

## **Is there an Association of Patient mindset and Physician willingness to acquiesce to unhealthy patient preferences?**

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### **INTRODUCTION:**

Patient requests may diverge from evidence-based recommendations, in part related to misconceptions and feelings of distress regarding bodily sensations. Surgeons may feel pressure to honor less healthy patient requests due to experience metrics, legal concerns, or referral relationships. Additional pressure may stem from emotional contagion, when the patient's distress is partially experienced by the specialist. In a survey-based experiment, aspects of patient scenarios were randomized to examine factors that might be associated with a specialist's likelihood of acquiescing to unhealthy patient requests. In this study we asked: 1) Which patient factors are associated with surgeon likelihood to fulfill requests for tests or treatments that may not align with best evidence? And 2) which surgeon factors are associated with the likelihood of fulfilling such requests?

### **METHODS:**

We conducted an online scenario-based experiment involving 144 orthopedic surgeons from the Science of Variation Group (SOVG). Participants reviewed five randomized clinical vignettes involving upper extremity musculoskeletal conditions. Patient characteristics were randomized and varied in: age, gender, number of prior visits (first, second, fourth), symptom clarity (specific vs puzzling), stress level, and a patient request that conflicted with current evidence or was considered debatable. We assessed patient-level factors associated with surgeon likelihood to fulfill requests (measured using an 11-point ordinal scale from 0, not at all likely to 10, definitely) using multilevel mixed-effects linear regression, accounting for surgeon-level nesting. Surgeon-level predictors were analyzed using multivariable negative binomial regression. Statistical significance was set at  $p < 0.05$ .

**RESULTS:** Surgeons showed low overall willingness to fulfill debatable patient requests (median likelihood 2 [IQR 1–5]), with somewhat higher values for a patient with ECU tendinopathy requesting a steroid injection (4 [IQR 2–7]) and a patient with nonspecific wrist pain and laxity requesting an MRI (4 [2–7]). Compared to the least debatable scenario of requesting corticosteroid injections for ECU tendinopathy, a lower likelihood to fulfill the request was moderately associated with requesting a mild opioid for SLAC arthritis (RC = -3.4; 95%CI = -4.0 to -2.7), slight-to-moderately with requesting an MRI for De Quervain tendinopathy (RC = -2.1; 95%CI = -2.8 to -1.5), and slight-to-moderately with supporting a requested work claim for TMC arthritis or laxity (RC = -1.8; 95%CI = -2.5 to -1.1). A slight association was observed with requests for ganglion cyst removal (RC = -0.87; 95%CI = -1.6 to -0.16), and with requests for surgical treatment to address a TFCC “tear” on MRI (RC = -1.4; 95%CI = -2.1 to 0.74). Surgeons were more likely to fulfill debatable or non-evidence-based requests in cases with more follow-up visits (second: RC = 0.91; 95% CI, 0.48 to 1.3; fourth: RC = 0.85; 95% CI, 0.38 to 1.3). No association was found with patient distress levels. Among surgeon characteristics, practicing outside North America was modestly associated with a higher likelihood of fulfilling a request (e.g., Latin America: RC = 0.59; 95% CI = 0.33–0.85). Surgeons who had entered practice between 2015–2020 were less likely to fulfill requests compared to more recent graduates (RC = -0.61; 95% CI = -1.0 to -0.18).

### **DISCUSSION AND CONCLUSION:**

The finding that surgeons are unlikely to fulfill potentially unhealthy patient requests, and that no association was found with patient stress, could indicate a limited influence of stress/emotion contagion on specialist decisions. Alternatively, scenario-based studies may not be able to fully capture such effects. However, the increased likelihood of accommodating requests from patients with numerous return visits may reflect an association with more subtle indicators of patient distress. Efforts to reduce overtreatment may benefit from supporting clinicians in navigating preference-evidence misalignment, particularly in the context of repeat visits, and addressing external factors such as cultural norms and systemic pressures.