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Summary of Hospitalizations Due to Fall-Related Injuries — Alaska, 2005–2009

Background

Nationally, the rate of unintentional fall deaths has increased each year from 2000–2007 (2007 is the most recent year for which national comparison data are available); more than 22,000 people died from fall-related injuries in 2007.¹ From 2000–2007, Alaska's age-adjusted rate of unintentional fall-related deaths was 31% lower than the U.S. age-adjusted rate (4.2 vs. 6.0 deaths per 100,000 persons, respectively);¹ however, fall-related injuries were the leading cause of injury-related hospitalizations for Alaskans aged 0–14 and ≥35 years.

Methods

Hospitalized injury data were obtained from the Alaska Trauma Registry (ATR), an active surveillance system that collects data from Alaska's 24 acute care facilities.² Data pertaining to the initial hospitalization for an injury event were used for the analyses. Subsequent admissions for the same injury were not included in the analyses. Age-adjusted rates were calculated using the 2000 U.S. Census data.

Summary Results

During 2005–2009, the ATR captured 8,991 cases of fall-related injury hospitalizations, which accounted for 36% of all recorded injury hospitalizations in the registry. The mean annual number of cases was 1,798 (range: 1,715–1,879); most cases occurred during the winter (2,425, 27%), followed by summer (2,289; 25%), spring (2,231, 25%) and fall (2,046, 23%) months. The median age of hospitalized patients was 56 years; 4,635 (52%) were female, and 8,319 (93%) were Alaska residents.

The average annual age-adjusted rate for all fall-related injury hospitalizations was 237 cases per 100,000 persons. Rates by age-group were highest for older adults aged ≥65 years (1,295 per 100,000 persons), followed by persons aged 15–64 years (189 per 100,000 persons), and children aged <15 years (111 per 100,000 persons). Rates by race were highest among American Indian/Alaska Native (AI/AN) people, followed by Whites, and Asian/Pacific Islanders (387, 212, and 95 cases per 100,000 persons, respectively). Rates were highest in the Northern region of the state (Table 1).

Of the 8,991 hospitalizations,

- 4,184 (47%) were due to injuries sustained in the home;
- 3,946 (44%) were due to a slip, trip, or stumble;
- 3,129 (35%) were due to injuries caused by a fall from one level to another, of which, stair or step (898, 29%); building, scaffolding, or ladder (735, 23%); and furniture (557, 18%) were the most commonly involved objects;
- 5,574 (62%) were due to injuries categorized as having an “unspecified” or “unknown” cause;
- 1,292 (14%) were suspected or proven to have been associated with alcohol;
- 5,167 (57%) were due to injuries classified as minor or moderate, 2,903 (32%) were serious, and 486 (5%) were severe, critical, or maximal; 435 (5%) were not assigned an abbreviated injury severity score;
- 6,776 (75%) involved a fracture diagnosis;
- 1,099 (12%) involved a traumatic brain injury;
- 611 (7%) involved a transfer to a secondary hospital;
- 659 (7%) involved care in an intensive care unit;
- 209 (2%) involved fatality during the hospital stay;
- 41,121 hospital days were recorded (median: 4 days/hospitalization; maximum: 277 days/hospitalization); and

- hospital charges totaled \$193 million (median: \$21,507/hospitalization; maximum: \$2,182,694/hospitalization).

Table 1. Summary of Hospitalizations due to Fall-Related Injuries, by Region — Alaska, 2005–2009 (N=8,991)

Region	Number	Percent	Rate per 100,000 Pop.
Anchorage/Mat-Su	4,014	45%	221
Gulf Coast	1,214	14%	321
Interior	1,205	13%	229
Northern	532	6%	450
Southeast	1,190	13%	341
Southwest	608	7%	309
Unknown	228	2%	--

Table 2. Frequent Characteristics of Fall-Related Injury, by Age Group (Years) — Alaska, 2005–2009*

Characteristic [†]	Ages 0–14 n=923	Age 15–64 n=4,711	Age ≥65 n=3,356
Occurred in the home	47% (n=430)	37% (n=1,724)	60% (n=2,029)
Work-related	<1% (n=<5)	12% (n=561)	2% (n=57)
Caused by slip/trip/stumble	23% (n=212)	46% (n=2,162)	47% (n=1,571)
Caused by slipping on ice	3% (n=25)	17% (n=788)	9% (n=305)
Caused by fall from one level to another (e.g., from a stair/step, ladder, furniture)	59% (n=544)	37% (n=1,765)	24% (n=820)

*Age was not available for one case, therefore, column totals sum to 8,990.

[†]Characteristics are not mutually exclusive.

Discussion

The findings from this report indicate that during 2005–2009, Alaska's fall-related injury hospitalization rates were highest among persons aged ≥65 years, AI/AN people, and residents of the Northern region of the state. Fall-related injury hospitalizations did not vary considerably in number by season, they frequently resulted from incidents that occurred in the home, and they were usually associated with a fracture diagnosis. Over 33% of the hospitalizations were classified as serious or severe, and 2% of hospitalized persons died during their hospital stay. Finally, the socioeconomic costs associated with fall-related injury hospitalizations were considerable.

Recommendations

1. Health care providers should educate their patients about modifiable fall risk factors, such as home hazards, medication interactions and side effects, and the use proper protective equipment during recreational activities. More information is available at: <http://www.cdc.gov/injury/>
2. Health care providers and facility management teams should continue to work towards improving the quality and quantity of data provided to the ATR.

References

1. Centers for Disease Control and Prevention (CDC). Web-based Injury Statistics Query and Reporting System (WISQARS). Available at: <http://www.cdc.gov/injury/wisqars/fatal.html>
2. State of Alaska Trauma Registry website. Available at: <http://www.hss.state.ak.us/dph/emergency/trauma/>