

July 2012

# **Safety Belt Usage in Illinois**

## **June 2012 Observational Survey Results**

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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 2010 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, 1340 North 9<sup>th</sup> St., Springfield, Illinois 62702.

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## Survey Design

The recent safety belt survey was a statistical (multi-stage random) observational survey conducted statewide during June 2012 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 121,910 front seat occupants observed at 258 locations statewide in this survey. Of those, 110,492 drivers and outboard passengers were observed in passenger cars (which included cars, sport utility vehicles, and vans) and 11,418 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

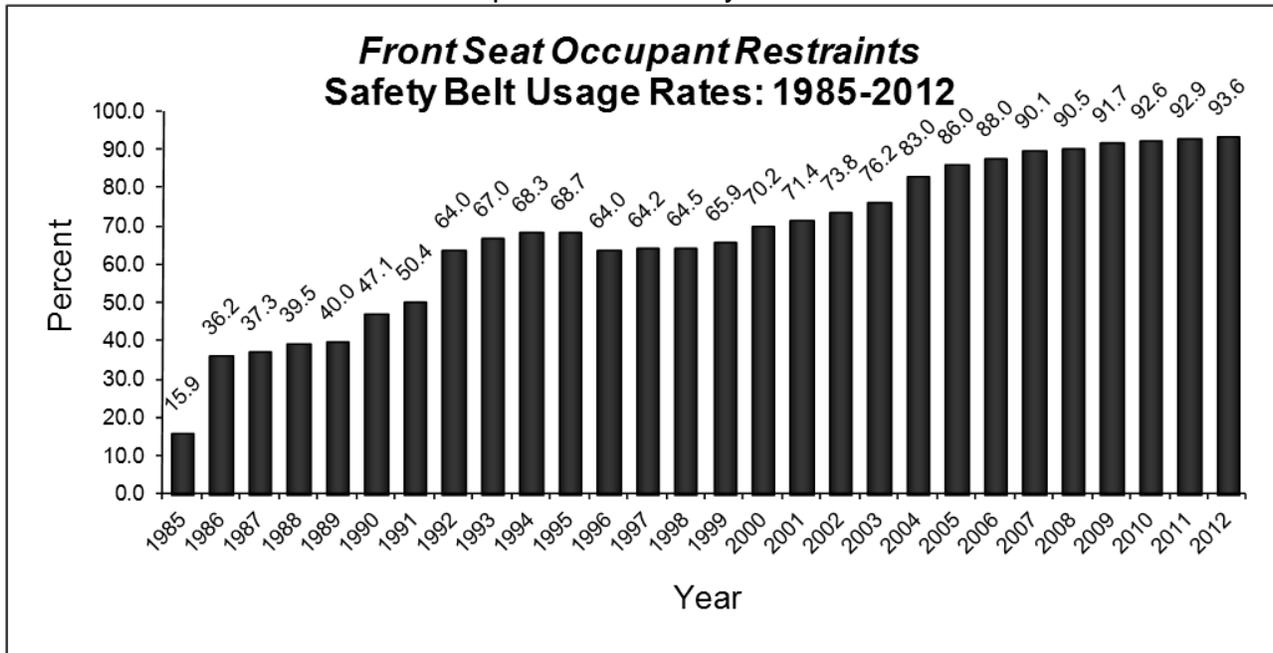
Currently the State of Illinois has a primary belt law, which became effective on July 3<sup>rd</sup>, 2003 after the bill was signed into the law. Under the primary belt law in Illinois, police officers can stop vehicles in which occupants fail to buckle up and issue citations.

