



Illinois Department of Transportation

Division of Traffic Safety
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TECHNICAL REPORT

July 2009

Safety Belt Usage in Illinois

June 2009 Observational Survey Results

Compiled and Prepared by

Illinois Department of Transportation

Division of Traffic Safety

Evaluation Unit

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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 2009 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.

TABLE OF CONTENTS

SURVEY DESIGN	1
HISTORICAL TRENDS	1
SUMMARY OF FINDINGS	3

LIST OF TABLES

TABLE 1. Overall Safety Belt Usage Rates in Illinois.....	5
TABLE 2. Passenger Car Safety Belt Usage Rates in Illinois	6
TABLE 3. Pickup Truck Safety Belt Usage Rates in Illinois	7
TABLE 4. Overall Safety Belt Usage Rates in Illinois (Comparison of 2008 and 2009).....	8
TABLE 5. Passenger Car Safety Belt Usage Rates in Illinois (Comparison of 2008 and 2009).....	9
TABLE 6. Pickup Truck Safety Belt Usage Rates in Illinois (Comparison of 2008 and 2009).....	10

LIST OF FIGURES

FIGURE 1. Front Seat Occupant Restraint Usage Rate: Comparison of Survey Results	2
FIGURE 2. Overall Safety Belt Usage Rates in Illinois in 2008-2009	11
FIGURE 3. Passenger Car Safety Belt Usage Rates in Illinois in 2008-2009	12
FIGURE 4. Pickup Truck Safety Belt Usage Rates in Illinois in 2008-2009.....	13

Survey Design

The recent safety belt survey was a statistical (multi-stage random) observational survey conducted statewide during June 2009 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 126,680 front seat occupants observed at 258 locations statewide in this survey. Of those, 114,263 drivers and outboard passengers were observed in passenger cars (which included cars, sport utility vehicles, and vans) and 12,417 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

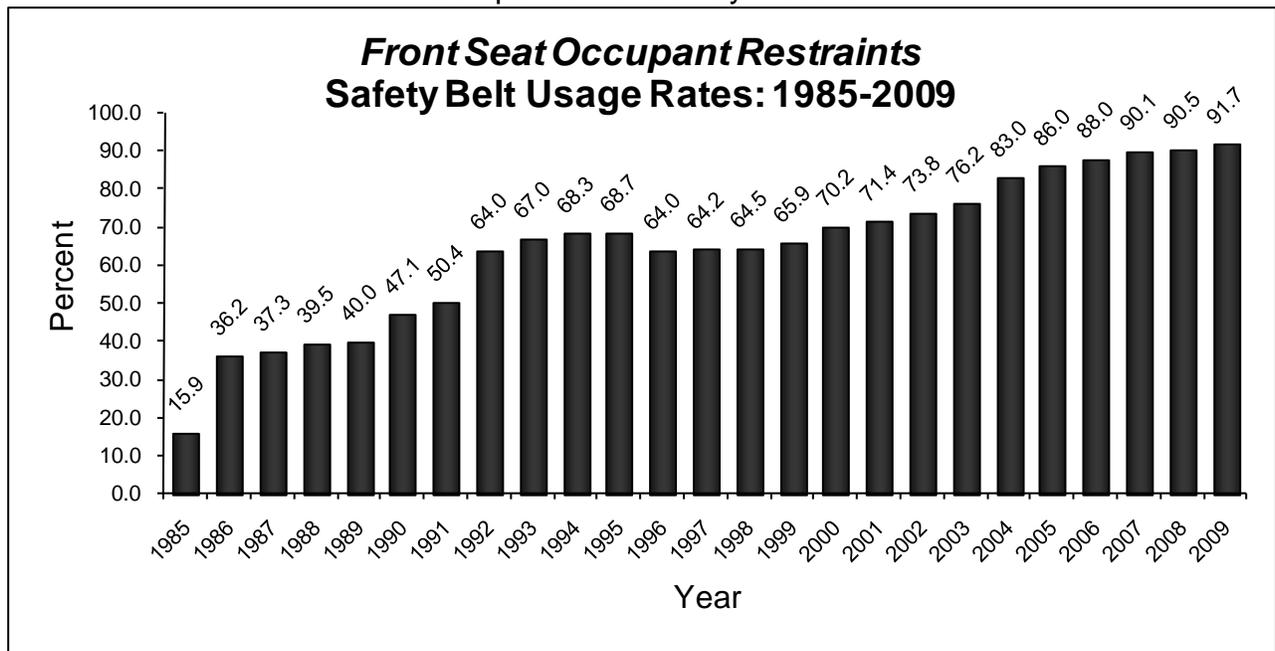
Currently the State of Illinois has a primary belt law, which became effective on July 3rd, 2003 after the bill was signed into the law. Under the primary belt law in Illinois, police officers can stop vehicles in which occupants fail to buckle up and issue citations.

