Introduction

Total knee and total hip replacements are among the most common surgeries performed. Despite the high volume of these surgeries, the quality and cost of care varies greatly among providers. In response to these trends and to ensure safe and coordinated care, this pilot policy is based on the Bree Collaborative and provides for elements of best practice, as well as a new form of payment for services believed to promote improvement in quality, health outcomes, and cost-effectiveness of the care delivered.

Total knee or total hip replacements (arthroplasty) are surgical procedures where a damaged part of the joint is removed and replaced with an artificial metal or plastic joint. These surgeries often help to reduce pain and improve quality of life. People who may qualify are those who have severe pain from “wear-and-tear” arthritis, who are not able to perform their normal daily activities, and who have failed nonsurgical treatments. Factors such as a person’s age, severity of
knee or hip disease, obesity, and use of tobacco affect who may be the best candidate for this type of procedure and the ability to participate in this pilot. This policy only applies to primary and initial total knee or total hip replacement procedures and outlines the information needed for health plan review.

**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.

### Designated Centers of Excellence:

- **Kadlec Regional Medical Center**
- **Swedish Medical Center-Ballard**
- **Providence Regional Medical Center - Everett**
- **Swedish Medical Center-Edmonds**
- **Providence Sacred Heart Medical Center**
- **Swedish Medical Center-First Hill**
- **Providence St. Peter Hospital**

### Policy Coverage Criteria

**Note:** Refer to the member contract language for benefit determination, member cost shares, the related services included in the bundle payment designation and any applicable concierge services provided.

<table>
<thead>
<tr>
<th>Preparation for Surgery</th>
<th>Minimum Standards</th>
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<tbody>
<tr>
<td>Prior to surgery</td>
<td>Prior to surgery, candidates should meet the following minimum standards to ensure safety and optimal return to function:</td>
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<tr>
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<td>• Plan to manage opioid dependency, if present and tapering of opioids prior to surgery when possible</td>
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<td>• Management of alcohol overuse if screen is positive</td>
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<td>• Absence of any physical or mental disability that would limit the benefits of the surgery or interfere with recovery</td>
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<td>• Pre-operative history and physical which addresses any identified areas of concerns such as cardiac and pulmonary</td>
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<tr>
<td>Preparation for Surgery</td>
<td>Minimum Standards</td>
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<td>fitness, dental concerns, abnormal lab values if warranted, and nasal passage cultures</td>
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<thead>
<tr>
<th>Service</th>
<th>Medical Necessity</th>
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<tbody>
<tr>
<td><strong>Total knee or total hip replacement</strong></td>
<td><em><em>Total knee or total hip replacement (arthroplasty) for the treatment of osteoarthritis</em> may be considered medically necessary when ALL the following are met:</em>*</td>
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<tr>
<td></td>
<td>• Member is 18 years of age or older</td>
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<td></td>
<td>• Body Mass Index (BMI) less than 40</td>
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<td></td>
<td>• Cessation of nicotine products at least four weeks prior to surgery</td>
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<tr>
<td></td>
<td>• Hemoglobin A1c less than 8% in diabetic patients</td>
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<td></td>
<td>• Impairment is documented by the presence of the following:</td>
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<td>o Disabling pain for at least 3 months duration</td>
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<td>o Functional disability interferes with the ability to carry out activities of daily living</td>
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<td><strong>AND</strong></td>
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<td></td>
<td>• Standard x-ray** of the affected joint (weight-bearing knee, non-weight bearing hip) demonstrates Kellgren-Lawrence grade 3 or 4 severity of osteoarthritis within 12 months prior to surgery (see Related Information for further details) <strong>AND</strong></td>
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<tr>
<td></td>
<td>• Documentation of three-month trial and failure of at least one or more of the following conservative therapies:</td>
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<td></td>
<td>o Physical therapy</td>
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<td>o Activity modification</td>
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<td>o Strengthening exercises</td>
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<td>o Non-steroidal anti-inflammatory drugs (oral or topical)</td>
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<td>o Intra-articular injection of corticosteroids***</td>
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<td></td>
<td>o Acetaminophen</td>
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</table>

*Osteoarthritis-excludes trauma, cancer, inflammatory arthritis (eg, rheumatoid arthritis), and congenital malformation

**X-rays are the preferred diagnostic test for joint arthritis. MRI studies are not recommended
**Medical Necessity**

***May be contraindicated within 12 months due to increased risk of infection***

**Documentation Requirements**

The patient’s medical records submitted for review should document that medical necessity criteria are met. The record should include the following:

- Documentation of BMI less than 40, cessation of nicotine products 4 weeks prior to surgery, Hemoglobin A1c is less than 8% if patient is diabetic, the presence of disabling pain for at least 3 months that has interfered in activities of living being carried out

AND

- X-ray of the affected joint (weight-bearing knee, non-weight bearing hip) demonstrates Kellgren-Lawrence grade 3 or 4 severity of osteoarthritis within 12 months prior to surgery

AND

- Trial and failure of one or more conservative therapies such as physical therapy, flexibility and muscle strengthening exercises, activity modification, NSAIDs (oral or topical), injection of corticosteroids, or acetaminophen.

