

Injuries to Illinois and Chicago Youth: Resulting from Sports & Outdoor Activities



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Sports and outdoor activities are a main source of injury for children. Many of these injuries are easily preventable, and the types of injuries vary widely among the regions in Illinois. In this CHDI Data Brief we will look at sports-related injuries, as well as injuries that occur during outdoor activities, between 2000 and 2007 among children ages 0 to 19 living in Illinois.

There is no way to identify all injuries that result from sports and outdoor activities. For this brief, we include injuries that are caused by a strike or fall in sports, a bike, an off-road or snow vehicle, overexertion, drowning or watercraft, or that are animal-related.

It appears that hospitalizations for sports and outdoor activities have declined between 2000 and 2007 for children ages 0 to 19, especially among males, while death rates between 2000 and 2005 have remained stable (Figure 1). Drowning is the leading cause of death among this group followed by off-road and snow vehicles (Figure 2). The death rate for drowning is 0.9 per 100,000 and 0.2 per 100,000 for off-road/all terrain vehicles injuries.

Figure 1. Hospitalizations from Sports-Related Injuries by Gender & Year, 2000-07, 0-19 Years

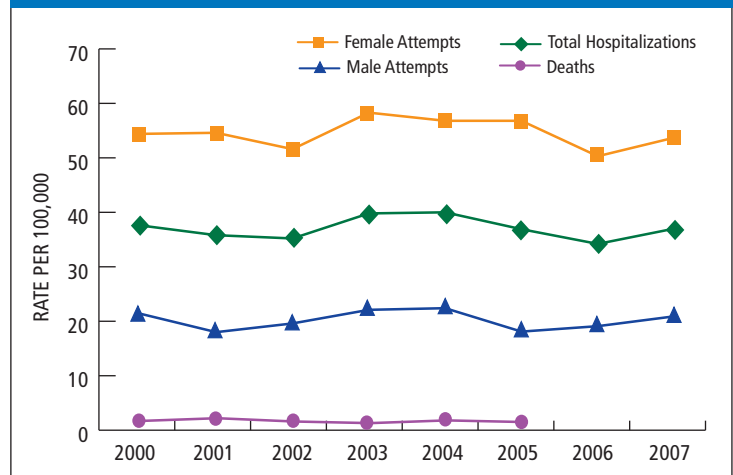


Figure 2. Sports-Related Deaths by Type of Injury, 2000-05

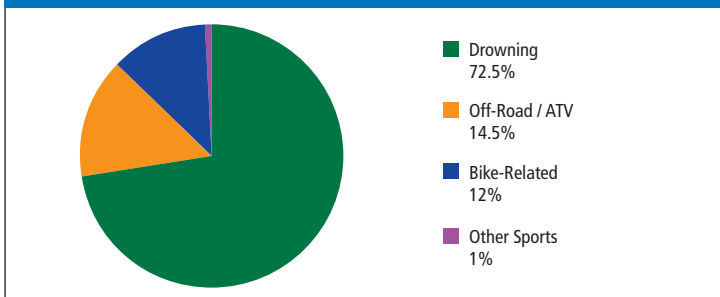
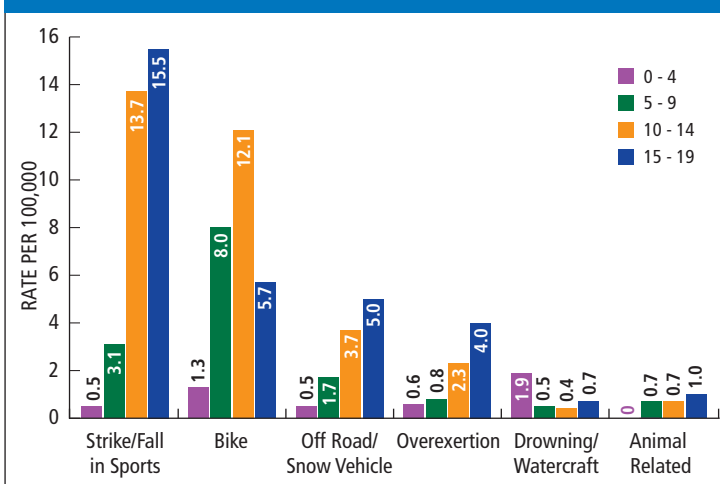


Figure 3. Hospitalizations for Sports-Related Injuries by Age Group, 2005-07



Most Deaths Caused by Drowning

Although drowning and submersion injuries make up a small portion of hospitalizations, they account for about 70% of the deaths from sports and outdoor activities. For our analysis, it was not possible to distinguish between drowning deaths that occurred during recreation and those that occurred in the home (during a bath, for example). However, Figure 3 indicates that many of the drownings occurred to very small children.

