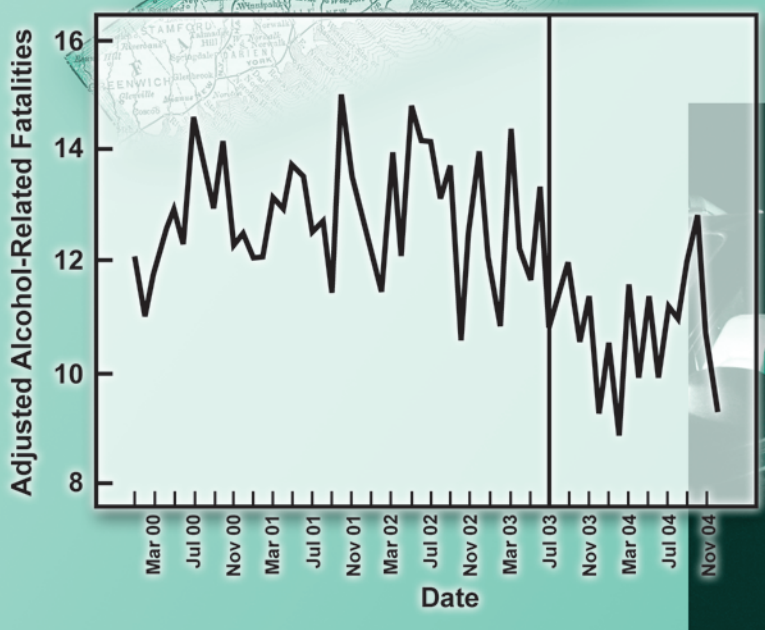
Connecticut's 2003 Impaired-Driving High-Visibility Enforcement Campaign



Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
DOT HS 810 689		

4. Title and Subtitle	5. Report Date
Connecticut's 2003 Impaired-Driving High-Visibility Enforcement Campaign	February 2007
	6. Performing Organization Code

7. Author(s)	8. Performing Organization Report No.
T.J. Zwicker, N. K. Chaudhary, S. Maloney, R. Squeglia	

9. Performing Organization Name and Address	10. Work Unit No. (TRAIS)
Preusser Research Group, Inc. and CT Governor's Highway Safety 7100 Main Street 2800 Berlin Turnpike Trumbull, CT 06611 Newington, CT 06131	11. Contract or Grant No. NHTSA Contract DTNH22-98-D-45079

12. Sponsoring Agency Name and Address	13. Type of Report and Period Covered
U.S. Department of Transportation National Highway Traffic Safety Administration 400 Seventh Street SW. Washington, DC 20590	Final Report January 2003 – December 2004
	14. Sponsoring Agency Code

15. Supplementary Notes

The Contracting Officer's Technical Representative for this project was Linda Cosgrove.

16. Abstract

In 2003, Connecticut initiated a publicity and enforcement campaign to reduce impaired driving and alcohol-related fatalities, particularly among men 21 to 34 years old. The State spent nearly 4 million dollars on the campaign. The campaign began during the July 4th holiday period, was sustained during the summer and fall, and peaked during the Thanksgiving and Christmas holiday period. Statewide telephone surveys indicated that drivers reported significantly more often after the campaign that they had heard about impaired driving in Connecticut and had been through or knew someone who had been through a sobriety checkpoint. Telephone surveys also indicated that more drivers thought State and local police were very strict about enforcing the laws against drinking and driving and that a driver who had been drinking was very likely to be stopped by police. Patterns were similar for men 21 to 34 years old. Roadside surveys of driver blood alcohol concentrations (BAC) indicated a significant decrease in the proportion of drivers with a positive BAC at the end of the campaign compared to the previous year. In addition, Autoregressive Integrated Moving Average analyses of the alcohol-related fatality trend for the State and for men 21 to 34 indicated that both rates decreased significantly, by an estimated 2.6 and 1.6 fewer fatalities each month. The total lives saved amounted to 47 statewide and 29 for men 21 to 34 in the year and a half following the campaign's start.

17. Key Words	18. Distribution Statement
Alcohol, Impaired-Driving Countermeasures, Publicity, Sobriety Checkpoints, Alcohol-Related Fatalities, DWI, BAC testing, High-Visibility Enforcement, DWI Enforcement	Document is available through the National Technical Information Service Springfield, VA 22161 www.nhtsa.dot.gov

19. Security Classif.(of this report)	20. Security Classif.(of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified		

Form DOT F 1700.7 (8-72) **Reproduction of completed page authorized**

This page intentionally left blank.

DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

TECHNICAL SUMMARY

CONTRACTOR	CONTRACT NUMBER
Preusser Research Group, Inc.	NHTSA Contract DTNH22-98-D-45079
REPORT TITLE	REPORT DATE
Connecticut's 2003 Impaired-Driving High-Visibility Enforcement Campaign	February 2007
REPORT AUTHOR(S)	
T.J. Zwicker, N. K. Chaudhary, S. Maloney, R. Squeglia	

Connecticut's number of alcohol-related fatalities remained essentially constant from 1992 to 2002. In addition, the percentage of alcohol-related fatalities (50.6%) out of all crash fatalities (312) during 2001 was higher than the national percentage (41.4%) and was also higher than other New England States (45.9%). Connecticut and the National Highway Traffic Safety Administration (NHTSA) focused their efforts to reduce drinking and driving, with media efforts focusing particularly on men 21 to 34 because of their overrepresentation in alcohol-related fatal crashes.

Background

Federal Highway Administration funds were transferred by the Connecticut Department of Transportation and committed to the Division of Highway Safety for a statewide impaired-driving publicity and enforcement campaign. The campaign represents the first time that Connecticut has expended such a substantial amount of money for both media and enforcement in its efforts to reduce impaired driving and, ultimately, alcohol-related injury and fatal crashes.

The campaign consisted of three components: (1) media with an enforcement message, (2) enhanced periods of enforcement surrounding the July 4th and winter holidays focusing on the use of sobriety checkpoints, and (3) sustained enforcement between holiday enforcement periods.

Connecticut's efforts followed the NHTSA impaired-driving high-visibility enforcement model and was a test of NHTSA's model, which includes (1) paid and earned media in support of (2) statewide high-intensity enforcement crackdowns, and (3) planned, sustained enforcement efforts between crackdowns. The enforcement component involved commitment to sustained DWI enforcement throughout the year and two enhanced enforcement crackdowns covering the Independence Day and Thanksgiving/Christmas holiday periods. NHTSA's model focuses on crackdowns that cover 85 percent of the States' populations and involve high-visibility sobriety checkpoints and/or saturation patrols during three weekends (16 days) of these holiday periods. It also

encompasses public awareness efforts involving State earned media, State funded paid media, and NHTSA paid media.

Media

Congress appropriated $11 million for paid media. Of the total, $5.5 million was spent to purchase air time on national TV, and the remainder was used to develop the ad used and for paid media in the 13 strategic evaluation States chosen because of their high alcohol-related fatality trend or high number of alcohol-related fatalities. Although Connecticut was not a strategic evaluation State, it followed NHTSA's impaired-driving high-visibility enforcement model including using NHTSA's ads. The TV ad was targeted especially to young men 18 to 34 and was placed on TV programs often viewed by this group. The ad ran during the June 20 – July 13, 2003, period.

Connecticut's media campaign spanned 11 months beginning in March 2003 at a cost of $2,199,533. The enforcement grant funds totaled $1,582,568. Connecticut spent a total of $3,782,101 on its 2003 impaired-driving publicity and enforcement program. For each of the State's campaign periods, a four- to six-week paid and earned media (media coverage a program "earns" whenever it makes the news in print or broadcast) campaign with a strong enforcement message was implemented. The focus of the media campaign was generally the same as that of NHTSA, primarily young men 21 to 34 years old due to their high rate of involvement in alcohol-related crashes. The media campaigns focused on two holiday periods during 2003 and were also designed to create the perception of sustained enforcement between these two holiday periods. Some media components continued throughout the campaign.

Sobriety Checkpoints

Sobriety checkpoints constituted the main focus of the enforcement effort. In total, the State funded 24 sobriety checkpoints during the July 4th holiday period. Fifteen towns held at least one sobriety checkpoint during the July 4th holiday period. Under the expanded grants, a total of 18 towns and the State Police conducted a total of 89 sobriety checkpoints. Some of the sobriety checkpoints conducted under the expanded grants were conducted during the two holiday periods, but there is no information on exactly how many of them were held during the holiday enforcement periods. Twenty-eight police agencies and the State Police conducted a total of 51 sobriety checkpoints during the winter holiday period, more than twice as many as conducted during the July 4th holiday period. Twenty additional sobriety checkpoints included an evaluation research component after the normal portion of the sobriety checkpoint in which researchers collected direct observations of drinking and driving by obtaining breath alcohol concentration (BAC) information from a random sample of drivers passing through the sobriety checkpoint.

In summary, the program began during the July 4th crackdown period, was sustained during the next few months, and then peaked during the Thanksgiving to Christmas holiday period.

Program Evaluation

The evaluation included statewide telephone surveys, direct observations of drinking and driving at sobriety checkpoints before and after each holiday enhanced enforcement effort, DWI arrest data, and alcohol-related fatality data.

Statewide Telephone Survey

Connecticut conducted telephone surveys before and after each holiday period. The sampling plan was designed to ensure a representative sample of Connecticut drivers and used a random digit dialing approach to interview a total of 2,430 drivers over the course of the campaign.

Direct Observations of Driver BACs

Driver BACs were collected at sobriety checkpoints in nine towns before and after the holiday enforcement periods as a direct measure of the effect of enforcement and publicity on drinking and driving. A geographically diverse set of sites in the State, focusing on towns with particularly high alcohol-related fatal and injury crash rates, were chosen. The research team obtained voluntary, "blind," anonymous BACs from randomly selected drivers on handheld breath-testing devices. Generally, about 92 percent or more drivers agreed to the BAC test. The team collected 1,249 BAC samples from drivers before and after the July 4th holiday enforcement period and 2,115 BAC samples from drivers before and after the winter holiday enforcement period.

Alcohol-Related Fatalities

Alcohol-related fatality data was taken from NHTSA's Fatality Analysis Reporting System (FARS) for 2000 through the preliminary 2004 data. The overall alcohol-related fatality trend for the State and the alcohol-related fatality trend for fatalities involving men 21 to 34 years old were analyzed using the Autoregressive Integrated Moving Average (ARIMA) technique.

Results and Discussion

Exposure to Enforcement Message

There was a statistically significant increase in the number of telephone survey respondents who reported hearing or seeing something about alcohol-impaired driving in Connecticut after each holiday period compared to responses by those asked before each holiday period. There was an 8.6-

percentage-point increase after the July 4th holiday period from 55.6 percent to 64.2 percent ($\chi^2(1)=9.42$, $p<.01$) and a similar 8.5-percentage-point increase from 53.3 percent to 61.8 percent after the winter 2003 holiday period ($\chi^2(1)=8.97$, $p<.01$).

Perceptions of Enforcement

The number of telephone survey respondents indicating that State Police "very strictly" enforce the drinking and driving laws increased significantly compared to the other options combined after both the July 4th holiday enforcement period from 39.2 percent to 48.8 percent ($\chi^2(1)=10.21$, $p=.001$) and the winter 2003 holiday enforcement period from 38.3 percent to 48.1 percent ($\chi^2(1)=10.29$, $p=.001$). Respondents indicated that local police "very strictly" enforce the drinking and driving laws significantly more often compared to the other options combined after both the July 4th ($\chi^2(1)=3.94$, $p<.05$) and winter ($\chi^2(1)=11.54$, $p=.001$) holiday periods compared to the period before each holiday.

When all telephone survey respondents were asked about the chances of being stopped if a driver had been drinking, there was a significant increase after both the July 4th holiday enforcement period from 53.8 percent to 62.5 percent ($\chi^2(1)=7.683$, $p<.01$) and winter 2003 holiday period from 53.5 percent to 64.6 percent ($\chi^2(1)=13.548$, $p<.001$) in the number of respondents indicating that they thought a driver who had been drinking was more likely to be stopped by police compared to all the other options combined.

Roadside Survey Driver BACs

More than three times as many sobriety checkpoints were held during the winter holiday period and were preceded by many more sobriety checkpoints during the sustained enforcement period that extended from summer to fall, so the cumulative effect of the campaign on driver BACs requires comparing the pre-July 4th data to the post-winter holiday period data. There are differences in the locations and times of night when comparing the pre-July 4th holiday period BACs to the post-winter holiday period BACs, but in looking at the overall impact of the program from its inception to its peak, the comparison indicated that there was a significant decrease in the proportion of drivers with a positive BAC from the pre-July 4th period to the post-winter holiday enforcement period ($\chi^2(2)=7.015$, $p<.01$). The pre-July 4th holiday sobriety checkpoints and post-winter holiday sobriety checkpoints were both conducted during colder, non-holiday times of the year. The breath test refusal rates for both periods were very similar.

The proportion of male drivers with a positive BAC at sobriety checkpoints decreased significantly from 17.8 percent for the pre-July 4th to 10.6 percent for the post-winter holiday period ($\chi^2(1)=10.42$, $p<.01$). Female drivers had a positive BAC about the same percentage of time from the

pre-July 4th holiday period (9%) to the post-winter holiday period (9.3%). There were generally more male drivers going through the sobriety checkpoint locations during all survey periods and they generally were more likely to have a positive BAC, but the proportion of men drinking and driving decreased almost to the same rate as the women by the post-winter holiday period.

