



**Illinois Department of Transportation**

Division of Traffic Safety  
3215 Executive Park Drive / P.O. Box 19245 / Springfield, Illinois / 62794-9245

**TECHNICAL REPORT**

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**August 2006**

# **Safety Belt Usage in Illinois**

## **June 2006 Observational Survey Results**

Compiled and Prepared by

Illinois Department of Transportation

Division of Traffic Safety

Evaluation Unit

3215 Executive Park Drive

Springfield, Illinois 62794-9245

# Illinois Department of Transportation

## Division of Traffic Safety

### Evaluation Unit

The Evaluation Unit within the Division of Traffic Safety in the Illinois Department of Transportation focuses on evaluation and monitoring of various highway safety projects and programs in Illinois. The Evaluation Unit conducts research and analyses that enhance the safety and efficiency of transportation by understanding the human factors that are important to transportation programs in Illinois. The main functions of the Unit include the following:

1. Develop an in-depth analysis of motor vehicle related fatalities and injuries in Illinois using several crash related databases (Crash data, FARS, Trauma Registry, Hospital data, and state and local police data).
2. Develop measurable long term and short term goals and objectives for the Highway Safety Program in Illinois using historical crash related databases.
3. Evaluate each highway safety project with enforcement components (e.g., Traffic Law Enforcement Program, Local Alcohol Program, IMAge projects) using crash and citation data provided by local and state police departments.
4. Evaluate several highway safety programs (e.g., Occupant Protection and Alcohol). This involves evaluating the effects of public policy and intervention programs that promote safe driving.
5. Design and conduct annual observational safety belt and child safety seat surveys for Illinois. The safety belt survey is based on a multi-stage random selection of Interstate Highways, US/IL Highways, and several local and residential streets.
6. Provide results of research and evaluation as well as annual enforcement activities to the National Highway Traffic Safety Administration (NHTSA) as part of the Federal Requirements of State Highway Safety Program in Illinois.
7. Provide statistical consultation to other Sections at the Division of Traffic Safety and other Divisions at IDOT.
8. Publish results of all research and evaluation at the Division and place them as PDF files at IDOT's Website.

**This report provides estimated safety belt usage rates in Illinois using a statistical (multi-stage random) observational survey conducted statewide during June 2006 on both high volume state highways and low volume local roads and residential streets in Illinois. In addition, the report provides safety belt usage rates by vehicle type (passenger car and pickup truck), region, road type, and day of week.**

The report was compiled and prepared by the Evaluation staff. Comments or questions may be addressed to Mehdi Nassirpour, Ph.D., Chief of Evaluation Unit, Bureau of Administrative Services, Division of Traffic Safety, Illinois Department of Transportation, 3215 Executive Park Drive, Springfield, Illinois 62794-9245.

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## Survey Design

The recent safety belt survey was a statistical (multi-stage random) observational survey conducted statewide during June 2006 on both high volume state highways and low volume local roads and residential streets. The survey provided a statistically representative sample of the state as a whole. The survey design was based on the National Highway Traffic Safety Administration's requirements and had four characteristics.

1. The survey was conducted between 7:00 a.m. and 6:30 p.m. when the light was adequate for observation.
2. The survey observations were restricted to front seat occupants (drivers and outboard passengers) of passenger cars (cars, sport utility vehicles, taxis, and vans) and pickup trucks.
3. Only the use of a shoulder harness was observed since vehicles passed an observation point without stopping.
4. The survey sites included interstate highways, freeways, county roads, state highways, and a random sample of residential streets within selected areas.

There were 132,056 front seat occupants observed at 258 locations statewide in this survey. Of those, 118,237 drivers and outboard passengers were observed in passenger cars (which included cars, sport utility vehicles, and vans) and 13,819 were observed in pickup trucks. For more information on survey design, refer to the original report entitled "Design of the New Safety Belt Usage Survey in Illinois", Division of Traffic Safety, Illinois Department of Transportation (IDOT), January 1994.

