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COLLECTION ANALYSIS AND INTERPRETATION OF DATA ON RELATIONSHIP BETWEEN DRUGS AND DRIVING

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16. Abstract
The purpose of this study was to determine if drug usage is related to driving history. Laboratory analyses of urine samples, in-depth interviews, and public driving records were obtained to investigate the relationship of traffic accidents and violations between male users and nonusers of alcohol and drugs. Data were being collected in six geographical areas. The frequency and amount of use drugs were analyzed in terms of driving performance for 1,889 arrestees for serious crimes. In general the results show that for this select population, drug using drivers have no worse driving records, in terms of accidents and convictions, than the nondrug user drivers.

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PREFACE

The Collection, Analysis and Interpretation of Data on Relationship Between Drugs and Driving is a study of drug usage and driving histories among arrestees in six metropolitan areas of the United States. The primary data source was a large survey sponsored by the Bureau of Narcotics and Dangerous Drugs of drug usage and arrest charges among arrestees in these six areas. The study relating the driving histories of those arrestees to drug usage was initiated after the BNDD study was underway. It was designed to use information already being collected and relate it to the additional information of driver histories. A special effort was made to obtain the most complete driver histories available from each licensing agency. This approach allowed the relationship between the arrestees drug history, whether or not [drugs] were ever used, and driving history, whether or not [accidents or serious traffic convictions] were ever recorded, to be examined. Site to site comparisons should be tempered with the knowledge that different states have different reporting laws, judicial systems, and recordkeeping systems which does determine the data avilaable in driver histories. However, the objective of the study, to determine if drug usage is related to driving history, is satisfied through the very reliable comparisons drawn between drug users and nonusers by study site. It should be noted that no attempt was made to determine if drugs were used before or during driving. Moreover, there was no intent to establish a correlation between drug usage in any given time period and the driver record in that same time period. The results should be interpreted as an expression of the general relationship of drug and nondrug user drivers to their driver histories.

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Chapter I

INTRODUCTION, SUMMARY AND CONCLUSIONS

Driving after taking drugs of different types has always been of concern to highway safety specialists. Alcohol in particular has been shown to be one of the more seriously debilitating drugs when combined with driving. Sufficient data have been collected to develop probability tables of single and multiple vehicle accidents related to the amount of alcohol consumed. Such data and correlations have not been developed for other drugs taken legally or illegally.

Experts in the field of drug abuse have frequently stated that driving after drug usage is potentially hazardous. Considering the potential physiological effects of excessive use of the various drugs available today this statement can almost be accepted without question. However, a number of important considerations do remain. These include: (1) Do drug users ordinarily combine usage and driving? (2) Are drugs used in sufficient quantity to seriously affect driving? and (3) Among the different kinds of drugs used what types most seriously affect driving behavior? In a recent review, Kibrick and Smart, 1970, contend that 35 to 50 percent of the general population run the risk of driving after drug use at least once per year, and that about 7 percent of these persons expose themselves to the risk of drinking and driving while on drugs.[1/] Two of our more distressing current societal problems involve the accelerated use and misuse of narcotics and other potentially dangerous drugs and the excessive death toll on our nation's highways. It would appear that a potentially fruitful area of inquiry would be an investigation into the possible relationship between these two phenomena.

Literature on the involvement of drug usage (other than alcohol) in vehicular accidents and hazardous driving violations is insufficient to establish clear relationships. Although numerous studies have been

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1/ Kibrick, Eleanor and Smart, R. G. "Psychotropic Drug Use and Driving Risk, A Review and Analysis," Journal of Safety Research, June 1970, p. 73-84.

performed on drug usage among the general population and for specific subpopulations, few of these investigations relate drug usage to vehicular accidents or driving histories. Moreover, studies employing questionnaire responses have not substantiated their findings with outside validation measures. Since drug usage is a highly sensitive area of inquiry, data validity is often times suspect. In the general population it may be questionable as to whether questionnaires or interviews will yield reliable data about usage. Blood or urine samples cannot ordinarily be obtained except on a voluntary basis raising the question of self-selection among volunteers and its effect upon research results.

The opportunity arose to relate driving history to drug usage for a very select portion of the population 18 months ago when the Research Triangle Institute (RTI) came under contract to the Bureau of Narcotics and Dangerous Drugs (BNDD) to study the relationship between drug usage and serious crime.[2/] Early in this project the Department of Transportation (DOT) agreed to support an analysis of drug and alcohol usage as it is related to driving behavior among study respondents. The BNDD study included a total of 1,889 men recently arrested for serious crimes from six cities throughout the United States. Each of these arrestees was interviewed in depth and a urine sample collected for laboratory analysis. The urine sample was analyzed for the presence of heroin (morphine), amphetamines, barbiturates, cocaine and methadone. In addition to the 1,889 arrestees who agreed to be interviewed, there were 381 arrestees from whom a urine sample was collected and analyzed but who were not interviewed due to early release, refusal, hospitalization or other security reasons. For analytical purposes of the present study the total group of arrestees, 2,270 men, was subdivided into nondrug users and drug users by type of drug.

The objective of the research presented in this report was to determine if drug usage is related to driving history (accidents and convictions).

2/ Eckerman, W. C., J. D. Bates, J. V. Rachal and W. K. Poole. Drug Usage and Arrest Charges, prepared for BNDD, U. S. Department of Justice, Final Report, RTI 23U-570, Research Triangle Park, N. C.: RTI December 30, 1971.

Research Triangle Institute personnel attempted to collect the driving histories of as many as possible of the 2,270 people contacted as part of the RTI-BNDD study on the relationship between drug usage and serious crime. The interview questionnaire asked respondents about drug and alcohol usage. Drug usage was also determined through the urinalysis. This report presents the data collected and the analyses undertaken to determine the relationship between drug usage and driving behavior.

There are several limitations inherent in this study. First, the study is directed at a subset of the total population and thus was not designed to answer questions about the population as a whole. Results presented in this report cannot be generalized to the general population. Second, this study began four months after the RTI-BNDD study had started. Hence, only data that were already being collected for that study were available for the Department of Transportation study. Data that may have greatly enhanced a study on driving habits of the arrestees, such as: driver license numbers, annual miles driven, drug usage while driving, etc., were not available because appropriate questions did not appear in the RTI-BNDD questionnaire. Finally, there was no attempt to establish a control group beyond the scope of the study. For both this study and the BNDD study the "control group" is taken to be those nondrug-user arrestees.[3/] The two groups being compared (drug users and nondrug users) are quite similar in terms of race, age and socioeconomic background by study site. Throughout the report, comparisons will be made for the drug user versus the nondrug user on a site by site basis. The study team feels confident that these comparisons

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3/ A nonarrestee, nondrug user control group was considered for purposes of comparison, but it was not feasible to match each arrestee history in each site with a nonarrestee comparable as to age and length of driving history. Collecting random records in each of six states for a control group matched as to age and length of driving history and determining that they were indeed nonarrestees and nondrug users was estimated to be prohibitively expensive.

A recent California study [Ref. R. C. Peck, R. S. McBride and R. S. Coppin. "The Distribution and Prediction of Driver Accident Frequencies," Accident Analysis and Prevention. Vol. 2, No. 4, March 1971, pp. 243, 299.] does, however, provide some comparative data. Peck, et al. found in a sample of 147,990 licenses that 86,717 males in one group had an average accident rate of .26 accidents per driver and an average conviction rate of .92 convictions per driver over a three year period. Adjusted to match age groups in the RTI study, the Peck-California study group had an accident rate of

are valid. Other comparisons which include arrestees for all sites should be interpreted advisedly, considering site to site variations as are pointed out in this report.

With these limitations in mind, a brief overview of the study procedures and findings can be given. In each of the six cities approximately 300 arrestees, a very select population, were interviewed and urine samples collected and analyzed. Driver histories for these respondents were requested from the respective state departments of motor vehicles.

Driving histories could be obtained on only about one half of the arrestees. Probable reasons for this low record check rate include: (1) the use of an alias by many arrestees; (2) some arrestees may not have a driver's license, particularly since the majority come from low income urban areas where cars are expensive to maintain and are not necessary; (3) arrestees may hold a license in a state other than the arresting state; and (4) insufficient or inaccurate identifying information available for requesting the drivers' history. Whatever the cause, there appeared to be no significant difference in drug usage between drivers and arrestees for which no driver record was available. Furthermore, there is no reason to believe that those arrestees whose names did not appear in the license files have different driving histories than those for whom driving histories were found, at least as a function of drug usage.

In general drug using drivers of this select population have no worse, and in fact usually better, driving histories than nondrug users. This is

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approximately .32 accidents per driver and a conviction rate of 1.33 convictions per driver over a three year period. This conviction rate included Failed to Appear (FTA) in court on charges as convictions while the drug study conviction rate excluded FTA's. The drug users in the RTI Los Angeles site sample had an accident rate of .39 accidents per driver and a conviction rate of 2.8 convictions per driver. The nondrug user arrestees had an accident rate of .42 accidents per driver and a conviction rate of 3 convictions per driver over a three year average length of driver histories.

The accident rate derived from the 1971 edition of Accident Facts adjusted for age may be roughly compared to the San Antonio RTI study sample. (Texas requires accidents causing $25 or more property damage to be reported and the National Safety Council estimates of accidents include all accidents of $25 property damage or more.) The derived accident rate for three years from Accident Facts is approximately .96 accidents per driver. The RTI San Antonio study sample included drivers with an average of 3.3 years history. Their accident rate was 1.1 accidents per user driver and 1.4 accidents per nonuser driver.

true when accidents or convictions are used as a criterion. Furthermore, there is no positive relationship between the number of drugs used and driver history. Exceptions to this general finding involve the use of psychedelic drugs. In some cities barbiturate, amphetamine, cocaine and tranquilizer users also have "problem" driving records but the same relationship is not found in all cities. (The number of cocaine and tranquilizer users was also really too small for conclusion results.)

Concerning site to site differences, it was found that Chicago has the highest conviction rate for hazardous traffic violations. Accident rates are highest for San Antonio, no doubt because of the $25 reporting limit. However, New York and Los Angeles have the second and third highest accident rates even though their reporting limit is $200. The distributions of drivers from each site by drug type used are similar.

This study did not have a comparison group in the general population. However, a cursory comparison with data from the general population would seem to indicate that the study population of persons arrested for a serious crime have a slightly higher accident rate. Additional data from a California study by Peck, et al. indicated that conviction rates of the RTI Los Angeles study sample were considerably higher than a sample of the California driving population.

While there do not appear to be any unusually serious driving history problems demonstrated by drug users as compared to nondrug users for this very select population, there are some tentative hypotheses of interest for future research which have emerged from this analysis. These are:

1. Since some drugs clearly have a negative effect on judgment, risk taking and physical capabilities, e.g., reaction time, it may be that drug-user-drivers don't combine driving and drug usage.

2. It may be that only particular drugs have a serious effect on driving performance. There is not yet enough evidence to determine which drugs and in what amounts might affect the combined mental-physical performance needs of the driving task and whether they are used sufficiently often to become a significant factor in the massive problem of highway safety. This type of inquiry would require a large-scale, carefully designed project focused upon this particular problem.

Chapter II

DRIVER HISTORY COLLECTION AND INITIAL RESULTS

A. Data Collection

The Research Triangle Institute (RTI) undertook a study to determine the relationship between crime and drug usage under the sponsorship of the Bureau of Narcotics and Dangerous Drugs (BNDD), U. S. Department of Justice.[4/] The contract provisions called for a study of the drug usage patterns and crime history of 1,800 arrestees in six major cities located throughout the country. Through the cooperation of BNDD and DOT, RTI undertook further study to examine the relationship between drug usage and driver records.

On initial contact with each arrestee at the study sites, a name and birthdate was obtained for use in requesting driver records. A request for the complete driver history of each contact was then made to the appropriate state licensing agency for each study site. These initial contacts are referred to throughout this report as the "Initial Sample."

The study population included all new arrests for state or municipal offenses. Excluded from the study were:

1. All federal prisoners
2. Prisoners held for military charges
3. Incoming transfers
4. Fugitives from other states
5. Arrests for drunk and disorderly
6. Driving while intoxicated
7. Gambling
8. Traffic violations

4/ Eckerman, W. C., J. D. Bates, J. V. Rachal and W. K. Poole. Drug Usage and Arrest Charges (prepared for BNDD, U. S. Department of Justice, Final Report, RTI 23U-570). Research Triangle Park, N. C.: Research Triangle Institute, December 30, 1971.

9. Contempt of court
10. Loitering
11. Violation of probation
12. Jumping bail
13. Bond forfeiture

unless these occurred in combination with a current felony or state misdemeanor charge.

In three sites - San Antonio, Chicago, and New Orleans - arrestees charged with narcotics violations were included in the study population. For the last three sites - St. Louis, New York and Los Angeles - all arrestees charged with only drug related violations were excluded.[5/] In originally considering the possibility of undertaking this study it was obvious that this study population is a highly select one. However, over and above the fact that this is already a select population there is no reason to believe that the exclusion rules applied will affect the basic relationships under consideration in this study.

The driving records on the initial sample were requested by name and birthdate of the arrestee. For those cases in which the arrestee provided an alias or an incorrect birthdate it was highly unlikely that a driver record would be located.

Table 1 shows the number of records requested and received from the initial sample. The overall response rate for the record requests was 48.7 percent. The Los Angeles response rate of 74.4 percent was achieved only after a second request was made for 55 of the sample. (The first request netted 68 percent.) On the second request 25 driver's license numbers were used as identifiers along with the arrestee's name. Of these 25, 76 percent were located. The remaining 24 percent included arrestees with out of state licenses and licenses that may have expired and were subsequently purged from the file.

The remainder of the second request of 55 were by alias and birthdate. The response from checking these 30 names was 37 percent.

5/ The preceding explanation was extracted from the Methodology Chapter of the Final Report to BNDD [Ref. 4]. Since the primary objective was to determine whether there is a relationship between serious crime and drug use it was felt that the less serious forms of crime listed above, and drug related charges only, did not contribute to this analysis.

Table 1

Driving Records Requested and Received

Sample	Requests	Driving Histories Received	Percent Response	State Average* Licensed Drivers per 100 Driving Age Population
St. Louis	496	256	51.6	69.8
Los Angeles	434	321	74.4	96.1
San Antonio	360	190	53.3	87.5
New Orleans	374	192	51.8	74.9
Chicago	385	153	39.7	90.6
New York	418	97	23.2	69.1
TOTAL	2,467	1,209	48.7	-

* This percentage was calculated using the 1970 Census Population for persons over 16 years of age and Number of Drivers from RTI Report OU-472-1, D. C. Jones and B. A. Moser, Analysis of Information to be Included in Driver License File, Research Triangle Park: RTI July 1970, pp.80-81.

An examination of the percentage of drivers in the driving age population for each state provides some insight into the response rates. The percent of drivers for the entire state of New York is 69.1 drivers per 100 persons in the driving age population. Since the study population was taken from the Brooklyn Borough of New York City, then it is expected that the percentage of drivers would be considerably less than for the entire state. In contrast, the State of California has a very high percentage of drivers and the response rate was very high. This was expected since the sample was taken in Los Angeles County which is spread out sufficiently that considerable driving is required for the residents to move about.

B. Driver History Analysis of the Initial Sample

For each of the sites driver history data were tabulated on the initial sample and rates of accidents and convictions were calculated. All of these data have been presented in detail through the course of project reports and are accumulated for reference in Appendix A.

Table 2 presents the accident rate, the number of accidents per driver, for the initial sample. The span of the driving record varies with the age of the driver and with the purging requirements of the State. In most States the driving records are maintained for three years except in cases of serious traffic violations, when the time may be extended by as much as ten years. Therefore, "Accident Rate" and "Conviction Rate" are not based on a consistent time factor. An analysis showed that this variable is present in all groups to the same degree and it does not affect the conclusions presented on page 5. The usual method of calculating accident rate by number of accidents per 100,000 miles could not be used in this study because the questionnaire did not inquire into mileage driven by the respondent.

Table 2

Accident Rate by City Sampled

Study Site	Number of Drivers	Percent of Drivers From Each Site in Accidents	Number of Accidents	Accident Rate
St. Louis	256	4.3	15	0.06
New Orleans	192	13.0	31	0.16
Chicago	153	22.9	44	0.29
New York*	97	37.1	77	0.73
San Antonio*	190	57.4	256	1.40
Los Angeles*	321	29.0	121	0.38
TOTAL	1,209	25.6	544	0.45

* Reports on property damage accidents in New York and Los Angeles are made only on those accidents having at least $200 damage; in Texas the damage need be only $25 to require a report; in all others the total damage is $100 to require a report.

The accident rates for Los Angeles, New York and San Antonio are based on accident reporting limits different from those applied in the other three sites (see Table 2). Los Angeles and New York require only that accidents involving either injury or $200 property damage be

reported; therefore, the rate for New York shown as .73 accidents per driver would certainly be higher if the required reporting limit was $100. Texas, on the other hand, requires that accidents involving injury or more than $25 property damage be reported. Therefore the rate shown in Table 2 for San Antonio, 1.40 accidents per driver, is certainly higher than would be expected if $100 was the reporting limit.

Table 3 presents a summary of traffic violation convictions of drivers by site. Convictions include driving-under-the-influence; hazardous traffic violations such as speeding, reckless driving, improper passing, etc. and nonhazardous traffic violations such as driving without a license, improper mufflers, etc.

The total number of traffic convictions for the 1,209 drivers is 4,174 or 3.5 convictions per driver. All convictions were committed by 87.5 percent of the drivers. In other words 12.5 percent of the drivers have no convictions.

Table 3

Conviction Rate by City Sampled
Total Number of Drivers = 1,209

	Number of Drivers	Percent of Drivers from each Site with Convictions	Number of Traffic Convictions	Conviction Rate
St. Louis	256	79.7	792	3.1
New Orleans	192	66.1	499	2.6
Chicago	153	86.3	648	4.2
New York	97	72.2	134	1.4
San Antonio	190	78.4	521	2.7
Los Angeles	321	87.5	1,580	4.9
TOTAL	1,209	79.7	4,174	3.5

Table 4 presents a summary of the driving record status (combining convictions or accidents recorded) by age of driver. This summary includes all 1,209 drivers from all the study sites. The largest age group in this sample of drivers is the less than 25 year group. This range includes 500, or 41.4 percent, of the 1,209 drivers. Some 77 percent of all drivers in the study were under 34 years of age. Further analysis concerning age ranges of drivers and drug users are presented in Chapter VII of this report.

Table 4

Driving Record by Age for Sampled Cities (N = 1,209)

Age	Total Drivers		Convictions or Accidents		Clean Record	
	N	%	N	%	N	%
<25	500	41.4	400	40.5	100	45.3
25-34	431	35.6	365	36.9	66	29.9
35-44	178	14.7	147	14.9	31	14.0
45-54	71	5.9	59	6.0	12	5.4
≥55	29	2.4	17	1.7	12	5.4
TOTAL	1,209	100.0	988	100.0	221	100.0

Chapter III

DRIVER HISTORIES BY DRUG USAGE AS DETERMINED BY THE QUESTIONNAIRE

A. Background

The arrestees were requested to respond to the questionnaire after screening had excluded Federal prisoners, transfers, fugitives, minor violators, etc. The subset of the study sample to be considered in this chapter is the 1,889 arrestees who completed the questionnaire, whether or not they provided a urine sample.

For each drug[6/] the arrestees were asked a series of questions about their drug usage patterns:

1. When did you begin use?
2. Do you still use?
3. When did you last use?
4. How do you use?
5. How often do you use?
6. How much do you use?
7. How much does it cost?

The question about frequency of use is the one of major concern to the analysis of the driver history data. Since the concern is with examining data for the driver's entire "driving-lifetime" with no reliable method of determining what portion of the respondent's driving history occurred while he used drugs, the analysis presented herein will be for those who have indicated ever using drugs versus the nondrug users.

An attempt was made to determine persons who were ever "Hard," "Moderate," or "Occasional" users of particular drugs. The following are definitions by frequency of use employed for this analysis:

6/ There were 13 drugs specified in the questionnaire: marihuana, hashish, cocaine, heroin, morphine, psychedelics, amphetamines, barbiturates, methadone, tranquilizers, special substances, darvon and codeine. The darvon and codeine samples were so small 30 and 24, that they will not be examined in this analysis.

1. A "Hard" user is one who indicated that he used a drug daily.
2. A "Moderate" user is one who indicated that he used a drug weekly, monthly or several times monthly.
3. An "Occasional" user is one who indicated that he used a drug less than monthly or only experimented once or twice.

Before proceding with the analysis of driver records of the sample, some definitions of subgroups of the study population should be made. In the previous chapter, driver data on the "initial sample" was discussed, the "initial sample" being the arrestees who were among the first contacts prior to final screening and who consequently were included in the request for driver license records.

