

Research - R208

Poster

Abstract Title:

Analysis of Pedestrian Injuries at a Level One Trauma Center in New York City

Authors:

Anju Galer, MSN, ANP-BC, RN, Jamie S. Ullman, MD, FACS, George Agriantonis, MD, FACS, Lejla Tukici, RPA

Background & Purpose:

Pedestrian Injury is a significant problem throughout New York City and a major contributor to morbidity. From 2000 to 2007, aggregated pedestrian accidents were the primary blunt mechanism of injury seen at a Level-I trauma center, in the borough of Queens, with no signs of abating. The purpose of this epidemiology study is to statistically analyze the characteristic of patient population admitted to the hospital with Pedestrian Injuries and identify contributing factors, which in turn can be used to target injury prevention program.

Study/Project Design:

Retrospective chart review analysis

Setting:

A Level One Trauma Center located in the borough of Queens, New York City

Sample:

A convenience sample of 1066 medical records of the patients admitted from 2000 to 2006 with pedestrian injuries

Procedures:

A retrospective review of patients admitted to the Emergency Department and the Trauma Service after a pedestrian injury was conducted. Patients were identified through the Trauma Registry Database from January 2000 through December 2006. Bicyclists were excluded. Variables used to abstract the charts were: Emergency Medical Services (EMS) call time, incident site, date of arrival to the Emergency Department (ED), age, sex and race of the patients, alcohol use, Glasgow Coma Scale (neurological score) at the time of arrival, ED disposition, Injury Severity Score (physiological score) and total length of stay. The Maptitude Geographic Information System (GIS) software was used to analyzing the Geographical data.

Findings/Results:

A total of 998 patients were included in the study. Most injuries occurred between 9AM and 3PM. Males outnumbered female. The mean age was 41.6 years with 56.4% of patients between 18 and 64 years. The mean blood ETOH level measured in 415 patients was <80 mg/dl. and was not significantly related to pedestrian injuries. Most of the accidents occurred on weekends and in the fall season. The mean ISS was 10.56. The mean hospital length of stay was 10.45 days. 361 patients were admitted to the Surgical ICU with an average length of stay of 6.8 days. The population's mortality rate was 7.1% with approximately 65% of patients discharged to home. Orthopedic injuries (32.5%) were the most common followed by head/neck (23.7%). A total of 607 incident locations were identified and mapping data indicated a significant concentration in areas representing dense pedestrian activity and major automobile thoroughfares.

Discussion/Conclusions/Implications:

The results of the data analysis showed that the pedestrian injury is a significant contributor to hospitalizations for trauma at this hospital. Most injuries occurred between 9 AM to 3 PM, mostly on weekends and in the fall season. People in the age group of 40 to 64 were more frequently involved in these accidents. Alcohol use was not a significant factor. The admission, total length of stay in the hospital, including the ICU stay showed the financial repercussions of these pedestrian injuries. A prevention program will need to target the general community to educate about the consequences of unsafe driver and pedestrian activity.