



**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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**July 2008**

# **Safety Belt Usage in Illinois**

## **June 2008 Observational Survey Results**

Compiled and Prepared by

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# 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 2008 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 2008 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 124,566 front seat occupants observed at 258 locations statewide in this survey. Of those, 111,897 drivers and outboard passengers were observed in passenger cars (which included cars, sport utility vehicles, and vans) and 12,669 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

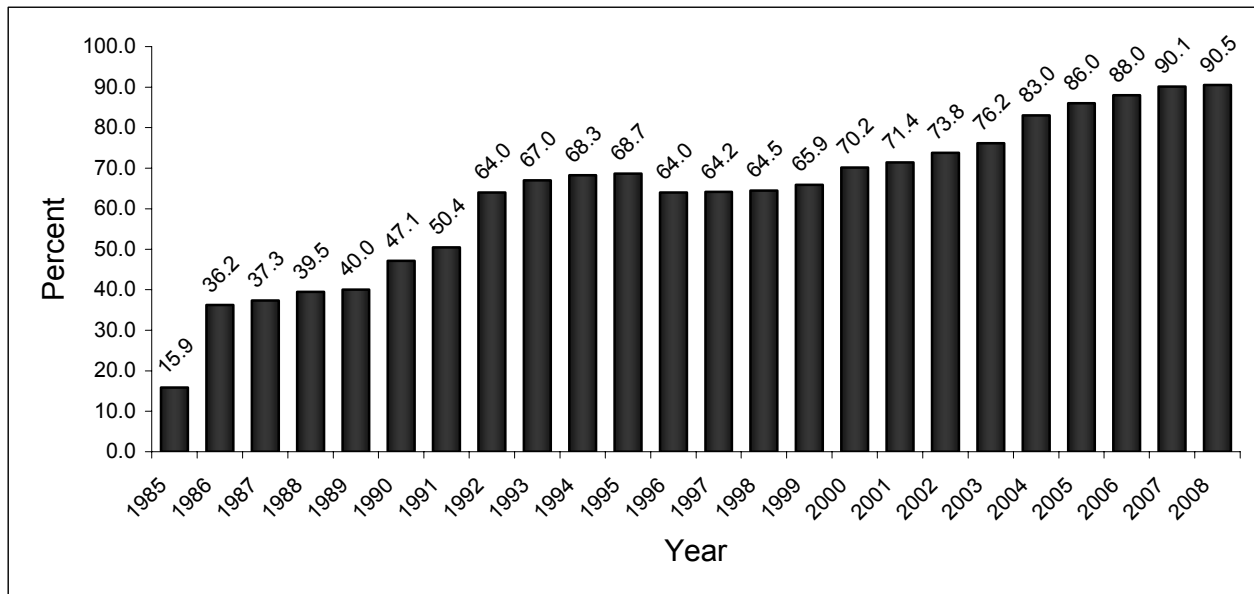
Currently the State of Illinois has a primary belt law, which became effective on July 3<sup>rd</sup>, 2003 after Governor Blagojevich signed the bill into the law. Under the primary belt law in Illinois, police officers can stop vehicles in which occupants fail to buckle up and issue citations.

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 2008 at a level of 90.5 percent. The safety belt usage rate in Illinois has increased almost 75 percentage points since the first survey was conducted in April 1985 (**see Figure 1**). It should be noted that the 1998 through 2008 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 2008 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 2008. 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 124,566 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 124,566 front seat occupants observed, approximately 90 percent were wearing safety belts. The Collar Counties (DuPage, Kane, Lake, McHenry, and Will) had the highest usage rate at 92.7 percent followed by Cook County, excluding the City of Chicago, at 90.4 percent. The Downstate Counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair) had a usage rate of 89.9 percent, while the City of Chicago had the lowest usage rate at 86.8 percent. Based on Road Type, Interstate highway travelers had the highest usage rate at 93.6 percent followed by U.S./Illinois Highway travelers at 90.6 percent. Motorists traveling on residential streets had the lowest usage rate at 89.5 percent. The usage rate on weekends was 92.3 percent, while on the weekdays it was slightly lower at 89.3 percent.