**Coding**

<table>
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<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>CPT</td>
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<tr>
<td>27130</td>
<td>Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip arthroplasty), with or without autograft or allograft</td>
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<tr>
<td>27447</td>
<td>Arthroplasty, knee, condyle and plateau; medial AND lateral compartments with or without patella resurfacing (total knee arthroplasty)</td>
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Benefit Application

Refer to the member contract language for benefit determination, member cost shares, the related services included in the bundle payment designation and any applicable concierge services provided.

Radiological Findings

**Standard knee x-rays may include:**
- Weight-bearing anterior posterior (AP) view
- Weight-bearing notch (Rosenberg) view
- Lateral view (non-weight bearing)
- Sunrise view (non-weight bearing)

**Standard hip x-rays may include:**
- Anterior posterior (AP) pelvis view (weight-bearing or non-weight bearing)
- Lateral hip view (cross table or frog leg, non-weight bearing)

Knee Injury and Osteoarthritis Outcome Score (KOOS)/ HOOS (Hip Disability and Osteoarthritis Outcomes Score)

It is widely agreed that good outcome measures are needed to be able to tell the difference between treatments that are effective from those that are not. To do this, there must be some standardized, patient-centered measures that can be administered at a low cost. A questionnaire (the Knee Injury and Osteoarthritis Outcome Scores, or KOOS) was developed to evaluate short-term and long-term patient-relevant outcomes after knee injury. This questionnaire was based on the WOMAC (Western Ontario and McMaster Universities) Osteoarthritis Index, a literature review, an expert panel, and a pilot study. The KOOS is a tool that can be used in the provider’s office. It is self-administered and looks at five outcomes: pain, symptoms, activities of daily living, sport and recreation function, and knee-related quality of life. It has been shown to be a useful tool in assessing a patient’s pain and functional disability.
A similar survey, HOOS (Hip Disability and Osteoarthritis Outcomes Score) was developed to evaluate physical function outcomes for hip osteoarthritis after total hip replacement. It was also based on the WOMAC score but was found to be more responsive than the WOMAC. The survey is a self-administered questionnaire used to assess a patient’s opinion regarding hip problems and evaluate symptoms and functional limitations. It is meant to be used over short-term and long-term intervals to assess changes related to treatment such as surgery, medication or physical therapy.\(^8\)

**Kellgren-Lawrence Grading Scale**

- Grade 1: Doubtful narrowing of joint space and possible osteophytic lipping
- Grade 2: Definite osteophytes, definite narrowing of joint space
- Grade 3: Moderate multiple osteophytes, definite narrowing of joints 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

**Evidence Review**

**Description**

Total knee and total hip arthroplasties consist of resection of the diseased articular surfaces of the knee or hip, followed by resurfacing with metal and polyethylene prosthetic components. Total hip arthroplasties consist of a femoral component, an acetabular component, and a bearing surface. For the properly selected patient, the procedure results in significant pain relief, as well as improved function and quality of life. Despite the potential benefits of a total knee or total hip arthroplasty, they are elective procedures and should only be considered after extensive discussion of the risks, benefits, and alternatives.\(^3\)
Background

Total knee and total hip replacements have increased by 17 and 33 percent respectively from 2010 to 2017 across Blue Cross and Blue Shield commercially insured members. Likewise, the costs for these procedures have risen by 6 percent for knee procedures and 5 percent for hip procedures.\(^1\) This pilot policy for a value-based bundle system of payment at a designated center of excellence was created to promote collaboration and coordination between hospitals, clinicians, and other care settings for a smooth patient recovery, while at the same time promoting quality and health outcomes with more cost-effective delivery of care.

Traditionally, payment to providers is made for each of the individual services they provide for an episode of care or course of treatment. This provides payment for the volume of services delivered but does not address the quality of the services provided. This approach can result in fragmented care and a wide variation of costs. To better align reimbursement to providers around patient safety, appropriateness of care, evidence-based standards of practice, quality outcomes, positive patient experiences, and greater affordability, this value-based bundle system of payment to surgeons and facilities at designated centers of excellence is being piloted to test the delivery of this service model for a subset of Plan members.

