

**Evaluation Of A Program
To Increase Belt Use On
The New York Thruway**

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ABSTRACT

A program developed to increase seat belt use on the ticket controlled portion of the New York Thruway toll road was implemented in 1988 and 1989. The program reinforced that New York state law requires seat belt use through highway signs, verbal reminders from toll collectors, printed material handed to motorists, increased enforcement, and publicity about the program. The program was implemented sequentially in each of the Thruway's four divisions. Observational surveys indicated that there were modest increases in belt use associated with the program, but the program was never fully implemented and did not achieve the belt use rates envisioned. In particular, sufficient enforcement by the police was not provided and as the program progressed fewer toll collectors were consistently reminding unbelted motorists to buckle up. Very high belt use rates are achievable through programs of this type, but the program's goals cannot be achieved without full participation by all the involved agencies.

INTRODUCTION

In the latter half of the 1980s the majority of states enacted laws requiring seat belt use; at the end of the 1980s belt use laws were in force in 32 states and the District of Columbia. Experience with the laws has varied, but belt use has generally increased from 10-20 percent before the laws to 40-50 percent after they are in force,^{1,2} and occupant fatalities and serious injuries have been reduced by 5-15 percent.^{2,3} Belt use has typically been higher on interstate highways than on other roads.⁴ Laws permitting motorists to be stopped for failure to use a seat belt (primary enforcement) have been more successful than laws requiring that motorists first be stopped for some other traffic offense before a ticket may be given for not using a seat belt (secondary enforcement).^{5,6}

Although the laws have produced important injury reductions, in most states half or more occupants required to use belts do not do so, whereas other countries such as Canada, Australia, England, and West Germany have reported belt use rates of 80-95 percent. One way to increase belt use is through programs combining increased enforcement of the law with publicity about the enforcement and about the importance of belt use. However, such programs, which have been used widely in Canada,^{7,8} have been used only sporadically in the United States.⁹⁻¹¹

To increase belt use through combined enforcement and publicity about New York State's belt use law, a program termed the "Buckle Up Program" was developed with the New York State Thruway Authority. The Thruway Authority operates 559 miles of limited access highway of which 466 miles are revenue ticket controlled and can only be entered through one of 51 toll barriers at which each motorist is handed a ticket by a toll collector (see Figure 1). The goals of the program were to increase belt use on the New York Thruway to a very high level (90 percent or more) and to achieve some spillover of increased belt use on roads connecting with the Thruway. The main elements of the program included signs positioned before Thruway entrances to encourage belt use, verbal reminders given by toll collectors about belt use, printed material handed to motorists entering the Thruway, increased enforcement of the belt use law by State Police, and publicity about the program and the enhanced enforcement.

