



Embargoed for release until 12:01 a.m. PST Feb. 12, 2024

For more information, contact:

Deanna Killackey	847-384-4035	630-815-5195	killackey@aaos.org
Lauren P. Riley	847-384-4031	708-227-1773	pearson@aaos.org

Watchful Waiting Shows Value as Treatment Option for Frozen Shoulder

SAN FRANCISCO (Feb. 12, 2024)—[Frozen shoulder](#), also known as adhesive capsulitis, is a condition characterized by pain and stiffness in the shoulder, resulting in difficulty of movement in the shoulder. It affects 2-5% of the population, typically those between 40 and 60 years of age. People with diabetes and hypothyroidism are at an increased risk. Even without treatment, frozen shoulder can get better with time; however, recovery may take up to three years. Pain medications and physical therapy (PT) are typically used as the main treatments, but there is little evidence supporting the use of PT.

Study Comparing Frozen Shoulder Treatments

A single-provider, randomized controlled trial (RCT) study presented at the 2024 Annual Meeting of the [American Academy of Orthopaedic Surgeons](#) (AAOS) used patient-reported outcome measures (PROMs) and health care costs to compare watchful waiting (WW) versus PT for the treatment and management of frozen shoulder. The study, “**Watchful Waiting Achieves Higher Value Than Physical Therapy for the Treatment of Idiopathic Frozen Shoulder: A Prospective Randomized Controlled Trial**,” randomized 61 patients to either WW (31 patients) or PT (30 patients) and assessed outcomes at six weeks, three months, six months and 12 months.

This is the first RCT to compare PT versus WW for frozen shoulder treatment using a value-based health care framework. The primary outcome was the American Shoulder and Elbow Surgeons Score (ASES), and secondary outcomes included the patient value (12-month ASES score divided by health care costs). The outcomes of the study include:

- WW and PT patients improved significantly at each time point for all PROMs ($p < 0.05$ for all).
- There were no significant differences between WW and PT treatments at any point in time ($p > 0.05$ for all).
- PT patients incurred 10 times higher costs than WW patients (normalized mean difference: 1,635.67; 95% CI: 967.19, 2,304.15; $p < 0.001$) and achieved only 16.9% of the patient value (normalized mean difference: -146.97; 95% CI: -207.47, -86.47; $p < 0.001$).

Based on the findings of this study, physicians should inform their patients with adhesive capsulitis of the treatment options. These include non-operative management with medications, physical therapy, watchful waiting and surgery when indicated. Physicians may then decide on the most appropriate treatment plan for their patient which may include the patient’s preferences and needs.

###

2024 AAOS Annual Meeting Disclosure Statement

About the AAOS

With more than 39,000 members, the [American Academy of Orthopaedic Surgeons](#) is the world’s largest medical association of musculoskeletal specialists. The AAOS is the trusted leader in advancing musculoskeletal health. It provides the highest quality, most comprehensive education to help orthopaedic surgeons and allied health professionals at every career level to best treat patients in their daily practices. The AAOS is the source for information on bone and joint conditions, treatments and related musculoskeletal healthcare issues; and it leads the healthcare discussion on advancing quality.

Follow the AAOS on [Facebook](#), [X](#), [LinkedIn](#) and [Instagram](#).