## Historical Trends

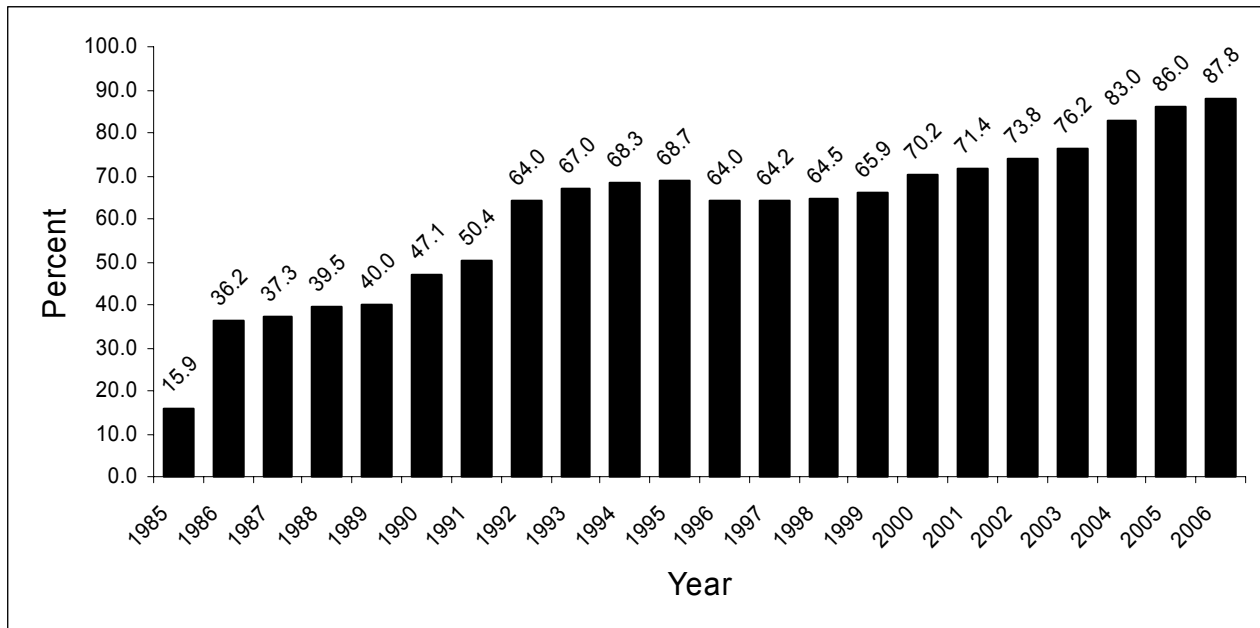
Currently the State of Illinois has a primary belt law, which became effective on July 3<sup>rd</sup>, 2003 after Governor Blagojevich signed the bill into the law. Under the primary belt law in Illinois, police officers can stop vehicles in which occupants fail to buckle up and issue citations.

The first Illinois safety belt law was passed in January 1985 and became effective July 1<sup>st</sup>, 1985. Originally, the safety belt law specified primary enforcement for front seat occupants of vehicles. Under this law, motor vehicle were required to be equipped with safety belts with the exception of those people frequently leaving their vehicles for deliveries if speed between stops was no more

than 15 mph, medical excuses, rural letter carriers, vehicles operating in reverse, and vehicles manufactured before 1965. In 1987, the original law was amended and became effective in January 1988 as a secondary enforcement law until July 3<sup>rd</sup>, 2003.

Illinois' first safety belt survey was conducted in April 1985, prior to the safety belt law becoming effective on July 1<sup>st</sup>, 1985. The data from the first survey became a baseline from which to measure the success of Illinois' efforts to educate citizens about the benefits of using safety belts. The baseline (April 1985) occupant restraint usage rate for all front seat occupants (drivers and passengers) observed in Illinois was 15.9 percent. During the first twelve months after the first safety belt law became effective, the observed usage rate increased to 36.2 percent. Since that time, the usage rate has gradually increased, peaking in June 2006 at a level of 88 percent. The safety belt usage rate in Illinois has increased almost 72 percentage points since the first survey was conducted in April 1985 (see Figure 1). It should be noted that the 1998 through 2006 safety belt surveys include pickup truck drivers and passengers who tend to have significantly lower usage rates than the front seat occupants of passenger cars.