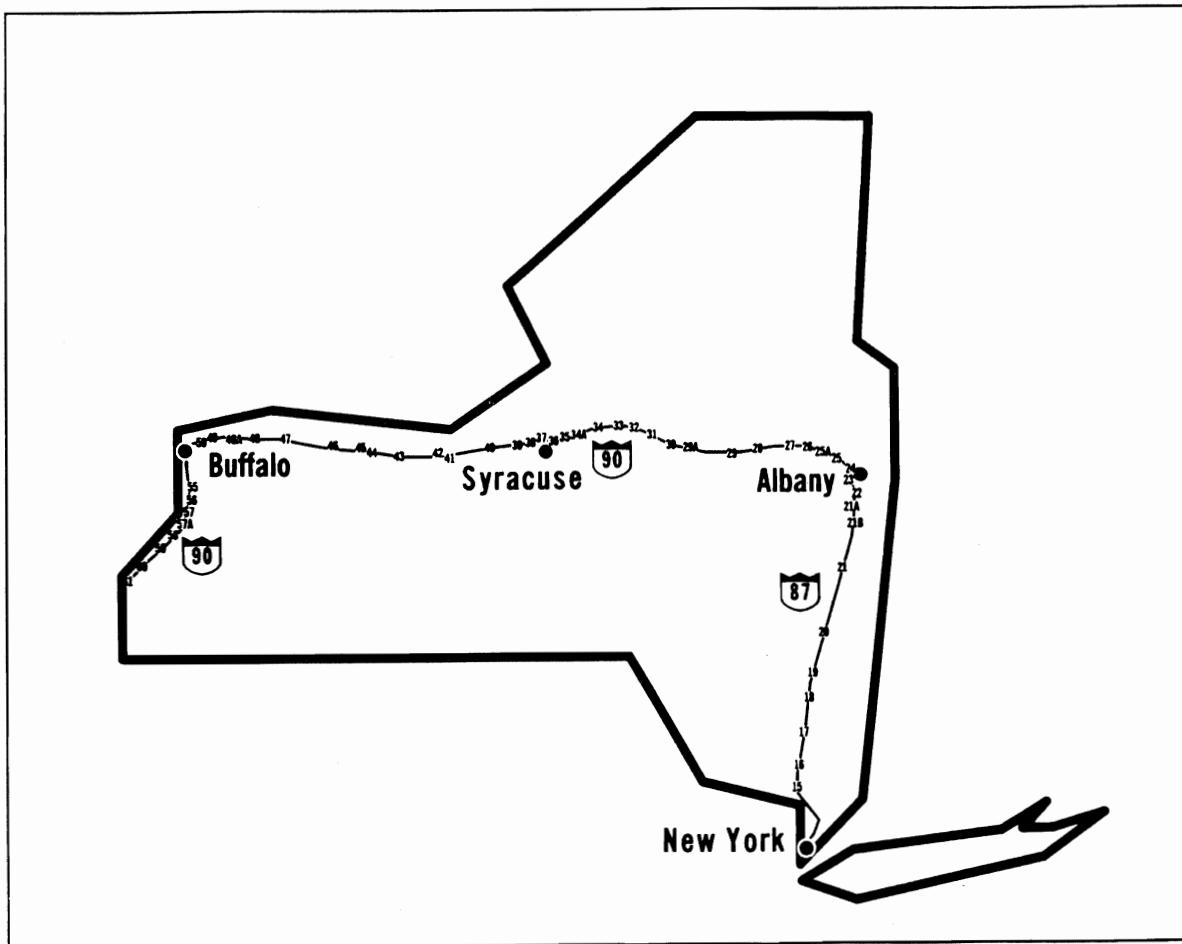
Program Development

Permanent signs were installed at all ticket controlled Thruway entrance ramps with the message, "Seat Belt Use Required on New York Thruway." Smaller but highly visible signs were installed at all entrance toll booths telling motorists to "Buckle Up Now" and informing them that the belt use law was being enforced on the Thruway. Additional signs were installed at the entrance ramps from Thruway rest areas back on to the Thruway reminding motorists to use seat belts.

Toll collectors working on entry lanes were asked to look at each arriving passenger vehicle to determine if the driver was wearing a seat belt. If the driver was buckled, the collector was to say, "Thank you for buckling up." If the driver was unbuckled, the collector was to say, "New York law

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Figure 1
New York State Thruway



requires you to wear your seat belt." He or she was to point to the "Buckle up Now" sign on the toll booth (which was directly visible to the stopped driver), pause to allow the driver to buckle up, and then hand the driver a revenue ticket and a card that outlined the requirements of the New York law. Toll collector supervisors were trained in these methods and they in turn were to train and monitor toll collectors. These duties were made part of the job description for these positions.

Printed materials included a brochure describing the seat belt use law that was distributed prior to the four program kickoffs (see Program Implementation Section) and was given to all motorists entering the Thruway. Printed cards asking motorists to buckle up were given to unbelted motorists at Thruway entrances (see Figure 2), and posters were prepared for toll collectors.