Figure 2.* Connecticut Predicted Alcohol-Related Fatalities 2000-2004 After Contiguous County Data and Modeling Applied to Remove Noise and the Effects of Regionwide Efforts to Combat Drinking and Driving as Well as Seasonal and Economic Variations

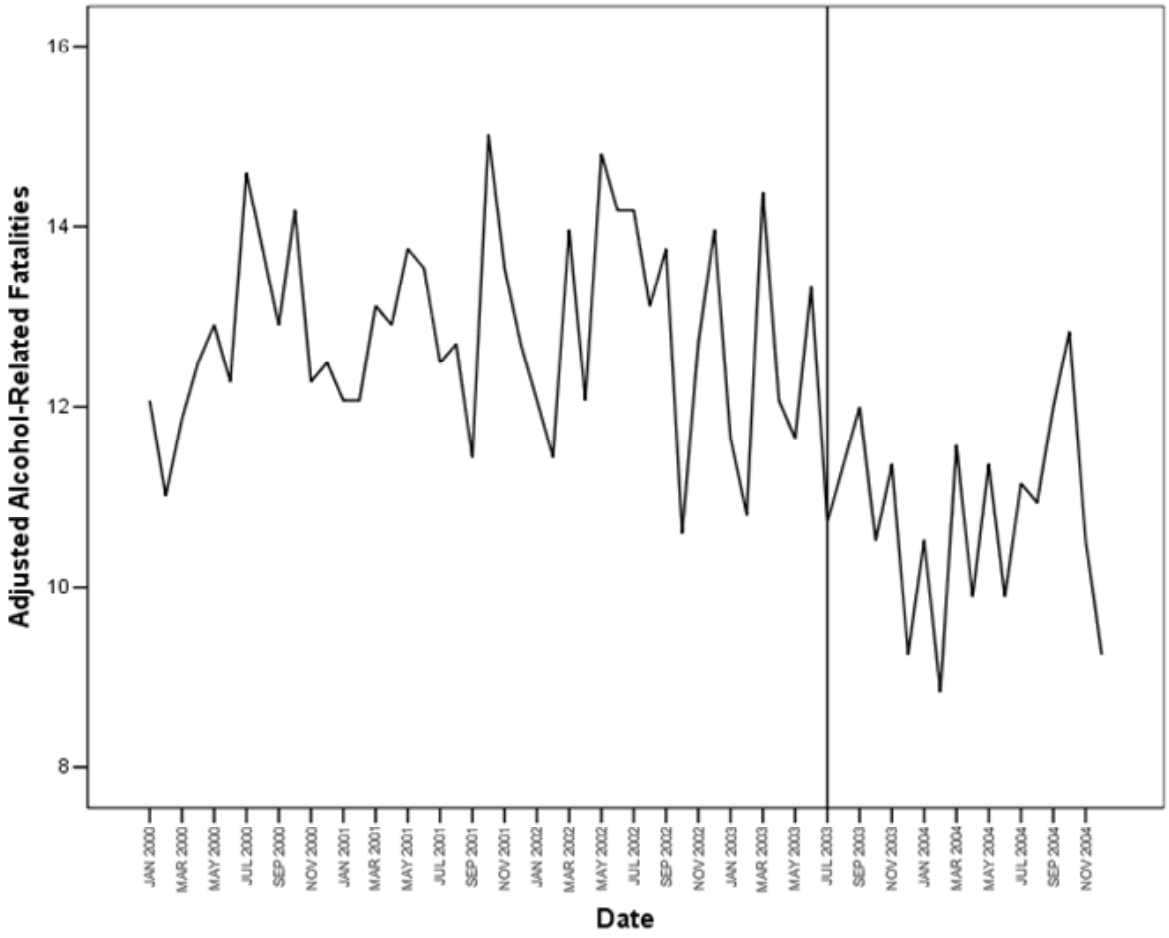


*Figure numbering consistent with order in report

Alcohol-Related Fatalities

ARIMA analyses indicated that there was a significant decrease in the alcohol-related fatality trend for the 18-month period following the beginning of the impaired-driving high-visibility enforcement campaign. The intervention period trend from July 2003 through December 2004 was evaluated in comparison to the trend from 2000 through the first six months of 2003 (p=.042). When alcohol-related fatalities from contiguous counties in New York, Rhode Island, and Massachusetts were used as a covariate, the significant decrease in the estimated monthly average number of alcohol-related fatalities in Connecticut during the second half of 2003 through December 2004 was stronger (p=.01). Figure 2 shows graphically the significant reduction in the estimated alcohol-related fatality trend in Connecticut after extraneous influences such as noise, bordering county drinking and driving trends, and seasonal and economic variation was removed from the series by using contiguous county monthly alcohol-related fatality totals. The estimated reduction in the number of alcohol related fatalities determined by the ARIMA analysis was about 2.6 lives each month for the 18 months following June 2003. Thus, if there were no campaign, there would have been an estimated 47 additional alcohol-related fatalities.

Summary and Conclusions

Surveys indicated that the paid media had reached a substantial number of Connecticut drivers. Law enforcement agencies conducted a large number of sobriety checkpoints throughout the campaign period, with a particularly large number of sobriety checkpoints during the winter 2003 holiday period. The combined publicity and highly visible enforcement campaign achieved its ultimate goal: significantly reducing the alcohol-related fatality trend, saving an estimated 2.6 lives a month, or a total of 47 lives, for the 18 months following the start of the first campaign crackdown in July 2003. The campaign also resulted in a significant decrease in the alcohol-related fatality trend for men 21 to 34 years old, saving an estimated 1.6 lives each month for a total of 29 lives for the 18-month period following the first crackdown.

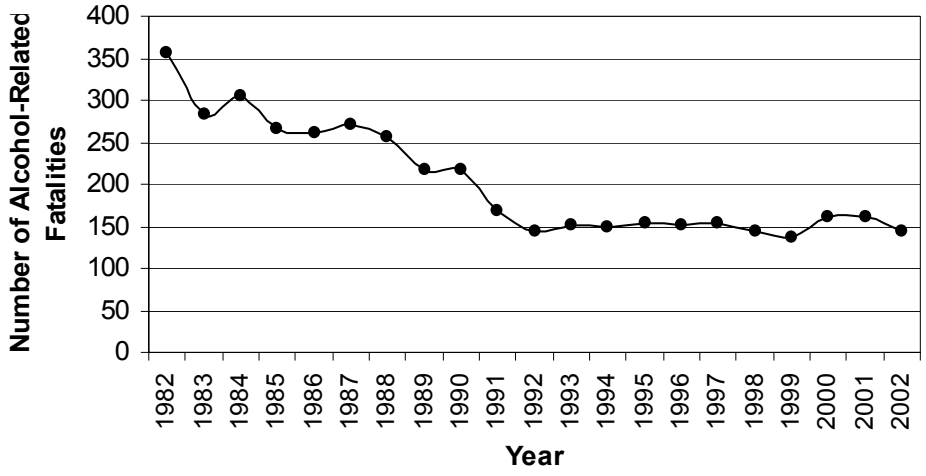
TABLE OF CONTENTS

TABLES AND FIGURES

I. INTRODUCTION

The National Highway Traffic Safety Administration (NHTSA, 2003) reported that the number of alcohol-related fatalities increased from 16,653 in 2000 to 17,524 in 2002. An alcohol-related fatality occurs when there is a crash in which someone dies and where it is determined that at least one active road user involved in the crash has a BAC >.00 grams per deciliter. An active road user is one who could have caused the crash; this includes drivers, pedestrians, and pedalcyclists. Passengers are not active road users. Connecticut's number of alcohol-related fatalities remained essentially constant from 1992 to 2002 with 144 fatalities in 1992 and 140 in 2002. Figure 1 shows the lack of change in the trend that followed a decade of consistent decreases in the number of alcohol-related fatalities beginning in 1982. Also, the percentage of alcohol-related fatalities (50.6%) out of all crash fatalities (312) during 2001 was higher than the national percentage (41.4%) and was also higher than the other New England States (45.9%) of Massachusetts, Rhode Island, Vermont, Maine, and New Hampshire.

Figure 1. Connecticut Number of Alcohol-Related Fatalities from 1982-2002.



Effective efforts to reduce impaired driving include highly visible enforcement, specifically sobriety checkpoints, and publicity about the enforcement. Sobriety checkpoints along with an enforcement-based media message have been effective at reducing alcohol-related crashes at both the local level (Wells, Preusser, and Williams, 1991) and statewide level (Lacey, Jones, and Smith, 1999).

Connecticut Department of Transportation data indicates that for 2001, 55 percent of the drinking drivers who were at fault in a crash were between the ages of 20 and 39. Eighty percent of those drivers were male. Fatality Analysis Reporting System (FARS) data from 2000 through June 2003 indicates that men 21 to 34 years old were involved as active road users (i.e., drivers, pedestrians, or pedal cyclists) in crashes resulting in 45 percent of the State's alcohol-related fatalities although, according to the U.S. Census Bureau population estimates, they account for just 11 percent of Connecticut's driving age population (i.e., 16 or older). While enforcement efforts

target all drinking drivers, Connecticut and NHTSA have focused their media efforts on increasing the awareness of men 21 to 34 years old about the enforcement because of their overrepresentation in alcohol-related fatal crashes.

II. BACKGROUND

In 2003, Connecticut launched a statewide impaired-driving publicity and enforcement campaign. This represents the first time Connecticut expended substantial resources for both media and enforcement in its efforts to reduce impaired driving and ultimately alcohol-related injury and fatal crashes. The initiative was a test of NHTSA's impaired-driving high-visibility enforcement model, which includes (1) paid and earned media in support of (2) statewide high-intensity enforcement crackdowns and (3) planned, sustained enforcement efforts between crackdowns. The high-visibility enforcement component included two major crackdowns with sustained enforcement between crackdowns. The two enforcement crackdowns covered the Independence Day and Thanksgiving/Christmas holiday periods. NHTSA's model focuses on crackdowns that cover 85 percent of the State's populations and involve high-visibility sobriety checkpoints during three weekends (16 days) of these holiday periods. Public awareness efforts in NHTSA's model involve State earned media, State-funded paid media, and NHTSA-funded paid media. The model's paid and earned media focuses on raising awareness of the enforcement efforts. The campaign media visual image is of a young man being handcuffed and assisted into the back seat of a police car during a DWI arrest. The national campaign media message focuses foremost on enforcement.

Connecticut diverted highway funds from the Federal Highway Administration, as required, for highway safety programs directed at impaired driving due to Connecticut's lack of an open container law and a repeat DWI offender law that satisfied the Federal Government's requirements. The Connecticut Department of Transportation Division of Highway Safety committed these funds for 2003 to a statewide impaired-driving publicity and enforcement campaign based on NHTSA's model. The campaign focused on sobriety checkpoints as the most effective highly visible enforcement method.

III. PROGRAM DESCRIPTION

The campaign consisted of three components: (1) media with an enforcement message, (2) enhanced periods of enforcement surrounding the July 4th and winter holidays focusing on the use of sobriety checkpoints, and (3) sustained enforcement between holiday enforcement periods. The media campaign spanned seven months beginning in June at a cost of $2,199,533. The enforcement grant funds totaled $387,555 for the July 4th holiday period, $792,312 for the expanded grant period between holidays, and $402,702 for the winter holiday period. Connecticut spent a total of $3,782,101 on its 2003 impaired-driving publicity and enforcement program.

Expenditures totaled about $1.08 per Connecticut resident using U.S. Census Bureau estimates of Connecticut's population as of July 1, 2003 (3,483,372).

A. Media

Congress appropriated $11 million for paid media. Of the total, $5.5 million was spent to purchase air time on national TV, and the remainder was used to develop the ad used and for paid media in the 13 strategic evaluation States chosen because of their high alcohol-related fatality trend or high number of alcohol-related fatalities. Although Connecticut was not a strategic evaluation State, it followed NHTSA's impaired-driving high-visibility enforcement model including using NHTSA's ads. The TV ad was targeted especially to young men 18 to 34 years old and was placed on TV programs often viewed by this group. The ad ran during the June 20–July 13, 2003, period.

Cronin and Company, Inc., of Glastonbury, Connecticut, managed Connecticut's paid and statewide earned media components. For each campaign period, a four- to six-week paid and earned media (media coverage a program "earns" whenever it makes the news in print or broadcast) campaign with a strong enforcement message was implemented (See appendix A for media campaign details). The focus of the Connecticut-funded paid media campaign was primarily men 21 to 34 years old due to their high rate of involvement in alcohol-related crashes. To supplement the paid media campaign, the Governor's Highway Safety Office coordinated an earned media effort focusing on special enforcement efforts and involving State and local law enforcement personnel and other government officials. The media campaigns focused on two holiday periods during 2003 and were also designed to create the perception of sustained enforcement between these two holiday periods. The first media campaign began in late March 2003, and reached its peak during July 4th. The second media campaign began just before Thanksgiving and focused on the Thanksgiving, Christmas, and New Year's (winter) holiday period that spanned from November 24, 2003, until January 31, 2004. Some media components continued throughout the 11-month campaign.

B. Enforcement

The Governor's Highway Safety Office offered grants for conducting sobriety checkpoints and purchasing needed equipment to local police agencies and the State Police for three separate grant periods. There were two holiday grants and one expanded grant for sustained enforcement between the holiday periods.

Connecticut State Police (CSP) is organized into 11 troops and has statewide jurisdiction with respect to traffic enforcement and sole jurisdiction on limited access highways. Troops provide primary police response on all roadways in 18 of Connecticut's 169 cities and towns and provide "resident troopers" to an additional 63 towns. Municipal police departments serve the remaining 88 cities and towns. Both State and municipal police played important roles in achieving the goals of the impaired-driving publicity and enforcement campaign.

The State Police and local police agencies received grant funds for enforcement during each holiday period and the expanded grant period. Law enforcement agencies receiving grant funds were asked to report on their enforcement efforts, including the number of sobriety checkpoints held and equipment purchased as well as any results from enforcement activities including the number of DWI arrests and average BAC at time of arrest.

C. Sobriety Checkpoints

Sobriety checkpoints constituted the main focus of the enforcement effort. In total, the State funded 24 sobriety checkpoints during the July 4th holiday period. Law enforcement agencies spent a majority of the $387,555 in grants for the 4th of July holiday period on equipment. Fifteen towns throughout the State held at least one sobriety checkpoint during the July 4th holiday period. Most of these sobriety checkpoints took place on the Friday and Saturday nights surrounding the holidays. Under the expanded grants, 18 towns and the State Police conducted a total of 89 sobriety checkpoints. Some of the sobriety checkpoints conducted under the expanded grants were conducted during the two holiday periods, but there is no information on exactly how many of them were held during the holiday enforcement periods. Twenty-eight local law enforcement agencies and the State Police conducted a total of 51 sobriety checkpoints during the winter holiday period, more than twice as many as conducted during the July 4th holiday period.

