

MEDICAL POLICY – 7.01.549

Knee Arthroscopy in Adults


Effective Date: Apr. 1, 2025
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RELATED MEDICAL POLICIES:

- 1.03.501 Custom-made Knee Orthoses (Braces), Ankle-Foot-Orthoses, and Knee-Ankle-Foot-Orthoses
- 2.01.31 Intra-Articular Hyaluronan Injections for Osteoarthritis
- 7.01.15 Meniscal Allograft and Other Meniscus Implants
- 7.01.48 Autologous Chondrocyte Implantation for Focal Articular Cartilage Lesions
- 7.01.78 Autografts and Allografts in the Treatment of Focal Articular Cartilage Lesions
- 7.01.113 Bioengineered Skin and Soft Tissue Substitutes
- 7.01.160 Synthetic Cartilage Implants for Joint Pain
- 7.01.550 Knee Arthroplasty in Adults
- 11.01.524 Site of Service: Select Surgical Procedures

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Introduction

The knee is a complex joint that includes multiple components. Knee pain can be caused by many different conditions including bending or using the knee too much, arthritis, swelling, fluid collection, tears in any of four different ligaments or in the meniscus (a cushion of cartilage), muscle strains, injuries, infections, or hip problems. Most often knee pain improves with rest, ice, and pain-relieving medications. When knee pain is associated with an injury or pain is worsening or fails to improve after several days, tests or x-ray studies may help to determine the cause and direct the best treatment. Technology has led to the development of a process known as arthroscopy in which the inside of the knee can be visualized and treated. Small incisions (cuts) are made in the knee to allow the surgeon to insert a narrow tube with a camera into the area. The camera sends images to a monitor, which allows the inside of the knee and its structures to be viewed in detail. Arthroscopy can also be used to diagnose and treat specific knee problems such as repairing the knee or removing damaged tissue. This policy describes when knee

arthroscopy is covered by the health plan. For some conditions, a trial of conservative care including physical therapy, time, and medication is recommended before arthroscopy is done.

Note: The Introduction section is for your general knowledge and is not to be taken as policy coverage criteria. The rest of the policy uses specific words and concepts familiar to medical professionals. It is intended for providers. A provider can be a person, such as a doctor, nurse, psychologist, or dentist. A provider also can be a place where medical care is given, like a hospital, clinic, or lab. This policy informs them about when a service may be covered.

Policy Coverage Criteria

We will review for medical necessity these elective surgical procedures.

We also will review the site of service for medical necessity. Site of service is defined as the location where the surgical procedure is performed, such as an off campus-outpatient hospital or medical center, an on campus-outpatient hospital or medical center, an ambulatory surgical center, or an inpatient hospital or medical center.

Site of Service for Elective Surgical Procedures	Medical Necessity
Medically necessary sites of service: <ul style="list-style-type: none">• Off campus-outpatient hospital/medical center• On campus-outpatient hospital/medical center• Ambulatory Surgical Center	Certain elective surgical procedures will be covered in the most appropriate, safe, and cost-effective site. These are the preferred medically necessary sites of service for certain elective surgical procedures.
Inpatient hospital/medical center	Certain elective surgical procedures will be covered in the most appropriate, safe, and cost-effective site. This site is considered medically necessary only when the individual has a clinical condition which puts him or her at increased risk for complications including any of the following (this list may not be all inclusive): <ul style="list-style-type: none">• Anesthesia Risk



Site of Service for Elective Surgical Procedures	Medical Necessity
	<ul style="list-style-type: none"> ○ American Society of Anesthesiologists (ASA) classification III or higher (see definition) ○ Personal history of complication of anesthesia ○ Documentation of alcohol dependence or history of cocaine use ○ Prolonged surgery (>3 hours) ● Cardiovascular Risk <ul style="list-style-type: none"> ○ Uncompensated chronic heart failure (NYHA class III or IV) ○ Recent history of myocardial infarction (MI) (<3 months) ○ Poorly controlled, resistant hypertension* ○ Recent history of cerebrovascular accident (< 3 months) ○ Increased risk for cardiac ischemia (drug eluting stent placed < 1 year or angioplasty <90 days) ○ Symptomatic cardiac arrhythmia despite medication ○ Significant valvular heart disease ● Liver Risk <ul style="list-style-type: none"> ○ Advance liver disease (MELD Score > 8)** ● Pulmonary Risk <ul style="list-style-type: none"> ○ Chronic obstructive pulmonary disease (FEV1 <50%) ○ Poorly controlled asthma (FEV1 <80% despite treatment) ○ Moderate to severe obstructive sleep apnea*** ● Renal Risk <ul style="list-style-type: none"> ○ End stage renal disease (on dialysis) ● Other <ul style="list-style-type: none"> ○ Morbid obesity (body mass index ≥ 50) ○ Pregnancy ○ Bleeding disorder (requiring replacement factor, blood products, or special infusion product [DDAVP**** does not meet this criterion]) ○ Anticipated need for transfusion(s) <p>Note: * 3 or more drugs to control blood pressure ** https://reference.medscape.com/calculator/359/meld-score-age-above-12-years</p>

Site of Service for Elective Surgical Procedures	Medical Necessity
	<p>*** Moderate-Apnea-Hypopnea Index (AHI) ≥ 15 and ≤ 30, Severe-AHI ≥ 30</p> <p>****DDAVP-Deamino-Delta-D-Arginine Vasopressin (Desmopressin)</p>
Inpatient hospital/medical center	This site of service is considered NOT medically necessary for certain elective surgical procedures when the site of service criteria listed above are not met.

