



**Illinois Department
of Transportation**

TECHNICAL REPORT

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Child Safety Seat Usage in Illinois

July 2011 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., Sustained Traffic Enforcement Program & Local Alcohol Program) 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 a descriptive analysis of child safety seat usage in Illinois. The survey was an observational survey conducted statewide during July 2011 at selected survey locations which included day care centers, health care centers, McDonald's restaurants, and shopping malls. This survey provided a statistically representative sample of child safety seat usage in the state of Illinois.

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 Grand Avenue East, Springfield, Illinois 62702.

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Executive Summary

Using a multi-stage random sampling technique, a total of 2,587 children were observed in 2,034 passenger cars and pickup trucks in Illinois in 2011. There were a total of 119 randomly selected survey locations: 40 day care centers, 11 health care centers, 36 McDonald's restaurants, and 32 shopping malls within 12 selected counties. The counties were grouped into three different regions which included Cook County, the collar counties (DuPage, Kane, Lake, McHenry, and Will), and the downstate counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair).

It should be noted that in 2006, IDOT revised the definition of incorrect child restraint use. An incorrect child restraint use includes seat faces wrong way, harness loose or not used, retainer clip below armpit level, seat not secured, belt across face, and safety belt under arm. As result of this change, the correct restraint usage rate declined significantly. Therefore, comparing the current usage rates to the rates in previous years would not be valid. Here are the findings:

1. During July 2011, a total of 2,587 children were observed in 2,034 passenger cars, pickup trucks, and vans at selected day care centers, McDonald's restaurants, health care centers, and shopping malls across Illinois.
2. The total observed safety seat usage rate was 90.2 percent. When only including the observations where the safety seat was used properly, the usage rate dropped to 48.2 percent.
3. The collar counties had the highest percentage of child restraint use at 94.1 percent. The child safety seat usage rate in the downstate counties and Cook County was 91.1 percent and 87.9 percent respectively. Cook County had the highest percentage of properly restrained children at 52.4 percent. The percentage of properly restrained children in the collar counties and downstate counties was 51.0 percent and 34.0 percent respectively.
4. Shopping malls had the highest percentage of children who were restrained at 93.2 percent. The child safety seat usage rate at health care centers was 90.6 percent. The child safety seat usage rate at day care centers and McDonald's restaurants was 90.8 percent and 85.6 percent respectively. Based on proper child safety seat use, shopping malls had the highest percentage of properly restrained children at 54.6 percent. The child safety seat usage rate at day care centers and McDonald's restaurants malls was 47.6 percent and 41.9 percent respectively. Health care centers had the lowest percentage of properly restrained children at 40.2 percent.
5. Vans had the highest percentage of children who were restrained and properly restrained at 91.2 percent and 53.9 percent respectively. In automobiles, the percentage of children who were restrained and properly restrained was 91.2 percent and 48.5 percent respectively. The child safety seat usage rate for pickup trucks was 65.7 percent. When excluding incorrect use, the child safety seat usage rate in pickup trucks was 23.8 percent.
6. When a female was driving, over 91 percent of children (91.7 percent) were restrained and 50.3 percent of children were properly restrained. When a male was driving, over 87 percent (87.3 percent) of children were restrained and only 45.1 percent of children were properly restrained.

7. When drivers were wearing their safety belt, almost 95 percent of children were restrained. When excluding incorrect use, only 53.1 percent of these children were properly restrained. On the other hand, unbelted drivers tend to have significantly lower child restraint usage rates than belted drivers. When a driver was not wearing their safety belt, only 56.0 percent of children were restrained. When excluding incorrect use, only 9.7 percent of these children were properly restrained.
8. The total usage rate from 2001 thru 2011 increased significantly by 12.2 percentage points from 78.0 percent in 2001 to 90.5 percent in 2011. The rate of increase ranges from 9.5 percent for vehicle with one child to 72.7 percent for vehicles with four children.
9. Since IDOT revised the definition of correct child safety seat use in 2006, it would not be valid to compare the usage rate during the current years (2006-2011) to the years prior to 2006. The correct usage rate of restrained children decreased by 5.7 percentage points from 53.9 percent in 2006 to 48.2 percent in 2011.

Observational Survey

Using a multi-stage random sampling technique, a total of 2,587 children were observed in 2,034 passenger cars and pickup trucks in Illinois in 2011. There were a total of 119 randomly selected survey locations: 40 day care centers, 11 health care centers, 36 McDonald's restaurants, and 32 shopping malls within 12 selected counties. The counties were grouped into three different regions which included Cook County, the collar counties (DuPage, Kane, Lake, McHenry, and Will), and the downstate counties (Champaign, Macon, Montgomery, Peoria, Rock Island, and St. Clair). The survey design had four characteristics:

1. The survey was conducted between 6:30 a.m. and 6:00 p.m. when the light was adequate for observation.
2. The survey was restricted to a total of 30 observations or an hour of observation per site.
3. The survey was conducted at the exit/entrance of selected locations.
4. The survey included the following common misuses of child safety seats:
 - Safety Belt Not Positioned Properly
 - Harness Loose
 - Inappropriate Seat Selection
 - Seat Not Secured to Vehicle
 - Tether Not Used for Forward Facing
 - Retainer Clip Too Low
 - Harness Not Used
 - Seat Faces Wrong Way
 - Other

It should be noted that based on the comments we received from the child safety seat surveyors, we revised the definition of an incorrect child restraint use twice during the past six years (2006 and 2011). As a result of the changes in 2006, the correct restraint usage rate declined significantly. Therefore comparing the current usage rates to the rates prior to 2006 would not be valid. The main change in 2011 was only to redefine some the incorrect use items for each child. It should be noted that the redefining of the incorrect use in 2011 did not have any negative effect on the correct use rate. A copy of the data collection form is included in **Appendix A**.