Sports-Related Injury Increases with Age

The most notable increase in hospitalization rates by age is among those who have been injured in a strike or fall during sports. Children ages 5 to 9 have a rate of 3.1 per 100,000 compared to children ages 10 to 14, who have a rate of 13.7 per 100,000 (Figure 3).

For bike-related injuries, children ages 5 to 9 and 10 to 14 have higher hospitalization rates than those ages 15 to 19: 8.0 per 100,000 for ages 5 to 9, 12.1 per 100,000 for ages 10 to 14 and 5.7 per 100,000 for ages 15 to 19.

Additionally, among children who were hospitalized for a drowning or watercraft related injury, those ages 0 to 4 had the highest rates of hospitalization (1.9 per 100,000) compared to all other age groups (less than 1.0 per 100,000).

Southern and Western Illinois Have Higher Rates of Hospitalizations for Sports and Outdoor Injuries

- Rural regions have higher rates of hospitalization compared to city and suburban regions, with Marion and Peoria regions having the highest rate of injury (Figure 4).
- Death rates are also higher in rural areas (Table 1), most notably in the Marion region, where the death rate is 30% higher than in neighboring Edwardsville.
- Hospitalization rates are similar between 10- to 14-year-olds and 15- to 19-year-olds in all regions except Marion and Suburban Cook, where the rate drops slightly for older adolescents (Table 1).
- The leading causes of injuries include being struck or falling in a sports activity (highest in the Peoria region), being injured while riding a bicycle (highest in the Peoria and Rockford regions), and riding off-road vehicles (highest in the Marion region) (Figure 5).
- Strikes or falls in sports and bike injuries are the leading causes of hospitalization in all regions except for the Marion region.

