

Kansas



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**Leading Causes of Injury-Related Hospitalizations in Kansas, 2007**

**Research  
Summary**

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## Our Vision – Healthy Kansans Living in Safe and Sustainable Environments

As the state's environmental protection and public health agency, KDHE promotes responsible choices to protect the health and environment for all Kansans. Through education, direct services, and the assessment of data and trends, coupled with policy development and enforcement, KDHE will improve health and quality of life. We prevent illness, injuries and foster a safe and sustainable environment for the people of Kansas.

## Leading Causes of Injury-Related Hospitalizations in Kansas, 2007

In the United States an estimated 50 million persons experience injuries that require medical attention each year. In, 2004, injuries nationally resulted in an estimated 1.9 million injury-related discharges from short-stay hospitals. These injuries represented 6% of all hospitalizations [1]. State morbidity data can be used to monitor temporal changes and patterns in causes of unintentional injuries, assaults, and self-harm injuries and to set priorities for planning, implementing, and evaluating the effectiveness of injury-prevention programs. The purpose of this article is to identify and rank the top five leading causes of injury-related hospitalization by age group for Kansans.

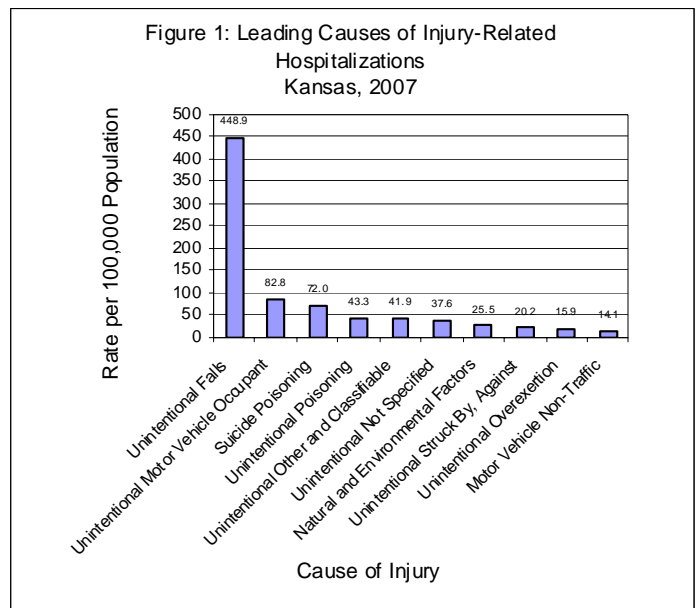
### Methodology

Kansas hospital discharge data for 2007 were provided by the Kansas Hospital Association. A methodology similar to that employed by the state of Louisiana in 2001 was used [2]. Data containing ICD-9 CM primary diagnosis codes between 800-995, and any diagnoses outside the principal diagnosis code 900-995 but with a valid E-code were included in the analysis. Codes E 849.0—E 849.9, E 870.0—E 876.6, and E 996-999.9 were excluded. Data consisted of 27,492 Kansas resident injury records, of which, 25,941 were E-coded. Thus, 94.4% of the records contained E-codes.

### Injury Related Hospitalizations

Data analysis shows that in 2007 approximately 8.0 percent of Kansas resident hospitalizations were due to injuries, and that unintentional falls were by far the most common cause of these injuries (Figure 1).

Table 1 lists the top five causes of injury related hospitalizations in Kansas by age group. Unintentional falls are the top ranking cause of injury-related hospitalization in nearly every age group with the exception of ages < 1, 15-24, 25-34 and 35-44. Of the other leading causes, assault and other classifiable injuries in the < 1 age group, injuries to motor vehicle occupants in the 15-24 age group, and suicide poisoning in the 25-34 and 35-44 age groups ranked first.