For more information on the design of the survey refer to "Design of the Child Safety Seat Survey", Division of Traffic Safety, Illinois Department of Transportation (IDOT), June 1996.

Results of Child Safety Seat Survey in Illinois

Tables 1 through 8 provide descriptive information on the child safety seat usage rate and its correlates, such as gender of driver, belt status of driver, location type, region, and vehicle type in 2011.

Table 1 shows that the overall child restraint usage rate in Illinois is 90.2 percent. After excluding total number of observations in which the child restraint is used incorrectly, the usage rate is reduced to 48.2 percent. As was expected, child safety restraint usage rates are inversely related to the number of children in the car. It is likely to see usage rates decrease as the number of children in the vehicle increase. The usage rate and correct usage rate for Child 1 are 90.5 percent and 48.4 percent respectively. On the other hand, these percentages are lower for Child 3 at 83.9 percent and 41.1 percent respectively.

Table 1: 2011 Child Safety Seat Usage Rate in Illinois

Seating Position	No Restraint	Incorrect Use	Correct Use	Total Observed	Usage Rate Total	Usage Rate (excludes incorrect use)
Child 1	194	856	984	2,034	90.5%	48.4%
Child 2	50	203	241	494	89.9%	48.8%
Child 3	9	24	23	56	83.9%	41.1%
Child 4	0	3	0	3	100.0%	0.0%
Total	253	1,086	1,248	2,587	90.2%	48.2%

Note: Common incorrect child safety seat use include Safety Belt Not Positioned Properly, Harness Loose, Inappropriate Seat Selection, Seat Not Secured to Vehicle, Tether Not Used for Forward Facing, Retainer Clip Too Low, Harness Not Used, Seat Faces Wrong Way

Table 2 shows frequency and percent distributions of types of incorrect use. As shown in this table, there were over 1,510 incorrect use items. The most common incorrect use items were safety belt not positioned properly (26.5%), harness loose (17.7%), inappropriate seat selection (14.2%), and seat not secured to vehicle (13.8%). The average incorrect use was 1.4 per child.

Table 3 presents frequency and percentage distributions for selected demographics, including type of vehicle, driver's gender, driver's belt status, and total vehicles observed by site type. As

expected, the largest percentage of vehicles observed were automobiles (81.2 percent). The percentage of vans and trucks observed were 14.6 percent and 4.3 percent respectively. Based on driver's gender, almost 63 percent of the drivers observed were female, while only 37.4 percent of the observations were male. Based on driver's belt status, almost 90 percent of drivers were observed wearing their seat belts, while the remaining 10.5 percent were unbelted. Based on location type, the largest percentage of vehicles was observed at shopping malls (41.0 percent). Twenty-eight percent of the vehicles were observed at McDonald's restaurants and 24.0 percent were observed at day care centers. The smallest percentage of vehicles was observed at health care centers (7.0 percent).

Table 2: Distribution of Incorrect Uses of Child Safety Seats

Forms of Incorrect Use	Frequency	Percentage Distribution
Safety Belt Not Positioned Properly	400	26.49%
Harness Loose	267	17.68%
Inappropriate Seat Selection	214	14.17%
Seat Not Secured to Vehicle	208	13.77%
Tether Not Used for Forward Facing	123	8.15%
Other	110	7.28%
Retainer Clip Too Low	82	5.43%
Harness Not Used	55	3.64%
Seat Faces Wrong Way	51	3.38%
Total	1,510	100.00%

Table 3: Frequency and Percentage Distributions of Selected Demographics for the 2011 Child Safety Seat Survey

Type of Vehicle		
	Frequency	Percentage
Automobile	1,642	81.2%
Truck	86	4.3%
Van	295	14.6%
TOTAL	2,023	100.0%
Driver's Gender		
	Frequency	Percentage
Female	1,262	62.6%
Male	755	37.4%
TOTAL	2,017	100.0%
Driver's Belt Status		
	Frequency	Percentage
Belted	1,782	89.6%
Not Belted	208	10.4%
TOTAL	1,990	100.0%
Total Vehicles Observed by Location Type		
	Frequency	Percentage
Daycare	488	24.0%
Health Center	143	7.0%
McDonald's	570	28.0%
Shopping Mall	833	41.0%
TOTAL	2,034	100.0%
TOTAL	2,034	100.0%

*Note: The Totals are different for each demographic due to missing values. Due to rounding error, percentages may not equal 100 percent.

