

# P&S Network, Inc.

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## Notice of Independent Review Decision

**DATE OF REVIEW:** 09/02/2008

**IRO CASE #:**

### **A DESCRIPTION OF THE QUALIFICATIONS FOR EACH PHYSICIAN OR OTHER HEALTH CARE PROVIDER WHO REVIEWED THE DECISION:**

This case was reviewed by a Orthopaedic Surgery, Licensed in Texas and Board Certified. The reviewer has signed a certification statement stating that no known conflicts of interest exist between the reviewer and the injured employee, the injured employee's employer, the injured employee's insurance carrier, the utilization review agent (URA), any of the treating doctors or other health care providers who provided care to the injured employee, or the URA or insurance carrier health care providers who reviewed the case for a decision regarding medical necessity before referral to the IRO. In addition, the reviewer has certified that the review was performed without bias for or against any party to the dispute.

### **DESCRIPTION OF THE SERVICE OR SERVICES IN DISPUTE**

Inpatient left knee unicondylar replacement with 2-3 day LOS

### **REVIEW OUTCOME**

Upon independent review the reviewer finds that the previous adverse determination/adverse determinations should be:

Upheld (Agree)

### **INFORMATION PROVIDED TO THE IRO FOR REVIEW**

- o Submitted medical records were reviewed in their entirety.
- o Treatment guidelines were provided to the IRO.
- o December 23, 2005 MRI left knee read by Dr.
- o March 6, 2008 Radiographs of the left knee read by Dr
- o April 24, 2008 Radiographs of the left knee read by Dr.
- o June 5, 2008 MRI left knee read by Dr.
- o June 19, 2008 Non-certification review for left knee unicondylar replacement
- o June 21, 2008 Progress report from Dr.
- o June 23, 2008 Request for reconsideration from Dr
- o July 1, 2008 Follow-up report from Dr.
- o July 7, 2008 Non-certification review for reconsideration of left knee inicondylar replacement
- o July 18, 2008 Follow-up Note from Dr
- o August 20, 2008 Request for IRO

### **PATIENT CLINICAL HISTORY [SUMMARY]:**

According to the medical records available for review, the patient is a xx-year-old employee who sustained an industrial injury to the left knee on xx/xx/xx when she fell. Following arthroscopy with chondroplasty on June 16, 2006 the patient developed post-operative infection with septic arthritis and on July 7, 2006 underwent arthroscopy with irrigation and lavage. In February and March of 2007 the patient was provided a series of 5 Supartz injections. The current diagnosis is unspecified osteomyelitis involving the knee. On June 19, 2007 a designated doctor evaluation note the diagnosis of chondromalacia patella.

The patient's symptoms increased in May of 2008. Arthrosopic irrigation for arthrodesis was reportedly provided on May 12, 2008. The provider noted bone on bone within the medial compartment.

Left knee MRI of December 23, 2005 shows intact meniscus and ligaments and mild joint effusion and mild periarticular soft tissue subcutaneous edema.

Radiograph of the left knee on March 6, 2008 show mild to moderate degenerative changes with narrowing of the medial joint

compartment and hypertrophic changes of the margins of the articular surfaces. There are also hypertrophic changes involving the lateral compartment of the femoral joint. No definite joint effusion is seen. Updated radiographs taken on April 24, 2008 show moderate degenerative changes with narrowing of the medial joint compartment, adjacent sclerosis, osteophytosis, and some cystic change in the distal femur. There are also some moderate degenerative changes in the patellofemoral compartment. There is mild chondrocalcinosis. Overall, in comparison to the prior study, there are stable degenerative changes with no acute findings.

MRI of June 5, 2008 shows intact ligaments. There is three compartment osteoarthritis which is moderately severe in the medial compartment and complex tearing of the medial meniscus.

A request for left knee unicompartmental replacement was not certified in review on June 19, 2008 with rationale that the patient has had a significant surgical history of her knee. She is under age 50 and is obese. There has been no recent serologic investigation to rule out any indolent infection. MRI of June 5, 2008 shows three compartment osteoarthroses, moderately severe in the medial compartment and mild chondromalacia of the patella. Recommendation was for consideration of either high tibial osteotomy or total knee arthroplasty versus medial compartment arthroplasty.

The provider responded on June 23, 2008 with an updated report and rationale for surgery. The provider notes that the patient has had conservative care with viscosupplementation and steroid injection. She has marked limitation in range of motion and significant pain. It is noted that the patient is quite obese at 5' 2" and 305 pounds with a body mass index of 55. However, according to the last Academy, a high body mass index does not contraindicate a total knee or unicompartmental knee replacement. She is over 2 years without any recurrence of infection and there is no fluid within the knee. Infection would be ruled out pre-op. She is a good candidate for unicompartmental knee consideration.