**Table 1\***  
**Leading Causes of Injury-Related Hospitalizations**  
**by Age Group, KHA Data, 2007**

Rank	1	2	3	4	5
Age < 1	Assault, Other & Classifiable 38 / 94.0	Unintentional Falls 36 / 89.1	Unintentional Poisoning 29 / 71.7	Unintentional Not Specified 16 / 39.6	Natural & Envir. Factors 11 / 27.2
1-4	Unintentional Falls 107 / 68.7	Unintentional Poisoning 89 / 57.2	Natural & Envir. Factors 47 / 30.2	Unintentional Burn, Hot Object 30 / 19.3	Unintentional Struck By, Against 22 / 14.1
5-14	Unintentional Falls 171 / 45.1	Unintentional MV Occupant 101 / 26.6	Natural & Envir. Factors 68 / 17.9	Unintentional Struck By, Against 57 / 15.0	Suicide Poisoning 54 / 14.2
15-24	Unintentional MV Occupant 578 / 140.7	Suicide Poisoning 513 / 124.9	Unintentional Falls 232 / 56.5	Suicide Cut/Pierce 129 / 31.4	Unint. Other & Classifiable 105 / 25.6
25-34	Suicide Poisoning 440 / 121.8	Unintentional MV Occupant 358 / 99.1	Unintentional Falls 268 / 74.2	Unint. Other & Classifiable 108 / 29.9	Unintentional Poisoning 103 / 28.5
35-44	Suicide Poisoning 466 / 126.9	Unintentional Falls 443 / 120.6	Unintentional MV Occupant 308 / 83.9	Unintentional Poisoning 149 / 40.6	Unint. Other & Classifiable 145 / 39.5
45-54	Unintentional Falls 838 / 206.6	Suicide Poisoning 384 / 94.7	Unintentional MV Occupant 349 / 86.1	Unint. Other & Classifiable 233 / 57.4	Unintentional Poisoning 220 / 54.2
55-64	Unintentional Falls 1,179 / 399.0	Unintentional MV Occupant 223 / 75.5	Unintentional Poisoning 156 / 52.8	Unint. Other & Classifiable 148 / 50.1	Unintentional Not Specified 128 / 43.3
65+	Unintentional Falls 9,129 / 2,534.3	Unintentional Not Specified 566 / 157.1	Unintentional MV Occupant 347 / 96.3	Unint. Other & Classifiable 342 / 94.9	Unintentional Poisoning 312 / 86.6
All	Unintentional Falls 12,461 / 448.9	Unintentional MV Occupant 2,298 / 82.8	Suicide Poisoning 2,000 / 72.0	Unintentional Poisoning 1,201 / 43.3	Unint. Other & Classifiable 1,164 / 41.9

\* Each cell contains event frequency and rate/ per 100,000 age-group population

## Unintentional Falls

Unintentional falls are a threat to life, independence and health. One in three older adults falls each year in the United States. Every 18 seconds, an older adult is treated in an emergency department for a fall [3].

For unintentional falls, the highest hospitalization rates were among the elderly females which were hospitalized for falls at a rate of 6,873 per 100,000 population, while males in that age group were hospitalized at a rate of 5,112 (Figure 2). Females aged 85 and over were hospitalized at a significantly higher rate than their male counterparts ( $P=.05$ ) (Figure 2).