**Table 2** presents safety belt use information for drivers and passengers of passenger cars excluding pickup trucks. Of the total of 111,897 observations, 91.6 percent were wearing seat belts. The safety belt usage rate for drivers was slightly higher than that for passengers (91.7 percent versus 90.9 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 10,652 drivers and 2,017 passengers were observed. Drivers had a slightly higher seat belt usage rate than passengers (84.0 percent versus 81.2 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 2007 to June 2008 and show percent changes among front seat occupants of passenger cars and pickup trucks.

**Table 4** and **Figure 2** show that the overall safety belt usage rate among drivers and front seat passengers increased by 0.4 percentage point from June 2007 to June 2008. Cook County, excluding the City of Chicago, had the highest increase in belt use of 2.2 percentage points. The Downstate County and Collar Counties had increases in seat belt use of 0.5 and 0.4 percentage points respectively. In the City of Chicago, seat belt use did not change from June 2007 to June 2008. Based on road type, residential roads had the largest percentage point increase in seat belt use of 0.8 percentage point. Seat belt use on interstate highways and U.S./Illinois highways increased by 0.3 and 0.1 percentage points respectively. Based on day of the week, safety belt use increased by 0.6 percentage point on the weekdays and by 0.5 percentage point on weekends.

**Table 5** and **Figure 3** show that the safety belt use among front seat passenger car occupants 0.4 percentage point from 91.2 percent in June 2007 to 91.6 percent in June 2008. **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 1.5 percentage points from 82.0 percent in June 2007 to 83.5 percent in June 2008.

**Table 1**  
**Overall Safety Belt Usage Rates in Illinois**  
**(June 2008)**

	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>105,839</b>	<b>90.9%</b>	<b>18,727</b>	<b>89.9%</b>	<b>124,566</b>	<b>90.5%</b>
<b>Regions</b>						
City of Chicago (46)	18,790	86.7%	3,146	87.4%	21,936	86.8%
Cook County (40)	13,207	90.6%	2,218	89.4%	15,425	90.4%
Collar Counties (118)	52,477	92.8%	9,364	91.9%	61,841	92.7%
Downstate (54)	21,365	90.4%	3,999	87.1%	25,364	89.9%
<b>Road Type</b>						
Residential (190)	59,542	89.6%	10,657	88.6%	70,199	89.5%
U.S./Illinois Highways (40)	17,848	90.7%	2,865	90.2%	20,713	90.6%
Interstate Highways (28)	28,449	93.9%	5,205	92.3%	33,654	93.6%
<b>Day of Week</b>						
Weekends (115)	50,409	92.4%	10,313	91.9%	60,722	92.3%
Weekdays (143)	55,430	89.6%	8,414	87.4%	63,844	89.3%

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 2008)**

	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>95,187</b>	<b>91.7%</b>	<b>16,710</b>	<b>90.9%</b>	<b>111,897</b>	<b>91.6%</b>
<b>Regions</b>						
City of Chicago (46)	17,821	87.3%	2,973	88.3%	20,794	87.4%
Cook County (40)	12,131	91.1%	2,016	89.5%	14,147	90.9%
Collar Counties (118)	47,387	93.5%	8,365	92.8%	55,752	93.4%
Downstate (54)	17,848	91.9%	3,356	89.2%	21,204	91.5%
<b>Road Type</b>						
Residential (190)	54,562	90.2%	9,693	89.4%	64,255	90.1%
U.S./Illinois Highways (40)	15,641	91.7%	2,556	91.8%	18,197	91.7%
Interstate Highways (28)	24,984	95.1%	4,461	93.7%	29,445	94.9%
<b>Day of Week</b>						
Weekends (115)	45,391	93.2%	9,271	92.7%	54,662	93.1%
Weekdays (143)	49,796	90.4%	7,439	88.6%	57,235	90.2%

