

The [North American Clinical Trials Network](#) (NACTN) for [Spinal Cord Injury](#) (SCI) is a [consortium](#) of tertiary medical centers that has maintained a prospective SCI registry since [2004](#), and has espoused that early surgical intervention is associated with improved outcome.

The NACTN database was evaluated to examine the association between [interhospital transfer](#) (IHT), early surgery, and outcome, taking into account distance traveled and site of origin for the patient. Data from a 15-year period of the NACTN SCI Registry were analyzed (years 2005-2019). Patients were stratified into transfers directly from the scene to a level I trauma center (NACTN site) versus IHT from a level II or III trauma facility. The main outcome was surgery within 24 hours of injury (yes/no) while secondary outcomes were length of stay, death, discharge disposition, and 6-month [AIS](#) grade conversion. For the IHT patients, distance traveled for transfer was calculated by measuring the shortest distance between origin and NACTN hospital. Analysis was performed with Brown-Mood test and chi-square tests. Of 724 patients with transfer data, 295 (40%) underwent IHT and 429 (60%) were admitted directly from the scene of accident. Patients who underwent IHT were more likely to have a less severe SCI (AIS D) ($p=.002$), have a central cord injury ($p=.004$), and have a fall as their mechanism of injury ($p<.0001$) than those directly admitted to a NACTN center. Of the 634 patients who had surgery, direct admission to a NACTN site was more likely to result in surgery within 24 hours compared to IHT patients (52% vs. 38%) ($p<.0003$). Median IHT distance was 28 miles (interquartile range=13-62 miles). There was no significant difference in death, length of stay, discharge to a rehab facility versus home, or 6-month AIS grade conversion rates between the two groups. Patients who underwent IHT to a NACTN site were less likely to have surgery within 24 hours of injury, compared to those directly admitted to the level I trauma facility. While there was no difference in mortality rates, length of stay, or 6-month AIS conversion between groups, patients with IHT were more likely be older with a less severe level of injury (AIS D). This work suggests there are barriers to timely recognition of SCI in the field, appropriate admission to a higher level of care after recognition, and challenges related to the management of individuals with less severe SCI ¹⁾

1)

Kelly-Hedrick M, Ugiliweneza B, Toups EG, Jimsheleishvili G, Kurpad SN, Aarabi B, Harrop JS, Foster N, Goodwin CR, Shaffrey C, Fehlings MG, Tator C, Guest J, Neal CJ, Abd-El-Barr M, Williamson T. Interhospital Transfer delays care for spinal cord injury patients: A Report from the North American Clinical Trials Network for Spinal Cord Injury. J Neurotrauma. 2023 Apr 4. doi: 10.1089/neu.2022.0408. Epub ahead of print. PMID: 37014079.

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