

Impact of Winter Resort Injuries on ACS Level I Trauma Center

Karen Danenhauer, MD
Craig Moffat, MS
Nathan Gilmore, MD
Christy L. McCowan, MD

University of Utah Health Care; University of Pittsburgh

Objectives: To evaluate the impact of winter resort injuries on hospital resource utilization at a regional ACS level 1 Trauma Center.

Methods: Patients ≥ 12 years presenting to the emergency department (ED) with an acute injury sustained at a winter resort were included in the study. Trained research assistants approached eligible patients in the ED. Missed patients were identified from the ED log and contacted by phone. ED and hospital data was obtained from trauma registry and hospital records. Patients were excluded if their injury occurred outside a winter resort, if they were inter-facility transfers, or if they did not present the day of their injury.

Results: Four hundred seventeen patients presented to the ED from local ski resorts during the 2006-07 season. Three hundred two of 417 (72.4%) patients were male. Average patient age was 32.8 +/- 16.1 years. 203 of 417 (48.7%) patients lived locally. Two hundred fifty-five of 417 (61.2%) patients arrived via ground emergency medical services (EMS), and 39 (9.4%) arrived via helicopter EMS. Two hundred fifty-five of 371 (60.6%) patients were not wearing helmets. One hundred sixty of 415 (38.6%) patients were admitted to the hospital, 47 of 160 (29.3%) were admitted for observation, and 23 (14.4%) required ICU admission. Average hospital LOS was 3.3 +/- 3 days with an average ISS of 7.6 +/- 4.6. Average ICU LOS was 58 +/- 77 hours. 14 of 23 (60.9%) ICU admissions had head injuries. Two hundred eleven of 415 (50.8%) patients required specialty intervention and/or consultation, including 73 (34.6%) trauma activations, and 105 (49.8%) orthopedic consultations. Seven patients were emergently intubated (3 by EMS), two required chest tubes, and two were taken emergently to the operating room.

Conclusions: Patients presenting with injuries from winter resorts have a significant impact on both EMS and hospital resources. Winter resort injuries have a high rate of hospital admission, specialty care, and/or trauma service evaluation. Injury prevention initiatives, including increasing helmet usage, in areas with high winter resort densities may help to increase awareness of the common and potentially serious injuries.