

Epidemiology of Lower Limb Dislocations

Introduction: Although uncommon, most lower limb injuries are knee dislocations. This study assesses the incidence, patient demographics, and mechanisms of injury of lower limb dislocations which occurred from 2001-2019.

Methods: The National Electronic Injury Surveillance System (NEISS) was queried for the years 2001-2019 to identify emergency department patients with lower extremity dislocations. National estimates were calculated using NEISS hospital weights. US census data was used to calculate the incidence rates by age, sex, and race. Logistic regression was used to compare dislocation rates between sex and race.

Results: There were an estimated 860,206 lower extremity dislocations that occurred from 2001-2019, with an incidence of 1.3 per 10,000 person-years. Lower extremity dislocations were most common in the knee (79.4%), followed by toe (10.7%), ankle (7.7%), foot (1.4%), lower leg (0.6%), and upper leg (0.2%). 53% of lower extremity dislocations occurred in males, and 47% in females. Lower extremity dislocations most often occurred in adolescents 10-19 years old from 2001-2019, with an average incidence rate of 3.85 per 10,000 person-years. The main mechanisms of injury were sports and exercise. No statistical significance was found in dislocation rates between sex and race.

Conclusion: While sports, falls and jumps comprised the majority of toe, ankle, and foot dislocations, data regarding knee dislocations could not be distinguished by NEISS codes. Lower limb dislocations were consistent across decades of life, with a single peak incidence rate in the 10–19-year age range.