

July 2016

# **Seat Belt Usage in Illinois**

## **June 2016 Observational Survey Results**

Compiled and Prepared by

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# Illinois Department of Transportation

## Division of Transportation Safety

### Evaluation Unit

The Evaluation Unit within the Bureau of Safety Programs and Engineering 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., Local Alcohol Program and STEP 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 seat belt and child safety seat surveys for Illinois. The seat 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 Transportation 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 seat belt usage rates in Illinois using a statistical (multi-stage random) observational survey conducted statewide during June 2016 on both high volume state highways and low volume local roads and residential streets in Illinois. In addition, the report provides seat 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 Safety Programs and Engineering, Illinois Department of Transportation, 2300 North Dirksen Parkway, Springfield, Illinois 62764.

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## Survey Design

The recent seat belt survey was a statistical (multi-stage random) observational survey conducted statewide during June 2016 on both high volume state highways and low volume local roads and residential streets. The survey design was based on the National Highway Traffic Safety Administration (NHTSA)'s Uniform Criteria for State Observational Surveys of Seat Belt Use. This plan is fully compliant with the Uniform Criteria and was used for the implementation of Illinois 2016 seat belt survey. The new plan 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 170,367 front seat occupants observed during the June 2016 observational survey. The survey provided a statistically representative sample of the state as a whole. For more information on survey design, refer to "Seat Belt Use Survey Design for State of Illinois: Sampling, Data Collection and Estimation Plan", Division of Transportation Safety, Illinois Department of Transportation (IDOT), March, 2012.

## Historical Trends

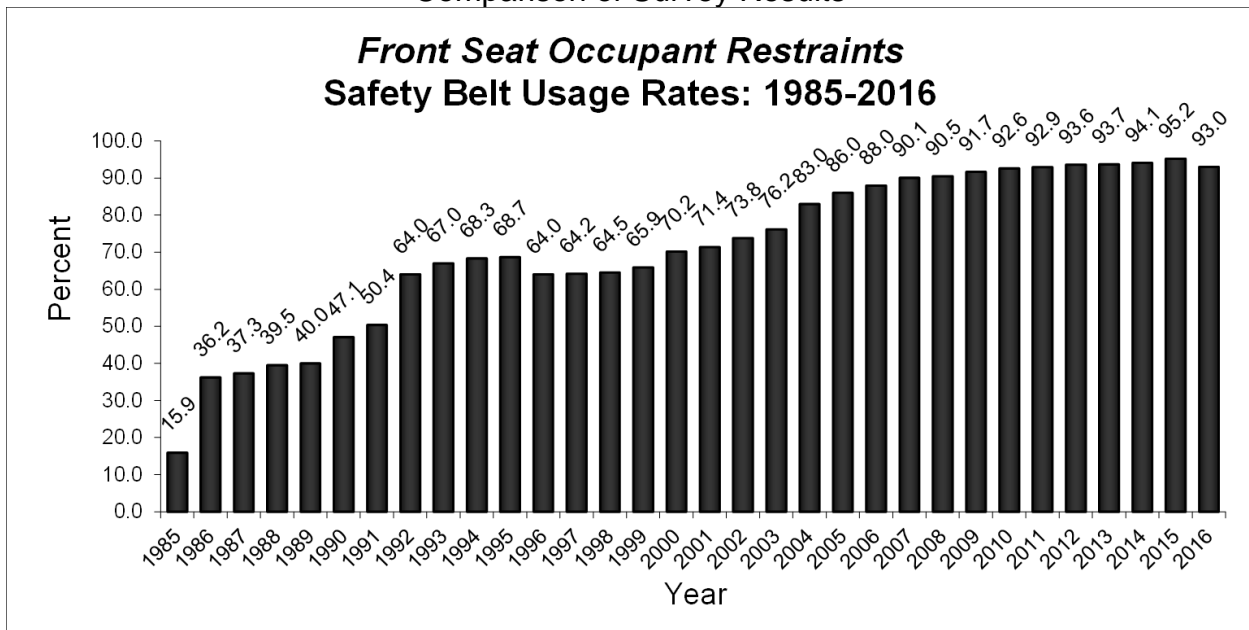
Currently the State of Illinois has a primary belt law, which became effective on July 3<sup>rd</sup>, 2003 after the bill was signed into the law. Under the primary belt law in Illinois, police officers can stop vehicles in which occupants fail to buckle up and issue citations.

The first Illinois seat belt law was passed in January 1985 and became effective July 1<sup>st</sup>, 1985. Originally, the seat belt law specified primary enforcement for front seat occupants of vehicles. Under this law, motor vehicle were required to be equipped with seat 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 seat belt survey was conducted in April 1985, prior to the seat 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 seat 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 seat 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 2015 at a level of 95.2 percent, but in June 2016, it slightly decreased to 93.0 percent. The seat belt usage rate in Illinois has increased almost 80 percentage points since the first survey was conducted in April 1985 (**see Figure 1**). It should be noted that the 1998 through 2016 seat 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 2016 seat belt usage rates include pickup truck drivers and passengers.**

## Summary of Findings

**Tables 1** shows results of the seat belt survey conducted at 288 sites during June 2016. 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 the estimated seat 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 170,367 front seat occupants were observed during the survey. By looking at these tables, the seat usage rate patterns across selected categories for drivers are similar to that for passengers.