Police in 10 Connecticut towns conducted sobriety checkpoints before and after the July 4th period and winter holiday periods as part of a research effort to directly measure the impact of the campaign crackdowns on drinking and driving on Connecticut roads. An additional 10 sobriety checkpoints were conducted in 5 Connecticut towns, with one sobriety checkpoint occurring in each town before and after the crackdown. Two Hartford County towns and three New London County towns participated. In addition, before and after the winter holiday period, police conducted two sobriety checkpoints in eight Connecticut towns, three in Hartford County and five in New London County, and an additional four sobriety checkpoints in one Hartford County town. These 30 additional sobriety checkpoints were not included in the 24 and 51 sobriety checkpoints counted by the State because they were also part of the evaluation of the enforcement component of the campaign. The sobriety checkpoints included an evaluation research component after the normal portion of the sobriety checkpoint in which researchers collected direct observations of drinking and driving by obtaining blood alcohol concentration information from a random sample of drivers passing through the sobriety checkpoint.

D. DWI Arrests

Local law enforcement agencies and the State Police reported making a total of 89 DWI arrests while engaged in grant-funded enforcement activities during the July 4th holiday period. Agencies reported 731 DWI arrests for the expanded grant period, and they reported a total of 349 DWI arrests for the winter holiday grant period. For 2003, statewide DWI arrests totaled 11,825. Agencies reported 540 fewer DWI arrests than the 12,365

DWI arrests reported statewide for 2002. The average BAC for those arrested in 2003 for DWI who submitted to a BAC test, was .165, which is over twice the legal BAC limit of .08. The average BAC remained the same from 2002 to 2003.

In summary, the main program began during the July 4th crackdown period; was sustained during the next few months; then peaked during the Thanksgiving to Christmas holiday period.

IV. PROGRAM EVALUATION

The evaluation involved a number of components. Various types of data were collected before and after each holiday campaign period using statewide telephone surveys, direct observations of drinking and driving at sobriety checkpoints before and after each holiday enhanced enforcement effort, DWI arrest data, and alcohol-related fatality data. Table 1 exemplifies each of the holiday campaign periods and the accompanying evaluation activities that spanned the entire campaign.

Table 1. Typical Holiday Campaign and Sustained Activities and Evaluation Efforts

	Pre-Holiday Period	Week 1	Week 2	Week 3	Post-Holiday Period
Program Activities					
Enforcement					
Paid Media					
Earned Media					
Evaluation Activities					
Roadside Survey BAC Data					
Statewide Phone Survey					
Alcohol-Related Fatality Data					
DWI Arrest Data					

A. Connecticut Statewide Telephone Survey

TMR, Inc. conducted four statewide telephone surveys, one before and one directly after each holiday period for Connecticut. The survey telephone instrument (Appendix B) contained 30 questions and took about 20 minutes to complete. It was designed to measure drivers' perceptions and behaviors related to drinking and driving and also included some questions regarding safety belt use and awareness of safety belt enforcement efforts. TMR, Inc., used the instrument to interview approximately 600 Connecticut drivers both before and after each holiday campaign period began for a total of about 1,200 interviews. A telephone survey conducted in March 2003 gathered baseline information and a survey conducted in July 2003 gathered information immediately after the July 4th enhanced three-week holiday enforcement period ended. For the winter campaign, the baseline telephone

survey was conducted in October 2003 and the post-campaign survey was conducted in March 2004, about one year following the administration of the first survey.

The sampling plan was designed to ensure a representative sample of Connecticut drivers and used a random digit dialing approach. Random digit dialing ensures that households with unlisted numbers will be represented in the sample. The survey protocol provided that numerous attempts were made to contact selected households so that the survey could be completed. Individuals within the household were randomly selected to interview by choosing the person with the next or most recent birthday in the home. All Connecticut households were randomly sampled. Telephone survey responses were weighted by age group using the U.S. Census Bureau population estimates for Connecticut for each group.

B. Connecticut Roadside Survey Direct Measures of Driver BACs

Driver BACs were collected at sobriety checkpoints in nine towns before and after the holiday enforcement periods as a direct measure of the effect of enforcement and publicity on drinking and driving. A geographically diverse set of sites in the State were chosen, focusing on towns with particularly high alcohol-related fatal and injury crash rates. The towns were East Lyme, East Windsor, Ledyard, Manchester, New London, Norwich, South Windsor, Stonington, Waterford, and Windsor. For the July 4th holiday enforcement evaluation, drivers' BACs were collected in East Windsor, East Lyme, New London, Norwich, and South Windsor. For the evaluation of the winter holiday enforcement period, driver BACs were collected in each town, excluding East Windsor, for a total of 20 sobriety checkpoints (South Windsor had 2 locations for sobriety checkpoints and thus, held 4 sobriety checkpoints). The sobriety checkpoints for each evaluation period in each town were held before and after the holiday period at the same location on the same road on the same night of the week at the same time of night.

At sobriety checkpoints, the Connecticut research team obtained voluntary, blind, anonymous BACs from randomly selected drivers on handheld breath testing devices. These devices (Intoxilyzer 400PA) stored, but did not display, the driver's BAC reading. The research team collected anonymous BAC information from the random sample of drivers who were passing through the sobriety checkpoint in one direction in cases where traffic flowed in both directions and the sobriety checkpoint was held on both sides of a road. Researchers collected this data after the drivers had passed through the sobriety checkpoint. Researchers interviewed between 80 and 200 drivers at each sobriety checkpoint, typically about 20 percent of the traffic passing in one direction at a sobriety checkpoint. The interviews consisted of a short set of questions about the type of location the driver was coming from and going to, whether the driver had been through a sobriety checkpoint in the past six months, opinions of sobriety checkpoints, and whether the driver had heard any media messages about special efforts to enforce the laws against drinking and driving. Researchers estimated characteristics such as age group, gender, race, number of passengers, and type of vehicle after completing an interview with a driver. Generally, about 92 percent or more drivers agreed to the BAC test. The team collected 1,249 BAC samples from drivers in the course of evaluating

the July 4th holiday enforcement period and 2,115 BAC samples from drivers over the course of evaluating the winter holiday enforcement period.

C. Alcohol-Related Fatalities

Alcohol-related fatality data was taken from NHTSA's Fatality Analysis Reporting System (FARS) for 2000 through the preliminary 2004 data. Crashes involving pedalcyclists and pedestrians were included because they are considered active road users and could either be responsible for a fatal crash in which alcohol was determined to be involved or could be struck and fatally injured by a drinking driver. The alcohol-related fatality trend was analyzed using an interrupted time series design. A separate interrupted time series analysis was used to analyze the alcohol-related fatality trend for men 21 to 34 years old because they were the focus of the media efforts to increase awareness of the enforcement campaign.

Using this design, the Autoregressive Integrated Moving Average (ARIMA) method was able to determine if there was a change in the number of alcohol-related fatalities starting at a point in time coincident with the beginning of the first campaign crackdown in July of 2003 and sustained through December 31st of 2004. ARIMA modeling required the selection of a model that controlled for periodic fluctuations in the data series. That is, combinations of parameters were entered into the analysis such that systematic fluctuations in the data (i.e., monthly "lags") were reduced to nonsignificance. Lags were judged to be nonsignificant based on exploration of autocorrelations (AC) and partial autocorrelations (PAC) where the monthly lags were deemed to be random with 95 percent confidence. The parameters used to control the lags, as required, significantly affected the series in order to be considered valid for inclusion in the model. Analyses were conducted using the "Trends" module of the software package SPSS 11.5.

The ARIMA modeling process applies parameters to account for periodic fluctuations in monthly alcohol-related fatalities. For instance, alcohol-related fatalities tend to increase sharply over the summer months. There is also the possibility of nonperiodic fluctuations that might occur due to random noise or simply different numbers of weekend days (when drinking and driving are more prevalent) in a given month. The modeling process accounts for these periodic variations in the series by including the appropriate parameter. Additionally, multivariate ARIMA models, like the one used in this study for analyzing all alcohol-related fatalities, allow for the addition of a "covariate" which examines change in a series in the context of changes in a similar comparison series. For instance, drinking and driving fatalities can be affected by the weather, economic conditions, regionwide trends in drinking and driving, and regionwide efforts to combat drinking and driving. Thus, using the alcohol-related fatality totals for all contiguous counties from neighboring States may help to remove the impacts of these three sources of variation on the number of alcohol-related fatalities each month. The covariate used here for analyzing all alcohol-related fatalities in Connecticut was the combined total alcohol-related fatalities each month for all contiguous counties from the three surrounding States: New York, Massachusetts, and Rhode Island. The five New

York counties were Suffolk, Nassau, Westchester, Putnam, and Duchess. The three Massachusetts counties were Berkshire, Hampden, and Worcester. The three Rhode Island counties were Providence, Kent, and Washington.

V. RESULTS AND DISCUSSION

Connecticut Telephone Survey

A. Characteristics of Connecticut Telephone Survey Respondents

Connecticut conducted telephone surveys before and after each holiday enforcement and media period. The race and age groups of survey respondents for each survey are presented below in Table 2, Table 3, and Table 4. As indicated in Table 2, the proportion of men and women responding to the survey was slightly skewed towards men during the first, third, and fourth surveys than their proportion of Connecticut's population. Table 3 shows the percentage of respondents identifying themselves as White, Black, or Asian in each survey were somewhat higher than their proportion in the State's population estimates. The proportion of respondents identifying themselves as Native American or other was somewhat lower. Overall, the proportions were generally similar to the population estimates. As shown in Table 4, the proportion of respondents identifying themselves in each age group was similar to their proportions in the population of the State except for the 16- to 20-year-old group, which was underrepresented. As indicated in Table 5, respondents cited a car about 67 percent of the time on average across all four survey administrations when asked what vehicle they drove the most. Telephone respondents reported SUVs second most frequently at about 13 percent, on average across survey administrations, as the vehicle driven most often.

Weights were applied to the telephone data when all respondents were included in analyses to account for the under-representation of the younger age groups in the survey responses. All telephone survey question analyses of the responses of men 21 to 34 years old were unweighted.

Table 2. Connecticut Telephone Survey Q27: Self–Reported Gender by Survey Administration

Self-Reported Gender	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)	Overall (%)	CT Population Statistics* (%)
	(N=600)	(N=620)	(N=601)	(N=600)	(N=2,421)	Pop: 3,405,565
Male	50.0	48.4	49.9	50.0	50.0	48.4
Female	50.0	51.6	50.1	50.0	50.0	51.6
Total	*100*	*100*	*100*	*100*	*100*	*100*

* 2000 U.S. Census Estimates

Table 3. Connecticut Telephone Survey Q29: Self–Reported Race by Survey Administration

Self-Reported Race	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)	Overall (%)	CT Population Statistics* (%)
	(N=600)	(N=620)	(N=601)	(N=600)	(N=2,421)	Pop: 3,405,565
White	85.8	89.0	89.9	87.7	88.1	81.6
Black	5.8	4.5	2.5	3.3	4.0	9.0
Asian	2.2	1.9	2.7	1.7	2.1	0.3
Native American	0.8	0.5	0.0	0.0	0.3	2.4
Native Hawaiian	0.3	0.0	0.0	0.0	0.0	0.0
Other	1.8	1.8	1.8	2.8	2.1	6.7
Refused	3.2	2.3	3.2	4.0	3.1	
Total	*100*	*100*	*100*	*100*	*100*	*100*

* 2000 U.S. Census Estimates

Table 4. Connecticut Telephone Survey Q28: Self-Reported Age Group by Survey Administration

Self-Reported Age Group	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)	Overall (%)	CT Population Statistics* (%)
	(N=600)	(N=620)	(N=601)	(N=600)	(N=2421)	Pop: 2,652,316
16-20	3.3	2.7	2.7	2.5	2.8	7.9
21-34	12.8	14.8	16.3	17.2	15.3	22.5
35-39	11.2	9.4	10.5	8.7	9.9	11.1
40-49	23.0	21.1	23.3	23.3	22.7	20.7
50-59	21.7	20.2	20.0	20.0	20.4	15.2
60+	28.0	31.8	27.3	28.3	28.9	22.7
Total	*100*	*100*	*100*	*100*	*100*	*100*

* 2000 U.S. Census Estimates

Table 5. Connecticut Telephone Survey Q3: Self-Reported Type of Vehicle Driven Most by Respondent

Type of Vehicle Driven Most	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=600)	(N=620)	(N=601)	(N=600)
1. Car	67.5	67.6	65.6	66.3
2. SUV	11.0	11.5	10.6	9.3
3. Pickup	13.2	9.7	13.1	15.8
4. Mini-van	6.0	9.0	7.2	6.2
5. Full van	1.8	1.9	1.5	2.0
6. Other	0.3	0.2	1.8	0.2
7. Refused	0.2	0.2	0.2	0.2
Total	*100*	*100*	*100*	*100*

B. Exposure to Enforcement Message

Significantly more respondents reported hearing or seeing something about alcohol-impaired driving in Connecticut after each holiday period compared to responses by those asked before each holiday period. As shown in Table 6, there was an 8.6-percentage-point increase after the July 4th holiday period ($\chi^2(1)=9.42$, $p<.01$) and a similar 8.5-percentage-point increase after the winter 2003 holiday period ($\chi^2(1)=8.97$, $p<.01$). Newspaper was most often cited as the source. Television was the second most frequently cited source with anywhere from 40 to 50 percent of all respondents who reported seeing something indicating that they had seen it on television. Of those who indicated seeing something, a sobriety checkpoint was the least frequently cited source.

Table 6. Connecticut Telephone Survey Q21 and Q22: Had Seen or Heard Something About Impaired Driving in Connecticut and the Source of What They Had Seen or Heard

Recently Read, Seen, or Heard Something	**July 4th Pre (%)**	**July 4th Post (%)**	**Winter Pre (%)**	**Winter Post (%)**
	(N=597)	(N=618)	(N=599)	(N=607)
Yes	55.6	64.2	53.3	61.8
No	44.4	35.8	46.7	38.2
Total	*100*	*100*	*100*	*100*
If Yes, Where Was the Message Read, Seen, Heard*	(N=333)	(N=397)	(N=319)	(N=374)
Newspaper	75.7	55.2	60.2	52.4
Radio	12.7	13.4	10.3	12.0
Television	39.9	47.2	42.3	49.6
Poster	3.0	3.8	3.1	3.7
Brochure	1.5	2.8	1.3	1.1
Sobriety Checkpoint	0.6	2.0	0.9	0.5
Other	6.9	5.3	11.6	6.9

*Respondent could indicate multiple sources.

