

## 12 Emergency Department Length of Stay and Predictive Demographic Characteristics

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**Objectives:** Emergency department (ED) crowding continues to be a significant national concern. However, there is a paucity of data on the disparities in length of stay (LOS) by ethnicity and insurance coverage. We sought to identify associations between LOS and patient demographic characteristics, using three years of a nationally representative database.

**Methods:** Retrospective cohort study. We used data from the 2002 to 2004 National Hospital Ambulatory Medical Care Survey (NHAMCS), a nationally representative database containing information on ED patients, their diagnosis, and length of stay. Our empirical approach accounted for hospital-specific differences, adjusted for the number of procedures and diagnoses for each patient (as a proxy for patient complexity), and included data on day-of-week (as a proxy for typical ED flow).

**Results:** From 2002 to 2004, NHAMCS collected data on 114,179 ED visits, representing a weighted estimate of 334.3 million national visits over three years. Mean LOS for discharged patients was 167.4 minutes (95% CI 162.1-172.8); patients admitted to the hospital had a mean LOS of 363.4 minutes (95% CI 338.4-388.3). After adjusting for patient severity and individual hospital effects, longer LOS was associated with nonwhite patients (an additional 10.6 minutes, 95% CI 4.0-17.1) and patients who were uninsured (an additional 8.7 minutes, 95% CI 1.4-15.9). Moreover, differences in LOS are primarily attributable to the portion of time spent in the ED waiting to see the emergency physician. For example, compared to white patients, nonwhite patients waited 5.4 minutes longer (95% CI 3.4-7.4) to see a physician.

**Conclusions:** Disparities exist in ED LOS, with nonwhite and uninsured patients experiencing longer lengths of stay. Interventions to reduce ED crowding should consider efforts that aim to reduce wait times for underserved populations.

## 13 Hand Surgeons' Perceived Barriers and Solutions to Emergency Call

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**Objectives:** Sub-specialty shortages are a growing threat to public healthcare. Surveyed emergency physicians and administrators cite the difficulties of liability, costs, and lack of reimbursement. Our study explores hand surgeons' perceived barriers and potential solutions to taking call.

**Methods:** An IRB-approved, anonymous electronic survey

was sent to the American Society of Surgery of the Hand list serve. Respondents ranked perceived obstacles (payment, liability, lifestyle, and inconvenience) and potential solutions (fixed payment per call, reimbursement rate per patient, and liability assistance). Respondents listed specific requirements to do more call. Comments were solicited qualitatively.

**Results:** 614/2054 (30%) of surveys were returned. Respondents varied by location, practice type, and call coverage. Barriers cited were lifestyle (42%), dumping (11%), uninsured patients, and liability concerns (10% each). The preferred incentive was pay-per-call (58%), followed by a guaranteed reimbursement per patient (27%). Results did not significantly vary by geographic location. Respondents gave 632 qualitative comments, calling for improved management and referrals (48%), prevention of dumping (12%), availability of rooms and staff (11%), and earlier triage/consultation (3%). Eighty-three percent would increase call for money. Fifty percent would take more call for \$1500/night, 150% of Medicare reimbursement guaranteed-per-patient, or \$45,000/year in liability assistance.

**Conclusions:** Hand surgeons' barriers to call were lifestyle, dumping, and financial concerns. Professional and personal frustrations were evident in the qualitative analysis. Respondents called for defining appropriate referrals. Fixed pay-per-call was the preferred incentive. \$1,500/night, 150% of Medicare reimbursement guaranteed, or \$45,000/year of liability assistance would increase coverage 50%. Our survey is a novel step focused on hand surgeons. Further research should explore incentives, mandates, and standardized protocols in other specialties.

## 14 Severe Traumatic Brain Injury: Stabilization or Definitive Care

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**Objectives:** We conducted this study to determine whether there is a mortality reduction conferred by direct transport to the trauma center from the scene when compared with inter-facility transfer (IFT).

**Methods:** This is a retrospective cohort study of all patients over the age of two who suffered a traumatic head injury and were transported across county lines to a regional Level I trauma center for neurosurgical care between January 2002 and November 2006. Patients with suspected TBI resulting in a GCS less than 9 were included. Patients were stratified according to whether they were directly transported (DT) from the field or via IFT after initial stabilization and resuscitation at a Level III trauma center. Data obtained from the trauma registry included patient demographics including age, sex, and race, time of ambulance arrival, mechanism of injury, initial