There are three subgroups to the initial sample that will be discussed throughout this report. These groups are shown in Table 5. They are (1) study sample, (2) number completing the questionnaire and (3) number providing urine samples.

The study samples are all those arrestees who were included in the study after the screening and either completed a questionnaire or provided a urine sample. There are 2,270 arrestees in the study sample; 1,084, or 47.8 percent, are drivers within the states of the study sites.

Throughout this report the persons for whom a driver record was located will be referred to as "Drivers." There is no way to determine how many of the arrestees with no available record are also drivers. These arrestees will be referred to simply as having "No driver record."

Almost all of the information to be considered in this report came from the questionnaire which was completed by personal interview. For this reason, with the exception of the chapter relating driver histories to urinalysis results, the subgroup under discussion consists of the arrestees who completed the questionnaire. This group consists of 1,889 arrestees of which 865, or 45.6 percent, are drivers.

Table 5

Subgroups of the Study Population

Driver Record Status	Initial Sample		Study Sample		Number Completing Questionnaire		Number Providing Urine Samples			
							Also Completed Questionnaire		Urine Sample Only	
	(N)	%	(N)	%	(N)	%	(N)	%	(N)	%
Driver Record Received	1209	48.7	1084	47.8	865	45.6	758	44.6	219	57.7
No Driver Record Available	1258	51.3	1186	52.2	1024	54.4	937	55.4	162	42.5
TOTAL	2467	100.0	2270	100.0	1889	100.0	1695	100.0	381	100.0
							2076			

Finally, the subgroup of arrestees who provided urine samples includes some who also completed the questionnaire. The total providing urine samples is 2,076, of which 977 or 47 percent are drivers. This subgroup will be discussed in relation to driver histories and drugs found in the urine sample in Chapter IV of this report.

This chapter includes discussions of the driver histories by type of drug used as determined by the questionnaire, as well as a comparison between that group of drivers who indicated they had ever used drugs versus the nonusers. These data have been reported previously in project reports. Appendix B contains that data in similar format as previously reported. For more detail one should refer to Appendix B.

B. Driver History by Type of User

Table 6 presents the number of drivers who indicated drug use for each of the drug use frequencies previously defined, their average hazardous traffic conviction rate, and their average accident rate. Some respondents used more than one drug and thus are represented more than once in Table 6.

Among the "Hard" users, the respondents who indicated the use of marihuana daily or more often rank high in rates for both hazardous traffic convictions and accidents. Only the "Hard" barbiturate users are as high in accident rates. The "Hard" psychedelic user (persons who use LSD, LSD-25, DMT daily or more often) have consistently high rates in both accidents and convictions.

The high rates for psychedelic users appear for all three user types with the moderate user having the highest accident rate. Furthermore, comparisons with the nonuser's rates show that a number of types of drug users rank higher than nonusers in both convictions and accidents. They are:

	Conviction rate	Accident rate
Hard psychedelics	3.1	.50
Moderate pyschedelics	2.9	.74
Occasional cocaine	2.8	.57
Occasional tranquilizer*	2.8	.89
Nonusers	2.7	.48

* Only nine drivers were "Occasional tranquilizer" users.

Table 6

Driver History Rates by Type of Drug User for Each Drug
(N = 865 Drivers)

	Hard User*			Moderate User**			Occasional User***		
	Number Drivers	Traffic Conviction Rate	Accident* Rate	Number Drivers	Traffic Conviction Rate	Accident Rate	Number Drivers	Traffic Conviction Rate	Accident Rate
Marihuana	142	2.6	.53	209	2.2	.36	98	2.2	.47
Hashish	27	3.1	.33	73	2.4	.51	93	2.5	.46
Cocaine	31	1.6	.35	42	2.8	.21	69	2.8	.57
Heroin	118	1.8	.36	43	1.9	.42	36	2.4	.61
Morphine	19	1.4	.21	14	2.9	.29	45	2.5	.60
Psychedelics	14	3.1	.50	58	2.9	.74	65	2.4	.55
Amphetamines	64	3.0	.47	76	2.5	.43	60	2.4	.65
Barbiturates	55	1.9	.53	83	2.7	.39	35	2.2	.31
Methadone	9	2.3	.44	10	.9	.00	12	1.5	.08
Tranquilizers	12	2.0	.17	18	2.9	.44	9	2.8	.89
Special Substances	18	1.9	.50	27	1.7	.37	30	1.5	.40
Mean Rates		2.3	.44		2.4	.41		2.4	.51
Total Ever Used	518	2.3	.43						
Nondrug Users	347	2.7	.48						
Total Drivers	865	2.4	.45						

*Hard User - drug use daily or several times a day

**Moderate User - drug use weekly, monthly, or several times monthly

**Occasional User - drug use less than monthly

⊛Accidents as reported on the driver histories are based on different reporting limits in each state.

C. Driver History by Type of Drug Used

The average conviction and accident rates for all the sites by drug used are presented in Table 7. The rank order is in terms of hazardous conviction rate. (The hazardous conviction is considered to be more consistent for all sites since there are differences in accident reporting limits for minor accidents.)

As indicated in the previous section, the psychedelic users are highest ranked in both conviction and accident rate. Furthermore, psychedelic users are the only group ranking at or above the nondrug users on both hazardous conviction rate and accident rate.

More detailed descriptions of the driver histories by site for each drug are presented in the next eleven tables. A table for each drug gives the number of drivers from each site that indicated the use of the particular drug, the percent of drivers from each site that are users, the number and rate of hazardous traffic convictions, and the number of accidents and accident rate. It should be recalled that accident rates are influenced by the accident reporting limit in the state law for each site. New York and Los Angeles will have accidents recorded on all personal injury accidents or property damage accidents with damage estimated at $200 or more. That property damage limit is $100 for St. Louis, Chicago, and New Orleans, but only $25 for San Antonio. Based stricly on these reporting limits, San Antonio accident rates should always be highest, while New York and Los Angeles should be lowest. It is readily evident that the latter is not the case.

Chicago has the highest conviction rate while, as expected because of the $25 limit, San Antonio has the highest accident rate. However, the New York and Los Angeles rates are relatively high considering the $200 limit in effect for these sites. In addition Table 8 shows that marihuana usage does vary across sites from 71 percent of the drivers in Los Angeles to 33 percent of the New Orleans drivers indicating use. Interestingly, it will be remembered that the New Orleans sample includes persons convicted on drug charges while the Los Angeles does not.

Table 7

Summary of Conviction and Accident Rates by Drug for the 865 Drivers Responding to the Questionnaire

Drug Used	Hazardous Conviction Rate	Accident Rate
Psychedelics	2.7	.63
Amphetamines	2.6	.51
Tranquilizers	2.6	.49
Hashish	2.5	.62
Cocaine	2.5	.41
Barbiturates	2.4	.42
Marihuana	2.4	.44
Morphine	2.3	.45
Heroin	2.1	.41
Special Substances	1.7	.41
Methadone	1.6	.16
Nondrug Users	2.7	.48

Table 8

Driver History Summary for all Sites by Marihuana Use for 865 Drivers

Marihuana	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	63	39	139	2.2	2	.03
Chicago	62	51	208	3.4	20	.32
New Orleans	46	33	61	1.3	9	.20
New York	31	45	24	.8	10	.32
San Antonio	82	57	161	2.0	90	1.10
Los Angeles	165	71	465	2.8	66	.40
TOTAL	449	52	1,058	2.4	197	.44

Table 9 shows that 34 percent of the drivers from Los Angeles use hashish. Chicago has the highest hazardous conviction rate as well as a relatively high accident rate.

Of the New York drivers in the sample, 33 percent indicated the use of cocaine (Table 10). However these drivers had a very low conviction rate for hazardous traffic violations. Chicago is highest in the conviction rate while Los Angeles has the highest accident rate other than San Antonio.

The largest percentage of drivers who indicate heroin use is from the New York sample, as shown in Table 11. Chicago remains highest in conviction rates while Los Angeles and New York are relatively high in accident rates.

Table 12 shows that morphine is only used by 9 percent of the 865 drivers in the questionnaire sample. The highest incidence of use is 12 percent in the New York sample.

Table 13 presents the drivers who indicated use of psychedelics. Los Angeles and San Antonio have the highest usage. The hazardous traffic conviction rate is still highest for the Chicago sample. It is considerably higher than the other sites and much higher than reported for other drugs.

Table 14 shows that 46 percent of the drivers from the Los Angeles site use amphetamines. In addition, the hazardous traffic conviction and accident rates are relatively high in that site. However, Chicago still ranks highest in the convictions per driver for users of amphetamines.

Table 15 shows that 20 percent of the 865 drivers indicated use of barbiturates. Chicago remains consistently high in the hazardous conviction rate while New York and Los Angeles remain relatively high in accident rate.

Tables 16-18 show methadone, tranquilizer and special substance usage among drivers. The conviction rate for Chicago is consistently

Table 9

Driver History Summary for all Sites by Hashish Use
for 865 Drivers

Hashish	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	23	14	56	2.4	0	.00
Chicago	17	14	65	3.8	12	.71
New Orleans	26	19	39	1.5	3	.12
New York	22	32	20	.9	7	.32
San Antonio	29	20	60	2.1	63	2.17
Los Angeles	79	34	252	3.2	36	.46
TOTAL	196	23	492	2.5	121	.62

Table 10

Driver History Summary for all Sites by Cocaine Use
for 865 Drivers

Cocaine	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	17	11	57	3.3	1	.06
Chicago	25	21	84	3.4	6	.24
New Orleans	13	9	28	2.2	1	.08
New York	23	33	16	.7	8	.35
San Antonio	15	10	32	2.1	21	1.40
Los Angeles	49	21	138	2.8	22	.45
TOTAL	142	16	355	2.5	59	.41

Table 11

Driver History Summary for all Sites by Heroin Use
for 865 Drivers

Heroin	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	21	13	62	3.0	1	.05
Chicago	33	28	110	3.3	11	.33
New Orleans	40	20	59	1.4	3	.08
New York	28	41	26	.9	9	.32
San Antonio	48	34	78	1.6	43	.90
Los Angeles	67	29	173	2.6	29	.43
TOTAL	237	27	508	2.1	96	.41

Table 12

Driver History Summary for all Sites by Morphine Use
for 865 Drivers

Morphine	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	6	3	15	2.5	0	.00
Chicago	12	10	37	3.1	3	.25
New Orleans	11	8	15	1.4	1	.09
New York	8	12	8	1.0	4	.50
San Antonio	16	11	28	1.8	14	.88
Los Angeles	25	11	74	3.0	13	.52
TOTAL	78	9	177	2.3	35	.45

Table 13

Driver History Summary for all Sites by Psychedelics Use
for 865 Drivers

Psychedelics	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	11	7	33	3.0	0	.00
Chicago	14	12	64	4.6	8	.57
New Orleans	9	6	13	1.4	0	.00
New York	8	12	17	2.1	5	.63
San Antonio	35	24	65	1.9	43	1.23
Los Angeles	60	26	175	2.9	30	.50
TOTAL	137	16	367	2.7	86	.63

Table 14

Driver History Summary for all Sites by Amphetamine Use
for 865 Drivers

Amphetamine	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	23	14	62	2.7	2	.09
Chicago	17	14	85	5.0	8	.47
New Orleans	10	7	10	1.0	1	.10
New York	11	16	15	1.4	7	.64
San Antonio	31	22	64	2.1	37	1.19
Los Angeles	108	46	288	2.7	46	.43
TOTAL	200	23	524	2.6	101	.51

Table 15

Driver History Summary for all Sites by Barbiturate Use
for 865 Drivers

Barbiturate	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	12	8	37	3.1	0	.00
Chicago	16	13	64	4.0	4	.25
New Orleans	19	14	38	2.0	2	.11
New York	14	20	15	1.1	6	.43
San Antonio	23	16	44	1.9	26	1.13
Los Angeles	89	38	211	2.4	34	.38
TOTAL	173	20	409	2.4	72	.42

Table 16

Driver History Summary for all Sites by Methadone Use
for 865 Drivers

Methadone	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	1	<1	2	2.0	0	.00
Chicago	3	2	16	5.3	3	1.00
New Orleans	4	3	2	.5	0	.00
New York	11	16	13	1.2	2	.18
San Antonio	3	2	3	1.0	0	.00
Los Angeles	9	4	12	1.3	0	.00
TOTAL	31	4	48	1.6	5	.16

Table 17

Driver History Summary for all Sites by Tranquilizer Use
for 865 Drivers

Tranquilizer	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	5	3	13	2.6	0	.00
Chicago	6	5	34	5.7	1	.17
New Orleans	1	<1	1	1.0	1	1.00
New York	4	6	2	.5	1	.25
San Antonio	8	6	14	1.8	6	.75
Los Angeles	15	6	38	2.5	10	.67
TOTAL	39	5	102	2.6	19	.49

Table 18

Driver History Summary for all Sites by Special Substance Use
for 865 Drivers

Special Substance	Number of User-Drivers	Percent User-Drivers for each Site	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents	Accidents per Driver
Users						
St. Louis	11	7	11	1.0	0	.00
Chicago	5	4	16	3.2	3	.60
New Orleans	5	4	6	1.2	1	.20
New York	6	7	9	1.5	3	.50
San Antonio	14	10	14	1.0	7	.50
Los Angeles	34	15	70	2.1	17	.50
TOTAL	75	9	126	1.7	31	.41

high throughout. The accident rate varies for these drugs over the study sites. This is most likely due to the small sample of drivers for these three drugs.

Finally, a summary of the overall driver histories by site for the arrestees who indicated use of any drug versus the nondrug user is shown in Table 19. The patterns emerging in the previous tables by drug type are evident here. That is, the hazardous traffic conviction rate and the accident rate vary considerably by site. Chicago has the highest conviction rate for hazardous traffic violations. Accident rates are, as expected, highest for San Antonio, no doubt because of the $25 reporting limit. However, New York and Los Angeles have the second and third highest accident rates even though their reporting limit is $200.

Even though there is considerable site-to-site variation, a comparison between users and nondrug users for each site can be made. For example, the nondrug users have more convictions for hazardous traffic violations per person than do the users. The same holds true for the accident rate with the single exception of the Chicago site. The nondrug users from among Chicago arrestees have a slightly lower accident rate than do the users, .23 to .29 accidents per person.

D. Summary

Considering the total sample of 865 drivers across all sites there are some types of drug users (classified by frequency of use) who have more hazardous traffic violation convictions and more accidents per driver than the nondrug user. Comparisons show that the "Hard" and "Moderate" user of psychedelics and the "Occasional" user of cocaine and tranquilizers are higher in both rates than nonusers.

When the total drug use of each drug across all sites is considered, the users of psychedelics are the only group to have more accidents and more hazardous traffic convictions than the nondrug user.

Finally a comparison between all drug users and nonusers for each site reveals that the nonusers have consistently more hazardous traffic convictions and accidents than the drug users.

Table 19

Driver History Summary for all Sites by Drug Type
(From the Questionnaire)

Total	Number of Drivers	Number Hazardous Convictions	Hazardous Convictions per Driver	Number* Accidents	Accidents per Driver	Percent with Clean Record
Users (Ever indicated use)						
St. Louis	76	160	2.1	3	.04	21.1
Chicago	68	223	3.3	20	.29	14.7
New Orleans	63	83	1.3	11	.17	34.9
New York	37	31	.8	14	.38	37.8
San Antonio	91	173	1.9	99	1.09	19.4
Los Angeles	181	507	2.8	71	.39	15.5
TOTAL USERS	516	1,177	2.3	218	.42	20.8
Nonuser						
St. Louis	84	292	3.5	8	.10	16.7
Chicago	52	184	3.5	12	.23	9.6
New Orleans	76	116	1.5	15	.20	22.4
New York	32	49	1.5	42	1.31	31.3
San Antonio	52	125	2.4	73	1.40	18.0
Los Angeles	53	159	3.0	22	.42	15.1
TOTAL NONUSERS	349	925	2.7	172	.49	18.2

*Requirements for reporting property damage only accidents vary by site: San Antonio - $25; Chicago, New Orleans, and St. Louis - $100; New York and Los Angeles - $200.

Chapter IV

DRIVER HISTORY ANALYSIS BY SPECIFIC DRUG AS DETERMINED BY URINALYSIS

The methodology of data collection used in this project allowed the use of urine samples to identify drug users. The driver history of all arrestees who provided this sample was requested. This chapter presents a comparison of driver histories, by drug, for those persons identified as drug users through the urinalyses.

A. Urinalysis Background[7/]

Some factors about the urinalysis should be kept in mind in the following discussion. Each urine sample was collected, identified and sent to Washington Reference Laboratories[8/] for chemical analysis for the presence of five drugs: cocaine, methadone, heroin, amphetamines, and barbiturates. Control sample results demonstrated that the analyses were accurate to the degree of precision anticipated in all cases except for amphetamines in three sites, St. Louis, New York and Los Angeles, and cocaine in one site, New York.

The ability to detect drugs through urinalysis varies by drug type over time. However, it is safe to assume that drugs used more than four days prior to arrest will probably not be detected.

Three of the five drugs under consideration - morphine, barbiturates and amphetamines - can be obtained legally by prescription or administered by a physician. Methadone also can be legally dispensed in drug treatment programs. Therefore the detection of these drugs in the urine would not necessarily indicate illicit use. To determine legal use of these drugs, two questions were included in the questionnaire requesting

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7/ For specific details see Eckerman, et al., op. cit., Chapter VII.

8/ Washington Reference Laboratories, 4380 MacArthur Boulevard, N. W. Washington, D. C. 20007.

information about the respondent's current use of prescriptions or involvement in a methadone program. There were 1,695 arrestees who completed a questionnaire and provided a urine sample. Of these only 41 (2.4 percent) were determined to be legally using either methadone or barbiturates. If the same percentage holds for the remaining 381 arrestees who provided a urine sample but did not complete the questionnaire, only nine would be legally using a drug. Hence out of the total sample of 2,076 cases submitted for urinalysis approximately 2,026 could be considered users of illicit drugs if the urinalysis showed positive results.

B. Urine Samples Collected

Urine samples were obtained in the receiving area of the jail as quickly as possible after each arrestee was admitted. For this reason the "Study Sample" for driver history analysis includes some arrestees who did not answer the questionnaire because they were transferred, released, etc. and thus screened from the study. Table 20 shows the number of urine samples tested for each study site and whether or not a questionnaire was completed. The total of urine samples tested is 2,076. Of these 977 or 47.1 percent were matched to a driving record in the respective state driver license files. In this chapter the sample subset under discussion is the 977 drivers from whom a urine sample was obtained.

For those arrestees tested, Table 21 presents the percentage of arrestees whose urine samples were positive for at least one drug, negative for all drugs, or drugs were not ascertained. (Results may have not been ascertained if not enough urine was supplied, urine samples were misplaced, etc.) The second column of Table 20 gives the percentage of the arrestees who were drivers in each site's sample.

C. Driver History Summary by Drug Type

This section will present the driver history summaries for all sites by each drug identified in the urinalysis.

Table 20

Number of Urine Samples Tested (N = 2,076)

Study Site	Total		Urine Sample Only		Questionnaire Also Completed	
	Drivers	No Driver Record	Drivers	No Driver Record	Drivers	No Driver Record
St. Louis	173	172	36	29	137	143
Chicago	131	231	18	33	113	198
New York	86	289	22	62	64	227
New Orleans	164	165	33	10	131	155
San Antonio	177	163	43	16	134	147
Los Angeles	246	79	67	12	179	67
TOTAL	977	1,099	219	162	758	937

Table 21

Results of Urine Analysis in Percentage of Arrestees Tested for each Site (N = 2,076)

Study Site	Total Tested		Drivers	Positive	Negative	Not Ascertained
	(N)	%	%	%	%	%
St. Louis	(345)	100	50.1	28.7	67.5	3.8
Chicago	(362)	100	37.0	22.9	74.3	2.8
New York	(375)	100	22.9	54.1	43.5	2.4
New Orleans	(329)	100	49.8	25.5	69.0	5.5
San Antonio	(340)	100	52.1	15.8	76.5	7.7
Los Angeles	(325)	100	75.7	31.4	64.6	4.0

1. Heroin Usage

A chemical analysis for the presence of morphine may indicate the usage of heroin since heroin is metabolized in part as morphine. Furthermore, since quinine is used as a cutting agent for heroin, cases previously reported (Appendix B) as having been positive for quinine may be considered suspect of heroin usage. However, since quinine eliminates rapidly from the human body and proportionally less appears unchanged in the urine than is the case for morphine,[9/] cases showing only quinine in the urine sample will not be considered in this analysis. All cases showing only morphine or morphine and quinine in the urine sample will be considered heroin users.

Table 22 presents the driver history summary of those arrestees whose urinalysis was positive for morphine and quinine or morphine only.

