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# NEW YORK STATE

## 2021 Observational Survey of Seat Belt Use

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New York State Governor's Traffic Safety Committee  
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Albany, New York 12228



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## 2021 OBSERVATIONAL SURVEY OF SEAT BELT USE

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### INTRODUCTION

New York's seat belt law, first implemented on December 1, 1984, was recently amended to require universal coverage of all motor vehicle occupants. Effective November 1, 2020, *no person sixteen years of age or over shall be a passenger in a motor vehicle unless restrained by a safety belt approved by the Commissioner of Motor Vehicles*. Prior to this date, passengers 16 years of age and older riding in the rear seat were exempt from the state's seat belt law. The new law also extends mandatory seat belt use to all backseat passengers in a taxi or livery and requires all passengers ages 8-15 to be restrained by a seat belt. Since November 1, 2017, seat belt use has been required for the driver and each front seat passenger age 16 or older riding in one of these vehicles.

Earlier amendments to the original law expanded the requirements regarding safety restraint use by young passengers. Since November 2009, children riding in a motor vehicle are required to remain in a safety restraint appropriate for their age, until they reach the age of eight. The Governor's Traffic Safety Committee's child passenger safety program promotes keeping all children in child restraints, regardless of age, until they are 4'9" tall and weigh 100 pounds or more.

Primary enforcement is allowed under New York's law and a fine of up to \$50.00 is imposed for violations of the law pertaining to occupants age 16 and over. A fine of not less than \$25.00 nor more than \$100.00 is assessed for violations involving occupants under age 16. Seat belt use is not required in emergency vehicles or by passengers in buses other than school buses (seat belt use may be required by the school district). Rural mail carriers in the process of delivering the mail are also excluded.

Since 1984, New York State has conducted statewide observational surveys of seat belt use. With few exceptions, the statewide use rate has risen steadily each year. Based on this year's survey conducted June 7-19, 2021, New York's seat belt compliance rate dropped slightly to 93% from 94% in 2019.

The 2021 New York State observational survey of seat belt use was conducted using the design that was approved by NHTSA in 2012. In accordance with federal regulations, the 2021 survey was conducted using the 2018 sites that were selected using the same methodology as the original sites. Adhering to the Uniform Criteria for State Observational Surveys of Seat Belt Use (23 CFR Part 1340), the design required that 1) the geographic coverage of the sampling frame be changed from a population-based exclusion criterion to a fatality-based exclusion criterion, 2) the road types required for the sampling frame be identified, and 3) the precision requirement be changed from a five percent relative error to a 2.5 percentage point standard error.

A brief description of the key components of the design used to conduct the 2013 – 2019 and 2021 seat belt surveys is provided below. No survey was conducted in 2020 due to health and safety concerns related to the Covid-19 virus. For a detailed description of the design, the reader is referred to the document titled *Seat Belt Use Survey Design for New York State* (revised September 2012), available from the Governor's Traffic Safety Committee.

## OVERVIEW OF SAMPLING PLAN

### Stage 1: Selection of Counties

New York's survey design calls for the designation of counties as the primary sampling units with all 62 counties in New York State eligible for inclusion in the survey sample. Using data obtained from the NYS Department of Motor Vehicles Accident Information System, the average number of passenger vehicle occupant fatalities for the period 2014-2016 was computed for each of the state's 62 counties. Of these 62 counties, 37 counties accounted for 85.7% of the passenger vehicle occupant fatalities and represented the first stage of sampling. The 37 counties were then stratified into six groups according to their geographic region. Two counties were selected from each of the six regions for a sample size of 12 counties. Since New York does not have VMT data by county, the 12 sample counties were selected using passenger vehicle registrations (includes pick-ups) as the measure of size. The 12 counties selected for inclusion in the survey are listed below:

<b>NYS Average Passenger Vehicle Occupant Fatalities by Selected County</b>		
<b>Region</b>	<b>County</b>	<b>Average Fatality Count (2014 - 2016)</b>
1	Queens	24
	Suffolk	80
2	Dutchess	15
	Westchester	20
3	Albany	10
	Rensselaer	5
4	Broome	8
	Onondaga	17
5	Monroe	20
	Wayne	8
6	Erie	27
	Niagara	11

### Stage 2: Selection of Roadway Segments

The second stage of the sampling plan was the selection of roadway segments where the observation sites would be located. Taking into account both the precision of the estimate and the survey costs associated with the sample size, it was determined that the survey should include a total of 120 sites, ten in each county. A list of road segments was created using the 2010 TIGER data developed by the U.S. Census Bureau. The road segments have been classified by the U.S. Census Bureau using the MAF/TIGER Feature Class Code (MTFCC). There are primarily three classifications: 1) Primary Roads, 2) Secondary Roads, and 3) Local Roads.

The first step in the selection process was to determine the number of road segments that would be sampled from each type of road stratum. To accomplish this, the ten roadway segments were selected for each of the 12 counties based on the statewide distribution of vehicle miles traveled (VMT). In 2010, the statewide distribution of VMT by roadway type was 33.0% for primary roads, 33.7% for secondary roads and 33.3% for local roads. As a result, for the 11 counties that had all three types of roads in the data set, three primary road segments, four secondary road segments and three local road segments were selected. For the one county that did not have any primary roadway segments in the NHTSA data file, five secondary road segments and five local road segments were selected.

The second step in the process involved the selection of the 120 road segments. Using the MTFCC from the U.S. Census Bureau, the road segments within each of the 12 sample counties were classified into primary, secondary and local roads. The road segments needed for each of the three strata for each county were then randomly selected using SAS computer software.

