

Medical Policy

Knee Arthroplasty (Total or Partial)	
MEDICAL POLICY NUMBER	Med_Clin_Ops-009
CURRENT VERSION EFFECTIVE DATE	January 1, 2024
APPLICABLE PRODUCT AND MARKET	Individual Family Plan: All Plans Small Group: All Plans Medicare Advantage: All Plans

Brand New Day/Central Health Medicare Plan develops policies and makes coverage determinations using credible scientific evidence including but not limited to MCG™ Health Guidelines, the ASAM Criteria™, and other third party sources, such as peer-reviewed medical literature generally recognized by the relevant medical community, physician specialty society recommendations, and expert opinion as relevant to supplement those sources. Brand New Day/Central Health Medicare Plan Medical Policies, MCG™ Guidelines, and the ASAM Criteria™ are not intended to be used without the independent clinical judgment of a qualified health care provider considering the individual circumstances of each member's case. The treating health care providers are solely responsible for diagnosis, treatment, and medical advice. Members may contact Brand New Day/Central Health Medicare Plan Customer Service at the phone number listed on their member identification card to discuss their benefits more specifically. Providers with questions about this Brand New Day/ Central Health Medicare Plan policy may contact the Health Plan. Brand New Day/Central Health Medicare Plan policies and practices are compliant with federal and state requirements, including mental health parity laws.

If there is a difference between this policy and the member specific plan document, the member benefit plan document will govern. For Medicare Advantage members, Medicare National Coverage Determinations (NCD) and Local Coverage Determinations (LCD), govern. Refer to the CMS website at <http://www.cms.gov> for additional information.

Brand New Day/Central Health Medicare Plan medical policies address technology assessment of new and emerging treatments, devices, drugs, etc. They are developed to assist in administering plan benefits and do not constitute an offer of coverage nor medical advice. Brand New Day/Central Health Medicare Plan medical policies contain only a partial, general description of plan or program benefits and do not constitute a contract. Brand New Day/Central Health Medicare Plan does not provide health care services and, therefore, cannot guarantee any results or outcomes. Treating providers are solely responsible for medical advice and treatment of members. Our medical policies are updated based on changes in the evidence and healthcare coding and therefore are subject to change without notice. CPT codes, descriptions and materials are copyrighted by the American Medical Association (AMA). MCG™ and Care Guidelines® are trademarks of MCG Health, LLC (MCG).

PURPOSE

The purpose of this policy is to establish the clinical review criteria that support the determination of medical necessity for Total Knee Arthroplasty (TKA) and partial or unicompartmental knee arthroplasty.

POLICY

Clinical Review Criteria

KNEE ARTHROPLASTY RELATED TO FRACTURE

Prior Authorization is **NOT** required when Total or Partial Knee Arthroplasty is part of the care of an acute fracture (excluding fracture of implant and periprosthetic fracture).

ELECTIVE KNEE ARTHROPLASTY

A. Initial/Primary Total Knee Arthroplasty or Partial Knee Arthroplasty

Prior Authorization is required for elective Total or Partial Knee Arthroplasty and maybe authorized documentation in the medical records indicates that **ALL** the following criteria are met:

- 1) The member has advanced joint disease due to conditions such as osteoarthritis, rheumatoid arthritis, osteonecrosis, or traumatic arthritis and **ALL** of the following criteria

Medical Policy

are met:

- a. Reports of imaging studies obtained within the past twelve (12) months describing the degree of cartilage damage.
 - b. The results of all imaging studies correlate with the clinical findings in support of the requested procedure.
 - c. Presence of significant radiographic findings, including knee joint destruction, angular deformity or severe narrowing.
- 2) Physical exam demonstrates limited range of motion, crepitus, effusion or swelling of knee joint on physical examination.
 - 3) Functional limitation resulting in two (2) impaired activities of daily living.
 - 4) Pain that is persistent, severe and has been present for at least six (6) months. For purposes of this guideline, severe pain is ≥ 4 on the VAS scale.
 - 5) Failure of a minimum of (3) months of intensive conservative non-operative care when **ONE or more** of the following has occurred
 - a. Improvement of the symptoms has plateaued or failed to occur and the residual symptoms of pain and functional disability are unacceptable
 - b. An explicit statement in the clinical documents that explains why such conservative therapy is contraindicated. The requirement for physical therapy will not be met if there is a failure to initiate or complete prescribed physical therapy for non-clinical reasons.
 - 6) BMI documentation of **ONE** of the following
 - a. BMI < 35 at the time of the prior authorization request
 - b. BMI 35 - 40. If the BMI is greater than 35, but less than 40, documentation of failure of concerted effort to lose weight AND documentation that the surgeon has considered the risks of overweight.
 - 7) Documentation in the medical record of tobacco and nicotine status indicating **ONE** of the following:
 - i. The individual is a non-tobacco and non-nicotine user.
 - ii. The individual has been tobacco-free for a minimum of six (6) weeks prior to the date of the prior authorization request.

