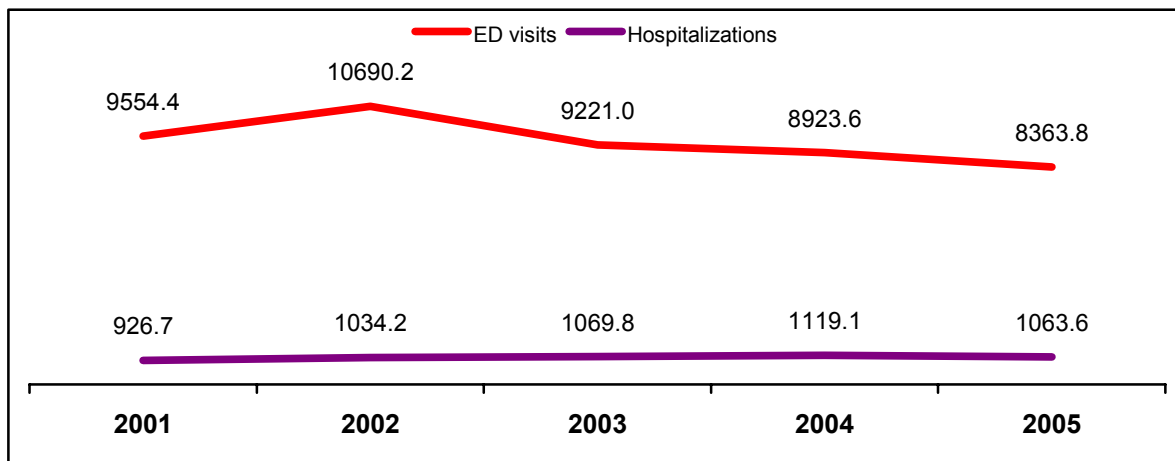


Unintentional Injuries

Unintentional injuries are involuntary. They may be caused by a variety of circumstances, such as the motor vehicle crash injuries discussed previously. Nationally, 10.3% of medical expenditures are due to injuries, intentional and unintentional.⁴¹¹ Unintentional injuries lead to utilization of emergency department and hospital services, and to deaths. Between 2001 and 2005, the age-adjusted hospitalization rates due to intentional injuries increased 15%, while the age-adjusted rates for persons seeking assistance at emergency departments due to unintentional injuries decreased 12% (Figure 94). The annual age-adjusted deaths rates from unintentional injuries are shown in Figure 95, while the age distribution of deaths in 2005 is presented in Figure 96. The annual incidence of selected unintentional injuries incurred by Kansas City residents is presented in Table 100.

Figure 94 Age-adjusted emergency department visits and hospitalization rates per 100,000 population due to unintentional injuries, Kansas City, Mo



Each year, 7-8 Kansas City residents die from unintentional injuries that were occupationally related. This death rate has remained constant over the past decade. The US Bureau of Labor Statistics reported that Missouri recorded 166 work place deaths in 2006, down from 185 in 2005 (www.bls.gov). In 2005, Missouri ranked 35th highest in workplace fatalities with a rate of 6.4 deaths per 100,000 workers (www.aflcio.org/issues/safety/memorial/doj_2007.cfm).

⁴¹¹ Finkelstein EA et al. Medical expenditures attributable to injuries – United States, 2000. MMWR 2004;53:1-4.

Figure 95 Age-adjusted death rates per 100,000 population due to unintentional injuries, Kansas City, Mo