2. Methadone Usage

In the entire study sample there were only 61 cases of urine positive for methadone. Table 23 presents the driver history summary for methadone users as determined by urinalysis. Of the 61 methadone users 25, or 41 percent, had driver records. For such a small sample the variation between sites is quite large. However, the overall accident and hazardous conviction rates are below the average which will be shown in the following sections for barbiturate and amphetamine users.

3. Cocaine Usage

The urinalysis revealed only six cases of cocaine usage. Of these, driver records were obtained for only two. New York City data has been excluded due to difficulties in identifying cocaine for New York samples before the urine sample was exhausted. No table will be presented since there were only four hazardous convictions for the two drivers. No accidents were reported for these two drivers.

9/ Andres, Both, Medical Pharmacology: Principles and Concepts. St. Louis: The C. V. Mosby Company, 1961, pp. 235, 891.

Table 22

Driver History Summary for all Sites for Heroin Users as Determined by the Urine Analysis (N = 2,076)

Drug - Heroin	Number Tested Positive		Accidents*		Hazardous Convictions		Clean Record	
	Drivers	Total Persons	N	Rate	N	Rate	N	% of Drivers
St. Louis	21	44	1	.05	62	3.0	1	4.8
Chicago	4	11	1	.25	7	1.8	1	25.0
New Orleans	6	17	1	.17	1	.2	2	33.3
New York	34	170	13	.38	35	1.0	10	29.4
San Antonio	19	31	14	.74	30	1.6	4	21.1
Los Angeles	28	35	4	.14	79	2.8	4	14.3
TOTAL	112	308	34	.30	214	1.9	22	19.6

*Property damage accident reporting limits for New York and Los Angeles are $200, San Antonio is $25, and the remaining 3 are $100.

Table 23

Driver History Summary for all Sites for Methadone Users as Determined by the Urine Analysis (N = 2,076)

Drug - Methadone	Number Tested Positive		Accidents*		Hazardous Convictions		Clean Record	
	Drivers	Total Persons	N	Rate	N	Rate	N	% of Drivers
St. Louis	1	1	0	.00	6	6.0	0	0.0
Chicago	1	2	0	.00	0	.0	1	100.0
New Orleans	5	8	0	.00	5	1.0	0	0.0
New York	15	44	5	.33	10	.7	3	20.0
San Antonio	1	4	0	.00	1	1.0	0	0.0
Los Angeles	2	2	2	1.00	23	11.5	0	0.0
TOTAL	25	61	7	.28	45	1.8	4	16.0

*Property damage accident reporting limits for New York and Los Angeles are $200, San Antonio is $25, and the remaining 3 are $100.

4. Barbiturate Usage

The urinalysis showed 239 persons with urine positive for barbiturates, as in Table 24. Of these, 105, or 44 percent are drivers. The hazardous conviction and accident rates are higher than the rates for methadone or heroin users. San Antonio's one driver with ten convictions and two accidents raises these rates by .08 and .02 respectively. The conviction rate is almost the same as that for those whose urinalysis was negative for drugs. The accident rate is only half that shown for those drivers whose urine was negative for drugs. (See section 6 below.)

5. Amphetamine Usage

As indicated earlier in this chapter there is data available for "amphetamine users" for only three study sites due to a series of laboratory problems. A total of only 37 cases were revealed through urinalysis for Chicago, New Orleans, and San Antonio. The driver history summary for the 18 drivers (48.5 percent) is presented in Table 25. For so few cases very little can be said about the accident and conviction rates of these drivers. It is noticable, however, that the rates are considerably higher than among barbiturate, heroin and methadone users. Without more data it is not possible to determine if a larger sample would tend to reduce these rates.

6. Negative Results

There were 1,362 persons tested in which there was no drug usage detected. Of these, 655 or 48 percent were drivers. Table 26 presents the driver history summary for those drivers by study site. The accident rate for the 655 nondrug user drivers is higher than the rates for each group of drug users except for amphetamine users. The hazardous conviction rate is also higher for nondrug users than the rates for methadone and heroin users but only slightly higher than for barbiturate users. This pattern is consistant with rates reported on nondrug users as determined by the questionnaire in the previous chapter.

Table 24

Driver History Summary for all Sites for Barbiturate Users as Determined by the Urine Analysis (N = 2,076)

Drug - Barbiturate	Number Tested Positive		Accidents*		Convictions		Clean Record	
	Drivers	Total Persons	N	Rate	N	Rate	N	% Drivers
St. Louis	20	43	0	.00	44	2.2	3	15.0
Chicago	16	50	4	.25	44	2.8	3	18.7
New Orleans	10	27	0	.00	21	2.1	3	30.0
New York	8	47	1	.13	9	1.1	2	25.0
San Antonio	1	6	2	2.00	10	10.0	0	.0
Los Angeles	50	66	20	.40	133	2.7	8	16.0
TOTAL	105	239	27	.26	261	2.5	19	18.1

* Property damage accident reporting limits for New York and Los Angeles are $200, San Antonio is $25, and the remaining 3 are $100.

Table 25

Driver History Summary for Three* Sites for Amphetamine Users as Determined by the Urine Analysis (N = 2,076)

Drug - Amphetamine	Number Tested Positive		Accidents**		Hazardous Convictions		Clean Record	
	Drivers	Total Persons	N	Rate	N	Rate	N	% Drivers
Chicago	3	12	3	1.00	18	6.0	0	.0
New Orleans	8	12	2	.25	20	2.5	1	12.5
San Antonio	7	13	8	1.14	16	2.3	2	28.6
TOTAL	18	37	13	.72	54	3.0	3	16.6

* Samples obtained from St. Louis, New York and Los Angeles were discarded or exhausted before satisfactory level of precision attained.

** Accident reporting limit on San Antonio is $25 while Chicago and New Orleans limits are $100.

Table 26

Driver History Summary for all Sites for Nonusers
as Determined by the Urine Analysis
(N = 2,076)

Drug - Negative to all Drugs	Number Tested Negative		Accidents*		Hazardous Convictions		Clean Record	
	Drivers	Total Persons	N	Rate	N	Rate	N	% Drivers
St. Louis	119	233	7	.06	353	3.0	26	21.8
Chicago	101	269	30	.30	362	3.6	11	10.9
New Orleans	110	227	24	.22	157	1.4	32	29.1
New York	47	163	44	.94	53	1.1	6	12.8
San Antonio	130	260	179	1.38	275	2.1	22	16.9
Los Angeles	148	210	54	.36	407	2.8	14	9.5
TOTAL	655	1,362	338	.52	1,607	2.5	111	16.9

* Accident reporting limits on New York and Los Angeles are $200, San Antonio limit is $25, and the remaining 3 are $100.

D. Summary

Table 27 presents the summary for the 977 drivers who were tested by urinalysis. Of these, 48 percent of the urine samples tested were negative for all drugs; 52 percent were positive for at least one drug. Table 27 shows for each drug the percent of drivers among persons positive for drugs in the urinalysis; e.g., 44 percent of the barbiturate users are drivers.

The most outstanding finding from Table 27 is that the accident and conviction rates for the persons with no drugs present in the urinalysis are among the highest of any group. They rank second only to the rates shown by the small sample of amphetamine users.

For the drug users, the methadone and heroin users rank quite low on hazardous convictions and lower than the barbiturate and amphetamine users in accidents. As has been stated earlier, however, the amphetamine sample is too small to make a definitive statement. Nonetheless, the rates shown by amphetamine users are certainly not typical of the overall sample.

Table 27

Driving History Summary for Positive
And Negative Urine Analysis for the Total Sample
Tested (N = 2076)

Drug	Drivers		Accidents*		Hazardous Convictions		% With Clean Records
	Number Tested	Percent of Tests	N	Rate	N	Rate	
Negative to all	655	48.0	338	.52	1607	2.5	17.0
Barbiturates	105	44.0	27	.26	261	2.5	18.1
Heroin	112	35.0	34	.30	214	1.9	19.6
Methadone	25	41.0	7	.28	45	1.8	16.0
Amphetamines	18	48.5	13	.72	54	3.0	16.7

* Reporting limits for property damage accident vary over sites.

Chapter V

DRIVER HISTORY ANALYSIS BY ALCOHOL USAGE

A section of the questionnaire was devoted to personal habits including alcohol consumption. Since alcohol consumption and related driving histories are of concern to the national drinking-driving countermeasure effort, the responses to the questions on alcohol consumption are discussed in this chapter. This data was derived from the BNDD questionnaire. The question was only on type and quantity of alcoholic beverage consumed if any, with no reference to whether or not the respondent drank before driving. The respondents were then classified as heavy, moderate or light drinkers according to each beverage type. Appendix B presents the tabular results by study-site for alcohol usage and driver history. A summary of those results is presented in this chapter.

The data from each site indicated that an individual responding that he used alcoholic beverages almost always used beer. This beverage type will therefore be used to look at driver histories, by amount of beverage consumed, for the total sample.

The heavy beer drinkers comprise 22.3 percent or 145 of the total of 650 drivers in the sample as shown in Table 28. Of these 145 drinker-drivers, 75 percent have a hazardous conviction recorded. The group (all heavy beer drinkers) has an overall conviction rate of 2.6 convictions per driver. For only those drivers who have at least one conviction of a hazardous traffic violation, the rate is 3.4 convictions per driver (374 convictions for 109 drivers). Compared to the moderate and light beer drinkers, this group has a greater percentage of its drivers being involved in accidents and a higher accident rate. Furthermore, the accident rate for only those drivers who had accidents is higher, 45 drivers had 86 accidents for a rate of 1.9 accidents per driver. The drivers who are heavy beer drinkers also have the smallest percentage of drivers who have no accidents or convictions of any type recorded on their driver history.

Table 28

Driver History Summary by Quantity of Beer Consumed as Indicated by Questionnaire, Number of Drivers is 650

Quantity of Beer Consumed	Drivers		Hazardous Convictions			Accidents*			Clean Records	
	Number	% Total	Drivers %	N	Rate N	Drivers %	N	Rate N	Drivers %	N
Heavy	145	100	75.0	(109)	2.6 (374)	31.0	(45)	.59 (86)	15.8	(23)
Moderate	115	100	63.5	(73)	2.4 (236)	25.2	(29)	.40 (46)	21.7	(25)
Light	390	100	63.0	(265)	2.3 (889)	24.5	(96)	.40 (156)	21.2	(83)

*Reporting limits for property damage accident vary over sites.

The questionnaire allowed a respondent to indicate quantity of alcohol consumed for each beverage type. The rates and percentages for wine and liquor consumption are quite similar to those shown for beer. This is to be expected since many of the same individuals are represented in each category. There are some exceptions caused by the fact that a heavy drinker of one category may be a light or moderate drinker in another category.

The driver history summaries of hazardous convictions and accidents by site for respondents who indicated use of an alcoholic beverage is presented in the following section. Tables 29 through 31 present data on the user of each beverage type and Table 32 summarizes for the alcohol user (any type) versus the nonuser. There is no significant difference between the overall conviction and accident rates for the three beverage types.

The same variation between sites appears in all three beverage types, with New Orleans and New York having relatively low hazardous conviction

Table 29

Driver History Summary for all Sites by Alcohol Type
(N = 865)

Beer	Number of Drivers	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents*	Accidents Per Driver
Users					
St. Louis	126	335	2.7	11	.09
Chicago	84	248	3.0	23	.27
New Orleans	100	124	1.2	20	.20
New York	47	54	1.2	34	.72
San Antonio	105	204	1.9	124	1.18
Los Angeles	188	513	2.7	72	.38
TOTAL	650	1,478	2.3	284	.43

* Accident reporting limits on New York and Los Angeles are $200, San Antonio limit is $25, and the remaining 3 are $100.

Table 30

Driver History Summary for all Sites by Alcohol Type
(N = 865)

Wine	Number of Drivers	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents*	Accidents Per Driver
Users					
St. Louis	36	97	2.7	2	.06
Chicago	41	112	2.7	5	.12
New Orleans	32	34	1.1	5	.16
New York	28	35	1.3	26	.93
San Antonio	35	73	2.1	33	.94
Los Angeles	91	273	3.0	43	.47
TOTAL	263	624	2.4	114	.43

* Accident reporting limits on New York and Los Angeles are $200, San Antonio limit is $25, and the remaining 3 are $100

Table 31

Driver History Summary for all Sites by Alcohol Type
(N = 865)

Liquor	Number of Drivers	Number Hazardous Convictions	Hazardous Convictions per Driver	Number * Accidents	Accidents Per Driver
Users					
St. Louis	77	233	3.0	9	.12
Chicago	54	158	2.9	11	.20
New Orleans	65	88	1.4	14	.22
New York	37	31	.8	22	.59
San Antonio	53	140	2.6	71	1.34
Los Angeles	111	289	2.6	39	.35
TOTAL	397	939	2.4	166	.42

* Accident reporting limits on New York and Los Angeles are $200, San Antonio limit is $25, and the remaining 3 are $100.

Table 32

Driver History Summary for all Sites by Alcohol Type
(N = 865)

Total	Number of Drivers	Percent of Drivers with Clean Records	Number Hazardous Convictions	Hazardous Convictions per Driver	Number Accidents*	Accidents Per Driver
Users						
St. Louis	131	22	358	2.7	11	.08
Chicago	94	20	289	3.2	23	.24
New Orleans	112	30	157	1.4	22	.20
New York	57	19	60	1.0	43	.75
San Antonio	120	21	260	2.2	150	1.20
Los Angeles	206	32	572	2.8	77	.37
TOTAL	720	144	1,696	2.4	326	.45
Nonusers						
St. Louis	29	8	82	2.83	0	.00
Chicago	26	3	87	3.35	2	.08
New Orleans	27	9	42	1.52	4	.15
New York	12	5	20	1.50	13	1.08
San Antonio	23	6	38	1.65	22	.96
Los Angeles	28	4	94	3.20	16	.57
TOTAL	145	35	363	2.50	57	.40

* Accident reporting limits on New York and Los Angeles are $200, San Antonio limit is $25, and the remaining 3 are $100.

rates and New York and San Antonio having relatively high accident rates. San Antonio's rate is greatly increased by the Texas State Law that requires all accidents involving $25 or more to be reported. New York, on the other hand, has a $200 accident reporting limit. Los Angeles also has a $200 limit and the third highest accident rate of the sites studied. The three remaining sites have a $100 accident reporting limit.

In summary, the total sample included 865 drivers. Of these, 720 or 83.3 percent, admitting to drinking an alcoholic beverage of some type at least occasionally. Comparing the user drivers to the abstainer drivers, the drinkers have an overall conviction rate slightly lower than the abstainers and an accident rate which is slightly higher. The percentage of drivers with no convictions or accidents recorded is slightly more for the abstainers. The data seem to indicate that for the respondents of this study there does not appear to be any meaningful difference in the driving histories of those who drink compared to those who abstain. However, the heavy drinker is more likely to have had hazardous traffic violation convictions and accidents.

Chapter VI

DRIVER HISTORY ANALYSIS BY ARREST CHARGE

A. General

The analysis of driver histories by criminal charge is presented in this chapter. The "study sample" subset to be examined is the 1,889 respondents to the questionnaire.

The criminal charge is the current first charge of each arrestee. These charges have been grouped into the following classifications:[10/]

1. Serious crimes against the person: criminal homicide, rape, aggravated assault, robbery and kidnapping
2. Less serious crimes against the person: other assaults, sex offenses (except forcible rape)
3. Property crimes: burglary, larceny, theft, arson, forgery, counterfeiting, fraud, etc.
4. Crime without a victim - vice or sex
5. Possession of narcotics
6. Selling, manufacturing, pushing, distributing, smuggling narcotics
7. Possession of narcotic paraphernalia
8. Other miscellaneous legal classifications

The most serious arrest charge was coded as first charge and is used as the basis of discussion of the following tables. The data which are summarized and discussed in this chapter have been presented in interim project reports and are assembled for your reference in Appendix C. In

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10/ Much effort was directed toward the design of a crime coding system suited to the objectives of the RTI study for the Bureau of Narcotics and Dangerous Drugs. Ultimately "a decision was made to use two measures: One an established crime coding system employed by the FBI for the Uniform Crime Reports; the other an ad hoc measure designed for the purposes of this [BNDD] study." Eckerman, et al., op. cit., p. 39-43. Four additional classifications are included for the purposes of presenting data in this report. Since three of the study sites did include persons arrested on drug and related charges, the classifications relating to drugs are included. The fourth category of crime without a victim was included for comparison to the serious (violent) crimes against a person, less serious crimes against the person and property crimes.

addition some brief discussion of arrest charges by drug and alcohol usage will be included. These data by study site are also presented in Appendix C.

B. Arrest Charge Versus Driver History

A summary of the driver history of the driver-arrestees who completed the questionnaire according to the crime charged is shown in Table 33. Of the drivers, 30.1 percent were charged with serious crimes against a person. The conviction rate for hazardous traffic violations among this group charged with serious personal crimes is the same as for the total sample of drivers, 2.4 convictions per driver. The 8.9 percent of the drivers charged with less serious crimes against the person and the 1.4 percent charged with "Crime Without A Victim" have conviction rates slightly higher than the average at 2.5 convictions per driver. The 8.4 percent of drivers charged with "other miscellaneous crimes," have a conviction rate considerably higher than the average, 3.7 convictions per driver. Reference to Table 34 will show that exceptionally high rates for the Chicago and New York arrestees in this category is a major contributing factor. However, conviction rates for all sites in this category are higher than the average, the single exception being New Orleans. It is interesting to note that those arrested for drug related charges have consistantly low conviction rates.

The accident rates do not have the same pattern vis-à-vis criminal charges. The highest rates are among arrestees charged with two of the drug related charges as shown in Table 33. This includes 8.7 percent of the drivers. The next highest accident rate is found for the drivers charged with "other miscellaneous crimes." This rate is higher than the average, i.e. .54 compared to the average of .45 accidents per person. The 30.1 percent of the drivers charged with serious crimes against the person have a lower than average accident rate.

C. Criminal Charge by Alcohol Usage

The relationship of criminal charge of arrestees to their response about the type of alcoholic beverage they used does not affect the previous

Table 33

Driver History Summary by Type of Crime on First Charge
(N = 1,889)

Type of Crime	Total Arrestees	Drivers		Hazardous Convictions		Accidents**		Drivers with Clean Record	
		N	%	N	Rate	N	Rate	N	%
Serious Crimes Against the Person	586	260	30.1	630	2.4	100	.38	55	32.2
Less Serious Crimes Against Person	142	77	8.9	189	2.5	35	.45	18	10.5
Property	830	362	41.8	833	2.3	153	.42	71	41.6
Crime without Victim	19	12	1.4	30	2.5	3	.25	3	1.7
Possession* of Narcotic	139	62	7.2	112	1.8	46	.74	14	8.2
Selling,* Pushing, etc.	15	13	1.5	23	1.8	11	.85	3	1.7
Possession* of Paraphernalia	13	6	.7	11	1.8	2	.33	0	0.0
Other	145	73	8.4	272	3.7	40	.54	7	4.1
TOTAL	1,889	865	100.0	2,100	2.4	390	.45	171	100.0

* Three sites, Chicago, New Orleans and San Antonio.

** Accident reporting limits for property damage only accidents vary from site to site.

Table 34

Hazardous Traffic Violation Conviction Rates and Accident Rates for each Site by Criminal Charge (Number Drivers = 865)

Crime Charged	St. Louis		Chicago		New York		New Orleans		San Antonio		Los Angeles	
	CR*	AR*	CR	AR	CR	AR	CR	AR	CR	AR	CR	AR
Serious Crimes Against the Person	2.8	.13	3.0	.19	.8	.75	1.3	.18	1.8	1.50	2.9	.40
Less Serious Crimes Against the Person	3.1	.08	3.0	.11	1.0	1.20	.4	.14	2.6	1.50	2.8	.39
Property Crime	2.6	.05	3.9	.50	.6	.59	1.3	.12	1.9	1.10	2.9	.42
Crime without a Victim	1.0	.00	-	-	-	-	2.6	.17	5.0	1.00	1.0	.00
Possession of Narcotics	-	-	1.9	.13	-	-	1.9	.37	1.7	1.08	-	-
Selling, Pushing, etc.	-	-	1.0	.50	-	-	1.0	.00	2.0	1.00	-	-
Possession of Narcotic Paraphernalia	-	-	3.0	.00	-	-	-	-	1.6	.40	-	-
Other	3.1	.00	5.6	.36	7.2	1.60	2.2	.40	3.9	1.83	2.6	.33
TOTAL	2.8	.07	3.4	.27	1.2	.81	1.4	.19	2.1	1.20	2.8	.40

CR = Hazardous Traffic Violation Conviction Rate

AR = Accident Rate - Accident reporting limits for property damages are $25 in San Antonio, $100 in Chicago, New Orleans, and St. Louis and $200 in New York and Los Angeles.

analysis concerning the driving records. However, since there is considerable interest in alcohol usage across the nation the data that is presented in tabular form by site in Appendix C will be discussed briefly here.