B. Revision Total Knee Arthroplasty or Partial Knee Arthroplasty

Prior authorization is required for Revision Total or Partial Knee Arthroplasty and maybe authorized when **ONE or more** of the following are met:

- 1) Adverse local tissue or systemic reaction to previous metal implant, or
- 2) Component instability, loosening, fracture of implant or other mechanical failure such as implant malposition or impingement as documented by imaging or other demonstration of effect, or
- 3) Previous removal of prosthesis due to infection or catastrophic failure, or

Medical Policy

- 4) Progressive and substantial bone loss **causing failure of the previous implant, or**
- 5) Failure of a minimum of (3) months of intensive conservative non-operative care when **ONE** of the following is documented:
 - a. Improvement of the symptoms has plateaued or failed to occur and the residual symptoms of pain and functional disability are unacceptable including documentation of antalgic gait and abnormal plain radiography or imaging studies.
 - b. An explicit statement in the clinical documents that explains why such conservative therapy is contraindicated. The requirement for physical therapy will not be met if there is a failure to initiate or complete prescribed physical therapy for non-clinical reasons.
- 6) BMI documentation of **ONE** of the following
 - a. BMI < 35 at the time of the prior authorization request
 - b. BMI 35 - 40. If the BMI is greater than 35, but less than 40, documentation of failure of concerted effort to lose weight AND documentation that the surgeon has considered the risks of overweight.
- 7) Documentation in the medical record of tobacco and nicotine status indicating the following:
 - a. The individual is a non-tobacco and non-nicotine user.
 - b. The individual has been tobacco-free for a minimum of six (6) weeks prior to the date of the prior authorization request.

CONTRAINDICATIONS AND UNAUTHORIZED INVESTIGATIVE PROCEDURES

Total or Partial Knee Arthroplasty will not be authorized if medical contraindications are present. Services may be authorized after confirmation of **ALL of the following**

- 1) No documentation of active (untreated or failed treatment) infection of the knee joint.
- 2) No documentation of active skin infection or open wounds within the planned surgical site of the knee.
- 3) No documentation of permanent or irreversible muscle weakness in the absence of pain that prevents ambulation;
- 4) No documentation of Allergy to components of the implant (for example, cobalt, chromium, or alumina).
- 5) No documentation of BMI > 40.
- 6) No documentation of severe cardiopulmonary disease.
- 7) No documentation of anemia.
- 8) No documentation of malnutrition.
- 9) No documentation of active urinary tract infection.
- 10) No documentation of active dental infection.
- 11) No documentation of systemic infection.
- 12) No documentation of skeletal immaturity.

Medical Policy

EXCLUSIONS

Brand New Day/Central Health Medicare Plan considers some procedures **investigative** and those procedures will not be authorized. Services may be authorized after confirmation of **ALL** of the following::

- 1) The Authorization is NOT for procedures utilizing computer-navigated, patient-specific or gender-specific instrumentation.
- 2) The Authorization is NOT for Bicompartamental Arthroplasty.
- 3) The Authorization is NOT for MAKOplasty/MAKO Tactile Guidance System.

BACKGROUND

The incidence of knee osteoarthritis (OA) in the United States is estimated at 240 persons per 100,000 persons per year. It was estimated that 9.9 million adults had symptomatic OA of the knee in 2010. Risk factors for the condition increase with age, especially in women. Genetics, large body mass, certain occupations, and repetitive knee bending or heavy lifting are other factors that increase the risk of developing the disease.

Total Knee Arthroplasty is one of the most commonly performed orthopedic procedures, making it a key driver of health care costs. Many studies have demonstrated that total knee replacement is a cost-effective procedure that improves activity and quality of life. As of 2017, over 840,000 inpatient total knee replacements were performed annually in the United States and were becoming increasingly common. The number of total knee replacements performed annually in the United States is expected to grow by 673 percent to nearly 3.5 million procedures per year by 2030. This expected increase will be driven by an aging population, increased usage in younger individuals, the increased prevalence of obesity, and the increased demand for an active lifestyle.

