Major and Minor Complications Correlate With Patient-Reported Outcomes Following Orthopaedic Trauma Surgeries

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Purpose: Complications can severely impact a patient's recovery. The purpose of this study was to quantify the effects of major and minor complications on patient-reported outcomes following musculoskeletal injuries.

Methods: Trauma patients completed Patient-Reported Outcomes Measurement Information System (PROMIS) 10 surveys across our health-care organization at 6 weeks, 3 months, 6 months, and 1 year postoperatively.

Major complications included amputations, deep vein thrombosis/pulmonary embolism, hardware failure with reoperations, malunion, nonunion, deep infection requiring surgery, or biological complications requiring reoperation. Minor complications included pain, postoperative stiffness, urinary tract infection, superficial infections, and pneumonia. A mixed model analysis was performed to compare those with major, minor, and no complications.

Results: 1098 patients were included. 83 had major complications and 42 had minor complications. The groups were similar in age, gender, and body mass index (P>0.05). Those with major complications had an average PROMIS Global Physical Health (GPH) in standard error of 41.5 ± 0.9, compared to 43.2 ± 1.2 for minor complications, and 44.7 ± 0.3 for patients without complications (P<0.01). A major complication was associated with a decrease of 4.3 points, while minor complications had a decrease of 2.5 points of PROMIS GPH.

Conclusion: PROMIS 10 GPH is responsive for postoperative complications following surgical interventions for musculoskeletal injuries. Our data suggest that longitudinal tracking of PROMIS 10 will comprehensively depict patient recovery following orthopaedic trauma surgery and may be used to counsel patients on their recovery trajectory.