

Geriatric Recovery and Enhancement Alliance in Trauma (GREAT) multidisciplinary quality improvement initiative: improving rates of successful resuscitation, rehabilitation and reintegration of geriatric trauma patients across the trauma spectrum of care.

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Background: Traumatic injuries are a significant cause of morbidity and mortality in the elderly, with the risk of poor outcomes increasing with advanced age. Using a multidisciplinary geriatric trauma care approach, led by a dedicated nursing coordinator, standardized order sets were implemented to reduce in-hospital complications and screening tools applied early to identify patient specific care needs. Specifically, early trauma consult, identification of injuries, appropriate opioid ordering, polypharmacy avoidance, delirium prevention, mental health issues, and mobility needs were addressed

The goal was to improve geriatric trauma awareness, decrease in-hospital complications and improve the likelihood of return to home and baseline function

Implementation: Through stakeholder consultation process, it was recognized that the hospital needed a coordinated, geriatric trauma team process. The geriatric trauma navigator (GTN) role was created to lead these quality improvement initiatives. This included the development of educational strategies for frontline staff and physicians to highlight the unique challenges of trauma patient management and to introduce the GREAT study for optimized patient care. Patients 65 years of age or older with a traumatic mechanism were enrolled. GREAT patients then followed a protocol designed for tracking and implementing standardized processes, including early ED and in-patient order sets, engagement of trauma services, and the application of screening tools and specialty consultations. Screening tools (Identification of Seniors At Risk (ISAR), Confusion Assessment Method (CAM), Mini-Cog, Patient Health Questionnaire (PHQ-2), Geriatric Depression Scale (GDS-15), Alcohol Use Disorders Identification Test- Concise (AUDIT-C), Canadian Nutrition Screening Tool (CNST), Clinical Frailty Scale, ADL/IDLs) were administered to identify at-risk patients and to inform consultation with geriatrics and psychiatry, and allied health services (occupation therapy, physical therapy, nutrition services, pharmacy). The study team evaluated data on a monthly basis and met quarterly to evaluate and implement changes.

Evaluation Methods: Data was prospectively collected and compared to control data from the Alberta Trauma Registry and Trauma Quality Improvement Program (American College of Surgeons). Data tabulation and statistical analysis was performed using Stat59 (STAT59 Services Ltd, Edmonton, AB, Canada).

Outcome measures

- provision of timely and comprehensive care: rates of trauma team activations, emergency department and in-hospital length of stay

- reduction of hospital complications: UTI, DVT/PE, pneumonia, pressure ulcers, ICU admission, unexpected readmission to hospital
- improvement of functionality upon discharge: in-hospital and 30 day mortality rates, return to function, disposition (home versus long term care)

Process measures

- time to diet and ambulation
- tracking of number of days of urinary catheter in situ
- compliance with GOC discussions
- use of assessment screening tools
- spinal clearance <24 hours

Results: Enrollment of patients into GREAT based on study criteria lowered the threshold for triggering a trauma team consult, improving the recognition rate of geriatric trauma. This was reflected in the decreased average ISS scores and higher rate of trauma consults. Ground level falls, which previously did not typically activate a trauma consult, are now be recognized as major trauma. With the GTN, we determined that gaps exist in the current monitoring of key performance measures. Through the GREAT data collection process, we were able to establish baseline data and target PDSA changes to address these gaps.

Advice and Lessons Learned: This quality initiative was designed as a proof of concept model for early identification of the geriatric trauma patient and a collaborative team approach to optimize care processes, and in turn minimize complications. The GTN role was vital to identify patients, implement screening tools, and coordinate care. With limited resources and increasing work loads for all programs, the additional GTN role required site leadership and stakeholder support. Ideally, a protocolized geriatric trauma team activation and admission process would ensure all patients receive screening tools as part of their in-patient orders for early assessments and interventions. Further educational campaigns will need to be developed to increase awareness of the importance of geriatric trauma. Additionally, processes need to be streamlined for data gathering and monitoring of performance measures. Access to screening tools and order sets need to be user friendly, built into currently existing workflows, and evaluated for optimization.