Despite the potential benefits of total knee arthroplasty, it is an elective procedure and should only be considered after extensive discussion of the risks, benefits, and alternatives. As with any major surgical procedure, complications, though uncommon and often preventable with careful surgical technique and postoperative management, may result during or after knee replacement. In addition to anesthesia related risks, exacerbation of preexisting medical issues and medication and allergic reactions, other possible complications include, but are not limited to: thromboembolism, infection, patellofemoral disorders, peroneal nerve palsy, periprosthetic fractures, wound healing, accelerated wear or failure of the prosthetic device, instability, persistent pain, and stiffness. Therefore, health optimization and informed consent are critical.

DEFINITIONS

1. **Arthroplasty**, also called joint replacement, is a surgical procedure in which the worn and/or damaged surfaces of the knee joint are replaced with a prosthesis made of metal, ceramic material or high-density plastic. Knee arthroplasty may be total or unicompartmental. TKA is performed when all three compartments of the knee are affected by joint disease. TKA involves removal of a thin layer of subchondral bone and overlying articular cartilage, with anatomic resurfacing of all three compartments and insertion of a metal implant and polyethylene bearing surface. The implants are either fixed with bone cement or are cementless and press fit into place.

Medical Policy

2. **Authorization:** A decision by Brand New Day/Central Health Medicare Plan that a health care service, treatment plan, prescription drug or durable medical equipment is medically necessary or meets other member contract terms. Sometimes called prior authorization, prior approval or precertification. Brand New Day/Central Health Medicare Plan requires preauthorization for certain services before a member receives them, except in an emergency. Authorization is not a promise that Brand New Day/Central Health Medicare Plan will cover the cost.
3. **Grading systems** may be used to classify the severity of osteoarthritis and identify those injuries that are suitable for repair techniques. The most common grading systems include the Kellgren-Lawrence and the Modified Outerbridge Classification systems.
 - i.) **The Kellgren-Lawrence** grading system is based on radiographic evidence of cartilage damage.
 - 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 joint space, some sclerosis and possible deformity of bone contour.
 - Grade 4: Large osteophytes marked narrowing of joint space, severe sclerosis and definite deformity.
 - ii.) The **Modified Outerbridge Classification** addresses arthroscopic evidence of articular cartilage damage and provides delineation of varying areas of chondral pathology, based on the qualitative appearance of the cartilage surface.
 - Grade 0: Normal
 - Grade I: Cartilage with softening and swelling.
 - Grade II: Partial-thickness defect with fissures on the surface that do not reach subchondral bone or exceed 1.5 centimeters (cm) in diameter.
 - Grade III: Fissuring to the level of the subchondral bone in an area with a diameter more than 1.5 centimeters.
 - Grade IV: Exposed subchondral bone head. Subchondral bone is the bone underneath the joint cartilage.
4. **Visual Analog Scale (VAS) for Pain** The pain VAS is a unidimensional measure of pain intensity, which has been widely used in diverse adult populations, including those with rheumatic diseases). The pain VAS is available in the public domain at no cost. <http://www.amda.com/tools/library/whitepapers/hospiceinltc/appendix-a.pdf>.
The VAS takes <1 minute to complete. The VAS is administered as a paper and pencil measure. As a result, it cannot be administered verbally or by phone. No training is required other than the ability to use a ruler to measure distance to determine a score. Caution is required when photocopying the scale as this may change the length of the 10-cm line. As slightly lower scores have been reported on the HVAS compared to the VVAS the same alignment of scale should be used consistently within the same patient. The VAS is widely used due to its simplicity and adaptability to a broad range of populations and settings. Its acceptability as a generic pain measure was demonstrated in the early 1970s.
5. **Nonsurgical management** is typically used to treat early arthritis. The purpose of

Medical Policy

treatments to reduce pain, increase function and generally reduce symptoms. Nonsurgical treatments fall into the following major categories:

