

Injuries to Illinois and Chicago Youth: Motor Vehicle Crashes

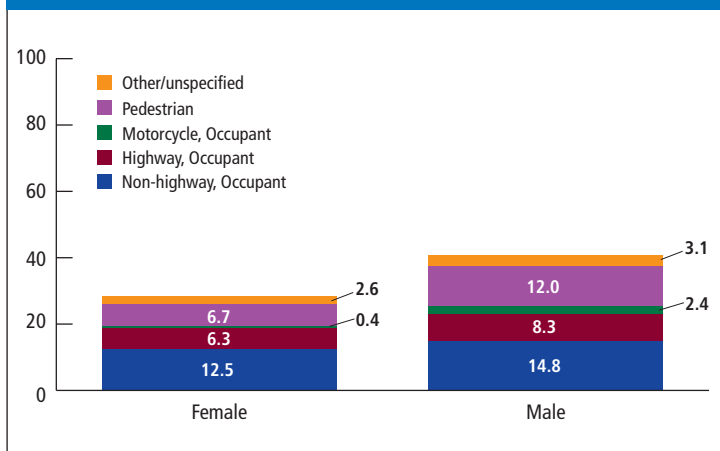


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Motor vehicle crashes are the leading cause of death in Illinois for children over 10 years of age. They are also a major source of hospitalizations in Illinois; hospitalizations due to motor vehicle crash injuries are among the top five injuries for all children age 5 and older. Injuries due to motor vehicle crashes can occur to the occupant of the vehicle or a pedestrian who is struck by the vehicle (bicycle injuries have been addressed in the CHDL Data Brief “Sports and Outdoor Activities”).

Rates of hospitalization due to motor vehicle crashes have been steadily declining since 2000 (Figure 1). Death rates have remained fairly stable from 2000 to 2007.

Figure 2. Motor Vehicle Crash Hospitalizations and Deaths by Gender, 2000-07, (rate per 100,000)

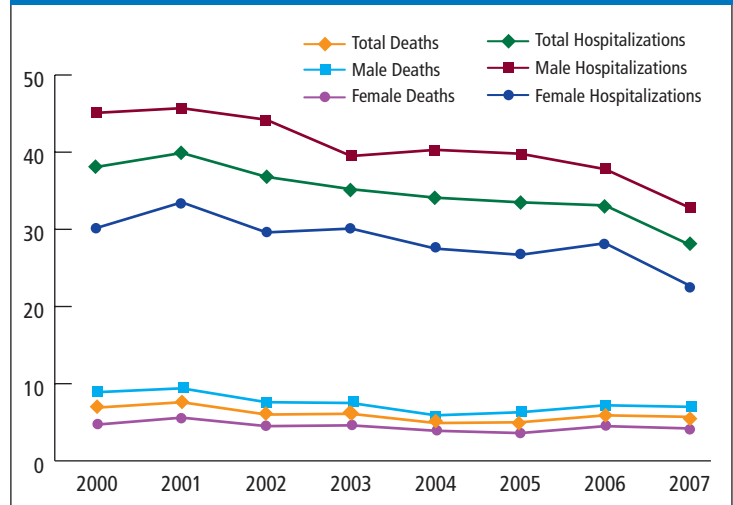


Gender Differences in Hospitalization Reflect Type of Crash

Males are about 50% more likely than females to be hospitalized from a motor vehicle crash. Gender differences in hospitalization rates for injuries from motor vehicle crashes are due mostly to crashes involving pedestrians and motorcycles among males (Figure 2).

Death rates by gender are similar for pedestrian crashes (1.2 per 100,000 for males and 0.7 for females) but differ for motorcycle crashes (0.3 for males vs. 0.0 for females) and crashes where the victim was the motor vehicle occupant (6.0 for males vs. 3.7 for females).

Figure 1. Hospitalizations from Motor Vehicle Crashes by Gender and Year, 2000-07, 0-19 Years (rate per 100,000)

