

TECHNICAL REPORT

July 2004

Safety Belt Usage In Illinois

June 2004 Observational Survey Results

Compiled and Prepared by
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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 of 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 motor vehicle related fatalities and injuries in Illinois using several crash related databases (Crash data, FARS, Trauma Registry, and Hospital data, 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 component (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 in 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. This survey is based on a multi-stage random 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 2004 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 belt survey was a statistical (multi-stage random) observational survey conducted statewide during June 2004 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 120,664 front seat occupants at 258 locations statewide observed in this survey. Of those, 108,042 drivers and outboard passengers were in passenger cars (which included cars, sport utility vehicles, and vans) and 12,622 were 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, 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. (It should be noted that the statewide observational survey was conducted before the primary belt became effective in July 2003).

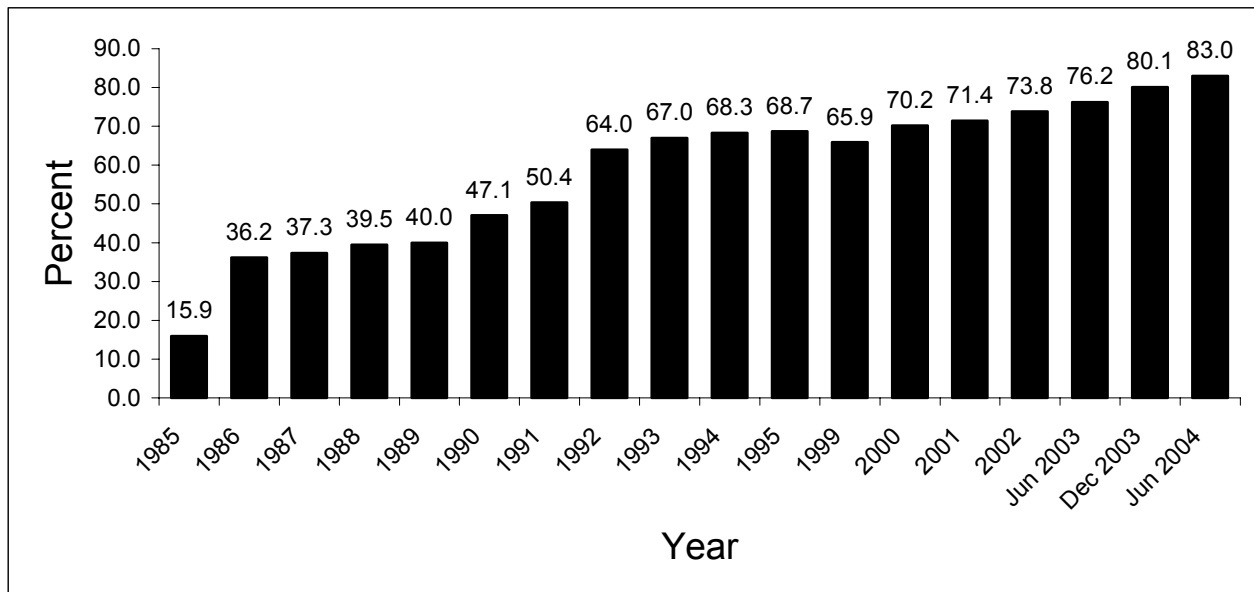
The first Illinois safety belt law was passed in January 1985 and became effective July 1, 1985. Originally, the safety belt law specified primary enforcement for front seat occupants of vehicles. Under this law, motor vehicle were required to be equipped with safety belts with the exception of

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, 2003.

Illinois' first safety belt survey was conducted in April 1985, prior to the safety belt law becoming effective on July 1, 1985. The data from the first survey became a base from which to measure the success of Illinois' efforts to educate citizens about the benefits of using safety belts.