**Figure 1**  
**Front Seat Occupant Restraint Usage Rate**  
Comparison of Survey Results



**Note: 1998 through 2006 safety belt usage rates include pickup truck drivers and passengers.**

## Summary of Findings

**Tables 1, 2 and 3** show results of the safety belt survey conducted at 258 sites during June 2006. Columns 1, 3 and 5 show the total number of observations for drivers, passengers and totals (drivers and passengers). Columns 2, 4 and 6 represent actual safety belt usage rates for drivers, passengers, and totals (drivers and passengers). The categories listed down the left side of the table indicate where the surveys were conducted by region of the state (with the number of sites in each region in parentheses), by road type, and by day of week. A total of 132,056 front seat occupants were observed during the survey. By looking at these tables, the safety usage rate patterns across selected categories for drivers are similar to that for passengers.

**Table 1** shows safety belt use for combined passenger cars and pickup trucks. Of the total of 132,056 front seat occupants observed, approximately 88 percent were wearing safety belts. The Collar Counties (DuPage, Kane, Lake, McHenry, and Will) had the highest usage rate at 89 percent followed by the Downstate Counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair) at 87.2 percent. Cook County, excluding the City of Chicago, had a usage rate of 85.6 percent, while the City of Chicago had the lowest usage rate at 84.4 percent. Based on Road Type, Interstate highway travelers had the highest usage rate at 94.0 percent followed by U.S./Illinois Highway travelers at 87.1 percent. Motorists traveling on residential streets had the lowest usage rate at 85.6 percent. The usage rate on weekends was 89.0 percent, while on the weekdays it was slightly lower at 86.9 percent.

**Table 2** presents safety belt use information for drivers and passengers of passenger cars excluding pickup trucks. Of the total of 118,237 observations, 89.1 percent were wearing seat belts. The safety belt usage rate for drivers was slightly higher than that for passengers (89.3 percent versus 87.9 percent). The usage rate patterns across selected categories in **Table 2** are similar to the overall usage rate patterns shown in **Table 1**.

**Table 3** shows safety belt use patterns for pickup truck drivers and passengers. A total of 11,657 drivers and 2,162 passengers were observed. Drivers had a slightly higher seat belt usage rate than passengers (79.5 percent versus 78.4 percent). The usage rate patterns across selected categories in **Table 3** are similar to the overall usage rate patterns shown in **Table 1**.

**Table 4** through **Table 6** compare safety belt usage rates from June 2005 to June 2006 and show percent changes among front seat occupants of passenger cars and pickup trucks.

**Table 4** and **Figure 2** depict that the overall safety belt usage rate among drivers and front seat passengers increased by 1.8 percentage points from June 2005 to June 2006. The City of Chicago had the highest increase in belt use of 3.5 percentage points. Cook County, excluding the City of Chicago, had an increase in belt use of 2.3 percentage points. The Collar Counties and the Downstate Counties had slight increases in belt use of 0.6 and 0.4 percentage points respectively. Safety belt use among residential streets increased by 2.7 percentage points. Interstates and U.S./Illinois Highways had increases in belt use of 1.1 and 0.8 percentage points respectively. Safety belt use increased by 3.0 percentage points on the weekdays and 1.0 percentage point on the weekends.

**Table 5** and **Figure 3** show that the safety belt use among front seat passenger car occupants 1.9 percentage points from 87.2 percent in June 2005 to 89.1 percent in June 2006.

**Table 5** follows the same trends that are found in **Table 4**.

**Table 6** and **Figure 4** show that the safety belt usage rate for pickup truck occupants increased by 3.7 percentage points from 75.6 percent in June 2005 to 79.3 percent in June 2006.

**Table 1**  
**Overall Safety Belt Usage Rates in Illinois**  
**(June 2006)**

	Drivers		Passengers		Total	
	Total Observed	Actual Usage Rate	Total Observed	Actual Usage Rate	Total Observed	Actual Usage Rate
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Statewide (258)</b>	<b>111,496</b>	<b>88.2%</b>	<b>20,560</b>	<b>86.9%</b>	<b>132,056</b>	<b>87.8%</b>
<b>Regions</b>						
City of Chicago (46)	20,572	83.7%	3,894	84.7%	24,466	84.4%
Cook County (40)	14,311	86.2%	2,375	84.7%	16,686	85.6%
Collar Counties (118)	53,454	90.7%	10,032	89.5%	63,486	89.0%
Downstate (54)	23,159	87.9%	4,259	84.2%	27,418	87.2%
<b>Road Type</b>						
Residential (190)	64,745	85.8%	12,363	84.0%	77,108	85.6%
U.S./Illinois Highways (40)	18,141	87.4%	3,544	87.7%	21,685	87.1%
Interstate Highways (28)	28,610	94.2%	4,653	94.2%	33,263	94.0%
<b>Day of Week</b>						
Weekends (115)	50,561	89.9%	10,951	88.9%	61,512	89.0%
Weekdays (143)	60,935	86.9%	9,609	84.7%	70,544	86.9%

Note: Pickup trucks and passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.