NOTE: This policy only applies to adults aged 19 and older

Hyperlinks to criteria:

[Anterior cruciate ligament \(ACL\) tear](#)

[Meniscal tear](#)

[Arthroscopic debridement, drainage, or lavage](#)

[Osteochondral defect](#)

[Chondromalacia patellae \(patellar compression syndrome\)](#)

[Popliteal \(Baker\) cyst](#)

[Posterior cruciate ligament \(PCL\) tear](#)

[Intra-articular joint pathology](#)

[Synovial disorders](#)

Indication	Medical Necessity
Meniscal tear	<p>Knee arthroscopy for repair of a meniscal tear may be considered medically necessary when ALL of the following criteria are met:</p> <ul style="list-style-type: none"> Clinical documentation confirms the presence of ONE of the following: <ul style="list-style-type: none"> Positive McMurray test; or Positive Apley test; or Joint line tenderness with palpation; or Diagnostic imaging (MRI, CT, etc.) done within the 12 months prior to surgery demonstrates a torn or displaced meniscus (e.g., bucket handle tear, radial tear, posterior horn tear); or Meniscus tear coincident with anterior cruciate ligament (ACL) injury, discovered during arthroscopy for ACL <p>AND</p>



Indication	Medical Necessity
	<ul style="list-style-type: none"> Repair is indicated by ONE of the following: <ul style="list-style-type: none"> Functional impairment (e.g., knee locking, giving way or decreased range of motion [ROM]) is present; or A medically necessary ACL repair or reconstruction has been approved; or Symptoms have not responded to 8 weeks of conservative care (e.g., PT, activity modification, oral analgesics) <p>AND</p> <ul style="list-style-type: none"> If age 50 and older, imaging shows the absence of severe arthritis (i.e., large osteophytes, marked narrowing of joint space, severe sclerosis, and definite deformity of bone contour) <p>Knee arthroscopic partial meniscectomy is considered not medically necessary for a degenerative tear(s) (e.g., horizontal cleavage tear on imaging) with no associated mechanical symptoms (e.g., knee locking, giving way, or decreased range of motion)</p>
Anterior cruciate ligament (ACL) tear	<p>Knee arthroscopy for repair of an ACL tear may be considered medically necessary when ALL of the following criteria are met:</p> <ul style="list-style-type: none"> Clinical documentation confirms the presence of ONE of the following: <ul style="list-style-type: none"> Positive anterior drawer sign (laxity with anterior stress to the knee) Positive pivot shift test; or Positive Lachman test; or Diagnostic imaging (magnetic resonance imaging [MRI], computed Tomography [CT], etc.) done within the 12 months prior to surgery demonstrates an ACL tear <p>AND</p> <ul style="list-style-type: none"> Repair is indicated by ONE of the following: <ul style="list-style-type: none"> Symptoms have not responded to 2 weeks of conservative care (e.g., physical therapy [PT], activity modification, oral analgesics); or ACL tear occurred in conjunction with meniscus tear or concomitant multi-ligamentous knee injuries (e.g., medial collateral, posterior cruciate, lateral collateral); or Individual is involved in physically demanding occupation (e.g., firefighter, law enforcement, construction); or Individual participates in activities involving cutting, jumping, and/or pivoting (e.g., skiing, basketball, football)

Indication	Medical Necessity
	<p>Note: Please see 7.01.113 Bioengineered Skin and Soft Tissue Substitutes for information on the BEAR (bridge-enhanced anterior cruciate ligament repair) implant which may be used in conjunction with anterior cruciate ligament repair.</p>
<p>Posterior cruciate ligament (PCL) tear</p>	<p>Knee arthroscopy for repair or reconstruction of a PCL tear may be considered medically necessary when ALL of the following criteria are met:</p> <ul style="list-style-type: none"> Evidence of torn PCL with presence of ONE of the following: <ul style="list-style-type: none"> Positive posterior drawer sign (laxity with posterior stress to knee) Positive reversed pivot shift test; or Positive posterior sag sign; or Diagnostic imaging (MRI, CT, etc.) done within the 12 months prior to surgery demonstrates a PCL tear <p>AND</p> <ul style="list-style-type: none"> PCL tear occurred with ONE of the following other injuries: <ul style="list-style-type: none"> Injury to the posterolateral corner of the knee; or Medial collateral ligament tear; or ACL tear; or Avulsion fracture of fibular head; or Avulsion of the tibia distal to the lateral plateau (Segond fracture)
<p>Arthroscopic debridement, drainage, or lavage</p>	<p>Knee arthroscopy for arthroscopic debridement, drainage, or lavage may be considered medically necessary when ONE of the following is present:</p> <ul style="list-style-type: none"> Rheumatoid arthritis; or Septic joint or osteomyelitis; or Septic prosthetic joint; or Postoperative arthrofibrosis (e.g., after ACL repair or total knee arthroplasty) as indicated by BOTH of the following: <ul style="list-style-type: none"> Loss of range of motion; and Symptoms have not responded to 8 weeks of conservative care (e.g., PT, activity modification, oral analgesics) <p>Arthroscopic debridement, drainage, and/or lavage for the treatment of osteoarthritis of the knee in the absence of any other findings is considered not medically necessary</p>



Indication	Medical Necessity
Intra-articular joint pathology	<p>Knee arthroscopy for evaluation or treatment of intra-articular joint pathology may be considered medically necessary when ALL of the following is present:</p> <ul style="list-style-type: none"> • Mechanical symptoms (including locked knee or giving way); and • A loose or foreign body is evident on imaging or plain x-rays <p>OR</p> <ul style="list-style-type: none"> • Chronic knee pain, effusion, or instability and ALL of the following: <ul style="list-style-type: none"> ○ Etiology is unknown; and ○ Imaging (MRI) or plain x-rays are nondiagnostic; and ○ Symptoms have not responded to 8 weeks of conservative care (e.g., PT, activity modification, oral analgesics)
Osteochondral defect	<p>Knee arthroscopy for repair of an osteochondral defect (e.g., osteochondritis dissecans) may be considered medically necessary when a displaced osteochondral lesion or loose body is present and the following criterion is met:</p> <ul style="list-style-type: none"> • Diagnostic imaging (MRI, CT, etc.) or plain x-rays done within the 12 months prior to surgery shows the presence of an osteochondral defect
Chondromalacia patellae (patellar compression syndrome)	<p>Knee arthroscopy for lateral retinacular release for patellar compression syndrome (chondromalacia patellae) may be considered medically necessary when ONE of the following is present:</p> <ul style="list-style-type: none"> • Positive patella glide test; or • Positive patella tilt test; or • Articular cartilage lesion and ALL of the following: <ul style="list-style-type: none"> ○ Symptoms are attributed to chondral injury; and ○ Diagnostic imaging (MRI, CT, etc.) done within the 12 months prior to surgery demonstrates a cartilage defect; and ○ Symptoms have not responded to 8 weeks of conservative care (e.g., PT, activity modification, oral analgesics)
Popliteal (Baker) cyst	<p>Knee arthroscopy for excision of a symptomatic popliteal (Baker) cyst may be considered medically necessary when BOTH of the following are present:</p> <ul style="list-style-type: none"> • Visible or palpable bulge in the popliteal fossa is evident on clinical exam or diagnostic imaging (e.g., MRI, CT, ultrasound) demonstrates the presence of the cyst <p>AND</p>