The first Illinois safety belt law was passed in January 1985 and became effective July 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 2012 at a level of 93.6 percent. The safety belt usage rate in Illinois has increased more than 77 percentage points since the first survey was conducted in April 1985 (see Figure 1). It should be noted that the 1998 through 2012 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 2012 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 2012. 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 121,910 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 121,910 front seat occupants observed, almost 93 percent were wearing safety belts. The collar counties (DuPage, Kane, Lake, McHenry, and Will) had the highest usage rate at 94.5 percent closely followed by the downstate counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair) at 94.4 percent. Cook County, excluding the city of Chicago, had a usage rate of 92.2 percent, while the city of Chicago had the lowest usage rate at 89.0 percent. Based on Road Type, Interstate highway travelers had the highest usage rate at 96.9 percent followed by U.S./Illinois Highway travelers at 92.9 percent. Motorists traveling on residential streets had the lowest usage rate at 91.7 percent. The usage rate on weekends was 94.7 percent, while on the weekdays it was slightly lower at 92.1 percent.

**Table 2** presents safety belt use information for drivers and passengers of passenger cars excluding pickup trucks. Of the total of 110,492 observations, 94.2 percent were wearing safety belts. The safety belt usage rate for drivers and passengers was 94.2 percent and 94.3 percent, respectively. 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 9,727 drivers and 1,691 passengers were observed. Passengers had a slightly higher safety belt usage rate than drivers (89.7 percent versus 89.2 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 2011 to June 2012 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 0.6 percentage point from June 2011 to June 2012. Cook County had the highest increase in safety belt use showing an increase of 1.9 percentage points from 2011 to 2012. The city of Chicago had an increase of 1.6 percentage points in safety belt use from 2011 to 2012. The downstate counties had an increase in safety belt use by 1.0 percentage point. The safety belt usage rate in the collar counties increased by only 0.1 percentage point. Based on road type, safety belt use on U.S./Illinois Highways increased by 1.3 percentage points. Safety belt use on residential roads and Interstate Highways increased by 0.8 percentage points and 0.6 percentage points respectively. Based on day of the week, safety belt use increased by 1.2 percentage points on the weekdays. On the weekends, safety belt use increased by 0.5 percentage point.

**Table 5** and **Figure 3** show that the safety belt use among front seat passenger car occupants slightly increased by 0.8 percentage point from 93.5 percent in June 2011 to 94.3 percent in June 2012. **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 slightly increased by 1.3 percentage points from 88.0 percent in June 2011 to 89.3 percent in June 2012.

**Table 1**  
**Overall Safety Belt Usage Rates in Illinois**  
**(June 2012)**

	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>104,057</b>	<b>93.6%</b>	<b>17,853</b>	<b>93.8%</b>	<b>121,910</b>	<b>93.6%</b>
<b>Regions</b>						
City of Chicago (46)	16,307	88.9%	2,231	89.9%	18,538	89.0%
Cook County (40)	13,671	92.3%	1,970	91.7%	15,641	92.2%
Collar Counties (118)	53,990	94.5%	10,089	94.3%	64,079	94.5%
Downstate (54)	20,089	94.6%	3,563	93.5%	23,652	94.4%
<b>Road Type</b>						
Residential (190)	55,148	91.6%	9,985	92.0%	65,133	91.7%
U.S./Illinois Highways (40)	19,926	92.9%	3,559	92.7%	23,485	92.9%
Interstate Highways (28)	28,983	97.0%	4,309	96.8%	33,292	96.9%
<b>Day of Week</b>						
Weekends (115)	49,738	94.7%	9,946	94.7%	59,684	94.7%
Weekdays (143)	54,319	92.2%	7,907	91.6%	62,226	92.1%