The first Illinois safety belt law was passed in January 1985 and became effective July 1st, 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 3rd, 2003.

Illinois' first safety belt survey was conducted in April 1985, prior to the safety belt law becoming effective on July 1st, 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 2009 at a level of 91.7 percent. The safety belt usage rate in Illinois has increased almost 76 percentage points since the first survey was conducted in April 1985 (see Figure 1). It should be noted that the 1998 through 2009 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 2009 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 2009. 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 126,680 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 126,680 front seat occupants observed, approximately 92 percent were wearing safety belts. The collar counties (DuPage, Kane, Lake, McHenry, and Will) had the highest usage rate at 93.1 percent closely followed by the downstate counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair) at 93.0 percent. Cook County, excluding the City of Chicago, had a usage rate of 90.2 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 95.3 percent followed by U.S./Illinois Highway travelers at 91.3 percent. Motorists traveling on residential streets had the lowest usage rate at 89.9 percent. The usage rate on weekends was 92.9 percent, while on the weekdays it was slightly lower at 90.3 percent.

Table 2 presents safety belt use information for drivers and passengers of passenger cars excluding pickup trucks. Of the total of 114,263 observations, 92.3 percent were wearing seat belts. The safety belt usage rate for drivers was slightly higher than that for passengers (92.5 percent versus 91.4 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 10,595 drivers and 1,822 passengers were observed. Drivers had a slightly higher seat belt usage rate than passengers (85.5 percent versus 82.3 percent). The usage rate patterns across selected

categories in **Table 3** are similar to the overall usage rate patterns shown in **Table 1** with the exception being region. For pickup trucks, the region with the highest usage rate was the downstate counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair) at 87.2 percent. This was followed by the collar counties (DuPage, Kane, Lake, and Will) with a usage rate of 85.3 percent. Cook County, excluding the city of Chicago, had a usage rate of 83.6 percent. The city of Chicago had the lowest pickup truck safety belt usage rate at 78.2 percent.

Table 4 through **Table 6** compare safety belt usage rates from June 2008 to June 2009 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 1.2 percentage points from June 2008 to June 2009. The downstate counties had the highest increase in safety belt use showing an increase of 3.1 percentage points from 2008 to 2009. The collar counties had an increase of 0.4 percentage point in safety belt use from 2008 to 2009. On the other hand Cook County, excluding the City of Chicago, had a decrease in safety belt use of 0.2 percentage point. There was no change in safety belt use from 2008 to 2009 for the city of Chicago. Based on road type, interstate highways had the largest percentage point increase in safety belt use of 1.7 percentage points. Seat belt use on U.S./Illinois highways and residential roads increased by 0.7 and 0.4 percentage points respectively. Based on day of the week, safety belt use increased by 1.0 percentage point on the weekdays and by 0.6 percentage point on weekends.

Table 5 and **Figure 3** show that the safety belt use among front seat passenger car occupants increased 0.7 percentage point from 91.6 percent in June 2008 to 92.3 percent in June 2009. **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 83.5 percent in June 2008 to 85.1 percent in June 2009.