The base line (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 safety belt law became effective, the observed usage rate increased to 36.2 percent. Since that time, the usage rate has shown a gradual increase, peaking in June 2004 at a level of 83.0 percent. There was an increase of over 67 percentage points since the first survey was conducted in April 1985 (see Figure 1). It should be noted that the 1998 through 2004 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 2004 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 2004. Columns 1, 3 and 5 depict total number of observations for drivers, passengers and combined drivers and passengers respectively. 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 the various regions of the state where the survey was conducted (with the number of sites in each region in parentheses), road types, time of day the survey was conducted, and a breakdown of weekdays and weekends. A total of 120,664 front seat occupants were observed during the survey. Looking at these tables, it is evident that 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 120,664 front seat occupants of both passenger cars and pickup trucks, 83.0 percent wear safety belts. The Downstate Counties (Champaign, Macon, Rock Island, St. Clair, Montgomery and Peoria) had the highest usage rate at 87.6 percent followed by the Collar Counties (DuPage, Will, Kane, McHenry, and Lake) at 84.0 percent. Cook County, excluding the City of Chicago, had a usage rate of 80.1 percent, while the City of Chicago had the lowest usage rate at 76.8 percent. Interstate highway travelers had the highest usage rate at 91.7 percent followed by US and Illinois marked highway travelers at 82.4 percent. Motorists traveling on residential streets had the lowest usage rate at 79.5 percent. The usage rate on weekends was higher at 85.5 percent than the 80.7 percent on weekdays.

Table 2 presents safety belt use data and information for drivers and passengers of passenger cars excluding pickup trucks. Of the total of 108042 observations, 84.2 percent were wearing seat belts. The safety belt usage rate for drivers was slightly higher than that for passengers (84.6 percent versus 82.3 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 10,666 drivers and 1,956 passengers were observed. Passengers had a slightly higher seat belt usage rate than drivers (72.9 percent versus 71.3 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** present safety belt usage rates in December 2003 and June 2004 and 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 2.9 percent from December 2003 to June 2004. Cook County, excluding the City of Chicago, had the highest increase in belt use with an increase of 5.1 percentage points. The Collar Counties had the second highest increase in belt use by 2.8 percentage points. The City of Chicago and Downstate County had increases in belt use of 2.4 and 2.3 percentage points respectively. Residential roads had an increase in belt use of 3.4 percentage points. Interstate highways and U.S./Illinois Highways had increases in belt use of 2.4 and 2.8 percentage points respectively. Weekend belt usage was up 2.9 percentage points and weekday belt usage was up 3.1 percentage points.

Table 5 and **Figure 3** show that the safety belt use among passenger car drivers and passengers increased by 2.7 percentage points from 81.5 percent in December 2003 to 84.2 percent in June 2004.

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

Table 6 and **Figure 4** show that the safety belt usage for pickup truck drivers and passengers increased by 4.4 percentage points from 68.2 percent in December 2003 to 72.6 percent in June 2004.

Table 1
Overall Safety Belt Usage Rates in Illinois
(June 2004)

	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)	101,491	83.4%	19,173	81.2%	120,664	83.0%
Regions						
City of Chicago (46)	19,234	77.1%	3,094	74.8%	22,328	76.8%
Cook County (40)	12,058	81.1%	1,743	72.9%	13,801	80.1%
Collar Counties (118)	47,569	84.3%	10,184	82.7%	57,753	84.0%
Downstate (54)	22,630	87.9%	4,152	85.6%	26,782	87.6%
Road Type						
Residential (190)	58,003	80.2%	10,454	75.7%	68,457	79.5%
U.S./Illinois Highways (40)	19,135	82.3%	3,681	83.0%	22,816	82.4%
Interstate Highways (28)	24,353	91.8%	5,038	91.2%	29,391	91.7%
Day of Week						
Weekends (115)	47,260	85.8%	10,969	84.3%	58,229	85.5%
Weekdays (143)	54,231	81.3%	8,204	77.0%	62,435	80.7%

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 2004)

	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)	90,825	84.6%	17,217	82.3%	108,042	84.2%
Regions						
City of Chicago (46)	18,116	77.8%	2,912	75.8%	21,028	77.5%
Cook County (40)	11,084	82.5%	1,574	74.1%	12,658	81.5%
Collar Counties (118)	42,799	85.8%	9,257	83.9%	52,056	85.4%
Downstate (54)	18,826	89.7%	3,474	87.3%	22,300	89.4%
Road Type						
Residential (190)	52,713	81.3%	9,416	76.8%	62,129	80.6%
U.S./Illinois Highways (40)	16,501	84.2%	3,236	84.6%	19,737	84.3%
Interstate Highways (28)	21,611	92.9%	4,565	92.1%	26,176	92.8%
Day of Week						
Weekends (115)	42,485	87.2%	9,862	85.4%	52,347	86.8%
Weekdays (143)	48,340	82.4%	7,355	78.2%	55,695	81.8%

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 2004)