**Table 1** shows seat belt use for combined passenger cars and pickup trucks. Of the total of 170,367 front seat occupants observed, 93.0 percent were wearing seat belts. The downstate counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair) had the highest usage rate at 93.8 percent closely followed by the collar counties (DuPage, Kane, Lake, McHenry, and Will) and Cook County at 93.6 percent and 93.0 percent respectively. The city of Chicago had the lowest usage rate at 87.8 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 92.5 percent. Motorists traveling on residential streets had the lowest usage rate at 91.6 percent. The usage rate on weekends was 93.1 percent, while on the weekdays it was slightly lower at 92.7 percent.

**Table 2** and **Figure 2** compare seat belt usage rates from June 2015 to June 2016 and show percent changes among front seat occupants of passenger cars and pickup trucks.

**Table 2** and **Figure 2** show that the overall seat belt usage rate among drivers and front seat passengers decreased by 2.2 percentage points from June 2015 to June 2016. All categories had decreases from 2015 to 2016. The collar counties and Chicago each had decreases of 2.6 percentage points from 2015 to 2016. Cook County had a decrease of 3.3 percentage points, while the downstate counties had a decrease of 3.5 percentage points from 2015 to 2016. Based on road type, from 2015 to 2016, there was no change in the seat belt usage rate on U.S./Illinois Highways. On the other hand, the seat belt use rate on residential roads and Interstate Highways decreased by 0.8 percentage point and 4.4 percentage points, respectively. Based on day of the week, seat belt use decreased by 2.7 percentage points on the weekends and, on the weekdays, it only decreased by 1.1 percentage point.

**Table 1**  
**Overall Seat Belt Usage Rates in Illinois**  
**(June 2016)**

	Drivers		Passengers		Total	
	Total Observed	Estimated Usage Rate	Total Observed	Estimated Usage Rate	Total Observed	Estimated Usage Rate
	(1)	(2)	(3)	(4)	(5)	(6)
<b>Statewide (288)</b>	<b>143,244</b>	<b>93.3%</b>	<b>27,123</b>	<b>91.8%</b>	<b>170,367</b>	<b>93.0%</b>
<b>Regions</b>						
City of Chicago (35)	12,936	89.8%	3,418	81.4%	16,354	87.8%
Cook County (63)	39,278	93.4%	6,754	90.8%	46,032	93.0%
Collar Counties (120)	65,595	93.7%	11,714	93.5%	77,309	93.6%
Downstate (70)	25,435	93.6%	5,237	95.2%	30,672	93.8%
<b>Road Type</b>						
Residential (144)	40,171	92.4%	8,090	87.5%	48,261	91.6%
U.S./Illinois Highways (84)	43,021	93.0%	8,090	90.3%	51,111	92.5%
Interstate Highways (60)	60,052	93.7%	10,943	93.5%	70,995	93.6%
<b>Day of Week</b>						
Weekends (112)	63,213	93.3%	14,462	92.5%	77,675	93.1%
Weekdays (176)	80,031	93.2%	12,661	89.7%	92,692	92.7%

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

**Table 2**  
**Overall Seat Belt Usage Rates in Illinois**  
**(Comparison of June 2015 and June 2016)**

	Drivers			Passengers			Total		
	Usage Rate (2015)	Usage Rate (2016)	Percent Change	Usage Rate (2015)	Usage Rate (2016)	Percent Change	Usage Rate (2015)	Usage Rate (2016)	Percent Change
<b>Statewide (288)</b>	<b>94.9%</b>	<b>93.3%</b>	<b>-1.6%</b>	<b>96.2%</b>	<b>91.8%</b>	<b>-4.4%</b>	<b>95.2%</b>	<b>93.0%</b>	<b>-2.2%</b>
<b>Regions</b>									
City of Chicago (35)	89.7%	89.8%	<b>0.1%</b>	92.7%	81.4%	<b>-11.3%</b>	90.4%	87.8%	<b>-2.6%</b>
Cook County (63)	96.4%	93.4%	<b>-3.0%</b>	95.9%	90.8%	<b>-5.1%</b>	96.3%	93.0%	<b>-3.3%</b>
Collar Counties (120)	95.8%	93.7%	<b>-2.1%</b>	97.4%	93.5%	<b>-3.9%</b>	96.2%	93.6%	<b>-2.6%</b>
Downstate (70)	97.3%	93.6%	<b>-3.7%</b>	97.3%	95.2%	<b>-2.1%</b>	97.3%	93.8%	<b>-3.5%</b>
<b>Road Type</b>									
Residential (144)	92.9%	92.4%	<b>-0.5%</b>	89.8%	87.5%	<b>-2.3%</b>	92.4%	91.6%	<b>-0.8%</b>
U.S./Illinois Highways (84)	92.2%	93.0%	<b>0.8%</b>	94.0%	90.3%	<b>-3.7%</b>	92.5%	92.5%	<b>0.0%</b>
Interstate Highways (60)	97.9%	93.7%	<b>-4.2%</b>	98.3%	93.5%	<b>-4.8%</b>	98.0%	93.6%	<b>-4.4%</b>
<b>Day of Week</b>									
Weekends (112)	95.3%	93.3%	<b>-2.0%</b>	97.3%	92.5%	<b>-4.8%</b>	95.8%	93.1%	<b>-2.7%</b>
Weekdays (176)	94.2%	93.2%	<b>-1.0%</b>	91.3%	89.7%	<b>-1.6%</b>	93.8%	92.7%	<b>-1.1%</b>

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



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