As reported in Table 7, there was a large increase in the proportion of survey respondents reporting that they had seen or heard about sobriety checkpoints where police were looking for alcohol-impaired drivers in the past 30 days. There was a 23.8-percent increase in awareness of sobriety checkpoints after the July 4th holiday enforcement crackdown ($\chi^2(1)=78.097$, $p<.001$) and a 28.9-percent increase after the winter holiday enforcement crackdown ($\chi^2(1)=107.453$, $p<.001$). The overall increase from the beginning of the program to the end represented a 31.9-percent increase in awareness of sobriety checkpoints from March of 2003 to March of 2004 ($\chi^2(1)=131.962$, $p<.001$).

Table 7. Connecticut Telephone Survey Q16: Had Seen or Heard About Checkpoints in Past 30 Days Where Police Looking for Alcohol-Impaired Drivers

Seen/Heard About Police Checkpoints in Past 30 Days	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=596)	(N=613)	(N=602)	(N=606)
Yes	20.1	43.9	23.1	52.0
No	79.9	56.1	76.9	48.0
Total	*100*	*100*	*100*	*100*

There was an increase in the number of men 21 to 34 years old responding that they had heard or seen something about alcohol-impaired driving in Connecticut after each holiday period compared to responses by those asked before each holiday period. However, as shown in Table 8, the 20-percentage-point increase after the July 4th holiday period only approached statistical significance ($\chi^2(1)=3.269$, $p=.057$) and the 8.5-percentage-point increase after the winter 2003 holiday period was not statistically significant ($\chi^2(1)=.767$, $p>.38$). "Newspaper" was most often cited as the source for the first survey while "Television" was cited as often in the second survey and more often than all other sources for the pre- and post-winter holiday crackdown surveys. Men 21 to 34 got more of their information about the crackdowns from television than the general population responding to the surveys. Of those men 21 to 34 who indicated seeing something, a brochure was the least frequently cited information source across all survey administrations.

Table 8. Connecticut Telephone Survey Responses of Men 21 to 34 for Q21 and Q22: Had Seen or Heard Something About Impaired Driving in Connecticut and the Source of What They Had Seen or Heard

Recently Read, Seen, or Heard Something	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=45)	(N=45)	(N=53)	(N=54)
Yes	44.4	64.4	43.4	51.9
No	55.6	35.6	56.6	49.1
Total	*100*	*100*	*100*	*100*
If Yes, Where Was the Message Read, Seen, Heard*	(N=20)	(N=29)	(N=23)	(N=28)
Newspaper	65.0	34.5	52.2	32.1
Radio	5.0	13.8	4.3	21.4
Television	40.0	55.2	52.2	50.0
Poster	0.0	3.4	0.0	14.3
Brochure	0.0	0.0	8.7	0.0
Sobriety Checkpoint	5.0	6.9	0.0	0.0
Other	5.0	0.0	17.4	7.1

*Respondent could indicate multiple sources.

As reported in Table 9, there was a large increase in the proportion of men 21 to 34 years old reporting that they had seen or heard about sobriety checkpoints in the past 30 days where police were looking for alcohol-impaired drivers. There was a 46.7-percent increase in awareness of sobriety checkpoints after the July 4th holiday enforcement crackdown ($\chi^2(1)=19.955$, $p<.001$) and a 27.1-percent increase after the winter holiday enforcement crackdown ($\chi^2(1)=7.903$, $p=.005$). The overall increase in awareness of sobriety checkpoints for men 21 to 34 years old from the beginning of the program to the end represented a 41.1-percent increase from March 2003 to March 2004 ($\chi^2(1)=16.984$, $p<.001$). Thus, the media focus on increasing the awareness of this group produced an increase in their awareness of the enforcement.

Table 9. Connecticut Telephone Survey Responses of Men 21 to 34 for Q16: Seen or Heard About Checkpoints in Past 30 Days Where Police Looking for Alcohol-Impaired Drivers

Seen/Heard About Police Checkpoints in Past 30 Days	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=45)	(N=45)	(N=53)	(N=54)
Yes	20.0	66.7	34.0	61.1
No	80.0	33.3	66.0	38.9
Total	*100*	*100*	*100*	*100*

C. Perceptions of Enforcement

The proportion of telephone survey respondents indicating that State Police "very strictly" enforce the drinking and driving laws increased significantly compared to the other response options combined after both the July 4th holiday enforcement period ($\chi^2(1)=10.21$, $p=.001$) and the winter 2003 holiday enforcement period ($\chi^2(1)=10.29$, $p=.001$). Respondents also indicated that local police "very strictly" enforce the drinking and driving laws significantly more often compared to the other response options combined after both the July 4th ($\chi^2(1)=3.94$, $p<.05$) and winter ($\chi^2(1)=11.54$, $p=.001$) holiday periods compared to the period before each holiday. Results for both questions are presented in Table 10.

Table 10. Connecticut Telephone Survey Q14 and Q15: Public Perception of the Strictness of Local and State Police Enforcement of Drinking and Driving Laws

Local Police Enforcement	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=538)	(N=547)	(N=534)	(N=535)
Very Strictly	38.9	44.8	35.8	45.9
Somewhat Strictly	41.0	40.8	48.3	40.3
Not Very Strictly	11.9	9.1	9.7	7.5
Rarely	4.1	2.7	2.8	2.2
Not at All	4.1	2.6	3.4	4.1
Total	*100*	*100*	*100*	*100*
State Police Enforcement	(N=531)	(N=551)	(N=532)	(N=528)
Very Strictly	39.2	48.8	38.3	48.1
Somewhat Strictly	43.0	40.3	47.9	40.2
Not Very Strictly	10.4	6.7	9.0	6.8
Rarely	2.6	2.5	1.9	2.7
Not at All	4.7	1.6	2.8	2.3
Total	*100*	*100*	*100*	*100*

The perceptions of men 21 to 34 years old of State Police "very strictly" enforcing the laws against drinking and driving compared to all the other response options combined increased after both the July 4th holiday period and after the winter holiday period. However, neither the 2.8-percent increase after the July 4th holiday enforcement period ($\chi^2(1)=.086$, $\underline{p}=.794$) nor the 8.4-percent increase after the winter 2003 holiday enforcement period were statistically significant ($\chi^2(1)=.731$, $\underline{p}=.393$). The number of men 21 to 34 years old indicating that local police "very strictly" enforced the drinking and driving laws decreased compared to all the other responses combined after the July 4th holiday enforcement period and increased after the winter holiday enforcement period compared to those asked before the winter holiday period began. However, the 13-percent increase after the winter holiday period was not statistically significant ($\chi^2(1)=1.74$, $\underline{p}=.187$). Men 21 to 34 years old had a higher general perception about the strictness of both local and State Police enforcement of the drinking and driving laws across surveys compared to the general group of survey respondents. The relatively few men 21 to 34 responding to the survey combined with the relatively high baseline perception of the strictness of enforcement required a larger increase in perceptions to reach statistical significance. Both results are presented in Table 11.

Table 11. Connecticut Telephone Survey Responses of Men 21 to 34 for Q14 and Q15: Public Perception of the Strictness of Local and State Police Enforcement of Drinking and Driving Laws

Local Police Enforcement	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=41)	(N=44)	(N=50)	(N=49)
Very Strictly	53.7	50.0	32.0	44.9
Somewhat Strictly	31.7	29.5	54.0	38.8
Not Very Strictly	12.2	13.6	8.0	8.2
Rarely	0.0	0.0	2.0	4.1
Not at All	2.4	6.8	4.0	4.1
Total	*100*	*100*	*100*	*100*
State Police Enforcement	(N=38)	(N=43)	(N=52)	(N=49)
Very Strictly	55.3	58.1	36.5	44.9
Somewhat Strictly	31.6	32.6	50.0	42.9
Not Very Strictly	10.5	7.0	9.6	8.2
Rarely	2.6	0.0	0.0	4.1
Not at All	0.0	2.3	3.8	0.0
Total	*100*	*100*	*100*	*100*

There was a significant increase in the proportion of drivers indicating that they saw police on the roads they normally drove more often compared to the other two options combined after the July 4th holiday crackdown ($\chi^2(1)=4.211$, $\underline{p}=.040$) and after the winter holiday crackdown ($\chi^2(1)=4.850$, $\underline{p}=.028$). The results are presented in Table 12. The increase in the perception that police are on the roads more often is consistent with the increase in the proportion of respondents reporting that they thought State and local police were very strict in enforcing the drinking and driving laws.

Table 12. Connecticut Telephone Survey Q13: Public Perception of Police Presence on the Road

Police Presence on Roads	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=561)	(N=601)	(N=567)	(N=588)
More Often	27.1	32.6	25.9	31.8
About the Same	60.6	59.9	63.7	59.4
Less Often	12.3	7.5	10.4	8.8
Total	*100*	*100*	*100*	*100*

For men 21 to 34 years old, there were increases in the proportion of drivers indicating that they saw police on the roads they normally drove more often compared to the other two options combined after the July 4th holiday

crackdown ($\chi^2(1)=2.299$, $p=.129$) and after the winter holiday crackdown ($\chi^2(1)=.349$, $p=.554$), but neither was statistically significant. Results are reported in Table 13.

Table 13. Connecticut Telephone Survey Responses of Men 21 to 34 for Q13: Public Perception of Police Presence on the Road

Police Presence on Roads	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=43)	(N=44)	(N=50)	(N=53)
More Often	25.6	40.9	34.0	39.6
About the Same	65.1	52.3	56.0	60.4
Less Often	9.3	6.8	10.0	0.0
Total	*100*	*100*	*100*	*100*

Telephone respondents who indicated that in the past 30 days they had driven a motor vehicle after drinking alcohol beverages were asked to indicate how likely it was for someone who had too much to drink to drive safely to be stopped by police. The results are reported in Table 14 below. As shown in the table, there were few respondents who indicated that they had driven a motor vehicle after drinking an alcoholic beverage and there was no statistically significant change between administrations of the telephone survey in the proportion of respondents who reported drinking and driving who indicated that someone would "almost certainly" be stopped if they drank too much to drive safely.

There were too few men 21 to 34 years old who responded to the question (ranging from 4 responses in July 4th pre-survey to a high of 9 responses in the winter pre-survey) to ascertain their perceptions of the risks of being stopped if they drove after drinking too much to drive safely.

Table 14. Connecticut Telephone Survey Q8: Perceived Likelihood of Being Stopped if You Drove After Drinking Too Much to Drive Safely

Likelihood of Being Stopped After Drinking Too Much	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=54)	(N=50)	(N=69)	(N=54)
Almost Certain	9.3	10.0	5.8	11.1
Very Likely	14.8	10.0	10.1	16.7
Somewhat Likely	18.5	32.0	36.2	33.3
Somewhat Unlikely	31.5	26.0	29.0	18.5
Very Unlikely	25.9	22.0	18.8	20.4
Total	*100*	*100*	*100*	*100*

When all telephone survey respondents were asked about the chances of being stopped if a driver had been drinking, there was a significant increase in the proportion of drivers indicating that it was more likely compared to

the other options combined after both the July 4th ($\chi^2(1)=7.683$, $p<.01$) and winter 2003 ($\chi^2(1)=13.548$, $p<.001$) holiday periods. The overall increase from the first to last survey was significant as well ($\chi^2(1)=11.174$, $p<.001$). Overall, the campaign resulted in a significant increase in the proportion of drivers reporting that their perception of the chances of a drinking driver being stopped by police had increased. The results are presented in Table 15.

Table 15. Connecticut Telephone Survey Q9: Perceived Likelihood of a Driver Being Stopped by Police if the Driver Had Been Drinking

Likelihood of Being Stopped if Driver Had Been Drinking	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=472)	(N=520)	(N=511)	(N=508)
More Likely	53.8	62.5	53.5	64.6
About the Same	38.3	28.8	39.8	25.5
Less Likely	7.8	8.7	6.7	9.8
Total	*100*	*100*	*100*	*100*

Among men 21 to 34 years old, there was a 3-percent increase after the July 4th ($\chi^2(1)=074$, $p=.786$) holiday period and a 14.3-percent increase after the winter 2003 holiday period ($\chi^2(1)=1.92$, $p=.166$) in the number of respondents indicating that they thought a driver who had been drinking was more likely to be stopped by police than the other responses combined. Neither increase was statistically significant. Thus, the perception of a drinking driver being stopped by police increased, but that increase did not reach statistical significance. Table 16 presents these results.

Table 16. Connecticut Telephone Survey Responses of Men 21 to 34 for Q9: Perceived Likelihood of a Driver Being Stopped by Police if the Driver Had Been Drinking

Likelihood of Being Stopped if Driver Had Been Drinking	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=40)	(N=38)	(N=48)	(N=45)
More Likely	57.5	60.5	47.9	62.2
About the Same	42.5	34.2	41.7	24.4
Less Likely	0.0	5.3	10.4	13.3
Total	*100*	*100*	*100*	*100*

D. Self-Reported Changes in Drinking and Driving

The proportion of telephone survey respondents indicating that they were drinking and driving more often compared to last year increased significantly after the July 4th holiday period ($\chi^2(1)=8.86$, $p<.01$), and then decreased significantly between the administration of the post-July 4th survey and the pre-winter 2003 holiday period survey ($\chi^2(1)=8.94$, $p<.01$). The results are shown in Table 17. There was no statistically significant change

in the proportion of respondents indicating that they were drinking more often compared to last year between administrations of the winter holiday survey.

The number of men 21 to 34 years old who responded to the question ranged from 10 to 20 for each administration for a total of 60 men 21 to 34 years old responding for all four surveys. There were too few responses to the question across all four administrations to provide any meaningful results regarding changes in self-reported drinking and driving compared to the previous year.

