



## Motor Vehicle Crashes

Motor vehicle crashes lead to property damage, injuries and death. Such crashes are the leading cause of injury death in the United States for persons 5-29 y of age. The National Highway Traffic Safety Administration (NHTSA) reported that 43,443 people died on the nation's highways in 2005, a 1.4% increase over the number killed in 2004. Eighty-six percent of the increase in deaths were due to motorcycle crashes. In 2005, 37,778 motorists and 5,665 non-motorists died in motor vehicle crashes ([www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)). Another 2,699,000 were injured for a 3.2% reduction from 2004. The NHTSA estimated for 2005 there were 1.47 deaths per 100,000 miles traveled. California, Florida and Missouri were the leading states for deaths.

In 2005, 1,125 persons died on Missouri roads and 66,413 were injured.<sup>386</sup> While total accidents declined 4% and the number of persons injured declined 3.3% from 2004, fatalities increased 11.2%. Although 72.7% of fatalities occurred in rural areas of the state, 60.3% of injuries were in urban areas. Of all crashes, 85.2% occurred along straight stretches of roadway resulting in 64.7% of fatalities and 81.3% of injuries. Over 80% of fatalities (86.2%) and injuries (80.5%) occurred during dry road conditions. And, 53.8% of fatalities occurred during day time as did 71.3% of injuries.

Kansas City is a dangerous environment when it comes to traffic fatalities and injuries. Kansas City led all Missouri communities with motor vehicle crashes followed by St Louis City and Springfield. Among counties, Jackson was 2<sup>nd</sup> behind St Louis, while Clay and Platte ranked 6<sup>th</sup> and 13<sup>th</sup>, respectively.

In 2005, the Kansas City Police Department recorded 21,700 traffic accidents, 66 of which involved fatalities (71 fatalities) and 4,748 involved injuries (Table 94). Between 2000 and 2004, the age-adjusted death rate for City residents due to motor vehicle crashes rose 5.6% (Figure 87). A breakdown of traffic fatalities and injuries in Kansas City in 2005, by county and by other characteristics is provided in Table 95.

For the period 1999-2003, there was a 16.6% decline in the age-adjusted rates for emergency

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<sup>386</sup> Missouri State Highway Patrol. 2006. 2005 Missouri traffic safety compendium. 287p. [www.mshp.dps.missouri.gov](http://www.mshp.dps.missouri.gov)

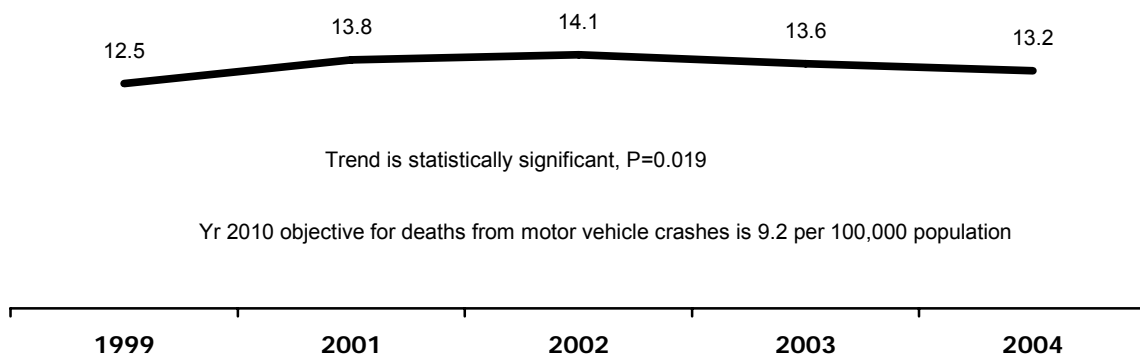


department visits due to motor vehicle crashes, while the age-adjusted hospitalization rates rose 7% (Figure 88).