**Table 2**  
**Passenger Car Safety Belt Usage Rates in Illinois**  
**(June 2006)**

	Drivers		Passengers		Total	
	Total Observed (1)	Actual Usage Rate (2)	Total Observed (3)	Actual Usage Rate (4)	Total Observed (5)	Actual Usage Rate (6)
<b>Statewide (258)</b>	<b>99,839</b>	<b>89.3%</b>	<b>18,398</b>	<b>87.9%</b>	<b>118,237</b>	<b>89.1%</b>
<b>Regions</b>						
City of Chicago (46)	19,579	84.3%	3,675	85.4%	23,254	84.5%
Cook County (40)	13,136	87.1%	2,124	85.7%	15,260	86.9%
Collar Counties (118)	47,867	91.8%	9,063	90.3%	56,930	91.5%
Downstate (54)	19,257	89.6%	3,536	85.8%	22,793	89.0%
<b>Road Type</b>						
Residential (190)	58,970	86.8%	11,140	85.0%	70,110	86.5%
U.S./Illinois Highways (40)	15,610	89.0%	3,092	88.9%	18,702	89.0%
Interstate Highways (28)	25,259	95.2%	4,166	95.1%	29,425	95.1%
<b>Day of Week</b>						
Weekends (115)	45,087	91.0%	9,809	89.8%	54,896	90.8%
Weekdays (143)	54,752	87.8%	8,589	85.8%	63,341	87.5%

Note: Passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.

**Table 3**  
**Pickup Truck Safety Belt Usage Rates in Illinois**  
**(June 2006)**

	Drivers		Passengers		Total	
	Total Observed (1)	Actual Usage Rate (2)	Total Observed (3)	Actual Usage Rate (4)	Total Observed (5)	Actual Usage Rate (6)
<b>Statewide (258)</b>	<b>11,657</b>	<b>79.5%</b>	<b>2,162</b>	<b>78.4%</b>	<b>13,819</b>	<b>79.3%</b>
<b>Regions</b>						
City of Chicago (46)	993	72.9%	219	72.6%	1,212	72.9%
Cook County (40)	1,175	75.8%	251	75.7%	1,426	75.8%
Collar Counties (118)	5,587	81.5%	969	81.8%	6,556	81.5%
Downstate (54)	3,902	79.5%	723	76.3%	4,625	79.0%
<b>Road Type</b>						
Residential (190)	5,775	75.6%	1,223	75.0%	6,998	75.5%
U.S./Illinois Highways (40)	2,531	78.0%	452	79.0%	2,983	78.1%
Interstate Highways (28)	3,351	87.4%	487	86.2%	3,838	87.3%
<b>Day of Week</b>						
Weekends (115)	5,474	80.8%	1,142	80.8%	6,616	80.8%
Weekdays (143)	6,183	78.4%	1,020	75.6%	7,203	78.4%

Note: Large trucks were excluded from this table.