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 2008)**

	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>10,652</b>	<b>84.0%</b>	<b>2,017</b>	<b>81.2%</b>	<b>12,669</b>	<b>83.5%</b>
<b>Regions</b>						
City of Chicago (46)	969	76.1%	173	72.8%	1,142	75.6%
Cook County (40)	1,076	84.8%	202	87.6%	1,278	85.2%
Collar Counties (118)	5,090	86.4%	999	84.7%	6,089	86.1%
Downstate (54)	3,517	82.5%	643	76.0%	4,160	81.5%
<b>Road Type</b>						
Residential (190)	4,980	83.3%	964	80.9%	5,944	82.9%
U.S./Illinois Highways (40)	2,207	83.3%	309	76.7%	2,516	82.5%
Interstate Highways (28)	3,465	85.3%	744	83.5%	4,209	85.0%
<b>Day of Week</b>						
Weekends (115)	5,018	85.4%	1,042	84.0%	6,060	85.1%
Weekdays (143)	5,634	82.7%	975	78.3%	6,609	82.1%

Note: Large trucks were excluded from this table.

**Table 4**  
**Overall Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2007 and June 2008)**

	Drivers			Passengers			Total		
	Usage Rate (2007)	Usage Rate (2008)	Percent Change	Usage Rate (2007)	Usage Rate (2008)	Percent Change	Usage Rate (2007)	Usage Rate (2008)	Percent Change
<b>Statewide (258)</b>	<b>90.6%</b>	<b>90.9%</b>	<b>0.3</b>	<b>88.4%</b>	<b>89.9%</b>	<b>1.5</b>	<b>90.1%</b>	<b>90.5%</b>	<b>0.4</b>
<b>Regions</b>									
City of Chicago (46)	87.2%	86.7%	-0.5	84.6%	87.4%	2.8	86.8%	86.8%	0.0
Cook County (40)	88.4%	90.6%	2.2	87.4%	89.4%	2.0	88.2%	90.4%	2.2
Collar Counties (118)	92.5%	92.8%	0.3	91.3%	91.9%	0.6	92.3%	92.7%	0.4
Downstate (54)	90.1%	90.4%	0.3	86.4%	87.1%	0.7	89.4%	89.9%	0.5
<b>Road Type</b>									
Residential (190)	89.0%	89.6%	0.6	87.0%	88.6%	1.6	88.7%	89.5%	0.8
U.S./Illinois Highways (40)	90.8%	90.7%	-0.1	88.6%	90.2%	1.6	90.5%	90.6%	0.1
Interstate Highways (28)	93.7%	93.9%	0.2	91.3%	92.3%	0.7	93.3%	93.6%	0.3
<b>Day of Week</b>									
Weekends (115)	92.1%	92.4%	0.3	90.4%	91.9%	1.5	91.8%	92.3%	0.5
Weekdays (143)	89.1%	89.6%	0.5	86.3%	87.4%	1.1	88.7%	89.3%	0.6

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 2007 and June 2008)**

	Drivers			Passengers			Total		
	Usage Rate (2007)	Usage Rate (2008)	Percent Change	Usage Rate (2007)	Usage Rate (2008)	Percent Change	Usage Rate (2007)	Usage Rate (2008)	Percent Change
<b>Statewide (258)</b>	<b>91.5%</b>	<b>91.7%</b>	<b>0.2</b>	<b>89.5%</b>	<b>90.9%</b>	<b>1.4</b>	<b>91.2%</b>	<b>91.6%</b>	<b>0.4</b>
<b>Regions</b>									
City of Chicago (46)	87.9%	87.3%	-0.6	85.6%	88.3%	2.7	87.5%	87.4%	-0.1
Cook County (40)	89.4%	91.1%	1.7	88.7%	89.5%	0.8	89.3%	90.9%	1.6
Collar Counties (118)	93.3%	93.5%	0.2	92.1%	92.8%	0.7	93.1%	93.4%	0.3
Downstate (54)	91.9%	91.9%	0.0	87.9%	89.2%	1.3	91.1%	91.5%	0.4
<b>Road Type</b>									
Residential (190)	89.9%	90.2%	0.3	87.9%	89.4%	1.5	89.6%	90.1%	0.5
U.S./Illinois Highways (40)	92.3%	91.7%	-0.6	89.6%	91.8%	2.2	91.8%	91.7%	-0.1
Interstate Highways (28)	94.8%	95.1%	0.3	92.8%	93.7%	0.9	94.5%	94.9%	0.4
<b>Day of Week</b>									
Weekends (115)	93.1%	93.2%	0.1	91.2%	92.7%	1.5	92.8%	93.1%	0.3
Weekdays (143)	90.1%	90.4%	0.3	87.5%	88.6%	1.1	89.7%	90.2%	0.5