Table 1
Overall Safety Belt Usage Rates in Illinois
(June 2009)

	Drivers		Passengers		Total	
	Total Observed	Actual Usage Rate	Total Observed	Actual Usage Rate	Total Observed	Actual Usage Rate
	(1)	(2)	(3)	(4)	(5)	(6)
Statewide (258)	108,518	91.8%	18,162	90.5%	126,680	91.7%
Regions						
City of Chicago (46)	19,347	86.7%	2,643	87.6%	21,990	86.8%
Cook County (40)	13,573	90.2%	1,921	89.6%	15,494	90.2%
Collar Counties (118)	54,346	93.3%	9,360	91.3%	63,706	93.1%
Downstate (54)	21,252	93.5%	4,238	90.8%	25,490	93.0%
Road Type						
Residential (190)	60,224	90.1%	10,353	89.1%	70,577	89.9%
U.S./Illinois Highways (40)	18,916	91.6%	2,932	89.4%	21,848	91.3%
Interstate Highways (28)	29,378	95.4%	4,877	94.1%	34,255	95.3%
Day of Week						
Weekends (115)	51,705	93.2%	10,067	91.8%	61,772	92.9%
Weekdays (143)	56,813	90.5%	8,095	88.9%	64,908	90.3%

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 2009)

	Drivers		Passengers		Total	
	Total Observed (1)	Actual Usage Rate (2)	Total Observed (3)	Actual Usage Rate (4)	Total Observed (5)	Actual Usage Rate (6)
Statewide (258)	97,923	92.5%	16,340	91.4%	114,263	92.3%
Regions						
City of Chicago (46)	18,322	87.0%	2,491	88.8%	20,813	87.3%
Cook County (40)	12,441	90.8%	1,782	90.1%	14,223	90.8%
Collar Counties (118)	49,297	94.1%	8,431	92.2%	57,728	93.9%
Downstate (54)	17,863	94.5%	3,636	91.9%	21,499	94.1%
Road Type						
Residential (190)	55,065	90.6%	9,428	89.9%	64,493	90.5%
U.S./Illinois Highways (40)	16,687	92.6%	2,555	91.0%	19,242	92.4%
Interstate Highways (28)	26,171	96.2%	4,357	94.8%	30,528	96.0%
Day of Week						
Weekends (115)	46,565	94.0%	9,049	92.7%	55,614	93.7%
Weekdays (143)	51,358	91.1%	7,291	89.9%	58,649	90.9%

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 2009)

	Drivers		Passengers		Total	
	Total Observed (1)	Actual Usage Rate (2)	Total Observed (3)	Actual Usage Rate (4)	Total Observed (5)	Actual Usage Rate (6)
Statewide (258)	10,595	85.5%	1,822	82.3%	12,417	85.1%
Regions						
City of Chicago (46)	1,025	79.6%	152	68.4%	1,177	78.2%
Cook County (40)	1,132	83.6%	139	83.5%	1,271	83.6%
Collar Counties (118)	5,049	85.7%	929	83.3%	5,978	85.3%
Downstate (54)	3,389	87.8%	602	83.9%	3,991	87.2%
Road Type						
Residential (190)	5,159	83.8%	925	80.5%	6,084	83.3%
U.S./Illinois Highways (40)	2,229	84.3%	377	78.8%	2,606	83.5%
Interstate Highways (28)	3,207	89.2%	520	87.9%	3,727	89.0%
Day of Week						
Weekends (115)	5,140	86.1%	1,018	83.9%	6,158	85.7%
Weekdays (143)	5,455	85.0%	804	80.2%	6,259	84.4%

Note: Large trucks were excluded from this table.

Table 4
Overall Safety Belt Usage Rates in Illinois
(Comparison of June 2008 and June 2009)