Table 35 presents the number of persons who indicated alcohol usage by type of crime and the distribution of these persons for each beverage type. Individuals who indicated they drank more than one beverage type may be counted more than once in this table. Most of the persons who admitted alcohol usage drank beer and almost all who drank liquor or wine also drank beer.

A comparison of these distributions by beverage type shows that each is similar to the distribution for all arrestees to all criminal charges. There is no indication of an unusually large proportion of persons in any crime category using a particular alcoholic beverage.

D. Arrest Charges by Drug Used

Previous project interim reports have presented tabular data by site on arrest charges versus drug usage. This was determined by the questionnaire for drivers and those arrestees with no driver record. This data has been accumulated and is included in Appendix C. Any attempt by the study team to make an intensive analysis of this data would be beyond the scope of the present study. The RTI study for BNDD, from which this data was obtained, involved a detailed analysis of this issue. The authors of this report would like to refer those readers interested in this topic to the previously referenced report by Eckerman, et al.

E. Summary

From the analysis of hazardous traffic violation convictions it is evident that the persons charged with the more serious crimes do not have higher than average conviction rates. In fact, these arrestee-drivers have slightly lower than average accident rates. Only the 8.4 percent of

Table 35

Distribution of Alcohol Beverage Usage by Type of Crime for Arrestees who Completed the Questionnaire (N = 1,889)

Type of Crime	Total Arrestees		Beer		Wine		Liquor	
	N	%	N	%	N	%	N	%
Serious Crimes Against the Person	586	31.0	451	32.2	185	30.4	287	34.1
Less Serious Crimes Against the Person	142	7.5	116	8.3	51	3.6	72	8.6
Property Crimes	830	43.9	610	43.6	270	44.4	363	43.2
Crime without Victim	19	1.0	14	1.0	7	1.2	9	1.1
Possession of Narcotics	139	7.4	92	6.5	48	7.9	39	4.6
Selling, etc.	15	.7	13	.9	11	1.8	2	.2
Possession of Paraphernalia	13	.7	6	.4	4	.7	5	.6
Other	145	7.7	97	6.9	32	5.3	64	7.6
TOTAL	1,889	100.0	1,399	100.0	608	100.0	841	100.0

drivers found in the "other crimes" category have consistently higher than average conviction and accident rates.

A comparison was also made of alcohol usage for each beverage type by various crime charge categories. It was determined that arrest charges did not vary in any systematic way by type of alcoholic beverage consumed.

Chapter VII
OTHER STUDY RELATED VARIABLES

This chapter will treat some variables related to the study sample but not necessarily to driver histories. Specifically, the following will be discussed: age distribution of the study sample, combinations of drug use reported, use of crime files in the study, and case disposition of the arrest charges.

A. Age Distribution of Questionnaire Respondents

Age of the arrestee is a personal characteristic variable of considerable interest. First, there is general concern about the age of drug users across the nation. Second, age is a large factor in whether or not a person has a driver's license as well as the driving record he has had time to accumulate.

The age distribution of arrestees who indicated that they used drugs and those who reportedly do not use are shown in Table 36. Of the 1,889 arrestees who responded to the questionnaire, 55.5 percent were under 25 years of age and 84 percent were under 35 years of age. Furthermore, of the 1,137 drug users, 60.7 percent were under 25 and 90.8 percent were under 35 years of age. Approximately the same age distributions prevail for the arrestees with no driver record as for drivers, both drug users and nonusers. The single exception is the nonuser drivers who show a slightly larger proportion in the 35-44 year range.

The age distribution of the arrestees in the sample taken at each study site does vary. Table 37 presents a summary by site of the distribution of ages. More detailed tabulations are furnished in Appendix D.

Table 36

Age Distribution of Drug User Versus the Nonusers as Determined by the Questionnaire (N = 1,889)

Arrestee Age	Total		User						Nonuser					
			Total		Driver		No Driver Record		Total		Driver		No Driver Record	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
<25	1,049	55.5	691	60.7	297	57.4	394	63.5	358	47.6	116	33.3	242	59.9
25-34	538	28.5	342	30.1	167	32.3	175	28.2	196	26.1	110	31.2	86	21.3
35-44	206	10.9	83	7.3	45	8.7	38	6.1	123	16.4	79	22.7	44	10.9
45-54	70	3.7	17	1.5	7	1.4	10	1.6	53	7.0	32	9.2	21	5.2
≥55	26	1.4	4	.4	1	.2	3	.5	22	2.9	11	3.2	11	2.7
TOTAL	1,889	100.0	1,137	100.0	517	100.0	620	100.0	753	100.0	348	100.0	404	100.0

Table 37

Age Distributions of Questionnaire Respondents
By Study Site (N = 1,889)

Age	St. Louis	Chicago	New York	New Orleans	San Antonio	Los Angeles	Total
<25	62.5	58.0	43.1	49.5	68.2	51.3	55.5
25-34	21.8	28.8	39.5	27.8	22.0	30.7	28.5
35-44	8.8	10.2	12.4	16.7	5.4	11.9	10.9
45-54	4.4	2.1	4.3	4.3	3.0	4.2	3.7
>55	2.5	.9	.7	1.7	1.4	1.2	1.4
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Since over one-half of the respondents were less than 25 years of age, this range will be examined more closely. Table 38 presents the age distribution under 25 years of age by site for the questionnaire respondents.

Table 38

Percent of Respondents Less Than 25 Years of Age
For All Sites (N = 1,049)

Age	St. Louis	Chicago	New York	New Orleans	San Antonio	Los Angeles
-15	1.0	.5	.8	.0	.5	.0
16-17	17.5	16.1	.0	18.9	19.3	.6
18-20	44.0	39.4	.8	44.6	44.6	48.0
21-24	37.5	44.0	98.5	36.5	35.6	51.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

The distribution for the ranges shown is almost the same for the St. Louis, New Orleans, and San Antonio sites. The Chicago and Los Angeles sites differ in that fewer respondents appear in the ranges 16-17 and 18-20 years leaving the largest percentage in the range 21-24. The New York site differs radically from the other five sites since 98.5 percent of the respondents are in the age range 21-24 years.

Drug usage versus non-usage for questionnaire respondents less than 25 years of age and their age distributions are presented in Table 39. For the 1,049 respondents, there is a much larger percentage of nonusers in the ranges 16-17 and 18-20 and a much larger percentage of users in the range 21-24.

Table 39

Age Distribution of Respondents Less Than 25 Years of Age For the Sample as Determined by the Questionnaire (N = 1,049)

	Users		Non Users		Total	
Age	No	Percent	No	Percent	No	Percent
-15	1	.1	4	1.1	5	.5
16-17	70	10.0	65	18.2	135	12.9
18-20	239	34.6	165	46.1	404	38.5
21-24	381	55.2	124	34.6	505	48.1
TOTAL	691	100.0	358	100.0	1049	100.0

One other characteristic of these young arrestees should be examined. Since the six study sites are located in states with different driver licensing minimum age limits, a site by site comparison of drivers versus arrestees with no driver record is presented in Table 40.

Table 40

Percent of Respondents Less Than 25 Years of Age
with Driver Record or with No Driver Record

Age	St. Louis		Chicago		New York		New Orleans		San Antonio		Los Angeles	
	D*	NR*	D	NR	D	NR	D	NR	D	NR	D	NR
-15	0	1.8	0	.7	0	.9	0	0	0	.9	0	0
16-17	12.6	21.2	7.3	19.6	0	.9	8.0	24.5	13.0	24.6	.9	1.6
18-20	44.8	43.4	40.0	39.1	0	0	34.0	50.0	45.7	43.6	42.7	56.2
21-24	42.5	33.6	52.7	40.6	100	98.2	58.0	25.5	41.3	30.9	56.4	42.2
TOTAL	100.0	100.0	100.0	100.0	100	100.0	100.0	100.0	100.0	100.0	100.0	100.0

*Driver Record
NR - No Driver Record

Driver licensing age requirements of the sites are the following:

1. St. Louis licensing laws allows unlimited operator's license to be issued at age 16.
2. Chicago has restricted license available for age 16.
3. New York has a minimum age of 18.
4. New Orleans' minimum age for unrestricted license is 17 while,
5. San Antonio and
6. Los Angeles require licensed drivers to be 18 years of age.

In all six states, restricted licenses (learner permits) may be issued at age 16 with the parents' permission.

San Antonio and St. Louis have the largest percentage of drivers under 18 years of age. St. Louis' rate is expected since the minimum age for a

driver's license is 16. San Antonio's rate must come from the restricted drivers aged 16 and 17. It appears obvious from Table 40 that the minimum age for unlimited operator's license issuance has little if any affect on the numbers of licensed drivers below 18 years of age in the sample.

In summary, it is evident that the drug user is disproportionaly represented in the younger age ranges. That is, 90.8 percent of the arrestees who responded that they had ever used drugs were less than 35 years of age compared to 73.7 percent of the non-drug users. For those arrestees under 25 years of age, over one-half of the users are in the 21-24 year age group.

B. Number of Drugs Used Versus Driver History

The questionnaire allowed for a respondent to indicate drug usage on one or more of the eleven drugs as discussed in Chapter 3. Table 41 is a summary of data provided by all respondents to the questionnaire by the number of drugs used. (This is not meant to imply combinations of drugs used at the same time but rather that a person has used more than one drug.[11]) For each category of number of drugs used, the number of drivers indicating usage is shown as well as the number of accidents and hazardous traffic violations and the number of drivers with clean records. Table 42 shows the corresponding distribution rates and percentages. The distribution of arrestees over the number of drugs used ("0" drugs used indicates the non-users) is almost the same as the distribution of drivers.

It should be kept in mind that the accident rate is based on total number of accidents for all drivers in each group with no distinction among property damage limits that differ by state. Compared to the nondrug users' accident rate, those drivers who indicated use of six, seven, ten and eleven different drugs have relatively high rates.

When grouped into a range of six or more drugs used these 112 drivers accumulated 60 accidents. This rate is .54 accidents per driver for those drivers who indicated that they used six or more different drugs.

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[11] Eckerman, et al., op. cit. reports on drugs used in combination (Chapter 10, pp. 296-300). In brief, the results were: 1) about one fourth of the positive urine samples had more than one drug present, and 2) responses to the questionnaire indicate the heroin, amphetamines, barbiturates, cocaine or marihuana are used in combination with one other drug by approximately 52 percent of the users.

The conviction rate for hazardous traffic violations does not have a similar pattern. Only one group of user drivers has a higher conviction rate than the nondrug users. The 18 drivers who indicated that they used as many as nine different drugs have accumulated 60 hazardous traffic violations for which they show a conviction on their driving record. Their rate of 3.3 convictions per driver is considerably higher than the 2.7 convictions per driver for the nonusers.

Table 42 also shows the percentage of drivers within each drug use frequency group that have neither accidents nor convictions of any kind on their driver record. The nondrug users have a relatively small proportion of drivers with clean records. The groups with the highest accident rates have among the highest proportion of drivers with clean records.

In summary, the group of drivers who indicated use of six or more different drugs have more accidents than the nondrug users while they have fewer hazardous convictions. The drivers with no accidents or convictions on their record come largely from the drug users. No reasons for this are apparent.

C. Use of Crime Files in the Study

Two additional methods of obtaining drug use information were (1) a check of local drug registers and BNDD regional and national drug registers to determine whether study respondents were listed; and (2) an inquiry into the past history of arrests for each respondent through FBI rap sheets to ascertain whether a respondent had been engaged in any drug related criminal activity in the past.

The limitations inherent in this type of data for the research effort are discussed in the study methodology of the RTI 23U-570 Final Report to BNDD (Eckerman, et al., op. cit.). It was the decision of the study team for this associated project on drivers records that the use of data from the crime files would not provide sufficiently different information to warrant its analysis with the driver histories.

Table 41

Driving Record of Questionnaire Respondents
By Number of Drugs Used (N = 1889)

No. of Drugs Used	Total	Number of Drivers	NUMBER OF		
			Accidents*	Hazardous Traffic Convictions	Clean Records
0	753	349	172	925	63
1	319	143	67	301	28
2	223	107	36	262	23
3	144	60	20	127	15
4	121	52	19	107	13
5	89	42	16	110	6
6	66	28	18	56	7
7	51	25	16	56	6
8	47	17	4	43	5
9	28	18	5	60	3
10	15	9	8	19	1
11	33	15	9	36	1
TOTAL	1889	865	390	2102	171

*Accidents as reported on the driver histories are based on different reporting limits in each state.

Table 42

Percentage Distribution and Rates on Driving Records of Questionnaire Respondents By Number of Drugs (N = 1889)

Number of Drugs Used	Total %	Drivers % of Total	Accident Rate	Hazardous Conviction Rate	Percent of Drivers With Clean Records For Each Frequency
0	39.9	40.3	.49	2.7	18.1
1	16.9	16.5	.47	2.1	19.6
2	11.8	12.4	.34	2.5	21.5
3	7.6	6.9	.33	2.1	25.0
4	6.4	6.0	.37	2.1	25.0
5	4.7	4.9	.38	2.6	14.3
6	3.5	3.2	.64	2.0	25.0
7	2.7	2.9	.64	2.2	24.0
8	2.5	2.0	.24	2.5	29.4
9	1.5	2.1	.28	3.3	16.7
10	.8	1.0	.89	2.1	11.1
11	1.7	1.8	.60	2.4	6.7
TOTAL	100.0	100.0	.45	2.4	19.8

D. Disposition of Cases

The chapter and appendix discussing arrest charges or criminal charges are at all times referring to current arrest charges, not convictions. Provision has been made under the RTI contract to BNDD for collection of information on the ultimate disposition of each case included in this study. Therefore, a reanalysis of the data at a later time based on convictions rather than arrest charges is possible.

APPENDIX A

DRIVER HISTORY DATA ANALYSIS ON THE INITIAL SAMPLE

APPENDIX A

DRIVER HISTORY DATA ANALYSIS ON THE INITIAL SAMPLE

This appendix contains data previously reported in progress reports. For each site, a brief description and factors which may have influenced the record request response rate are given. The driver history data has been analyzed along three lines for all sites. First, the age distributions by site for drivers who have had a recorded traffic violation conviction, either hazardous or nonhazardous, or an accident, are shown. The same distributions are shown for drivers with no accidents or convictions recorded. These persons shall be indicated as having a "clean record."

Second, the accidents recorded on drivers records from each site are reported by whether the drivers were licensed or nonlicensed. With the exception of the San Antonio and Los Angeles data, the accidents are categorized by type, i.e. fatal, personal injury, or property damage. California and Texas do not report accident data by type of accident.

Finally, traffic violation convictions of drivers, licensed or nonlicensed, are reported. Driving under the influence arrests, all other hazardous moving traffic violations, and other nonhazardous and/or nonmoving violations are examined.

The driving-under-the influence category also includes the convictions for refusal of the chemical breath test under the implied consent law in states with such a law. Hazardous traffic violations include speeding, reckless driving, driving on wrong side of the street, failure to yield right-of-way, improper turn, improper passing, stop sign or signal violations, improper use of equipment, improper lights, etc. Other traffic violations include nonhazardous ones such as driving without a license, improper muffler, equipment violations, no registration, etc.

A. St. Louis, Missouri

This site included only the city of St. Louis. The initial sample was drawn from arrestees by the Metropolitan Police Department

for offenses alleged to have been committed within the city. Driving records were requested on 496 contacts. Of these, 256, or 51.6 percent, were successful matches to a driving history in Missouri's driver license file. The low percentage of matches may be attributed to two factors. First, the individual may not have had an active Missouri driver license in the past six years. Second, the identification data collected in the sample did not fulfill the requirements of the Missouri driver license unit for obtaining records. Missouri requires the correct driver license number, last name, full first name and middle initial, sex, and correct date of birth. The identification data obtained on the survey site and thus available for us to furnish to Missouri to obtain the driver history did not include driver license number and, in many instances, did not include the full or correct name. In any instance where an alias was given, no matching driver record could be found. The age distribution of these persons with driving histories is shown in Table A-1. The number of persons with accidents or convictions recorded and the number with clean records in each category, as well as the respective percentage of the total response, are also shown. Of the total drivers in this sample, 131 or 51.2 percent, are less than 25 years of age.

The driver records that were matched to a name on the initial sample have been tabulated for licensed or unlicensed drivers to show accident type and traffic conviction type recorded. Table A-2 presents the accident analysis where accident rate is the number of accidents divided by the number of drivers. "Property damage only" accidents are those which involve more than $100 in property damage and no bodily injury; personal injury accidents include Class A, B, or C bodily injury; and fatal accidents include one or more fatalities.

Of the 256 drivers, only 4.3 percent had an accident recorded on their driver history. These 11 drivers had 15 accidents making the sample accident rate .06 accidents per driver. Twenty percent of the accidents involved personal injury but there were no fatalities.

Table A-1

Driving Record by Age for the St. Louis Initial Sample (N = 256)

Driver Age	Record with Traffic Convictions or Accidents		Clean Record		Total Drivers	
	N	%	N	%	N	%
<25	94	46.1	37	71.2	131	51.2
25-34	63	30.8	8	15.4	71	27.7
35-44	26	12.7	3	5.8	29	11.3
45-54	15	7.5	2	3.8	17	6.7
≥55	6	2.9	2	3.8	8	3.1
TOTAL	204	100.0	52	100.0	256	100.0

Table A-2

Accidents by Licensed and Nonlicensed Drivers in the St. Louis Initial Sample (N = 256)

Driver Status	Drivers		Drivers with Accidents		Total Accidents		Type of Accident				Accident Rate
							Property Damage Only		Personal Injury		
	N	%	N	%	N	%	N	%	N	%	
Licensed	220	86.0	8	72.8	12	80.0	9	60.0	3	20.0	.054
Not Licensed	36	14.0	3	27.2	3	20.0	3	20.0	0	0.0	.083
TOTAL	256	100.0	11	100.0	15	100.0	12	80.0	3	20.0	.059

Table A-3 presents the traffic violation convictions reported on the driver record by whether the individual is licensed or not licensed. The driving-under-the-influence (DUI) category also includes persons who refused the chemical breath test. The percentage of drivers from this initial sample with a conviction is 79.7 percent. The average number of convictions per driver for all convictions is 3.9 (791 convictions for 204 drivers).

B. Chicago, Illinois

This survey site included Chicago and Cooke County. Arrestees within this jurisdiction were included in the initial contact. Driving history records were requested on 385 arrestees. Of these, 153, or 40 percent, were successful matches to a driving history in the Illinois driver license file. Since the driver license number and, in most cases, correct name with middle initial were not available for identification, the Illinois Driver License Division manually searched their files for our requests. Thus, even though the positive response is low, it represents special effort.

The age distribution of these persons with driving histories is shown in Table A-4. The number of persons with accidents or convictions recorded and the number with clean records in each age category as well as the respective percentage of the total sample are also shown.

The driver records that were matched to an arrestee have been tabulated by whether the person is licensed or nonlicensed in order to examine the type of accidents and traffic violation convictions recorded. Table A-5 presents the accident analysis. "Property damage only" accidents are those which involve more than $100 damage and no bodily injury.

Table A-6 presents the traffic violation convictions reported on the driver record by whether the individual is licensed or nonlicensed. The driving-under-the-influence category does not include any chemical breath test refusals.