The main indication for a total knee or total hip arthroplasty is for the relief of pain associated with arthritis of the knee or hip in patients who have failed nonoperative treatments. Correction of deformity and restoration of function should be considered secondary outcomes of the surgery and should not be considered the primary indication. The prosthetic joint has a finite lifetime, and the durability of the prosthesis depends on many factors such as patient age, underlying disease, the presence of obesity, as well as the type of prosthesis and surgical factors.\(^{14-15}\)

In 2010, Bozic et al\(^6\) looked at the relationship between the number of procedures that a surgeon and hospital performed, and the clinical outcomes of those procedures. They found that the patients of surgeons who performed more knee replacements had a lower risk of complications, lower readmission and reoperation rates, shorter lengths of stay, and a higher chance that they would be discharged to home. Hospitals that did more knee replacement surgeries had lower mortality, lower risk of readmission, and a higher likelihood of the patient being discharged to home. Bozic et al also found that when the surgeon and hospital closely follow evidence-based processes of care, there were better clinical outcomes and shorter lengths of stay, regardless of how many procedures the surgeon and hospital had performed.
Practice Guidelines and Position Statements

American Academy of Orthopaedic Surgeons

The American Academy of Orthopaedic Surgeons (AAOS) updated new clinical practice guideline on the treatment of osteoarthritis of the hip (2017) strongly recommends the use of pre-surgical treatments to ease pain and mobility, including corticosteroid injection, physical therapy, and non-narcotic medications. The Academy does not recommend the use of hyaluronic acid or glucosamine sulfate to minimize osteoarthritis symptoms due to a lack of evidence supporting the efficacy of these treatments.

The Osteoarthritis Research Society International (OARSI)

The Osteoarthritis Research Society International (OARSI) (2014) updated its guidelines for non-surgical treatment of osteoarthritis of the knee in one or both knees only with no comorbidities:

Core Treatments Appropriate for all individuals:
Land-based exercise, weight management, strength training, water-based exercise, self-management and education

Recommended treatments Appropriate for Knee-only OA without comorbidities:
Biomechanical interventions, intra-articular corticosteroids, topical NSAIDs, walking cane, oral COX-2 Inhibitors, capsaicin, oral non-selective NSAIDs, duloxetine, acetaminophen

Recommended treatments considered Uncertain for Knee-only OA without comorbidities:
Acupuncture, TENS, ultrasound, avocado soybean unsaponfiables (ASU), chondroitin, diacerein glucosamine, hyaluronic acid (intra-articular injection), opioids (oral or transdermal), rosehip

Recommended treatments considered Not Appropriate for Knee-only OA without comorbidities:
Risedronate

References


3. Martin G, Roe, J, Total Knee Arthroplasty. Available online. UpToDate, Updated April 01, 2019, UpToDate®, Waltham, MA


**History**

<table>
<thead>
<tr>
<th>Date</th>
<th>Comments</th>
</tr>
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<tbody>
<tr>
<td>07/01/19</td>
<td>New policy, approved June 11, 2019, effective January 1, 2020. This pilot policy outlines the medical necessity criteria for total joint replacement (knee and hip) at select Designated Centers of Excellence for select Plans.</td>
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</tbody>
</table>

**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). ©2019 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.
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  • Written information in other formats (large print, audio, accessible electronic formats, other formats)
• Provides free language services to people whose primary language is not English, such as:
  • Qualified interpreters
  • Information written in other languages

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PO Box 91102, Seattle, WA 98111
Toll free 855-332-4535, Fax 425-918-5592, TTY 800-842-5357
Email AppealsDepartmentInquiries@Premera.com

You can file a grievance in person or by mail, fax, or email. If you need help filing a grievance, the Civil Rights Coordinator is available to help you.

You can also file a civil rights complaint with the U.S. Department of Health and Human Services, Office for Civil Rights, electronically through the Office for Civil Rights Complaint Portal, available at https://ocrportal.hhs.gov/ocr/portal/lobby.jsf, or by mail or phone at:
U.S. Department of Health and Human Services
200 Independence Avenue SW, Room S09F, HHH Building
Washington, D.C. 20201, 1-800-368-1019, 800-537-7697 (TDD)
Complaint forms are available at:

Getting Help in Other Languages

This Notice has Important Information. This notice may have important information about your application or coverage through Premera Blue Cross. There may be key dates in this notice. You may need to take action by certain deadlines to keep your health coverage or help with costs. You have the right to get this information and help in your language at no cost. Call 800-722-1471 (TTY: 800-842-5357).

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本通知有重要之訊息。本通知可能有關於您透過Premera Blue Cross申請或保單的重要訊息。本通知內可能有重要日期。您可能需要在截止日期之前採取行動。以保留您的健康保險或費用補貼。您有權利免費以您的母語得到本訊息和幫助。請撥電話800-722-1471 (TTY: 800-842-5357).

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Deutsche (German):

Italiano (Italian):
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Chiamà 800-722-1471 (TTY: 800-842-5357).
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Tagalog (Tagalog):

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