## Motor Vehicle Occupant

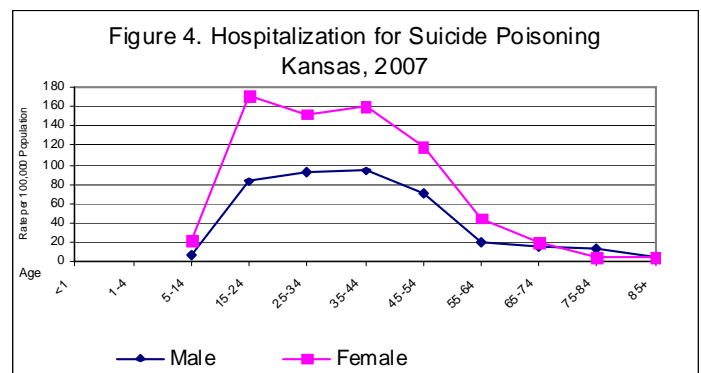
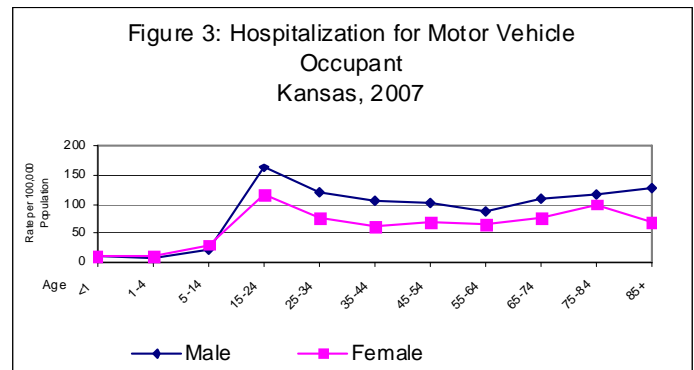
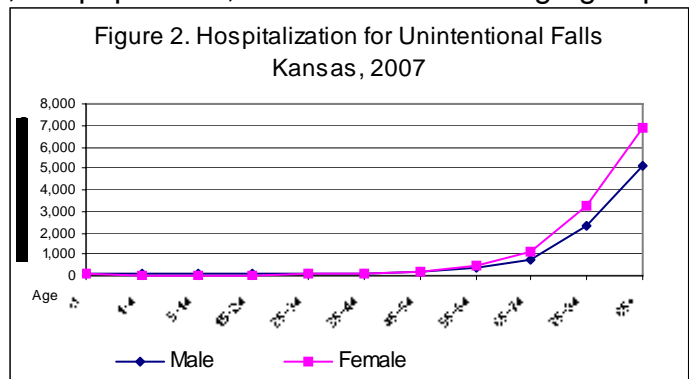
The U.S. National Highway Traffic Safety Administration conducted a survey in 2003 related to crash injury and emergency medical services. According to the report nationally, “nearly three in 10 persons aged 16 and older reported having been injured in a vehicle crash where they required medical attention. Approximately 16% of the total population, aged 16 and older, has received injuries from motor vehicle crashes severe enough to prevent them from performing some of their normal activities for at least a week” [4].

Kansas individuals aged 15-24 years of age are hospitalized for injuries to motor vehicle occupants more than any other type of injury. Males in that age group were hospitalized at a rate of 163 per 100,000 population, compared to a rate of 117 for females. In fact, males were hospitalized for motor vehicle occupant injury at a significantly higher rate than females in all age groups from 15-54, spiking again in the 85 and above age group at 129 ( $P=.05$ ) (Figure 3).

## Suicide Poisoning

According to John Hopkins University, from 1999 to 2005 suicide poisoning increased in women by 57% [5]. “The results underscore a change in the epidemiology of suicide, with middle aged whites emerging as a new high-risk group” [6].

Kansans ages 25 to 34, and 35 to 44, are more likely to be hospitalized for suicide than for any



other type of injury (Table 1). Females have higher rates of hospitalization than males for suicide poisoning in all age groups up to age 74 (Figure 4) and overall, have higher rates of suicide poisoning than males ( $p=.05$ )(Figure 4). In the 15-24 year age group, however the rate for females was double that for males, 171 and 83 per 100,000 population, respectively, ( $P=.05$ ) (Figure 4).

## **Summary and Conclusion**

This review presents Kansas injury related hospitalization trends by age group and gender for 2007. “Injuries disproportionately affect children, adolescents, young adults, and parents of young children. In the United States, injuries are the number one cause of death among persons 1 to 44 years of age and account for more years of potential life lost before the age 65 than all causes of cancer and all causes of heart disease combined. According to the World Health Organization, injury ranks as a leading causes of death and disability among all age groups except (for) people 60 years of age or older” [7].

In Kansas, the leading causes of injury related to hospitalization vary. For the majority of age groups, the most common injuries are attributable to falls, but for ages 25 to 44 injury due to suicide is the most frequent cause, while motor vehicle accidents are more recurrent for younger people ages 15-24. Prevention efforts are underway to decrease injury rates in Kansas. Programs must continue to be tailored to meet the needs of specific population groups in order to reduce injury related hospitalization.

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