

Pre-operative Insurance Mandated Physical Therapy does not Prevent the Need for Shoulder Arthroplasty in Patients with Glenohumeral Osteoarthritis.

Brendan Patterson, Grant E Garrigues, Gregory Neal Lervick, Maria Fernanda Bozoghlian¹, Arden C Shen, James V Nepola, Jay D Keener, Jason E Hsu

¹Orthopedics and Rehabilitation

INTRODUCTION:

Glenohumeral osteoarthritis (GHOA) is a common cause of shoulder pain for many patients that can have a significant impact on overall quality of life. Non-surgical treatment options for advanced GHOA are limited, and there are currently no high-level studies supporting the use of physical therapy (PT) to treat advanced cases of GHOA¹⁻³. Despite this, there has been an increasing requirement for insurance-mandated PT prior to shoulder arthroplasty. The purpose of this study was to investigate patients with shoulder arthritis who were denied shoulder arthroplasty by their insurance carriers based on the lack of pre-operative PT. We aimed to determine the proportion of these patients who ultimately required formal physical therapy prior to elective shoulder arthroplasty. Additionally, we aimed to determine what factors, if any, might prevent the need for eventual shoulder arthroplasty in this cohort. We further sought to assess healthcare provider's perception regarding frequency, duration, and overall impact of the peer-to-peer (P2P) process.

METHODS:

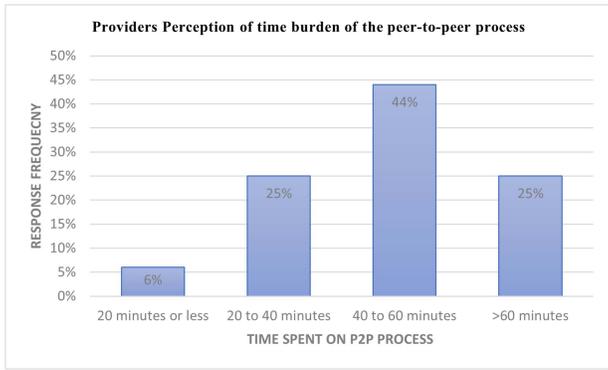
This was a multicenter retrospective case series of patients with moderate to severe GHOA who were denied shoulder arthroplasty by their insurance carrier due to lack of pre-operative PT. The cohort was followed to assess if a peer-2-peer process (P2P) took place and if patients were required to perform formal pre-operative PT prior to shoulder arthroplasty. Patient data was collected from 2022-2024. Variables collected included demographic data, insurance carrier status, pre-operative range of motion, pre-operative Patient Reported Outcome Measures (PROMs), and post-physical therapy ROM and PROMs. A survey distributed among healthcare providers including surgeons and advanced practice providers, was administered to assess healthcare provider's perception of the frequency, duration, and overall impact of the P2P process.

RESULTS:

A total of 12 patients were included for analysis. Demographic data is summarized in Table 1. Prior to surgical indication all patients (n=12, 100%) had undergone some form of conservative treatment for their shoulder arthritis in the form of NSAIDs, corticosteroid injections, and/or activity modification. Despite being initially denied surgery due to lack of formal pre-operative PT, ultimately, 11/12 (92%) of patients underwent the indicated shoulder arthroplasty. Ten of the 12 cases (83%) underwent a P2P. Six P2P appeals (60%) were unsuccessful (surgery denied after P2P process), and five of those patients were required to undergo a course of pre-operative PT. A total of seven patients (58%) were required to undergo formal pre-operative PT and six of those seven patients (86%) ultimately underwent shoulder arthroplasty. Of the seven patients who we required to undergo insurance mandated PT, five had complete pre- and post-physical therapy ROM data. None of those five patients had sufficient improvement of their ROM after performing PT that would alter their ultimate decision to proceed with shoulder arthroplasty. The average time elapsed from the day the patients were indicated for the shoulder arthroplasty procedure until they were able to undergo the surgery was 102 days (range 17 to 288 days). Results from the survey show that almost half of healthcare respondents spend between 40 to 60 minutes on P2P appeals (Figure 1).

DISCUSSION AND CONCLUSION:

Despite the lack of evidence to support PT for the treatment of GHOA, many patients indicated for shoulder arthroplasty are denied the surgery by their insurance carrier due to lack of pre-operative PT. The vast majority of patients in our cohort initially indicated and denied prior authorization for shoulder arthroplasty ultimately underwent the procedure that was originally indicated, regardless of whether they participated in insurance mandated PT or not. Insurance-mandated pre-operative physical therapy in this cohort did not significantly improve outcomes or prevent the need for shoulder arthroplasty. Results of this study highlight a significant burden to providers and to patients who are denied a shoulder arthroplasty due to lack of pre-operative physical therapy in the setting of moderate to advanced GHOA.



Age [Mean (SD)]	66 (2)
Sex	
Female	58% (n=7)
Male	42% (n=5)
BMI [Mean (SD)]	31.36 (1.65)
Procedure	
TSA	36% (n=4)
RSA	64% (n=7)
Kellgren-Lawrence	
Grade 2	8% (n=1)
Grade 3	58% (n=7)
Grade 4	34% (n=4)
Diagnosis	
Glenohumeral OA	75% (n=9)
Cuff Tear Arthropathy	25% (n=3)