



Circumstances of Drinking Prior To DUI Arrest

A report of the 2002 Orange County
Drinking Driver Program Survey

This project was partially funded by the National Tobacco Settlement

Recommended Citation:

Kite, R.; Alberts, J.; and Condon, C. J. (2002).
“Circumstances of Drinking Prior to DUI Arrest:
A Report of the 2002 Orange County Drinking Driver Program Survey. ”
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Dear Colleagues:

This research report focuses on the problem of impaired driving, and provides a wealth of information to support ongoing DUI/impaired driving prevention efforts throughout Orange County. From a public health perspective, the two most significant features of alcohol and drug-impaired driving are the magnitude of its impact across all areas of health and safety, and the growing body of evidence demonstrating that it is a preventable problem.

The personal and societal costs associated with impaired driving are staggering. Nationally, there were 16,653 alcohol-related traffic fatalities in 2000 and more than 310,000 persons were injured in alcohol-related motor vehicle crashes -- an average of one person injured every two minutes. In Orange County, 61 of the 164 traffic fatalities in 2000 were alcohol-related. Strikingly, impaired driving is the leading cause of death in 15 to 20 year olds. In addition to the toll on human life, the total economic costs of impaired driving in the United States are estimated at more than \$100 billion a year.

Yet there is some good news to accompany these sobering statistics: Overall, impaired driving has declined nearly every year over the past two decades. The reasons for this decline can be largely attributed to combination of drinking and driving prevention measures, including stronger laws and vigorous enforcement, changing social attitudes fostered by citizen pressure, and community-level initiatives aimed at reducing environmental risk-factors for impaired driving. Clearly, our collective prevention efforts are working.

Significant progress has been made in reducing alcohol/drug-impaired driving in Orange County, but much more can be done. The County of Orange Health Care Agency, Alcohol and Drug Education and Prevention Team (ADEPT) and its many community partners are committed to providing effective, science-based programs to prevent a broad spectrum of alcohol and other drug-related problems that threaten public health and safety, including impaired driving. A key requirement of science-based prevention is ongoing research to assess risk and protective factors associated with alcohol/drug problems.

In keeping with the Health Care Agency's commitment to research-based prevention, this study provides a revealing profile of individual factors and environmental circumstances associated with high-risk drinking and impaired driving. We believe that this information provides both a strong impetus and a constructive framework for future alcohol and other drug prevention efforts.

Sincerely,

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Drinking Driver Program Survey**

October, 2002

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Executive Summary

A survey was conducted to investigate the environmental circumstances and other factors associated with driving under the influence (DUI) incidents in Orange County. The primary purpose of the research was to gather information to be used in developing community-based DUI prevention strategies and interventions.

Survey participants were voluntarily recruited from the population of DUI offenders enrolled in the court-mandated Orange County Drinking Driver Program (DDP) during the months of February, March, and April 2002. All survey materials were printed in both English and Spanish languages and were distributed to each of the seven state-licensed and county-contracted DDP providers in Orange County.

The survey questionnaire was group-administered to volunteers within three different levels of the Drinking Driver Program: Level I, a 3-month program for first-time DUI offenders; Level II, a 6-month program for first offenders with exceptionally high blood alcohol content (BAC) test levels at the time of arrest; Level III, an 18-month program for multiple DUI offenders. All questionnaire responses were anonymous in that no personal-identifying information was recorded.

All differences presented in this report were significant at the $p < .05$ level of significance.

Highlights of the findings:

- Almost half the DUI arrests reported in this survey were made on Fridays and Saturdays, and 72% were made between the hours of 8:00 p.m. and 4:00 a.m.
- Cities with the highest reported DUI arrest rates (the number of arrests per 10,000 adult residents to adjust for city size) were Costa Mesa, Laguna Beach, and Newport Beach. These same cities were the three most commonly named cities of last drink (i.e., the city in which respondents reported having their last drink before being arrested for DUI).
- Cities with a higher density of alcohol-serving establishments (the number of establishments per 10,000 adult residents) were more likely to be reported as a city of last drink before DUI arrest, suggesting that the density of alcohol-serving establishments in a city is a significant community-level risk factor for alcohol impaired driving.
- Only 37% of respondents were arrested for DUI in the city in which they had last been drinking prior to DUI arrest, indicating that most intoxicated drivers may travel some distance before being arrested for DUI.
- Nearly one-third of respondents had at least one passenger with them when they were arrested for DUI, thereby placing those individuals at risk for injury by driving under the influence of alcohol. Respondents in Level I (42%) were more likely to have had passengers upon DUI arrest than those in Levels II or III (27% in each).
- Over half of the respondents (53%) had their last drink in a bar, restaurant, or other establishment licensed to sell alcohol for on-site consumption, whereas 35% had their last drink in a private residence, and 12% had their last drink in another type of setting (e.g., park, beach, vehicle).

Executive Summary

- White respondents were more likely to have been drinking at a bar or restaurant. Conversely, Hispanic/Latino respondents were more likely to have had their last drink in a private setting.
- More “acculturated” Hispanics (defined as Hispanic respondents who completed the survey in English) also were more likely to have been drinking in a bar, restaurant, or private club, whereas less acculturated Hispanic respondents (i.e., Hispanic respondents who completed the survey in Spanish) were more likely to have been drinking in a private setting.
- Approximately half of the respondents had been at their place of last drink for two hours or less before being arrested for DUI, and had consumed an average of 4-6 drinks during that time.
 - Individuals who drank in a private setting spent more time drinking and consumed more drinks at that place than did individuals who drank in a public setting.
 - Hispanic/Latino respondents, especially those who were less acculturated, spent more time drinking and consumed a greater number of drinks at their place of last drink than did White respondents.
- The most commonly-attempted intervention reported was the general suggestion from a server or someone else that the person not drive (made to 17% of respondents), followed by the recommendation that they wait before driving (8%). Only 2% were refused service by a bartender or server, and only 1% were offered a cab.
 - Although the percentages were small, respondents with a higher BAC (at or above two times the legal limit) were more likely to be offered a cab or a ride home, or to be told that they should not drive compared with those who reported a lower BAC.
- The vast majority of respondents thought their ability to drive safely was relatively unimpaired and that it was “not at all” or “not very” likely that they would get arrested for DUI. Only 22% thought their ability to drive safely was impaired “a fair amount or very much” and only 9% thought they were “fairly or very likely” to get arrested for DUI.
 - White respondents thought they were less likely to get stopped for DUI than Hispanic respondents. Similarly, more acculturated Hispanic respondents believed that they were less impaired and were less likely to believe they would get stopped for DUI than less acculturated Hispanic individuals.
- When asked about drinking and driving behavior in the 12 months prior to their latest DUI arrest, approximately 28% reported driving at least once per month within two hours after drinking, and over half of those did so three or more times per week.
 - Respondents in Level II indicated that they more frequently drove within two hours of drinking during the previous 12 months than those in Level I.

