National Trauma Data Bank

https://www.facs.org/quality-programs/trauma/tqp/center-programs/ntdb

The National Trauma Data Bank (NTDB), also called the American College of Surgeons National Trauma Data Bank, is a compilation of information about traumatic injuries and outcomes in the United States. Hospital emergency rooms and other institutions such as trauma centers which are participants submit data and receive in return access to reports analyzing data about both their own operations and trauma medicine in the United States as a whole.

Annual reports, an annual report, and a pediatric report, which includes demographic information is issued. Access to data sets is available to researchers who apply and are approved.

The National Trauma Data Bank® (NTDB®) National Sample Program (NSP) is a national probability sample of 100 Level I and II trauma centers in the United States. The goal of the NTDB NSP is to enhance current injury information by providing nationally representative baseline estimates of trauma care to meet the needs of trauma care assessment, clinical outcomes research, and injury surveillance. This program is supported by the Centers for Disease Control and Prevention and the American College of Surgeons (ACS).

The NTDB National Sample is a unique and powerful database that includes information on trauma patients, such as admission and discharge status; patient demographics (for example, gender, age, race); injury and diagnosis (i.e., mechanism, e-code, ICD-9 or AIS code); procedure codes; injury severity scores (i.e., the Injury Severity Score, Glasgow Coma Scale); and outcome variables (for example, length of stay, intensive care unit days, payment method).

The National Trauma Data Bank was used to identify patients with spinal cord injury. The primary objective was to determine the association between center type, transfer, and surgical intervention. A secondary objective was to determine the association between center type, transfer, and surgical timing. Multivariable logistic regression models were fit on surgical intervention and timing of the surgery as binary variables, adjusting for relevant clinical and demographic variables.

There were 11,744 incidents of spinal cord injury identified. A total of 2,883 patients were transferred to a Level I center and 4,766 presented directly to a Level I center. Level I center refers to a level I trauma center. Those who were admitted directly to a level I center had a higher odds of receiving surgery (odds ratio, 1.703; 95% confidence interval, 1.47-1.97; $p < 0.001$), but there was no significant difference in terms of timing of surgery. Patients transferred into a level I center were also more likely to undergo surgery than those at a level II/III/IV center, although this was not significant (odds ratio, 1.213; 95% confidence interval, 0.099-1.48; $p = 0.059$).

Patients with traumatic spinal cord injury admitted to a Level I trauma center were more likely to have surgery, particularly if they were directly admitted to a Level I center. A study of Williamson et al. provides insights into a large US sample and sheds light on opportunities for improving pre-hospital care pathways for patients with traumatic SCI, to provide timely and appropriate care and achieve the best possible outcomes [1)]

1)
Williamson T, Hodges S, Yang LZ, Lee HJ, Gabr M, Ugiliweneza B, Boakye M, Shaffrey CI, Goodwin CR, Karikari IO, Lad S, Abd-El-Barr M. Impact of US hospital center and interhospital transfer on spinal cord injury management: An analysis of the National Trauma Data Bank. J Trauma Acute Care Surg. 2021 Jun 1;90(6):1067-1076. doi: 10.1097/TA.0000000000003165. PMID: 34016930.