American Pain Society
RESEARCH
EDUCATION
TREATMENT
ADVOCACY
PUBLISHED BY ELSEVIER

The Journal of Pain, Vol 15, No 1 (January), 2014: pp 49-58
Available online at www.jpain.org and www.sciencedirect.com

Facilitating Unequivocal and Durable Decisions in Workers' Compensation Patients Eligible for Elective Orthopedic Surgery

Emily Brede,* Tom G. Mayer,† Margareta Shea,* Cristina Garcia,* and Robert J. Gatchel‡

**PRIDE Research Foundation, Dallas, Texas.*
†Department of Orthopedic Surgery, University of Texas Southwestern Medical Center at Dallas, Dallas, Texas.
‡Department of Psychology, College of Science, University of Texas at Arlington, Arlington, Texas.

Abstract: Timely intervention and recovery is beneficial to patients with chronic disabling occupational musculoskeletal disorders. Therefore, a surgical option process was developed for use in a functional restoration program (FRP) to allow chronic disabling occupational musculoskeletal disorder patients who were undecided about elective orthopedic surgery to participate in interdisciplinary rehabilitation, rather than suspending treatment, until the surgical option could be resolved. A consecutive cohort of 295 chronic disabling occupational musculoskeletal disorder patients with an unresolved surgical option was admitted to an FRP and their surgical preference at FRP midpoint was determined. The majority of patients declined surgery (n = 164) and were invited to complete the FRP. The remainder elected to pursue surgery and either underwent surgery (n = 43) or had their surgical request denied (n = 38). In the post-FRP year, only .8% of patients reversed their original decision and underwent surgery. Patients whose surgical preferences were accommodated (ie, the declined-surgery/underwent-surgery groups) demonstrated significant psychosocial improvement and excellent socioeconomic outcomes, which were similar to those of FRP patients without a surgical option. Patients whose request for surgery was denied had poorer outcomes than the other groups, but still outperformed FRP dropouts. This suggests that the addition of a formal surgical option process to an interdisciplinary FRP facilitated the surgical decision-making process and helped prevent delayed recovery.

***Perspective:** This study introduces a surgical option process to improve outcomes for patients with chronic disabling occupational musculoskeletal disorders who are undecided about elective orthopedic surgery. The addition of a surgical option process to interdisciplinary rehabilitation may resolve surgical indecision, improve outcomes, promote psychosocial recovery, and facilitate progression to Maximum Medical Improvement.*

***Key words:** Surgical option process, functional restoration, workers' compensation, chronic disabling occupational musculoskeletal disorders, orthopedic surgery.*

In patients with chronic disabling occupational musculoskeletal disorders (CDOMDs), an important treatment goal within Workers' Compensation (WC) systems is to avoid delayed recovery. Delayed recovery may contribute to physical deconditioning as a result of prolonged inactivity,[25-27,30,31,38] and longer delays in recovery are associated with poorer functional and socioeconomic outcomes in CDOMD patients (Theodore et al, 2013, unpublished data).[22] Delayed recovery in the WC system may be the result of factors such as difficulty accessing treatment or delays in preauthorization. However, in CDOMD patients who have been offered elective surgery, surgical uncertainty on the part of the patient or indecision due to disagreements among providers and/or insurance carrier utilization review teams can be important factors delaying recovery.

Participation in WC systems is specific to the work-related injury, and the primary system goal is care coordination to facilitate timely resolution of the injury and related disability, known as Maximum Medical

Received May 15, 2013; Revised August 9, 2013; Accepted September 20, 2013.
The writing of this manuscript was supported in part by Grant 1K05-MH-71892 from the National Institutes of Health, which focuses on evidence-based assessment and treatment of musculoskeletal pain and the monitoring of valid outcomes.
No conflicts of interest were reported by any of the authors.
Address reprint requests to Tom G. Mayer, MD, 5701 Maple Ave. #100, Dallas, TX 75235. E-mail: tgmayer@pridedallas.com
1526-5900/$36.00

http://dx.doi.org/10.1016/j.jpain.2013.09.009

Improvement. Then, financial compensation is determined and the patient exits the WC system. However, in the case of surgical uncertainty, other forms of medical care are frequently suspended, pending resolution of the surgical decision. This delay may allow additional physical deterioration to occur, impeding the patient's successful treatment response and ability to return to work (Theodore et al, 2013, unpublished data).[16,22,24] Further complicating matters, surgical requests may be partially motivated by secondary gain because a WC claim surgical procedure can lead to higher payments for permanent partial impairment/disability. Thus, conflicting financial motives pit patients against insurance carriers, creating incentives to pursue surgery or resist its approval, respectively.