Findings

BACKGROUND INFORMATION

During the timeframe that surveys were distributed, a total of 9,826 people were enrolled in the three specified program-levels at all DDP sites. With a return of 3,673 complete surveys, the voluntary sample for this survey comprised 37% of the specified DDP population in Orange County.

Figure 1 Language of Survey

Of the 3,673 surveys that were completed:

- 73% (n = 2,676) were completed in English, and
- 27% (n = 997) in Spanish

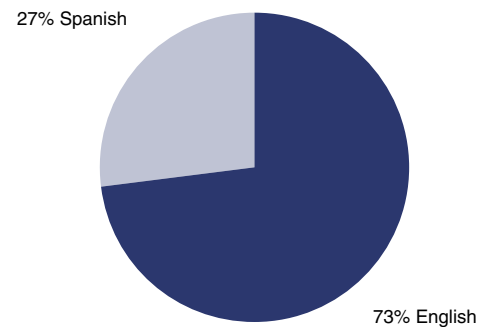
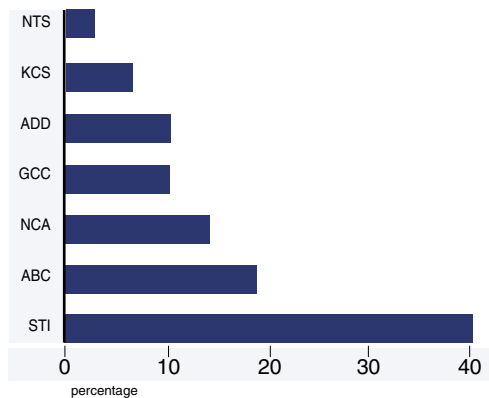


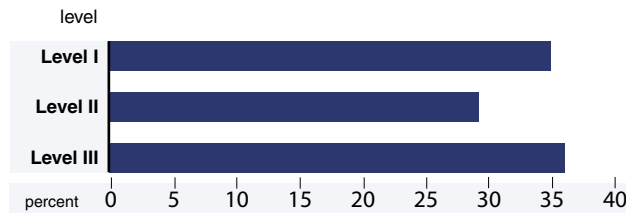
Figure 2 Schools



Surveys were completed by DUI offenders from each of the seven local drinking driver programs.

- Predictably, the greatest response (40% of all completed surveys) came from the school with the largest enrollment: School Ten, Inc.
- 18% were from ABC Traffic Schools
- 13% from National Council on Alcoholism and Drug Dependence
- 10% from Academy of Defensive Driving
- 10% from Gold Coast Counseling
- 6% from K.C. Services, and
- 4% from National Traffic Safety Institute

Figure 3 Program Level



There was a relatively equal number of respondents from each of the three levels of the drinking driver program.

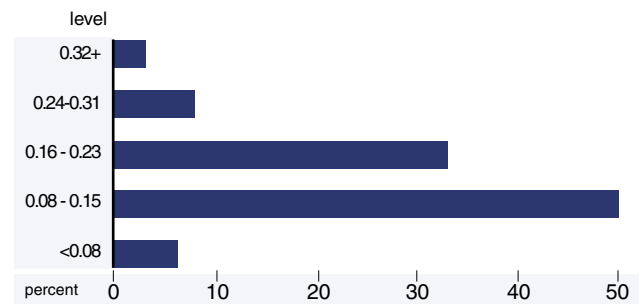
- 1,087 in Level I
- 882 in Level II, and
- 1,118 enrolled in a Level III program.

Nearly 600 respondents did not identify their program level.

Figure 4 Self-Reported Blood Alcohol Content at Time of Arrest

The average blood alcohol content (BAC) at the time of arrest reported by all respondents was 0.15, almost twice the legal limit of 0.08¹.

- One-third of respondents reported having a BAC between 0.16 - 0.23 (i.e., 2-3 times the legal limit)
- 8% were between 0.24 - 0.31 (i.e., 3-4 times the legal limit)
- 3% reported having a BAC that was at or above 4 times the legal limit.



¹ The average BAC was 0.16 for those who reported having a BAC at or above the legal limit of 0.08.

Table 1 Average Reported Blood Alcohol Level by Program Level

Program Level	Mean BAC
Level I	0.13
Level II	0.17
Level III	0.15

Differences in the average blood alcohol content (BAC) across the three program levels were largely a reflection of the criteria that determine drinking driver program assignment.

Specifically, Level II respondents (first-time DUI offenders with an exceptionally high BAC) had the highest average BAC of 0.17, while Level III respondents (multiple DUI offenders who, presumably, have a high tolerance for alcohol) had the second-highest average BAC of 0.15, followed by Level I (first-time DUI offenders) at 0.13. All program level differences are statistically significant.

Table 2 Cross-Tabulation of BAC and Program Level

BAC Level	Program Level		
	Level I	Level II	Level III
0.08 to 0.15	70%	34%	48%
0.16+	30%	66%	52%
Level Totals	100%	100%	100%

Consistent with the previous analysis, respondents in Level II were significantly more likely to report having a high BAC (0.16+, two or more times the legal limit) than a lower BAC of 0.08 – 0.15. Conversely, the BAC profile of Level I respondents showed the reverse tendency, with most (70%) within the range of 0.08 – 0.15.

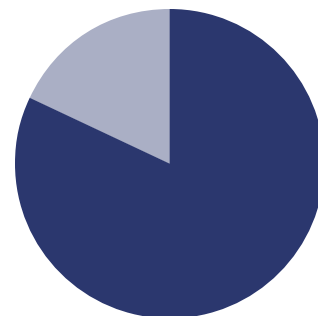
Respondents in Level III were equally likely to report having a high BAC (two or more times the legal limit) as a lower BAC (less than two times the legal limit).

Figure 5 Gender of Respondents

Most respondents were men:

- 82% men
- 18% women

18% Female



82% Male

Figure 6 Racial/Ethnic Background

The racial/ethnic background was predominantly:

- Non-Hispanic white (50%), or
- Hispanic/Latino (43%).