## **SURVEY PROCEDURES**

### **Observation Periods**

All seat belt and booster seat use observations were conducted during weekdays and weekends between 7 a.m. and 6 p.m. The schedule included rush hour (before 9:30 a.m. and after 3:30 p.m.) and non-rush hour observations. Data collection was conducted for exactly 45 minutes at each site. Start times were staggered to ensure that a representative number of weekday /weekend/rush hour/non-rush hour sites are included. The assignment of days and times was random; however, to minimize the amount of travel between sites, sites in close proximity were assigned as data collection clusters.

### **Data Collection**

All passenger vehicles, including commercial vehicles weighing less than 10,000 pounds, are eligible for observation. Data on seat belt use are collected for drivers and right front seat passengers (including those in booster seats). The only right front seat occupants who are excluded are child passengers who are traveling in child seats with harness straps. Copies of the data collection form cover sheet and survey observation form are provided in Appendix A.

Each observer was given a Site Assignment Sheet, county maps marked with the site locations, and a schedule indicating the date and time for conducting observations at each site. The direction of traffic to be observed at the site was predetermined and included on the list of assigned sites. The observers were instructed to only observe traffic on the assigned road segment traveling in the direction designated. They were also instructed on how to select an appropriate and safe location for conducting the observations and on the procedures to follow if the designated observation point is found to be inaccessible or unsafe. Since the sites are roadway segments and are not limited to intersections, observations can be conducted anywhere on the designated segment as long as the same traffic is observed.

## SEAT BELT USAGE RATE AND VARIANCE ESTIMATES

The results of the June 2021 survey indicate a statewide seat belt use rate of 93.24%. The standard error of the estimate is 0.59% and the lower and upper limits of the use rate are 91.80% and 94.68%, at the 95% confidence interval. The estimate was based on observations made at 120 sites within six predefined regions of the state. The data used to derive the estimate are provided in Appendix B. The rate and variance estimates were calculated using the Sudaan software package.

### NYS SEAT BELT USAGE RATE AND VARIANCE ESTIMATES June 2021

Usage Rate %	Standard Error %	95% Confidence Interval	
		% Lower	% Higher
93.24	0.59	91.80	94.68

# APPENDIX A

## New York State Seat Belt Survey Data Collection Form Cover Sheet

Institute for Traffic Safety Management and Research, State University at Albany  
Office phone #518-453-0291

Observer \_\_\_\_\_

Date \_\_\_\_\_

Site Identification \_\_\_\_\_

Site Location \_\_\_\_\_

Site # \_\_\_\_\_

### Alternate Site Information

Is this an alternate site? (Circle one) No Yes

If yes, please provide a reason for using an alternate site from the reserve list: \_\_\_\_\_

### Site Description

Assigned traffic flow: North South East West

Number of lanes observed: One

Total number of lanes in this direction: \_\_\_\_\_

Weather Conditions: (Circle one) Clear Light Fog Light Rain

### Site Start and End Time

Start time for observation: \_\_\_\_\_ am/pm

End Time for observation: \_\_\_\_\_ am/pm

Total observation period must last exactly 45 minutes.

## New York State Seat Belt Survey-Observation Form

Site # \_\_\_\_\_

Institute for Traffic Safety Management and Research, University at Albany, 518-453-0291

Page \_\_\_\_\_ of \_\_\_\_\_

**Key: Yes = 1 No = 0 Unknown = U No Passenger: Leave Blank**

Vehicle #	Driver Seatbelt Use	Pass. Seatbelt Use	Vehicle #	Driver Seatbelt Use	Pass. Seatbelt Use	Vehicle #	Driver Seatbelt Use	Pass. Seatbelt Use	Vehicle #	Driver Seatbelt Use	Pass. Seatbelt Use	Vehicle #	Driver Seatbelt Use	Pass. Seatbelt Use	Vehicle #	Driver Seatbelt Use	Pass. Seatbelt Use
1			26			51			76			101			126		
2			27			52			77			102			127		
3			28			53			78			103			128		
4			29			54			79			104			129		
5			30			55			80			105			130		
6			31			56			81			106			131		
7			32			57			82			107			132		
8			33			58			83			108			133		
9			34			59			84			109			134		
10			35			60			85			110			135		
11			36			61			86			111			136		
12			37			62			87			112			137		
13			38			63			88			113			138		
14			39			64			89			114			139		
15			40			65			90			115			140		
16			41			66			91			116			141		
17			42			67			92			117			142		
18			43			68			93			118			143		
19			44			69			94			119			144		
20			45			70			95			120			145		
21			46			71			96			121			146		
22			47			72			97			122			147		
23			48			73			98			123			148		
24			49			74			99			124			149		
25			50			75			100			125			150		



## APPENDIX B

### NEW YORK STATE 2021 OBSERVATIONAL SURVEY OF SEAT BELT USE

County		Number of Front Seat Occupants Belted	Number of Front Seat Occupants Unbelted	Total Front Seat Occupants	Unweighted County Usage Rate	Weighted Statewide Usage Rate
1	Queens	1,683	64	1,747	96.34%	
2	Suffolk	1,823	113	1,936	94.16%	
3	Dutchess	2,109	92	2,201	95.82%	
4	Westchester	2,330	92	2,422	96.20%	
5	Albany	2,009	88	2,097	95.80%	
6	Rensselaer	1,614	26	1,640	98.41%	
7	Broome	1,907	123	2,030	93.94%	
8	Onondaga	2,077	87	2,164	95.98%	
9	Monroe	1,875	282	2,157	86.93%	
10	Wayne	1,287	124	1,411	91.21%	
11	Erie	1,869	234	2,103	88.87%	
12	Niagara	1,508	224	1,732	87.07%	
<b>State Total</b>		22,091	1,549	23,640	93.45%	<b>93.24%</b>

Standard Error of Statewide Usage Rate: 0.59