The patient seen by her pain management provider on July 1, 2008. She reported a pain level of 6-7/10. She was using crutches and continuing her medications. On examination, there was crepitus in the left knee. There was point tenderness with palpation in the peripatellar tissue and medial collateral ligament. Ligaments testing was unremarkable, however, McMurray's test was positive. Muscle strength was tested as 3+/5. She has traumatic chondromalacia of the left patella and complex tearing of the medial meniscus.

Request for reconsideration, left knee unicompartmental replacement was not certified in review on July 7, 2008 with rationale that the claimant has a BMI of 55.8 and is noted to be 5' 2" and 305 pounds. According to guidelines, left knee unicompartmental replacement does not appear indicated in a claimant demonstrated to have tricompartmental arthritis of the knee as shown on the recent MRI.

On July 18, 2008 the patient returned for a pain management follow-up reporting about 3 weeks relief with a saphenous nerve block administered one month prior. Her current pain is about 3/10. There is mild to moderate tenderness in the medial knee. Range of motion is slightly decreased. The patient is using a crutch.

The patient returned to the provider on July 21, 2008. Recommendation remains for a unicompartmental Zimmer knee replacement. She is not a candidate for a high tibial osteotomy since she has flexion contracture and rather significant loss of motion. She even has a slight valgus position, so a high tibial osteotomy would not help.

#### **ANALYSIS AND EXPLANATION OF THE DECISION INCLUDE CLINICAL BASIS, FINDINGS AND CONCLUSIONS USED TO SUPPORT THE DECISION.**

The Official Disability Guidelines state that obese patients fare nearly as well as their normal-weight peers following total knee replacement. The MRI of June 2008 shows three-compartment osteoarthritis which is moderately severe in the medial compartment, with mild chondromalacia of the patella and complex tearing of the medial meniscus. For this reason, a total knee replacement appears to be needed. If the patient lost weight a TKR could last more than 20 years. However, ODG also states that good candidates for TKR are over 50 years of age and have a Body Mass Index of less than 35. The patient is therefore not an ideal candidate for TKR.

Because prosthetic knees may wear out over time, an osteotomy procedure can enable younger, active osteoarthritis patients to continue using the healthy portion of their knee. The procedure can delay the need for a total knee replacement for up to ten years. Knee osteotomy is commonly used to realign the knee structure if there is arthritic damage on only one side of the knee. The goal is to shift the body weight off the damaged area to the other side of the knee, where the cartilage is still healthy. There must also be uneven damage to the joint, correctable deformity, and no inflammation. Osteotomy is generally reserved for younger active people who want to delay total knee replacement. Following osteotomy, use of crutches may be needed for several months which would be difficult for an obese person. Additionally, lack of full knee range of motion would contraindicate the stretching and strengthening for full motion needed after osteotomy. The patient is not an ideal candidate for osteotomy.

The medical records indicate the patient is xx years and has a weight of approximately 300 pounds and a body mass index of approximately 55. Patients are generally considered candidates for a fixed bearing unicompartmental knee replacement if they have disease in only one compartment, weigh less than 220 pounds, do not have significant deformity (genu varum or genu valgum), are able to extend the knee to within 10 degrees of full extension (flexion contracture of less than 10 degrees), are able to bend the knee more than 90 degrees and have an average activity level and do not have the goal of returning to high impact sports or

heavy labor. The patient has osteoarthritis in more than one compartment and has a flexion contracture of more than 15 degrees. Although a unicompartmental knee replacement would eliminate the problem of the torn medial meniscus as that is removed during the intervention, the patient can not be stated to be a good candidate for unicompartmental knee replacement which might last about 5 years at the most in an obese patient.

Additionally, unicompartmental knee replacement, like osteotomy, is a temporary measure. According to the literature, the revision rate is higher for unicompartmental knee replacements than for total knee replacement. Based on most studies, a revision of a unicompartmental knee replacement will not result in the same functional outcome as in patients that undergo a total knee replacement as their primary procedure. In addition, the revision surgery at times is technically more complex than a primary total knee replacement, especially when bone loss and decreased range of motion are encountered. The medical records fail to document that the patient has exhausted conservative care which, in this case, would include weight loss. Based on the reviewed medical records, a general consensus found in the literature, and The Official Disability Guidelines, a unicompartmental knee replacement cannot be recommended. Therefore, my recommendation is to agree with the previous non-certification of the request for Inpatient left knee unicompartmental replacement with 2-3 day LOS.