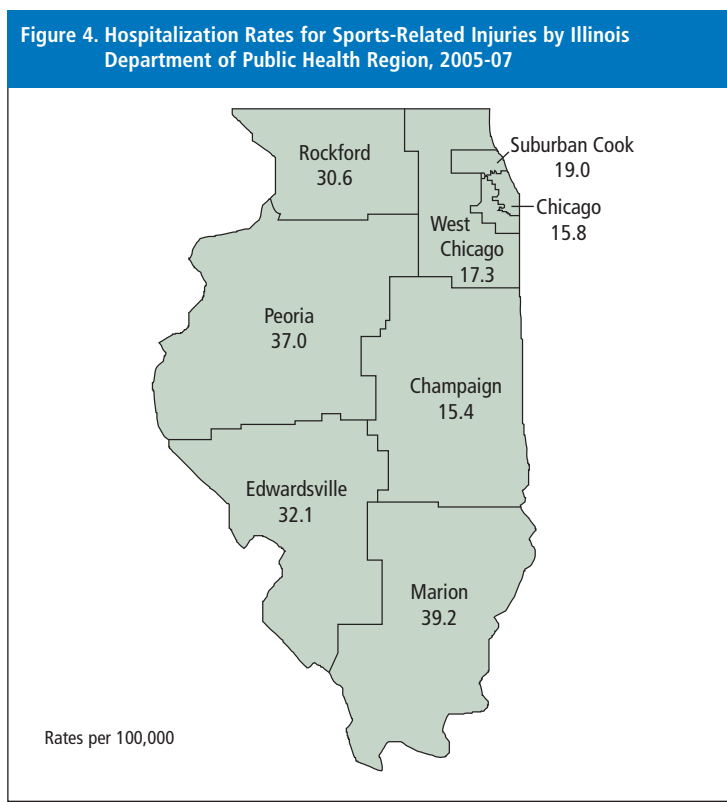
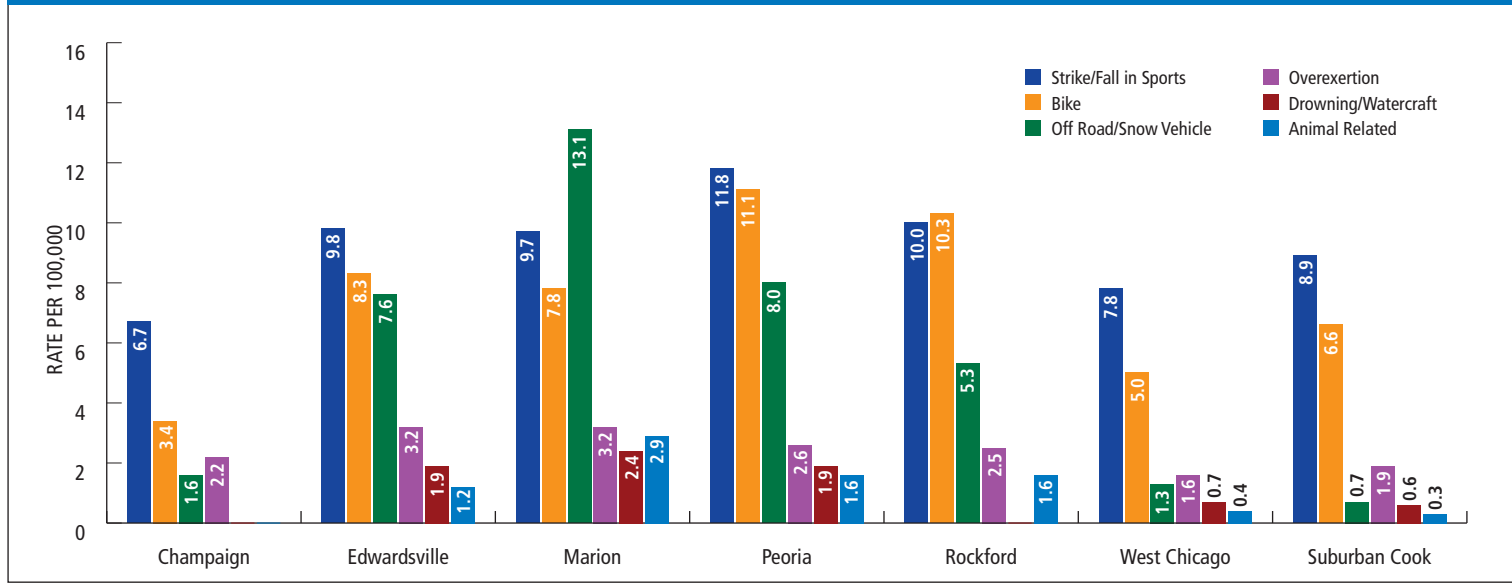


Table 1. Hospitalizations for Sports-Related Injuries by Illinois Region and Age Group, 2005-07

	Illinois	Champaign	Edwardsville	Marion	Peoria	Rockford	West Chicago	Suburban Cook
0 to 4	4.9	*	10.9	15.4	12.9	7.0	3.0	2.6
5 to 9	14.7	15.8	24.2	31.7	26.1	19.8	9.3	13.8
10 to 14	33.0	21.6	45.3	56.5	52.3	45.0	28.5	31.4
15 to 19	31.9	21.6	45.4	49.9	53.5	46.7	28.0	27.9
All ages	21.2	15.4	32.1	39.2	37.0	30.6	17.3	19.0
Deaths (2000-05)	1.2	1.5	2.3	3.4	2.0	1.3	1.1	0.8

* Denotes rates not calculated; fewer than six events

Figure 5. Hospitalizations for Firearm Injuries by Illinois Region and Type, 2005-07



North and South Regions Have Lowest Hospitalization Rate for Sports-Related Injuries

- Chicago has the lowest rate of sports and outdoor injuries compared to all other regions in Illinois except the Champaign region (Figure 4).
- Bike injuries are a leading cause of hospitalization in the West, South and Southwest regions, while a strike or fall in sports are the leading cause in the North, Northwest and Far South regions (Figure 7).
- The North and South regions have the lowest rate of hospitalization for sports and outdoor injuries at 10.4 and 10.5 per 100,000, respectively (Figure 6).
- The West and Northwest regions have the highest rate among 10- to 14-year-olds, at 33.2 and 30.6 per 100,000 youth, respectively (Table 2).
- The West region shows a sizeable drop in the rate of hospitalization for sports and outdoor injuries in later adolescence, from 33.2 per 100,000 in 10- to 14-year-olds to 23.4 per 100,000 in 15- to 19-year-olds.
- Death rates for sports-related injuries are low throughout the city of Chicago with the rate in the entire city at 0.8 per 100,000 (Table 2).

