Title: The Influence Of Insurance Status On The Decision To Transfer Or Admit Patients Presenting With Orthopedic Injuries

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Abstract: Background: Previous studies have shown the decision to admit or transfer a patient after initial ED evaluation may be based on the clinical needs of the patient, the resources available at the initial and accepting hospitals, and, in some cases the payer status of the patient. Objectives: We evaluated transfer patterns and the impact of insurance status for patients presenting to the ED with orthopedic injuries. Methods: The Nationwide Emergency Department Sample, the American Hospital Association Survey, and the Area Resources Files for 2010 were used. All ED encounters with the follow Clinical Classifications Software (CCS) categories were included in the sample: femur neck fracture, lower limb fracture, upper limb fracture, and other fracture. The CCS categories were developed at the Agency for Healthcare Research and Quality as a tool to cluster patient diagnoses into clinically meaningful categories. We studied the effect of patient- (demographic characteristics, insurance status, injury severity and co-morbidities), hospital- (private vs public, region, teaching status, trauma-level, bed-size) and county-level characteristics (number of hospitals, income level, racial composition, and number of orthopedists) on odds of transfer compared to admission. All estimates were projected to national levels and each ED visit was the unit of analysis. Results: In 2010, approximately 1,942,692, or 1.78% of all ED encounters led to a transfer to another short-term hospital. There were 3,715,517 visits for the orthopedic categories mentioned above, of which 774,657 (20.8%) were admitted and 114,434 (3.1%) were transferred. The average age was 43.6, and 50% were
female. After adjusting for patient-, hospital and county-level characteristics, Medicaid patients with these injuries had a two times greater odds of being transferred (OR 2.0, CI 1.62 to 2.46), uninsured patients had a 1.8 greater odds (OR 1.82, CI 1.42 to 2.33) and Medicare patients had a 1.3 greater odds (OR 1.3, CI 1.19 to 1.51) compared to privately insured patients.

**Conclusion:** Publicly insured and uninsured patients with orthopedic injuries were more likely to be transferred than admitted compared to privately insured patients. These findings suggest that ED disposition and treatment decisions may be influenced by patients’ insurance status.