Throughout this report, non-Hispanic whites will be referred to as “Whites.”

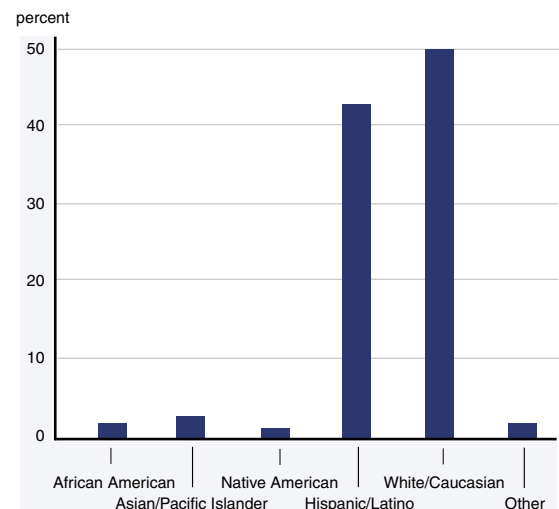
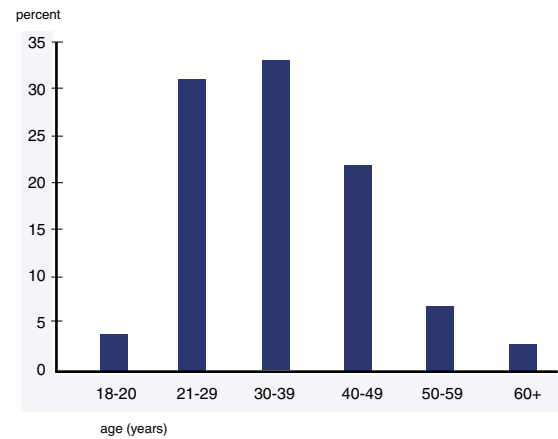


Figure 7

Age of Respondents

The average age of respondents was 35.3 years (SD = 11.1). The vast majority of respondents (86%) were between 21-49 years of age.

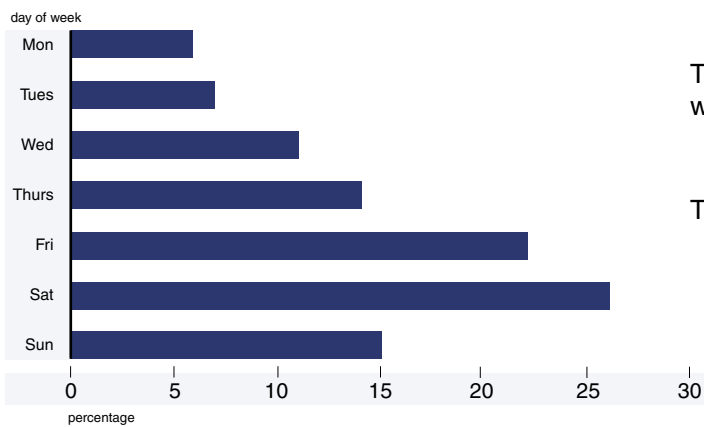


Findings

CIRCUMSTANCES OF DUI ARREST

Respondents were asked to report the day of the week and time of day they were arrested for DUI. They were also asked to identify the city in which they were arrested and whether they had passengers in their car at the time of their arrest.

Figure 8 Day of Arrest



The most frequently reported days of the week for DUI arrests were:

- Fridays (22%) and Saturdays (26%),

The least frequent days were:

- Mondays (6%) and Tuesdays (7%)

Figure 9 Time of Arrest

Most arrests occurred between:

- 8 p.m. and 4 a.m. (72%)

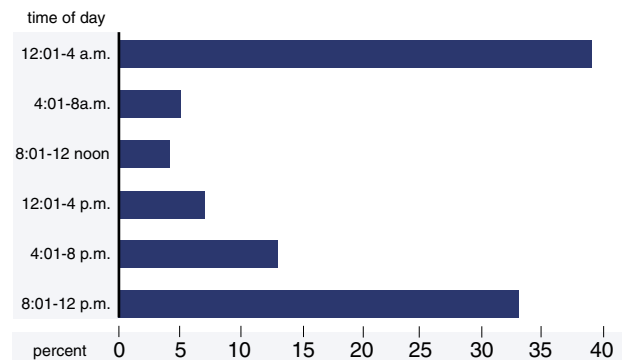


Table 3 Most Commonly-Reported Cities of DUI Arrest (Unadjusted)

City	Percent of Reported DUI Arrests
Santa Ana	11%
Anaheim	9%
Costa Mesa	8%
Huntington Beach	6%
Newport Beach	5%

The five most commonly-reported cities where respondents' DUI arrests occurred were:

- Santa Ana (11%)
- Anaheim (9%)
- Costa Mesa (8%)
- Huntington Beach (6%)
- Newport Beach (5%)

Cities with 5 or fewer incidents of reported DUI were excluded from further analyses. These included Villa Park, and Laguna Woods. Table 3 shows the top five most commonly-reported cities of DUI arrest, not adjusting for population.

While these rates identify the cities with the absolute greatest number of DUI arrests, they do not take into consideration the size of the population in each city. Therefore, rates were also calculated as the number of individuals who reported being arrested for DUI in each city, per 10,000 adult residents of that city.

Table 4 Most Commonly-Reported Cities of DUI Arrest (Population-Adjusted)

Adjusting for population, the cities with the highest rates of DUI arrest were:

- Costa Mesa
- Laguna Beach
- Newport Beach
- Brea
- Los Alamitos

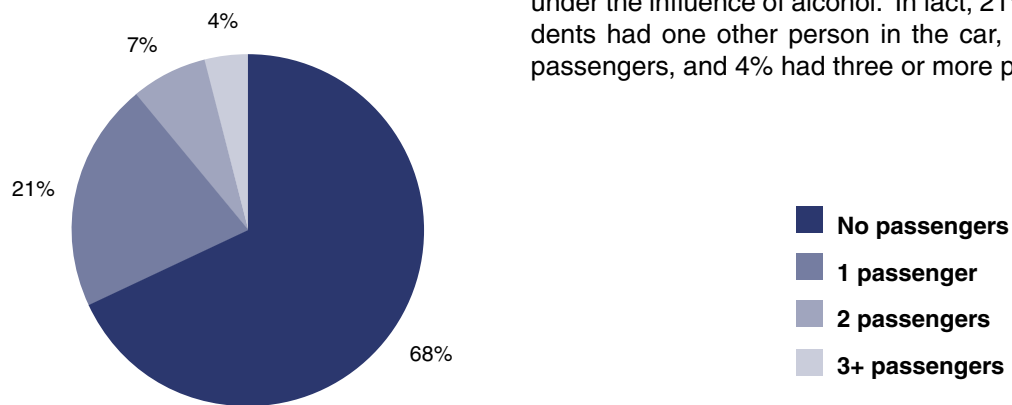
Rates for all cities can be found in Appendix A.

