



Innovation Challenge

Project Overview

Development and Implementation of an Agitation Management Guideline to Reduce Agitation in Patients with Acute Traumatic Brain Injury

This interdisciplinary team plans to develop a guideline to manage agitation in patients following acute traumatic brain injury (TBI) which is anticipated to improve patient and staff safety and promote optimal patient outcomes. The tool will be tested among patients diagnosed with acute TBI admitted to R Adams Cowley Shock Trauma Center Neurotrauma Critical Care (NTCC) and Neurotrauma Intermediate Care (MTIMC) units. To understand the impact, the team will compare the prevalence of agitation and safety outcomes between patients managed using the guideline and those from a previous study that were managed without the tool.



Cohort 1
July 2021 - January 2023



\$25,000 Award



Primary Outcome
Improved patient & staff safety



Project Team

- Karen A. McQuillan, MS, RN, Nursing, Shock Trauma Center
- Gary Schwartzbauer, MD, PhD, FPI, Neurosurgery
- Mehrnaz Pajoumand, PharmD, BCPS, Pharmacy
- Paul Thurman PhD, RN, Nursing, Shock Trauma Center
- Alivia Stenzel MS, RN, Nursing, Shock Trauma Center
- Madeline Marks, PhD, Psychiatry
- Nora Tamulevich, RN, BSN, Nursing, Shock Trauma Center
- Alexandra Hunt, MSN, CRNP, Nursing, Shock Trauma Center
- Juli Carbone, OTR/L, CBIS, Rehabilitation Services
- Amy Madren, BS, BSN, Nursing, Shock Trauma Center
- Katelyn Delauter (Ruhe) MS, RN, Nursing, Shock Trauma Center
- Sara Le Maitre, MS, RN, Perioperative Services
- Samantha Latorre, MD, Psychiatry

Midpoint Progress Updates

(June 2022)

Following development of a guideline for management of agitation in patients with acute TBI, all Neurotrauma Critical Care and Neurotrauma Intermediate Care staff were educated on the tool and began routine use on November 16, 2021. Audits are being performed at least three times a week by the research team on all traumatic brain injured patients in the Neurotrauma units. The audits indicate an 85% compliance rate with the guideline.

After 6 months of guideline use, 160 patients meeting the study inclusion and exclusion criteria have been identified and interim analysis will be performed to determine the early impact of the guideline use on agitation prevalence among patients with acute traumatic brain injury in the Neurotrauma units.

Final Report Summary

(January 2023)

The team successfully developed, implemented and trained on the use of an agitation management algorithm. More than 850 patient use cases have been analyzed, showing significant improvements with the use of the algorithm for agitation management.

The team plans to broadly disseminate results through additional UMMS facilities, national conferences, and publications. They are also considering developing a similar algorithm tailored for use with patients that have other non-traumatic etiologies of brain injury or dysfunction.