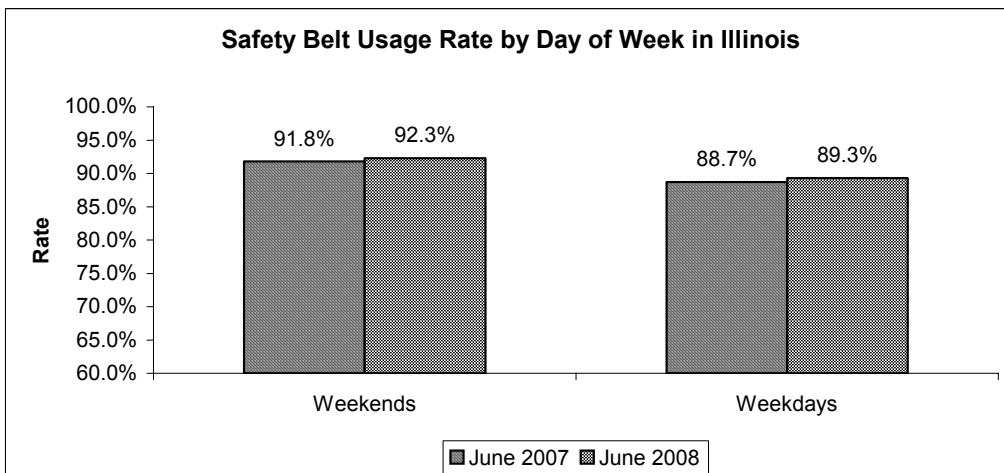
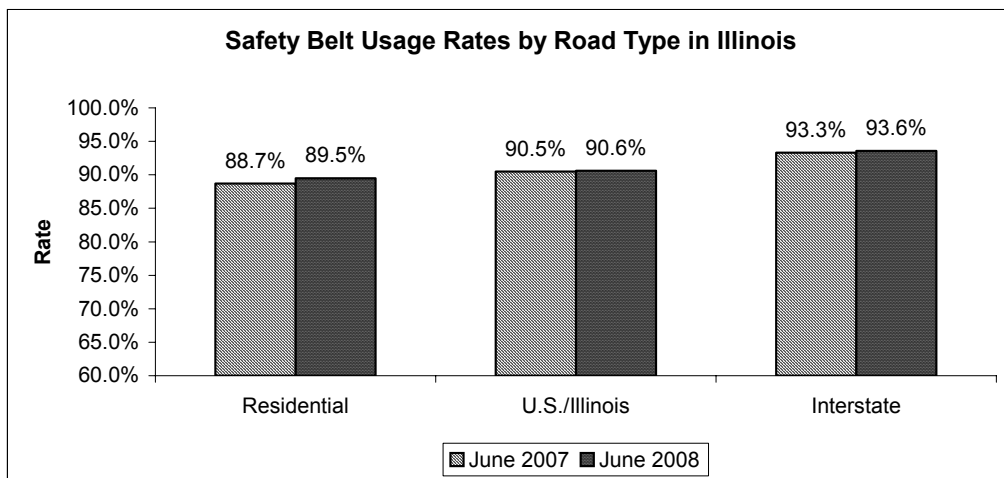
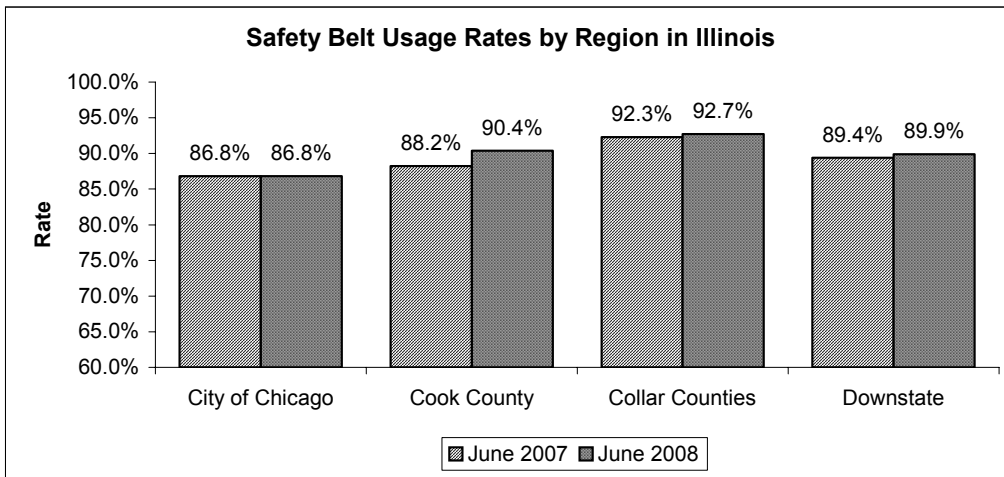
Note: Passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.