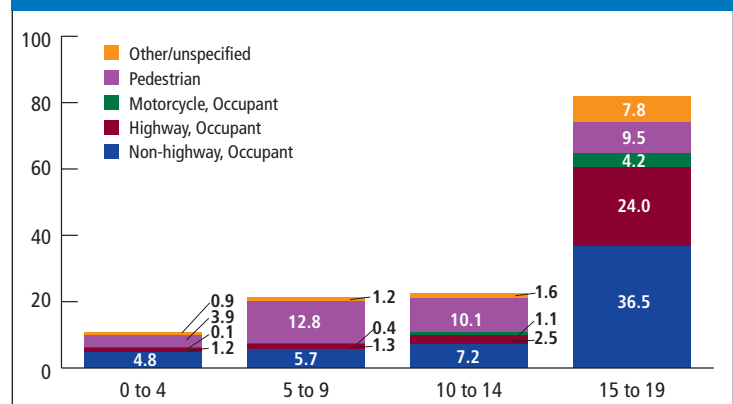


Causes of Hospitalizations Differ by Age Group

Pedestrian injuries are the leading cause of motor vehicle injury hospitalizations among children ages 5 to 14 (Figure 3). In contrast, motor vehicle occupant injuries are the leading cause of hospitalization for children ages 15 to 19 — and relates to inexperienced driving.

Children ages 0 to 4 have relatively low rates of hospitalizations from motor vehicle crashes, either as a pedestrian or occupant. This suggests that car seat use for infants and preschoolers remains high and is an effective injury prevention strategy.

Figure 3. Motor Vehicle Crash Hospitalizations by Age Group, 2000-07 (rate per 100,000)



Motor Vehicle Crash Deaths and Hospitalizations in Illinois Children

- There is substantial variation in the rates of motor vehicle crash hospitalizations and deaths by Illinois region, with the highest region having a hospitalization and death rate three to four times that of the lowest region.
- The Marion region has the highest hospitalization and death rate for motor vehicle crashes at 55.7 hospitalizations per 100,000 and 13.2 deaths per 100,000 (Table 1).
- The Champaign, West Chicago and Suburban Cook regions have the lowest rates of hospitalizations due to motor vehicle crashes (18.4, 19.0 and 21.1 respectively) (Figure 4).
- Hospitalization rates among 15 to 19 year olds in the Marion and Edwardsville regions are three times higher compared to the same age group in the Champaign region (Table 1).
- Even though the Champaign region has the lowest rate of hospitalization, it has the second highest death rate in Illinois; only the Marion region is higher (Table 1).
- Suburban Cook County has the highest rate of hospitalizations due to pedestrian injuries (Figure 5).
- The Edwardsville region has the highest rate of hospitalizations due to motorcycle crashes (Figure 5).

Figure 4. Hospitalization Rates for Motor Vehicle Crashes by Illinois Department of Public Health Region, 2005-07 (rates per 100,000)