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 2012)**

	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>94,330</b>	<b>94.2%</b>	<b>16,162</b>	<b>94.3%</b>	<b>110,492</b>	<b>94.2%</b>
<b>Regions</b>						
City of Chicago (46)	15,486	89.3%	2,103	90.7%	17,589	89.5%
Cook County (40)	12,610	92.9%	1,805	92.7%	14,415	92.9%
Collar Counties (118)	49,097	94.9%	9,207	94.8%	58,304	94.9%
Downstate (54)	17,137	95.6%	3,047	94.0%	20,184	95.3%
<b>Road Type</b>						
Residential (190)	50,616	92.2%	9,148	92.6%	59,764	92.2%
U.S./Illinois Highways (40)	17,757	93.6%	3,199	93.2%	20,956	93.6%
Interstate Highways (28)	25,957	97.3%	3,815	97.5%	29,772	97.3%
<b>Day of Week</b>						
Weekends (115)	44,918	95.2%	8,983	95.4%	53,901	95.3%
Weekdays (143)	49,412	92.6%	7,179	92.0%	56,591	92.5%

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 2012)**

	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>9,727</b>	<b>89.2%</b>	<b>1,691</b>	<b>89.7%</b>	<b>11,418</b>	<b>89.3%</b>
<b>Regions</b>						
City of Chicago (46)	821	81.0%	128	76.6%	949	80.4%
Cook County (40)	1,061	85.2%	165	80.0%	1,226	84.5%
Collar Counties (118)	4,893	90.7%	882	89.2%	5,775	90.5%
Downstate (54)	2,952	89.1%	516	90.9%	3,468	89.4%
<b>Road Type</b>						
Residential (190)	4,532	86.0%	837	85.5%	5,369	85.9%
U.S./Illinois Highways (40)	2,169	87.0%	360	88.3%	2,529	87.1%
Interstate Highways (28)	3,026	94.3%	494	91.5%	3,520	93.9%
<b>Day of Week</b>						
Weekends (115)	4,820	89.3%	963	88.2%	5,783	89.1%
Weekdays (143)	4,907	88.3%	728	87.5%	5,635	88.2%

Note: Large trucks were excluded from this table.

**Table 4**  
**Overall Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2011 and June 2012)**

	Drivers			Passengers			Total		
	Usage Rate (2011)	Usage Rate (2012)	Percent Change	Usage Rate (2011)	Usage Rate (2012)	Percent Change	Usage Rate (2011)	Usage Rate (2012)	Percent Change
<b>Statewide (258)</b>	<b>93.0%</b>	<b>93.6%</b>	<b>0.6</b>	<b>92.7%</b>	<b>93.8%</b>	<b>0.9</b>	<b>92.9%</b>	<b>93.6%</b>	<b>0.7</b>
<b>Regions</b>									
City of Chicago (46)	87.1%	88.9%	1.8	89.3%	89.9%	0.6	87.4%	89.0%	1.6
Cook County (40)	90.5%	92.3%	1.8	88.9%	91.7%	2.8	90.3%	92.2%	1.9
Collar Counties (118)	94.3%	94.5%	0.2	94.6%	94.3%	-0.3	94.4%	94.5%	0.1
Downstate (54)	93.8%	94.6%	0.8	91.3%	93.5%	2.2	93.4%	94.4%	1.0
<b>Road Type</b>									
Residential (190)	90.9%	91.6%	0.7	90.9%	92.0%	1.1	90.9%	91.7%	0.8
U.S./Illinois Highways (40)	91.6%	92.9%	1.3	92.1%	92.7%	0.6	91.6%	92.9%	1.3
Interstate Highways (28)	96.3%	97.0%	0.7	96.4%	96.8%	0.4	96.3%	96.9%	0.6
<b>Day of Week</b>									
Weekends (115)	94.2%	94.7%	0.5	94.2%	94.7%	0.5	94.2%	94.7%	0.5
Weekdays (143)	91.0%	92.2%	1.2	90.4%	91.6%	1.2	90.9%	92.1%	1.2