Most respondents who were not arrested for DUI in Orange County reported that they were arrested in neighboring counties, including Los Angeles, Riverside, and San Diego.

City	Rate per 10,000 Adult Residents
Costa Mesa	35.35
Laguna Beach	32.04
Newport Beach	30.97
Brea	29.63
Los Alamitos	20.87

It is important to note that findings related to the day of the week, time of day, and city of arrest may be strongly influenced by police patrol patterns and enforcement priorities (i.e., where and when police officers are on patrol and the departmental priority placed on DUI enforcement).

Figure 10 Number of Passengers When Arrested



Individual Differences in the Presence of Passengers

When data on the presence of passengers in the car was analyzed by Program Level, BAC level, and ethnicity, several differences emerged. Specifically, the following groups were more likely to have passengers in the car when they were arrested for DUI:

- 42% of respondents in Level I had passengers (compared with 27% in Level II and 27% in Level III).
- 38% of those with a BAC less than 0.16 (two times the legal limit) had passengers (compared with 27% of those with a BAC of 0.16 or higher)
- 35% of Hispanic/Latino respondents had passengers (compared with 30% of White respondents)

Findings

LAST DRINK INFORMATION

Respondents reported the city and type of setting (e.g., bar, home) in which they were last drinking before being arrested for DUI. They also indicated how long they had been at that place and the number of drinks they had consumed in that place.

Table 5 Most Commonly Reported Cities of Last Drink (Unadjusted)

City	Percent of Reported Cities of Last Drink
Santa Ana	11%
Anaheim	9%
Costa Mesa	8%
Huntington Beach	6%
Newport Beach	5%

The five most commonly-reported cities in which respondents had their last drink before being arrested were Santa Ana (11%), Anaheim (9%), Costa Mesa (7%), Huntington Beach (6%), and Newport Beach (6%). Cities that were reported 5 or fewer times as the city of last drink were excluded from further analyses. These included Villa Park, Laguna Woods, La Palma, and the community of Midway City (all less than 0.2%). Table 5 presents the five most commonly-reported cities of last drink, not adjusting for population.

Again, these rates identify the cities where the greatest number of individuals had been drinking before their DUI arrest, but do not take into consideration the size of the population in each city. Therefore, city-of-last-drink rates were also calculated as the number of individuals who reported drinking in each city per 10,000 adult residents.

Table 6 Most Commonly Reported Cities of Last Drink (Population Adjusted)

City	Rate per 10,000 Adult Residents
Newport Beach	37.68
Laguna Beach	30.04
Costa Mesa	29.72
Los Alamitos	26.67
Brea	22.79

Adjusting for population, the cities with the highest rates of drinking before DUI arrest were: Newport Beach, Laguna Beach, Costa Mesa, Los Alamitos, and Brea.

Rates for all cities can be found in Appendix A.

Cities outside of Orange County in which respondents reported they were drinking before their arrest included: Los Angeles, Long Beach, Riverside and San Diego

Only 37% of respondents were arrested for DUI in the city in which they had last been drinking prior to DUI arrest. Therefore, an additional analysis focused on comparing rates of drinking and rates of DUI arrest within each city. Specifically, the number of individuals who were arrested for DUI in a particular city per 10,000 adult residents was compared to the number of individuals who reported having their last drink in that city, also adjusted for population. Among these drinking driver respondents, this rate differential reflects the relative likelihood of last drink occurrence versus DUI arrest within a given city.

Table 7 Cities With More People Who Reported Drinking In That City Than Who Were Arrested There for DUI

City	Difference in Rate Per 10,000 Adult Residents
Newport Beach	6.72
Los Alamitos	5.80
Stanton	3.46
Dana Point	2.87
Anaheim	1.75

Table 7 shows the top 5 cities that had more people who reported drinking in that city than were arrested in that city.

Table 8 Cities With More People Who Were Arrested for DUI In That City Than Who Reported Drinking In That City

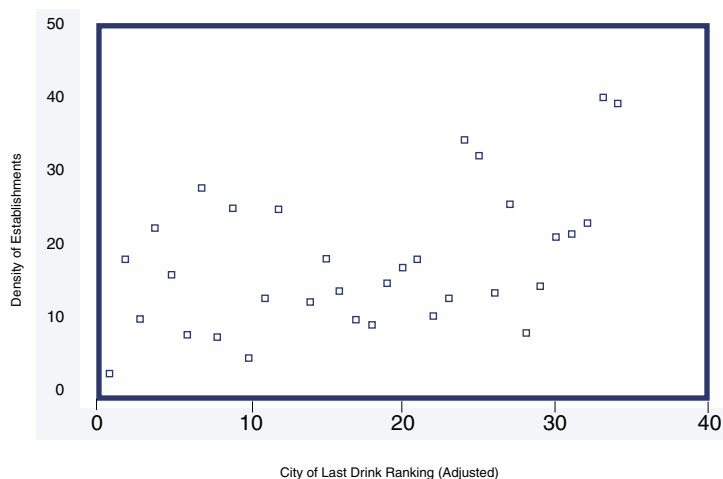
Conversely, Table 8 shows the top 5 cities that had more DUI arrests than people who reported drinking in that city.

City	Difference in Rate Per 10,000 Adult Residents
Brea	6.84
Costa Mesa	5.63
Seal Beach	5.25
Fountain Valley	5.23
La Habra	4.30

Figure 11 City of Last Drink by Establishment Density

In order to determine the degree to which city of last drink rates correspond with alcohol-serving establishment density (i.e., the number of alcohol-serving establishments adjusted for population), a Spearman rank-order correlation was conducted using the city of last drink ranking (with higher numerical ranks indicating the more frequently reported cities) and density values.