C. New York, New York

The New York study site included only the borough of Brooklyn which is within the City. Only those men arrested within the Brooklyn jurisdiction

Table A-3

Traffic Violation Convictions of Drivers in the St. Louis Initial Sample by Licensed or Nonlicensed Drivers (N = 256)

Driver Status	Drivers with Convictions		DUI Convictions		Hazardous Traffic Convictions		Other Traffic Convictions	
	N	%	N	%	N	%	N	%
Licensed	168	82.3	17	85.0	675	97.3	46	59.7
Not Licensed	36	17.7	3	15.0	19	2.7	31	40.3
TOTAL	204	100.0	20	100.0	694	100.0	77	100.0

Table A-4

Driving Record by Age for the Chicago Initial Sample (N = 153)

Driver Age	Record with Traffic Convictions or Accidents		Clean Record		Total Drivers	
	N	%	N	%	N	%
<25	48	36.1	11	55.0	59	38.6
25-34	58	43.6	4	20.0	62	40.5
35-44	22	16.5	4	20.0	26	16.9
45-54	5	3.8	1	5.0	6	4.0
>55	0	0.0	0	0.0	0	0.0
TOTAL	133	100.0	20	100.0	153	100.0

Table A-5

Accidents by Licensed and Nonlicensed Drivers in the Chicago Initial Sample (N = 153)

Driver Status	Drivers		Drivers with Accidents		Total Accidents		Type of Accident				Accident Rate
							Property Damage Only		Personal Injury		
	N	%	N	%	N	%	N	%	N	%	
Licensed	125	81.7	29	82.9	37	84.1	22	50.0	15	34.1	.296
Not Licensed	28	18.3	6	17.1	7	15.9	6	13.6	1	2.3	.250
TOTAL	153	100.0	35	100.0	44	100.0	28	63.6	16	36.4	.288

Table A-6

Traffic Violation Convictions of Drivers in the Chicago Initial Sample by Licensed or Nonlicensed Drivers (N = 153)

Driver Status	Drivers with Convictions		DUI Convictions		Hazardous Traffic Convictions		Other Traffic Convictions	
	N	%	N	%	N	%	N	%
Licensed	109	82.6	24	70.6	456	92.5	96	79.3
Not Licensed	23	17.4	10	29.4	37	7.5	25	20.7
TOTAL	132	100.0	34	100.0	493	100.0	121	100.0

were included in the sample. Driving records were requested on 418 initial contacts for the sample. Of these, only 97, or 23.2 percent, were successful matches in the New York State Driver License File. A likely reason for such a low response is that these arrestees do not have need for a driver license since the City has good public transportation facilities. The New York Driver License filing system has the ability to display a probable series of names, addresses, and birth dates for any given name, thereby allowing an operator to select the correct record. It is one of the best systems for searching by name in the nation. Addresses and ages were also furnished for each name to aid in the selection process.

The age distribution of those persons with driving histories is presented in Table A-7. The number of persons with accidents or convictions recorded and the number with clean records in each category, as well as the respective percentage of the total response, are also shown.

The driver records that were matched to a name in the initial sample have been tabulated as licensed or not licensed in order to examine the accident and conviction types recorded. Table A-8 presents the accident analysis. "Property damage only" accidents are those which involve more than $200 in property damage and no bodily injury.

Table A-9 presents the traffic violation convictions reported on the driver record by whether the individual is licensed or nonlicensed. The driving-under-the-influence category also includes the convictions for refusal of chemical breath test under the implied consent law.

D. New Orleans, Louisiana

This study site included only the city of New Orleans. Initial contacts for the sample were arrestees on violations allegedly committed within the City jurisdiction.

Driving records were requested on 374 contacts. Of these, 192, or 51.8 percent, were successful matches in the Louisiana Driver License File. The age distribution of drivers with convictions or accidents and drivers with clean records is shown in Table A-10.

Table A-7

Driving Record by Age for the Brooklyn, New York Initial Sample (N = 97)

Driver Age	Record with Traffic Convictions or Accidents N	%	Clean Record N	%	Total Drivers N	%
<25	15	19.5	5	25.0	20	20.6
25-34	36	46.7	9	45.0	45	46.4
35-44	18	23.4	2	10.0	20	20.7
45-54	5	6.5	3	15.0	8	8.2
≥55	3	3.9	1	5.0	4	4.1
TOTAL	77	100.0	20	100.0	97	100.0

Table A-8

Accidents by Licensed and Nonlicensed Drivers in the New York Initial Sample (N = 97)

Driver Status	Drivers N	%	Drivers with Accidents N	%	Total Accidents N	%	Type of Accident: Property Damage Only N	%	Personal Injury N	%	Fatal Accidents N	%	Accident Rate
Licensed	74	76.3	35	97.2	70	98.6	26	36.6	43	60.6	1	1.4	.946
Not Licensed	23	23.7	1	2.8	1	1.4	0	0.0	0	0.0	1	1.4	.043
TOTAL	97	100.0	36	100.0	71	100.0	26	36.6	43	60.6	2	2.8	.732

Table A-9

Traffic Violation Convictions of Drivers in the New York Initial Sample by Licensed or Nonlicensed Drivers (N = 97)

Driver Status	Drivers with Convictions		DUI Convictions		Hazardous Traffic Convictions		Other Traffic Convictions	
	N	%	N	%	N	%	N	%
Licensed	52	74.3	5	55.6	106	99.1	13	72.2
Not Licensed	18	25.7	4	44.4	1	.9	5	27.8
TOTAL	70	100.0	9	100.0	107	100.0	18	100.0

Table A-10

Driving Record by Age for the New Orleans Initial Sample (N = 192)

Driver Age	Record with Traffic Convictions or Accidents		Clean Record		Total Drivers	
	N	%	N	%	N	%
<25	48	36.6	15	24.6	63	32.8
25-34	44	33.6	24	39.3	68	35.4
35-44	25	19.1	12	19.7	37	19.3
45-54	11	8.4	3	4.9	14	7.3
>55	3	2.3	7	11.5	10	5.2
TOTAL	131	100.0	61	100.0	192	100.0

Table A-11 presents the accident analysis by whether the driver is licensed or nonlicensed. "Property damage only" accidents are those that involve property damage of more than $200 and no bodily injury.

Table A-12 presents the traffic violation convictions reported on the driver record by whether the individual is licensed or not licensed. The driving-under-the-influence category includes the convictions for refusal of the chemical breath test under the implied consent law. The category of "other traffic violations" is large for this sample since the driving records had an exceptionally large number of "equipment violation" convictions.

E. San Antonio, Texas

This study site was Bexar County which includes the city of San Antonio. The sample was drawn from arrestees in the Bexar jurisdiction. Driving records were requested on 360 contacts. Of these, 190, or 53.3 percent were successful matches in the Texas Driver License File. The age distribution of those persons with driving histories is shown in Table A-13. The number of persons with accidents or convictions recorded and the number with clean records with the respective percentage of total drivers are shown for each category.

Table A-14 presents the accident analysis with all accidents involving more than $25 in property damage or bodily injury having been reported. This low dollar value requirement in reporting accidents accounts for the high accident rate. Reported accidents did not indicate type of accident.

Table A-15 presents the traffic violation convictions. The driving-under-the-influence category also includes convictions for refusal of the chemical breath test under the implied consent law.

F. Los Angeles, California

The Los Angeles study site included the entire city and county. The initial sample was drawn from arrestees from throughout the county by County Deputies and by the Los Angeles Police Department. Driving records

Table A-11

Accidents by Licensed and Nonlicensed Drivers in the New Orleans Initial Sample (N = 192)

Driver Status	Drivers		Drivers with Accidents		Total Accidents		Type of Accident						Accident Rate
							Property Damage Only		Personal Injury		Fatal Accidents		
	N	%	N	%	N	%	N	%	N	%	N	%	
Licensed	190	99.0	25	100.0	31	100.0	18	58.1	12	38.7	1	3.2	.163
Not Licensed	2	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	.000
TOTAL	192	100.0	25	100.0	31	100.0	18	58.1	12	38.7	1	3.2	.163

Table A-12

Traffic Violation Convictions of Drivers in the New Orleans Initial Sample by Licensed or Nonlicensed Drivers (N = 192)

Driver Status	Drivers with Convictions		DUI Convictions		Hazardous Traffic Convictions		Other Traffic Convictions	
	N	%	N	%	N	%	N	%
Licensed	125	98.4	9	60.0	242	99.2	235	97.9
Not Licensed	2	1.6	6	40.0	2	.8	5	2.1
TOTAL	127	100.0	15	100.0	244	100.0	240	100.0

Table A-13

Driving Record by Age for the San Antonio Initial Sample (N = 190)

Driver Age	Record with Traffic Convictions or Accidents		Clean Record		Total Drivers	
	N	%	N	%	N	%
<25	79	50.0	20	62.5	99	52.1
25-34	53	33.5	9	28.2	62	32.6
35-44	11	7.0	1	3.1	12	6.3
45-54	11	7.0	2	6.2	13	6.9
>55	4	2.5	0	0.0	4	2.1
TOTAL	158	100.0	32	100.0	190	100.0

Table A-14

Accidents by Licensed and Nonlicensed Drivers in the San Antonio Initial Sample (N = 190)

Driver Status	Drivers		Drivers with Accidents		Accidents		Accident Rate
	N	%	N	%	N	%	
Licensed	186	97.9	107	98.2	252	98.4	1.35
Not Licensed	4	2.1	2	1.8	4	1.6	1.00
TOTAL	190	100.0	109	100.0	256	100.0	1.35

Table A-15

Traffic Violation Convictions of Drivers in the San Antonio Initial Sample by Licensed and Unlicensed Drivers (N = 190)

Driver Status	Drivers with Convictions		DUI Convictions		Hazardous Traffic Convictions		Other Traffic Convictions	
	N	%	N	%	N	%	N	%
Licensed	145	97.3	19	86.4	384	99.0	108	97.3
Not Licensed	4	2.7	3	13.6	4	1.0	3	2.7
TOTAL	149	100.0	22	100.0	388	100.0	111	100.0

Table A-16

Driving Record by Age for the Los Angeles Initial Sample (N = 321)

Driver Age	Record with Traffic Convictions or Accidents		Clean Record		Total Drivers	
	N	%	N	%	N	%
<25	116	40.7	12	33.3	128	39.9
25-34	111	38.9	12	33.3	123	38.3
35-44	45	15.8	9	25.0	54	16.8
45-54	12	4.2	1	2.8	13	4.1
>55	1	.4	2	5.6	3	.9
TOTAL	285	100.0	36	100.0	321	100.0

were requested on 434 contacts. Of these 295, or 67 percent, were successful matches to a driver history.

The Los Angeles data from the California Bureau of Identification and Investigation included the driver license number on a portion of the initial sample. In an effort to obtain as many driver records as possible and to provide some insight into the response rate of the requests for driver histories in this study, 55 records which were not matched the first time were requested a second time. The name and driver license number were used for 25 requests and an individual's alias and birthdate were used for 30 requests.

Of those 25 requests by driver license number 19 were filled. The remaining six included at least one non-California license number. There is no way of knowing whether the other five are forged driver licenses or licenses that have simply expired and been purged from the file. Of the 30 requests made by an individual's alias and birth date, 12 were filled Five of these requests were for duplicates using the alias. This raises the total requests matched to a driver history to 321 or 74 percent.

The tables on the following pages present the driver history data for the drivers in the Los Angeles initial sample. Table A-16 presents the age distribution of those persons in the initial sample with driving histories. The driver records that were matched to a name on the initial sample have been tabulated for licensed and nonlicensed drivers to show accidents and traffic convictions recorded.

Table A-17 presents the accident analysis where accident rate is the number of accidents divided by the number of drivers. All accidents that involve $200 in property damage or bodily injury have been reported. The percentage of drivers that have been involved in accidents was 29 percent. The type of accident, i.e., property damage only, injury, or fatal, was not reported on the driver record. The accident rate for the Los Angeles site is much lower than the rate for the only other sample site with the $200 limit, New York - that is, .38 accidents per driver in the Los Angeles initial sample as compared to .73 accidents per driver in the New York initial sample.

Table A-17

Accidents by Licensed and Nonlicensed Drivers in the Los Angeles Initial Sample (N = 321)

Driver Status	Drivers		Drivers with Accidents		Accidents		Accident Rate
	N	%	N	%	N	%	
Licensed	300	93.5	88	94.6	115	95.0	.38
Not Licensed	21	6.5	5	5.4	6	5.0	.29
TOTAL	321	100.0	93	100.0	121	100.0	.38

Table A-18

Traffic Violation Convictions of Drivers in the Los Angeles Initial Sample by Licensed or Nonlicensed Drivers (N = 321)

Driver Status	Drivers with Convictions		DUI Convictions		Hazardous Traffic Convictions		Other Traffic Convictions	
	N	%	N	%	N	%	N	%
Licensed	263	93.6	81	100.0	763	97.1	659	92.4
Not Licensed	18	6.4	0	0.0	23	2.9	54	7.6
TOTAL	281	100.0	81	100.0	786	100.0	713	100.0

Table A-18 presents the traffic violation convictions reported on the driver record by whether the individual is licensed or not licensed. The driving-under-the-influence category also includes the convictions for refusal of the chemical breath test under the implied consent law.

The percent of drivers from the Los Angeles initial sample with a conviction is 87.5 percent. The average number of convictions per driver from the Los Angeles initial sample is 4.9.

APPENDIX B

DATA ANALYSIS OF DRIVER HISTORIES BY DRUG AND ALCOHOL USAGE

APPENDIX B

DATA ANALYSIS OF DRIVER HISTORIES BY DRUG AND ALCOHOL USAGE

A. Introduction

This Appendix presents the data of the entire study sample by site. With the exception of the Los Angeles data, these data observations have been reported previously in quarterly or interim project reports. The Los Angeles data were the last to be received, after the presentation of the last interim report.

For each site, the study sample was selected from the initial sample, the study sample consisting of only those persons for whom there are drug data available from a completed questionnaire and/or a urine sample analysis. For each site, the initial and study samples are divided into those with and without driving records. The study sample is further divided into respondents to the questionnaire only, individuals with data from both questionnaire and urinalysis, and those from whom only a urine sample was obtained.

Each driver history in each site was tabulated according to type and frequency of drug usage as admitted in the questionnaire. A respondent who indicated use of more than one drug was included in each drug category for which he indicated uses. For example, if he indicated that he was a hard user of Marijuana, a light user of Heroin, and a moderate user of Amphetamines, his record is included in each of those three categories.

The frequency of drug use is defined as follows:

1. Hard user - one who uses a drug daily or several times a day,
2. Moderate user - one who uses a drug weekly, monthly or several times monthly, and
3. Occasional user - one who uses a drug less than monthly or has tried it only once or twice.

For each site and for each appropriate subsample, hazardous conviction and accident rates were calculated by dividing the number of convictions or accidents by the respective number of drivers. The hazardous convictions included those for driving under the influence.

In the urinalysis, a positive test for one or more drugs indicated use of the drug(s) within a few hours of arrest.

Data from the questionnaires were further analyzed by type of alcoholic beverage used; therefore one person may be included as a drinker in each of the three beverage categories: beer, liquor and wine. A heavy beer drinker is defined as one who indicated that he consumed more than fourteen 12-ounce beers per week; a moderate beer drinker, if he consumed from 7 to 14 beers per week; and a light beer drinker, if he consumed less than 7 beers per week. A heavy wine or liquor drinker is defined as one who indicated that he consumed a fifth or more of wine or liquor per week; a moderate wine or liquor drinker, if he consumed more than a pint but not more than a fifth per week; and a light drinker if he consumed up to a pint per week.* The majority of drinker-drivers in the study sample drank beer as well as liquor or wine.

B. St. Louis, Missouri

The distribution of the St. Louis, Missouri study sample by type of data available and by driver status is shown in Table B-1. Driving records were requested on the 496 persons in the initial sample.

That portion of the study sample for which a questionnaire was completed, consisted of 320 persons of whom 50 percent were drivers. Table B-2 presents the driver history summary for the St. Louis sample who completed the questionnaire tabulated by type and frequency of drug use.

The average drug user in Table B-2 has a hazardous conviction rate of 2.1 per user-driver. The nonuser's rate is considerably higher at 3.4 per driver. The St. Louis study sample included only eleven accidents but the nonusers had 8 of them. The accident rate for the user versus the

* As analyzed by RTI in the BNDD study.

Table B-1

INITIAL AND STUDY SAMPLE, ST. LOUIS, MISSOURI

Driver Record Status	Initial Sample	Study Sample	Number That Completed Questionnaire	Number Urine Samples Tested	
				Also Completed Questionnaire	Urine Sample Only
Drivers	256	196	160	137	36
Arrestees with No Driver Record	240	189	160	143	29
TOTAL	496	385	320	280	65

Table B-2

DRIVER HISTORY SUMMARY FOR ST. LOUIS DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
MARIHUANA					
Hard User	13	0	44	7	0
Moderate User	31	1	49	7	2
Occasional User	19	2	43	7	0
Subtotal	63	3	136	21	2
HASHISH					
Hard User	1	0	11	2	0
Moderate User	4	0	11	0	0
Occasional User	15	0	34	2	0
Subtotal	20	0	56	4	0
COCAINE					
Hard User	3	0	0	4	0
Moderate User	5	0	21	0	0
Occasional User	9	0	36	3	1
Subtotal	17	0	57	7	1
HEROIN					
Hard User	14	0	48	7	1
Moderate User	4	0	1	1	0
Occasional User	3	0	13	0	0
Other	1	0	2	1	0
Subtotal	22	0	64	9	1
MORPHINE & OPIUM					
Hard User	2	0	1	1	0
Moderate User	1	0	4	0	0
Occasional User	3	0	10	1	0
Subtotal	6	0	15	2	0
PSYCHEDELICS					
Hard User	0	0	0	0	0
Moderate User	3	0	10	0	0
Occasional User	8	0	23	0	0
Subtotal	11	0	33	0	0

Table B-2 (Continued)

DRIVER HISTORY SUMMARY FOR ST. LOUIS DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
AMPHETAMINES					
Hard User	9	0	22	2	0
Moderate User	10	0	37	3	1
Occasional User	4	1	2	5	1
Subtotal	23	1	61	10	2
BARBITURATES					
Hard User	2	0	12	0	0
Moderate User	7	0	19	3	0
Occasional User	3	0	6	1	0
Subtotal	12	0	37	4	0
METHADONE					
Hard User	0	0	0	0	0
Moderate User	0	0	0	0	0
Occasional User	1	0	2	0	0
Subtotal	1	0	2	0	0
TRANQUILIZERS					
Hard User	2	0	6	0	0
Moderate User	3	0	7	1	0
Occasional User	0	0	0	0	0
Subtotal	5	0	13	1	0
SPECIAL SUBSTANCES					
Hard User	1	0	5	0	0
Moderate User	7	0	3	1	1
Occasional User	3	0	3	2	0
Subtotal	11	0	11	3	0
DARVON					
Hard User	3	0	3	2	0
Moderate User	3	0	14	0	1
Occasional User	8	0	11	1	0
Other	1	0	1	0	0
Subtotal	15	0	29	3	1

Table B-2 (Continued)

DRIVER HISTORY SUMMARY FOR ST. LOUIS DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
CODEINE					
Hard User	5	0	9	0	0
Moderate User	3	0	10	0	0
Occasional User	1	0	4	0	0
Subtotal	9	0	23	0	0
TOTAL USERS	76	4	156	33	3
NONUSERS	84	8	284	23	8
SAMPLE TOTAL	160	12	440	56	11

nonuser is .04 to .09 accidents per driver, respectively. The initial sample accident rate was between these rates,.06 accidents per driver.

Table B-3 presents the driver history summary of the sample for which a urinalysis was completed; the total number tested in 345, of whom 65 did not complete a questionnaire. For the St. Louis sample 99 or 28.7 percent of the urine samples were positive for drugs.

The summary of driver histories by type of alcoholic beverage used is shown in Table B-4. Of the 160 drivers in the sample presented in Table 8 131 drank. The hazardous conviction rate for the beer drinker is 335 convictions per 126 drivers, or 2.7. Wine and liquor drinkers have approximately the same rate. The abstainers' hazardous conviction rate is slightly higher with 82 convictions by 29 drivers for a rate of 2.8 convictions per driver. The drinker-driver does, however, account for all of the accidents in this sample.

C. Chicago, Illinois

The distribution of the Chicago study sample by type of data available and driver record status is shown in Table B-5. Driving records were requested on 385 persons in the initial sample. That portion of the study sample for which a questionnaire was completed in Chicago was 333 persons of whom almost 40 percent were drivers. Table B-6 presents the driver history summary for the Chicago sample tabulated by type and frequency of drug use.

The average drug user in Table B-6 has a hazardous conviction rate of 3.0 per user-driver. The nonuser's rate is almost the same at 3.1 convictions per driver. The Chicago sample included 32 accidents with users accounting for 63 percent of them. The accident rate for the user versus the nonuser is .29 to .23 accidents per driver, respectively. The accident rate for the total initial sample from Chicago was .29 accidents per driver.