	Drivers			Passengers			Total		
	Usage Rate (2008)	Usage Rate (2009)	Percent Change	Usage Rate (2008)	Usage Rate (2009)	Percent Change	Usage Rate (2008)	Usage Rate (2009)	Percent Change
Statewide (258)	90.9%	91.8%	0.9	89.9%	90.5%	0.6	90.5%	91.7%	1.2
Regions									
City of Chicago (46)	86.7%	86.7%	0.0	87.4%	87.6%	0.2	86.8%	86.8%	0.0
Cook County (40)	90.6%	90.2%	-0.4	89.4%	89.6%	0.2	90.4%	90.2%	-0.2
Collar Counties (118)	92.8%	93.3%	0.5	91.9%	91.3%	-0.6	92.7%	93.1%	0.4
Downstate (54)	90.4%	93.5%	3.1	87.1%	90.8%	3.7	89.9%	93.0%	3.1
Road Type									
Residential (190)	89.6%	90.1%	0.5	88.6%	89.1%	0.5	89.5%	89.9%	0.4
U.S./Illinois Highways (40)	90.7%	91.6%	0.9	90.2%	89.4%	-0.8	90.6%	91.3%	0.7
Interstate Highways (28)	93.9%	95.4%	1.5	92.3%	94.1%	1.8	93.6%	95.3%	1.7
Day of Week									
Weekends (115)	92.4%	93.2%	0.8	91.9%	91.8%	-0.1	92.3%	92.9%	0.6
Weekdays (143)	89.6%	90.5%	0.9	87.4%	88.9%	1.5	89.3%	90.3%	1.0

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 2008 and June 2009)

	Drivers			Passengers			Total		
	Usage Rate (2008)	Usage Rate (2009)	Percent Change	Usage Rate (2008)	Usage Rate (2009)	Percent Change	Usage Rate (2008)	Usage Rate (2009)	Percent Change
Statewide (258)	91.7%	92.5%	0.8	90.9%	91.4%	0.5	91.6%	92.3%	0.7
Regions									
City of Chicago (46)	87.3%	87.0%	-0.3	88.3%	88.8%	0.5	87.4%	87.3%	-0.1
Cook County (40)	91.1%	90.8%	-0.3	89.5%	90.1%	0.6	90.9%	90.8%	-0.1
Collar Counties (118)	93.5%	94.1%	0.6	92.8%	92.2%	-0.6	93.4%	93.9%	0.5
Downstate (54)	91.9%	94.5%	2.6	89.2%	91.9%	2.7	91.5%	94.1%	2.6
Road Type									
Residential (190)	90.2%	90.6%	0.4	89.4%	89.9%	0.5	90.1%	90.5%	0.4
U.S./Illinois Highways (40)	91.7%	92.6%	0.9	91.8%	91.0%	-0.8	91.7%	92.4%	0.7
Interstate Highways (28)	95.1%	96.2%	1.1	93.7%	94.8%	1.1	94.9%	96.0%	1.1
Day of Week									
Weekends (115)	93.2%	94.0%	0.8	92.7%	92.7%	0.0	93.1%	93.7%	0.6
Weekdays (143)	90.4%	91.1%	0.7	88.6%	89.9%	1.3	90.2%	90.9%	0.7