This analysis revealed that cities with a higher density of alcohol-serving establishments were more likely to be reported as the city of last drink before DUI arrest (Spearman $\rho = .41$, $p < .05$; see Figure 11), suggesting that the density of alcohol-serving establishments in a city is a significant community-level risk factor for alcohol impaired driving.



Those cities with the highest density of alcohol-serving establishments are at greater risk for various community health and safety problems related to drinking and driving, including alcohol-related motor vehicle crashes, property damage, personal injuries and deaths, along with the staggering economic costs associated with these problems.

Table 9 Setting of Last Drink

Over half of the respondents (53%) had their last drink in a bar, restaurant, or other establishment licensed to sell alcohol for on-site consumption. Approximately 33% reported having their last drink in a bar, 14% in a restaurant, 5% in a private club, and 1% in an arena or stadium.

These data have important implications for community-based prevention efforts that focus on changing environmental conditions that give rise to impaired driving incidents. Specifically, these findings are indicative of environments that allow the irresponsible practice of serving alcohol to intoxicated individuals, a condition that can be remedied through interventions such as Responsible Beverage Service training.

More than one-third of the respondents (35%) had been drinking in a private residence (15% at their own home and 20% at another person’s home) just before being arrested for DUI.

Approximately 5% (n = 167) of respondents identified a setting other than the places listed as the site where they had their last drink before being arrested for DUI. Of those individuals, 19% (n = 32) reported drinking at work, 11% (n = 18) drank at a hotel or motel, and 10% (n = 17) drank at a party.

Setting	Percent
Bar	33%
Another’s Home	20%
Own Home	15%
Restaurant	14%
Vehicle	5%
Private Club	5%
Other Location	5%
Park	1%
Stadium/Arena	1%
Beach	1%



Individual Differences in Setting of Last Drink

Cross-tabulations revealed differences between men and women, Hispanic/Latino and White respondents, and between more and less acculturated Hispanics in the setting where they were last drinking before being arrested for DUI. For purposes of this analysis, the term “more acculturated Hispanics” refers to those respondents who indicated that their ethnic background was Hispanic/Latino and completed the survey in English, while “less acculturated Hispanics” refers to respondents who indicated that their ethnic background was Hispanic/Latino and completed the survey in Spanish.

- Women were more likely to have been drinking in a restaurant (22% of women vs. 13% of men).
- Hispanic/Latino respondents were more likely to have had their last drink in a private setting (own home: 17% Hispanic vs. 12% White; another’s home: 24% Hispanic vs. 17% White). Conversely, White respondents were more likely to have been drinking at a bar (39% White vs. 28% Hispanic) or restaurant (17% White vs. 12% Hispanic).
- Less acculturated Hispanic respondents were more likely to have been drinking in a private setting (own home: 21% of less acculturated vs. 11% of more acculturated Hispanics; other’s home: 26% of less acculturated vs. 20% of more acculturated Hispanics), whereas more acculturated Hispanics were more likely to have been drinking in a bar (33% more acculturated vs. 24% less acculturated respondents), restaurant (14% more acculturated vs. 10% less acculturated respondents), or private club (9% more acculturated vs. 5.5% less acculturated respondents).

Figure 12

Length of Time at Place of Last Drink

Approximately half of the respondents had been at their place of last drink for 2 hours or less before being arrested for DUI. Most individuals had been at their place of last drink for 1-4 hours (68%).

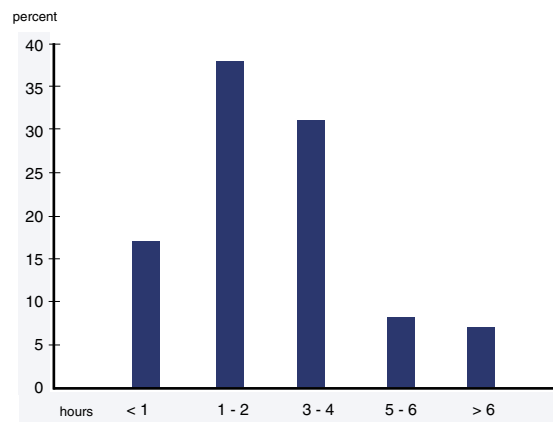
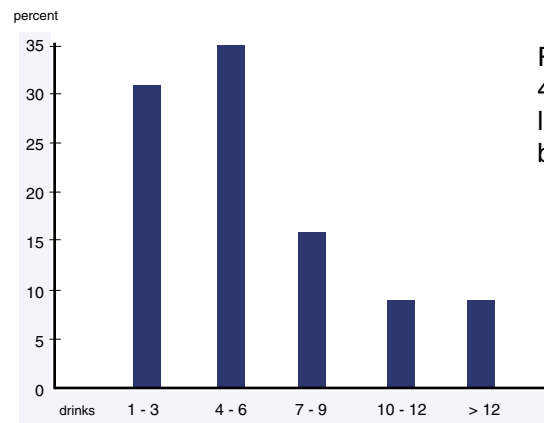


Figure 13 Number of Drinks Consumed at Place of Last Drink



Respondents had consumed an average of 4-6 alcoholic drinks while at their place of last drink, and most (67%) had consumed between one and six drinks at that place.



Individual Differences in Duration & Number of Drinks Consumed at Place of Last Drink

Cross-tabulations revealed differences in how long and how many drinks individuals consumed at their place of last drink based on the type of setting, gender, program level, BAC level, ethnicity, and acculturation level.

- Individuals who drank in a private setting spent more time drinking and consumed more drinks in that setting than did individuals who drank in a public setting
- Respondents in Levels II and III spent more time and consumed more drinks at their place of last drink than respondents in Levels I
- As might be expected, those with a higher BAC had spent more time (21.5% spent 5 or more hours at their place of last drink vs. 10%) and had consumed more drinks (28% had consumed 10 or more drinks vs. 10%) at their place of last drink
- Women consumed fewer drinks at their place of last drink than men, although they spent comparable amounts of time at these establishments
- Hispanic/Latino respondents had been drinking at their place of last drink longer than White respondents (50% of Hispanic and 43% of White respondents had been drinking at the place for three or more hours) and had consumed more drinks at their place of last drink than White respondents (23% of Hispanic respondents had consumed 10 or more drinks at the place of last drink compared with 14% of White respondents).
- Less acculturated Hispanics drank for a longer duration at their place of last drink, and consumed more drinks at that place, than their more acculturated counterparts. For example, 19% of less acculturated respondents drank for 5 or more hours compared with 14% of more acculturated individuals. Additionally, 46% of less acculturated individuals had consumed 7 or more drinks at that place, compared with 33% of more acculturated individuals.