	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)	10,666	72.9%	1,956	71.3%	12,622	72.6%
Regions						
City of Chicago (46)	1,118	64.9%	182	59.9%	1,300	64.2%
Cook County (40)	974	64.8%	169	62.1%	1,143	64.4%
Collar Counties (118)	4,770	71.4%	927	71.1%	5,697	71.3%
Downstate (54)	3,804	79.1%	678	77.0%	4,482	78.8%
Road Type						
Residential (190)	5,290	68.9%	1,038	65.9%	6,328	68.4%
U.S./Illinois Highways (40)	2,634	70.3%	445	71.7%	3,079	70.5%
Interstate Highways (28)	2,742	82.9%	473	82.9%	3,215	82.9%
Day of Week						
Weekends (115)	4,775	73.3%	1,107	75.2%	5,882	73.6%
Weekdays (143)	5,891	72.5%	849	66.2%	6,740	71.7%

Note: Large trucks were excluded from this table.

Table 4
Overall Safety Belt Usage Rates in Illinois
(Comparison of December 2003 and June 2004)

	Drivers			Passengers			Total		
	Usage Rate (2003)	Usage Rate (2004)	Percent Change	Usage Rate (2003)	Usage Rate (2004)	Percent Change	Usage Rate (2003)	Usage Rate (2004)	Percent Change
Statewide (258)	80.4%	83.4%	3.0	78.5%	81.2%	2.7	80.1%	83.0%	2.9
Regions									
City of Chicago (46)	75.0%	77.1%	2.1	70.6%	74.8%	4.2	74.4%	76.8%	2.4
Cook County (40)	76.1%	81.1%	5.0	67.9%	72.9%	5.0	75.0%	80.1%	5.1
Collar Counties (118)	81.3%	84.3%	3.0	80.6%	82.7%	2.1	81.2%	84.0%	2.8
Downstate (54)	85.5%	87.9%	2.4	84.2%	85.6%	1.4	85.3%	87.6%	2.3
Road Type									
Residential (190)	76.9%	80.2%	3.3	73.2%	75.7%	2.5	76.4%	79.5%	3.1
U.S./Illinois Highways (40)	79.8%	82.3%	2.5	78.1%	83.0%	4.9	79.6%	82.4%	2.8
Interstate Highways (28)	89.4%	91.8%	2.4	88.9%	91.2%	2.3	89.3%	91.7%	2.4
Day of Week									
Weekends (115)	82.6%	85.8%	3.2	82.3%	84.3%	2.0	82.6%	85.5%	2.9
Weekdays (143)	78.3%	81.3%	3.0	73.0%	77.0%	4.0	77.6%	80.7%	3.1

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 December 2003 and June 2004)

	Drivers			Passengers			Total		
	Usage Rate (2003)	Usage Rate (2004)	Percent Change	Usage Rate (2003)	Usage Rate (2004)	Percent Change	Usage Rate (2003)	Usage Rate (2004)	Percent Change
Statewide (258)	81.8%	84.6%	2.8	79.8%	82.3%	2.5	81.5%	84.2%	2.7
Regions									
City of Chicago (46)	76.1%	77.8%	1.7	72.3%	75.8%	3.5	75.6%	77.5%	1.9
Cook County (40)	77.5%	82.5%	5.0	68.5%	74.1%	5.6	76.3%	81.5%	5.2
Collar Counties (118)	83.2%	85.8%	2.6	81.9%	83.9%	2.0	83.0%	85.4%	2.4
Downstate (54)	87.1%	89.7%	2.6	86.3%	87.3%	1.0	87.0%	89.4%	2.4
Road Type									
Residential (190)	78.3%	81.3%	3.0	74.4%	76.8%	2.4	77.7%	80.6%	2.9
U.S./Illinois Highways (40)	82.3%	84.2%	1.9	80.0%	84.6%	4.6	81.9%	84.3%	2.4
Interstate Highways (28)	90.7%	92.9%	2.2	90.2%	92.1%	1.9	90.6%	92.8%	2.2
Day of Week									
Weekends (115)	84.0%	87.2%	3.2	83.5%	85.4%	1.9	83.9%	86.8%	2.9
Weekdays (143)	79.8%	82.4%	2.6	74.3%	78.2%	3.9	79.1%	81.8%	2.7

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 December 2003 and June 2004)