Table 4 shows frequency and percentage distributions of child restraint use by selected regions of Illinois (collar counties, Cook County, and downstate counties). The collar counties had the highest percentage of child restraint use at 94.1 percent. The child safety seat usage rate in the downstate counties and Cook County was 91.1 percent and 87.9 percent respectively. Cook County had the highest percentage of properly restrained children at 52.4 percent. The percentage of properly restrained children in the collar counties was 51.0 percent. The downstate counties had the lowest percentage of properly restrained children at 34.0 percent.

**Table 4: Analysis of the 2011 Child Safety Seat Survey
Child Restraint Status by Region**

Child Restraint Status	Region						Totals	
	Collar Counties**		Cook County		Downstate Counties***			
	N	%	N	%	N	%	N	%
Properly Restrained	362	51.0%	707	52.4%	179	34.0%	1,248	48.2%
Incorrectly Restrained	306	43.1%	479	35.5%	301	57.1%	1,086	42.0%
Total Restrained*	668	94.1%	1,186	87.9%	480	91.1%	2,334	90.2%
Not Restrained	42	5.9%	164	12.1%	47	8.9%	253	9.8%
<i>Column Totals</i>	710	100.0%	1,350	100.0%	527	100.0%	2,587	100.0%

* The row 'Total Restrained' is the sum of the cases from the rows 'Properly Restrained' and 'Incorrectly Restrained'

** The collar counties are comprised of DuPage, Kane, Lake, McHenry, & Will

*** The downstate counties are comprised of Champaign, Macon, Montgomery, Peoria, Rock Island, & St. Clair

Table 5 provides information on child restraint usage rates by location type. The location types included day care centers, health care centers, McDonald's restaurants, and shopping malls. Shopping malls had the highest percentage of children who were restrained at 93.2 percent. The child safety seat usage rate at health care centers was 90.8 percent. The child safety seat usage rate at day care centers and McDonald's restaurants was 90.6 percent and 85.6 percent respectively. Based on proper child safety seat use, shopping malls had the highest percentage of properly restrained children at 54.6 percent. The percentage of properly restrained children at day care centers and McDonald's restaurants was 47.6 percent and 41.9 percent respectively. Health care centers had the lowest percentage of properly restrained children at 40.2 percent.

**Table 5: Analysis of the 2011 Child Safety Seat Survey
Child Restraint Status by Location Type**

Child Restraint Status	Location Type								Totals	
	Day Care Center		Health Care Center		McDonald's		Shopping Mall			
	N	%	N	%	N	%	N	%	N	%
Properly Restrained	310	47.6%	70	40.2%	312	41.9%	556	54.6%	1,248	44.9%
Incorrectly Restrained	280	43.0%	88	50.6%	325	43.7%	393	38.6%	1,086	47.9%
Total Restrained*	590	90.6%	158	90.8%	637	85.6%	949	93.2%	2,334	92.8%
Not Restrained	61	9.4%	16	9.2%	107	14.4%	69	6.8%	253	7.2%
<i>Column Totals</i>	651	100.0%	174	100.0%	744	100.0%	1,018	100.0%	2,587	100.0%

* The row 'Total Restrained' is the sum of the cases from the rows 'Properly Restrained' and 'Incorrectly Restrained'

Table 6 shows child restraint use by vehicle type, including automobiles, pickup trucks, and vans. Vans had the highest percentage of children who were restrained and properly restrained at 91.2 percent and 53.9 percent respectively. Slightly more than 91 percent of children in automobiles were restrained. When excluding incorrect use, the child safety seat usage rate in automobiles was 48.5 percent. The child safety seat usage rate for pickup trucks was 65.7 percent. When excluding incorrect use, the child safety seat usage rate in pickup trucks was 23.8 percent.

**Table 6: Analysis of the 2011 Child Safety Seat Survey
Child Restraint Status by Vehicle Type**

Child Restraint Status	Vehicle Type						Totals**	
	Automobile		Truck		Van			
	N	%	N	%	N	%	N	%
Properly Restrained	998	48.5%	25	23.8%	221	53.9%	1,427	48.4%
Incorrectly Restrained	877	42.7%	44	41.9%	153	37.3%	1,520	41.8%
Total Restrained*	1,875	91.2%	69	65.7%	374	91.2%	2,947	90.2%
Not Restrained	181	8.8%	36	34.3%	36	8.8%	229	9.8%
<i>Column Totals</i>	2,056	100.0%	105	100.0%	410	100.0%	3,176	100.0%

* The row 'Total Restrained' is the sum of the cases from the rows 'Properly Restrained' and 'Incorrectly Restrained'

** The total does not equal 2,587 cases due to missing data.

Table 7 shows that male and female drivers have similar child safety seat usage rates. When a female was driving, almost 92 percent of children (91.7 percent) were restrained and only 50.3 percent of children were properly restrained. When a male was driving, only 87.3 percent of children were restrained and only 45.1 percent of children were properly restrained.