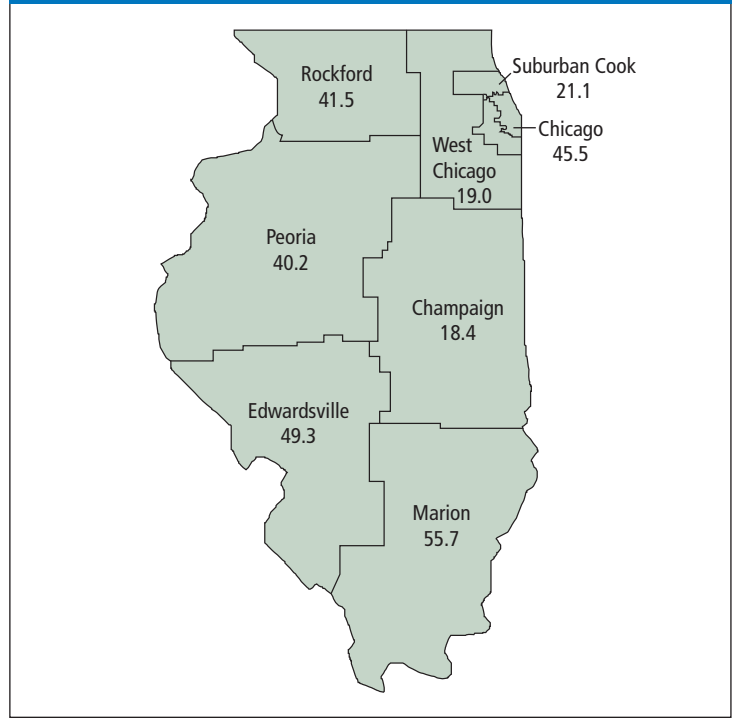
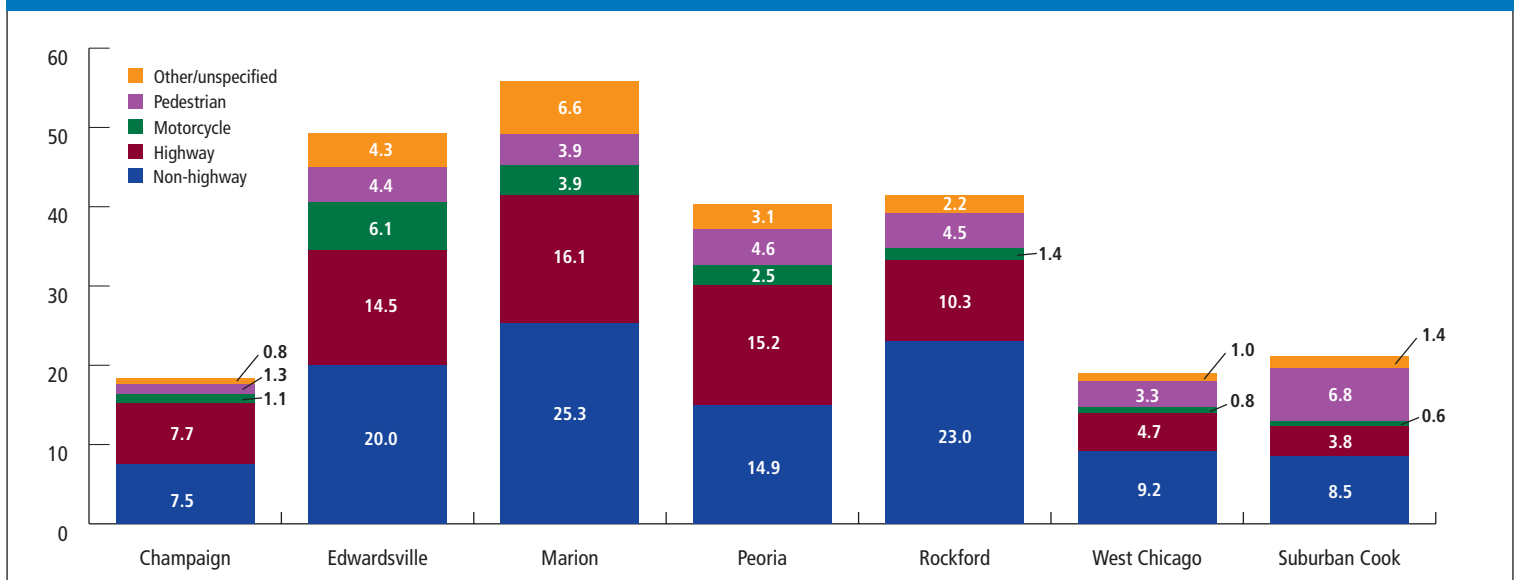


Table 1. Hospitalizations for Motor Vehicle Crashes by Illinois Region and Age Group, 2005-07

	Illinois	Champaign	Edwardsville	Marion	Peoria	Rockford	West Chicago	Suburban Cook
0 to 4	10.5	4.9	10.9	15.4	8.8	13.2	4.1	6.7
5 to 9	16.2	7.2	14.6	24.3	15.7	15.2	5.3	9.2
10 to 14	20.2	12.0	27.1	35.7	20.9	22.8	10.8	15.3
15 to 19	77.2	42.5	135.7	131.2	105.7	105.1	56.6	52.4
All ages	34.9	18.4	49.3	55.7	40.2	41.5	19.0	21.1
Deaths (2000-07)	6.0	10.7	9.1	13.2	8.8	8.5	4.8	3.4

Figure 5. Hospitalizations for Motor Vehicle Crashes by Illinois Region and Type, 2005-07



Motor Vehicle Crash Deaths and Hospitalizations in Chicago Children

- Hospitalizations due to pedestrian injuries are higher than hospitalizations due to motor vehicle occupant injuries in all Chicago regions except the North and Northwest (Figure 7).
- The North region of Chicago has the lowest rates of hospitalizations and deaths due to motor vehicle crashes, while the West region has the highest (Figure 6).
- The Northwest and the West have the highest hospitalizations rates among teenagers, ages 15 to 19 (Table 2).
- Death rates in the West and South regions are three times higher than death rates in the North region (Table 2).
- Very few hospitalizations in Chicago are due to injuries that resulted from a motorcycle crash (Figure 7).