	Drivers			Passengers			Total		
	Usage Rate (2003)	Usage Rate (2004)	Percent Change	Usage Rate (2003)	Usage Rate (2004)	Percent Change	Usage Rate (2003)	Usage Rate (2004)	Percent Change
Statewide (258)	68.2%	72.9%	4.7	67.9%	71.3%	3.4	68.2%	72.6%	4.4
Regions									
City of Chicago (46)	58.9%	64.9%	6.0	49.8%	59.9%	10.1	57.5%	64.2%	6.7
Cook County (40)	61.0%	64.8%	3.8	62.4%	62.1%	-0.3	61.2%	64.4%	3.2
Collar Counties (118)	65.3%	71.4%	6.1	68.6%	71.1%	2.5	65.9%	71.3%	5.4
Downstate (54)	77.2%	79.1%	1.9	74.2%	77.0%	2.8	76.7%	78.8%	2.1
Road Type									
Residential (190)	63.8%	68.9%	5.1	63.2%	65.9%	2.7	63.7%	68.4%	4.7
U.S./Illinois Highways (40)	65.1%	70.3%	5.2	65.9%	71.7%	5.8	65.2%	70.5%	5.3
Interstate Highways (28)	79.7%	82.9%	3.2	78.2%	82.9%	4.7	79.4%	82.9%	3.5
Day of Week									
Weekends (115)	69.7%	73.3%	3.6	71.5%	75.2%	3.7	70.1%	73.6%	3.5
Weekdays (143)	67.0%	72.5%	5.5	63.2%	66.2%	3.0	66.5%	71.7%	5.2

Note: Large trucks were excluded from this table.

Figure 2
Overall Safety Belt Usage Rates in Illinois

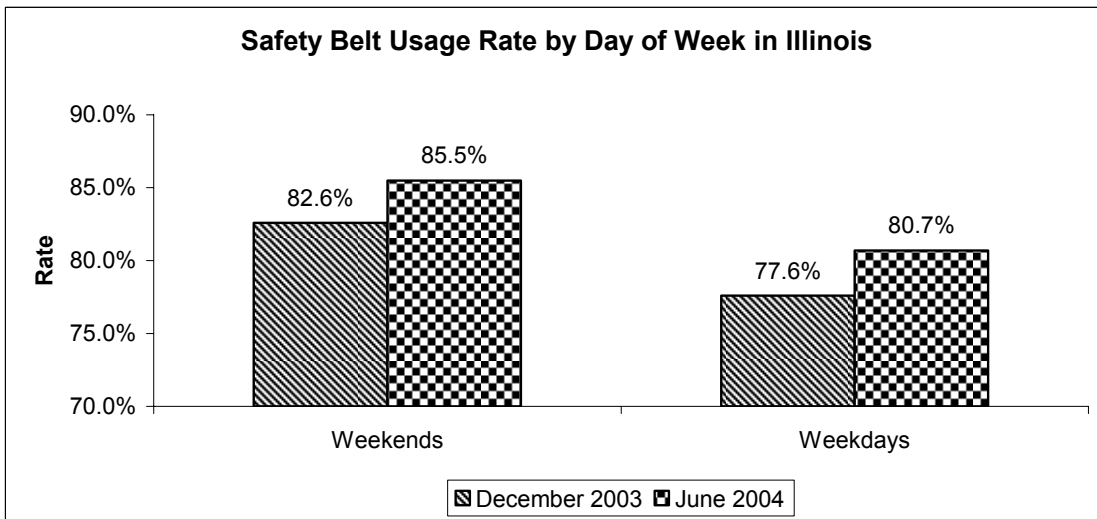
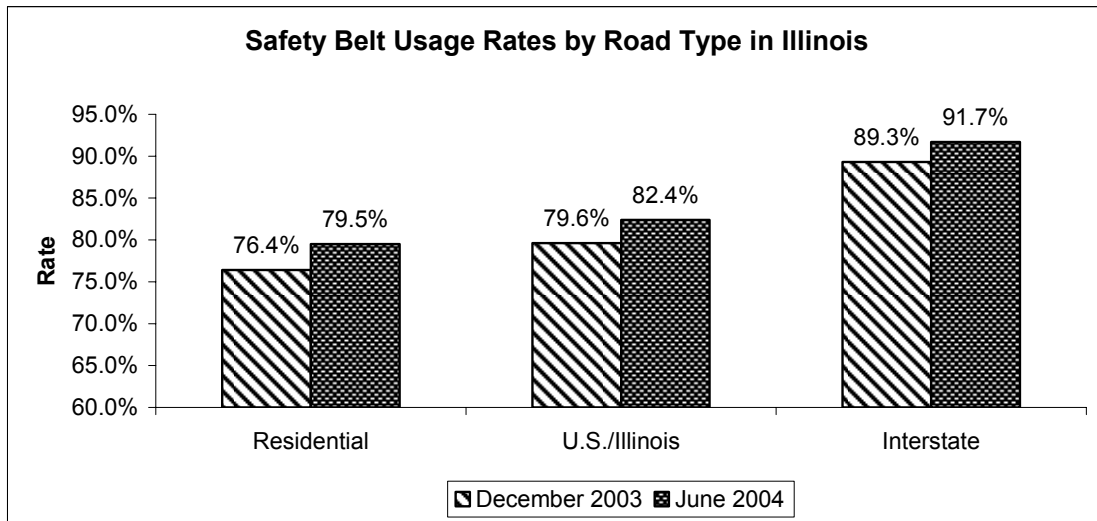
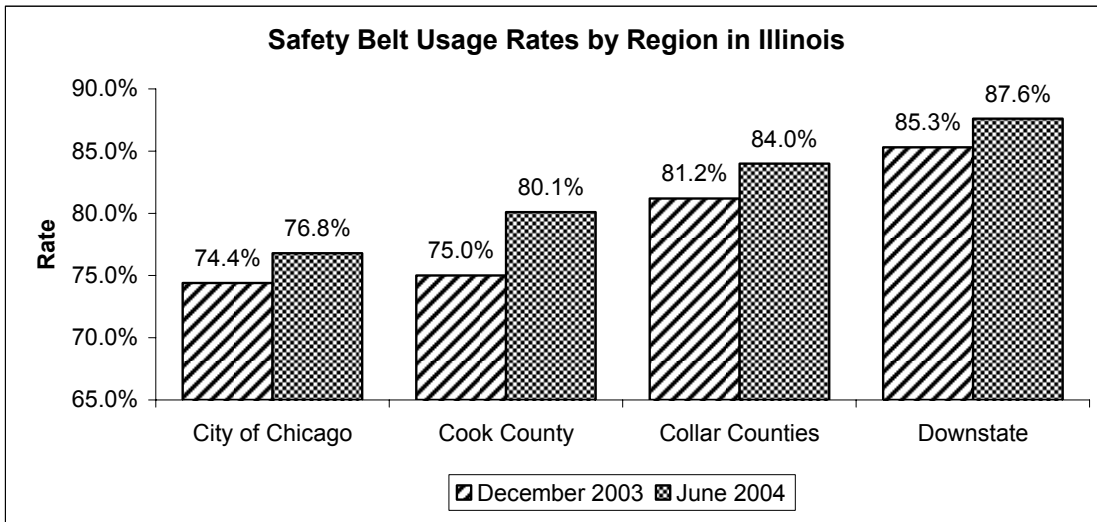