Table 17. Connecticut Telephone Survey Q10: Self-Reported Drinking and Driving Compared to Last Year

Self-Reported Drinking and Driving	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=110)	(N=139)	(N=134)	(N=104)
More Often	4.5	16.5	5.2	1.0
About the Same	50.5	48.2	49.3	62.5
Less Often	45.0	35.3	45.5	36.5
Total	*100*	*100*	*100*	*100*

There was a statistically significant increase of 9.8 percent after the July 4th holiday period in the proportion of telephone respondents reporting that they knew other people who were drinking and driving more often compared to the other two responses combined ($\chi^2(1)=17.39$, $p<.001$). There was a significant decrease between the post-July 4th survey and the pre-winter 2003 holiday period survey corresponding with the change from summer to fall ($\chi^2(1)=13.30$, $p<.001$). There was no significant change after the winter holiday enforcement period compared to the pre-winter enforcement period. The increase was consistent with the increase in drinking and driving in the summer months compared to winter months (See Section G of this report for the proportion of positive BACs measured during roadside surveys across seasons). The results are reported in Table 18.

Table 18. Connecticut Telephone Survey Q11: Reported Knowing Other People Drinking and Driving Compared to Last Year

Know Other People Drinking and Driving	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=300)	(N=327)	(N=324)	(N=308)
More Often	4.3	14.1	5.6	7.8
About the Same	54.0	45.1	49.7	51.3
Less Often	41.7	40.8	44.8	40.9
Total	*100*	*100*	*100*	*100*

As shown in Table 19, there was also an increase after the July 4th holiday period in the number of men 21 to 34 years old who reported knowing others who were drinking and driving more often compared to the other two

responses combined ($\chi^2(1)=4.25$, $p<.04$). There was a corresponding decrease in the proportion indicating they knew others drinking and driving more often between the post-July 4th holiday period survey and the pre-winter holiday survey ($\chi^2(1)=3.389$, $p=.066$), but the decrease was not significant.

Table 19. Connecticut Telephone Survey of Men 21 to 34 for Q11: Reported Knowing Other People Drinking and Driving Compared to Last Year

Know Other People Drinking and Driving	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=25)	(N=34)	(N=38)	(N=33)
More Often	4.0	23.5	7.9	9.1
About the Same	52.0	38.2	47.4	72.7
Less Often	44.0	38.2	44.7	18.2
Total	*100*	*100*	*100*	*100*

Overall, there was no statistically significant change in the number of respondents, including the 21- to 34-year-old men group, reporting that they or others they knew were drinking and driving more often from the first survey to the final, post-winter holiday survey. In fact, the proportion of respondents reporting knowing others who were driving after drinking after each holiday period increased by 19.5 percentage points after the July 4th holiday crackdown and 1.2 percentage points after the winter holiday crackdown. These changes were consistent with the general survey results for the question, but the increase after the July 4th holiday enforcement period was larger for men 21 to 34 years old.

There was not a statistically significant change in the proportion of respondents reporting that they had driven within two hours of drinking alcoholic beverages in the past 30 days after either holiday enforcement period when compared to the responses before the holiday enforcement periods. There was a 1.2-percent decrease after the July 4th holiday enforcement period ($\chi^2(1)=.437$, $p=.509$) and a 3-percent decrease after the winter holiday enforcement period ($\chi^2(1)=2.649$, $p=.104$). Neither decrease was statistically significant. The results are presented in Table 20.

Table 20. Connecticut Telephone Survey Q5: Reported Having Driven in the Past 30 Days Within Two Hours of Drinking an Alcoholic Beverage

Driven in Past 30 Days Within 2 Hours of Drinking Alcohol	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=597)	(N=616)	(N=600)	(N=610)
Yes	10.6	9.4	13.2	10.2
No	89.4	90.6	86.8	89.8
Total	*100.0*	*100.0*	*100.0*	*100.0*

Men 21 to 34 years old reported driving within two hours of drinking 4.5 percent more often after the July 4th holiday crackdown ($\chi^2(1)=.385$, $p=.535$), but reported doing so 5.9 percent less often after the winter holiday enforcement period ($\chi^2(1)=.698$, $p=.403$). Neither change was statistically significant. The results are reported in Table 21.

Table 21. Connecticut Telephone Survey Responses of Men 21 to 34 for Q5: Reported Having Driven in the Past 30 Days Within Two Hours of Drinking an Alcoholic Beverage

Driven in Past 30 Days Within 2 Hours of Drinking Alcohol	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=45)	(N=45)	(N=53)	(N=54)
Yes	11.1	15.6	18.9	13.0
No	88.9	84.4	81.1	87.0
Total	*100*	*100*	*100*	*100*

E. Exposure to Enforcement

There was a significant increase in the proportion of drivers reporting that they had gone through a sobriety checkpoint after the July 4th holiday period ($\chi^2(1)=15.780$, $p<.001$). Similarly, drivers reported going through sobriety checkpoints significantly more often after the winter holiday period as well ($\chi^2(1)=15.780$, $p<.001$). Overall, the proportion of drivers reporting having gone through a sobriety checkpoint increased significantly by 6.8 percentage points from the first survey to the final, post-winter holiday period survey ($\chi^2(1)=16.965$, $p<.001$). Respondents also reported knowing others who had been through a sobriety checkpoint in the past 30 days more often after the July 4th holiday period ($\chi^2(1)=44.347$, $p<.001$) and the winter holiday period ($\chi^2(1)=7.675$, $p<.01$). Overall, the 10.9-percentage-point increase in the proportion of drivers reporting knowing others who had gone through a sobriety checkpoint between the first and last survey administrations was statistically significant ($\chi^2(1)=33.588$, $p<.001$). Results for both questions are presented in Table 22

Table 22. Connecticut Telephone Survey Q17 and Q18: Reported Having Gone Through or Knowing Someone Who Went Through a Sobriety Checkpoint in Past 30 Days

Reported Going Through a Sobriety Checkpoint in Past 30 Days	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=598)	(N=614)	(N=601)	(N=607)
Yes	5.7	12.2	6.2	12.5
No	94.3	87.8	93.8	87.5
Total	*100*	*100*	*100*	*100*
Reported Knowing Others Who Went Through a Sobriety Checkpoint in Past 30 Days	(N=593)	(N=614)	(N=592)	(N=606)
Yes	6.6	19.5	11.8	17.5
No	93.4	80.5	88.2	82.5
Total	*100*	*100*	*100*	*100*

There was a significant increase in the proportion of men 21 to 34 years old reporting that they had gone through a sobriety checkpoint after the July 4th holiday period ($\chi^2(1)=6.944$, $p<.01$). The 12.8-percent increase after the winter holiday enforcement period was not statistically significant ($\chi^2(1)=3.273$, $p=.070$). Overall, the proportion of drivers reporting having gone through a sobriety checkpoint increased significantly by 6.8 percent from the first survey to the final, post-winter holiday period survey ($\chi^2(1)=16.965$, $p<.001$). Men 21 to 34 years old also reported knowing others who had been through a sobriety checkpoint in the past 30 days significantly more often after the July 4th holiday period ($\chi^2(1)=6.944$, $p<.01$). There was a 6-percent increase in reports of knowing someone who had been through a sobriety checkpoint after the winter holiday period, but the increase was not statistically significant ($\chi^2(1)=.461$, $p=.497$). Overall, there was a statistically significant 22.6-percent increase in the proportion of drivers reporting knowing others who had gone through a sobriety checkpoint between the first and last survey administration ($\chi^2(1)=7.497$, $p<.01$). Results for both questions are presented in Table 23.

Table 23. Connecticut Telephone Survey Responses of Men 21 to 34 for Q17 and Q18: Reported Having Gone Through or Knowing Someone Who Went Through a Sobriety Checkpoint in Past 30 Days

Reported Going Through a Sobriety Checkpoint in Past 30 Days	**July 4th Pre (%)**	**July 4th Post (%)**	**Winter Pre (%)**	**Winter Post (%)**
	(N=45)	(N=45)	(N=53)	(N=54)
Yes	8.9	31.1	9.4	22.2
No	91.1	68.9	90.6	77.8
Total	*100*	*100*	*100*	*100*
Reported Knowing Others Who Went Through a Sobriety Checkpoint in Past 30 Days	(N=45)	(N=45)	(N=51)	(N=54)
Yes	8.9	31.1	25.5	31.5
No	91.1	68.9	74.5	68.5
Total	*100*	*100*	*100*	*100*

The number of drivers who reported being stopped for impaired driving remained about the same after the July 4th holiday crackdown, but increased significantly from the pre- to the post-winter holiday period ($\chi^2(1)=5.176$, $p=.023$). Overall, there was no statistically significant increase in the number of respondents reporting being stopped for impaired driving from the first survey to the last survey, which is consistent with the lack of an increase in the number of DWI arrests reported by law enforcement. The results are presented in Table 24.

For men 21 to 34, there was a statistically significant 13.4-percent increase in the proportion of respondents who reported being stopped for impaired driving after the July 4th holiday crackdown ($\chi^2(1)=4.939$, $p=.026$), but the 1.7-percent increase after the winter holiday period was not statistically significant. Overall, the number of DWI arrests for the year did not increase, so the increase in reports of being stopped for impaired driving may mean that these stops did not lead to an arrest in significantly more cases. The results are presented in Table 25.

Table 24. Connecticut Telephone Survey Q20: Reported Being Stopped for Driving While Intoxicated or Impaired

Stopped For Driving While Intoxicated/Impaired	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=598)	(N=615)	(N=603)	(N=609)
Yes	4.0	4.1	2.8	5.4
No	96.0	95.9	97.2	94.6
Total	*100*	*100*	*100*	*100*

Table 25. Connecticut Telephone Survey Responses of Men 21 to 34 for Q20: Reported Being Stopped for Driving While Intoxicated or Impaired

Stopped For Driving While Intoxicated/Impaired	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=45)	(N=45)	(N=53)	(N=54)
Yes	2.2	15.6	9.4	11.1
No	97.8	84.4	90.6	88.9
Total	*100*	*100*	*100*	*100*

Connecticut Roadside Survey

F. Driver Exposure to Enforcement Message

Part of the brief interaction with drivers at sobriety checkpoints to obtain a BAC involved asking whether they had read, seen, or heard about any special police efforts to enforce the laws against drinking and driving. As indicated in Table 26, significantly more drivers indicated that they had seen or heard something about special police efforts to enforce the drinking and driving laws after the July 4th holiday period compared to those asked before the holiday period began ($\chi^2(1)=24.03$, $p<.001$). However, there was not a similar increase after the winter holiday enforcement period ended compared to the pre-winter roadside survey responses. Newspapers were the most commonly cited source for those who had read, seen, or heard something, with television being the second-most-cited source. One possible reason for newspapers as the most commonly cited source was that police agencies in Connecticut must notify the public of upcoming sobriety checkpoints and these notices are always made in the local newspapers. Thus, drivers from these towns, especially those where many sobriety checkpoints were held, had a much higher chance of seeing something about the sobriety checkpoints than those watching television.

Table 26. Connecticut Roadside Survey: Whether and Where in the Past Month Respondents Had Seen, Heard, or Read About Any Special Police Efforts to Enforce the Law Against Drinking and Driving

Recently Seen or Heard About Any Special Efforts	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=605)	(N=713)	(N=1139)	(N=1114)
Yes	43.0	56.5	43.6	45.3
No	57.0	43.5	56.4	54.7
Total	*100*	*100*	*100*	*100*
If Yes, Where Was the Message Read/Seen/Heard*	(N=260)	(N=401)	(N=496)	(N=505)
Newspaper	42.7	54.4	47.2	45.0
Radio	13.3	24.7	22.6	15.6
Television	36.2	35.7	43.5	39.6
Poster	0.4	1.7	1.4	1.0
Brochure	0.8	1.2	0.4	0.6
Other	20.0	13.2	11.7	13.7

* Respondent could indicate multiple sources.

G. Direct Observations of Driver BACs

BACs were measured from drivers agreeing to take a blind, anonymous breath test. As presented in Table 27, there was an increase in the number of drinking drivers after the July 4th holiday period that was consistent with the self-reports of drinking and driving. More than three times as many sobriety checkpoints were held during the winter holiday period and were preceded by many more sobriety checkpoints during the sustained enforcement period that extended from summer to fall, so the cumulative effect of the campaign on driver BACs requires comparing the pre-July 4th data to the post-winter holiday period data. There are differences in the locations and times of night when comparing the pre-July 4th holiday period BACs to the post-winter holiday period BACs. However, in looking at the overall impact of the program from its inception to its peak, there was a significant decrease in the proportion of drivers with a positive BAC compared to those with a zero BAC from the pre-July 4th period to the post-winter holiday enforcement period ($\chi^2(1)=7.015$, $p \leq .01$). The pre-July 4th holiday sobriety checkpoints and post-winter holiday sobriety checkpoints were both conducted during colder, non-holiday times of the year and, as indicated in Table 28, the breath test refusal rates were very similar for both of these survey periods.

A comparison of the positive BACs from the pre- and post-winter holiday periods indicated that the proportion of positive BACs decreased while the proportion of zero BACs increased. In addition, there was a significant decrease in the refusal rate when comparing the pre-winter holiday period to the post-winter holiday period ($\chi^2(1)=4.29$, $p<.04$). Both sets of results are presented in Table 27 and Table 28.

The winter holiday data for both pre- and post- surveys were matched by times of night for each matching location. All things being equal, the refusal rate should be consistent across conditions because drivers generally refuse the survey for the same reasons across time or may even refuse more often if drivers keep encountering sobriety checkpoints on the same road they travel frequently. However, when drivers refuse because they have a positive BAC, the proportion of refusals would be expected to change as the number of drivers with a positive BAC changed. In fact, the refusal rate decreased significantly after the winter holiday campaign crackdown compared to the fall before the crackdown. The decrease may mean that the same proportion of drivers refusing because of the time required and intrusiveness of the survey, but the number of drivers with a positive BAC went down, resulting in the significant decrease in refusals. If the refusal proportions are combined with the proportion of those with known positive BACs in each condition, the result is a significant decrease from 20.2 percent to 16.2 percent after the winter holiday period compared to the pre-winter holiday period ($\chi^2(2)=6.70$, $p<.04$).