Figure 6. Hospitalization Rates for Motor Vehicle Crashes by Chicago Department of Public Health Planning Region, 2005-07 (rates per 100,000)

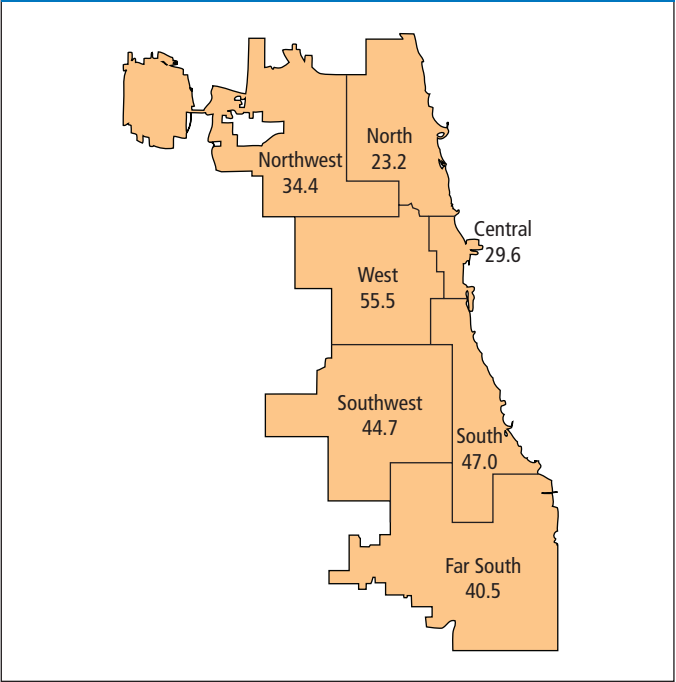
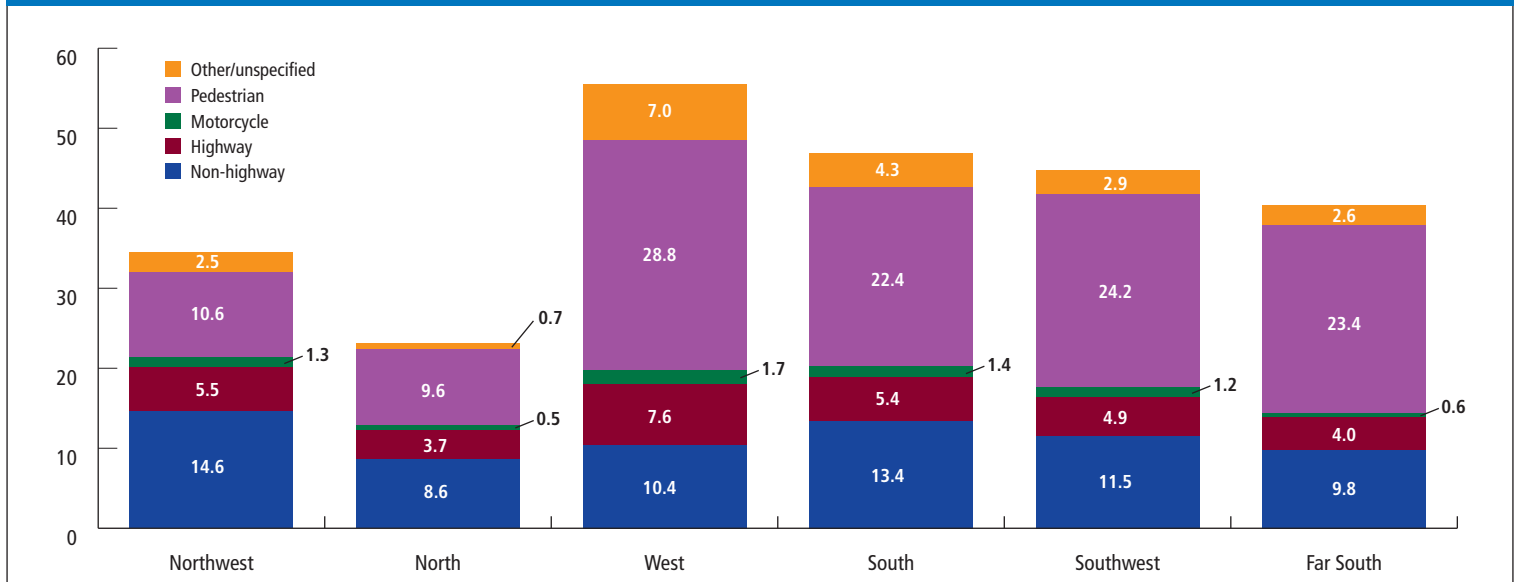


Table 2. Hospitalizations for Motor Vehicle Crashes by Chicago Region and Age Group