Table B-7 presents the driver history summary of the sample for which urinalysis was completed. The total number tested was 362, of

Table B-3

ST. LOUIS DRIVER HISTORY SUMMARY BY URINE ANALYSIS

Test Results	Number Tested	Number Accidents	Number DUI	Hazardous Violations	Clean Record	No Record
Negative to All Drugs	233	7	12	341	26	114
Unable to Determine	13	See below				
Positive to at Least One Drug	99					
Total	345					
Cocaine	5	1	1	1	0	4
Morphine & Quinine	50		0	82	1	25
Amphetamines	18		0	33	2	8
Barbiturates	43		1	43	3	23
Methadone	1		0	6	0	0

Table B-4

DRIVER HISTORY SUMMARY OF THE ST. LOUIS STUDY SAMPLE BY ALCOHOL USAGE DETERMINED BY THE QUESTIONNAIRE

Usage	Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
BEER							
Heavy	20	13	73	1	2	2	37
Moderate	23	13	41	1	3	5	24
Light	83	59	221	5	6	14	72
Total Beer	126	85	335	7	11	21	133
WINE							
Heavy	9	7	22	0	0	0	19
Moderate	7	6	25	1	2	0	5
Light	20	14	50	0	0	4	15
Total Wine	36	27	97	1	2	4	39
LIQUOR							
Heavy	16	7	45	1	1	3	10
Moderate	9	7	19	0	0	0	4
Light	52	39	169	4	8	8	48
Total Liquor	76	53	233	5	9	11	62
USER	131	89	358	7	11	22	139
ABSTAINER	29	19	82	0	0	8	21
TOTAL	160	108	440	7	11	30	160

Table B-5

INITIAL AND STUDY SAMPLE, CHICAGO, ILLINOIS

Driver Record Status	Initial Sample	Study Sample	Number that Completed Questionnaire	Number Urine Samples Tested	
				Also Completed Questionnaire	Urine Sample Only
Drivers	153	138	120	113	18
Arrestees with No Driver Record	232	246	213	198	33
TOTAL	385	384	333	311	51

Table B-6

DRIVER HISTORY SUMMARY FOR CHICAGO DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
MARIHUANA					
Hard User	23	3	68	17	7
Moderate User	25	6	73	35	9
Occasional User	14	7	51	15	4
Subtotal	62	16	192	67	20
HASHISH					
Hard User	3	1	10	2	3
Moderate User	7	3	13	3	2
Occasional User	7	0	38	7	2
Subtotal	17	4	61	12	7
COCAINE					
Hard User	9	1	20	7	5
Moderate User	5	1	22	16	0
Occasional User	11	2	38	7	1
Subtotal	25	4	80	30	6
HEROIN					
Hard User	22	4	65	27	8
Moderate User	2	0	3	1	0
Occasional User	9	4	34	6	3
Subtotal	33	8	102	34	11
MORPHINE & OPIUM					
Hard User	6	1	10	5	3
Moderate User	1	0	12	1	0
Occasional User	5	2	12	1	0
Subtotal	12	3	34	7	3
PSYCHEDELICS					
Hard User	2	2	18	1	0
Moderate User	6	1	26	10	5
Occasional User	6	0	17	22	3
Subtotal	14	3	61	33	8

Table B-6 (Continued)

DRIVER HISTORY SUMMARY FOR CHICAGO DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
AMPHETAMINES					
Hard User	6	1	26	5	4
Moderate User	5	0	22	7	0
Occasional User	6	4	32	5	4
Subtotal	17	5	80	17	8
BARBITURATES					
Hard User	6	4	31	2	3
Moderate User	5	0	15	8	0
Occasional User	5	0	14	2	1
Subtotal	16	4	60	12	4
METHADONE					
Hard User	1	1	7	1	3
Moderate User	0	0	0	0	0
Occasional User	2	2	6	1	0
Subtotal	3	3	13	2	3
TRANQUILIZERS					
Hard User	2	0	14	1	1
Moderate User	2	0	12	6	0
Occasional User	2	2	6	0	0
Subtotal	6	2	32	7	1
SPECIAL SUBSTANCES					
Hard User	1	1	7	1	3
Moderate User	3	2	6	0	0
Occasional User	1	0	0	0	0
Subtotal	5	3	13	1	3
TOTAL USERS	68	18	205	72	20
NONUSERS	52	13	171	29	12
SAMPLE TOTAL	120	31	376	101	32

Table B-7

CHICAGO DRIVER HISTORY SUMMARY BY URINE ANALYSIS

Test Results	Number Tested	Number Accidents	Number DUI	Hazardous Violations	Clean Record	No Record
Negative to All Drugs	269	30	22	340	11	168
Unable to Determine	10	See below				
Positive to at Least One Drug	83					
Total	362					
Morphine & Quinine	32	1	2	34	2	22
Methadone	2	0	0	0	1	1
Barbiturates	50	4	2	42	3	34
Amphetamines	12	3	2	16	0	9
Codeine	1	0	0	0	0	1

whom 51 did not complete a questionnaire. In The Chicago sample, 83 of the 362 persons, or 22.9 percent, had urinalysis positive for one or more drugs. There were 131 drivers in the sample.

The summary of driver histories by type of alcoholic beverage used is shown in Table B-8. Of the 120 drivers in the sample, 94 drank. The hazardous traffic conviction rate for the drinker-driver is 289 convictions for 94 drivers or almost 3.4 convictions per driver. The abstainer was not significantly different at 3.3 convictions per driver. The accident rate for the drinker versus the abstainer is .25 to .08 accidents per driver, respectively. The drinker-driver accounts for all but 2 of 25 accidents involving the Chicago sample.

D. New York

The distribution of the New York City study sample by type of data available and driver record status is shown in Table B-9. Driving records were requested on 418 persons in the initial sample.

That portion of the study sample for which a questionnaire was completed consisted of 306 persons of whom 23 percent were drivers. Table B-10 presents the driver history summary for the New York sample who completed the questionnaire tabulated by type and frequency of drug use.

The average drug user-driver in Table B-10 has a hazardous conviction rate of .84 accident per user-driver. The nonuser's rate is higher at 1.5 accidents per driver. The New York study sample included 56 accidents of which nonusers accounted for 75 percent. The accident rate for users versus nonusers is .38 to 1.31 accidents per driver, respectively. The initial sample accident rate was between these rates. 73 accidents per driver.

Table B-11 presents the driver history summary of the sample for which urinalysis was completed; the total number tested is 375, of whom 84 did not

Table B-8

DRIVER HISTORY SUMMARY OF THE CHICAGO STUDY SAMPLE BY ALCOHOL USAGE DETERMINED BY THE QUESTIONNAIRE

Alcohol/ Usage	Total No. of Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
BEER							
Heavy	19	17	59	5	7	2	20
Moderate	14	13	50	5	5	1	20
Light	51	35	139	9	11	15	108
Total Beer	84	65	248	19	23	18	148
WINE							
Heavy	17	12	49	2	2	5	33
Moderate	4	2	3	0	0	2	6
Light	20	13	60	3	3	7	36
Total Wine	41	27	103	5	5	14	75
LIQUOR							
Heavy	5	5	26	2	3	0	14
Moderate	6	4	10	1	1	2	16
Light	43	34	122	5	7	9	64
Total Liquor	54	43	158	8	11	11	94
USER	94	73	289	19	23	20	167
ABSTAINER	26	23	87	2	2	3	46
TOTAL	120	96	376	21	25	23	213

Table B-9

INITIAL AND STUDY SAMPLE, NEW YORK CITY

Driver Record Status	Initial Sample	Study Sample	Number that Completed Questionnaire	Number Urine Samples Tested	
				Also Completed Questionnaire	Urine Sample Only
Drivers	97	91	69	64	22
Arrestees with No Driver Record	321	299	237	227	62
TOTAL	418	390	306	291	84

Table B-10

DRIVER HISTORY SUMMARY FOR NEW YORK CITY DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE
N = 306

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
MARIHUANA					
Hard User	9	0	11	2	2
Moderate User	15	3	9	3	5
Occasional User	7	1	0	2	3
Subtotal	31	4	20	7	10
HASHISH					
Hard User	5	0	5	1	2
Moderate User	11	0	12	2	5
Occasional User	6	3	0	1	0
Subtotal	22	3	17	4	7
COCAINE					
Hard User	8	1	4	1	4
Moderate User	8	0	4	3	2
Occasional User	7	2	5	2	2
Subtotal	23	3	13	6	8
HEROIN					
Hard User	23	2	19	6	7
Moderate User	3	1	2	0	1
Occasional User	2	0	2	1	1
Subtotal	28	3	23	7	9
MORPHINE & OPIUM					
Hard User	2	0	0	1	1
Moderate User	2	0	0	0	0
Occasional User	4	0	8	0	3
Subtotal	8	0	8	1	4
PSYCHEDELICS					
Hard User	0	0	0	0	0
Moderate User	1	0	5	0	0
Occasional User	7	0	12	2	5
Subtotal	0	0	17	2	5

Table B-10 (Continued)

DRIVER HISTORY SUMMARY FOR NEW YORK CITY DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE
N = 306

Drug and Frequency of Use	No. of Drivers	Convictions	Hazardous Traffic	Other Traffic	Accidents
AMPHETAMINES					
Hard User	2	0	1	1	0
Moderate User	4	0	9	1	4
Occasional User	5	0	5	1	3
Subtotal	11	0	15	3	7
BARBITURATES					
Hard User	8	1	3	3	3
Moderate User	4	1	8	1	2
Occasional User	2	0	2	0	1
Subtotal	14	2	13	4	6
METHADONE					
Hard User	4	0	3	1	1
Moderate User	4	0	8	0	0
Occasional User	3	0	2	3	1
Subtotal	11	0	13	4	2
TRANQUILIZERS					
Hard User	4	0	2	2	1
Moderate User	0	0	0	0	0
Occasional User	0	0	0	0	0
Subtotal	4	0	2	2	1
SPECIAL SUBSTANCES					
Hard User	2	0	2	2	1
Moderate User	1	0	1	0	1
Occasional User	3	1	5	1	1
Subtotal	6	1	8	3	3
DARVON					
Hard User	4	1	5	2	3
Moderate User	0	0	0	0	0
Occasional User	1	0	1	0	2
Subtotal	5	1	6	2	5

Table B-10 (Continued)

DRIVER HISTORY SUMMARY FOR NEW YORK CITY DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE
N = 306

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
CODEINE					
Hard User	1	0	0	0	0
Moderate User	0	0	0	0	0
Occasional User	2	0	3	1	3
Subtotal	3	0	3	1	3
TOTAL USERS	37	5	26	8	14
NONUSERS	32	2	47	4	42
SAMPLE TOTAL	69	7	73	12	56

Table B-11

NEW YORK CITY DRIVER HISTORY SUMMARY BY URINE ANALYSIS

Test Results	Number Tested	Number Accidents	Number DUI	Hazardous Violations	Clean Record	No Record
Negative to all Drugs	163	44	8	45	6	116
Unable to Determine or Sample Missing	9	See Below				
Positive to at Least One Drug	203					
	375					
Cocaine	0	0	0	0	0	0
Morphine & Quinine	184	17	1	45	11	148
Amphetamines	1	1	0	0	0	0
Barbiturates	47	1	0	9	2	39
Codeine	4	0	0	0	0	2
Methadone	44	5	0	10	3	29

complete a questionnaire. For the New York sample 203 or 55 percent of those tested had urine positive for drugs. The number of drivers in the sample tested was 86.

The summary of driver histories by type of alcoholic beverage used is shown in Table B-12. Of the 69 drivers in the sample presented in Table B-12, 57, or 82.6 percent, drank. The hazardous conviction rate for the beer drinker is 57 convictions for 47 drivers, or 1.2 convictions per driver. Wine and liquor drinkers have approximately the same rate, 1.4 and 1.0 convictions per driver, respectively. The abstainers' hazardous conviction rate is slightly higher with 20 convictions for 12 drivers, or a rate of 1.7 convictions per drivers. With respect to accident rates, the drinker-driver has a rate of .76 accidents per driver compared to the abstainer-driver's rate of 1.1 accidents per driver.

E. New Orleans, Louisiana

The distribution of the New Orleans study sample by type of data available and driver record status is shown in Table B-13. Driving records were requested on 374 persons in the initial sample.

That portion of the study sample for whom a questionnaire was completed consisted of 299 persons of whom 46.5 percent were drivers. Table B-14 presents the driver history summary for the New Orleans sample who completed the questionnaire tabulated by type and frequency of drug use.

The average drug user in Table B-14 has a hazardous conviction rate of 1.3 convictions per user-driver. The nonuser's rate is about the same at 1.4 conviction per driver. The New Orleans study sample included only 26 accidents of which nonusers accounted to 58 percent. The accident rate for users versus nonusers is .17 to .19 accidents per driver, respectively. The total initial sample accident rate was almost the same at .16 accidents per driver.

Table B-15 presents the driver history summary of the sample for which urinalysis was completed. The total number tested is 329; of these 43 did

Table B-12

DRIVER HISTORY SUMMARY OF THE NEW YORK CITY STUDY SAMPLE BY ALCOHOL USAGE DETERMINED BY THE QUESTIONNAIRE

Usage	Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
BEER							
Heavy	10	3	10	4	11	4	34
Moderate	4	1	2	1	1	1	25
Light	33	15	45	10	22	10	111
Total Beer	47	19	57	15	34	15	170
WINE							
Heavy	10	2	6	3	5	4	67
Moderate	3	2	5	1	4	0	5
Light	15	5	27	7	17	4	44
Total Wine	28	9	38	11	36	8	116
LIQUOR							
Heavy	6	0	0	0	0	5	35
Moderate	3	0	1	1	1	1	10
Light	28	9	35	9	21	10	88
Total Liquor	37	9	36	10	22	16	133
USER	57	20	60	19	43	19	198
ABSTAINER	12	4	20	7	13	5	39
TOTAL	69	24	80	26	56	24	237

Table B-13

INITIAL AND STUDY SAMPLE, NEW ORLEANS, LOUISIANA

Driver Record Status	Initial Sample	Study Sample	Number that Completed Questionnaire	Number Urine Samples Tested	
				Also Completed Questionnaire	Urine Sample Only
Drivers	192	172	139	131	33
Arrestees with No Driver Record	182	170	160	155	10
TOTAL	374	342	299	286	43

Table B-14

DRIVER HISTORY SUMMARY FOR NEW ORLEANS DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
MARIHUANA					
Hard User	11	0	7	6	0
Moderate User	27	0	44	31	4
Occasional User	8	0	10	15	5
Subtotal	46	0	61	52	9
HASHISH					
Hard User	4	0	3	2	1
Moderate User	8	0	11	8	1
Occasional User	14	0	25	22	1
Subtotal	26	0	39	32	3
COCAINE					
Hard User	3	0	12	7	0
Moderate User	4	0	4	3	0
Occasional User	6	0	12	9	1
Subtotal	13	0	28	19	1
HEROIN					
Hard User	30	0	44	36	0
Moderate User	5	0	7	8	1
Occasional User	3	0	7	1	1
Other	2	1	0	0	1
Subtotal	40	1	58	45	3
MORPHINE & OPIUM					
Hard User	3	0	5	4	0
Moderate User	2	0	3	1	0
Occasional User	6	0	7	7	1
Subtotal	11	0	15	12	1
PSYCHEDELICS					
Hard User	1	0	1	1	0
Moderate User	3	0	2	1	0
Occasional User	5	0	10	1	0
Subtotal	9	0	13	3	0

Table B-14 (Continued)

DRIVER HISTORY SUMMARY FOR NEW ORLEANS DRIVER
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
AMPHETAMINES					
Hard User	3	0	6	3	0
Moderate User	4	0	4	2	1
Occasional User	3	0	0	0	1
Subtotal	10	0	10	5	1
BARBITURATES					
Hard User	5	0	7	8	0
Moderate User	11	0	29	16	1
Occasional User	3	0	2	3	1
Subtotal	19	0	38	27	2
METHADONE					
Hard User	0	0	0	0	0
Moderate User	1	0	0	0	0
Occasional User	3	0	2	5	0
Subtotal	4	0	2	5	0
TRANQUILIZERS					
Hard User	1	0	1	1	0
Moderate User	0	0	0	0	0
Occasional User	0	0	0	0	0
Subtotal	1	0	1	1	0
SPECIAL SUBSTANCES					
Hard User	2	0	2	1	0
Moderate User	0	0	0	0	0
Occasional User	3	0	4	3	0
Subtotal	5	0	6	4	1
TOTAL USERS	63	1	82	69	11
NONUSERS	76	12	104	125	15
SAMPLE TOTAL	139	13	186	194	26

Table B-15

NEW ORLEANS DRIVER HISTORY SUMMARY BY URINE ANALYSIS

Test Results	Number Tested	Accidents	Number DUI	Hazardous Violations	Clean Record	No Record
Negative to All Drugs	227	24	12	145	32	117
Unable to Determine	18					
Positive to at Least One Drug	84	See Below				
Total	329					
Codeine	2	0	0	0	1	0
Morphine & Quinine	45	2	0	18	6	25
Amphetamines	12	2	0	20	1	4
Barbiturates	27	0	2	19	3	17
Methadone	8	0	0	5	0	3

did not complete a questionnaire. For the New Orleans sample 84 or 25.5 percent had urinalysis positive for drugs. Of these tested, 164 or 50 percent were drivers.

The summary of driver histories by type of alcoholic beverage used is shown in Table B-16. Of the 139 drivers in the sample, 112, or 80.4 percent, drank. The hazardous conviction rate of the beer drinker is 134 convictions for 100 drivers or 1.3 convictions per driver.

F. San Antonio, Texas

Table B-17 shows distribution of the San Antonio study sample by type of data available and driver record status. Driving records were requested on 360 persons in the initial sample drawn from arrestees from throughout Bexar county which contains the city of San Antonio.

That portion of the study sample for which a questionnaire was completed consisted of 296 persons of whom 48.3 percent were drivers. Table B-18 presents the driver history summary for the San Antonio sample who completed the questionnaire tabulated by type and frequency of drug used.

The average drug user in Table B-18 has a hazardous conviction rate of 1.9 convictions per user-driver. The nonuser's rate is about the same at 2.4 convictions per driver. The San Antonio study sample included 172 accidents of which drug users accounted for 58 percent. The accident rate for users versus nonusers is 1.09 to 1.40 accidents per driver, respectively. The initial total sample accident rate was 1.40 accidents per driver.

Table B-19 presents the driver history summary of the sample for which urinalysis was completed. The total number tested is 340; of these, 59 did not complete a questionnaire. For the San Antonio sample, 54 of 15.9 percent of the urinalysis were positive for drugs. Of those tested, 177 or 52 percent were drivers.

The summary of driver histories by type of alcoholic beverage used is shown in Table B-20. Of the 143 drivers in the sample, 120, or 83.9 percent, drank. The hazardous conviction rate of the beer drinker is 212 convictions for 105 drivers or 2.0 convictions per driver. Wine and liquor

Table B-16

DRIVER HISTORY SUMMARY OF THE NEW ORLEANS STUDY SAMPLE
BY ALCOHOL USAGE DETERMINED BY THE QUESTIONNAIRE

Usage	Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
BEER							
Heavy	24	12	33	3	3	8	19
Moderate	21	11	21	2	3	7	25
Light	55	35	80	12	14	13	65
Total Beer	100	58	134	17	20	28	109
WINE							
Heavy	6	4	9	0	0	0	21
Moderate	8	3	7	1	1	3	9
Light	18	7	19	4	4	9	17
Total Wine	32	14	35	5	5	12	47
LIQUOR							
Heavy	10	5	12	3	3	2	8
Moderate	12	10	31	2	2	1	6
Light	43	21	56	6	9	12	38
Total Liquor	65	36	99	11	14	15	52
USER	112	65	157	19	22	30	124
ABSTAINER	27	13	42	3	4	9	36
TOTAL	139	78	199	22	26	39	160

Table B-17

INITIAL AND STUDY SAMPLE, SAN ANTONIO, TEXAS

Driver Record Status	Initial Sample	Study Sample	Number that Completed Questionnaire	Number Urine Samples Tested	
				Also Completed Questionnaire	Urine Sample Only
Drivers	190	186	143	134	43
Arrestees with No Driver Record	170	169	153	147	16
TOTAL	360	355	296	281	59

Table B-18

DRIVER HISTORY SUMMARY FOR SAN ANTONIO DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
MARIHUANA					
Hard User	30	0	51	19	37
Moderate User	34	3	69	22	29
Occasional User	18	1	37	18	24
Subtotal	82	4	157	59	90
HASHISH					
Hard User	2	0	6	11	0
Moderate User	10	0	21	8	11
Occasional User	17	0	33	3	25
Subtotal	29	0	60	22	36
COCAINE					
Hard User	0	0	0	0	0
Moderate User	5	0	11	16	3
Occasional User	10	2	19	4	18
Subtotal	15	2	30	20	21
HEROIN					
Hard User	35	3	46	32	28
Moderate User	7	0	21	2	7
Occasional User	6	0	8	1	8
Subtotal	48	3	75	35	43
MORPHINE & OPIUM					
Hard User	1	0	0	0	0
Moderate User	4	0	16	12	1
Occasional User	11	0	12	9	13
Subtotal	16	0	28	21	14
PSYCHEDELICS					
Hard User	2	0	1	2	2
Moderate User	18	0	30	6	22
Occasional User	15	0	34	18	19
Subtotal	35	0	65	26	43

Table B-18 (Continued)

DRIVER HISTORY SUMMARY FOR SAN ANTONIO DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
AMPHETAMINES					
Hard User	7	0	16	5	8
Moderate User	11	0	20	13	13
Occasional User	13	0	28	18	16
Subtotal	31	0	64	36	37
BARBITURATES					
Hard User	8	2	4	7	11
Moderate User	11	0	30	18	10
Occasional User	4	0	8	0	5
Subtotal	23	2	42	25	26
METHADONE					
Hard User	1	0	3	3	0
Moderate User	2	0	0	0	0
Occasional User	0	0	0	0	0
Subtotal	3	0	3	3	0
TRANQUILIZERS					
Hard User	2	0	0	2	0
Moderate User	4	0	12	3	4
Occasional User	2	0	2	3	2
Subtotal	8	0	14	8	6
SPECIAL SUBSTANCES					
Hard User	2	0	0	2	0
Moderate User	6	0	5	4	4
Occasional User	6	0	9	5	3
Subtotal	14	0	14	11	7
TOTAL USERS	91	4	169	61	99
NONUSERS	52	6	119	35	73
SAMPLE TOTAL	143	10	288	96	172

Table B-19

SAN ANTONIO DRIVER HISTORY SUMMARY BY URINE ANALYSIS

Test Results	Number Tested	Accidents	Number DUI	Hazardous Violations	Clean Record	No Record
Negative to All Drugs	260	179	15	260	22	129
Unable to Determine	26	See Below				
Positive to at Least One Drug	54					
Total	340					
Codeine	1	1	0	2	0	0
Morphine & Quinine	32	16	3	31	4	12
Amphetamines	13	8	0	16	2	6
Barbiturates	6	2	0	10	0	5
Methadone	4	0	0	1	0	3

Table B-20

DRIVER HISTORY SUMMARY OF THE SAN ANTONIO STUDY SAMPLE
BY ALCOHOL USAGE DETERMINED BY THE QUESTIONNAIRE

Usage	Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
BEER							
Heavy	35	25	97	22	51	2	41
Moderate	19	11	34	9	21	6	24
Light	51	34	81	25	52	12	45
Total Beer	105	70	212	56	124	20	110
WINE							
Heavy	6	3	11	1	1	1	12
Moderate	7	5	26	3	6	1	3
Light	22	16	38	11	26	6	17
Total Wine	35	24	75	15	33	8	32
LIQUOR							
Heavy	4	3	7	2	3	0	5
Moderate	5	4	11	4	10	1	7
Light	44	30	125	22	58	5	38
Total Liquor	53	37	143	28	71	6	50
USER	120	81	260	65	150	21	118
ABSTAINER	23	15	38	12	22	6	35
TOTAL	143	96	298	77	172	27	153

drinker-drivers' rates are 2.1 and 2.7 convictions per driver, respectively. The abstainers' rate is 1.7 hazardous convictions per abstaining driver. With respect to accident rate, the drinker-driver has a rate of 1.25 accidents per driver compared to the abstainer's rate of .96 accidents per driver.