- Lifestyle modification, including weight loss and minimizing activities that aggravate the condition.
 - Exercise including flexibility and muscle strengthening exercises and supervised physical therapy.
 - Assistive devices, such as canes, crutches, walkers, and knee braces. iv.) Drug treatment, including over-the-counter analgesics, anti-inflammatory medications, intra-articular steroids and hyaluronic acid derivative injection.
 - Other conservative measures such as applications of heat or ice, water exercises, liniments or elastic support bandages.
6. **Osteoarthritis (OA)** is the most common form of knee arthritis. OA is usually a slowly progressive degenerative disease in which the joint cartilage gradually wears away. It most often affects middle-aged and older people. It is also known as degenerative joint disease (DJD).
 7. **Osteonecrosis** is the destruction of bone tissue due to ischemia (disruption of the blood supply), infection, malignant disease, or trauma.
 8. **Post-traumatic arthritis** can develop after an injury to the knee. This type of arthritis is like osteoarthritis and may develop years after a fracture, ligament injury, or meniscus tear.
 9. **Rheumatoid arthritis (RA)** is an inflammatory type of arthritis that can destroy the joint cartilage. RA can occur at any age. RA generally affects both knees.
 10. **Tobacco/Nicotine** products can result in nicotine addiction and health problems, including a negative effect on bone healing. This includes delayed unions, non-unions and other complications (e.g., decreased blood flow; wound complications). Products containing nicotine include, but are not limited to;
 - Smoked tobacco (cigarettes, cigars, cigarillos, pipe tobacco).
 - Smokeless tobacco (chewing tobacco, snuff).
 - Nicotine replacements (patches, gum, nasal spray, inhalers).

CODING

The codes listed below are for reference purposes. This list does not imply whether the code is covered or not covered. The benefit document should be referenced for coverage determination. This list of applicable codes may not be all-inclusive.

CPT CODE	DESCRIPTION
27437	Arthroplasty, patella; without prosthesis
27438	Arthroplasty, patella; with prosthesis
27440	Arthroplasty, knee, tibial plateau;
27441	Arthroplasty, knee, tibial plateau; with debridement and partial synovectomy
27442	Arthroplasty, femoral condyles or tibial plateau(s), knee
27443	Arthroplasty, femoral condyles or tibial plateau(s), knee; with debridement and partial synovectomy
27445	Arthroplasty, knee, hinge prosthesis (eg, Walldius type)

Medical Policy

CPT CODE	DESCRIPTION
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
27488	Removal of prosthesis, including total knee prosthesis, methylmethacrylate with or without insertion of spacer, knee

HCPCS CODE	DESCRIPTION
n/a	

EVIDENCE BASED REFERENCES

- Ng VY, Lustenberger D, Hoang K, Urchek R, Beal M, Calhoun JH, Glassman AH. Preoperative risk stratification and risk reduction for total joint reconstruction: AAOS exhibit selection. J Bone Joint Surg Am. 2013 Feb 20; 95(4): e191-15. <https://www.ncbi.nlm.nih.gov/pubmed/23426776>. Accessed December 5, 2017.
- American Academy of Orthopaedic Surgeons. Treatment of Osteoarthritis of the Knee: Evidence-Based Guideline 2nd Edition. Rosemount, IL: American Academy of Orthopaedic Surgeons. <http://www.aaos.org/research/guidelines/TreatmentofOsteoarthritisoftheKneeGuideline.pdf>. May 18, 2013. Accessed April 17, 2015.