**Table 7: Analysis of the 2011 Child Safety Seat Survey
Child Restraint Status by Driver's Gender**

Child Restraint Status	Driver's Gender				Totals**	
	Male		Female		N	%
	N	%	N	%		
Properly Restrained	426	45.1%	810	50.3%	1,236	48.4%
Incorrectly Restrained	398	42.2%	667	41.4%	1,065	41.7%
Total Restrained*	824	87.3%	1,477	91.7%	2,301	90.1%
Not Restrained	120	12.7%	133	8.3%	253	9.9%
<i>Column Totals</i>	944	100.0%	1,610	100.0%	2,554	100.0%

* The row 'Total Restrained' is the sum of the cases from the rows 'Properly Restrained' and 'Incorrectly Restrained'

** The total does not equal 2,587 cases due to missing data.

Table 8 shows frequency and percentage distributions of child restraint use by driver's belt status. As indicated earlier (see **Table 3**), almost 90 percent of all drivers observed with children in their vehicles were wearing their safety belts (1,782 belted drivers divided by 1,990 total observations multiplied by 100 percent). Belted drivers have significantly higher child safety seat usage rates and proper child safety seat usage rates than unbelted drivers. When a driver was wearing their safety belt, almost 95 percent of children were restrained. When excluding incorrect use, only 53.1 percent of these children were properly restrained. On the other hand, unbelted drivers tend to have significantly lower child restraint usage rates than belted drivers. When a driver was not wearing their safety belt, only 56.0 percent of children were restrained. When excluding incorrect use, only 9.7 percent of these children were properly restrained.

**Table 8: Analysis of the 2011 Child Safety Seat Survey
Child Restraint Status by Driver's Belt Status**

Child Restraint Status	Driver's Belt Status				Totals**	
	Driver Belted		Driver Unbelted		N	%
	N	%	N	%		
Properly Restrained	1,201	53.1%	26	9.7%	1,227	48.5%
Incorrectly Restrained	930	41.2%	124	46.3%	1,054	41.7%
Total Restrained*	2,131	94.3%	150	56.0%	2,281	90.2%
Not Restrained	129	5.7%	118	44.0%	247	9.8%
<i>Column Totals</i>	2,260	100.0%	268	100.0%	2,528	100.0%

* The row 'Total Restrained' is the sum of the cases from the rows 'Properly Restrained' and 'Incorrectly Restrained'

** The total does not equal 2,587 cases due to missing data.

Historical Trends of Child Safety Seat Use

Tables 9 and 10 show historical trends on child safety seat use. **Table 9** provides information about total child restraint usage rates for 2001 thru 2011. As shown in this table, the total usage rate increased significantly by 12.2 percentage points from 78.0 percent in 2001 to 90.5 percent in 2011. The rate of increase ranges from 9.5 percent for vehicle with one child to 72.7 percent for vehicles with four children. In 2010, the total usage rate peaked at 92.8 percent.

Table 10 provides information about the correct usage rate of restrained children for only 2006 thru 2011 eliminating years prior to 2006. As indicated earlier, since IDOT revised the definition of correct child safety seat use in 2006, it would be incorrect to compare the usage rate during the current years (2006-2011) to the years prior to 2006. As shown in this table, the correct usage rate of restrained children decreased by 5.7 percentage points from 53.9 percent in 2006 to 48.2 percent in 2011. The correct usage rate increased from 44.9 percent in 2010 to 48.2 percent in 2011.

Table 11 shows comparative analyses of child safety seat usage rates for 2001 through 2011. The data was analyzed by selected demographics including region, location, vehicle type, driver's gender, and driver's belt status. The information in **Table 10** is displayed in graphic presentations of child safety seat usage rates by selected demographics in **Figures 1 through 5**. The percent change in **Table 10** is calculated by subtracting the 2001 usage rates from the 2011 usage rates.

Figure 1 shows the total usage rate of restrained children by the selected regions in Illinois. From 2001 to 2011, all regions noticed increases in child safety seat use. From 2010 to 2011, there was a slight decrease in the usage rate across the collar counties and Cook County. The child safety seat usage rate in the collar counties increased from 71.5 percent in 2001 to 94.1 percent in 2011. In the downstate counties, the child safety seat usage rates increased from 77.2 percent in 2001 to 91.1 percent in 2011. In Cook County, the child safety seat usage rate increased from 81.2 percent in 2001 to 87.9 percent in 2011.

Figure 2 shows the total child safety seat usage rate by location type in Illinois. From 2001 to 2011, the total usage rate of restrained children increased at all location types. From 2010 to 2011, there was a slight decrease in the usage rates across all location types. The total usage

rate at McDonald's increased from 67.6 percent in 2001 to 85.6 percent in 2011. The total usage rate at health care centers increased from 74.3 percent in 2001 to 90.8 percent in 2011. The total usage rate for shopping malls increased from 81.8 percent in 2001 to 93.2 percent in 2011. The total usage rate at day care centers increased from 83.7 percent in 2001 to 90.6 percent in 2011.