Findings

ATTEMPTED INTERVENTIONS

Respondents were asked which, if any, of six recommendations or attempted interventions were made by someone at their place of last drink.

Table 10 Attempted Interventions

The most common intervention reported was the general suggestion that the person not drive. This recommendation was made to 17% of respondents. The second most commonly attempted intervention was that they wait before driving, a suggestion made to 8% of respondents. Additionally, 6% of respondents were offered a ride by someone, 5% were told to eat food or drink coffee before driving, 2% were refused service by a bartender or server, and 1% were offered a cab.

Despite these attempted interventions, they did not prevent the respondents in this survey from driving under the influence.

Given the duration of time spent at the place of last drink and the number of drinks consumed at those establishments by many of the respondents, it seems apparent that bartenders/servers would have had ample opportunity to attempt a preventive intervention with these clients. However, very few intervention attempts were reported overall and only 2% of respondents were refused service. However, based on the survey it is impossible to know how many clients at these establishments may have received, and subsequently complied with, an intervention recommendation, thus avoiding a DUI arrest.

Intervention	Percent
Someone recommended I not drive	17%
Someone recommended I wait before driving	8%
Someone offered to give me a ride	6%
Someone recommended I eat food or drink coffee before I drive	5%
I was refused service by a bartender/server	2%
Someone offered to call me a cab	1%



Individual Differences in Attempted Interventions

Cross-tabulations revealed differences in who was most likely to be offered interventions. Specifically, there were differences based on setting of last drink, gender, BAC level, ethnicity, and acculturation level.

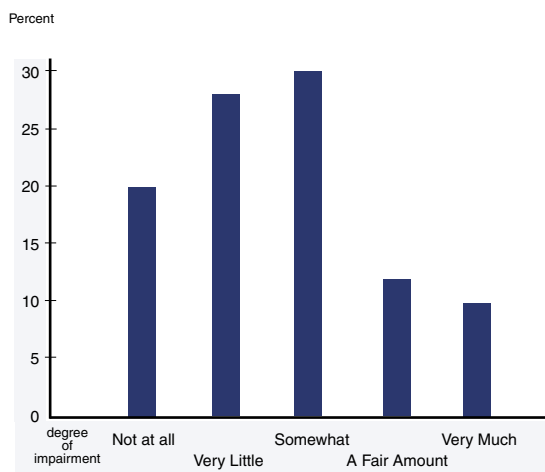
- Individuals who drank in a private setting were the recipients of more attempted interventions, including:
 - Someone recommending that they not drive (24% private vs. 13% public)
 - Someone recommending that they wait (11% private vs. 6% public)
 - Someone recommending that they eat food or drink coffee (7% vs. 4%)
- Men were more likely to have been told not to drive than women (18% vs. 14%), and were more likely to have been asked to wait before driving than women (9% vs. 6%)
- Those with a higher BAC were:
 - Three times as likely to have been offered a cab (2.2% vs. 0.7%)
 - 6% more likely to have been told not to drive (21% vs. 15%)
 - 3% more likely to have been offered a ride home (8% vs. 5%)
- Hispanic respondents were more likely to have been told not to drive compared with White respondents (25% vs. 11.5%). They were also more likely to have been asked to wait before driving (12% vs. 5%), and to eat food or drink coffee (7% vs. 3.5%).
- Less acculturated Hispanics received more attempted interventions than more acculturated individuals. Specifically, they were more likely to have been told not to drive (32% vs. 13%) or to wait before driving (13.5% vs. 9%).

Findings

PERCEIVED RISK OF DRIVING UNDER THE INFLUENCE

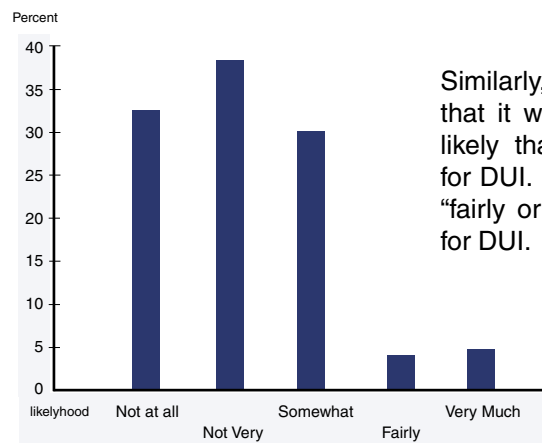
Respondents were asked about the degree to which they believed their ability to drive safely had been impaired and how likely they thought it was that they would get arrested for DUI when they left the place of last drink.

Figure 14 Perceived Degree of Impairment



The vast majority of respondents thought their ability to drive safely was “not at all” to only “somewhat” impaired. Only 22% thought their ability to drive safely was impaired “a fair amount or very much”.

Figure 15 Perceived Likelihood of DUI Arrest



Similarly, most respondents believed that it was “not at all” or “not very” likely that they would get arrested for DUI. Only 9% thought they were “fairly or very likely” to get arrested for DUI.



Individual Differences in Perceived Levels of Impairment/Being Stopped for DUI

Cross tabulations of perceived level of impairment and perceived likelihood of being stopped for DUI with program level, BAC level, gender, ethnicity, and acculturation level revealed several notable differences:

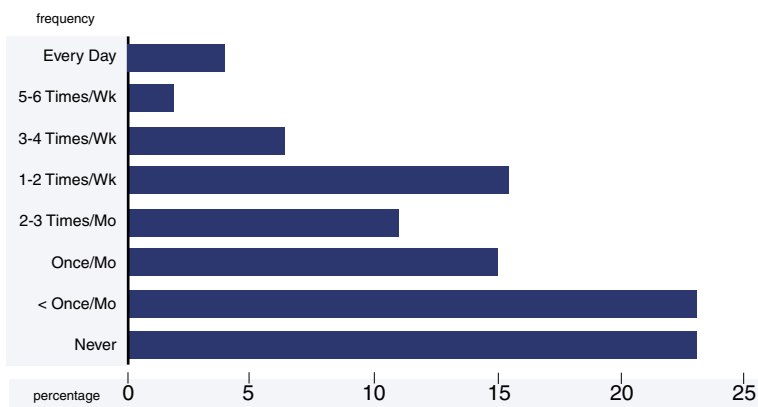
- Respondents in Level I were more likely to believe they were “Not at all likely” to get picked up for DUI (39%) than those in Level II (30%) or Level III (30%).
- Those with a higher BAC believed they were more impaired (31% believed they were impaired “a fair amount” or “very much” vs. 14%) and believed they were more likely to get stopped for DUI than those with a lower BAC (32.5% believed it was “somewhat, fairly, or very” likely vs. 24%).
- Women believed their ability to drive had been more impaired than did men.
- White respondents thought they were less likely to get stopped for DUI than Hispanic respondents. In fact, 80% of White respondents compared with 59% of Hispanic respondents thought that it was “not at all” or “not very” likely that they would get stopped for DUI.
- More acculturated Hispanic respondents believed that they were less impaired and were less likely to believe they would get stopped for DUI than less acculturated individuals. In fact, 51% of the more acculturated respondents believed they were “not at all” or “not very” impaired, compared with 42% of less acculturated respondents. Consistent with this notion, 75% of more acculturated respondents believed it was “not at all” or “not very” likely that they would get stopped for DUI, compared with 51.5% of less acculturated respondents.

Findings

PRE-DUI ARREST DRINKING & DRIVING BEHAVIOR

Respondents reported how frequently they had driven within two hours after drinking in the 12 months prior to their latest DUI arrest.

Figure 16 In 12 Months Prior to DUI Arrest, Frequency of Driving Within 2 Hours of Drinking



In the 12 months prior to their latest DUI arrest, approximately 28% reported driving at least once per week within two hours after drinking, and over half of those did so 3 or more times per week.

In contrast, almost 23% reported never driving within two hours after drinking in the prior 12 months, and 23% drove less than once per month within two hours after drinking.



Individual Differences in Pre-DUI Arrest Drinking and Driving Behavior

There were differences in how often individuals drove within two hours after drinking in the 12 months prior to this DUI arrest based on Program level, BAC level, ethnicity, and acculturation level.

- Respondents in Level II indicated that they more frequently drove within two hours of drinking during the previous 12 months than those in Level I. Furthermore, individuals in Level III were more likely than all others to indicate that they drove every day within two hours after drinking in the previous 12 months (6.3% Level III, 3.3% Level II, 2.4% Level I).

- Those with a higher BAC reported driving more frequently within two hours after drinking during the previous 12 months (35% reported drinking and driving at least once per week vs. 24%).
- White respondents were more likely to indicate that they had driven within two hours after drinking during the previous 12 months than Hispanic respondents (82% vs. 73%), and were three times as likely to say that they did so “every day” (6% vs. 2%).
- More acculturated Hispanics reported that they more frequently drove within two hours of drinking during the previous 12 months than less acculturated respondents. Specifically, only 23% reported never driving within two hours after drinking, compared with 29% of less acculturated respondents. Furthermore, 29% of more acculturated respondents reported drinking and driving at least once per week, compared with 19% of less acculturated respondents.

Implications and Opportunities for Prevention

This survey study reflects the agency's continuing commitment to developing a research-based system of Alcohol, Tobacco, and Other Drug (ATOD) prevention services for Orange County. The ultimate significance of these survey findings, however, will be measured by their application in planning, implementing, and evaluating a series of community-based prevention initiatives that, collectively, will serve to reduce the countywide prevalence and destructive consequences of alcohol-impaired driving. The following is presented as a summary of the major implications of the study, together with some suggested applications of these findings to create opportunities for prevention.

Setting of Last Drink

Environmental Risks

Approximately 53% of respondents reported having their last drink prior to DUI arrest in a bar, restaurant, or other public drinking establishment. This suggests that conditions of risk for impaired driving are present in many of these settings throughout the county—specifically, conditions that allow alcohol to be served to obviously intoxicated persons—a practice that violates California state law [Alcohol Beverage Control Act, Section 25602(a)]. The survey data also imply these same risk conditions are often found in private residence settings where alcohol is consumed.

Other implications regarding conditions of risk in the last-drink environment include:

- Nearly three-fourths (72%) of DUI arrests occurred between the hours of 8:00 pm and 4:00 am, suggesting that the risk of serving intoxicated persons is greatest during the late-evening hours of alcohol service.
- The correlation between length of time at the place of last drink and BAC

level suggests that the risk of impaired driving also increases with the sheer amount of time spent in the drinking environment.

- The low number of intervention attempts reported across all settings suggests that interfering with another person's drinking behavior is generally considered taboo, a social norm that clearly enables alcohol-impaired driving.

Opportunities For Prevention

Responsible beverage service (RBS) programs are a prevention strategy that seeks to change at-risk individual behavior by changing the environment in which drinking takes place. With a foundation in state laws that prohibit alcohol sales to minors and obviously intoxicated persons, RBS programs assist retail alcohol outlets to both adhere to these legal requirements and to implement alcohol-service policies and practices that prevent intoxicated patrons from driving. Research indicates that the most effective RBS programming includes the following service components:

- Collecting risk-indicator data from multiple sources and conducting on-site assessments of environmental risk conditions at identified retail alcohol outlets;
- Working with owners/managers of alcohol outlets to develop and implement policies regarding responsible service practices and RBS training requirements for staff;
- Providing RBS training for owners/managers;
- Providing initial and ongoing RBS training for servers (bartenders, waiters);
- Conducting periodic on-site assessments to evaluate compliance with RBS standards.

Variations of this prevention strategy may be applied to other non-retail settings or drinking environments such as private residences (social-host RBS training) or public events held on public property where alcoholic beverages are present (special-events RBS training). Several ADEPT-contracted prevention providers offer a comprehensive program of RBS services, including commercial, special events, and social host training.

Implication And Opportunities for Prevention

City of Last Drink

Environmental Risks

This survey revealed that the most commonly identified cities of DUI arrest were also the most commonly identified cities in which people were drinking just before being arrested for DUI. Additionally, cities with the greatest density of alcohol outlets were most likely to be identified as cities in which people were drinking just before being arrested for DUI. A significant body of research points to a strong association between the overall level of alcohol-related problems in a community and various indices of alcohol availability across all community environments of alcohol use—retail outlets, public events, and private events. Studies have linked higher alcohol availability to several public health and safety problems, including alco-

hol dependence and related medical disorders, crime and violence, traffic crashes, and youth access to alcohol.