Indication	Medical Necessity
	<ul style="list-style-type: none"> Symptoms have not responded to 8 weeks of conservative care (e.g., PT, activity modification, oral analgesics)
Synovial disorders	<p>Knee arthroscopy for a synovectomy (as a stand-alone or limited or major procedure) may be considered medically necessary to treat ONE of the following:</p> <ul style="list-style-type: none"> Rheumatoid arthritis; or Hemophilic joint disease; or Localized pigmented villonodular synovitis; or Other chronic inflammatory conditions (e.g., antibiotic-resistant Lyme arthritis)

Documentation Requirements
<p>For meniscal tear, supporting documentation of ALL of the following:</p> <ul style="list-style-type: none"> Confirming exam or imaging: <ul style="list-style-type: none"> Positive McMurray test, or positive Apley test, or joint line tenderness with palpation OR <ul style="list-style-type: none"> Diagnostic imaging done within 12 months prior to surgery demonstrates torn or displaced meniscus (e.g., bucket handle tear, radial tear, posterior horn tear) OR <ul style="list-style-type: none"> Meniscus tear and anterior cruciate ligament injury discovered during arthroscopy for anterior cruciate ligament <p>AND</p> <ul style="list-style-type: none"> ONE of the following: <ul style="list-style-type: none"> with impaired function on exam (e.g., knee locking, giving way or decreased range of motion) OR <ul style="list-style-type: none"> Pre-approved for medically necessary anterior cruciate ligament repair or reconstruction OR <ul style="list-style-type: none"> Failed a trial of nonoperative conservative therapy for 8 weeks (e.g., physical therapy, activity modification, oral analgesics) <p>AND</p> <ul style="list-style-type: none"> For individuals 50 years old and older, imaging shows an absence of severe knee osteoarthritis <p>For anterior cruciate ligament tear, supporting documentation of ALL of the following:</p> <ul style="list-style-type: none"> Confirming exam or imaging:

Documentation Requirements

- Positive anterior drawer sign (laxity with anterior stress to the knee), or positive pivot shift test, or positive Lachman test

OR

- Diagnostic imaging (MRI, CT, etc.) done within the 12 months prior to surgery shows a tear of the anterior cruciate ligament

AND

- ONE of the following:

- Failed trial of nonoperative conservative therapy for 2 weeks (e.g., PT, activity modification, oral analgesics)

OR

- Anterior cruciate ligament tear occurred in combination with meniscus tear or ligamentous injuries (i.e., medial or posterior collateral ligament, posterior cruciate ligament, or posterolateral ligamentous corner injury)

OR

- Individual is involved in physically demanding occupation (e.g., firefighter, law enforcement, construction) or participates in activities involving cutting, jumping, and/or pivoting (e.g., skiing, basketball, football)

For posterior cruciate ligament tear, supporting documentation of ALL of the following:

- Confirming exam or imaging:

- Positive posterior drawer sign (laxity with posterior stress to knee), or positive reversed pivot shift test, or positive posterior sag sign

OR

- Diagnostic imaging (MRI, CT, etc.) done within the 12 months prior to surgery demonstrates a PCL tear

AND

- Posterior cruciate ligament tear occurred in combination with other injury (i.e., injury to posterolateral corner of the knee, medial collateral ligament tear, ACL tear, avulsion fracture of fibular head or avulsion of the tibia distal to the lateral plateau [also known as Second fracture])

For arthroscopic debridement, drainage, or lavage, supporting documentation of presence of ONE of the following:

- Rheumatoid arthritis, or septic joint or osteomyelitis, or septic prosthetic joint

OR

Documentation Requirements

- Postoperative arthrofibrosis (after ACL repair or total knee arthroplasty) as indicated by BOTH of the following: loss of range of motion and the symptoms have not responded to 8 weeks of conservative care (e.g., PT, activity modification, oral analgesics)

For intra-articular joint pathology, history, exam, and diagnostic testing showing ALL of the following:

- Mechanical symptoms (including locked knee or giving way), and a loose or foreign body seen on imaging

OR

- Chronic knee pain, effusion, or instability is present along with all of the following: Etiology is unknown, and imaging studies are nondiagnostic and symptoms have not responded to 8 weeks of non-operative conservative therapy (e.g., PT, activity modification, oral analgesics)

For osteochondral defect, history, exam demonstrates presence of displaced osteochondral lesion or presence of loose body and the following:

- Osteochondral defect demonstrated on imaging

For chondromalacia patellae (patellar compression syndrome), history, exam show one of the following:

- Positive patella glide test or positive patella tilt test; or
- Articular cartilage lesion and all of the following: symptoms attributed to chondral injury and cartilage defect demonstrated on imaging, and symptoms have not responded to 8 weeks conservative care (e.g., PT, activity modification, oral analgesics)

For popliteal (Baker) cyst, history, exam demonstrate:

- Visible or palpable bulge in the popliteal fossa or imaging shows presence of the cyst and symptoms have not responded to 8 weeks conservative care (e.g., PT, activity modification, oral analgesics)

For synovial disorders, history, exam show one of the following medical conditions:

- Rheumatoid arthritis, or hemophilic joint disease or localized pigmented villonodular synovitis or other chronic inflammatory conditions (e.g., antibiotic resistant Lyme arthritis)

