentous instability upon physical exam
- Failure of at least 3 months of non-operative management
- Standing, AP, or PA weight-bearing radiographs demonstrate only unicompartamental disease of the patellofemoral joint, described as Kellgren-Lawrence** grade 3 or grade 4 degeneration, with no evidence of medial or lateral arthritis
- No cortisone injection into the joint within 12 weeks of surgery

Contraindications for patellofemoral UKA/PKA:

- Any corticosteroid injection into the joint within 12 weeks of surgery
- Local or systemic active infection
- Inflammatory arthritis
- Angular deformity or contracture greater than indicated range
- Significant arthritic involvement of the medial or lateral knee compartment(s)
- Ligament instability
- Poor bone quality or significant osteoporosis or osteopenia
- Stiffness greater than indicated range of motion

Revision Arthroplasty

Revision total knee arthroplasty (TKA) meets **the definition of medical necessity** when **ALL** of the following criteria are met:

- Previous removal of infected knee prosthesis
- No evidence of current, ongoing, or inadequately treated knee infection [documented by a normal erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP)], **OR** significant improvement in these markers and a clear statement by the treating surgeon that infection has been adequately treated

- **NOTE:** If these inflammatory markers are elevated, further evaluation is generally required, including an aspiration with synovial fluid WBC count, gram stain and cultures, or an intraoperative frozen biopsy.
- Off antibiotics at the time of pre-operative testing and aspiration, as well as re-implantation

OR

When **ALL** of the following criteria are met:

- Symptomatic UKA/PKA or TKA as evidenced by persistent, severe disabling pain, complaints of instability, mechanical abnormalities (“clunking” or audible crepitus), any of which result in a loss of function
- Any of the following findings upon physical exam:
 - Tenderness to palpation objectively attributable to the implant
 - Swelling or effusion
 - Pain on weight-bearing or motion
 - Instability on stress-testing
 - Abnormal or limited motion (compared to usual function)
 - Palpable or audible crepitus or “clunking” associated with reproducible pain
- Aseptic loosening, instability, osteolysis, progressive bone loss or mechanical failure confirmed on radiographic or advanced imaging (bone scan, CT scan, or MRI) (Cases that do not demonstrate any radiographic abnormalities yet show findings of gross instability on physical examination will be evaluated on a **case-by-case** basis)
- No evidence of current, ongoing, or inadequately treated knee infection [ruled out by normal inflammatory markers (ESR and CRP)]
- No corticosteroid injection into the joint within 12 weeks of surgery

NOTE: Removal of an infected knee prosthesis and subsequent insertion of antibiotic spacer is not considered an elective surgery or a revision knee arthroplasty.

Absolute contraindications for revision arthroplasty:

- Active infection (local or remote). If a local or remote infection is documented in the history, records should clearly demonstrate that the previous infection had been treated and symptoms have resolved or that the candidate has no clinical signs or symptoms of the previous infection at the time of the operation.
- Any corticosteroid injection into the joint within 12 weeks of surgery

Relative contraindications for revision arthroplasty:

- Unstable or poorly controlled comorbidities
- Severe peripheral vascular disease
- Compromised soft-tissue envelope (revision may be performed in conjunction with plastic surgical consultation for soft tissue coverage via pedicle flaps or other acceptable procedure)

NOTE: All requests for revision arthroplasty require documentation in the medical record that the potential risks, benefits, and complications specific to this procedure were discussed with the candidate.

****Kellgren-Lawrence Grading System:**

Grade 0: No radiographic features of osteoarthritis

Grade 1: Possible joint space narrowing and osteophyte formation

Grade 2: Definite osteophyte formation with possible joint space narrowing

Grade 3: Moderate multiple osteophytes, definite narrowing of joint space, some sclerosis and possible deformity of bone contour

Grade 4: Large osteophytes, marked narrowing of joint space, severe sclerosis and definite deformity of bone contour

BILLING/CODING INFORMATION:

CPT Coding

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

REIMBURSEMENT INFORMATION:

Refer to section entitled [POSITION STATEMENT](#).

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage products: The following Local Coverage Determination (LCD) was reviewed on the last guideline review date: Major Joint Replacement (Hip and Knee) (L33618), located at fcso.com.

DEFINITIONS:

No guideline specific definitions apply.

RELATED GUIDELINES:

[Autologous Chondrocyte Implantation \(ACI\), 02-20000-17](#)

[Computer Assisted Musculoskeletal Surgical Navigational Orthopedic Procedure, 02-20000-30](#)

[Knee Arthroscopy and Open, Non-Arthroplasty Knee Repair, 02-20000-65](#)

OTHER:

None applicable.

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COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 04/22/21.

GUIDELINE UPDATE INFORMATION:

10/15/16	New Medical Coverage Guideline.
04/15/17	Revision: updated criteria for total knee arthroplasty; unicompartmental knee arthroplasty (UKA) (partial arthroplasty, hemiarthroplasty, unicondylar knee arthroplasty, and bicondylar knee arthroplasty); and revision arthroplasty. Updated references.
07/15/18	Scheduled review. Revised description. Added general criteria for elective knee arthroplasty. Revised criteria for total knee arthroplasty and revision arthroplasty; separated UKA/PKA criteria into medial/lateral and patellofemoral. Deleted references to “computer-navigated instrumentation”, “patient-specific instrumentation”, and “gender-specific instrumentation”. Updated references.
07/15/19	Scheduled review. Revised TKA and TKA revision criteria. Updated references.
08/15/19	Revision. Deleted extreme morbid obesity (BMI > 40) as a contraindication for TKA.
07/15/20	Scheduled review. Revised position statement and CPT coding. Updated references.
05/15/21	Scheduled review. Revised relative contraindications for TKA; revised criteria for UKA and revision arthroplasty. Updated references.
12/15/22	Revision: Deleted statement regarding simultaneous bilateral total knee arthroplasty.