New York has a primary enforcement law; enforcement on the Thruway is provided by Troop T of the New York State Police, which is assigned to the Thruway and no other roadways. In early meetings, representatives of State Police Troop T agreed to provide increased primary enforcement for

Figure 2
New York Thruway
Seat Belt Use Reminder Card


<p style="text-align: center;">PLEASE</p> <p style="text-align: center;">BUCKLE UP</p> <p style="text-align: center;">NEW YORK'S SEAT BELT USE LAW IS BEING ENFORCED</p> <p style="text-align: center;">UP TO \$50 FINE</p> <p style="text-align: center;">FOR NOT BUCKLING UP</p> <div style="text-align: center;">  </div>	<p>NEW YORK'S SEAT BELT LAW</p> <p>WHO HAS TO BUCKLE UP?</p> <ul style="list-style-type: none"> ● All front seat occupants ● All children under 10 anywhere in the vehicle ● Children under 4 must be secured in an approved child safety restraint device <p>WHO IS RESPONSIBLE AND SUBJECT TO A FINE?</p> <ul style="list-style-type: none"> ● The driver is responsible for any passenger under 16 ● Passengers 16 and over are responsible for themselves <p>WHAT ARE THE PENALTIES?</p> <ul style="list-style-type: none"> ● A fine of up to \$50 <p>WHAT ARE THE EXEMPTIONS?</p> <ul style="list-style-type: none"> ● Occupants of automobiles manufactured before seat belts were required ● Emergency vehicles, taxis, medical, liveries, tractors, trucks with a maximum gross weight of 18,000 pounds or over, buses other than school buses, and school bus passengers ● Exemptions may be issued for a physical condition which prevents the use of belts. There are no blanket exemptions for size, weight, pregnancy, or any other medical condition. Physicians can certify the exemption but it must be written and signed by a medical doctor.
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Table 1
Schedule of Program Activities

Division	Start Date	Safety Day	Safety Week
Lower Hudson Valley (Interchanges 15-19)	5/88	8/23/88	10/23-29/89
Albany (Interchanges 20-29)	8/88	8/23/88	10/23-29/89
Syracuse (Interchanges 30-42)	10/88	--	10/23-29/89
Buffalo (Interchanges 43-50, 55-61)	4/89	5/2/89	10/23-29/89

belt law violations on the roadway and to coordinate their ongoing program of traffic safety checkpoints at interchanges with belt use law promotion activities. At Thruway traffic safety checkpoints, officers stand just past where the driver receives a Thruway ticket and visually inspect the vehicle for equipment and other safety violations. It was anticipated that the program kickoff day and periodic "Safety Days" and "Safety Weeks," featuring preannounced safety checkpoints and publicity indicating that police officers would be looking for seat belt violations, would be a key to the success of the program.

Several press releases covering the program and program events were sent to all major print, radio, and television outlets in the areas of the state affected. In addition, each press release was distributed by the Capital News Bureau, which is the clearinghouse for state press announcements, to the wire services and larger media outlets throughout the state.

Thruway representatives visited five of the largest stations in each radio markets before each program kickoff. Many of the stations broadcast interviews and one did a call-in segment. Radio time was also purchased for the period surrounding the program kickoff, and six radio spots featuring the Executive Director of the Thruway, a state police trooper, and a toll collector were prepared for use as public service announcements.

Program Implementation

A one-day pilot test was conducted at one interchange in the lower Hudson Valley in March 1988 that included little publicity but a state police traffic safety checkpoint. Observations of driver belt use during the pilot indicated that 68 percent of 896 drivers were belted as they approached the toll plaza and 99 percent were belted after they passed through the toll booth. The program was implemented sequentially from May 1988 through May 1989 on four sections of the Thruway: lower Hudson Valley, Albany division, Syracuse division, and Buffalo division (Table 1).