Coding

Code	Description
CPT	
29870	Arthroscopy, knee, diagnostic, with or without synovial biopsy (separate procedure)
29871	Arthroscopy, knee, surgical; for infection, lavage and drainage
29873	Arthroscopy, knee, surgical; with lateral release
29874	Arthroscopy, knee, surgical; for removal of loose body or foreign body, (e.g., osteochondritis dissecans fragmentation, chondral fragmentation)
29875	Arthroscopy, knee, surgical; synovectomy, limited (e.g., plica or shelf resection)
29876	Arthroscopy, knee, surgical; synovectomy, major, 2 or more compartments (e.g., medial or lateral)
29877	Arthroscopy, knee, surgical; debridement/shaving of articular cartilage (chondroplasty)
29879	Arthroscopy, knee, surgical; abrasion arthroplasty (includes chondroplasty where necessary) or multiple drilling or microfracture
29880	Arthroscopy, knee, surgical; with meniscectomy (medial AND lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29881	Arthroscopy, knee, surgical; with meniscectomy (medial OR lateral, including any meniscal shaving) including debridement/shaving of articular cartilage (chondroplasty), same or separate compartment(s), when performed
29882	Arthroscopy, knee, surgical; with meniscus repair (medial OR lateral)
29883	Arthroscopy, knee, surgical; with meniscus repair (medial AND lateral)
29884	Arthroscopy, knee, surgical; with lysis of adhesions, with or without manipulation (separate procedure)
29888	Arthroscopically aided anterior cruciate ligament repair/augmentation or reconstruction
29889	Arthroscopically aided posterior cruciate ligament repair/augmentation or reconstruction

Related Information

Consideration of Age

There is a lack of scientific evidence supporting arthroscopy for meniscal tears in middle aged individuals (aged 50 or older) with severe arthritis. Several studies show the surgery is no better than a placebo and is not recommended by the American Academy of Orthopedic Surgeons.

This policy is intended for use in the adult population as it is based on utilization in this population.

Definition of Terms

American Society of Anesthesiologists (ASA) Score:

ASA 1 A normal healthy patient.

ASA 2 A patient with mild systemic disease.

ASA 3 A patient with severe systemic disease.

ASA 4 A patient with severe systemic disease that is a constant threat to life.

ASA 5 A moribund patient who is not expected to survive

Anterior drawer test: A test used in the initial clinical assessment of suspected rupture of the cruciate ligaments in the knee.

Apley test: A test used to evaluate problems of the meniscus.

Chondromalacia patella: Inflammation and softening of the cartilage on the underside of the patella causing pain on the front of the knee.

Chondroplasty: Surgery to smooth and reshape cartilage by scraping, cutting, or shaving it. The procedure is often done arthroscopically.

Knee giving way: The knee is held together by ligaments, and the sensation of instability, or the knee giving out, is often due to a tear in one of the knee ligaments or menisci.

Knee locking: The sudden inability to either bend or straighten the knee. This is usually caused by a mechanical block to knee motion and is accompanied by significant pain. The most common cause is a fragment of torn meniscal tissue that becomes stuck between the articular surfaces.

Lachman test: A test to diagnose ACL injuries. With the patient supine, the knee is flexed at 20-30 degrees. The femur is secured, and with the examiner's thumb on the tibial tuberosity, the tibia is pulled forward. A positive test is anterior displacement, and the absence of a solid stop (end point) compared to unaffected leg.

McMurray test: A rotation test used to evaluate individuals for tears in the meniscus of the knee



Microfracture: A type of surgery used to repair damaged articular cartilage. The surgeon makes small holes in the bone just below the cartilage, which then allows stem cells from the bone marrow to get to the surface and stimulate cartilage growth. This works best when the defect is less than 2 centimeters in diameter and the individual is younger than 30 years of age.

New York Heart Association (NYHA) Classification:

Class I No symptoms and no limitation in ordinary physical activity, e.g., shortness of breath when walking, climbing stairs etc.

Class II Mild symptoms (mild shortness of breath and/or angina) and slight limitation during ordinary activity.

Class III Marked limitation in activity due to symptoms, even during less-than-ordinary activity, e.g., walking short distances (20–100 m). Comfortable only at rest.

Class IV Severe limitations. Experiences symptoms even while at rest. Mostly bedbound patients

Patellar tilt test: A test that assesses the tightness of lateral soft tissue structures in the knee by looking at the amount of lateral tilt or displacement of the patella. It has been used to help diagnose patellofemoral pain syndrome.

Patellar glide test: A test where the patella is manually displaced laterally and medially with the knee extended and the quadriceps relaxed. Translation less than one-quarter of the patella's width signifies a tight retinaculum, while translation of three-quarters of the patella's width signifies a hypermobile patella. It has been used to help diagnose patellofemoral pain syndrome.

Patellofemoral pain syndrome: Anterior knee pain involving the patella and retinaculum that excludes other intraarticular and peripatellar pathology. The pain worsens with prolonged sitting or when descending stairs. It is a complex syndrome and is a diagnosis of exclusion.

Pigmented villonodular synovitis: A condition that causes the synovium (the thin layer of tissue that lines the joints and tendons) to thicken and overgrow.

Pivot shift test: A very accurate test for the anterior cruciate ligament, lateral cruciate ligament, and posterior capsule integrity.

Evidence Review

Description

Knee arthroscopy is a surgical procedure performed through small incisions. During the procedure, the surgeon inserts an arthroscope into the knee joint. The arthroscope sends the image to a monitor so the structures of the knee can be observed in greater detail. The arthroscope is used to feel, repair, or remove damaged tissue. To do this, small surgical instruments are inserted through separate incisions around the knee.

Knee arthroscopy is the most commonly performed orthopedic procedure. Indications include diagnostic arthroscopy, meniscectomy, loose body removal, chondroplasty, microfracture, irrigation and debridement, and ligament reconstruction.

The two most frequent operative procedures in knee arthroscopy are meniscectomy and chondroplasty. Areas of cartilage degeneration or damage can be treated with chondroplasty. Rough and unstable cartilage lesions are treated with the use of an oscillating shaver, curettes, and other debridement tools. Unstable cartilage is removed while being careful not to damage healthy cartilage or to expose bare bone. Microfracture chondroplasty is one advanced technique for treating cartilage damage.

Background

Intra-articular Joint Pathology

Synovial plicae are membranous inward folds of the synovial lining of the knee joint capsule. Such folds are regularly found in the human knee, but most are asymptomatic and of little clinical consequence. However, they can become symptomatic and cause knee pain. Medial plica irritation of the knee is a common source of anterior knee pain. The main complaint is an intermittent, dull, aching pain in the area medial to the patella above the joint line and in the supramedial patellar area. Pain increases with activity, especially when knee flexion and extension are required. Treatment includes physiotherapy, reducing activity, and rest. In cases that do not respond initially to an exercise program, corticosteroid injections and non-steroidal anti-inflammatory medication are given. Results of conservative treatment seem to be more appropriate in young individuals with a short duration of symptoms. If conservative treatment fails, surgical treatment using arthroscopy is appropriate. During arthroscopy, excision of the whole plica should be achieved.¹

Articular cartilage lesions of the knee are most commonly treated with chondroplasty or microfracture chondroplasty.