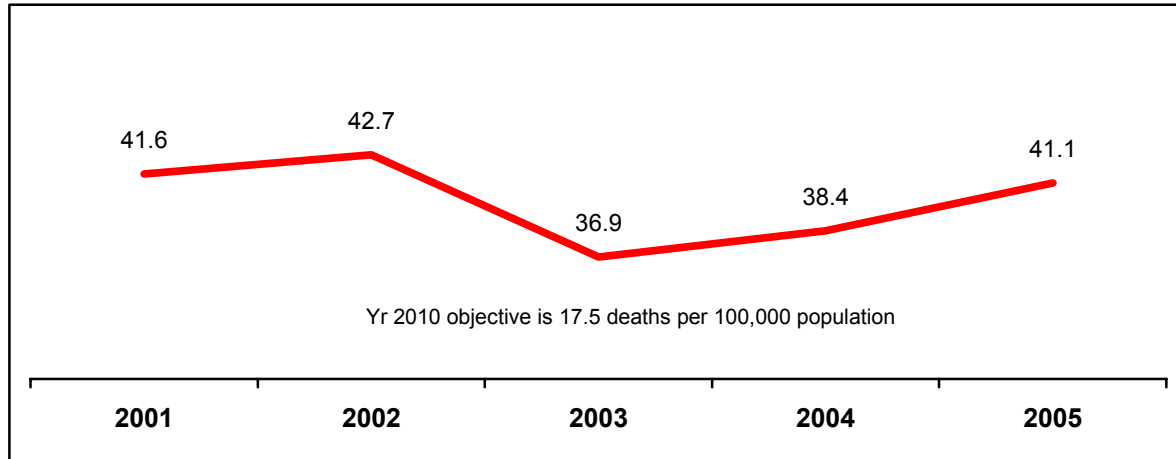
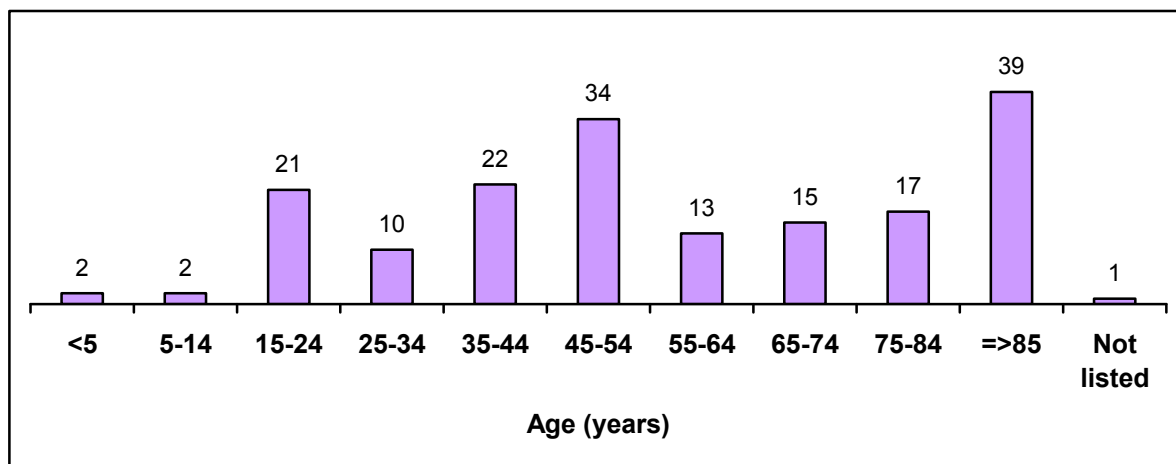


Figure 96 Distribution of 176 deaths from unintentional injuries by age for Kansas City, Mo, residents, 2005



Unintentional and unexpected falls, unfortunately, can be major causes of injuries or even deaths. Between 2001 and 2005, 260 Kansas City residents died as the result of falls (Figure 97). And, each year, approximately 10,100 Kansas Citians sought medical attention at a hospital as the result of a fall; many arrived in a MAST ambulance.

During this time period, women had higher overall annual rates for emergency department visits (317.0 per 10,000 population vs 286.6) and hospitalizations (63.6 vs 40.8) resulting from falls than did men (Table 101). The overall death rates from falls, however, were similar, 1.22 for women and 1.26 for men. There were differences by age groups. For emergency department visits, men had a higher rate than women among 0-19 y olds, but women had higher rates in each succeeding age group. For

