

Title: Lower Extremity Trauma is Associated with an Increased Rate of New Mental Health Disorder Diagnosis and Suicide Attempt

Authors: Bela P. Delvadia¹, Julianna E. Winter¹, Jacob S. Budin¹, Arjun Verma¹, Onyebuchi A. Imonugo¹, Olivia C. Lee², William F. Sherman¹

¹Tulane University School of Medicine, New Orleans, Louisiana

²Louisiana State University Health Sciences Center, New Orleans, Louisiana

ABSTRACT

Introduction: Psychiatric disorders are common in orthopaedic trauma patients, and place patients at an increased risk for postoperative complications. The purpose of this study was to evaluate the risk of developing a new psychiatric disorder diagnosis within 2 years following lower extremity fracture.

Methods: A retrospective cohort study was conducted using a large national insurance claims database. Patients with pelvis, acetabulum, proximal femur, femoral shaft, distal femur, patella, tibia plateau, tibia shaft, ankle (including malleolar, bimalleolar, and trimalleolar), pilon, calcaneus, and Lisfranc fractures were matched 1:4 with non-fracture controls. Rates of psychiatric disorders after primary lower extremity fractures were compared using multivariable logistic regression. Psychiatric disorders evaluated included alcohol use disorder, generalized anxiety disorder, bipolar disorder, major depressive disorder, drug use disorder, panic disorder, post-traumatic stress disorder, and suicide attempt.

Results: Compared to controls with no fracture, patients who sustained pelvis, acetabulum, proximal femur, midshaft femur, distal femur, patella, tibia plateau, tibia shaft, ankle, pilon, calcaneus, or Lisfranc fracture had a statistically significant increased risk of being diagnosed with any of the queried psychiatric disorders within two years following fracture. Comparison of risk of psychiatric disorder diagnosis between fracture location is visualized in **Figure 1**. More proximal fractures, such as pelvis fracture (OR: 1.48, CI: 1.37-1.59) and acetabulum fracture (OR:1.47, CI: 1.29-1.66) demonstrated the greatest risk of developing any of the queried psychiatric disorders compared to more distal fractures.

Conclusion: There is an increased risk of being diagnosed with a new psychiatric disorder following lower extremity trauma. Physicians should consider increased mental health screening and potential referral for psychiatric evaluation for patients following lower extremity trauma.

Rate of Any Psychiatric Diagnosis by Fracture Site

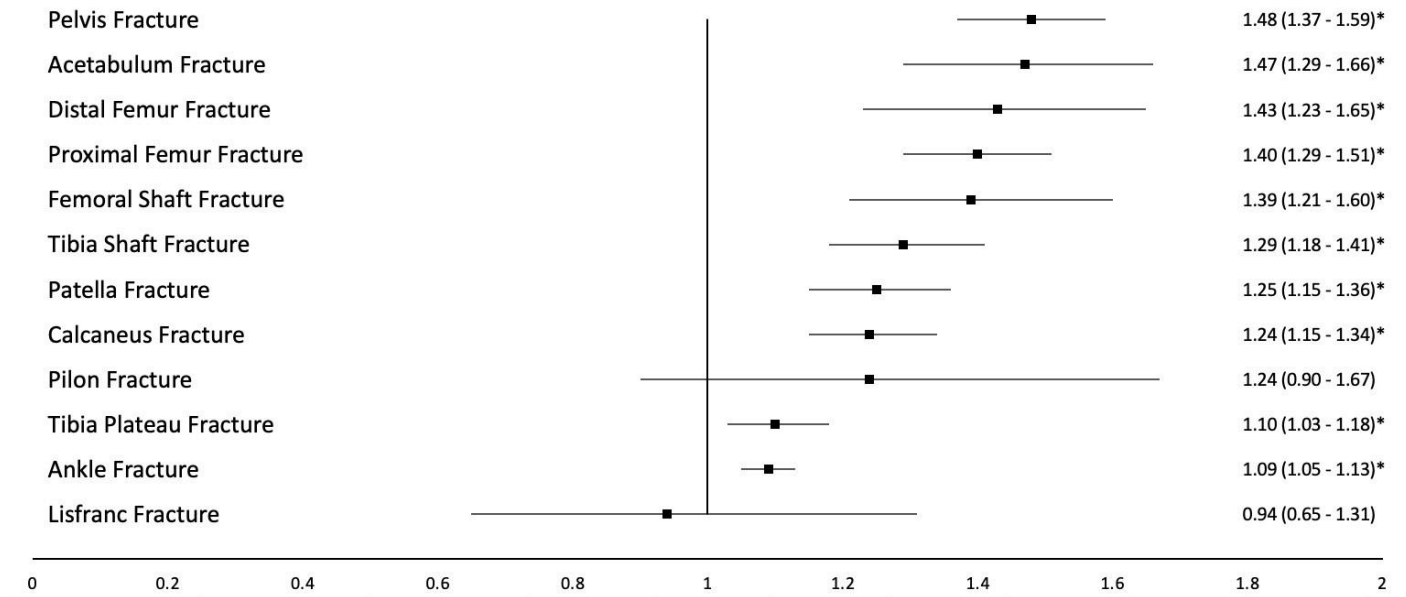


Figure 1: Rate of any psychiatric diagnosis by fracture site