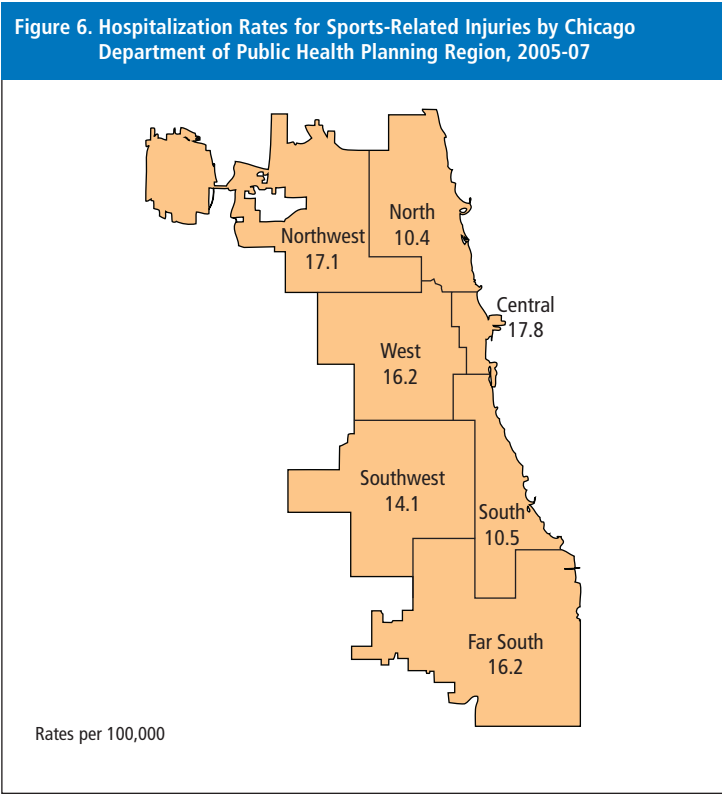
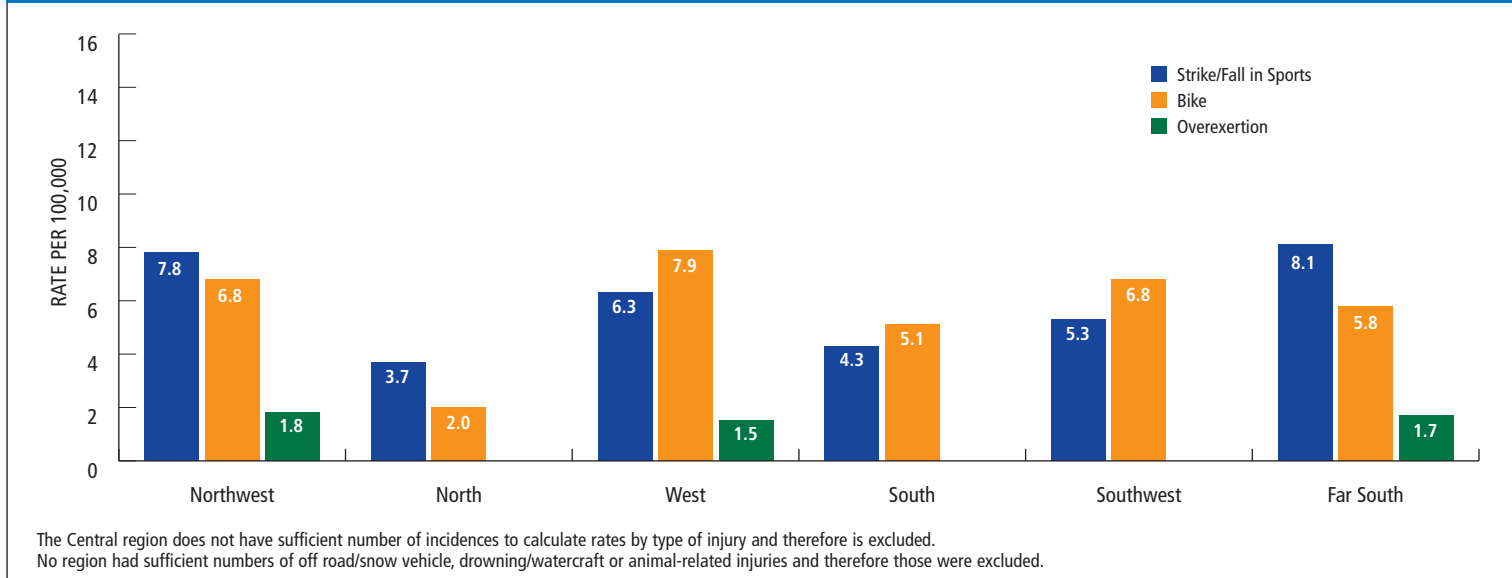