Table 27. Connecticut Roadside Survey: Driver BACs and Refusals

Driver BACs	July 4th Pre- (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=616)	(N=723)	(N=1168)	(N=1132)
Positive BAC	13.5	16.5	11.0	9.3
Zero BAC	80.5	76.1	79.8	83.8
Refused Test	6.0	7.5	9.2	6.9
Total	*100*	*100*	*100*	*100*

Table 28. Connecticut Roadside Survey: Breath Test Refusal Rates

Breath Test Refusal Rates	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=616)	(N=723)	(N=1168)	(N=1132)
Refused BAC Test	6	7.5	9.2	6.9
Took BAC Test*	94.0	92.5	90.8	91.9
Total	*100*	*100*	*100*	*100*

*Includes all positive BACs and all zero BACs combined.

There were no statistically significant changes in the proportion of men 16 to 34 with positive BACs after either the July 4th holiday period ($\chi^2(1)=2.89$, $p>.05$) or the winter holiday period ($\chi^2(1)=.540$, $p=.463$) when compared to each pre-holiday period. As shown in Table 29, there was an overall decrease of 4.8 percent in the proportion of men 16 to 34 with positive BACs. However, the decrease was not statistically significant ($\chi^2(1)=2.886$, $p, \leq.10$). As presented in Table 30, there were no significant changes in the refusal rates of men 16 to 34 after either holiday enforcement period.

Table 29. Connecticut Roadside Survey: Men 16 to 34 Driver BACs and Refusals

Driver BACs	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=179)	(N=242)	(N=301)	(N=344)
Positive BAC	15.6	15.3	12.0	10.8
Zero BAC	79.9	79.8	80.4	84.6
Refused Test	4.5	5.0	7.6	4.7
Total	*100*	*100*	*100*	*100*

Table 30. Connecticut Roadside Survey: Men 16 to 34 Breath Test Refusal Rates

Breath Test Refusal Rates	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=301)	(N=343)	(N=179)	(N=242)
Refused BAC Test	7.6	4.7	4.5	5.0
Took BAC Test*	92.4	95.3	95.5	95.0
Total	*100*	*100*	*100*	*100*

*Includes all positive BACs and all zero BACs combined

H. Driver BACs by Time of Night, Age, and Gender

The proportion of drivers with positive BACs increased steadily throughout the night from a low of 6.4 percent between 9 p.m. and 10 p.m. to 16.6 percent from 1 a.m. to 2 a.m. Sobriety checkpoints generally began between 8 p.m. and 9 p.m., and data collection generally began shortly afterwards. The proportions listed below only included BACs of drivers tested at times that matched across all sobriety checkpoints held in a particular location throughout the study. The proportion of positive BACs at higher levels increased steadily throughout the nighttime hours until 2 a.m. Most of the drivers with positive BACs had BACs less than .05 across all times of night. The 1-2 a.m. hour had the highest percentage of positive BACs and also included the highest proportion of drivers with BACs above .05 and the highest proportion of drivers with BACs at or above the legal limit of .08. In total, only 1.1 percent of the 3,356 drivers interviewed by researchers had BACs at or above the legal limit. The results are reported in Table 31.

Table 31. Connecticut Roadside Survey: Distribution of Roadside BACs by Category and Hour of Night

Hour of Night	Zero BAC	.001-.049	.05-.079	.08+	Totals
	(N=2,922)	(N=339)	(N=60)	(N=35)	(N=3,356)
9 p.m.-10 p.m.	92.0%	6.4%	1.3%	0.3%	(N=315)
10 p.m.-11 p.m.	88.5%	9.8%	1.1%	0.6%	(N=987)
11 p.m.-Midnight	88.6%	9.0%	1.9%	0.5%	(N=977)
Midnight-1 a.m.	84.8%	10.9%	2.3%	2.0%	(N=781)
1 a.m.- 2 a.m.	78.0%	16.6%	3.0%	2.4%	(N=296)

Generally, as the age group of the drivers increased, the proportion of positive BACs increased as well. This trend did not include the age group including those 65 years old and older. This age group had the lowest proportion of drivers with positive BACs. In general, there were more positive BACs for drivers of all ages measured after the July 4th holiday enforcement period. BACs decreased from the pre-July 4th holiday period to the post-winter holiday period in every age group except the 16- to 24-year-olds. More drivers 35 to 49 years old came through the sobriety checkpoints than any other age group. Drivers in the 25- to 34-year-old age group were the second most common. Results are presented in Table 32.

Table 32. Connecticut Roadside Survey: Distribution of BACs by Age Group

Age Group	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)	Totals
16-24	(N=137)	(N=215)	(N=246)	(N=220)	(N=818)
Positive BAC	11.7	14.4	10.2	11.4	11.9
Zero BAC	88.3	85.6	89.8	88.6	88.1
25-34	(N=161)	(N=153)	(N=268)	(N=323)	(N=905)
Positive BAC	15.5	19.6	12.3	10.2	13.4
Zero BAC	84.5	80.4	87.7	89.8	86.6
35-49	(N=164)	(N=195)	(N=326)	(N=334)	(N=1,019)
Positive BAC	16.5	20.0	11.0	9.9	13.2
Zero BAC	83.5	80.0	89.0	90.1	86.8
50-64	(N=95)	(N=67)	(N=160)	(N=125)	(N=447)
Positive BAC	12.6	22.4	16.3	8.8	14.3
Zero BAC	87.4	77.6	83.8	91.2	85.7
65+	(N=8)	(N=27)	(N=53)	(N=45)	(N=133)
Positive BAC	12.5	11.1	5.7	6.7	7.5
Zero BAC	87.5	88.9	94.3	93.3	92.5

As indicated in Table 33, the proportion of drivers going through the sobriety checkpoints from younger age groups increased slightly during later hours. The proportion of drivers at sobriety checkpoints from the youngest group, drivers 16 to 24 years old increased throughout the night from 22 percent from 9 p.m.-10 p.m. to a high of 32 percent from 1 a.m.-2 a.m. The proportion of drivers from the 25- to 34-year-old age group remained

relatively stable throughout the night. The proportion of drivers from the 35- to 49-year-old age group dropped from above 30 percent before 1 a.m. to 26 percent from 1 a.m.-2 a.m., meaning that the shift in the age of drivers at later hours was due to a decrease in the number of drivers from this older group along with an increase in the number of drivers 16 to 24 years old.

Table 33. Connecticut Roadside Survey: Proportion of Drivers at Sobriety Checkpoints by Age Group and Hour of Night

	9-10 p.m.	10-11 p.m.	11 p.m.-Midnight	Midnight-1 a.m.	1-2 a.m.	Totals
Age Group	(N=337)	(N=1,037)	(N=1,026)	(N=815)	(N=302)	(N=3,517)
16-24	22%	21%	23%	27%	32%	(N=848)
25-34	29%	27%	29%	26%	28%	(N=965)
35-49	31%	33%	30%	31%	26%	(N=1,094)
50-64	15%	15%	13%	12%	12%	(N=471)
65+	4%	4%	5%	4%	2%	(N=139)
Total	*100%*	*100%*	*100%*	*100%*	*100%*	

As indicated in Table 34, the proportion of male drivers with positive BACs at sobriety checkpoints decreased significantly from 17.8 percent for the pre-July 4th to 10.6 percent for the post-winter holiday period ($\chi^2(1)=10.42$, $p<.01$). Female drivers had positive BACs about the same percentage of time from the pre-July 4th holiday period (9%) to the post-winter holiday period (9.3%). There were generally more male drivers going through the sobriety checkpoint locations during all survey periods, and they generally were more likely to have positive BACs, but the proportion of men drinking and driving decreased almost to the same rate as the women by the post-winter holiday period.

Table 34. Connecticut Roadside Survey: Distribution of BACs by Gender

	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)	Totals
Men	(N=342)	(N=415)	(N=616)	(N=661)	(N=2,034)
Percent Positive BACs	17.8	18.8	13.1	10.6	(N=290)
Zero BAC	82.2	81.2	86.9	89.4	(N=1,744)
Total	*100*	*100*	*100*	*100*	
Women	(N=221)	(N=243)	(N=436)	(N=389)	(N=1,289)
Percent Positive BACs	9.0	16.0	9.6	9.3	(N=137)
Zero BAC	91.0	84.0	90.4	90.7	(N=1,152)
Total	*100*	*100*	*100*	*100*	

Connecticut Alcohol-Related Fatality Analysis

I. ARIMA Analyses of All Connecticut Alcohol-Related Fatalities

The random effects ARIMA model (000) (000) results indicated that there was a significant decrease in Connecticut's alcohol-related fatality trend following the beginning of the campaign and including an 18-month period from July 2003 through December 2004 compared to the trend from January 2000 through June 2003 (p=.042). As indicated in Table 35, the estimated reduction in the number of alcohol-related fatalities determined by the ARIMA analysis was 2.055 lives each month for the 18 months following the beginning of the campaign for a total of an estimated 37 lives saved.

The estimated reduction each month based on the ARIMA model for all alcohol-related fatalities matches the actual mean monthly decrease in Connecticut's alcohol-related fatalities from 12.8 from January 2000 through June 2003 to 10.7 from July 2003 through December 2004. However, the analysis predicted that had there been no campaign, alcohol-related fatalities in Connecticut would likely have increased beyond the number that actually occurred during the period.

Table 35. Connecticut Alcohol-Related Fatality Trend ARIMA Results: Parameter Estimates for Alcohol-Related Fatalities

		Estimates	Standard Error	t	Significance
Regression Coefficients	Intervention	-2.055	.990	-2.075	.042
Constant		12.83	.543	23.656	.000

Another ARIMA analysis of the Connecticut alcohol-related fatality trend used the alcohol-related fatality totals for each month from contiguous counties as a covariate to help account for noise and the effects of drinking and driving trends in bordering counties as well as seasonal and economic variations. The use of the covariate helped to clarify the effect of the campaign on Connecticut's alcohol-related fatality trend. The total number of alcohol-related fatalities each month from contiguous counties in New York (Duchess, Nassau, Putnam, Suffolk, and Westchester), Rhode Island (Berkshire, Hampden, and Worcester), and Massachusetts (Kent, Providence, and Washington) was used to construct the covariate trend for Connecticut's alcohol-related fatality trend.

The random effects model (000) (000) was used for the ARIMA because the inclusion of the alcohol-related fatalities from contiguous counties as a covariate left no significant autocorrelations and no significant partial autocorrelations. This model left a significant "sudden and sustained" effect on alcohol-related fatalities coincident with the beginning of the campaign and continuing through the end of 2004 (p=.01).

The results indicated that the campaign saved an estimated 2.604 lives each month, which is more than the previous estimate of about 2.055 lives each month without the covariate. This estimate is a better prediction of the number of lives saved because it controls for more extraneous influences than the ARIMA model that did not

include a covariate. Thus, the total estimated lives saved increased from about 37 to about 47 with the addition of a covariate to the ARIMA model.

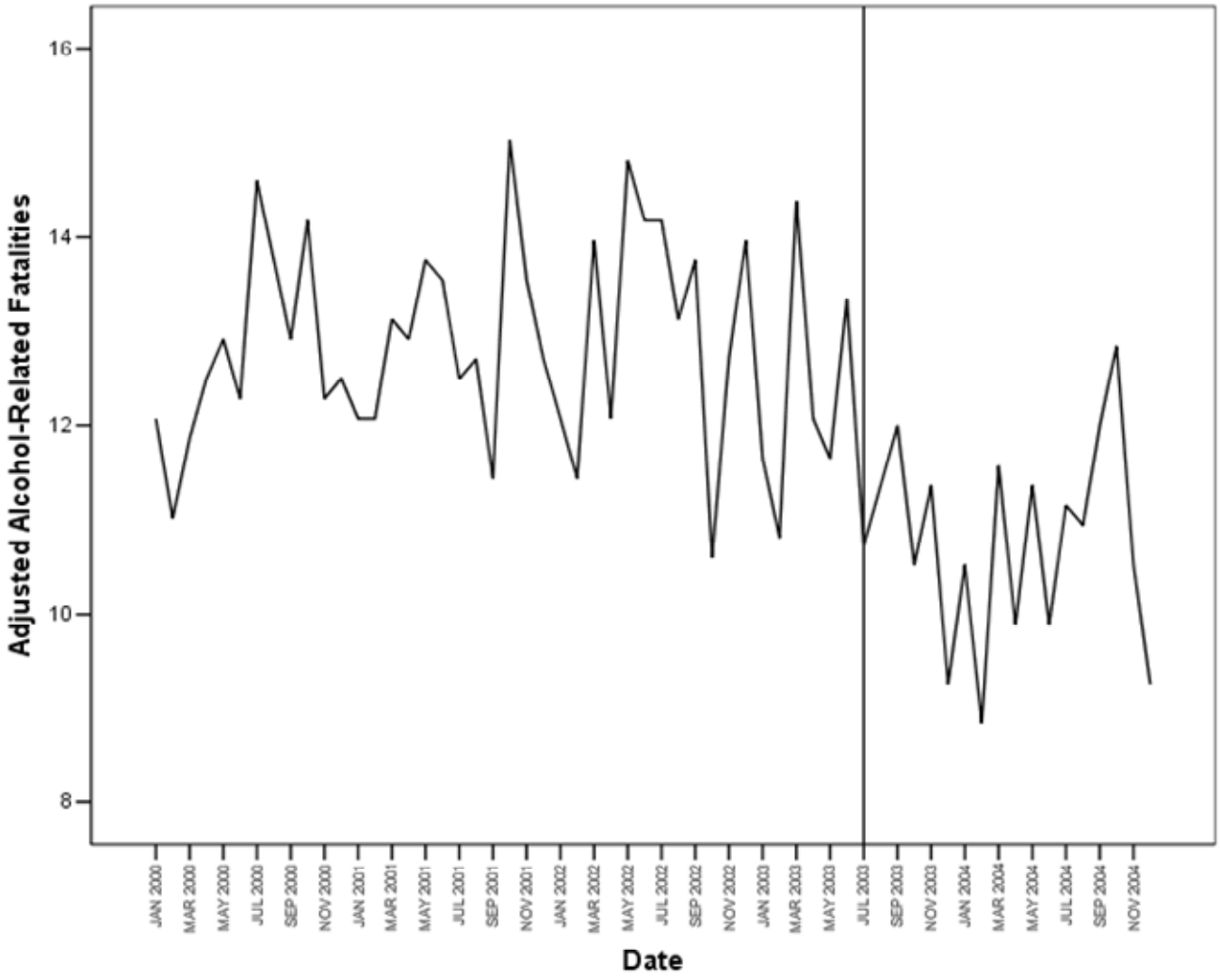
Table 36 shows the estimated reductions in alcohol-related fatalities. The significant value for the covariate indicates that the number of alcohol-related fatalities in contiguous counties is related to the number of alcohol-related fatalities in Connecticut.