Most patients with work-related injuries can be successfully treated in primary and secondary care (with medications and/or exercise, etc). Other patients have injuries that unquestionably require surgery. However, some patients with ambiguous surgical indications will fail to reach Maximum Medical Improvement within 4 to 6 months after injury, progressing to chronic disability. Some of these patients may become candidates for elective surgical procedures when nonoperative care has failed to resolve pain and functional deficits. For these CDOMD patients, already experiencing delayed recovery, indecision about undergoing elective surgery and lengthy preauthorization disputes can be particularly damaging. Multiple studies have found that a longer time between injury and surgery is related to poorer treatment outcomes, such as less return to work, more permanent disability, and higher rates of opioid use, particularly in lumbar fusion or carpal tunnel release.[9-11,23,33]

To prevent treatment delays and to promote earlier recovery in WC patients with CDOMDs, a surgical option process (SOP) was developed and implemented.[5] The goal of this SOP was to allow patients with an unresolved surgical option to enter a structured, intensive rehabilitation program and make a surgical decision based on the response to rehabilitation. The SOP pilot study was conducted at a functional restoration program (FRP) that has been extensively discussed in the literature.[19,25,27,28,30,39] After completing half the recommended FRP, the patient made a final surgical determination. Most patients chose not to pursue surgery at FRP midpoint and opted to complete the FRP. These patients demonstrated substantial benefits in resolving disability. However, the pilot study was quite small (N = 44). Therefore, the purpose of the present study was to validate the pilot study over a longer period of time, by examining the effect of SOP participation on treatment outcomes, relative to a matched comparison group lacking a surgical option. We also wanted to examine the effect of SOP decisions on patient-reported outcomes, and the responsiveness of those outcomes to the combined SOP/FRP. Our hypothesis was that patients who declined or underwent surgery as a part of the SOP would have outcomes similar to the comparison group, but that patients whose surgical requests were denied would have poorer outcomes.

Methods

Participants: SOP

The current prospective cohort study identified 295 consecutive patients with an elective orthopedic surgical option, who were admitted to an interdisciplinary regional referral center providing an FRP between January 2004 and May 2011. This facility has been awarded a Center of Clinical Excellence designation by the American Pain Society, and its published outcomes are included in the major national treatment guidelines applied to WC claims for CDOMD patients.[6,12,18] All patients were referred by treating providers for rehabilitation of CDOMDs under WC insurance and consented to participate. The SOP was part of the standard FRP care, and all patients with an elective surgical opportunity were offered participation in this program as a component of their care. The study was granted an exemption from review by the institutional review board, as data were collected from standard medical records. Inclusion criteria were as follows: 1) total or partial disability of at least 4 months, 2) failure of prior nonoperative and surgical care to resolve disability, 3) persistent severe pain with functional limitations, 4) unresolved surgical option (study group only), and 5) able to communicate in English or Spanish. An unresolved surgical option was defined in 4 ways: 1) surgery was requested by the surgeon but denied by the insurance carrier, 2) the patient was undecided about the surgical option presented by the surgeon, 3) surgery was presented to the patient as a treatment option by 1 or more surgeons, but patient/surgeon shared decision-making was ambivalent on benefits vs risks, and 4) the treating surgeon's authorization request was withdrawn because of disagreement with a second opinion or utilization review surgeon (see Table 1).

Participants: Nonsurgical Option Comparison Group

During the study period, there were 1,758 additional patients admitted to the FRP without an unresolved surgical option, from which a comparison group was selected (COMP, n = 272). Although these patients may have had surgery prior to FRP admission, additional surgery was no longer an option. Patients with prior surgery were included in the COMP group because roughly half of the patients with an unresolved surgical option had also undergone surgery prior to participation in the SOP. We believed that excluding all patients with prerehabilitation surgery would decrease the validity of the COMP group. Fig 1 illustrates the exclusion factors (FRP nonstarters or drop-outs prior to the surgical decision meeting, n = 50) that led to the final SOP cohort (n = 245).

The COMP group was matched to the SOP group for year of discharge to avoid cohort effects, as there were significant economic changes during the study period that may have changed the overall likelihood of certain socioeconomic outcomes, such as return to work. For each discharge year, a percentage of non-SOP patients, comparable to the