Table 2. Hospitalizations for Sports-Related Injuries by Chicago Region and Age Group, 2005-07

	Chicago	Northwest	North	West	Central	South	Southwest	Far South
0 to 4	2.9	*	*	*	*	*	4.6	*
5 to 9	12.0	8.6	9.1	7.0	*	*	15.0	11.7
10 to 14	26.3	30.6	17.1	33.2	*	18.1	19.3	24.7
15 to 19	23.4	29.3	16.8	23.4	*	15.4	17.9	25.6
All ages	15.8	17.1	10.4	16.2	17.8	10.5	14.1	16.2
Deaths	0.8	0.2	0.1	0.2	*	*	*	*

* Denotes rates not calculated; fewer than six events

Figure 7. Hospitalizations for Sports-Related Injuries by Chicago Region and Type, 2005-07



What you can do and teach at home...

SPORTS INJURIES *(Adapted from Sports Parents magazine)*

- Encourage your child to be active, but be aware of his or her limitations, especially limits given by your child's doctor.
- Be sure the coaches for sports teams are careful to build team members' strength and endurance gradually.
- Be alert to your child's nonverbal signals that he/she may be hurting or overdoing the activity.
- Children are more prone to a new injury after an injury that is not well-healed. Help your child heal from injuries using prescribed treatments, rest and exercises.
- Outfit your child with the proper protective equipment and clothing, whether that means using equipment already provided or having to purchase equipment yourself. Protective eyewear is important in all impact sports.

OFF-ROAD VEHICLE (ATV) *(Adapted from Phoenix Children's Hospital Injury Prevention Center)*

- Follow minimum age recommendations on the ATV warning label. The American Academy of Pediatrics recommends that no child under 16 should operate an ATV.
- If you chose to allow children to ride on an ATV, only allow them to do so with adult supervision.
- Make sure that children wear a helmet, protective clothing and eyewear.
- Do not allow children to ride double, as most ATVs are designed for only one rider.
- Only ride off-road, as ATVs are less stable on paved roads.
- Children should never ride adult-sized ATVs because they cannot properly reach the throttle, gear shift or brakes.

BIKE INJURIES *(Adapted from the National Highway Traffic Safety Administration)*

- Make sure to wear a helmet!
- Have your child try a helmet on before purchasing it. The helmet should fit snugly, with the front of the helmet low to protect the forehead. The padding should exert uniform pressure all over the head.
- The bike should be an appropriate size for the child. The bike seat must be adjusted so that the leg can be slightly bent while sitting.
- Reflectors should be on the front and back and should be pointed straight to reflect car headlights.
- Make sure that the bike chain is lubricated, the brakes stop the bike but do not stick and the tires are properly inflated.
- Before the age of 10, a child should not be riding in streets unless accompanied by an adult.

DROWNING *(Adapted from the American Academy of Pediatrics)*

- Learn CPR.
- Never — even for a moment — leave young children, especially those under age 5, alone in bathtubs, spas or wading pools, near irrigation ditches, potholes or other open standing water.
- For children ages 5 and up, teach your children to swim. At the same time, teach children never to swim alone or without adult supervision.
- Use an approved personal flotation device on your children whenever riding on a boat or fishing, and preferably while playing near a river, lake or ocean.
- Install a four-sided fence around your personal pool.

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 suicide.

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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