Osteochondral Dissecans

Juvenile osteochondritis dissecans (JOCD) has been a recognized entity for more than 100 years. Despite long recognition of JOCD, the natural history and most effective therapies are poorly understood. Although conclusive evidence of an exact cause is lacking, there is widespread agreement that JOCD is related to repetitive trauma. Individuals with JOCD present with vague pain and occasionally, mechanical symptoms. The diagnosis of JOCD can be confirmed on plain radiographs. Magnetic resonance imaging has emerged as the study of choice to evaluate the stability of the lesion and integrity of the overlying articular cartilage. Treatment decisions are based on the stability of the lesion. Stable JOCD lesions should be treated initially with activity modification and possibly, immobilization. Unstable lesions and stable lesions not responding to an initial course of nonoperative therapy should be surgically treated. Surgical treatment is based on the radiographic and arthroscopic characteristics of the lesion. Multiple techniques from simple arthroscopic drilling and fixation to salvage techniques for cartilage restoration are discussed in this policy.²

Torn Meniscus

In 2014, Mordecai et al wrote an evidence-based review exploring the options for managing meniscal tears. Treatment options for meniscal tears fall into three broad categories: non-operative, meniscectomy or meniscal repair. Selecting the most appropriate treatment for a given individual involves both patient factors and tear characteristics. There is evidence suggesting that degenerative tears in older individuals without mechanical symptoms can be effectively treated non-operatively with a structured physical therapy program as a first line. Even if these individuals later require meniscectomy, they will still achieve similar functional outcomes than if they had initially been treated surgically. Partial meniscectomy is suitable for symptomatic tears not amenable to repair and can still preserve meniscal function especially when the peripheral meniscal rim is intact. Meniscal repair shows 80% success at 2 years and is more suitable in younger individuals with reducible tears that are peripheral and horizontal or longitudinal in nature. However, careful patient selection and repair technique is required with good compliance to post-operative rehabilitation which often consists of bracing and non-weight bearing for 4-6 weeks.³



Torn Ligaments

The multiple ligament-injured knee is a complex problem in orthopedic surgery. These injuries may or may not present as acute knee dislocations, and careful assessment of the extremity vascular and neurologic status is essential because of the possibility of arterial and/or venous compromise, and nerve injury. These complex injuries require a systematic approach to evaluation and treatment. Physical examination and imaging studies enable the surgeon to make a correct diagnosis and formulate a treatment plan. Knee stability is improved postoperatively when evaluated with knee ligament rating scales, arthrometer testing, and stress radiographic analysis. Surgical timing depends on the injured ligaments, vascular status of the extremity, reduction stability, and the overall health of the individual. The use of allograft tissue is preferred because of the strength of these large grafts, and the absence of donor site morbidity.⁴

In 2015, the Multicenter Orthopaedic Outcomes Network (MOON) longitudinal research on ACL reconstruction stated meniscal injuries were the most common injury found in both primary and revision ACL procedures. There were 509 individuals in the primary ACL revision and 281 individuals underwent revision reconstruction. With the high prevalence of meniscal tears associated with ACL tears, meniscal repairs are a necessary component of the ACL reconstruction to help minimize potential for posttraumatic osteoarthritis.⁵

The optimal treatment of posterior cruciate ligament ruptures remains controversial despite numerous recent basic science advances on the topic. The current literature on the anatomy, biomechanics, and clinical outcomes of posterior cruciate ligament reconstruction is reviewed. Recent studies have quantified the anatomic location and biomechanical contribution of each of the 2 posterior cruciate ligament bundles on tunnel placement and knee kinematics during reconstruction. Additional laboratory and cadaveric studies have suggested double-bundle reconstructions of the posterior cruciate ligament may better restore normal knee kinematics than single-bundle reconstructions although clinical outcomes have not revealed such a difference. Tibial inlay posterior cruciate ligament reconstructions (either open or arthroscopic) are preferred by many authors to avoid the "killer turn" and graft laxity with cyclic loading. Posterior cruciate ligament reconstruction improves subjective patient outcomes and return to sports although stability and knee kinematics may not return to normal.⁶

Popliteal (Baker) Cyst

Popliteal (Baker) cysts, meniscal cysts, proximal tibiofibular joint cysts, and cruciate ligament ganglion cysts are cystic masses commonly found about the knee. Popliteal cysts form when a

bursa swells with synovial fluid, with or without a clear inciting etiology. Presentation ranges from asymptomatic to painful, limited knee motion. Management varies based on symptomatology and etiology. Meniscal cysts form within or adjacent to the menisci. These collections of synovial fluid are thought to develop from translocation of synovial cells or extravasation of synovial fluid into the meniscus through a tear. Joint-line pain and swelling are common symptoms. Management entails partial meniscectomy with cyst decompression or excision. Proximal tibiofibular joint cysts are rare, and their etiology remains unclear. Pain and swelling secondary to local tissue invasion are common, and management consists of surgical excision. Cruciate ligament ganglion cysts have no clear etiology but are associated with mucoid degeneration of the anterior and posterior cruciate ligaments, knee trauma, and synovial translocation into these ligaments. Knee pain and limited range of motion, especially with exercise, are common presenting symptoms. In symptomatic cases, arthroscopic excision is commonly performed.⁷

Synovial Disorders

Collectively, benign synovial disorders are not uncommon, and they may be seen in general orthopedic practices. Symptoms are nonspecific, often delaying diagnosis. In fact, synovial chondromatosis, pigmented villonodular synovitis, synovial hemangioma, and lipoma arborescens often mimic each other as well as other, more common joint disorders in presentation, making diagnosis extremely difficult. It is important to diagnose these disorders correctly in order to provide appropriate treatment and avoid secondary sequelae, such as bone erosion and cartilage degeneration.⁸

Chondromalacia Patellae (Patellar Compression Syndrome)

Patellofemoral pain syndrome has many names including chondromalacia patellae. It is the most common cause of knee pain in teenagers and young adults due to overuse injury in sports like running. It is caused by weakness of the quadriceps muscles resulting in improper knee alignment and pressure on the outer part of the kneecap. The inner and outer retinaculum become stretched. It may also occur in older adults who have arthritis of the knee. Treatment includes muscle strengthening exercises, patellar taping, physical therapy, and surgery. The need for surgery (lateral retinacular release) is almost eliminated with vastus medialis obliquus strengthening and a taping program.^{9, 10}



Osteoarthritis

In 2002, Moseley et al published a randomized placebo-controlled trial to evaluate the efficacy of arthroscopy for osteoarthritis (OA) of the knee.¹² One hundred eighty individuals were randomized to debridement (without abrasion or microfracture), lavage or placebo surgery. Placebo surgery involved a skin incision and simulated debridement without insertion of the arthroscope. Individuals and assessors were blinded to treatment group. Neither treatment group reported less pain or better function than the placebo group at any time point over the 2-year follow-up.