G. Los Angeles, California

Table B-21 shows the distribution of Los Angeles, California study sample by type of data available and by driver record status. Driving records were requested on 434 persons in the initial sample. A second request was made on 55 of these persons by their driver license number or alias. The first request yielded 295 drivers; the second request added 26 for a total of 321 drivers. The initial sample was drawn by selecting a random sample from the arrestees in Los Angeles County, California. That portion of the study sample for which a questionnaire was completed consisted of 335 persons of whom 69.9 percent were drivers. Table B-22 presents the driver history summary for the Los Angeles sample who completed the questionnaire tabulated by type and indicated frequency of drug use.

The average drug user shown in Table B-22 has a hazardous conviction rate of 2.8 convictions per user-driver. The nonuser's rate is almost the same at 3.0 convictions per driver. The Los Angeles sample included 93 accidents of which drug users accounted for 76.3 percent. However, the accident rate for users versus nonusers is .39 to .41 accidents per driver, respectively. The total inital sample rate was almost the same at .39 accidents per driver.

Table B-23 presents the driver history summary of the sample for which urinalysis was completed. The total number tested was 325; of these 79 did not complete a questionnaire. For the Los Angeles sample 102, or 31.4 percent of the urines tested were positive for drugs indicating drug usage within a few hours of arrest. Of these tested, 246 or 75.7 percent were drivers.

Table B-21

INITIAL AND STUDY SAMPLE, LOS ANGELES, CALIFORNIA

Driver Record Status	Initial Sample	Study Sample	Number that Completed Questionnaire	Number Urine Samples Tested	
				Also Completed Questionnaire	Urine Sample Only
Drivers	321	301	234	179	67
Arrestees with No Driver Record	113	113	101	67	12
TOTAL	434	414	335	246	79

Table B-22

DRIVER HISTORY SUMMARY FOR LOS ANGELES DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE
N = 335

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
MARIHUANA					
Hard User	56	14	181	144	29
Moderate User	77	14	194	194	27
Occasional User	32	4	58	62	10
Subtotal	165	32	433	400	66
HASHISH					
Hard User	12	1	46	39	3
Moderate User	33	2	103	71	18
Occasional User	34	11	89	102	15
Subtotal	79	14	238	212	36
COCAINE					
Hard User	8	1	10	24	2
Moderate User	15	1	52	36	4
Occasional User	26	7	67	71	16
Subtotal	49	9	129	131	22
HEROIN					
Hard User	31	11	61	102	10
Moderate User	19	4	44	44	8
Occasional User	17	3	50	53	11
Subtotal	67	18	155	199	29
MORPHINE & OPIUM					
Hard User	5	1	6	25	0
Moderate User	4	0	6	3	3
Occasional User	16	6	55	37	10
Subtotal	25	7	67	65	13

Table B-22 (Continued)

DRIVER HISTORY SUMMARY FOR LOS ANGELES DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE
N = 335

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
PSYCHEDELICS					
Hard User	9	1	20	30	5
Moderate User	27	2	95	96	16
Occasional User	24	8	49	75	9
Subtotal	60	11	164	201	30
AMPHETAMINES					
Hard User	37	12	105	121	18
Moderate User	42	5	96	99	14
Occasional User	29	5	65	68	14
Subtotal	108	22	266	288	46
BARBITURATES					
Hard User	26	6	37	66	12
Moderate User	45	12	112	118	19
Occasional User	18	0	44	70	3
Subtotal	89	18	193	254	34
METHADONE					
Hard User	3	0	7	4	0
Moderate User	3	0	1	3	0
Occasional User	3	1	3	1	0
Subtotal	9	1	11	8	0
TRANQUILIZERS					
Hard User	1	0	1	2	0
Moderate User	9	5	17	12	4
Occasional User	5	0	15	16	6
Subtotal	15	5	33	30	10

Table B-22 (Continued)

DRIVER HISTORY SUMMARY FOR LOS ANGELES DRIVERS
BY DRUG TYPE AND FREQUENCY OF USE AS OBTAINED BY QUESTIONNAIRE
N = 335

Drug and Frequency of Use	No. of Drivers	DUI Convictions	Hazardous Traffic	Other Traffic	Accidents
SPECIAL SUBSTANCES					
Hard User	10	1	17	44	5
Moderate User	10	1	28	12	4
Occasional User	14	2	21	23	8
Subtotal	34	4	66	79	17
DARVON					
Hard User	4	1	4	19	0
Moderate User	1	0	2	9	0
Occasional User	6	0	20	24	7
Subtotal	11	1	26	52	7
CODEINE					
Hard User	3	3	4	1	3
Moderate User	2	1	2	10	0
Occasional User	7	2	29	30	9
Subtotal	12	6	35	41	12
TOTAL USERS	181	35	472	461	71
NONUSERS	53	23	136	128	22
SAMPLE TOTAL	234	58	608	589	93

Table B-23

LOS ANGELES DRIVER HISTORY SUMMARY BY URINE ANALYSIS
N = 325

Test Results	Number Tested	Accidents	Number DUI	Hazardous Violations	Clean Record	No Record
Negative to All Drugs	210	54	32	375	14	62
Unable to Determine	13	See Below				
Positive to at Least One Drug	102					
Total	325					
Codeine	2	2	2	0	0	1
Morphine & Quinine	47	9	9	76	6	10
Amphetamines	12	4	2	17	2	4
Barbiturates	66	20	13	120	8	16
Methadone	2	2	0	23	0	0

The summary of driver histories by type of alcoholic beverage used is shown in Table B-24. Of the 234 drivers in the sample, 206, or 88 percent, drank. The hazardous conviction rate of the beer drinker is 513 convictions for 188 drivers or 2.7 convictions per driver. Wine and liquor drinker-drivers' rates are 3.0 and 2.6 convictions per driver, respectively. The abstainers' rate is 3.3 hazardous convictions per abstainer-driver. With respect to accident rate, the drinker-driver has a rate of .37 accident per driver compared to the abstainers' rate of .57 accidents per driver.

Table B-24

DRIVER HISTORY SUMMARY OF THE LOS ANGELES STUDY SAMPLE
BY ALCOHOL USAGE DETERMINED BY THE QUESTIONNAIRE

N = 335

Usage	Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
BEER							
Heavy	37	29	102	10	12	5	14
Moderate	34	24	88	11	13	5	23
Light	117	87	323	35	47	19	42
Total Beer	188	140	513	56	72	29	79
WINE							
Heavy	41	36	143	15	20	5	25
Moderate	10	6	25	2	3	2	6
Light	40	31	105	14	20	5	20
Total Wine	91	73	273	31	43	12	51
LIQUOR							
Heavy	21	14	53	6	7	4	5
Moderate	12	10	48	3	4	2	6
Light	78	51	188	22	28	18	42
Total Liquor	111	75	289	31	39	24	53
USER	206	154	572	60	77	32	88
ABSTAINER	28	22	94	11	16	4	13
TOTAL	234	176	666	71	93	36	101

APPENDIX C

ANALYSIS OF CRIMINAL CHARGES AND THEIR RELATIONSHIP TO DRIVER HISTORY AND DRUG USAGE

APPENDIX C

ANALYSIS OF CRIMINAL CHARGES AND THEIR RELATIONSHIP TO DRIVER HISTORY AND DRUG USAGE

A. Introduction

The analysis of crime data by driver history and alcohol and drug usage includes only that portion of the study sample for which a questionnaire was completed. The following is a description of the codes used in this analysis to indicate type of crime.

1. Crime of violence, i.e., criminal homocide, rape, aggravated assault, robbery, and kidnapping.
2. Less serious crime against the person.
3. Property crime.
4. Crime without a victim - vice or sex.
5. Possession of narcotics.
6. Selling, manufacturing, pushing, distributing, smuggling, etc. (narcotics).
7. Possession of narcotic paraphernalia.
8. Other miscellaneous legel classifications.

With respect to correlations between crime data, driver history and alcohol usage, the total drinkers of all three types of alcoholic beverages will not necessarily equal the number of persons in the study sample since one person may use more than one type of beverage.

With respect to correlations between criminal record, driving history, and drug usage, an individual may be counted in one or more or none of the drug categories depending on the number of drugs that he admitted to using.

B. St. Louis, Missouri

The summary of driver histories by type of criminal charge for the St. Louis sample is presented in Table C-1.

Of the 44 drivers charged with crimes of violence, 61.5 percent have been convicted of a hazardous traffic violation. The overall conviction

Table C-1

DRIVER HISTORY SUMMARY BY TYPE OF CRIME (FIRST CHARGE),
ST. LOUIS SAMPLE FROM QUESTIONNAIRE
N = 320

Type of Crime	Total No. of Drivers	Hazardous Convictions*		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
Violence	44	27	124	3	6	12	49
Other Crimes Against Person	25	17	77	1	2	5	7
Property Crime	62	44	163	3	3	9	90
Crime w/o Victim	1	1	1	0	0	0	0
Other	28	22	87	0	0	4	14
Total	160	111	452	7	11	30	160

* Hazardous convictions includes arrests for driving under the influence of liquor.

rate for these drivers is 2.8 convictions per driver. Although there are only eleven accidents in the St. Louis sample, six of them were committed by three drivers from this group. Thus the accident rate for the group charged with crimes of violence is .14 accidents per driver.

Drivers charged with other types of crimes show approximately the same rates for hazardous violation convictions and somewhat lower rates for accidents. The St. Louis initial sample rates were almost the same at 3.1 hazardous convictions per driver and .06 accidents per driver.

Table C-2 presents alcohol usage as indicated by the questionnaire for persons charged with each type of crime. As reported in Appendix B, 82 percent of the drivers drank and 79 percent were beer drinkers. For those with no driver record 87 percent drank and 83 percent were beer drinkers.

Tables C-3 and C-4 were presentations of the drug usage as indicated in the questionnaire by type of crime on the first charge for the St. Louis Study. Table C-3 presents the drivers in that sample and Table C-4 presents those persons for whom no driver record could be obtained. Of these drivers in the sample 76, or 48 percent, were drug users, as reported in Appendix B. Almost the same percentage of those on which no driver record was obtained also admitted use of drugs.

C. Chicago, Illinois

The summary of driver histories by type of criminal change for the Chicago study sample is presented in Table C-5. Of the 120 drivers, 80.8 percent have been convicted of a hazardous traffic conviction. The overall conviction rate for these drivers is 3.4 convictions per driver. Drivers in the "other" category have the highest conviction rate, 5.6 per driver.

There were 32 accidents in the Chicago sample giving an accident rate of .27 accidents per driver. The majority of the drivers in this sample, 71.6 percent, committed crimes of violence or property crimes and were responsible for 75 percent of the accidents. The accident rate for those charged with "property crimes" is considerably higher, .5 per driver, than the overall rate.

Table C-2

ALCOHOL USAGE BY TYPE OF CRIME (FIRST CHARGE),
ST. LOUIS SAMPLE FROM QUESTIONNAIRE
N = 320

Type of Crime	Total in Study Sample	Drivers				No Driver Record			
		No. of Drivers	Beer	Wine	Liquor	No. with No Record	Beer	Wine	Liquor
Violence	93	44	31	5	19	49	45	11	21
Other Crimes Against the Person	32	25	25	5	16	7	6	2	3
Property	152	62	49	21	29	90	73	22	39
Crime w/o Victim	1	1	1	0	0	0	0	0	0
Other	42	28	27	6	14	14	11	4	8
Total	320	160	127	37	78	160	135	39	62

Table C-3

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
ST. LOUIS STUDY SAMPLE - DRIVERS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Sex Crime Without Victim	Other
No. in Study Sample	320	93	32	152	1	42
No. of Drivers	160	44	25	62	1	28
Drug Used	Total No. of Users	Number of Users				
Marijuana	63	19	5	29	0	10
Hashish	20	3	0	15	0	2
Cocaine	17	4	0	13	0	0
Heroin	22	7	0	15	0	0
Morphine	6	1	0	5	0	0
Psychedelics	11	3	2	5	0	1
Amphetamines	23	4	2	15	0	2
Barbiturates	12	2	1	7	0	2
Methoadone	1	0	0	1	0	0
Tranquilizers	5	1	1	2	0	1
Special	11	2	4	4	1	0

Table C-4

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
ST. LOUIS SAMPLE - NO DRIVER RECORDS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Sex Crime Without Victim	Other
No. in Study Sample	320	93	32	152	1	42
No. of Arrestees with No Driver Record	160	49	7	90	0	14
Drug Used	Total No. of Users	Number of Users				
Marijuana	66	16	0	41	0	9
Hashish	23	3	0	18	0	2
Cocaine	22	4	0	15	0	3
Heroin	29	6	0	20	0	3
Morphine	15	4	0	11	0	0
Psychedelics	9	1	0	7	0	1
Amphetamines	26	4	1	19	0	2
Barbiturates	12	3	0	9	0	0
Methadone	1	0	0	1	0	0
Tranquilizers	5	1	0	4	0	0
Special	7	1	0	6	0	0

Table C-5

DRIVER HISTORY SUMMARY BY TYPE OF CRIME
(FIRST CHARGE), CHICAGO SAMPLE
N = 333

Type of Crime	Total No. of Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convic-tions	No. of Drivers	No. of Accidents		
Crimes of Violence	62	52	186	11	12	9	120
Other Crimes Against Person	9	6	27	1	1	1	10
Property Crime	24	19	95	7	12	3	51
Possession of Narcotics	8	5	15	1	1	1	11
Selling, Pushing, etc.	2	1	2	1	1	1	0
Possession of Paraphernalia	1	1	3	0	0	0	4
Other	14	13	79	5	5	0	17
Total	120	97	407	26	32	15	213

Table C-6 presents the alcohol usage as indicated by the questionnaire for persons charged with each type of crime. In the Chicago study sample, 78.3 percent of the 120 drivers drank and 70 percent were beer drinkers. For those with no driver record, 78.4 percent drank and 69.5 percent were beer drinkers.

Tables C-7 and C-8 are presentations of the drug usage as indicated in the questionnaire by type of crime on the first charge for the Chicago study sample. Table C-7 presents the drivers in that sample and Table C-8 presents those persons for whom no driver record could be obtained. Of the drivers in the sample 68, or 56.7 percent, were drug users. For those whose driver record was not obtained, 54.9 percent also admitted use of drugs.

D. New York City, New York

The summary of driver histories by type of crime for the New York study sample is presented in Table C-9. Of the 69 drivers 42 percent have been convicted of a hazardous traffic conviction. The overall conviction rate for these drivers is 1.2 convictions per driver.

There were 56 accidents in this sample giving an accident rate of .81 accidents per driver. The ten drivers charged with "other crimes against the person" and the five charged with "other crimes" have the highest accident rates, 1.2 and 1.6 accidents per driver respectively. Comparisons with the New York initial sample rates reported in Appendix A show that the study sample rates are not very different, i.e., 1.2 hazardous convictions per driver and .73 accidents per driver for the initial sample.

Table C-10 presents the alcohol usage as indicated by the questionnaire for persons charged with each type of crime. As reported in Appendix B, 82.6 percent of the 69 drivers drank and 68.1 percent were beer drinkers. For those with no driver record 83.5 percent drank and 71.7 percent were beer drinkers.

Table C-6

ALCOHOL USAGE BY TYPE OF CRIME (FIRST CHARGE),
CHICAGO SAMPLE
N = 333

Type of Crime	Total in Study Sample	Drivers				No Driver Record			
		No. of Drivers	Beer	Wine	Liquor	No. with No Record	Beer	Wine	Liquor
Crimes of Violence	182	63	48	22	31	120	88	41	58
Other Crime Against Person	19	9	5	3	0	10	9	6	7
Property Crime	75	24	17	7	15	51	31	20	21
Possession of Narcotics	19	8	3	3	1	11	8	5	4
Selling, Pushing, etc.	2	2	2	2	1	0	0	0	0
Possession of Paraphernalia	5	1	0	1	1	4	1	2	1
Other	31	14	9	4	7	17	13	4	8
Total	333	120	84	42	56	213	150	78	99

Table C-7

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
CHICAGO SAMPLE - DRIVERS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Possession of Narcotics	Selling, Pushing, etc.	Possession of Para-phernalia	Other
No. in Study Sample	333	182	19	75	19	2	5	31
No. of Drivers	120	62	9	24	8	2	1	14
Drug Used	Total No. of Users	Number of Users						
Marijuana	62	32	3	16	5	2	1	3
Hashish	17	8	2	2	3	0	1	1
Cocaine	25	10	1	6	5	1	1	1
Heroin	33	13	1	8	8	1	1	1
Morphine	12	3	0	4	3	1	1	0
Psychedelics	15	4	1	5	4	0	0	1
Amphetamines	18	7	1	7	2	0	0	1
Barbiturates	18	9	1	4	3	0	0	1
Methadone	3	1	0	1	1	0	0	0
Tranquilizers	7	4	0	2	1	0	0	0
Special	5	2	0	2	1	0	0	0

Table C-8

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
CHICAGO SAMPLE - NO DRIVER RECORDS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Possession of Narcotics	Selling, Pushing, etc.	Possession of Para-phernalia	Other
No. in Study Sample	333	182	19	75	19	2	5	31
No. of Arrestees with No Driver Record	213	120	10	51	11	0	4	17
Drug Used	Total No. of Users	Number of Users						
Marijuana	110	55	5	32	7	0	3	8
Hashish	32	17	2	10	0	0	0	3
Cocaine	34	18	0	9	5	0	1	1
Heroin	45	19	0	14	9	0	2	1
Morphine	15	8	0	6	0	0	1	0
Psychedelics	17	6	0	8	0	0	1	2
Amphetamines	33	14	1	12	2	0	2	2
Barbiturates	28	13	1	10	1	0	1	2
Methadone	8	3	0	4	0	0	1	0
Tranquilizers	10	5	0	3	1	0	0	1
Special	7	4	0	2	0	0	0	1

Table C-9

DRIVER HISTORY SUMMARY BY TYPE OF CRIME
(FIRST CHARGE), NEW YORK SAMPLE
N = 306

Type of Crime	Total No. of Drivers	Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
Crimes of Violence	20	8	15	8	16	7	81
Other Crime Against Person	10	4	10	7	12	2	24
Property Crime	34	14	19	8	20	14	115
Other	5	3	36	3	8	1	17
Total	69	29	80	26	56	24	237

Table C-10

ALCOHOL USAGE BY TYPE OF CRIME (FIRST CHARGE),
NEW YORK SAMPLE
N = 306

Type of Crime	Total in Study Sample	Drivers				No Driver Record			
		No. of Drivers	Beer	Wine	Liquor	No. with No Record	Beer	Wine	Liquor
Crimes of Violence	101	20	13	8	10	81	61	45	47
Other Crime Against Person	34	10	8	3	5	24	18	12	14
Property Crime	149	34	23	14	20	115	81	52	62
Other	22	5	0	0	0	17	0	0	0
Total	306	59	47	28	37	237	171	117	134

Tables C-11 and C-12 are presentations of the drug usage as indicated in the questionnaire by type of crime on the first charge for the New York study sample. Table C-11 presents the drivers in that sample and Table C-12 presents those persons for whom no driver record could be obtained. Of the drivers in the sample 37, or 53.6 percent, were drug users. For those of whom no driver record was obtained, 71.2 percent also admitted use of drugs.