Lower Hudson Valley: Extensive newspaper and radio coverage was provided prior to the start of the program in May 1988. Traffic safety checkpoints at the four interchanges were scheduled for the first day of the program and the entire kickoff period including the checkpoints received extensive advance publicity. However, when press reports of the planned Troop T kickoff checkpoints reached State Police Headquarters in Albany, these checkpoints were cancelled and replaced with increased patrols on the roadway. The press reports, as intended, had tied the checkpoint activity specifically to belt law enforcement; however, this use of checkpoints was unacceptable to the State Police Command.

Albany Division: The August 1988 initiation of the program in the Albany division was accompanied by newspaper and radio news coverage, and television coverage as well. After negotiations with state police, traffic safety checkpoints at interchanges in the lower Hudson Valley and Albany divisions were coordinated with Buckle Up Program activities for the August 23, 1988, Safety Day. This arrangement was agreeable because the safety checkpoints were part of a larger campaign regarding speed

and alcohol-impaired driving and because safety belt enforcement at these checkpoints was not emphasized.

Syracuse Division: No special kickoff or Safety Day activities were planned for the Syracuse division, but there was considerable newspaper and radio coverage during the October 1988 extension to Syracuse.

Buffalo Division: The program was not implemented in the Buffalo division until April 1989 because of roadway construction. May 2, 1989, one week after the program initiation, was designated as Safety Day in the Buffalo division, but police checkpoints were cancelled after a story in Buffalo newspapers indicated that the state police were cracking down on belt use on the Thruway and that the belt use law would be enforced at traffic safety checkpoints.

To reinforce the program along the entire length of the Thruway, the week of October 23-29, 1989 was designated as Safety Week. By this time, the administrative procedures were in place, the Buckle Up signs had been posted permanently, and all Thruway divisions had several months experience with the program. State police increased enforcement targeted at belt use law violations and were frequently visible at toll plazas; however, no safety checkpoints were conducted.

EVALUATION

Belt use observations were made from a van traveling in the right lane slower than the prevailing Thruway traffic. Front seat occupant belt use was observed in passenger vehicles that passed the van on the left. Vehicles not covered by the seat belt use law (e.g., taxis, police, and emergency vehicles) were not included. An observer, seated behind the van driver, recorded the type of vehicle; state of registration; the driver's sex, shoulder belt use, and estimated age; and the right front seat passenger's sex, shoulder belt use, and estimated age. Belt use was recorded as correct placement of the shoulder harness, not using the shoulder harness, no anchor (i.e., vehicle not equipped with a shoulder harness), or incorrect belt use (i.e., shoulder harness behind the back or under the arm).

Three independent sets of observations were obtained. The first set was done in the lower Hudson Valley Division and covered northbound traffic from interchange 15 to interchange 20. All vehicles observed should have been exposed to the program. Observations were taken over four days between April 28 and May 12 before the start of the program, eight days between May 16 and June 17 after the start of the program, and one day with two vans on the August 23 Safety Day.

The second set of observations was taken in the Buffalo Division covering interchanges 55 to 61. Any vehicles on this section of roadway, regardless of direction of travel, would have been exposed to the program. Observations were made before the program, during its first week, and on Safety Day.

The third set of observations covered the entire Thruway and was used to assess the overall effects of the program. The van traveled from interchange 15 (Woodbury) to interchange 61 (Pennsylvania state line) and back. Observations were taken during February 1988 before the start of

program activities, September 1988 after the program had been implemented in two of the four divisions, April 1989 after the program had been implemented along much of the Thruway but before implementation at Buffalo, May 1989 shortly after implementation in Buffalo, and October 1989 during Safety Week.

RESULTS

Driver seat belt use rates based on the observations taken on the Thruway are presented in Tables 2-4. Table 2 shows that in the lower Hudson Valley shoulder belt use increased from 68 percent before the program to 77 percent during its early stages and was 88 percent three months later on Safety Day. In the Buffalo division belt use increased from 66 percent before the program to 73 percent in its early stages and was 83 percent on Safety Day (Table 3).