A systematic review produced in 2007 for the Agency for Healthcare Research and Quality by the Blue Cross and Blue Shield Association Technology Evaluation Center Evidence-based Practice Center noted that generalizability of study results was limited by the lack of detail provided regarding the patient sample, the use of a single surgeon, and enrollment of individuals at a single Veterans Affairs Medical Center.¹¹ The report concluded that "the existing evidence does not definitively show that arthroscopic lavage with or without debridement is more effective than placebo. However, additional placebo controlled RCTs showing clinically significant advantage for arthroscopy would be necessary to refute the Moseley results, which show equivalence between placebo and arthroscopy."

A 2008 Cochrane review of arthroscopic debridement for knee OA assessed 3 RCTs, including the study by Moseley et al and concluded that there is gold-level evidence that arthroscopic debridement has no benefit for undiscriminated OA (mechanical or inflammatory causes).¹³ The other 2 studies included in the Cochrane review were of lower methodologic quality and compared arthroscopy with lavage. In one of the reviewed studies Chang et al compared arthroscopy with closed needle lavage and found no significant between-group differences in pain, self-reported and observed functional status, and patient and physician global assessments.¹⁴ This study was small (32 subjects) with only 3 months of follow-up. The second study was a randomized trial of 76 knees, 40 laparoscopic debridement and 36 washout, with mean follow-up time of 4.5 years and 4.3 years, respectively.¹⁵ At 1 year, 32 of the debridement group and 5 of the washout group were pain-free. At 5 years, 19 of the survivors in the debridement group and 3 of the 26 in the washout group were free of pain. This study was noted by the Cochrane review to be at high risk of bias; specifically, outcome assessors were neither independent nor blinded, and pain was measured as success when absent and failure when present.

An updated systematic review of the evidence for joint lavage for OA of the knee was published by the Cochrane Musculoskeletal Group in May 2010 and was based on the literature to April 2009.¹⁶ This review included 7 trials with 567 individuals. The Cochrane review did not include



the study described below by Kirkley et al,¹⁷ since that trial focused on debridement. The authors concluded that joint lavage does not result in a benefit for individuals with knee OA for pain relief or improvement in function.

In September 2008, Kirkley et al¹⁶ published a single-center RCT comparing surgical lavage and/or arthroscopic debridement (without abrasion or microfracture) together with optimized physical and medical therapy, or physical and medical therapy alone. Individuals with more than 5 degrees of misalignment were excluded. Both men and women were included. Seven experienced arthroscopists performed lavage, debridement, or both at their discretion. Between January 1999 and August 2005, 277 individuals were assessed for eligibility; 58 were not eligible (most [38%] because of substantial misalignment) and 31 declined participation. Ninety-two individuals were randomly assigned to the surgery arm and 86 were assigned to physical and medical therapy alone. Ten withdrew consent (2 in the surgery and 8 in the control group). Six in the surgery group did not undergo surgery. Data from these individuals was included in the intent to treat analysis. The primary outcome was total Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score. Secondary outcomes included the Short Form-36 (SF-36) Physical Component Summary score. After 2 years, the mean (standard deviation) WOMAC score for the surgery group was 874 (624) as compared with 897 (583) for the control group (absolute difference [surgery-group score minus control-group score], -23 (605); 95% confidence interval [CI], -208 to 161; $P=0.22$). The SF-36 Physical Component Summary scores were 37.0 and 37.2, respectively (absolute difference, -0.2; 95% CI: -3.6 to 3.2; $P=0.93$). Analyses of WOMAC scores at interim visits and other secondary outcomes also failed to show superiority of surgery. Prespecified analyses of subgroups were performed for individuals with less severe disease (Kellgren-Lawrence grade 2) at baseline and individuals with mechanical symptoms of catching or locking, and no significant difference between treatment groups was found. A post-hoc analysis of individuals with more severe radiographic disease (Kellgren-Lawrence grade 3 or 4) also found no benefit of surgery.

In March 2013, Katz et al¹⁸ published a multicenter, randomized, controlled trial comparing arthroscopic partial meniscectomy surgery and postoperative physical therapy to a standardized physical therapy regimen (with the option to cross over to surgery) for symptomatic individuals with a meniscal tear and concomitant mild-to-moderate osteoarthritis. They enrolled symptomatic individuals 45 years of age or older with a meniscal tear as well as osteoarthritis detected on MRI or x-ray. The primary outcome was the difference between the study groups with respect to the change in the score on the physical-function scale of the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) from baseline to 6 months after randomization. They found no significant differences in the magnitude of improvement in functional status and pain after 6 and 12 months between individuals assigned to arthroscopic partial meniscectomy with postoperative physical therapy and individuals assigned to a

standardized physical-therapy regimen. At 6 months the WOMAC score was 20.9 points (95% confidence interval [CI], 17.9 to 23.9) in the surgical group and 18.5 (95% CI: 15.6 to 21.5) in the physical-therapy group (mean difference, 2.4 points; 95% CI: -1.8 to 6.5). At 6 months, 51 active participants in the study who were assigned to physical therapy alone (30%) had undergone surgery, and 9 individuals assigned to physical therapy alone (30%) had undergone surgery, and 9 individuals assigned to surgery (6%) had not undergone surgery. The results at 12 months were similar to those at 6 months.