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 2011 and June 2012)**

	Drivers			Passengers			Total		
	Usage Rate (2011)	Usage Rate (2012)	Percent Change	Usage Rate (2011)	Usage Rate (2012)	Percent Change	Usage Rate (2011)	Usage Rate (2012)	Percent Change
<b>Statewide (258)</b>	<b>93.5%</b>	<b>94.2%</b>	<b>0.7</b>	<b>93.5%</b>	<b>94.3%</b>	<b>0.8</b>	<b>93.5%</b>	<b>94.3%</b>	<b>0.8</b>
<b>Regions</b>									
City of Chicago (46)	87.3%	89.3%	<b>2.0</b>	89.7%	90.7%	<b>1.0</b>	87.7%	89.5%	<b>1.8</b>
Cook County (40)	90.8%	92.9%	<b>2.1</b>	90.7%	92.7%	<b>2.0</b>	90.8%	92.9%	<b>2.1</b>
Collar Counties (118)	94.7%	94.9%	<b>0.2</b>	95.1%	94.8%	<b>-0.3</b>	94.8%	94.9%	<b>0.1</b>
Downstate (54)	95.0%	95.6%	<b>0.6</b>	92.3%	94.0%	<b>1.7</b>	94.6%	95.3%	<b>0.7</b>
<b>Road Type</b>									
Residential (190)	91.3%	92.2%	<b>0.9</b>	91.7%	92.6%	<b>0.9</b>	91.4%	92.2%	<b>0.8</b>
U.S./Illinois Highways (40)	92.4%	93.6%	<b>1.2</b>	93.1%	93.2%	<b>0.1</b>	92.5%	93.6%	<b>1.1</b>
Interstate Highways (28)	96.6%	97.3%	<b>0.7</b>	97.0%	97.5%	<b>0.5</b>	96.7%	97.3%	<b>0.6</b>
<b>Day of Week</b>									
Weekends (115)	94.8%	95.2%	<b>0.4</b>	94.7%	95.4%	<b>0.7</b>	94.8%	95.3%	<b>0.5</b>
Weekdays (143)	91.4%	92.6%	<b>1.2</b>	91.4%	92.0%	<b>0.6</b>	91.4%	92.5%	<b>1.1</b>