**Table 4  
Overall Safety Belt Usage Rates in Illinois  
(Comparison of June 2005 and June 2006)**

	Drivers			Passengers			Total		
	Usage Rate (2005)	Usage Rate (2006)	Percent Change	Usage Rate (2005)	Usage Rate (2006)	Percent Change	Usage Rate (2005)	Usage Rate (2006)	Percent Change
<b>Statewide (258)</b>	<b>86.5%</b>	<b>88.2%</b>	<b>1.7</b>	<b>83.1%</b>	<b>86.9%</b>	<b>3.8</b>	<b>86.0%</b>	<b>87.8%</b>	<b>1.8</b>
<b>Regions</b>									
City of Chicago (46)	81.1%	83.7%	2.6	74.6%	84.7%	10.1	80.1%	84.4%	4.3
Cook County (40)	84.4%	86.2%	1.8	77.2%	84.7%	7.5	83.5%	85.6%	2.1
Collar Counties (118)	88.9%	90.7%	1.8	86.1%	89.5%	3.4	88.4%	89.0%	0.6
Downstate (54)	87.1%	87.9%	0.8	85.8%	84.2%	-1.6	86.8%	87.2%	0.4
<b>Road Type</b>									
Residential (190)	83.8%	85.8%	2.0	78.0%	84.0%	6.0	82.9%	85.6%	2.7
U.S./Illinois Highways (40)	86.7%	87.4%	0.7	84.2%	87.7%	3.5	86.3%	87.1%	0.8
Interstate Highways (28)	92.8%	94.2%	1.4	93.5%	94.2%	0.7	92.9%	94.0%	1.1
<b>Day of Week</b>									
Weekends (115)	88.7%	89.9%	1.2	85.3%	88.9%	3.6	88.0%	89.0%	1.0
Weekdays (143)	84.6%	86.9%	2.3	80.0%	84.7%	4.7	83.9%	86.9%	3.0

Note: Pickup trucks and passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.

**Table 5**  
**Passenger Car Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2005 and June 2006)**

	Drivers			Passengers			Total		
	Usage Rate (2005)	Usage Rate (2006)	Percent Change	Usage Rate (2005)	Usage Rate (2006)	Percent Change	Usage Rate (2005)	Usage Rate (2006)	Percent Change
<b>Statewide (258)</b>	<b>87.8%</b>	<b>89.3%</b>	<b>1.5</b>	<b>84.1%</b>	<b>87.9%</b>	<b>3.8</b>	<b>87.2%</b>	<b>89.1%</b>	<b>1.9</b>
<b>Regions</b>									
City of Chicago (46)	82.1%	84.3%	2.2	75.8%	85.4%	9.6	81.0%	84.5%	3.5
Cook County (40)	85.6%	87.1%	1.5	77.9%	85.7%	7.8	84.6%	86.9%	2.3
Collar Counties (118)	90.1%	91.8%	1.7	86.9%	90.3%	3.4	90.0%	91.5%	1.5
Downstate (54)	89.0%	89.6%	0.6	87.8%	85.8%	-2.0	88.8%	89.0%	0.2
<b>Road Type</b>									
Residential (190)	84.9%	86.8%	1.9	78.9%	85.0%	6.1	84.0%	86.5%	2.5
U.S./Illinois Highways (40)	88.9%	89.0%	0.1	86.2%	88.9%	2.7	88.4%	89.0%	0.6
Interstate Highways (28)	93.9%	95.2%	1.3	94.5%	95.1%	0.6	94.0%	95.1%	1.1
<b>Day of Week</b>									
Weekends (115)	90.1%	91.0%	0.9	86.3%	89.8%	3.5	89.3%	90.8%	1.5
Weekdays (143)	85.8%	87.8%	2.0	81.1%	85.8%	4.7	85.1%	87.5%	2.4

