Insurance Status and Race Affect Spine Trauma Treatment Decisions
“Disturbing” Studies Examine the Influence of Insurance and Other Factors on Morbidity and Mortality

(DALLAS)—When tragedy strikes and a spine trauma occurs, it appears that life-altering decisions may be limited by the patient’s insurance coverage and race, according to two Best Papers presented at the 27th NASS Annual Meeting.

“Although this behavior is inappropriate, it has been suggested that insurance status and race may influence medical treatment decisions in normal circumstances, such as preventive check-ups and elective surgery,” said Jeffrey C. Wang, MD, Annual Meeting Program Co-Chair. “However, these studies suggest that insurance coverage and race may also play a key role in treatment decisions for trauma patients whose best treatment choice clearly should be immediate surgical intervention. This is disturbing—spine specialists should be able to do better for their patients in their hour of need.”

In “The Influence of Insurance Status on the Surgical Treatment of Acute Spinal Fractures,” researchers conducted a retrospective cohort study of 28,429 patients with fractures of the cervical or thoracolumbar spine. Comparisons were made between surgical rate and clinical (fracture location, spinal cord injury, comorbidities, demographics, mechanism of injury and injury severity) and non-clinical factors (insurance status, transfer status and hospital characteristics). The lead author is Sam Bederman, MD, PhD, assistant clinical professor and director of orthopedic inpatient services at the University of California, Irvine.

Multiple logistic regression models were used to determine adjusted odds ratios (ORs) for rate of surgery, controlling for these factors. These models demonstrated significantly higher rates of surgery in patients with spinal cord injury (OR, 11.54, P<0.0001), insurance (OR: 1.35, P<0.0001), blunt trauma (OR: 4.65, P<0.0001), transfer from lower acuity hospital (OR: 1.69, P<0.0001) and those treated at for-profit (OR: 1.30, P<0.0001) and teaching hospitals (OR: 1.23, P<0.0001). A subgroup analysis of patients with spinal cord injury similarly revealed higher surgical rates for insured patients (OR: 1.52, P=0.0016).
The researchers concluded that patients with traumatic spine fractures were more likely to receive surgery if they were insured, regardless of the presence of neurologic injury or fracture location.

In another large study, “Patient Demographics, Insurance Status, Race and Ethnicity as Predictors of Morbidity and Mortality Following Spine Trauma: A Study Utilizing the National Trauma Data Bank,” researchers attempt to identify the predictors of complications and mortality after spine trauma. The study’s lead author is Andrew J. Schoenfeld, MD of Canutillo, Texas.

In a retrospective review, 75,351 incidents of spine trauma were examined. The average patient age was 45.8 years, 64% of the population was male, 9% was Black/African American, 38% had private/commercial insurance and 12.5% lacked insurance. The mortality rate was 6%, and 16% sustained complications. The study found the significant predictors of mortality and complications were: increased age, male gender, injury severity and high blood pressure. Non-white and Black/African Americans had an increased risk of mortality. Lack of insurance increased mortality and decreased the number of hospital days, ICU days and ventilator time. The study’s authors suggest that outcomes and quality of care can be improved by discussing these risks with patients and their families in the immediate post-injury period.

Nearly 4,000 spine professionals will meet at the NASS 27th Annual Meeting in Dallas, October 24-27, 2012 at the Dallas Convention Center. NASS is a multidisciplinary medical organization dedicated to fostering the highest quality, evidence-based and ethical spine care by promoting education, research and advocacy. NASS is comprised of more than 6,500 members from several disciplines including orthopedic surgery, neurosurgery, physiatry, neurology, radiology, anesthesiology, research, physical therapy and other spine care professionals. For more information, visit www.spine.org and find NASS on: NASS Facebook and NASS Twitter.