Figure 3 shows the total usage rate of restrained children by vehicle type in Illinois. From 2001 to 2011, the total usage rate increased in automobiles and vans. While the total usage rate increased in pickup trucks from 2001 through 2010, the 2011 usage rate numbers were influenced by significantly lower observations of pickup trucks. In automobiles, the total usage rate of restrained children increased by 15.2 percentage points (an increase from 76.0 percent in 2001 to 91.2 percent in 2011). In vans, the total usage rate of restrained children increased from 82.0 percent in 2001 to 91.2 percent in 2011. In pickup trucks, the total usage rate of restrained children increased by 10.1 percentage points (an increase from 80.8 percent in 2001 to 90.9 percent in 2010). During 2011, due to significantly low observations of pickup trucks, the total usage rate of restrained children was 65.7 percent.

Figure 4 shows the total usage rate of restrained children by driver's gender in Illinois. From 2001 to 2011, the total usage rate of restrained children for male drivers increased by 13.8 percentage points and for female drivers it increased by 11.3 percentage points.

Figure 5 shows the total usage rate of restrained children by the driver's belt status across selected years in Illinois. As was expected, the usage rates of child seats were significantly higher for belted drivers than for unbelted drivers. The child safety seat usage rate for belted drivers slightly increased by 3.1 percentage points from 2001 through 2011. The total child safety seat usage rate for unbelted drivers gradually increased from 51.8 percent in 2001 to 65.7 percent in 2009. In 2010, the total child safety seat usage rate increased to 81.9 percent, but, in 2011, it came back down to 56.0 percent. The usage rates for unbelted drivers should be approached with caution due to the low number of observations of vehicles with unbelted drivers.

TABLE 9
Total Child Safety Seat Usage Rates in Illinois
(2001-2011)

Child Number	Total Usage Rate of Restrained Children									Percent Change* (2001-2011)
	Total Use (2001)	Total Use (2003)	Total Use (2005)	Total Use (2006)	Total Use (2007)	Total Use (2008)	Total Use (2009)	Total Use (2010)	Total Use (2011)	
Statewide	78.0%	83.0%	87.7%	85.4%	87.2%	87.7%	90.7%	92.8%	90.2%	12.2%
Child #										
Child 1	81.0%	85.3%	89.4%	87.4%	88.8%	90.5%	92.1%	93.1%	90.5%	9.5%
Child 2	74.5%	80.0%	85.3%	79.7%	84.2%	84.7%	88.3%	93.1%	89.9%	15.4%
Child 3	51.1%	64.9%	75.0%	76.5%	75.8%	63.0%	78.4%	82.8%	83.9%	32.8%
Child 4	27.3%	50.0%	60.0%	72.7%	60.0%	50.0%	45.5%	71.4%	100.0%	72.7%

* Percent change was calculated by subtracting the 2001 Total Usage Rate from the 2011 Total Usage Rate.

TABLE 10
Correct Child Safety Seat Usage Rates in Illinois
(2006-2011)

Child Number	Correct Usage Rate of Restrained Children (excludes Incorrect Use)						Percent Change* (2006-2011)
	Proper Use (2006)	Proper Use (2007)	Proper Use (2008)	Proper Use (2009)	Proper Use (2010)	Proper Use (2011)	
Statewide	53.9%	53.6%	56.4%	47.7%	44.9%	48.2%	-5.7%
Child #							
Child 1	55.3%	54.2%	56.9%	47.7%	43.5%	48.4%	-6.9%
Child 2	51.7%	54.1%	58.6%	50.0%	52.6%	48.8%	-2.9%
Child 3	38.3%	37.4%	38.0%	35.2%	20.4%	41.1%	2.8%
Child 4	36.4%	33.3%	32.1%	0.0%	0.0%	0.0%	-36.4%

* Percent change was calculated by subtracting the 2006 Proper Usage Rate from the 2011 Proper Usage Rate.

Table 11
Total Child Safety Seat Usage Rates in Illinois
by Selected Characteristics
(2001-2011)

	Total Usage Rate of Restrained Children									
	Usage Rate 2001	Usage Rate 2003	Usage Rate 2005	Usage Rate 2006	Usage Rate 2007	Usage Rate 2008	Usage Rate 2009	Usage Rate 2010	Usage Rate 2011	Percent Change*
Statewide	78.0%	83.0%	87.7%	85.4%	87.2%	87.7%	90.7%	92.8%	90.2%	12.2%
Region										
Cook County	81.2%	85.2%	90.3%	82.4%	84.1%	85.2%	90.6%	90.9%	87.9%	9.7%
Collar Counties	71.5%	82.4%	87.3%	88.0%	93.4%	94.4%	93.5%	96.9%	94.1%	25.4%
Downstate Counties	77.2%	78.9%	81.5%	86.7%	86.9%	85.5%	87.3%	90.4%	91.1%	13.2%
Location										
Day Care Center	83.7%	87.0%	94.1%	85.5%	86.6%	88.4%	89.5%	90.7%	90.6%	7.0%
Health Center	74.3%	79.2%	84.2%	82.5%	90.7%	88.3%	85.2%	92.8%	90.8%	18.5%
McDonald's	67.6%	79.2%	83.9%	80.1%	83.1%	83.5%	87.9%	90.6%	85.6%	23.0%
Shopping Mall	81.8%	83.2%	86.6%	89.4%	90.7%	90.7%	94.8%	96.2%	93.2%	14.4%
Vehicle Type										
Automobile	76.0%	82.9%	88.0%	84.6%	87.2%	86.8%	90.5%	92.8%	91.2%	16.8%
Truck	80.8%	75.7%	87.1%	79.4%	79.4%	84.2%	88.2%	90.9%	65.7%	10.1%
Van	82.0%	85.4%	92.2%	88.8%	88.6%	92.3%	93.0%	94.5%	91.2%	12.5%
Gender										
Male	73.5%	81.8%	86.3%	80.0%	86.4%	85.9%	90.5%	92.2%	87.3%	18.7%
Female	80.4%	83.7%	88.6%	87.6%	87.6%	88.7%	90.9%	93.1%	91.7%	12.7%
Driver's Belt Status										
Belted	91.2%	94.0%	95.9%	91.6%	92.2%	92.7%	95.1%	94.6%	94.3%	3.4%
Unbelted	51.8%	57.1%	62.6%	62.4%	68.1%	66.8%	65.7%	81.9%	56.0%	30.1%

