

Terrain Park Injuries: Demographics and Injury Patterns

Craig Moffat
Nathan Gilmore, MD
Karen Danenhauer, MD
Jade Bringham
Christy McCowan, MD

University of Utah Health Care; University of Pittsburgh

Objectives: This study examined the demographics and injury pattern of patients utilizing winter resort terrain parks.

Methods: Patients ≥ 12 years presenting to an American College of Surgeons Level I trauma center with an acute injury sustained at a winter resort were included in the study. Trained research assistants approached eligible patients in the emergency department (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.

Results: Seventy-two patients were injured in a terrain park, and 263 patients were injured on winter resort slopes. Patients injured in terrain parks were more likely to be male [68 of 72 (94%) vs. 176 of 263 (67%), $p < 0.001$], and younger in age [23 +/- 7 vs. 36 +/- 17, $p < 0.001$] when compared to patients injured on slopes. Patients utilizing the terrain park were more likely to live locally [47 (65%) vs. 124 (47%), $p = 0.006$], use a snowboard [50 (69%) vs. 91 (35%), $p < 0.001$], and hold a season pass [52 (72%) vs. 108 (41%), $p < 0.001$]. There were no differences between the groups in terms of emergency medical services transport to hospital [48 (67%) vs. 189 (72%), $p = 0.39$], reported helmet use [35 (49%) vs. 99 (38%), $p = 0.092$], hospital admission rate [22 (31%) vs. 107 (41%), $p = 0.118$], total hospital length of stay [3 +/- 2.2 vs. 3 +/- 2.6 days, $p = 0.74$], and percent of patients requiring specialty consultation or care while in the ED [36 (50%) vs. 132 (49.8%), $p = 0.98$]. Patients utilizing terrain parks were more likely to sustain upper extremity injuries [29 of 72 (40%) vs. 52 of 263 (20%), $p < 0.001$]. There were no differences between the groups with respect to head/facial injuries [21 (29%) vs. 57 (21.7%), $p = 0.183$], spine fractures [5 (7%) vs. 21 (8%), $p = 0.78$], thoraco-abdominal injuries [5 (7%) vs. 9 (3.4%), $p = 0.186$], and lower extremity injuries [10 (14%) vs. 63 (24%), $p = 0.062$].

Conclusions: Terrain parks are becoming an increasing popular venue at winter resorts. Injury prevention messages should be tailored to this unique and growing demographic population.