In 2015, Thorlund et al²⁰ published a systematic review and meta-analysis of benefits and harms of arthroscopic surgery for degenerative knee. The objective was to determine benefits and harms of arthroscopic knee surgery involving partial meniscectomy, debridement, or both for middle aged or older individuals with knee pain and degenerative knee disease. The main outcome measures were pain and physical function. RCTs assessing benefit of arthroscopic surgery involving partial meniscectomy, debridement, or both for individuals with and without radiographic signs of osteoarthritis were included. The search identified nine trials. The main analysis, which combined the primary endpoints of the individual trials from three to 24 months postoperatively, showed a small difference in favor of interventions including arthroscopic surgery compared with control treatments for pain (effect size 0.14, 95% confidence interval 0.03 to 0.26). This difference corresponds to a benefit of 2.4 (95% confidence interval 0.4 to 4.3) mm on a 0-100 mm visual analogue scale. When analyzed over time of follow-up, interventions including arthroscopy showed a small benefit of 3-5 mm for pain at three and six months but not later up to 24 months. No significant benefit on physical function was found (effect size 0.09, -0.05 to 0.24). Nine studies reporting on harms were identified. Harms included symptomatic deep venous thrombosis (4.13 (95% confidence interval 1.78 to 9.60) events per 1000 procedures), pulmonary embolism, infection, and death. The authors concluded there was small inconsequential benefit seen from interventions that include arthroscopy for the degenerative knee is limited in time and absent at one to two years after surgery. Knee arthroscopy is associated with harms. Taken together, these findings do not support the practice of arthroscopic surgery for middle aged or older individuals with knee pain with or without signs of osteoarthritis.

Practice Guidelines and Position Statements

Osteoarthritis Research Society International

The Osteoarthritis Research Society International (OARSI) convened 16 experts from primary care, rheumatology, orthopedics, and evidence-based medicine from 6 countries including the



United States to develop consensus recommendations for management of hip and knee OA. OARSI concluded that, "...the roles of joint lavage and arthroscopic debridement are controversial and that, although some studies have demonstrated short-term symptom relief, others suggest that improvement in symptoms could be attributable to a placebo effect."¹⁹

American Academy of Orthopaedic Surgeons

Guideline recommendations from the American Academy of Orthopaedic Surgeons (AAOS) clinical practice guideline, "Treatment of Osteoarthritis of the Knee," second edition, May 2013.²¹

Recommendation 11

- We cannot suggest that the practitioner use needle lavage for patients with symptomatic osteoarthritis of the knee.
- Strength of Recommendation: Moderate
- Description: A moderate recommendation means that the benefits exceed the potential harm (or that the potential harm clearly exceeds the benefits in the case of a negative recommendation), but the quality/applicability of the supporting evidence is not as strong.

Recommendation 12

- We cannot recommend performing arthroscopy with lavage and/or debridement in patients with a primary diagnosis of symptomatic osteoarthritis of the knee.
- Strength of Recommendation: Strong
- Description: A strong recommendation means that the quality of the supporting evidence is high. A Harms analysis on this recommendation was not performed.

Recommendation 13

- We are unable to recommend for or against arthroscopic partial meniscectomy in patients with osteoarthritis of the knee with a torn meniscus.
- Strength of Recommendation: Inconclusive

- Description: An inconclusive recommendation means that there is a lack of compelling evidence that has resulted in an unclear balance between benefits and potential harm.

The AAOS clinical practice guideline on the management of anterior cruciate ligament injuries (AAOS, 2014) concluded there is limited evidence in individuals with combined ACL tears and reparable meniscus tears, but it supports that the practitioner might repair these meniscus tears when combined with ACL reconstruction because it improves patient outcomes.²⁹

National Institute for Health and Care Excellence (NICE)

In 2014 NICE published Clinical guidelines (CG177) Osteoarthritis: care and management, which was last updated 11 December 2020³⁸ and recommends intra-articular corticosteroid injections should be considered as an adjunct to core treatments for the relief of moderate to severe pain in people with OA. The guidelines do not recommend offering intra-articular hyaluronan injections for the management of OA. This guideline was updated in 2022 to a NICE guideline for Osteoarthritis in over 16s: diagnosis and management (NG226)³⁹ and continues to confer that intra-articular hyaluronan injections to manage osteoarthritis should not be offered, but to consider intra-articular corticosteroid injections when other pharmacological treatments are ineffective or unsuitable with the caveat that they are only for short-term relief (2 to 10 weeks).

Centers for Medicare and Medicaid Services Coverage Position

The Centers for Medicare & Medicaid Services (CMS) determined that the following procedures are not considered reasonable or necessary in treatment of the osteoarthritic knee and are not covered by the Medicare program:³⁶

- Arthroscopic lavage used alone for the osteoarthritic knee,
- Arthroscopic debridement for osteoarthritic patients presenting with knee pain only; or,
- Arthroscopic debridement and lavage with or without debridement for patients presenting with severe osteoarthritis. (Severe osteoarthritis is defined in the Outerbridge classification scale, grades III and IV. Grade I is defined as softening or blistering of joint cartilage. Grade II is defined as fragmentation or fissuring in an area <1 cm. Grade III presents clinically with cartilage fragmentation or fissuring in an area >1 cm. Grade IV refers to cartilage erosion down to the bone. Grades III and IV are characteristic of severe osteoarthritis.)



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History

Date	Comments
07/08/13	New policy. Add to Surgery Section. New policy effective December 1, 2013, follows a 90-day hold for provider notification.
10/17/13	Update Related Policies. Add policy 1.03.501.
02/24/14	Minor update. Clarification made to policy coverage for members under 50 with a history of osteoarthritis which now requires documentation via x-ray; KL4 score criteria as not medically necessary removed from this patient pool for torn meniscus.
07/14/14	Policy rewrite. Removed the word "adults" from title. Added criteria and rationale for intra-articular joint pathology, osteochondral dissecans, meniscus repair, ligament repair, popliteal cysts, synovectomy debridement, drainage and lavage. References 2-9 added.
08/11/14	Interim review. Minor update. Re-ordered policy statements and removed information on medial collateral ligament and lateral collateral ligaments.
09/17/14	Update Related Policies. Add 7.01.550.