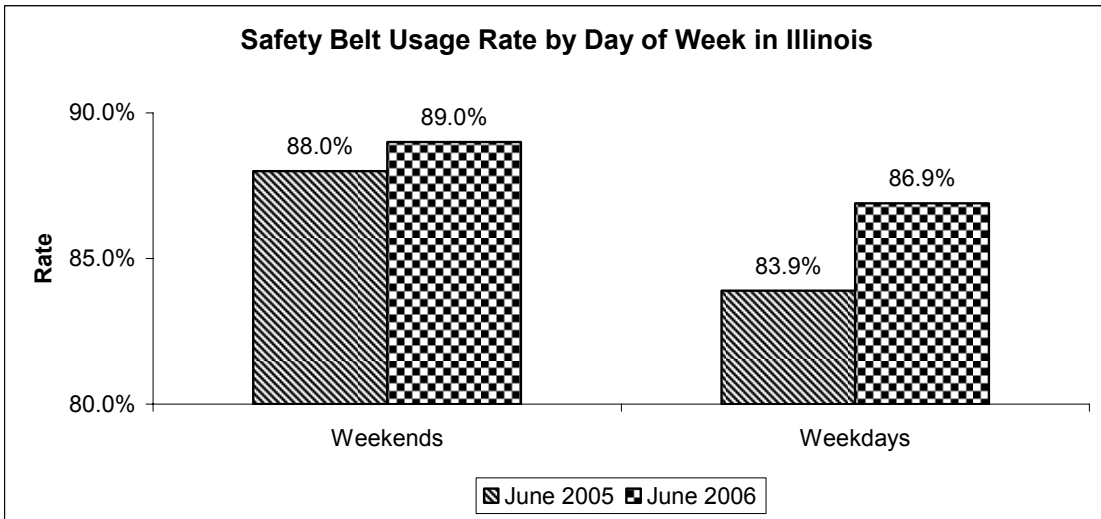
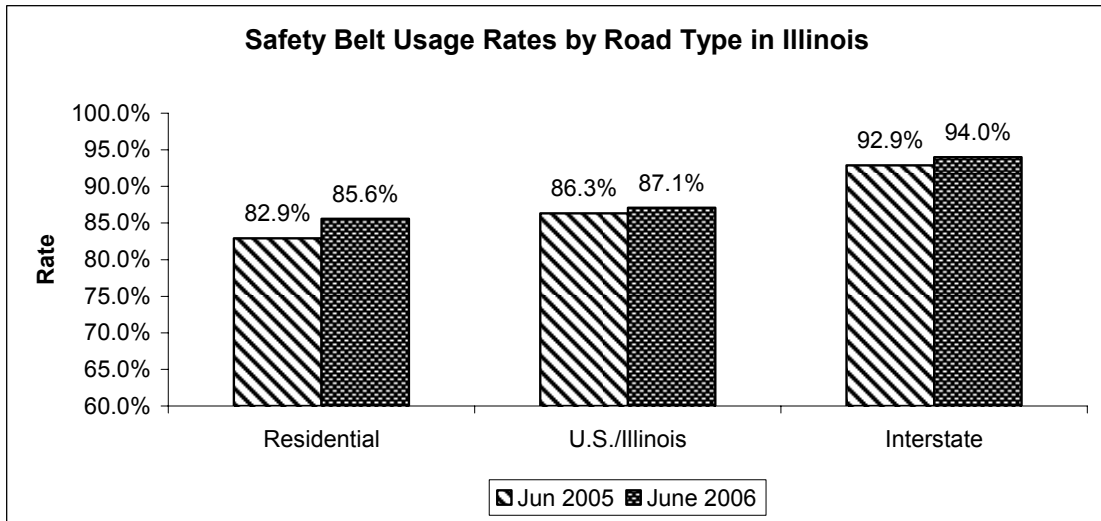
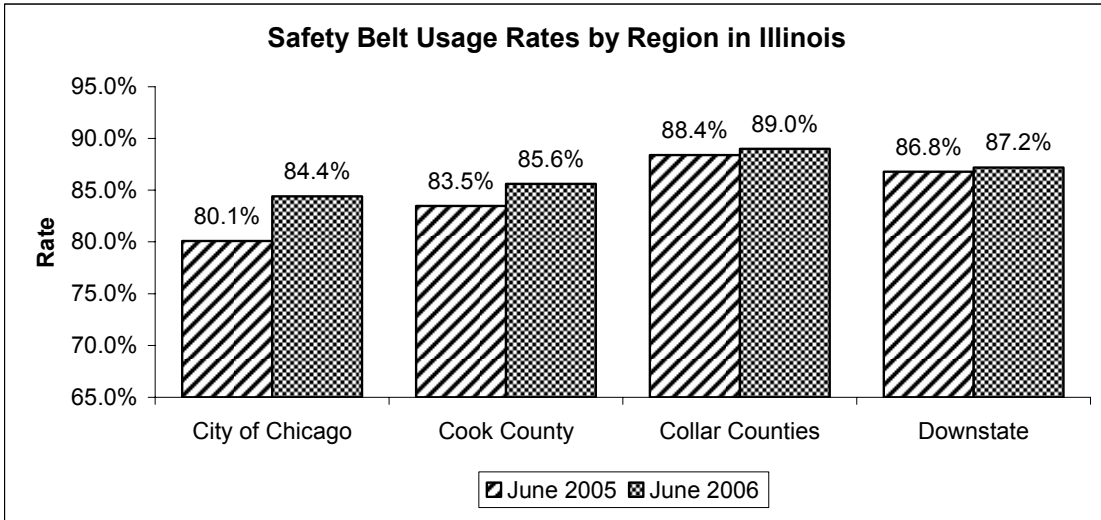
Note: Passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.