Opportunities for Prevention

The 21st Amendment to the U.S. Constitution gave control over alcohol availability to the individual States, which have chosen to share much of the responsibility with local jurisdictions. As a result, communities have considerable authority and many resources to manage alcohol availability in the interest of public health and safety. Application of these resources through proven environmental prevention strategies—local ordinances, planning and zoning regulations, police enforcement, negotiations with property owners and managers, pub-

lic information campaigns, etc.—can place effective limits on a community's high-risk alcohol environments. To achieve these outcomes, community prevention efforts require the active involvement of all community systems: citizens, government, business, health, education, law, transportation, engineering, architecture, and public safety. ADEPT, through its regional prevention providers, is working collaboratively with several communities throughout the county to develop environmental approaches to prevention that emphasize identifying the settings and circumstances within communities at highest risk for alcohol-related problems and applying intervention strategies that address the links between problem behaviors and environmental factors.

Perceived Impairment & Likelihood of Arrest

Individual Risks

As evidenced by their subsequent arrest, the majority of survey respondents greatly underestimated both the extent to which drinking had impaired their driving ability and the likelihood that they would be arrested for driving under the influence. Whether by reason of naiveté or denial, the former finding implies a widespread lack of awareness of the debilitating effects of alcohol on vision, motor coordination,

and reaction time, not to mention critical thinking and judgment. The latter finding regarding the perceived risk of DUI arrest may reflect these respondents' alcohol-impaired assessment of their ability to drive safely, but it also may represent a fairly realistic estimation of the limited resources law enforcement can allocate to detecting and arresting a particular alcohol-impaired driver at a particular

time and place. Another dimension of individual risk is indicated by the fact that approximately one-third of the DUI-offenders in this survey had passengers with them when they were arrested. This finding implies that many DUI offenders are either unaware of or insensitive to the risk of serious injury that their impaired condition poses for others, not just those who are passengers in their vehicles, but all the many

Implication And Opportunities for Prevention

others who happen to be “out on the streets.”

Opportunities for Prevention

In conjunction with community-based environmental prevention strategies, public information/education campaigns, particularly those with messages that appeal to high-risk populations such as 21-34 year olds, can be an effective strategy for creating awareness of how alcohol affects driving ability. Additionally, a number of prevention programs employing research-based, multi-media campaigns have been effective in changing community norms regarding the perceived risks and social disapproval of high-

risk behaviors such as drinking and driving.

The problem of alcohol-impaired driving involves all sectors of community life. From a public health perspective, the threat or risk of alcohol-impaired driving comes from three major sources: from the general community environment, from within individuals, and from interactions between people and their surrounding environments. Scientific advances in the prevention of alcohol problems have demonstrated that the most effective prevention efforts result from a comprehensive, community-based approach directed at risk factors in each of these domains—general community environ-

ments of alcohol use norms and alcohol availability, individuals with a genetic vulnerability to alcoholism and population segments disposed to high-risk drinking, and specific settings and circumstances of alcohol use that are conducive to high-risk drinking. The challenge facing local communities is to identify the risks of alcohol problems like impaired driving particular to the community from each of these sources, and to develop appropriate prevention initiatives to reduce these risks. ADEPT and its many prevention service providers are available to assist all Orange County communities in meeting this challenge.

Appendix

Cities of Last Drink and Cities of DUI Arrest Ranked From Most to Least Commonly-Reported (Rates Adjusted for Population)

Cities of Last Drink	Rate per 10,000 Adult Residents	Cities of DUI Arrest	Rate per 10,000 Adult Residents
Newport Beach	37.68	Costa Mesa	35.35
Laguna Beach	30.04	Laguna Beach	32.04
Costa Mesa	29.72	Newport Beach	30.97
Los Alamitos	26.67	Brea	29.63
Brea	22.79	Villa Park*	22.12
San Juan Capistrano	19.32	Los Alamitos	20.87
Santa Ana	17.44	San Juan Capistrano	20.55
Laguna Hills	17.39	Laguna Hills	19.56
Fullerton	17.39	Santa Ana	18.07
Dana Point	16.14	Fullerton	17.60
Stanton	16.14	Orange	16.51
Huntington Beach	15.67	San Clemente	16.09
Anaheim	15.37	Huntington Beach	14.86
Orange	15.14	Westminster	14.85
San Clemente	14.51	Placentia	14.74
Irvine	13.51	Irvine	14.43
Mission Viejo	12.48	Anaheim	13.62
Westminster	11.63	Mission Viejo	13.45
Placentia	11.20	Dana Point	13.27
Tustin	10.83	Tustin	12.76
Buena Park	10.50	Stanton	12.68
Aliso Viejo	8.42	Seal Beach	12.42
Lake Forest	8.39	Aliso Viejo	11.78
Garden Grove	8.12	La Habra	11.72
Rancho Santa Margarita	7.97	Fountain Valley	10.93
La Habra	7.41	Buena Park	10.68
Yorba Linda	7.20	Garden Grove	9.98
Seal Beach	7.16	La Palma	9.37
Villa Park*	6.64	Cypress	8.90
Fountain Valley	5.70	Yorba Linda	8.16
Cypress	5.04	Rancho Santa Margarita	6.38
Laguna Niguel	3.96	Laguna Woods*	1.83
La Palma*	3.41	Laguna Niguel	na
Laguna Woods*	2.44	Lake Forest	na

* Estimates unreliable due to low numbers - "na" indicates that data were not available

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Acknowledgements

This study could not have been completed without the diligent cooperation and assistance of the seven state-approved Orange County Drinking Driver Programs: ABC Traffic Schools (Lori Sanjuan and Diana Martinez), Academy of Defensive Driving (Andreas Cardona), Gold Coast Counseling (Pat Schaarsmith), K. C. Services (Jacquelyn Farha), National Council on Alcoholism and Drug Dependence (Sharon Herbert), National Traffic Safety Institute (Sonia Berton), and School 10, Inc. (Bob Bertrand).

Special thanks go also to the staff of Court Liaison Services, County of Orange HCA/Alcohol and Drug Abuse Services, who paved the way for our collaboration with the county-contracted Drinking Driver Programs: Jon Harwood, Manager; Daniel Duffy, Merida Hughes, and Kathleen Thomas.

Friedner Wittman, Ph.D., Institute for the Study of Social Change, University of California, Berkeley, provided invaluable assistance in terms of survey design, data analysis, and implications for prevention.