The Thruway-wide observations indicated that shoulder belt use was 68 percent before the program, 70-71 percent at stages at which the program was partially implemented, and 73-74 percent after the program was completely implemented (Table 4). Right front seat passenger belt use rates were 63 percent both before and at the end of the program, although at one measurement period (September 1988) 69 percent were belted.

Table 2
Driver Belt Use Rates: Lower Hudson Valley

	Percent Wearing Shoulder Belts				N
	Yes	No	No Shoulder Belt	Wearing Incorrectly	
Preprogram 4/28-5/12/88	68	30	1	2	897
Program 5/16-6/7/88	77	20	1	2	1,660
Safety Day	88	10	-	1	468

Table 3
Driver Belt Use Rates: Buffalo

	Percent Wearing Shoulder Belt				
	Yes	No	No Shoulder Belt	Wearing Incorrectly	N
Preprogram 4/11/89	66	33	-	1	402
Program 4/24-5/9/89	73	25	-	2	1,119
Safety Day 5/2/89	83	16	-	1	868

Table 4
Driver Belt Use Rates: Throughtout Thruway

	Percent Wearing Shoulder Belt				
	Yes	No	No Shoulder Belt	Wearing Incorrectly	N
Preprogram 2/88	68	32	-	-	1,275
Partial Program (2 division) 9/88	71	27	1	1	1,762
Partial Program (3 division) 4/89	70	28	-	1	923
Full Program (4 division) 5/89	74	26	-	1	1,105
Full Program (4 division) 10/89	73	25	-	1	777

DISCUSSION

Belt use observations taken across the entire length of the New York Thruway showed there were modest increases in driver belt use that coincided with Buckle Up Program activities. These increases, though slight, translate to millions more trips in which the drivers were belted. In 1988, 74,387,114 million passenger vehicles entered the ticket controlled portion of the Thruway and the average trip length was 43 miles.

However, the program was never fully implemented and did not achieve the belt use rates anticipated. In particular, the enforcement activities of the State Police never achieved the level or the public visibility that were envisioned for the Buckle Up Program. The reluctance of police to tie their safety checkpoints at interchanges to the Buckle Up Program (except for the Safety Day in August 1988 that produced an 88 percent belt use rate on the Thruway) limited its effect. Citations for belt use law violations on the Thruway increased from 2,327 in 1987 to 3,149 in 1988, the year the program was implemented, and to 1,680 during the first six months of 1989. Although this was a large percentage increase in citations, the final rate was less than 10 citations per day along the entire Thruway or about one per month per officer. At this rate, enforcement was probably not very visible.

Toll collector reaction to the program was quite favorable, and, when they asked drivers to fasten their belts, anywhere from one-third to two-thirds did so. However, in practice it was difficult to maintain motivation and impossible to have all collectors reminding all unbelted drivers to buckle up day after day, especially when the rate of unbuckled drivers was about 3 in 10 rather than the anticipated 1 in 10. Motivation could probably have been improved by visible enforcement and a police presence at toll booths to reinforce the toll collectors' message. In the absence of visible enforcement, belt use law violators could ignore the toll collectors' reminders with impunity. In October 1989 after implementation in all four divisions, the observation team traveled the length of the Thruway in a passenger van. They exited at each interchange and returned to the Thruway with the driver unbelted. Only three reminders were given to the unbelted driver at the 51 ticket controlled interchanges.

The Buckle Up Program received awards from the New York State Coalition for Seat Belt Use and the National Safety Council. It is known to have prevented serious and possibly fatal injuries of one driver who received only minor injuries in a very severe crash minutes after complying with a toll collector request to buckle up. However, the full potential of the program was never realized, despite the hard work and efforts of Thruway officials and many employees. New York has one of the strongest belt use laws, but statewide use rates are only about 50 percent. Enforcement and publicity techniques that will produce much higher belt use -- such as those planned for the Thruway program initially -- are well known and are supported by the public, but the enforcement presence to support and maintain these techniques must be there and in the Thruway program this necessary element was lacking.

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