**Table 94 Fatal traffic accidents, Kansas City, MO**

Year	Number of Accidents	Number of Persons Killed
1997	74	81
1998	62	68
1999	63	70
2000	62	70
2001	78	68
2002	67	84
2003	60	76
2004	48	54
2005	66	71

**Figure 87 Age-adjusted death rates resulting from motor vehicle crashes, Kansas City, MO**



**MOTOR VEHICLE CRASHES**



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**Table 95 Traffic accident summary for Kansas City, MO, 2005\***

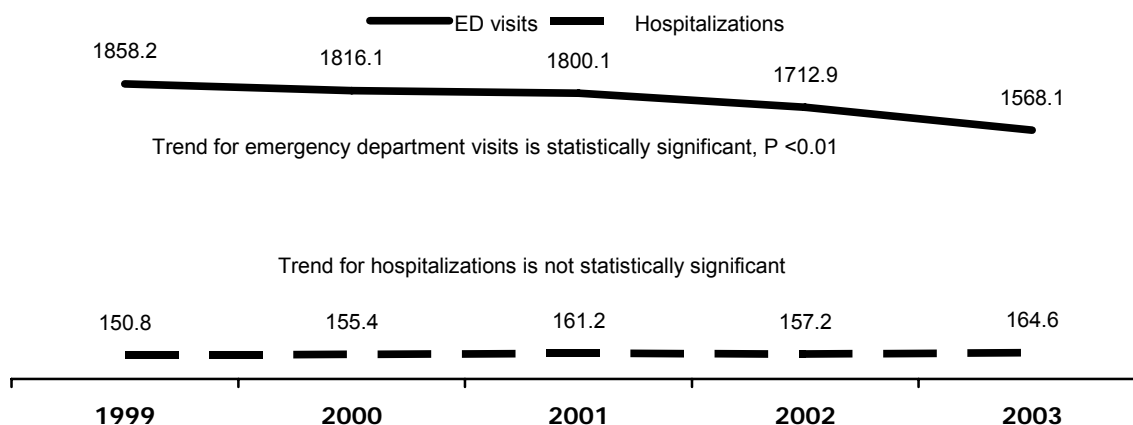
		Total accidents	Speed involved	Drinking involved	Driver <21 y	Driver ≥55 y	Commercial vehicle	Motorcycle	School bus	Bicycle	Pedestrian	Fixed object	Hazardous materials	Work zone
Kansas City, all	Total accidents	21,555	3,664	688	2,068	4,416	1,782	208	182	66	234	2,953	2	385
	State ranking**		1	1	3	1	2	1	2	2	2	1	Tied for 2	1
Clay Co portion	Fatal	17	4	5	5	4	1	2	0	0	4	4	0	0
	Injury	688	166	50	119	150	50	40	2	3	10	161	1	9
Jackson Co portion	Fatal	43	18	13	7	13	8	5	0	0	5	15	0	0
	Injury	3,624	826	199	399	837	232	93	24	52	182	569	1	69
Platte Co portion	Fatal	8	2	1	1	2	2	0	0	0	2	4	0	0
	Injury	301	65	26	47	62	20	16	1	1	9	60	0	7

\* Source: 2005 Missouri Traffic Safety Compendium, Missouri State Highway Patrol. [www.mshp.dps.missouri.gov](http://www.mshp.dps.missouri.gov)

\*\* Ranking of Missouri municipalities of 1,000 or more population.



**Figure 88 Age-adjusted rates for emergency department visits and hospitalizations due to motor vehicle crash related injuries, Kansas City, MO**



Seat belts and air bags significantly lower the risk of serious injury and death in motor vehicle crashes.<sup>387</sup> Primary seat belt laws which allow police to stop a motorist and issue a citation are more effective for increasing seat belt usage and reducing traffic fatalities than are secondary seat belt laws (police can only issue seat belt citation after stopping motorist for another violation).<sup>388</sup> The use of seat belts helps reduce the risk of death regardless where in the vehicle a person is sitting. Missouri does not have a primary seat belt law for adults although it does have one for persons <16 y of age. The NHTSA has estimated that the adoption of a primary seat belt law in Missouri would save 89 lives and prevent >1,000 serious injuries each year.

According to the Missouri State Highway Patrol, seat belt usage rates by residents of Clay, Jackson, and Platte counties were 96.2%, 95.6%, and 96.2%, respectively. Of persons killed in 2005, 66.7% of drivers and 64.8% of passengers were not wearing a seat belt. Persons who had been using alcohol

<sup>387</sup> Cummings P, Rivara FP. 2004. Car occupant death according to the restraint use of other occupants: a matched cohort study. *J Am Med Assoc* 291:343-349.

<sup>388</sup> Centers for Disease Control and Prevention. 2004. Impact of primary laws on adult use of safety belts – United States, 2002. *MMWR* 53:257-260.