Table 36. Connecticut Alcohol-Related Fatality Trend ARIMA Results Including a Covariate: Parameter Estimates for Alcohol-Related Fatalities Using Alcohol-Related Fatalities from Contiguous Counties as a Covariate

		Estimates	Standard Error	t	Significance
Regression Coefficients	Intervention	-2.604	.974	-2.672	.010
	Contiguous County Fatalities	.211	.085	2.483	.016
Constant		8.911	1.663	5.359	.000

Figure 2 shows graphically the significant reduction in the predicted alcohol-related fatality trend in Connecticut after contiguous county data were used to remove any noise, seasonal, region wide trends, and economic variations that may have obscured the effect of the campaign on the trend.

Figure 2. Connecticut Predicted Alcohol-Related Fatalities 2000-2004 After Contiguous County Data and Modeling Applied to Remove Noise and the Effects of Region Wide Efforts to Combat Drinking and Driving as Well as Seasonal and Economic Variations



J. ARIMA Analyses of Connecticut Alcohol-Related Fatalities Involving Men 21 to 34 Years Old

The random effects ARIMA model (000) (000) results indicated that there was a significant decrease in the alcohol-related fatality trend for men 21 to 34 following the beginning of the campaign and including the 18-month period from July 2003 through December 2004 ($p<.03$). As shown in Table 37, the estimated reduction in the number of fatalities by 1.568 lives each month for the 18 months following the beginning of the campaign led to a total estimate of about 28 lives saved in 18 months.

Table 37. Connecticut Alcohol-Related Fatality Trend Involving Men 21 to 34 Years Old ARIMA Results: Parameter Estimates for Alcohol-Related Fatalities

		Estimates	Standard Error	t	Significance
Regression Coefficients	Intervention	-1.568	.571	-2.748	.008
	Contiguous County Fatalities	-0.16	.062	-.252	.802
Constant		5.800	.869	6.674	.000

VI. SUMMARY AND CONCLUSIONS

Connecticut's impaired-driving high-visibility enforcement campaign represented the first time the State has expended such a substantial amount of money for both media and enforcement in its effort to reduce impaired driving and ultimately, alcohol-related crashes. The campaign focused on increasing awareness of the enforcement, especially during holiday periods, and on increasing the perceived risk of being stopped if a driver had been drinking. Men 21 to 34 years old served as the primary focus for the awareness campaign about the enforcement. Results from telephone and roadside surveys indicated that drivers, particularly men 21 to 34 years old, heard the enforcement-based media messages and their perceptions of being caught if they drove after drinking generally increased during holiday enforcement periods as well as between holiday periods, during the sustained enforcement period. The State spent over one million dollars on a public information campaign to produce changes in driver perceptions and reached a wide audience.

Law enforcement agencies put on a cumulative, large number of sobriety checkpoints as the campaign progressed, with a particularly large number of sobriety checkpoints held during the winter 2003 holiday enforcement period when law enforcement agencies held more than three times as many sobriety checkpoints as the July 4th holiday period. The number of arrests for 2003 did not increase, which was expected. Refocusing law enforcement efforts away from activities such as directed patrols and saturation patrols, which traditionally yield many more DWI arrests than sobriety checkpoints, was expected to lead to a similar number of DWI arrests or even fewer DWI arrests. The increased number of sobriety checkpoints accompanied by the extensive media campaign was designed to serve as a deterrent to those who may have otherwise chosen to drink and drive, and ultimately led to fewer alcohol-related fatalities on Connecticut roads.

The campaign also achieved its ultimate goal: significantly reducing the alcohol-related fatality trend for the State and for men 21 to 34 years old. The reduction in alcohol-related fatalities involving men 21 to 34 resulted in saving an estimated 28 lives and the reduction in the overall rate resulted in saving an estimated total of 47 lives.

VII. REFERENCES

Lacey, J. H., Jones, R. K., and Smith, R. G. (1999). *Checkpoint Tennessee: Tennessee's Statewide Sobriety Checkpoint Program*. Final Report, contract no. DTNH22-94-C-05064. National Highway Traffic Safety Administration, Report Number DOT HS 808 841. Washington, DC.

National Highway Traffic Safety Administration. (2003). Traffic Safety Facts 2003. DOT HS 809 761. Washington, DC.

Wells, J.K., Preusser, D.F., and Williams, A.F. *Enforcing Alcohol-Impaired Driving and Seat Belt Use Laws, Binghamton, New York*. Journal of Safety Research, 1992, 23, 63-71.

APPENDIX A: Connecticut Media Campaign Report From Cronin and Company

4th of July Holiday Campaign

Connecticut has 6 commercial broadcast television stations, 19 daily newspapers, and numerous radio stations. There are also 24 cable television franchises within the State. The State can be divided roughly into four media "centers," including Hartford, New Haven, New London, and Waterbury. With the exception of Fairfield County, which draws much of its media from New York City, Connecticut's media markets are isolated from other markets in contiguous States.

Television

Medium with great capacity to build broad and instantaneous reach to multiple audiences.

- Wrote, designed, and produced two 30-second television spots
- Spots aired for 13 weeks on broadcast and cable television

Radio

Offers reach into the target audience segment with frequency as it tends to "travel" with our audience from room to room, at home, in the car, and at work.

- Wrote and produced one 60-second radio spot
- Spot aired for 15 weeks on 6 stations

Outdoor

Reached out to the audience while in their most relevant environment – their vehicles.

- Wrote, designed, and produced two billboards
- Boards were posted in New London County and the Stamford/Greenwich area

Clear Channel Added Value

Media commitment helped maximize and expand the DWI enforcement message throughout the target audience.

- As part of the Clear Channel Radio package, the following was negotiated and included as added value: Web banner space on station sites, e-mail blasts, outdoor billboards, PSAs, Safe Rides Program, Dave Matthews Band ticket contest, etc.

Public Relations

Media relations campaign that delivered enforcement message and executed an ongoing publicity campaign that included press kit development and ongoing PR.

- Coordinated and executed kick-off press conference
- Created press material, media lists
- Secured interviews and placements with media

In-Bar Events

Aimed to educate target group, men 21 to 34, on the dangers of driving drunk in a fun, interactive way in their environment – the bar.

- Developed and executed four in-bar events
- Developed and produced in-bar material and giveaways including posters, key chains, dice games, and mouse pads

Web site

Served as the primary destination for individuals seeking information, insight, and knowledge about the issues involved with DWI enforcement, prevention, and education in Connecticut.

- Wrote, designed, and produced a Web site including the following interactive features: Idiot's Guide, Online Loss Calculator, Legal Trivia Quiz, Impairment Demo, and Animated Interactive Stories
- Wrote and designed one Web banner that appeared on media television and radio station Web sites

Winter Holiday Media Campaign

PAID MEDIA

The FY 2004 DWI Holiday Campaign was an extension of the 2003 Campaign aimed at:

- Creating the perception of sustained enforcement and supporting heightened enforcement times.
- Building awareness for severe consequences when caught drinking and driving.

It encompassed both paid media (broadcast TV, cable TV, and radio) as well as value-added initiatives that were negotiated on behalf of the Connecticut DOT by Cronin at no additional cost. Paid media began airing November 14, 2003, and lasted through January 9, 2004. (The campaign timeframe was extended using the value-added initiatives from October 1, 2003, through January 11, 2004.)

In total, the Holiday Campaign allowed for $447,143 in media at a cost of $136,000. (A savings of $311,143 was achieved via the negotiated value-added media.) Below is a breakdown of the media value: *(Note: Values assigned represent the median cost if it were paid for by an advertiser.)*

Medium	Total	Value
Broadcast Television	170+ 30-second spots	55,015
Cable Television	3,043+ 30-second spots	21,486
Radio	1,068+ 60-second spots	55,207
Public Service Announcements	2,016+ 60-second spots	171,360
Web Advertising	6 Station Web Sites/16 Consecutive Weeks	19,125
E-Mail Blasts	12 E-Mail Blasts Plus Trip Giveaway	11,900
In-Bar Merchandising/Events	17 In-Bar Events Including New Years Eve	57,800
Safe Rides Program	Car Rides (6 weeks, 11/24-1/1)	12,750
A Safe Rides Message on All Bar/Nightclub Radio Advertising	Tag Included on All Bars/Nightclubs Advertising on Clear Channel Radio Stations (6 Weeks, 11/24-1/1)	42,500

Web site hits during the media campaign totaled 12,318 from October 1, 2003, to January 11, 2004, with an increase during the heavier media timeframe and as the campaign progressed: 1,911 in October; 3,086 in November; 5,434 in December; and 1,887 January 1-11, 2004.

Broadcast Television

- Timing: Fox, CBS: November 24, 2003 – January 9, 2004 (7 Weeks)
  NBC, ABC, WB, UPN: December 8, 2003 – January 3, 2004 (4 Weeks)
- Station Mix: Fox (WTIC), CBS (WFSB), NBC (WVIT), ABC (WTNH), WB (WTXX), UPN (WCTX)
- Program Highlights: Sunday NFL, The Simpsons, That 70s Show, 24, NYPD Blue, UCONN Basketball, WWF Smackdown, According to Jim, Alias, LA Dragnet, Threat Matrix
- Schedule Delivered:
  - 97-percent reach with an average frequency of 6.3
  - 550+ M21-31 Gross Rating Points
  - 170+ 30-second spots
- Value Added:
  - Cronin was able to negotiate one bonus spot for every paid spot adding significant message frequency to the campaign.
  - FOX61 hosted a UCONN Men's Basketball ticket giveaway that involved answering a series of DWI questions on the Fox61 Web site. Contestants were referred to the drink-drive-lose.com Web site as the source for the answers. The giveaway was promoted via 10-second promotional spots. It received more than 145 entries.

Cable Television

- Timing: November 24, 2003 – January 9, 2004 (7 Weeks)
- Cable Systems: Comcast, COX, Cable Vision
- Network Highlights: ESPN, ESPN2, Comedy Central, MTV, FX, TNN, USA
- Schedule Delivered:
  - 3,043+ 30-second spots
- Value Added:
  - Cronin was able to negotiate one bonus spot for every paid spot adding significant message frequency to the campaign.

Radio

- Timing: November 24, 2003 – January 4, 2004 (6 Weeks)
  - The schedule was concentrated on Thursdays, Fridays, and Saturdays, using the day parts on each station that are most likely to influence the target's decision about DWI.
- Station Mix: WHCN, WWYZ, WKSS, WPHH, WPOP AM, WKCI
  - Station mix provided an audience of potential offenders and their sphere of influence: friends, girlfriends, and families.
- Schedule Delivered:
  - 85-percent reach with an average frequency of 20
  - 1,707+ M21-31 Gross Rating Points
  - 1,068+ 60-second spots

VALUE-ADDED MEDIA

Public Service Announcements

- Timing: November 14, 2003 – January 11, 2004 (9 Weeks)
- Station Mix: WHCN, WWYZ, WKSS, WPHH, WPOP AM, WKCI
- A bank of 60-second public service announcements aired on all six participating radio stations:
  - Each radio station ran 42 60-second public service announcements per week.
  - 2,016+ total 60-second spots (336 per station)
  - The "Dream Car" Commercial aired 11/14 – 11/23 and 1/1-1/11. The "Safe Rides PSA" aired 11/24-12/31.

Web Advertising

- Timing: October 1, 2003 – January 31, 2004 (18 Weeks)
- Stations: WHCN, WWYZ, WKSS, WPHH, WPOP AM, WKCI
- The participating radio stations placed a *You Drink and Drive. You Lose* banner on their Web sites. The link took viewers to the drink-drive-lose.com Web site.

E-Mail Blasts

- Timing: December 15, 2003 – January 31, 2004
  - The e-mail blasts occurred during peak holiday times where the target offender was most likely to be DWI; the weeks leading up to the holidays.
  - 12 total blasts
  - Reaching database of 30,000+ members
- Each radio station sent out a Web newsletter to their database of subscribers that included a message about DWI.
- To make the message more appealing, a Killington Ski Weekend Getaway was included in an effort to encourage viewers to click-through to the DWI message and get more information. The promotion received over 345 entries.

Safe Rides Program

- Cronin and Clear Channel joined with Yellow Cab of Hartford and Metro Taxi of New Haven to provide "Safe Rides" for the public between Thanksgiving and New Year's Eve, every Friday and Saturday night (6 weeks).
- The public was encouraged to use Safe Rides through the on-air public service announcements that began the week of November 24, 2003.
- Total number of safe rides home provided over the Holiday 2003 Campaign:
  - 320+ from Yellow Cab in Hartford
  - 250+ from Metro Taxi in New Haven

Safe Rides Message on All Bar/Nightclub Radio Advertising

- Timing: November 24, 2003 - January 1, 2004
- WKSS, WPHH, and WKCI included a tag on bar and nightclub commercials that encouraged listeners to use the Safe Rides program. The tag read:

  "Clear Channel reminds you to be safe this holiday season, if you've had too much to drink, call for a FREE, SAFE, ride home, in Hartford call Yellow Cab at 666-6666 and in New Haven call Metro Taxi at 777-7777."

