

Overview of Fall Traumas in Kansas

Falls are the most common cause of trauma in Kansas. In 2006, 2,721 unintentional fall-related traumas (ICD9 E-codes 880-888) were reported to the State Trauma Registry. Injury severity was minor (ISS 1-8) for approximately half (53.25%) of patients, moderate (ISS 9-14) for 31% of patients, and severe (ISS ≥ 15) for 15.7% of patients. The average length of stay across all ages was 5.68 days. Twelve percent of patients stayed in the hospital one day, 58% stayed for 2-5 days, 23% stayed 6-10 days, and 7% stayed for more than 10 days.

Traumas due to falls result in a significant amount of morbidity. Discharge disposition for 41.3% of patients was either to a skilled nursing facility, a nursing home, or rehabilitation facility (24%, 6.4%, 11% respectively). Half of patients who fell were discharged to home or to home with health care. Death was the outcome for 4.37% of patients.

Who is injured by falls?

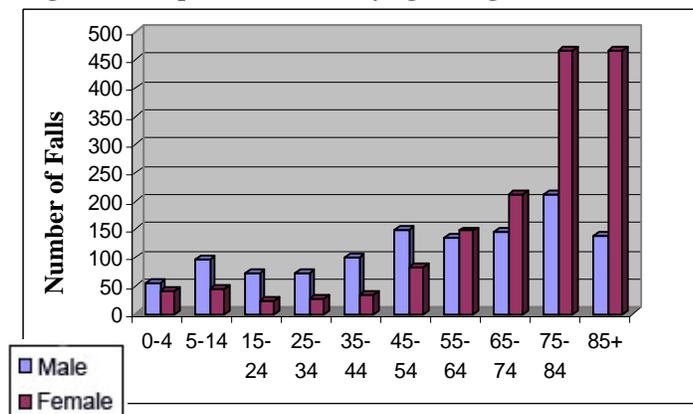
Although a preponderance of falls occur in older individuals, falls occur in all age groups (Figure 1). On average, male fall patients are younger (Mean=53.8 years) than females (Mean age 71.26). Half of all male patients are older than 57 years old, whereas half of female patients are older than 79 years old.

Where do fall traumas occur?

Many falls (62.92%) included in the trauma registry occur at home. Other places where falls occur include: residential facility (8.59%), public building (7.04%), recreation (3.50%), industry (2.73%), farm (1.29%), and other/unspecified place (10.55%).

For adults >55 years old and children 0-4 years old, more than half of all falls occur at home. Recreation accounts for 22.3% of all falls in 5-14 year olds and 17.89% of 15-24 year olds. For 85+ year olds, 20.96% of falls occur in residential facilities.

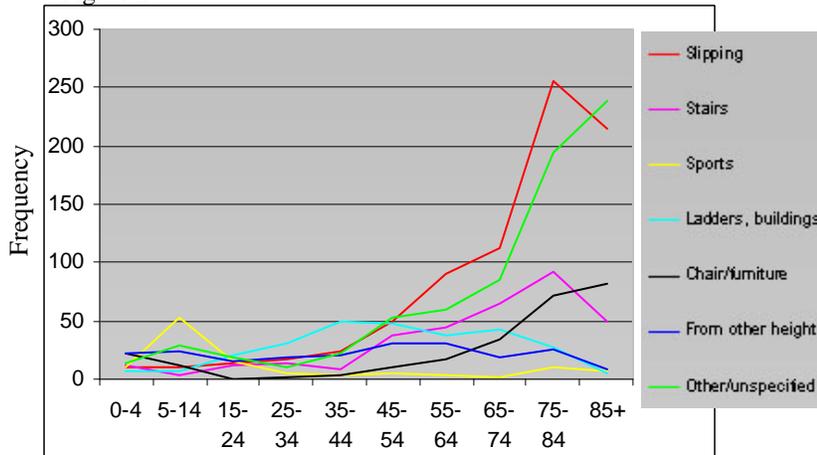
Figure 1. Frequencies of falls by age and gender



How do fall traumas occur? A relatively large number of falls (30%) occur from slipping or tripping², followed by falls from stairs (12%), ladders, scaffolding or buildings (10%), chairs/furniture (9%), and other heights (8%). The cause of over ¼ (27%) of falls is unspecified.

The number of fall traumas due to slipping increases dramatically with age. Similarly, the number of falls on steps increases with age. The number of sports-related injuries peaks at 5-14 years old and falls from ladders and buildings are highest in the 35-54 year age groups (See Figure 2).

Figure 2



1. Cases included met trauma criteria for the Kansas Trauma Registry. Duplicate transfer cases were excluded.
2. Same level falls that result in isolated hip fractures do not meet Trauma Criteria.

Discussion. These data do not represent all hospitalized fall injuries in Kansas. One large group excluded from the trauma registry are patients who sustain isolated hip fractures from falling from the same level (slipping, tripping or unspecified fall). For other types of falls, trauma registry data represent the most serious fall injuries and patients transferred to another acute care facility. Nevertheless, these data are useful for thinking about injury prevention

Preventing falls.

Half of fall traumas in Kansas are people ≥ 65 years old who are injured at home or in residential facilities. CDC recommends that older adults can take several steps to prevent falls in their homes:

- Exercise regularly to increase strength and improve balance.
- Review prescription and over-the-counter medicines with physician or pharmacist to reduce side effects and interactions.
- Improve lighting in home.
- Reduce other hazards that can lead to falls.

[More CDC recommendations.](#)

Nursing home interventions include:

- Assess patients after a fall to identify risk factors.
- Educate staff about fall prevention strategies.
- Review patient medications to reduce side effects and interactions.
- Make environment safer by putting in grab bars and raised toilet seats, lowering bed heights, and installing handrails.
- Provide patients with hip pads.
- Use alarms to identify patients who may need help if they get out of bed or try to move without help.

[More CDC recommendations.](#)