- American Joint Replacement Registry. American Joint Replacement Registry: Fall 2013 Update. http://teamwork.aaos.org/ajrr/AJRR%20Documents/AJRR%20Fall%202013_F11062013.pdf. November 6, 2013. Accessed December 5, 2017.
- A Workgroup of the American Association of Hip and Knee Surgeons (AAHKS) Evidence Based Committee. Obesity and total joint arthroplasty: a literature based review. J Arthroplasty. 2013; 28:714-721.
- Bedair H, Cha TD, Hansen VJ. Economic benefit to society at large of total knee arthroplasty in younger patients: a Markov analysis. J Bone Joint Surg Am. January 2014; 96(2):119-126.
- Belmont PJ Jr, Goodman GP, Waterman BR, Bader JO, Schoenfeld AJ. Thirty-day postoperative complications and mortality following total knee arthroplasty: incidence and risk factors among anational sample of 15, 321 patients. J Bone Joint Surg Am. January 2014; (96) 1:20-26.
- Bozic KJ, Grosso LM, Kin Z, et al. Variation in hospital -level risk-standardized complication rates following elective primary total hip and knee arthroplasty. J Bone Joint Surg Am. April 2014; 96(8):640-647.
- Brasington R Jr, Hsia EC, O'Hanlon KM, Murray JL. First Consult: Osteoarthritis. Philadelphia, PA: ClinicalKey;2014. <https://www.clinicalkey.com/>. Revised December 11, 2010. Accessed December 5, 2017.
- Efe T, Heyse TJ, Boese C, et al. TKA following high tibial osteotomy versus primary TKA –a matched pair analysis. BMC Musculoskeletal Disorders. 2010; 11:207. <http://biomedcentral.com/147-2474/11/207>. Accessed December 5, 2017.
- Fisher ES, Bell JE, Tomek IM, Esty AR, Goodman DE. A Dartmouth Atlas Surgery Report: Trends and Regional Variation in Hip, Knee and Shoulder Replacement.
- The Dartmouth Institute for Health Policy and Clinical Practice. http://www.dartmouthatlas.org/downloads/reports/Joint_Replacement_0410.pdf. April 6, 2010. Accessed December 5, 2017.
- Fu D, Li G, Chen K, et al. Comparison of high tibial osteotomy and unicompartmental knee arthroplasty in the treatment of unicompartmental osteoarthritis: a meta-analysis. J Arthroplasty. 2013; 28(5):759-765.
- Julin J, Jämsen E, Puolakka T, Kontinen Y, Moilanen T. Younger age increases the risk of early prosthesis failure following primary total knee replacement for osteoarthritis: a follow-up study of 32,019 total knee replacements in the Finnish Arthroplasty Register. Acta Orthopaedica. 2010; 81(4):413-419.
- Kerkhoffs GMMJ, Servien E, Dunn W, Dahm D, Bramer JAM, Haverka MP D. The influence of obesity on the complication rate and outcome of total knee arthroplasty. J Bone Joint Surg Am. October 2012; 94(20):1839-1844.
- Kurtz SM, Lau E, Ong K, Zhao K, Kelly M, Bozic KJ. Future young patient demand for primary and revision joint replacement. Clin Orthop Relat Res. 2009; 467:2606-2612.
- Losina E, Thornhill TS, Rome BN, Wright J, Katz JN. The dramatic increase in total knee replacement utilization rates in the United States cannot be fully explained by growth in population size and the obesity epidemic. J Bone Joint Surg Am. February 2012;94(3):201-207.
- Losina E, Walensky RP, Kessler CL, et al. Cost-effectiveness of total knee arthroplasty in the United States: patient