**Table 6**  
**Pickup Truck Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2005 and June 2006)**

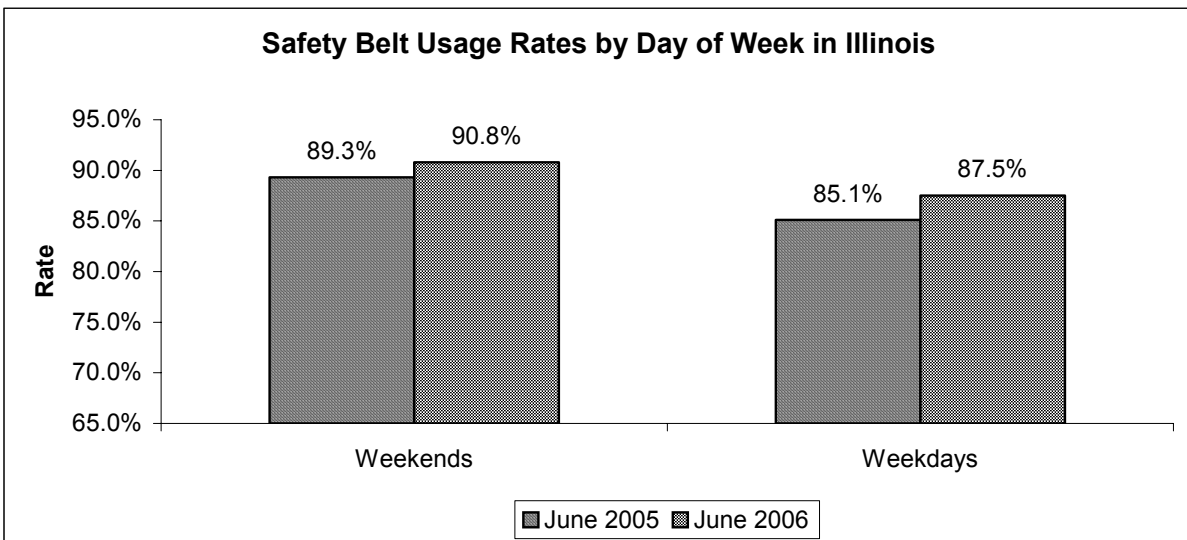
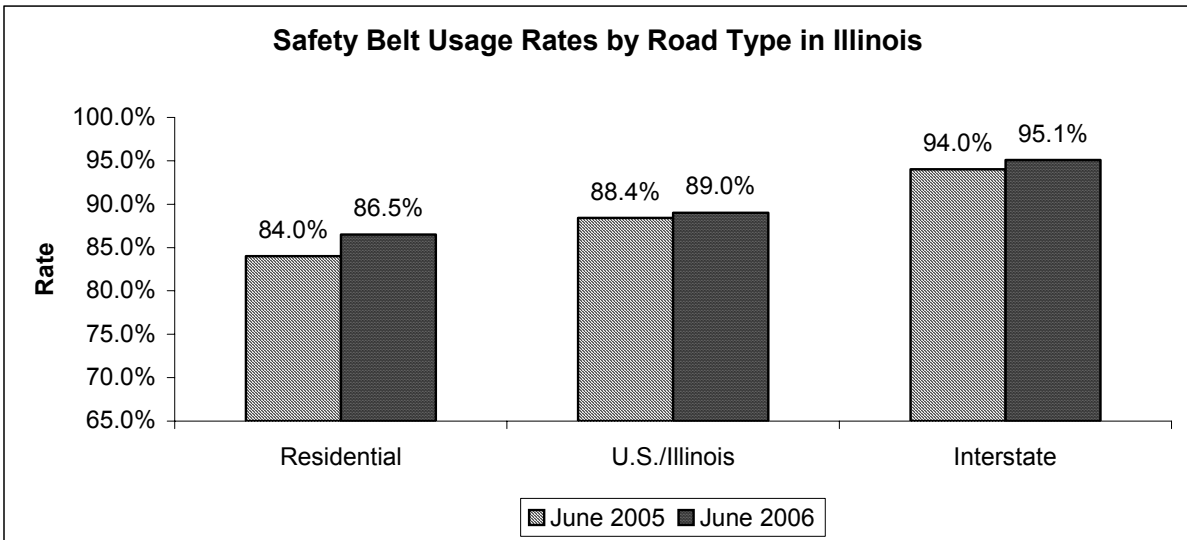
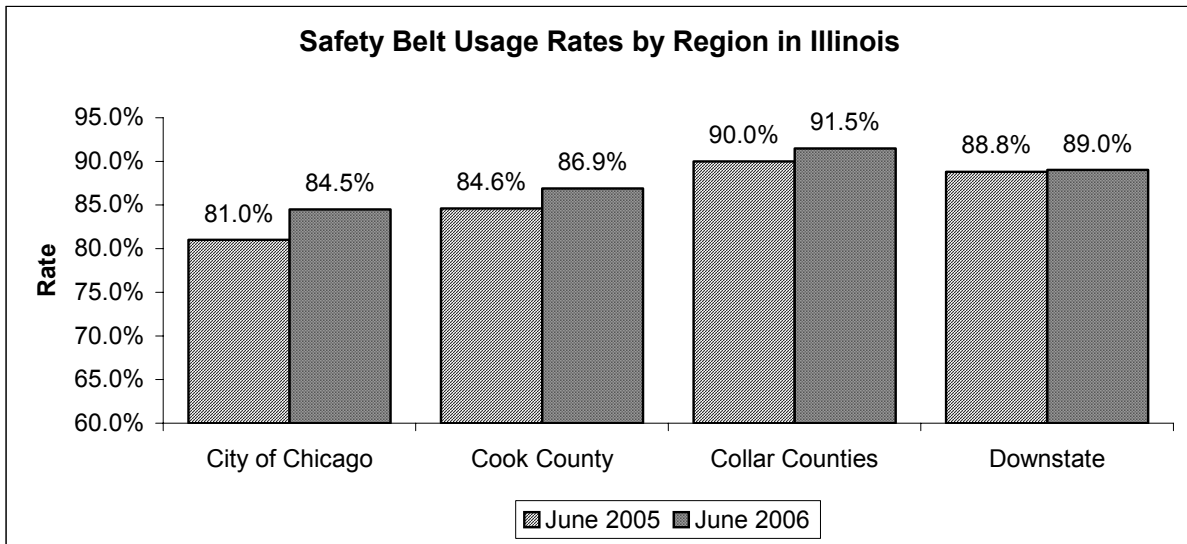
	Drivers			Passengers			Total		
	Usage Rate (2005)	Usage Rate (2006)	Percent Change	Usage Rate (2005)	Usage Rate (2006)	Percent Change	Usage Rate (2005)	Usage Rate (2006)	Percent Change
<b>Statewide (258)</b>	<b>75.8%</b>	<b>79.5%</b>	<b>3.7</b>	<b>74.9%</b>	<b>78.4%</b>	<b>3.5</b>	<b>75.6%</b>	<b>79.3%</b>	<b>3.7</b>
<b>Regions</b>									
City of Chicago (46)	67.9%	72.9%	5.0	58.1%	72.6%	14.5	66.0%	72.9%	6.9
Cook County (40)	69.7%	75.8%	6.1	71.7%	75.7%	4.0	70.1%	75.8%	5.7
Collar Counties (118)	77.3%	81.5%	4.2	79.0%	81.8%	2.8	77.7%	81.5%	3.8
Downstate (54)	77.7%	79.5%	1.8	75.2%	76.3%	1.1	77.4%	79.0%	1.6
<b>Road Type</b>									
Residential (190)	72.7%	75.6%	2.9	70.3%	75.0%	4.7	72.3%	75.5%	3.2
U.S./Illinois Highways (40)	72.7%	78.0%	5.3	71.7%	79.0%	7.3	72.5%	78.1%	5.6
Interstate Highways (28)	84.2%	87.4%	3.2	86.3%	86.2%	-0.1	84.6%	87.3%	2.7
<b>Day of Week</b>									
Weekends (115)	77.4%	80.8%	3.4	78.0%	80.8%	2.8	77.5%	80.8%	3.3
Weekdays (143)	74.3%	78.4%	4.1	70.5%	75.6%	5.1	73.7%	78.4%	4.7

Note: Large trucks were excluded from this table.

**Figure 2**  
**Overall Safety Belt Usage Rates in Illinois**



**Figure 3  
Passenger Car Safety Belt Usage Rates in Illinois**



**Figure 4  
Pickup Truck Safety Belt Usage Rates in Illinois**