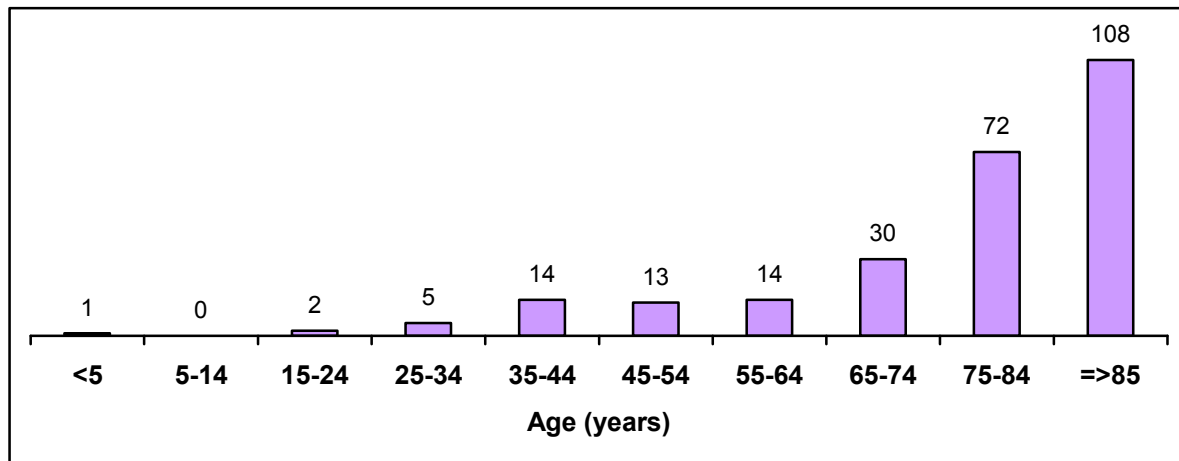
UNINTENTIONAL INJURIES

hospitalizations, rates were higher for men 0-64 y old, with women having the higher rates among those ≥ 65 y old. While 97.5% of all deaths attributed to falls occurred among individuals ≥ 65 y old, the fall associated death rate for males was 1.2 times that for women.

Table 100 Number of Kansas Citizens seeking medical care at a hospital for selected unintentional injuries, Kansas City, Mo

Injury caused by	2001	2002	2003	2004	2005	Total
Cut/pierce	5,533	5,244	4,800	4,227	4,273	24,077
Fall	12,793	12,584	11,995	10,885	11,295	50,552
Fighting	1,640	1,682	1,515	1,432	1,354	7,623
Firearm	286	334	409	385	512	1,926
Fire/burn	1,026	1,013	890	817	809	3,655
Machinery	282	232	214	197	208	1,133
Over exertion	4,379	4,680	4,218	3,773	4,108	21,158
Poison/overdose	1,250	1,331	1,294	1,295	1,245	6,415
Struck/blunt object	491	487	456	369	419	2,222
Venomous bite/sting	129	134	137	152	142	694

Figure 97 Distribution of 259 deaths from falls among Kansas City, Mo, residents by age, 2001-2005



An earlier analysis of falls showed that the highest rates for a specified antecedent cause were the result of falls on the same level from slipping, tripping or stumbling. As might be expected, this category also had the highest rates for hospitalizations. Women had higher rates of emergency department visits from falls involving steps and stairs than did men, whereas men had higher rates for falls from ladders, scaffolding, and buildings/structures. For both men and women, the total number of falls involving stairs/step, ladders/scaffolding, and from one level to another was not appreciably different from that resulting from falls on the same level as the result of slipping, tripping, or stumbling.

Because falls, particularly among the elderly and among workers on-the-job, are a significant cause of injury and death, there is considerable literature on the subject as well as federal safety



Table 101 Injuries and deaths rates per 10,000 population resulting from falls among Kansas City, Mo, residents, 2001-2005

Age (years)	Emergency Department Visits				Hospitalizations				Deaths			
	Male	Annual rate	Female	Annual rate	Male	Annual rate	Female	Annual rate	Male	Annual rate	Female	Annual rate
0-19	13,274	423.4	10,265	338.2	355	11.3	205	6.8	1	0.03	0	0.00
20-45	9,608	221.2	11,483	260.0	915	21.1	639	14.5	19	0.44	2	0.05
46-64	4,619	213.2	7,039	294.4	1,028	47.4	1,076	45.0	17	0.78	12	0.50
>65	3,040	300.5	7,416	471.5	2,047	202.4	5,339	339.4	97	9.59	125	7.95
Total	30,541	286.6	36,203	317.0	4,345	40.8	7,259	63.6	134	1.26	139	1.22

* Counts include only cases where age information was recorded

requirements for certain professions. Yet despite that literature, little attention has been given to young and middle-aged adults where falls represent a risk for injury with related expenses and potential interference with work and family.

A study looking at falls among Baltimore's Longitudinal Study of Aging participants found that young adults reported injuries from falls most frequently to the wrist/hand, knees and ankles, while middle aged adults tended to injure their knees.⁴¹² Senior citizens reported more head and knee injuries. Women had a higher percentage of injuries in all age groups. Ambulation was cited as the cause of fall most frequently regardless of age or sex. The survey did not find any difference in severity of injury. Falling often results from multiple concurrent problems including environmental and behavioral factors as well as disease processes. For example, middle aged adults progressively start to show higher incidences of diseases and medication use, along with lower levels of physical activity, and physiological changes that begin to alter posture stability. Events in this group are likely to predispose individuals for the higher risks that lead to falls in later years.

⁴¹² Talbot LA et al. Falls in young, middle-aged and older community dwelling adults: perceived cause, environmental factors and injury. *BMC Public Health* 2005;5:86.