

injury occurred. As a part of the cognitive study, participants completed a battery of measures that were combined into a single Z-scored executive functioning measure. Regression was used to evaluate the association between self-reported head trauma and executive functioning, controlling for age and gender. Post hoc analyses examined hospitalization and recency of head injury.

**Results:** Of the 1951 included participants, 70.7% reported zero head injuries, 20.8% reported one head injury, 5.8% reported two head injuries, and 2.7% reported at least three head injuries. History of head trauma was not associated with lower levels of executive functioning ( $F[3,1945]=2.68, p=.38$ ). Furthermore, executive functioning performance was not associated with hospitalization for head injury ( $b=-.04, p=.31$ ) or recent head injuries ( $b=-.04, p=.70$ ).

**Conclusions:** The current results do not provide evidence of decreased executive functioning performance linked to history of head injury in middle-aged and older adults. These findings are inconsistent with earlier literature suggesting that executive dysfunction is associated with prior head trauma. It is important to consider, however, that the operationalization of executive functioning as a cognitive domain is controversial and produces significant debate. Therefore, the present results solely indicate a lack of connection between previous head trauma and executive functioning, specifically as assessed by the current definition and measures. The present analyses were limited by the broad inclusion of all head injuries rather than a narrowed scope of specifically concussions or mild traumatic brain injuries. However, the study had the advantage of being adequately powered via a large sample size. The current results suggest that additional research is needed within middle-aged and older adult samples to investigate possible connections between head trauma and executive functioning performance using alternate definitions and assessments.

**Categories:** Acquired Brain Injury (TBI/Cerebrovascular Injury & Disease - Adult)

**Keyword 1:** executive functions

**Keyword 2:** neuropsychological assessment

**Keyword 3:** cognitive functioning

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### 23 Cross-Sectional Analysis of Rehospitalization Following Discharge from Inpatient Rehabilitation in Veterans with Traumatic Brain Injury Up to 10 Years Postinjury

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**Objective:** To characterize reasons for rehospitalization of Veterans and Service Members with mild, moderate, and severe traumatic brain injury (TBI) who received inpatient rehabilitation at a Veterans Affairs (VA) Polytrauma Rehabilitation Center (PRC) up to 10 years postinjury. TBI is a chronic condition, and a subset of TBI survivors experience rehospitalization after discharge from inpatient rehabilitation. Extant literature focuses primarily on persons with moderate-to-severe TBI and utilizes broad categories when determining readmission reasons. The present study aimed to delineate with greater specificity the reasons for rehospitalization up to 10 years postinjury across the TBI severity spectrum.

**Participants and Methods:** Participants were drawn from the VA TBI Model Systems multicenter longitudinal study for a cross-sectional analysis. Eligibility criteria included TBI diagnosis per case definition; age  $\geq 16$  years at TBI; admitted for inpatient rehabilitation at one of the five VA PRCs; and informed consent by the participant or legally authorized representative. At follow up interviews 1, 2, 5, and 10 years post-TBI, participants were asked whether they

were rehospitalized within the past year (up to five admissions). Rehospitalizations were classified according to the Agency for Healthcare Research and Quality's Healthcare Cost and Utilization Project classification (18 categories). In the present analyses, TBI severity was classified by duration of posttraumatic amnesia (PTA; 0-1 days=mild, 2+ days=moderate-severe). Statistical analyses were conducted in SPSS.

**Results:** Participants (N=1101; n=338 0-1 days PTA, n=513 2+ days PTA, n=250 no PTA data) ranged in age from 17 years to 91 years at the time of interview. Participants across all follow up timepoints reported 317 rehospitalizations in the past year. 19.45% of Year 1 participants, 24.37% of Year 2 participants, 16.19% of Year 5 participants, and 16.25% of Year 10 participants reported 1+ rehospitalizations in the past year. When controlling for age, participants with at least 2 days of PTA were more likely to be rehospitalized at least once compared to those with 0-1 days of PTA at Year 2 (OR=4.05,  $p<0.001$ ) and Year 5 (OR=2.39,  $p=0.03$ ) post-TBI. The three most common reasons for rehospitalization across all timepoints were injury and poisoning (17.3%), mental illness (16.7%), and diseases of the nervous system and sense organs (9.1%). Mental illness was the modal reason for rehospitalization at Years 2, 5, and 10, frequently due to substance- or alcohol-related disorders and suicide/intentional self-inflicted injury.

**Conclusions:** Compared to prior research, rates of rehospitalization were lower in this sample across follow-up time points. The inclusion of mild TBI in this analysis may partially explain the discrepancy. Importantly, two of the top three rehospitalization reasons are potentially preventable, and strategies to reduce risk of re-injury and minimize escalation of psychiatric distress should therefore be explored. Psychoeducation, supervision, and mental health support during the transition from hospital to community should be considered in order mitigate preventable causes of rehospitalization among long-term TBI survivors.

**Categories:** Acquired Brain Injury (TBI/Cerebrovascular Injury & Disease - Adult)

**Keyword 1:** traumatic brain injury

**Keyword 2:** brain injury

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## 24 Poststroke Depression in Patients with Infratentorial Stroke Undergoing Acute Inpatient Stroke Rehabilitation

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**Objective:** Poststroke depression is common in those with stroke and is associated with worse functional outcomes, recurrence of stroke, and increased mortality. Poststroke depression has been most commonly associated with lesions of the frontal lobe and anterior regions of the brain, in addition to lesions in subcortical structures. Yet, there is also evidence that indicates the presence of depressive symptoms in those with infratentorial (including brainstem, pontine, and cerebellar) stroke, which may be mediated by alternative pathophysiologic mechanisms. Patients undergoing acute inpatient stroke rehabilitation may present with depressive symptoms that go unassessed or untreated throughout their recovery, including those with infratentorial stroke. The current objective was to evaluate the degree of depressive symptoms in patients with infratentorial stroke compared to those with supratentorial stroke.

**Participants and Methods:** Participants were admitted to an acute inpatient rehabilitation unit for stroke rehabilitation. Participants were enrolled in an ongoing clinical trial. Participants with recent infratentorial stroke (N = 7; 4 female; Median age = 69 years; Median education = 16 years) were administered the Patient Health Questionnaire-9 (PHQ-9) to assess symptoms of depression. Severity of depressive symptoms (PHQ-9 total score) in participants with infratentorial stroke was compared to those with supratentorial stroke (N = 19; 10 female; Median age = 69 years; Median education = 15 years) through Mann-Whitney U tests.

**Results:** Participants with infratentorial stroke endorsed similar levels of depression to those with supratentorial stroke. Participants with infratentorial stroke endorsed overall mild depressive symptoms (Mean PHQ-9 score = 7.29; Median = 7), similar to those with supratentorial stroke (Mean PHQ-9 score = 7.11; Median = 6). Significant differences in depressive symptoms were not observed between participants with infratentorial and supratentorial stroke ( $p = .785$ ).