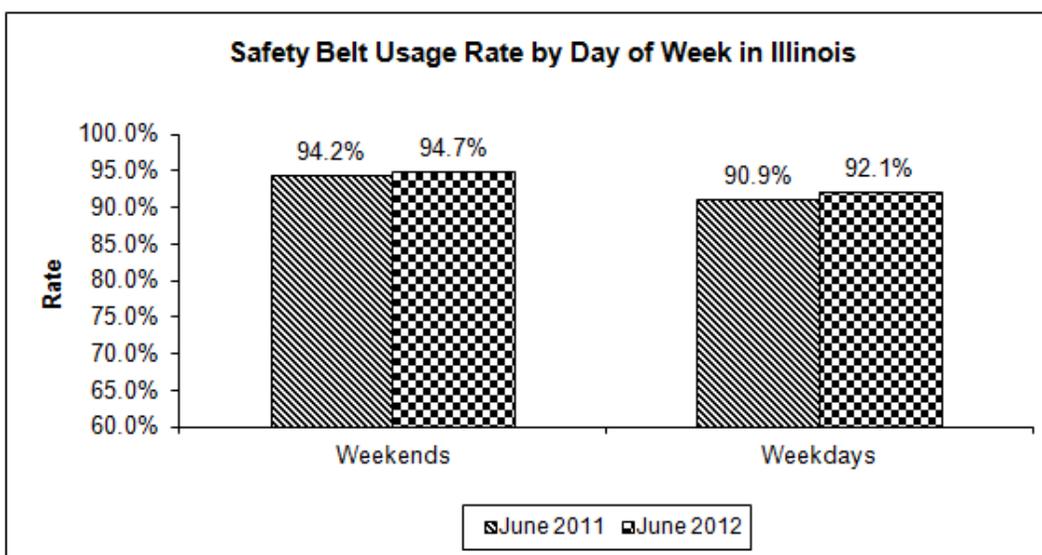
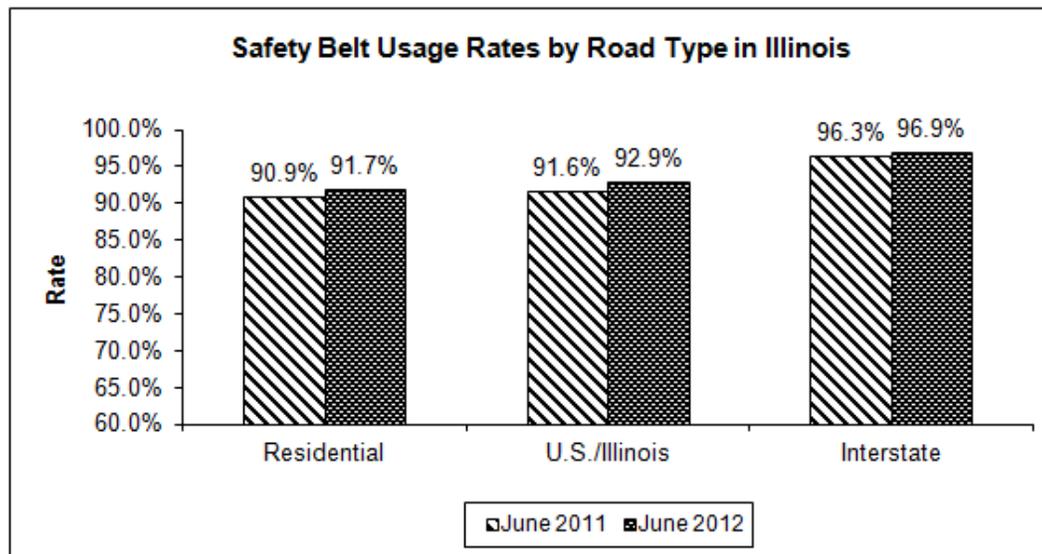
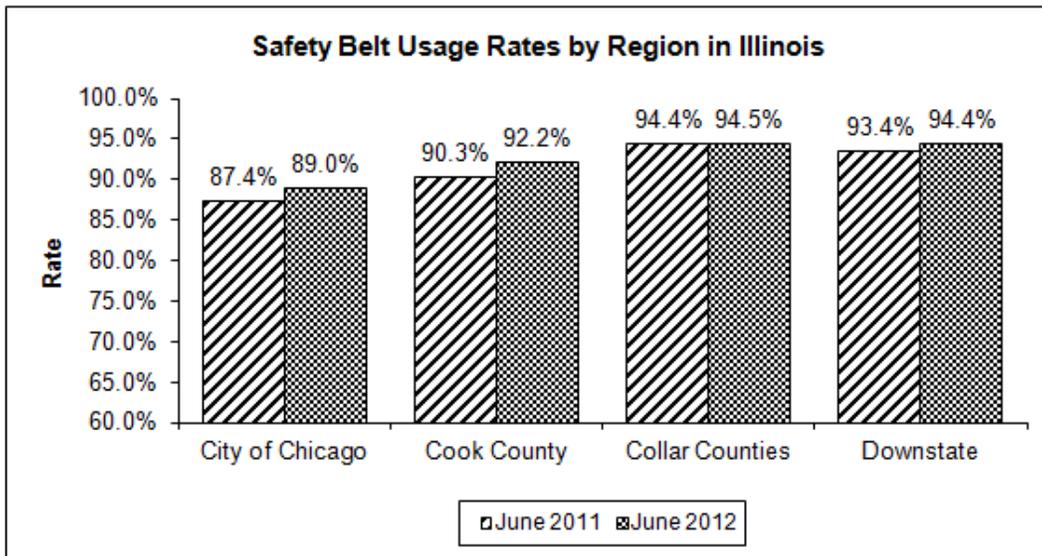
Note: Passenger cars (cars, sport utility vehicles, taxicabs and vans) were included in this table.