* Percent Change is calculated by subtracting the 2001 usage rates from the 2011 usage rates.

Figure 1: Total Child Safety Seat Usage Rates by Region in Illinois Across Selected Years

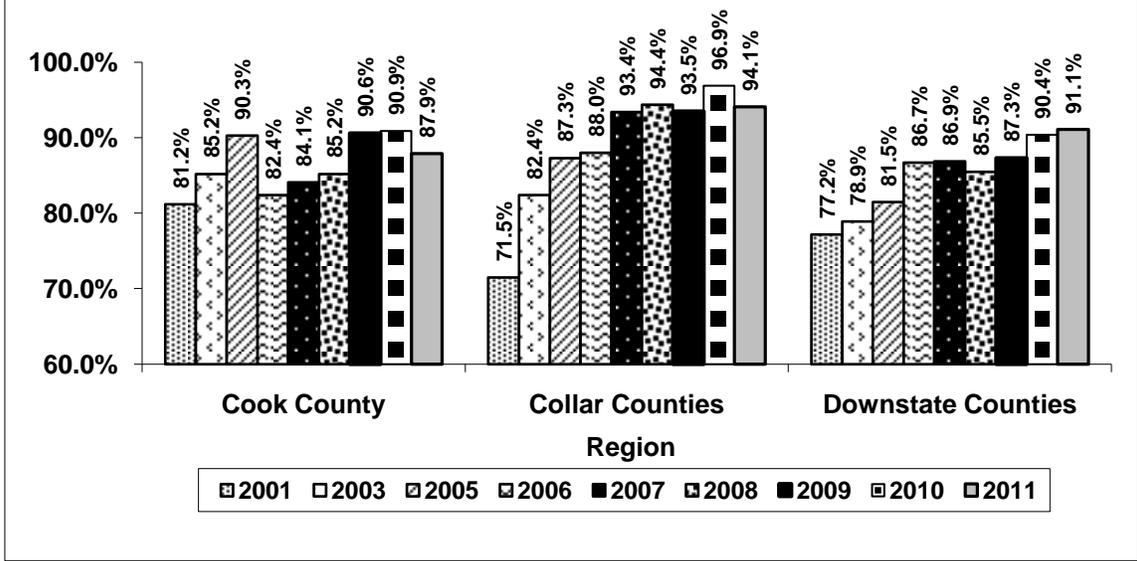


Figure 2: Total Child Safety Seat Usage Rates by Location Type in Illinois Across Selected Years

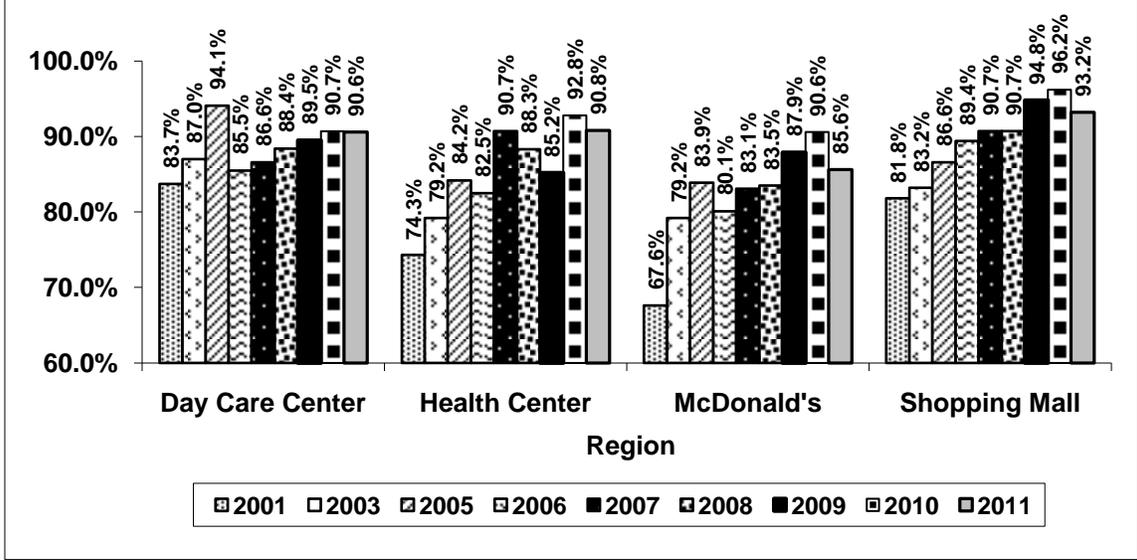


Figure 3: Total Child Safety Seat Usage Rates by Vehicle Type in Illinois Across Selected Years