**Table 6  
Pickup Truck Safety Belt Usage Rates in Illinois  
(Comparison of June 2007 and June 2008)**

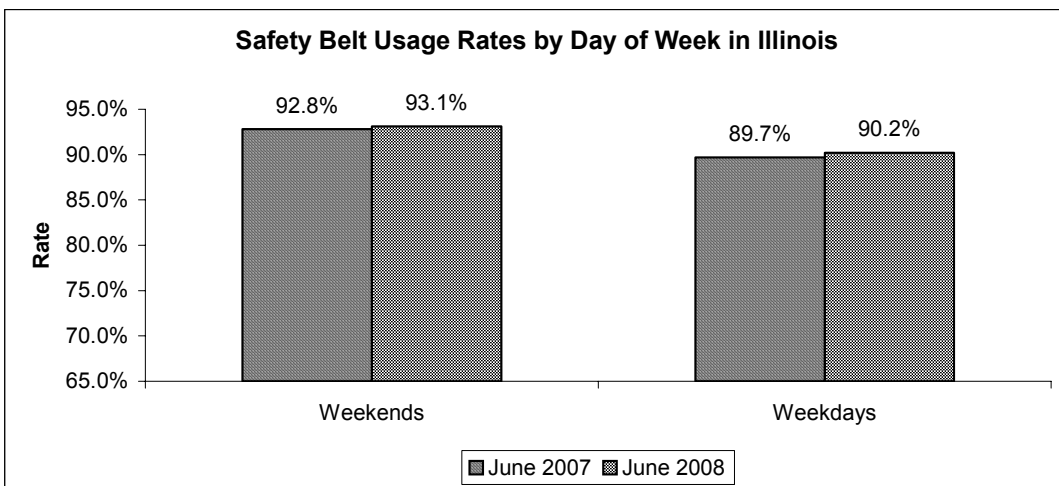
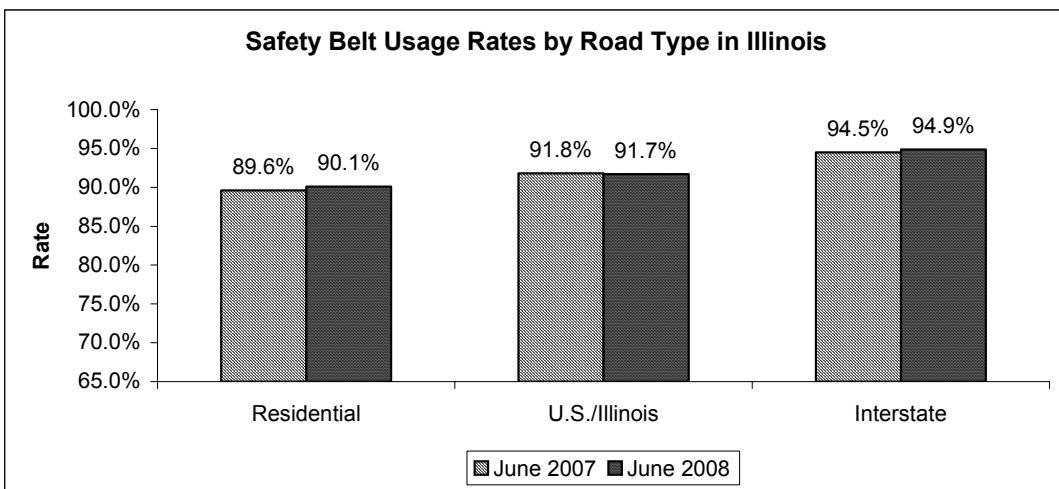
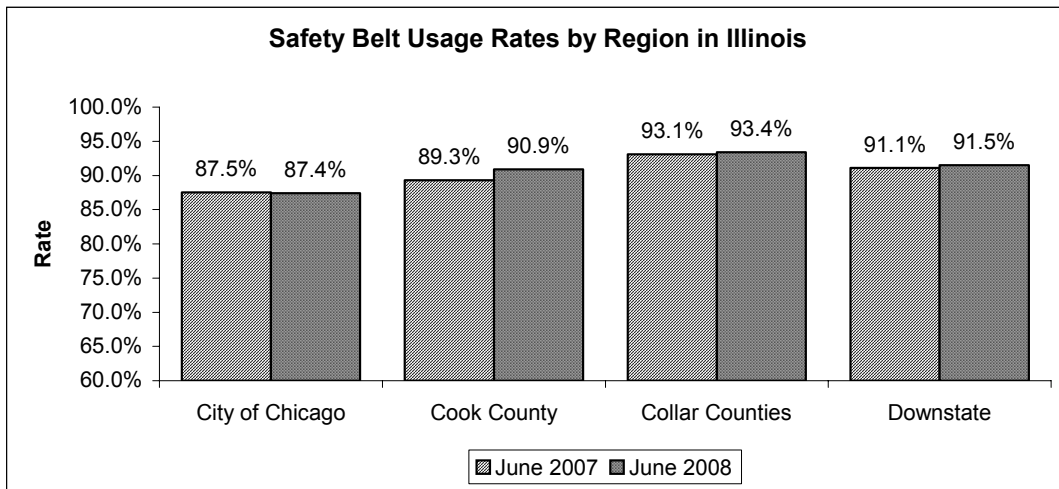
	Drivers			Passengers			Total		
	Usage Rate (2007)	Usage Rate (2008)	Percent Change	Usage Rate (2007)	Usage Rate (2008)	Percent Change	Usage Rate (2007)	Usage Rate (2008)	Percent Change
<b>Statewide (258)</b>	<b>82.3%</b>	<b>84.0%</b>	<b>1.7</b>	<b>80.7%</b>	<b>81.2%</b>	<b>0.5</b>	<b>82.0%</b>	<b>83.5%</b>	<b>1.5</b>
<b>Regions</b>									
City of Chicago (46)	75.1%	76.1%	1.0	69.3%	72.8%	3.5	74.0%	75.6%	1.6
Cook County (40)	77.2%	84.8%	7.6	76.4%	87.6%	11.2	77.0%	85.2%	8.2
Collar Counties (118)	85.4%	86.4%	1.0	84.7%	84.7%	0.3	85.3%	86.1%	0.8
Downstate (54)	81.5%	82.5%	1.0	80.3%	76.0%	-4.3	81.3%	81.5%	0.2
<b>Road Type</b>									
Residential (190)	80.5%	83.3%	2.8	78.6%	80.9%	2.3	80.2%	82.9%	2.7
U.S./Illinois Highways (40)	81.6%	83.3%	1.7	81.9%	76.7%	-5.2	81.6%	82.5%	0.9
Interstate Highways (28)	85.8%	85.3%	-0.5	82.6%	83.5%	0.9	85.2%	85.0%	-0.2
<b>Day of Week</b>									
Weekends (115)	83.6%	85.4%	1.8	83.7%	84.0%	0.3	83.6%	85.1%	1.5
Weekdays (143)	81.2%	82.7%	1.5	77.7%	78.3%	0.6	80.6%	82.1%	1.5

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**

