

Recidivism is Reduced with Engagement in Psychosocial Programming Following Orthopaedic Trauma

Isabella Heimke, BA; Ryan Furdock, MD; Natasha Simske, BS; Megen Joann Simpson, MEd; Sarah Hendrickson, MEd; Heather A. Vallier, MD
MetroHealth System, Cleveland, Ohio, UNITED STATES

Purpose: Recidivism is frequent following traumatic injury, with known demographic, social, and behavioral risk factors affording minimal opportunity for mitigation. Targeted interventions to enhance patient engagement and recovery may reduce recidivism. Trauma education, counseling, peer mentorship, and provision of other recovery resources have been formally operationalized at our trauma center, collectively referred to as Trauma Recovery Services (TRS). Our hypothesis is that utilization of TRS would reduce recidivism following orthopaedic trauma.

Methods: Over 5 years at a Level I trauma center, 959 adult patients treated operatively for pelvic, spine, and femoral fractures were reviewed to ascertain recidivism after minimum 12 months following injury. All patients receive information about TRS and are offered services as standard of care. Demographic, social, injury, and treatment features were recorded; utilization of TRS, including types and duration of engagement, were determined. Multivariate logistic regression statistical analysis was used to identify predictors of recidivism, including engagement with TRS.

Results: 736 of all patients (76.7%) had utilized TRS, including educational materials (n = 693), peer visits (n = 766), comfort items (n = 29), support groups (n = 22), coaching (n = 273), posttraumatic stress disorder (PTSD) screening (n = 74), and /or victim of crime (VOC) services (n = 377). Overall 134 patients (14.0%) returned to the emergency department for an unrelated trauma event after a mean of 21 months. 12.6% of TRS users became recidivists. Overall, 52% of recidivists had history of preexisting mental illness, with similar high rates of TRS engagement between recidivists (76.0%) and non-recidivists (76.9%). However, non-recidivists were more likely to use multiple different types of recovery services (48.6% vs 36.0%, P = 0.003), and were more likely to engage with trauma peer mentors (former trauma survivors) in the inpatient setting (91.0% vs 86.0%, P = 0.03). After multivariable analysis, patients using multiple different recovery services had a lower risk of recidivism (P = 0.04, odds ratio 0.42, 95% confidence interval 0.19-0.96).

Conclusion: Multifaceted engagement with interventions to optimize recovery, in the form of Trauma Recovery Services, is associated with less recidivism following major orthopaedic trauma. Resultant enhancement of individual health and well-being and reductions in health-care costs should be realized. These results demonstrate value of TRS interventions and warrant further study to optimize resource allocation and patient participation.