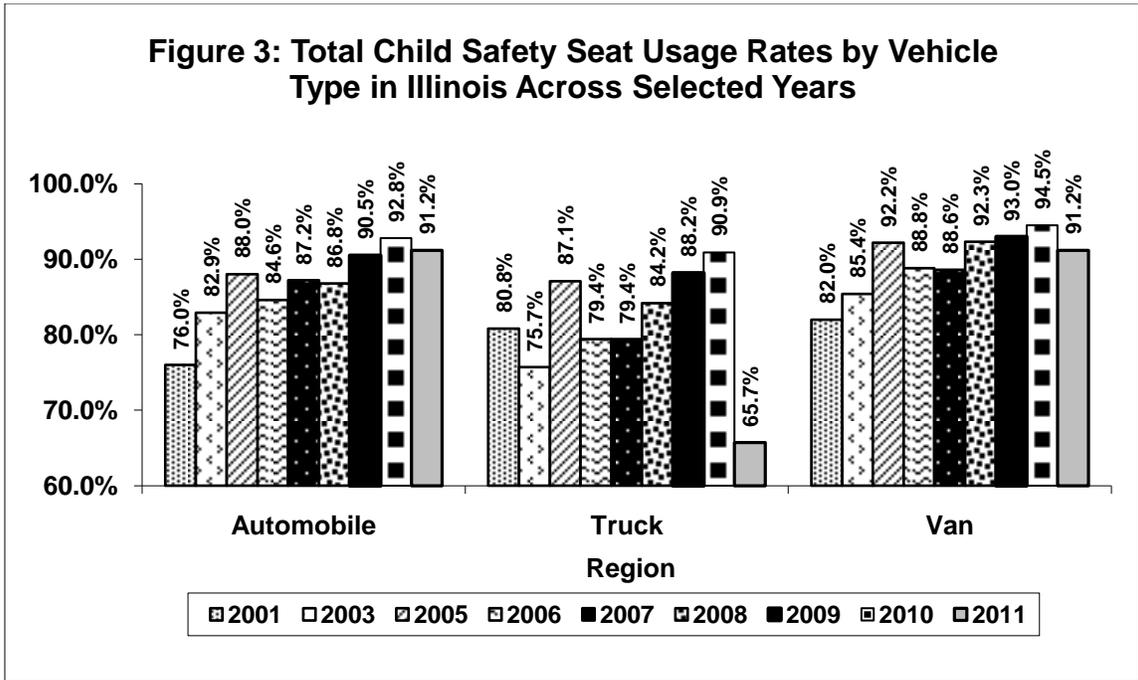


Figure 4: Total Child Safety Seat Usage Rates by Driver's Gender in Illinois Across Selected Years