Medical Policy

- risk and hospital volume. *Arch Intern Med.* June 2009; 169(2):1113-1112.
- Meehan JP, Danielsen B, Kim SH, Jamali AA, White RH. Younger age is associated with a higher risk of early periprosthetic joint infection and aseptic mechanical failure after total knee arthroplasty. *J Bone Joint Surg Am.* April 2014; 96(7):529-535.
 - Ruiz D Jr, Koenig L, Dall TM, et al. The direct and indirect costs to society of treatment for end-stage knee osteoarthritis. *J Bone Joint Surg Am.* August 2013; 95(16):1473-1480.
 - Shuman E. First Consult: Prosthetic Joint Infection. Philadelphia, PA: ClinicalKey; 2014. <https://www.clinicalkey.com/>. Revised February 27, 2013. Accessed December 5, 2017.
 - Singh JA, Lewallen DG. Cerebrovascular disease is associated with outcomes after total knee arthroplasty: a US total joint registry study. *J Arthroplasty.* January 2014; 29(1):40-45.
 - Yim JH, Song EK, Seo HY, Kim MS, Seon JK. Comparison of high tibial osteotomy and unicompartmental knee arthroplasty at a minimum follow-up of 3 years. *J Arthroplasty.* 2013; 28(2):243-247.
 - Inacio MCS, Kritz-Silverstein D, Paxton EW, Fithian DC. Do patients lose weight after joint arthroplasty surgery? A systematic review. *Clin Orthop Relat Res.* January 2013; 471(1):291-298.
 - Jones CA, Cox V, Jhangri GS, Suarez-Almazor ME. Delineating the impact of obesity and its relationship on recovery after joint arthroplasties. *Osteoarthritis and Cartilage.* 2012; 20:511-518.
 - Yeung E, Jackson M, Sexton S, Walter W, Zicat B, Walter W. The effect of obesity on the outcome of hip and knee arthroplasty. *International Orthopedics (SICOT).*
 - Belmont, Philip J., et al. "Thirty-Day Postoperative Complications and Mortality Following Total Knee Arthroplasty Incidence and Risk Factors Among a National Sample of 15,321 Patients." *The Journal of Bone & Joint Surgery* 96.1 (2014): 20-26.
 - Bolognesi, Michael P., et al. "Unicompartmental Knee Arthroplasty and Total Knee Arthroplasty Among Medicare Beneficiaries, 2000 to 2009." *The Journal of Bone & Joint Surgery* 95.22 (2013): e174-1.
 - Cram, Peter, et al. "Total knee arthroplasty volume, utilization, and outcomes among Medicare beneficiaries, 1991-2010." *JAMA* 308.12 (2012): 1227-1236.
 - D'Apuzzo, Michele R., Wendy M. Novicoff, and James A. Browne. "The John Insall Award: Morbid Obesity Independently Impacts Complications, Mortality, and Resource Use After TKA." *Clinical Orthopedics and Related Research* (2014): 1-7.
 - Fernandes, Linda, et al. "EULAR recommendations for the non-pharmacological core management of hip and knee osteoarthritis." *Annals of the rheumatic diseases* 72.7 (2013): 1125-1135.
 - Gossec, L., et al. "The role of pain and functional impairment in the decision to recommend total joint replacement in hip and knee osteoarthritis: an international cross-sectional study of 1909 patients. Report of the OARSI-OMERACT Task Force on total joint replacement." *Osteoarthritis and Cartilage* 19.2 (2011): 147-154.
 - Gossec, Laure, et al. "OARSI/OMERACT initiative to define states of severity and indication for joint replacement in hip and knee osteoarthritis. An OMERACT 10 Special Interest Group." *The Journal of rheumatology* 38.8 (2011): 1765-1769.
 - Hochberg, Marc C., et al. "American College of Rheumatology 2012 recommendations for the use of nonpharmacologic and pharmacologic therapies in osteoarthritis of the hand, hip, and knee." *Arthritis care & research* 64.4 (2012): 465-474.
 - Jevsevar, David S. "Treatment of osteoarthritis of the knee: evidence-based guideline." *Journal of the American Academy of Orthopaedic Surgeons* 21.9 (2013): 571-57.
 - Kozinn, S. C., and R. Scott. "Unicondylar knee arthroplasty." *J Bone Joint Surg Am* 71.1 (1989): 145-150.
 - Kremers, Hilal Maradit, et al. "The Effect of Obesity on Direct Medical Costs in Total Knee Arthroplasty." *The Journal of Bone & Joint Surgery* 96.9 (2014): 718-724.
 - Mofidi, Ali, et al. "Assessment of accuracy of robotically assisted unicompartmental arthroplasty." *Knee Surgery, Sports Traumatology, Arthroscopy* (2014): 1-8.
 - Stephens, Byron F., G. Andrew Murphy, and William M. Mihalko. "The effects of nutritional deficiencies, smoking, and systemic disease on orthopaedic outcomes." *The Journal of Bone & Joint Surgery* 95.23 (2013): 2152-2157.
 - Thompson, Scott AJ, et al. "Factors Associated with Poor Outcomes Following Unicompartmental Knee Arthroplasty: Redefining the "Classic" Indications for Surgery." *The Journal of arthroplasty* 28.9 (2013): 1561-1564.
 - Thomsen, Morten G., et al. "Indications for knee arthroplasty have remained consistent over time." *Dan Med J* 59 (2012): A4492.
 - Weinstein, Alexander M., et al. "Estimating the burden of total knee replacement in the United States." *The Journal of Bone & Joint Surgery* 95.5 (2013): 385-392.
 - Zhang, W., et al. "OARSI recommendations for the management of hip and knee osteoarthritis: part III: Changes in evidence following systematic cumulative update of research published through January 2009." *Osteoarthritis and Cartilage* 18.4 (2010): 476-499.

Medical Policy

POLICY HISTORY

This policy has been approved by the approval body listed below or has received other necessary approval pursuant to Brand New Day/Central Health Medicare Plan's policies on clinical criteria and policy development.

Approval Body		Utilization Management Committee	
Version History	Approval Date	Effective Date	Action
V1	07-31-2018	08-01-2018	New Policy
V2	12-18-2018	12-18-2018	Noted that policies apply to 2019 markets
V3	05-03-2019	05-03-2019	Edits made to radiography language
V4	02-01-2020	02-01-2020	Include appropriate 2020 markets
V5	12-20-2020	12-20-2020	Small Group added as applicable product
V6	05-20-2021	05-20-2021	Annual review
V7	06-17-2021	06-17-2021	Clarified documentation requirements, included partial knee arthroplasty
V8	05-09-2022	05-09-2022	Annual review
V9	10-12-2022	10-12-2022	Codes confirmed, criteria confirmed and reorganized for clarity
V10	10-12-2022	03-01-2023	Adopted by MA UM Committee (no policy revisions made)