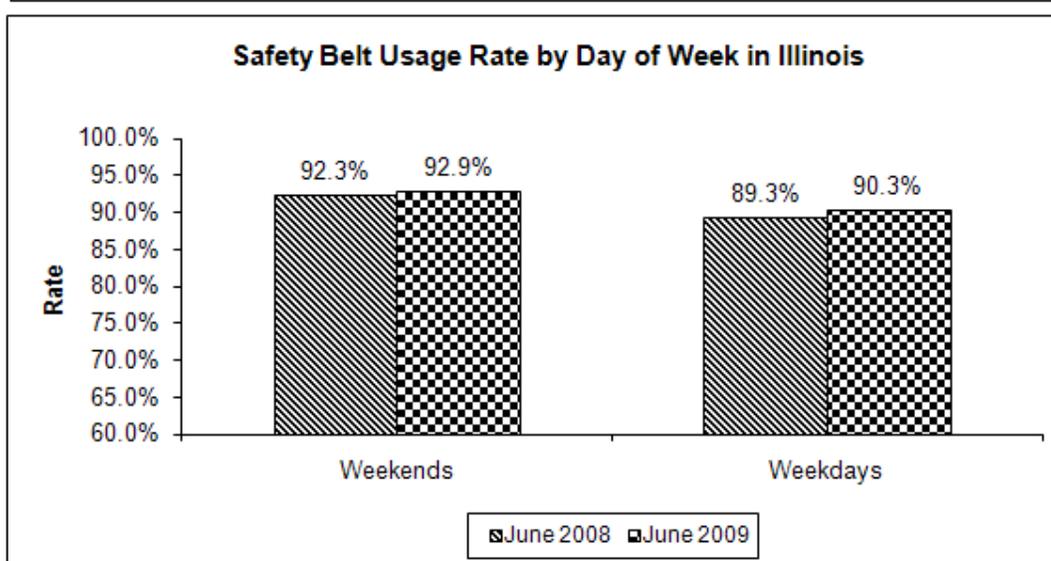
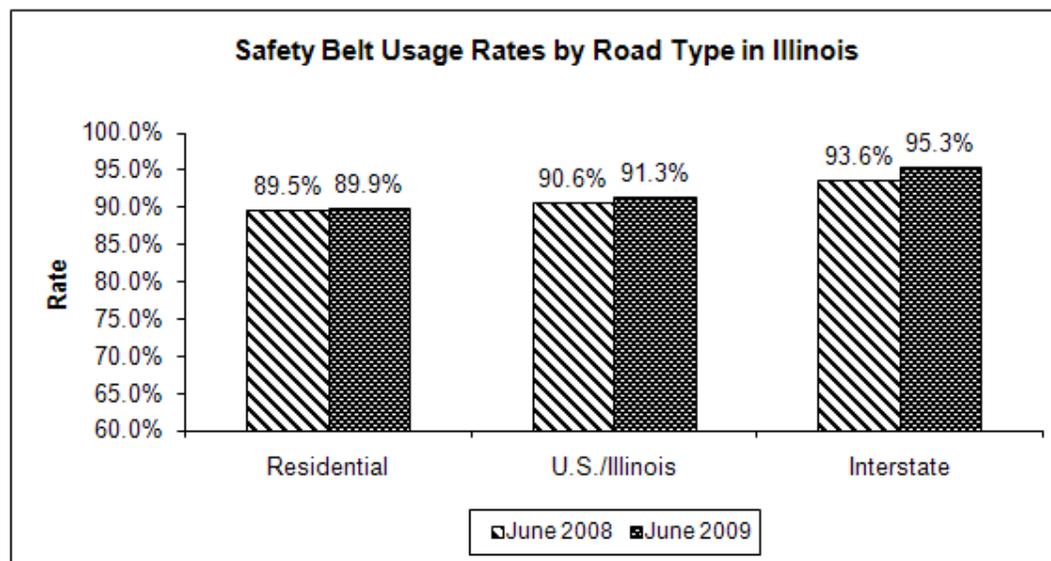
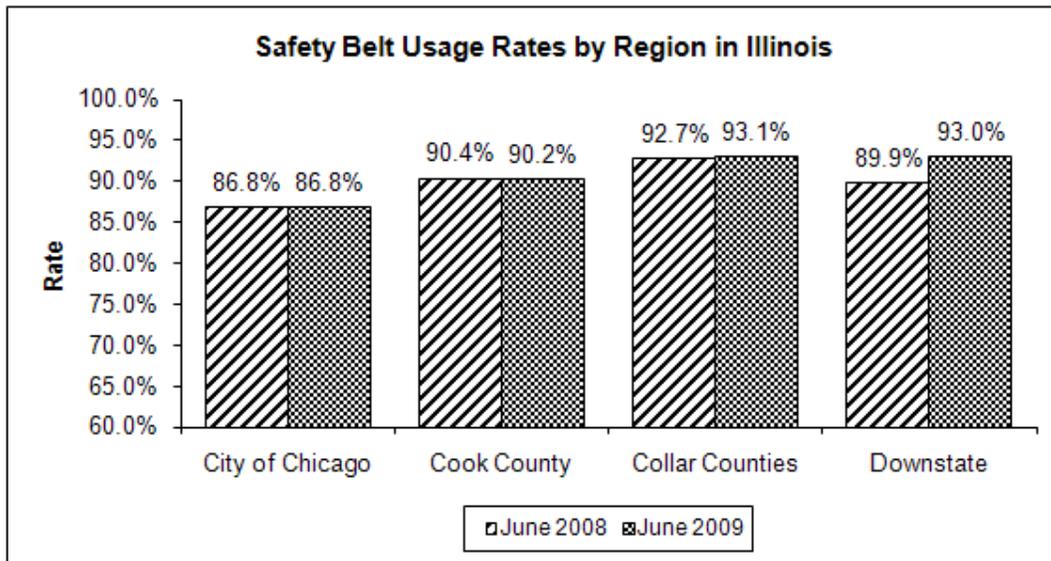
Note: Passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.