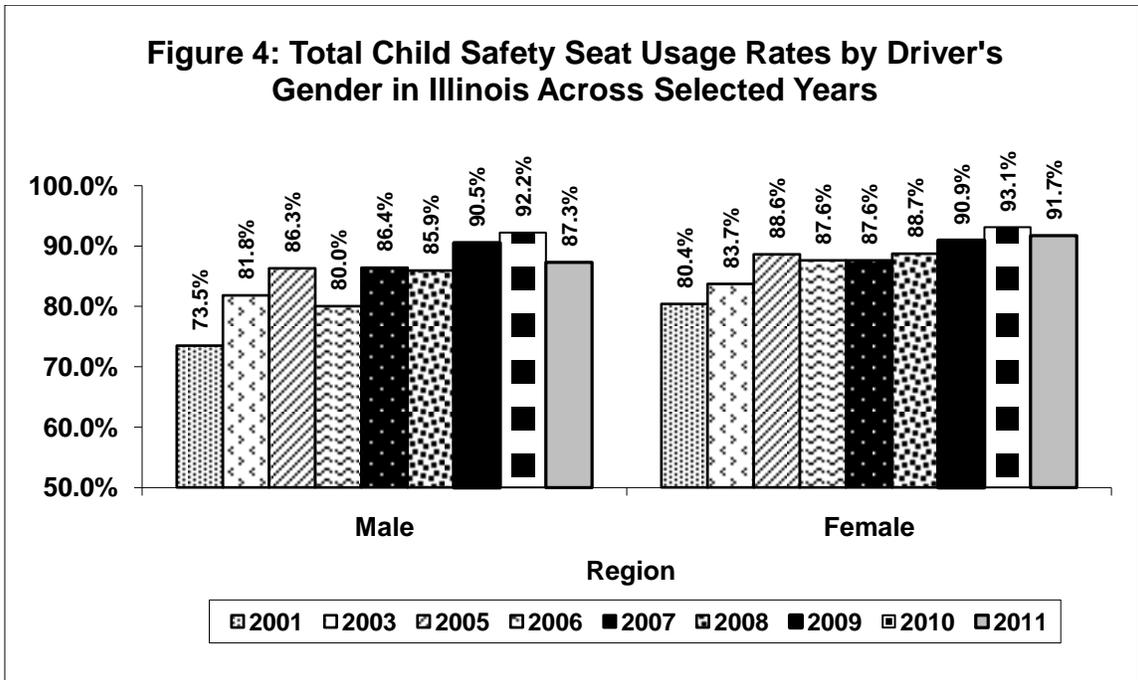
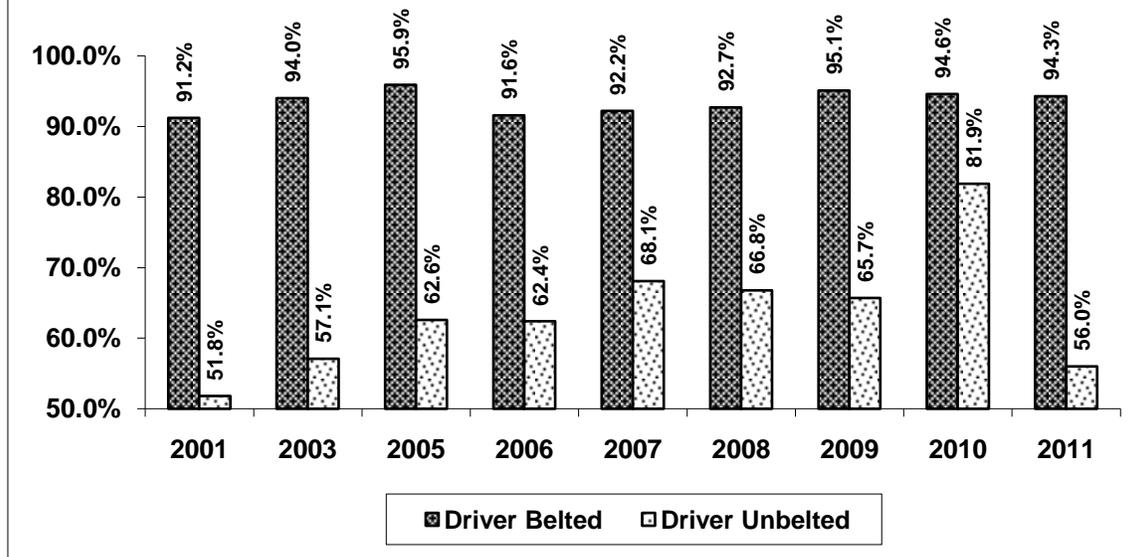


Figure 5: Total Child Safety Seat Usage Rates by Driver's Belt Status in Illinois Across Selected Years



APPENDIX A
Child Restraint Data Collection Observational Survey



Child Restraint Data Collection Observational Survey

Date: _____

Day of Week: _____

Starting Time: _____

Case: _____

Ending Time: _____

Site: _____

Location: _____

County: _____

Vehicle Type

- 1. Automobile / SUV
- 2. Truck
- 3. Van

Driver Gender

- 1. Female
- 2. Male

Driver Belt Use

- 1. Belted
- 2. Unbelted

18

CHILD #1																									
<p><u>Overall Restraint Use</u></p> <table style="width: 100%;"> <tr> <td style="width: 15%;">Correct</td> <td style="width: 15%;">Incorrect*</td> <td style="width: 15%;">Seat Type</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>1. Infant</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>2. Convertible</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>3. Booster</td> <td></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>4. Belt</td> <td></td> </tr> <tr> <td></td> <td><input type="checkbox"/></td> <td>5. No Restraint</td> <td></td> </tr> </table> <p style="text-align: center;"><u>Age of Child</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Under 1 year <input type="checkbox"/> 2. 1 - 4 year <input type="checkbox"/> 3. 5 - 8 year 	Correct	Incorrect*	Seat Type		<input type="checkbox"/>	<input type="checkbox"/>	1. Infant		<input type="checkbox"/>	<input type="checkbox"/>	2. Convertible		<input type="checkbox"/>	<input type="checkbox"/>	3. Booster		<input type="checkbox"/>	<input type="checkbox"/>	4. Belt			<input type="checkbox"/>	5. No Restraint		<p>If incorrect use, select one or more of the following:</p> <ul style="list-style-type: none"> <input type="checkbox"/> 1. Inappropriate seat selection <input type="checkbox"/> 2. Seat faces wrong way <input type="checkbox"/> 3. Seat not secured to vehicle <input type="checkbox"/> 4. Tether not used for forward facing <input type="checkbox"/> 5. Harness not used <input type="checkbox"/> 6. Harness loose <input type="checkbox"/> 7. Retainer clip too low <input type="checkbox"/> 8. Safety belt not positioned properly <input type="checkbox"/> 9. Other (please specify): _____
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CHILD #3																									
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CHILD #2																									
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CHILD #4																									
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