Date	Comments
12/22/14	Interim update. Removed reference #1.
02/10/15	Annual Review. Statements added indicating a meniscus tear may be repaired at the same time as an ACL repair when the ACL meets medically necessity criteria. Removed all policy statements for pediatric and adolescent. Added Adult to title. Reference 21 added.
03/24/15	Minor update. Add link for ACL with osteoarthritis to the navigational links for policy coverage topics.
03/30/15	Clarification only: "Over age 50" replaced throughout the policy statement with "age 50 and older".
05/27/15	Interim update. Added Chondromalacia patellae diagnosis beside patellar compression syndrome for clarification. Added Meniscus tear coincident with ACL injury, discovered during arthroscopy for ACL to medically necessary statement for ACL reconstruction. Replace reference 9. Remove information only codes: CPT 29885-29887.
09/08/15	Interim Review. Removed KL requirements for meniscus, ACL and PCL. Removed criteria for under age 50 with osteoarthritis. Combined meniscus tear criteria into one policy statement. Added clarification for symptomatic torn plica. Added bullet in ACL policy statement-physically demanding occupation, or an activity level that includes cutting, jumping, and/or pivoting. Changed recommendation for conservative care for ACL from 8 weeks to 2 weeks. Clarified Chondromalacia Patellae statement by adding (when one of the following are met). Clarified Intra-Articular Joint Pathology statement by adding (when one of the following are met). Added the word (all) to PCL statement. Added definitions for Anterior drawer test, Apley test, Lachman test, McMurray test, Patellofemoral pain syndrome, Patellar glide test, Positive pivot shift test, patella tilt test. Added References 5, 19. CPT codes 29887 and 29888 added to policy.
01/12/16	Clarifications only. Added definitions for chondroplasty, microfracture, knee locking, knee giving way. Removed duplicate 8 weeks of conservative care bullet from Meniscal Tear policy statement. Simplified intra-articular joint pathology and removed bullets regarding symptomatic plica; simplified osteochondral defect policy statements.
04/22/16	Clarification. Returned one criterion to ACL which was inadvertently left off in recent publications.
05/19/16	Coding update. Added 29889.
10/11/16	Policy moved into new format; no change to policy statements. Added Prior Authorization Requirements.
01/01/17	Annual Review, approved December 13, 2016. Added clarification to symptomatic acute tear in policy statement. Literature reviewed.
03/01/17	Interim Review, approved February 14, 2017. Clarification made regarding diagnostic imaging in policy section and prior authorization requirements: "Copy of radiologist's report for diagnostic imaging (MRI, CT, etc.) done within the past 12 months prior to surgery that demonstrates diagnosed defect. Imaging must be performed and read by



Date	Comments
	an independent radiologist. If there are discrepancies in the interpretation of the imaging, the radiologist's report will supersede." This is consistent with other policies.
12/21/17	Coding update; removed CPT 29887.
03/01/18	Annual Review, approved February 27, 2018. Minor edits. Intent of policy statements unchanged. One reference added. Note added that this policy has been revised. Added Surgery Site of Service criteria, which becomes effective June 1, 2018.
04/01/18	Minor update, added Documentation Requirements section.
06/01/18	Minor update; removed note and link to updated policy. Surgery Site of Service criteria becomes effective.
09/01/18	Minor update. Re-added Consideration of Age information; it was inadvertently removed in a previous update.
04/01/19	Annual Review, approved March 19, 2019. Reference 27 added. Minor edits to policy statements along with minor formatting for greater clarity. Intent of policy statements unchanged. Reinstated "Copy of radiologist's report for diagnostic imaging (MRI, CT, etc.) done within the past 12 months prior to surgery that demonstrates diagnosed defect. Imaging must be performed and read by an independent radiologist. If there are discrepancies in the interpretation of the imaging, the radiologist's report will supersede" previously removed in 2018.
05/01/19	Minor update, clarified Site of Service requirements.
05/10/19	Minor update, removed requirement that imaging must be performed and read by an independent radiologist, as this was inadvertently added back to policy.
04/01/20	Delete policy, approved March 10, 2020. This policy will be deleted effective July 2, 2020, and replaced with InterQual criteria for dates of service on or after July 2, 2020.
07/02/20	Delete policy.
11/01/20	Policy reinstated effective February 5, 2021, approved October 13, 2020. Added not medically necessary statement for knee arthroscopy for partial meniscectomy for degenerative meniscal tear(s) with no associated mechanical symptoms. References added.
05/01/21	Minor update, language clarified under anterior cruciate ligament (ACL) tear section. Policy intent unchanged.
10/01/21	Annual Review, approved September 2, 2021. Policy reviewed. References added. Policy statements unchanged.
09/01/22	Annual Review, approved August 22, 2022. Policy reviewed. References added. Policy statements unchanged except for minor clarifying edits.
10/03/22	Update Related Policies. 1.03.501 – title changed from "Knee Orthoses (Braces), Ankle-Foot-Orthoses, and Knee-Ankle-Foot-Orthoses" to "Custom-made Knee Orthoses (Braces), Ankle-Foot-Orthoses, and Knee-Ankle-Foot-Orthoses"



Date	Comments
03/01/23	Interim Review, approved February 14, 2023. Corrected policy criteria for intra-articular joint pathology to state ALL of the following criteria rather than ONE of the following criteria. Other minor edits throughout the policy; policy intent unchanged. Changed the wording from "patient" to "individual" throughout the policy for standardization.
11/01/23	Annual Review, approved October 23, 2023. Policy reviewed; reference added. Policy statements unchanged.
4/18/24	Minor correction made to MELD Score hyperlink.
11/01/24	Annual Review, approved October 21, 2024. Policy reviewed. Reference added. Policy statements unchanged.
04/01/25	Interim Review, approved March 10, 2025. Note added to ACL tear section to see 7.01.113 Bioengineered Skin and Soft Tissue Substitutes policy for BEAR (bridge-enhanced anterior cruciate ligament repair) implant which may be used in conjunction with anterior cruciate ligament repair.

Disclaimer: This medical policy is a guide in evaluating the medical necessity of a particular service or treatment. The Company adopts policies after careful review of published peer-reviewed scientific literature, national guidelines and local standards of practice. Since medical technology is constantly changing, the Company reserves the right to review and update policies as appropriate. Member contracts differ in their benefits. Always consult the member benefit booklet or contact a member service representative to determine coverage for a specific medical service or supply. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). ©2025 Premera All Rights Reserved.

Scope: Medical policies are systematically developed guidelines that serve as a resource for Company staff when determining coverage for specific medical procedures, drugs or devices. Coverage for medical services is subject to the limits and conditions of the member benefit plan. Members and their providers should consult the member benefit booklet or contact a customer service representative to determine whether there are any benefit limitations applicable to this service or supply. This medical policy does not apply to Medicare Advantage.