Table 6
Pickup Truck Safety Belt Usage Rates in Illinois
(Comparison of June 2008 and June 2009)

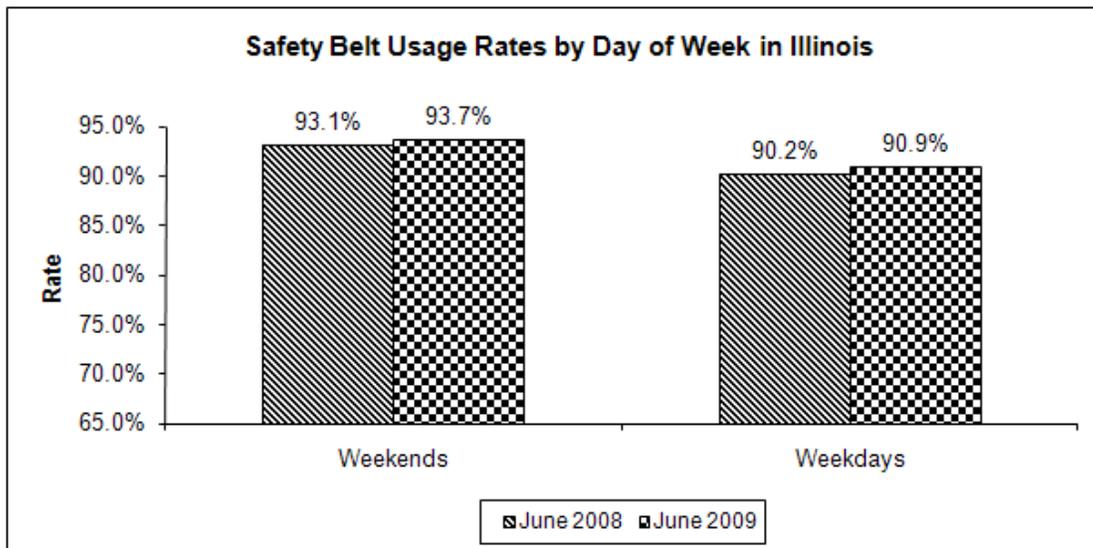
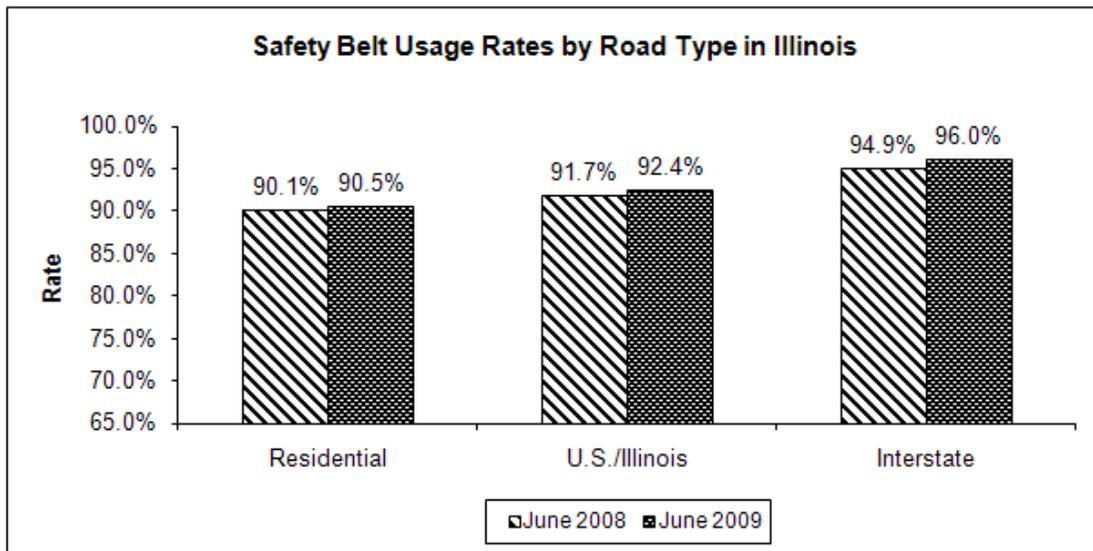
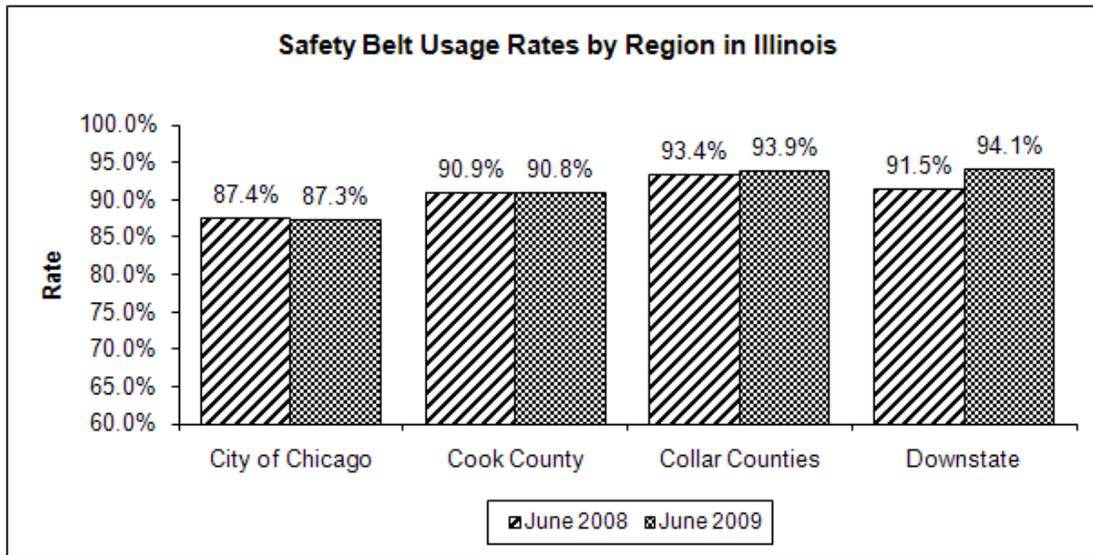
	Drivers			Passengers			Total		
	Usage Rate (2008)	Usage Rate (2009)	Percent Change	Usage Rate (2008)	Usage Rate (2009)	Percent Change	Usage Rate (2008)	Usage Rate (2009)	Percent Change
Statewide (258)	84.0%	85.5%	1.5	81.2%	82.3%	1.1	83.5%	85.1%	1.6
Regions									
City of Chicago (46)	76.1%	79.6%	3.5	72.8%	68.4%	-4.4	75.6%	78.2%	2.6
Cook County (40)	84.8%	83.6%	-1.2	87.6%	83.5%	-4.1	85.2%	83.6%	-1.6
Collar Counties (118)	86.4%	85.7%	-0.7	84.7%	83.3%	-1.4	86.1%	85.3%	-0.8
Downstate (54)	82.5%	87.8%	5.3	76.0%	83.9%	7.9	81.5%	87.2%	5.7
Road Type									
Residential (190)	83.3%	83.8%	0.5	80.9%	80.5%	-0.4	82.9%	83.3%	0.4
U.S./Illinois Highways (40)	83.3%	84.3%	1.0	76.7%	78.8%	2.1	82.5%	83.5%	1.0
Interstate Highways (28)	85.3%	89.2%	3.9	83.5%	87.9%	4.4	85.0%	89.0%	4.0
Day of Week									
Weekends (115)	85.4%	86.1%	0.7	84.0%	83.9%	-0.1	85.1%	85.7%	0.6
Weekdays (143)	82.7%	85.0%	2.3	78.3%	80.2%	1.9	82.1%	84.4%	2.3

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**