**Table 6**  
**Pickup Truck Safety Belt Usage Rates in Illinois**  
**(Comparison of June 2011 and June 2012)**

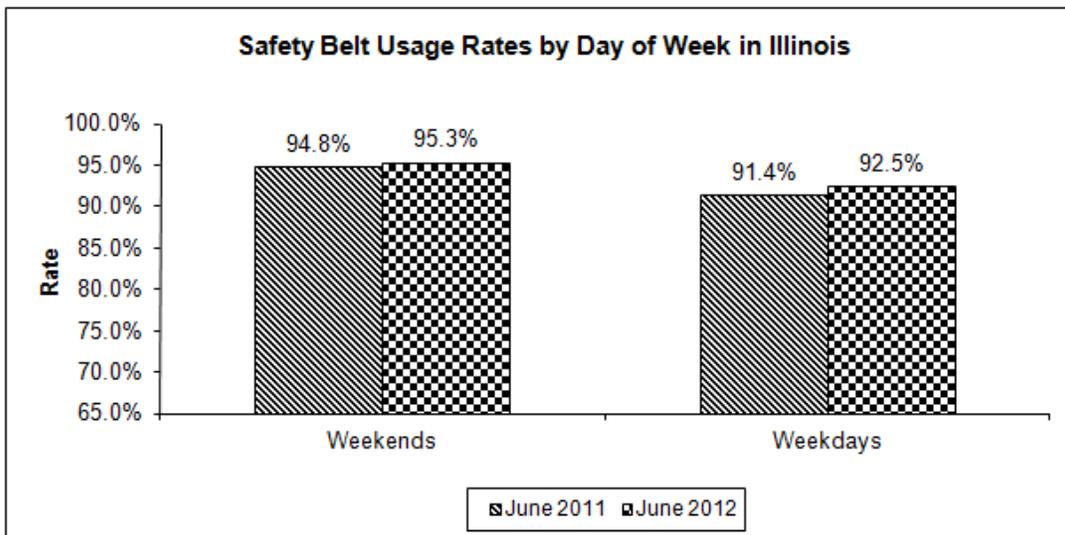
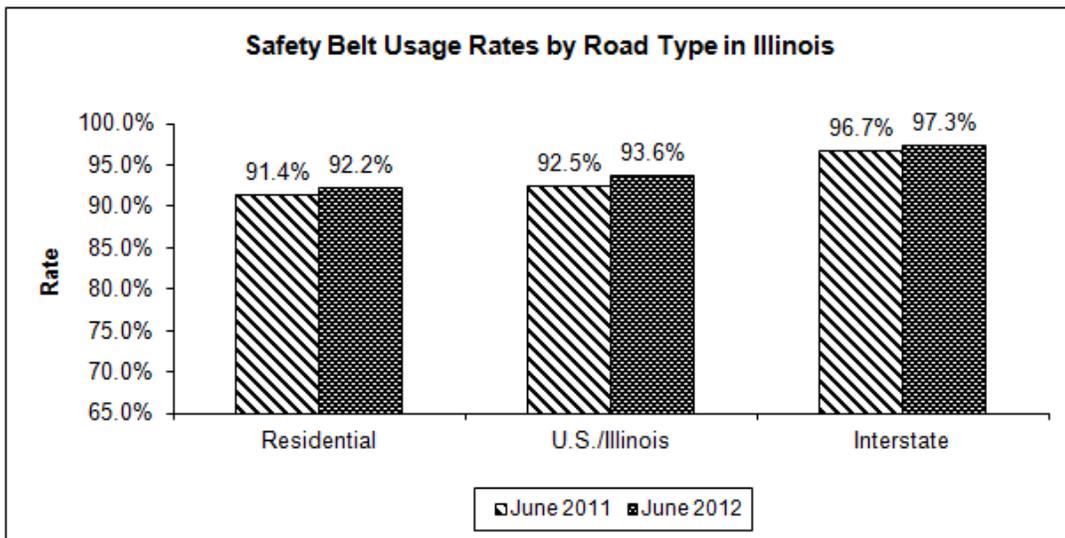
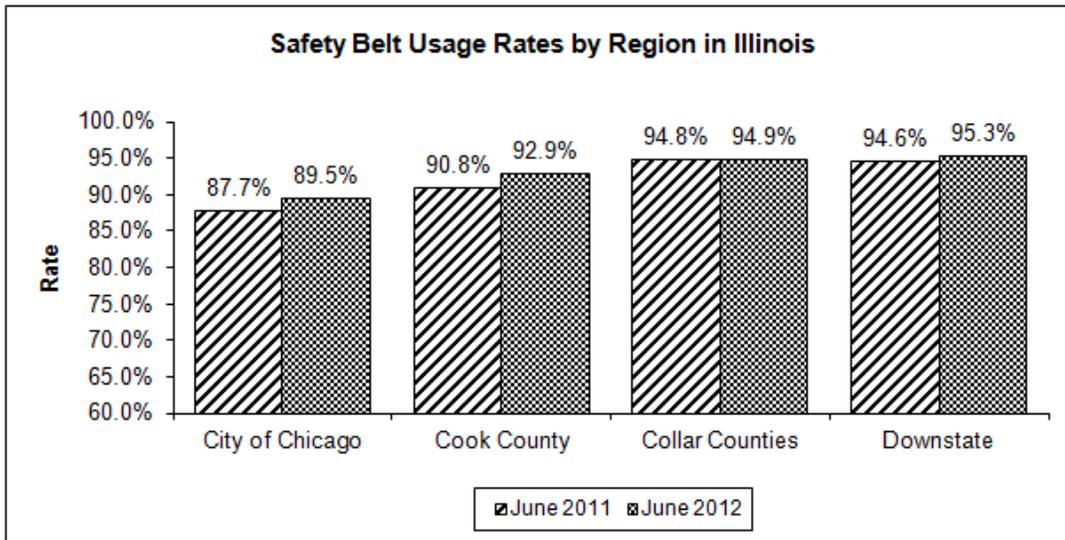
	Drivers			Passengers			Total		
	Usage Rate (2011)	Usage Rate (2012)	Percent Change	Usage Rate (2011)	Usage Rate (2012)	Percent Change	Usage Rate (2011)	Usage Rate (2012)	Percent Change
<b>Statewide (258)</b>	<b>88.3%</b>	<b>89.2%</b>	<b>0.9</b>	<b>85.6%</b>	<b>89.7%</b>	<b>4.1</b>	<b>88.0%</b>	<b>89.3%</b>	<b>1.3</b>
<b>Regions</b>									
City of Chicago (46)	81.7%	81.0%	-0.7	80.7%	76.6%	-4.1	81.5%	80.4%	-1.1
Cook County (40)	85.9%	85.2%	-0.7	70.8%	80.0%	9.2	83.6%	84.5%	0.9
Collar Counties (118)	90.4%	90.7%	0.3	89.4%	89.2%	-0.2	90.2%	90.5%	0.3
Downstate (54)	86.7%	89.1%	2.4	85.1%	90.9%	5.8	86.5%	89.4%	2.9
<b>Road Type</b>									
Residential (190)	86.0%	86.0%	0.0	83.0%	85.5%	2.5	85.5%	85.9%	0.4
U.S./Illinois Highways (40)	84.8%	87.0%	2.2	82.2%	88.3%	6.1	84.5%	87.1%	2.6
Interstate Highways (28)	93.4%	94.3%	0.9	91.5%	91.5%	0.0	93.2%	93.9%	0.7
<b>Day of Week</b>									
Weekends (115)	89.1%	89.3%	0.2	88.7%	88.2%	-0.5	89.0%	89.1%	0.1
Weekdays (143)	86.9%	88.3%	1.4	80.6%	87.5%	6.9	86.0%	88.2%	2.2

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**

