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**Title: BRAIN TOPiC Study: Assessing Variability in Traumatic Brain Injury (TBI) Outcome Prognostication – Do Self-Fulfilling Prophecies Exist in TBI, Too?**

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**OBJECTIVE:** In this study, we surveyed clinicians caring for patients with moderate-severe traumatic brain injury (msTBI) to assess (1) possible variability in outcome prognostication in TBI, varying by clinicians level of training and medical specialty, (2) possible biases and self-fulfilling prophecies, and (3) whether specific ICU medical complications may influence clinicians in their outcome prognostication.

**BACKGROUND:** Patients with msTBI commonly die from withdrawal of support, likely as a consequence of an unfavorable outcome prognosis provided to the family by the treating physician. It is unknown whether prognostication may lead to self-fulfilling prophecies, and whether the presence of intensive care unit (ICU) complications may accentuate possible provider bias.

**DESIGN/METHODS:** We conducted an anonymous electronic survey of clinicians, including faculty members (Neurology, Neurosurgery, Trauma, Anesthesia/Critical Care), neurology house staff, ICU affiliate practitioners and neuroICU nurses at a single Level I trauma center. The survey included three TBI case vignettes and their respective ICU courses. Questions were designed to assess the utilization of known TBI prognostic models, relative importance of ICU complications for outcome prognostication and aggressiveness of care recommended by the survey participant.

**RESULTS:** The survey response rate was 72% (106 surveys returned). In all 3 cases, the majority of participants did not recommend withdrawal of care, but did predict unfavorable 6-month outcomes. 51% of participants consider medical ICU complications as very important in TBI prognostication. Age, ICU course and head CT findings are the prognostic variables considered most important to outcomes.

**CONCLUSIONS:** We have discovered great variability in outcome predictions made by clinicians with different levels of experience in treating msTBI. Self-fulfilling prophecies may exist in msTBI outcomes. Outcome estimates should focus not only on admission variables, but also on ICU complications in order to guide clinicians in providing prognostication.