**MOTOR VEHICLE CRASHES**



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and/or drugs were 7-9 times more likely not to be wearing a seat belt than persons who had not been using these substances. The majority of Missouri's high school students report using seat belts, with 15.5% (13.1% girls, 17.7% of boys) rarely or never using a seat belt.<sup>389</sup>

The 2004 Health Assessment Survey commissioned by the Kansas City Health Department found that 88% of respondents reported that they usually or always used a seat belt when in a car and that 97% of children <5 y old used a seat belt.<sup>390</sup>

Walking is the most dangerous mode of travel per mile in the US. Although only 8.6% of all trips are made on foot, 11.4% of all traffic deaths are pedestrians.<sup>391</sup> In 2004, 10.9% of fatal motor vehicle accidents involved a pedestrian (4,641 killed). Among Missouri counties in 2005, Jackson County recorded the 3<sup>rd</sup> highest number of crashes involving pedestrians with 265, while Clay ranked 7<sup>th</sup> with 30 pedestrian related crashes, and Platte ranked 11<sup>th</sup> with 16. Statewide 92 pedestrians were killed and 1,441 were injured by motor vehicles, while in Kansas City there were 234 accidents and 11 deaths.

Nationally, in 2001, the fatality rate per 100 million miles traveled was 0.75 for public transit riders, 1.3 for drivers and their passengers, 7.3 for passengers of commercial airliners (includes passengers who died during September 11<sup>th</sup> terrorist attacks), the fatality rate for walkers was 20.1. For 2002-2003, the Pedestrian Danger Index (rate of pedestrian deaths relative to the amount that people walk in a given metropolitan area) was 100.3 for the Kansas City MO-KS metropolitan area, ranking 15<sup>th</sup> in the nation. This was the highest index for any metropolitan area in Missouri; the St Louis MO-IL index was 95 (17<sup>th</sup> in the nation). In addition, the Kansas City metropolitan area spent the lowest amount per person on pedestrian/bicycle facilities and safety at \$1.03. Columbia spent the most at \$3.32 and also had the lowest Pedestrian Danger Index at 22.8.

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<sup>389</sup> Grunbaum JA et al. 2004. Youth risk behavior surveillance – United States, 2003. *MMWR* 53:SS-2, 100 p.

<sup>390</sup> Kansas City Health Department. 2004. 2004 Health Assessment Survey. [www.kcmo.org/health](http://www.kcmo.org/health).

<sup>391</sup> Ernst M. 2004. Mean Streets 2004. How far have we come? Pedestrian safety, 1994-2003. Surface Transportation Policy Project. 38 p. [www.trasact.org](http://www.trasact.org).



During 2004, Jackson, Clay and Platte counties recorded 760 motor vehicle crashes involving deer, with 297 (39%) occurring within Kansas City. Jackson County with 383 recorded crashes led the state, while Platte with 197 crashes was ranked 3<sup>rd</sup> and Clay with 180 was 5<sup>th</sup>. Kansas City was ranked 1<sup>st</sup> among communities across the state for motor vehicle crashes involving deer. Statewide, 5 persons died and 337 were injured as the result of these crashes, with 4 of the deaths and 324 of the injuries occurring to persons in the vehicle that struck the deer.

Nationally, on average, July 4<sup>th</sup> has more motor vehicle crash deaths than any other day of the year, with a relatively high number of deaths involving alcohol.<sup>392</sup> January 1<sup>st</sup> has more pedestrian crash deaths on average, plus it has the 5<sup>th</sup> largest number of deaths per day overall, also due to alcohol impairment. For the period 1986-2002, the 10 deadliest days of year in decreasing order were July 4<sup>th</sup>, July 3<sup>rd</sup>, December 23<sup>rd</sup>, August 3<sup>rd</sup>, January 1<sup>st</sup>, August 6<sup>th</sup>, August 12<sup>th</sup>, July 2<sup>nd</sup> and September 2<sup>nd</sup>. The two deadliest days for pedestrians were January 1<sup>st</sup> and October 31<sup>st</sup>. The deadliest days for motor vehicle crash fatalities are Sunday (18.3%), Saturday (15.8%), Monday (15.6%), Friday (13.4%), Tuesday (12.4%), Thursday (12.3%), and Wednesday (12.2%).

In Kansas City during 2005, the largest percentage of accidents occur on Friday (17.3%) and the lowest percentage (10.0%) on Sunday. Each weekday had more accidents than either Saturday or Sunday which is not surprising given increased traffic volumes on traditional work days. Conversely, more DUI violations occur on the weekend.

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<sup>392</sup> Farmer CM, Williams AF. 2005. Temporal factors in motor vehicle crash deaths. *Injury Prev* 11:18-23.