Figure 3
Passenger Car Safety Belt Usage Rates in Illinois in June and December 2003

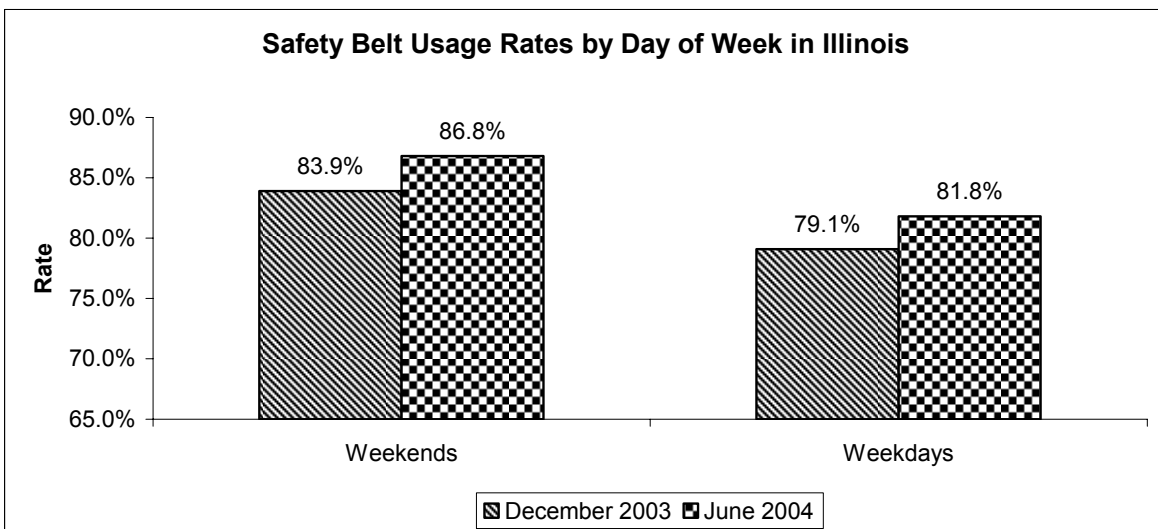
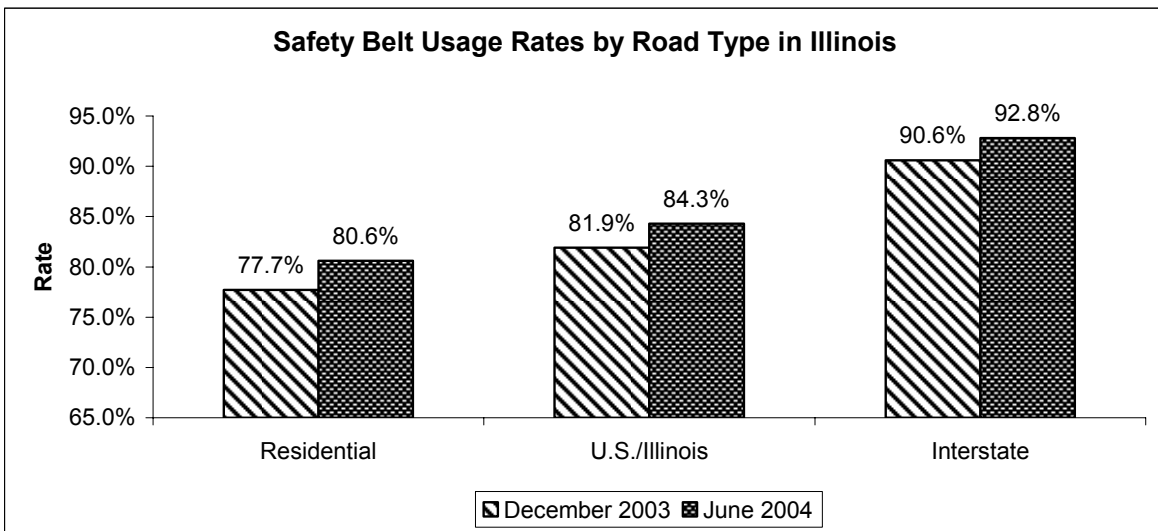
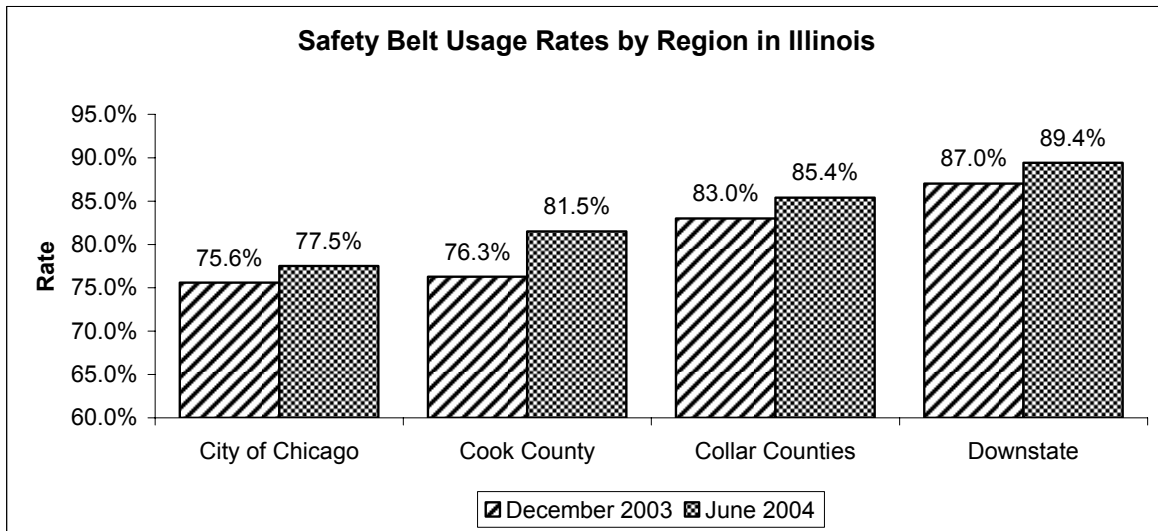


Figure 4
Pickup Truck Safety Belt Usage Rates in Illinois in June and December 2003