	Chicago	Northwest	North	West	Central	South	Southwest	Far South
0 to 4	21.6	8.5	9.4	27.3	*	41.9	29.0	14.9
5 to 9	40.5	16.3	15.1	41.1	*	31.5	43.5	45.8
10 to 14	34.7	19.0	9.1	49.4	*	48.4	29.8	34.8
15 to 19	88.4	100.8	59.3	105.7	67.7	69.2	79.5	65.8
All ages	45.5	34.4	23.2	55.5	29.6	47.0	44.7	40.5
Deaths (2000-07)	4.8	3.9	1.7	5.7	*	6.0	5.0	3.9

* Denotes rates not calculated; fewer than six events

Figure 7. Hospitalizations for Motor Vehicle Crashes by Chicago Region and Type



Preventive Strategies — Motor Vehicle Crashes

WHAT YOU CAN DO AND TEACH AT HOME...

Infants and Young Children: The first rule for child car safety is “buckle up.” Before a car is even turned on, everyone in the car should be buckled up.

- Children age 8 and younger should be restrained correctly in a safety seat or booster seat — one that fits the child’s size and is securely fastened in the car.
- Children over age 8 or 80 lbs. may wear an adult lap and shoulder safety belt if they can bend their knees at the edge of the seat when their back is touching the seat back. The seatbelt should fit snugly across the hips and collarbone; it should not cross the stomach.
- The shoulder strap is a very important piece of the seat belt system and must be worn with the lap belt—it cannot work if the wearer pushes it behind his/her body—and it must be securely fastened in the car.
- Front passenger air bags were designed to fit an average adult’s needs, and may injure or kill a child or small adult during a car crash. For this reason, the best place for all children and many adolescents is in the back seat wearing a seatbelt or in a safety seat.

Adolescents: Motor vehicle crashes are one of the leading causes of injury and death among children in this age group. So it is very important to stress motor vehicle safety to adolescents who drive and those who ride in a car with adolescent drivers (such as friends).

- Seat belts should be worn at all times in the front or back seat. Not only is it a good idea, the law requires it!
- Don’t give your teen permission right away to drive any time in any place. Tie driving privileges to responsible behavior and allow increased driving gradually as his/her driving experience grows. Establish a driving curfew for your child; often there are curfews established by the city in which you live and these can become yours as well. Remove privileges for a designated period when rules (like curfews) are broken.
- Stress the importance of not riding in a car with an intoxicated driver, and encourage your children to attempt to convince intoxicated friends not to drive when in that situation (“Friends Don’t Let Friends Drive Drunk”). Create an open door policy with your child so he or she feels comfortable calling for a ride home if his or her friends are intoxicated and cannot drive.

WHAT YOU CAN DO IN YOUR COMMUNITY...

- Educate friends and family members about transportation safety for children.
- Make certain that people who drive your children (even once) know that you expect your child to be restrained correctly in his/her seat.
- Advocate and help coordinate alcohol-free proms and parties.

WHAT YOU CAN DO IN YOUR CITY/STATE/COUNTY...

- Ally with other adults concerned with child safety (other adults in the community, parent-teacher association members, safety officers, etc.) to promote measures to slow traffic and to simplify intersections and traffic flow.
- Support legislation to make driving without a seatbelt a primary offense and to assure young persons ride in the backseat and are properly restrained for their size.
- Consult agencies that promote motor vehicle safety, such as the Illinois Department of Transportation or the National Highway Traffic Safety Administration.

Adapted from NHTSA and NYS Department of Motor Vehicles

FOR MORE CHILD SAFETY TIPS AND RESOURCES VISIT
childrensmemorial.org/parents/safetynews

METHODS

Hospitalization data in this report were obtained from the Illinois hospital discharge database, CompData, which is maintained by the Illinois Hospital Association. Death data were obtained from the Illinois Department of Public Health.

Hospitalization cases include children ages 0 to 19 who were admitted to the hospital and subsequently discharged between January 1, 2000 and December 31, 2007. Excluded cases were those who had expired and those not living in Illinois. Only cases that had an external cause of injury code (E-Code) were included in this report. Death cases were excluded if the decedent was not an Illinois resident or cause of death was not due to a motor vehicle crash.

Rates were calculated for all of Illinois and regions of Illinois using 2000 census data for the year 2000 and census estimates for 2001 through 2007. For multi-year rates, cases and populations were summed and the average rate was calculated with the results. Census estimates were not available for Chicago regions and all Chicago rates were calculated using 2000 census data. There is some evidence that the Chicago population is decreasing in some communities, hence some rates may be underestimates.

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