In-Bar Merchandising/Events

- Stations: WKSS-KISS 95.7 and WPHH-Power 104.1
- Both stations were live on location this holiday season at many bars and nightclubs. Clear Channel took DWI/Miller Beer merchandising material out to the bars to reinforce the DWI message.
- When appropriate, on-air personalities would include a message about the Safe Rides Program while addressing the crowds.
- Cronin and Clear Channel brainstormed to make the in-bar events more exciting and to bring something new and timely to the target audience:
  - A DWI tent card was set up at the radio station's promotion tables with information on drink-drive-lose.com Web site along with an entry to win personal chauffer service on New Year's Eve.
  - Cronin and Clear Channel joined with Premier Limousine to provide limousine service for one winner on New Year's Eve. Bar patrons were able to register at the various in-bar events Clear Channel conducted throughout the holidays.
  - In-Bar Events Calendar – 17 Bar Events:

- Saturday, December 6	WKSS Kiss 95.7	Hippodrome
- Friday, December 12	WKSS Kiss 95.7	Playwright
- Friday, December 12	WPHH Power 104	Longshots
- Saturday, December 13	WPHH Power 104	Bar With No Name
- Saturday, December 13	WKSS Kiss 95.7	Playwright
- Thursday, December 18	WPHH Power 104	Enchanted Garden
- Friday, December 19	WPHH Power 104	Longshots
- Friday, December 19	WKSS Kiss 95.7	Playwright
- Saturday, December 20	WPHH Power 104	Bar With No Name
- Saturday, December 20	WKSS Kiss 95.7	Hippodrome
- Thursday, December 25	WPHH Power 104	Edge Café
- Thursday, December 25	WKSS Kiss 95.7	Bar With No Name
- Friday, December 26	WKSS Kiss 95.7	Playwright

- Saturday, December 27 WPHH Power 104 Bar With No Name
- Saturday, December 27 WKSS Kiss 95.7 Hippodrome
- Wednesday, December 31 WPHH Power 104 Bar With No Name
- Wednesday, December 31 WKSS Kiss 95.7 BLU

- New Year's Eve: Extra on-air and in-bar mentions were made about both the Safe Rides Program and the drink-drive-lose.com Web site.

APPENDIX B: Connecticut Telephone Survey

Alcohol Crackdown Sobriety Telephone Survey
(Created for the Connecticut Department of Transportation)

Hello, I'm _____ calling for the Connecticut Department of Transportation. We are conducting a study on driving habits and attitudes. Your phone number was randomly selected and we would like to ask you a few questions. This interview is voluntary and completely confidential.

Is that OK?

1. Yes [proceed with interview]
2. No, refused [terminate interview]
3. Inconvenient to talk [schedule time for a call-back: _____]

Q1. Are you a licensed driver in the State of Connecticut?

1. Yes [if "yes" go to Q2.]
2. No [if "no" go to Q1a.]

Q1a. Could I speak to a licensed driver living in your home?

1. Yes
2. No

Q2. About how many miles did you drive last year?

1. Less than 5,000
2. 5,000 to 10,000
3. 10,001 to 15,000
4. More than 15,000

Q3. What type of vehicle do you drive most often?

1. Passenger car
2. Pickup truck
3. Sport utility vehicle
4. Mini-van
5. Full van
6. Other

Q4. How often do you use seat belts when you drive or ride in a car, van, sport utility vehicle, or pickup?

1. Always
2. Nearly Always
3. Sometimes
4. Seldom
5. Never

Q5. In the past 30 days, have you driven a motor vehicle within 2 hours after drinking alcoholic beverages?
1. Yes (Q5a) [if yes, enter # of times ___ ____]
2. No skip to Q9

Q6. On the most recent occasion when you drove within 2 hours after drinking alcoholic beverages, how many drinks (of beer, wine, liquor) did you have? [enter # drinks __ __]

Q7. About how many times in the past 30 days did you drive when you thought you had too much to drink? [enter # times __ __]

Q8. If you drove after having too much to drink to drive safely, how likely are you to be stopped by a police officer?
1. Almost certain
2. Very likely
3. Somewhat likely
4. Somewhat unlikely
5. Very unlikely

Q9. Compared with last year, do you think a driver who had been drinking is more likely, less likely, or about as likely to be stopped by a police officer?
1. More likely
2. Less likely
3. About as likely
4. Not sure

Q10. Compared with last year, are you now driving after drinking: (check one)
1. More often
2. Less often
3. About the same
4. I do not drive after drinking

Q11. Compared with last year, are other people you know now driving after drinking: (check one)
1. More often
2. Less often
3. About the same
4. I do not know people who drive after drinking

Q12. Compared with last year, have you been using your seat belt: (check one)
1. More often
2. Less often
3. About the same
4. Not sure

Q13. Compared with last year, do you see police on the roads you normally drive:
(check one)
1. More often
2. Less often
3. About the same
4. Not sure

Q14. In your opinion, do you think the State Police enforce drinking and driving laws very strictly, somewhat strictly, not very strictly, rarely, or not at all?
1. Very strictly
2. Somewhat strictly
3. Not very strictly
4. Rarely
4. Not at all

Q15. In your opinion, do you think the local police enforce drinking and driving laws very strictly, somewhat strictly, not very strictly, rarely, or not at all?
1. Very strictly
2. Somewhat strictly
3. Not very strictly
4. Rarely
4. Not at all

Q16. In the past 30 days, have you seen or heard anything about a checkpoint where police are looking for alcohol-impaired drivers?
1. Yes
2. No

Q17. In the past 30 days, have you personally gone through a checkpoint where police were looking for alcohol-impaired drivers?
1. Yes
2. No

Q18. In the past 30 days, has anyone you know gone through a checkpoint where police were looking for alcohol-impaired drivers?
1. Yes
2. No

Q19. Have you ever received a ticket for not wearing your seat belt?
1. Yes
2. No

Q20. Have you ever been stopped for driving while intoxicated or impaired by alcohol (DWI)?
1. Yes
2. No

Q21. Have you recently read, seen, or heard anything about alcohol-impaired driving in Connecticut?
1. Yes
2. No [if "no" skip to Q23]

Q22. Where did you see or hear about it? (check all that apply)
1. Newspaper
2. Radio
3. TV
4. Poster
5. Brochure
6. Police checkpoint
7. Other

Q23. Have you recently read, seen, or heard anything about the seat belt law in Connecticut?
1. Yes
2. No [if "no" skip to Q26.]

Q24. Where did you see or hear about it? (check all that apply)
1. Newspaper
2. Radio
3. TV
4. Poster
5. Brochure
6. Police checkpoint
7. Other

Q25. Do you know the name of any impaired-driving enforcement program(s) in Connecticut?
(check all that apply)
1.You drink, you drive, you lose
2. Team DWI
3. Friends don't let friends drive drunk
4. Checkpoint Strikeforce
5. Please step away from your vehicle

Q26. Do you know the name of any seat belt program(s) in Connecticut? (check all that apply)
1. No excuses, buckle up
2. Buckle up, now
3. Click it or ticket
4. No exceptions, no excuses
5. Operation 35, buckle up, stay alive
6. Drive to survive
7. No excuses. Buckle up. It's the law. It's enforced.

Q27. [Read out loud only if you aren't sure] Are you male or female?
1. Male
2. Female

Q28. What is your age? record actual age __ __
1. 16-20
2. 21-25
3. 26-39
4. 40-49
5. 50-59
6. 60 or older

Q29. What do you consider your race to be?
1. White
2. Black or African American
3. Asian
4. American Indian or Alaska Native
5. Native Hawaiian or Pacific Islander
6. Other

Q29a. Are you of Spanish/Hispanic origin?
1. Yes
2. No

Q30. What is your Zip Code? [__ __ __ __ __]

We've finished the interview. Thank you very much for taking the time to participate in this project.

APPENDIX C: Additional Connecticut Telephone Survey Responses

Connecticut Telephone Survey Q2: Self-Reported Number of Miles Driven Last Year

Self-Reported Miles Driven Last Year	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=600)	(N=620)	(N=601)	(N=600)
< 5,000	23.5	15.6	17.5	18.7
5,000 – 10,000	23.0	32.4	23.8	25.3
10,001 – 15,000	25.3	27.6	29.6	27.3
> 15,000	26.8	21.8	27.3	26.3
Refused	1.3	2.6	1.8	2.3
Total	*100*	*100*	*100*	*100*

Connecticut Telephone Survey Q4: Self-Reported Frequency of Seat Belt Use When Driving or Riding in a Motor Vehicle

Seat Belt Use When Driving or Riding in Motor Vehicle	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=598)	(N=618)	(N=603)	(N=611)
Always	82.8	87.9	85.6	87.1
Nearly Always	9.9	8.1	8.1	6.7
Sometimes	4.5	1.9	3.2	4.1
Seldom	0.7	0.6	1.7	1.1
Never	2.2	1.5	1.5	1.0
Total	*100*	*100*	*100*	*100*

Connecticut Telephone Survey Q12: Change in Seat Belt Use Compared to Last Year

Belt Use Compared to Last Year	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=600)	(N=620)	(N=601)	(N=600)
More Often	17.9	22.0	19.3	19.3
About the Same	0.3	0.8	0.7	0.5
Less Often	81.7	77.2	80.1	80.2
Total	*100*	*100*	*100*	*100*

Connecticut Telephone Survey Q6: Self-Reported Number of Drinks Consumed If Respondent Reported Having Driven in the Past 30 Days Within Two Hours of Drinking Alcohol

Number of Drinks Consumed	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=63)	(N=59)	(N=79)	(N=62)
1	36.5	33.9	39.2	46.8
2	46.0	37.3	38.0	35.5
3	9.5	10.2	13.9	4.8
4	3.2	5.1	1.3	6.5
5	0.0	5.1	2.5	0.0
7	0.0	3.4	0.0	0.0
10	0.0	0.0	0.0	3.2
12	0.0	0.0	0.0	1.6
20	0.0	1.7	0.0	0.0
21	4.8	3.4	5.1	1.6
Total	*100*	*100*	*100*	*100*

Connecticut Telephone Survey Q7: Self Reported Number of Times Driven After Drinking Too Much if Respondent Reported Having Driven in the Past 30 Days Within Two Hours of Drinking Alcohol

Number of Times Reported Driving After Drinking Too Much	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=64)	(N=57)	(N=79)	(N=62)
0	90.6	82.5	98.7	91.9
1	1.6	5.3	1.3	3.2
2	1.6	1.8	0.0	3.2
5	0.0	1.8	0.0	0.0
10	0.0	0.0	0.0	1.6
29	3.1	0.0	0.0	0.0
30	0.0	5.3	0.0	0.0
31	3.1	3.5	0.0	0.0
Total	*100*	*100*	*100*	*100*

Connecticut Telephone Survey Q19: Reported Ever Receiving a Seat Belt Ticket

Received Ticket for Not Wearing Seat Belt Ticket	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=598)	(N=617)	(N=602)	(N=609)
Yes	6.2	7.3	8.1	7.6
No	93.8	92.7	91.9	92.4
Total	*100*	*100*	*100*	*100*

Connecticut Telephone Survey Q23 and Q24: Respondent Awareness/Knowledge of Connecticut's Seat Belt Law and Source

Recently Heard About Connecticut's Seat Belt Law	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
	(N=598)	(N=617)	(N=601)	(N=608)
Yes	36.3	66.5*	49.1	52.6**
No	63.7	33.5	50.9	47.4
Total	*100*	*100*	*100*	*100*
If yes, where? ***	(N=217)	(N=410)	(N=295)	(N=320)
Newspaper	46.5	31.5	36.3	36.6
Radio	18.0	21.7	19.3	16.3
Television	40.1	56.8	39.3	50.6
Poster	14.8	13.7	9.8	15.0
Brochure	7.8	8.3	5.4	2.5
Checkpoint	7.8	8.3	2.4	0.6
Other	6.0	8.3	19.6	8.8

* Significant from Wave 1 to Wave 2 at $p<.01$
**Significant from Wave 1 to Wave 4 $p<.01$
***Respondents were allowed to reply with more than one answer.

Connecticut Telephone Survey Q26: Free Recall of Names of Any Seat Belt Program in Connecticut

	July 4th Pre (%)	July 4th Post (%)	Winter Pre (%)	Winter Post (%)
Recalled the following programs*	(N=372)	(N=390)	(N=247)	(N=238)
No excuses, buckle up.	19.6	11.8	10.9	8.4
Buckle up, now.	36.5	19.0	19.0	21.8
Click it or ticket.	11.0	48.8	49.4	26.9
No exceptions, no excuses.	7.5	6.7	5.7	0.8
Operation 35, buckle up stay alive.	12.9	4.6	7.7	2.5
Drive to survive.	13.7	5.1	5.3	0.4
No excuses. Buckle up. It's the law. It's enforced.	38.9	22.6	29.1	5.9
Other	17.5	26.4	15.0	33.5

* Respondents were allowed to reply with more than one answer.

APPENDIX D: Connecticut Roadside Survey Data Collection Form

Machine #:___ Refused All___
If subject pulled over, check all that apply: Warn__Belt Tckt__ CPS__ Oth Tckt__ FST__ DWI__ Oth Arrest__

Could Not Make Contact with Driver___ (still estimate age, sex, race, passengers, & vehicle type below)

Coming from:	Headed to:	# Miles:
__ Home __ Work __ Friend's/relative's house __ Restaurant/bar __ Store __ Theatre, movie, concert, game, other entertainment __ Other	__ Home __ Work __ Friend's/relative's house __ Restaurant/bar __ Store __ Theatre, movies, concert, game, other entertainment __ Other	

Ever been through a police checkpoint before? YES NO Day Night

In past six months besides this one? YES NO

Do you favor the use of checkpoints by police to enforce the law against drinking and driving?

YES NO Comments:

Within the past month, have you seen, heard, or read about any special police efforts to enforce the law against drinking and driving? YES NO

If YES, where? TV Radio Newspaper Poster Brochure Other

ZIP Code Where you Live	Manually Sampled?	Took Alcohol Test?
	YES NO	YES NO, refused

Estimate: **Get ZIP of subject if arrested—ask officer for ZIP on driver's license; Get State off plate if REFUSE ALL**

Age	Sex	Race	# of Passengers	Type of vehicle
__ 16-24 __ 25-34 __ 35-49 __ 50-64 __ 65+	__ M __ F	__ White __ Black __ Asian __ Other **Hispanic** __ Yes __ No	__0 __1 __2 __3 __4 __5 __more	__ Passenger car __ Pickup truck __ Minivan __ Full-size van __ SUV __ Truck __ Other

Test #: _____ **Press small far right dot for the test # for this person (if took test) and record here.**

If DWI arrest, evidentiary BAC test: ____

DOT HS 810 689
February 2007

U.S. Department of Transportation
National Highway Traffic Safety Administration

www.nhtsa.gov