The IRO's decision is consistent with the following guidelines:

**A DESCRIPTION AND THE SOURCE OF THE SCREENING CRITERIA OR OTHER CLINICAL BASIS USED TO MAKE THE DECISION:**

- ACOEM- AMERICAN COLLEGE OF OCCUPATIONAL & ENVIRONMENTAL MEDICINE UM KNOWLEDGEBASE
- AHCPR- AGENCY FOR HEALTHCARE RESEARCH & QUALITY GUIDELINES
- DWC- DIVISION OF WORKERS COMPENSATION POLICIES OR GUIDELINES
- EUROPEAN GUIDELINES FOR MANAGEMENT OF CHRONIC LOW BACK PAIN
- INTERQUAL CRITERIA
- MEDICAL JUDGEMENT, CLINICAL EXPERIENCE AND EXPERTISE IN ACCORDANCE WITH ACCEPTED MEDICAL STANDARDS
- MERCY CENTER CONSENSUS CONFERENCE GUIDELINES
- MILLIMAN CARE GUIDELINES
- ODG- OFFICIAL DISABILITY GUIDELINES & TREATMENT GUIDELINES
- PRESSLEY REED, THE MEDICAL DISABILITY ADVISOR
- TEXAS GUIDELINES FOR CHIROPRACTIC QUALITY ASSURANCE & PRACTICE PARAMETERS
- TEXAS TACADA GUIDELINES
- TMF SCREENING CRITERIA MANUAL
- PEER REVIEWED NATIONALLY ACCEPTED MEDICAL LITERATURE (PROVIDE A DESCRIPTION)
- OTHER EVIDENCE BASED, SCIENTIFICALLY VALID, OUTCOME

The Official Disability Guidelines - Knee Joint replacement - 8-26-08:

Recommended as indicated below. Total hip and total knee arthroplasties are well accepted as reliable and suitable surgical procedures to return patients to function. The most common diagnosis is osteoarthritis. Overall, total knee arthroplasties were found to be quite effective in terms of improvement in health-related quality-of-life dimensions, with the occasional exception of the social dimension. Age was not found to be an obstacle to effective surgery, and men seemed to benefit more from the

intervention than did women. (Ethgen, 2004) Total knee arthroplasty was found to be associated with substantial functional improvement. (Kane, 2005) Navigated knee replacement provides few advantages over conventional surgery on the basis of radiographic end points. (Bathis, 2006) (Bauwens, 2007) The majority of patients who undergo total joint replacement are able to maintain a moderate level of physical activity, and some maintain very high activity levels. (Bauman, 2007) Functional exercises after hospital discharge for total knee arthroplasty result in a small to moderate short-term, but not long-term, benefit. In the short term physical therapy interventions with exercises based on functional activities may be more effective after total knee arthroplasty than traditional exercise programs, which concentrate on isometric muscle exercises and exercises to increase range of motion in the joint. (Lowe, 2007) The safety of simultaneous bilateral total knee replacement remains controversial. Compared with staged bilateral or unilateral total knee replacement, simultaneous bilateral total knee replacement carries a higher risk of serious cardiac complications, pulmonary complications, and mortality. (Restrepo, 2007) Unicompartmental knee replacement is effective among patients with knee OA restricted to a single compartment. (Zhang, 2008) Accelerated perioperative care and rehabilitation intervention after hip and knee arthroplasty (including intense physical therapy and exercise) reduced mean hospital length of stay (LOS) from 8.8 days before implementation to 4.3 days after implementation. (Larsen, 2008) After total knee arthroplasty (TKA) for osteoarthritis of the knee, obese patients fare nearly as well as their normal-weight peers. A British research team reports that higher BMI (up to 35) should not be a contraindication to TKA, provided that the patient is sufficiently fit to undergo the short-term rigors of surgery. TKA also halts the decline and maintains physical function in even the oldest age groups (> 75 years). (Cushnaghan, 2008) In this RCT, perioperative celecoxib (Celebrex) significantly improved postoperative resting pain scores at 48 and 72 hrs, opioid consumption, and active ROM in the first three days after total knee arthroplasty, without increasing the risks of bleeding. The study group received a single 400 mg dose of celecoxib, one hour before surgery, and 200 mg of celecoxib every 12 hours for five days. (Huang, 2008)

ODG Indications for Surgery -- Knee arthroplasty:

Criteria for knee joint replacement (If only 1 compartment is affected, a unicompartmental or partial replacement is indicated. If 2 of the 3 compartments are affected, a total joint replacement is indicated.):

1. Conservative Care: Medications. OR Visco supplementation injections. OR Steroid injection. PLUS
  2. Subjective Clinical Findings: Limited range of motion. OR Night-time joint pain. OR No pain relief with conservative care. PLUS
  3. Objective Clinical Findings: Over 50 years of age AND Body Mass Index of less than 35. PLUS
  4. Imaging Clinical Findings: Osteoarthritis on: Standing x-ray. OR Arthroscopy.
- (Washington, 2003) (Sheng, 2004) (Saleh, 2002) (Callahan, 1995)