E. New Orleans, Louisiana

The summary of driver histories by type of crime for the New Orleans sample is presented in Table C-13. Of the 51 drivers charged with crimes against the person, which includes crimes of violence and other crimes against the person, 54.9 percent have been convicted of a hazardous traffic violation. The overall conviction rate for these drivers is 1.2 convictions per driver.

Of the 88 drivers charged with other crimes, 61.4 percent have been convicted of a hazardous traffic violation, a rate of 1.6 convictions per driver. Accident rates for the two are almost the same; those drivers charged with crimes against the person show an accident rate of .18 and those with other crimes a rate of .19.

Table C-14 presents the alcohol usage as indicated by the questionnaire for persons charged with each type of crime. Of the 139 drivers in the sample 112, or 80.4 percent, drank and 71.9 percent were beer drinkers. For those with no driver record, 77.5 percent drank and 68.1 percent were beer drinkers.

Tables C-15 and C-16 are presentations of the drug usage as indicated in the questionnaire by type of crime on the first charge for the New Orleans study sample. Table C-15 presents the drivers in that sample and Table C-16 presents those persons for which no driver record could be obtained. It has been reported in Appendix B that of the drivers in the sample 63, or 45.3 percent, were drug users. A somewhat higher percentage, 58.1 percent or 93 persons out of 160 for whom no driver record was obtained, also admitted use of drugs.

Table C-11

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
NEW YORK SAMPLE - DRIVERS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Other
No. in Study Sample	306	101	34	149	22
No. of Drivers	69	20	10	34	5
Drug Used	Total No. of Users	Number of Users			
Marijuana	31	10	2	16	3
Hashish	22	8	0	11	3
Cocaine	24	8	0	15	1
Heroin	28	8	1	17	2
Morphine	9	5	0	4	0
Psychedelics	8	3	0	4	1
Amphetamines	11	5	0	5	1
Barbiturates	14	5	0	7	2
Methadone	11	4	0	6	1
Tranquilizers	4	3	0	1	0
Special	6	3	0	3	0

Table C-12

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
NEW YORK SAMPLE - NO DRIVER RECORDS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Other
No. in Study Sample	306	101	34	149	22
No. of Arrestees with No Driver Record	237	81	24	115	17
Drug Used	Total No. of Users	Number of Users			
Marijuana	151	56	9	74	12
Hashish	91	35	5	47	4
Cocaine	106	38	6	55	7
Heroin	132	42	7	73	10
Morphine	23	8	2	10	3
Psychedelics	30	14	3	13	0
Amphetamines	37	13	3	20	1
Barbiturates	50	22	3	24	1
Methadone	39	13	0	22	4
Tranquilizers	20	8	1	10	1
Special	30	14	1	14	1

Table C-13

DRIVER HISTORY SUMMARY BY TYPE OF CRIME
(FIRST CHARGE), NEW ORLEANS SAMPLE
N = 299

Type of Crime	Total No. of Drivers	Hazardous Convictions		Accidents		Clean Record	No. Driver Record
		No. of Drivers	No. of Convic-tions	No. of Drivers	No. of Accidents		
Crimes of Violence	44	26	59	7	8	12	32
Other Crimes Against Person	7	2	3	1	1	4	14
Property Crime	57	31	72	5	7	17	66
Crime w/o Victim	6	4	16	1	1	2	4
Possession of Narcotics	19	14	37	6	7	4	37
Selling, Pushing, etc.	1	1	1	0	0	0	0
Other	5	4	11	2	2	0	7
Total	139	82	199	22	26	39	160

Table C-14

ALCOHOL USAGE BY TYPE OF CRIME (FIRST CHARGE),
NEW ORLEANS SAMPLE
N = 299

Type of Crime	Total in Study Sample	Drivers				No Driver Record			
		No. of Drivers	Beer	Wine	Liquor	No. with No Record	Beer	Wine	Liquor
Crimes of Violence	76	44	34	13	25	32	12	5	4
Other Crimes Against Person	21	7	6	1	2	14	9	4	8
Property Crime	123	57	38	11	20	66	45	20	19
Crime w/o Victim	10	6	5	2	4	4	3	0	1
Possession of Narcotics	56	19	14	6	12	37	25	10	7
Selling, Pushing, etc.	1	1	1	1	0	0	0	0	0
Other	12	5	3	1	3	7	5	1	3
Total	299	139	101	35	66	160	111	49	54

Table C-15

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
NEW ORLEANS SAMPLE - DRIVERS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Crime w/o Victim	Possession of Narcotics	Selling, Pushing, etc.	Other
No. in Study Sample	299	76	21	123	10	56	1	12
No. of Drivers	139	44	7	57	6	19	1	5
Drug Used	Total No. of Users	Number of Users						
Marijuana	47	11	4	22	0	10	0	0
Hashish	26	9	2	11	0	4	0	0
Cocaine	13	4	0	7	0	2	0	0
Heroin	39	11	0	23	0	4	1	0
Morphine	12	3	0	8	0	1	0	0
Psychedelics	9	2	2	4	0	1	0	0
Amphetamines	10	1	2	5	0	2	0	0
Barbiturates	19	10	0	7	0	2	0	0
Methadone	4	2	0	2	0	0	0	0
Tranquilizers	1	0	0	1	0	0	0	0
Special	5	3	0	2	0	0	0	0

Table C-16

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
NEW ORLEANS SAMPLE - NO DRIVER RECORDS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Crime w/o Victim	Possession of Narcotics	Selling, Pushing, etc.	Other
No. in Study Sample	299	76	21	123	10	56	1	12
No. of Arrestees with No Driver Record	160	32	14	66	4	37	0	7
Drug Used	Total No. of Users	Number of Users						
Marijuana	53	12	2	17	1	19	0	2
Hashish	29	5	0	10	0	11	0	3
Cocaine	16	4	0	5	0	7	0	0
Heroin	49	11	0	22	0	16	0	0
Morphine	13	1	0	7	0	5	0	0
Psychedelics	20	2	2	5	0	8	0	3
Amphetamines	22	4	0	8	0	7	0	3
Barbiturates	18	3	0	7	0	8	0	0
Methadone	3	0	0	3	0	0	0	0
Tranquilizers	7	2	1	0	0	3	0	1
Special	24	2	3	11	0	7	0	1

F. San Antonio, Texas

The summary of driver histories for the San Antonio study sample by type of criminal charge is presented in Table C-17. Of the 143 drivers, 69.9 percent have been convicted of a hazardous traffic conviction. The two drivers charged with "crime without a victim" show ten hazardous convictions on their driving records. The overall conviction rate for these drivers is 2.1 convictions per driver.

There were 172 accidents in the sample giving an accident rate of 1.2 accidents per driver. Comparison with the San Antonio initial sample rates in Appendix A show that the study sample rates are not very different, than is, 2.2 hazardous convictions and 1.4 accidents per driver for the initial sample.

Table C-18 presents the alcohol usage as indicated by the questionnaire for persons charged with each type of crime. Of the 143 drivers, 83.9 percent drank and 73.4 percent were beer drinkers. For those with no driver record, 77.1 percent drank and 71.9 percent were beer drinkers.

Tables C-19 and C-20 are presentations of the drug usage as indicated in the questionnaire by type of crime on the first charge for the San Antonio study sample. Table C-19 presents the drivers in that sample and Table C-20 presents those persons for whom no driver record could be obtained. Of the drivers in the sample 93, or 65 percent, were drug users. For those of whom no driver record was obtained, 57.5 percent also admitted use of drugs.

G. Los Angeles, California

The summary of driver histories for the Los Angeles study sample by type of criminal charge is presented in Table C-21. Of the 211 drivers, 77.8 percent have been convicted of a hazardous traffic conviction. The overall conviction rate for the 234 drivers is 2.8 hazardous violations per driver.

There were 93 accidents in the sample giving an overall accident rate of .40 accidents per driver. This is comparable to the initial sample rate, .38, shown in Appendix A. Only 71 of the sample drivers actually had an accident, hence these persons has 1.3 accidents per driver.

Table C-17

DRIVER HISTORY SUMMARY BY TYPE OF CRIME
(FIRST CHARGE), SAN ANTONIO SAMPLE
N = 296

Type of Crime	Total No. of Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convictions	No. of Drivers	No. of Accidents		
Crimes of Violence	20	15	36	14	30	2	26
Other Crimes Against Person	8	6	21	4	12	1	3
Property Crime	51	32	96	27	56	12	73
Crime w/o Victim	2	1	10	1	2	1	2
Possession of Narcotics	35	22	60	16	38	9	29
Selling, Pushing, etc.	10	8	20	5	10	2	2
Possession of Paraphernalia	5	5	8	2	2	0	3
Other	12	11	47	8	22	0	15
Total	143	100	298	77	172	27	153

Table C-18

ALCOHOL USAGE BY TYPE OF CRIME (FIRST CHARGE),
SAN ANTONIO SAMPLE
N = 296

Type of Crime	Total in Study Sample	Drivers				No Driver Record			
		No. of Drivers	Beer	Wine	Liquor	No. with No Record	Beer	Wine	Liquor
Crimes of Violence	46	20	19	2	11	26	21	3	8
Other Crime Against Person	11	8	7	1	4	3	2	1	1
Property Crime	124	51	37	8	18	73	51	11	26
Crime w/o Victim	4	2	2	2	2	2	1	1	0
Possession of Narcotics	64	35	22	13	9	29	20	11	6
Selling, Pushing, etc.	12	10	8	6	1	2	2	2	0
Possession of Paraphernalia	8	5	4	0	2	3	1	1	1
Other	27	12	9	3	8	15	15	4	9
Total	296	143	108	35	55	153	113	34	51

Table C-19

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
SAN ANTONIO SAMPLE - DRIVERS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Crime w/o Victim	Possession of Narcotics	Selling, Pushing, etc.	Possession of Para-phernalia	Other
No. in Study Sample	296	46	11	124	4	64	12	8	27
No. of Drivers	143	20	8	51	2	35	10	5	12
Drug Used	Total No. of Users	Number of Users							
Marijuana	82	6	1	23	1	29	9	5	8
Hashish	29	4	0	6	0	12	5	0	2
Cocaine	16	1	0	4	0	8	3	0	0
Heroin	48	2	1	16	0	19	4	5	1
Morphine	16	1	0	5	0	6	3	0	1
Psychedelics	35	4	0	7	0	13	7	1	3
Amphetamines	31	3	0	7	1	13	5	0	2
Barbiturates	23	2	0	5	0	12	3	1	0
Methadone	3	0	0	2	0	1	0	0	0
Tranquilizers	8	1	0	3	0	2	2	0	0
Special	14	2	0	7	0	5	0	0	0

Table C-20

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
SAN ANTONIO SAMPLE - NO DRIVER RECORD

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Crime w/o Victim	Possession of Narcotics	Selling, Pushing, etc.	Possession of Paraphernalia	Other
No. in Study Sample	296	46	11	124	4	64	12	8	27
No. of Arrestees With No Drivers Record	153	26	3	73	2	29	2	3	15
Drug Used	Total No. of Users	Number of Users							
Marijuana	75	7	1	30	1	24	1	3	8
Hashish	23	3	0	4	1	13	1	0	1
Cocaine	9	2	0	3	0	3	0	0	1
Heroin	42	6	1	17	1	11	0	3	3
Morphine	7	2	0	2	1	1	0	1	0
Psychedelics	26	1	0	8	1	13	1	0	2
Amphetamines	26	3	0	11	1	8	0	0	3
Barbiturates	27	3	0	12	1	7	0	1	3
Methadone	4	1	0	1	0	2	0	0	0
Tranquilizers	8	1	0	2	1	3	0	1	0
Special	28	5	1	16	0	3	0	1	2

Table C-21

DRIVER HISTORY SUMMARY BY TYPE OF CRIME
(FIRST CHARGE), LOS ANGELES SAMPLE
N = 234

Type of Crime	Total No. of Drivers	Hazardous Convictions		Accidents		Clean Record	No Driver Record
		No. of Drivers	No. of Convic-tions	No. of Drivers	No. of Accidents		
Crimes of Violence	70	53	201	20	28	13	18
Other Crimes Against Person	18	13	51	5	7	5	7
Property Crime	134	107	388	43	55	16	73
Sex Crime w/o Victim	3	2	3	0	0	0	1
Other	9	7	23	3	3	2	2
Total	234	182	666	71	93	36	101

Table C-22 presents the alcohol usage as indicated by the questionnaire for persons charged with each type of crime. Of the 234 drivers, 88.0 percent drank (see Appendix B).

Tables C-23 and C-24 are presentations of the drug usage as indicated in the questionnaire by type of crime on the first charge for the Los Angeles study sample. Table C-23 presents the drivers in that sample and C-24 presents those persons for whom no driver record could be obtained. Of the drivers in the sample 181, or 77.4 percent, were drug users.

Table C-22

ALCOHOL USAGE BY TYPE OF CRIME (FIRST CHARGE),
LOS ANGELES SAMPLE
N = 335

Type of Crime	Total in Study Sample	Drivers				No Driver Record			
		No. of Drivers	Beer	Wine	Liquor	No. with No Record	Beer	Wine	Liquor
Crimes of Violence	88	70	55	23	44	18	14	7	9
Other Crime Against Person	25	18	15	11	7	7	5	2	5
Property Crime	207	134	109	54	56	73	56	30	38
Sex Crime w/o Victim	4	3	1	2	1	1	1	0	1
Other	11	9	8	3	4	2	2	1	0
Total	335	234	188	93	112	101	79	40	53

Table C-23

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
LOS ANGELES SAMPLE - DRIVERS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Crime Without Victim	Other
No. in Study Sample	335	88	25	207	4	11
No. of Drivers	234	70	18	134	3	9
Drug Used	Total No. of Users	Number of Users				
Marijuana	168	48	12	100	3	5
Hashish	81	22	9	48	0	2
Cocaine	51	11	5	32	2	1
Heroin	69	13	6	48	2	0
Morphine	25	3	4	17	1	0
Psychedelics	66	10	7	47	1	1
Amphetamines	114	29	8	72	1	4
Barbiturates	92	23	9	56	2	2
Methadone	9	0	1	8	0	0
Tranquilizers	16	3	2	11	0	0
Special	36	8	4	21	1	2

Table C-24

DRUG USAGE BY TYPE OF CRIME (FIRST CHARGE),
LOS ANGELES SAMPLE - NO DRIVER RECORDS

Type of Crime		Crimes of Violence	Other Crime Against Person	Property Crime	Crime Without Victim	Other
No. in Study Sample	335	88	25	207	4	11
No. of Arrestees with No Driver Record	101	18	7	73	1	2
Drug Used	Total No. of Users	Number of Users				
Marijuana	70	13	2	53	1	1
Hashish	26	5	0	21	0	0
Cocaine	22	6	0	16	0	0
Heroin	22	4	0	18	0	0
Morphine	14	4	0	10	0	0
Psychedelics	33	6	1	25	1	0
Amphetamines	45	9	2	32	1	1
Barbiturates	41	8	2	31	0	0
Methadone	5	1	0	4	0	0
Tranquilizers	13	2	0	11	0	0
Special	22	5	1	16	0	0

APPENDIX D

AGE DISTRIBUTION AND DRUG COMBINATIONS

APPENDIX D
AGE DISTRIBUTION AND DRUG COMBINATIONS

This appendix presents data on age distribution of arrestees and the number of drugs of which they admitted use for each study site.

I. AGE OF ARRESTEES FOR EACH SITE

The following Tables D-1 through D-12 present the age distribution of the arrestees who responded to the questionnaire in each study site. The first table for each presents arrestees who are drug users or nonusers and whether or not a driver record was obtained. The second table for each site gives the percentage of drug users and nonusers for each age group.

II. DRIVER HISTORIES BY NUMBER OF DRUGS USED BY QUESTIONNAIRE RESPONDENTS FOR EACH SITE

The set of following tables D-13 through D-18 presents the driver histories for questionnaire respondents by the number of drugs used. There is no indication of whether these drugs were used separately or in combination.

Table D-13 shows the driving record of St. Louis drivers classified by the number of drugs they admitted to having used. Eight of the eleven accidents are attributed to nondrug users and two to a person or persons who used only one drug. The number of violations for nonusers are 3.8 per driver as opposed to 2.6 for user-drivers. Of the nonuser drivers, 16.7 percent had clean records and of the user-drivers, 21 percent.

In the Chicago site, as shown in Table D-14, users of seven and nine drugs showed the extremely high hazardous conviction rate of 6.0. There was also one user with eight violations in each of the categories "one" and "ten" drugs used. In addition, three accidents were reported for the person who admitted to using ten drugs.

Table D-1

Age Distribution for the St. Louis Questionnaire Sample (N = 320)

Age	Sample Total	Number of Users			Number of Nonusers		
		Total	Drivers	No Driver Record Obtained	Total	Drivers	No Driver Record Obtained
<25	200	109	53	56	91	34	57
25-34	70	37	21	16	33	22	11
35-44	28	8	3	5	20	15	5
45-54	14	1	0	1	13	7	6
>55	8	0	0	0	8	5	3
TOTAL	320	155	77	78	165	83	82

Table D-2

Percentage Distribution of the St. Louis Questionnaire Sample by Age (N = 320)

Age	Sample Total/N	Users		Nonusers	
		Users/N	Users/Total Users	Nonusers/N	Nonusers/Total Nonusers
<25	62.5	34.1	70.8	28.4	54.8
25-34	21.8	11.3	23.4	10.5	20.6
35-44	8.8	2.5	5.2	6.3	12.0
45-54	4.4	.3	.6	4.1	7.8
>55	2.5	.0	.0	2.5	4.8
TOTAL	100.0	48.2	100.0	51.8	100.0

Table D-3

Age Distribution for the Chicago Questionnaire Sample (N = 333)

Age	Sample Total	Number of Users			Number of Nonusers		
		Total	Drivers	No Driver Record Obtained	Total	Drivers	No Driver Record Obtained
<25	193	107	35	72	86	20	66
25-34	96	61	23	38	35	17	18
35-44	34	14	10	4	20	13	7
45-54	7	2	0	2	5	2	3
≥55	3	1	0	1	2	0	2
TOTAL	333	185	68	117	148	52	96

Table D-4

Percentage Distribution of the Chicago Questionnaire Sample by Age (N = 333)

Age	Sample Total/N	Users		Nonusers	
		Users/N	Users/Total Users	Nonusers/N	Nonusers/Total Nonusers
<25	58.0	32.1	57.8	25.8	58.1
25-34	28.8	18.3	33.0	10.5	23.6
35-44	10.2	4.2	7.6	6.0	13.5
45-54	2.1	.6	1.1	1.6	3.4
≥55	.9	.3	.5	.6	1.4
TOTAL	100.0	55.5	100.0	44.5	100.0

Table D-5

Age Distribution for the New York Questionnaire Sample (N = 306)

Age	Sample Total	Number of Users			Number of Nonusers		
		Total	Drivers	No Driver Record Obtained	Total	Drivers	No Driver Record Obtained
<25	132	108	17	91	24	2	22
25-34	121	83	16	67	38	14	24
35-44	38	11	4	7	27	11	16
45-54	13	3	0	3	10	5	5
>55	2	1	0	1	1	0	1
TOTAL	306	206	37	169	100	32	68

Table D-6

Percentage Distribution of the New York Questionnaire Sample by Age (N = 306)

Age	Sample Total/N	Users		Nonusers	
		Users/N	Users/Total Users	Nonusers/N	Nonusers/Total Nonusers
<25	43.1	35.3	52.4	7.8	24.0
25-34	39.5	27.1	40.3	12.4	38.0
35-44	12.4	3.6	5.3	8.8	27.0
45-54	4.3	1.0	1.5	3.4	10.0
>55	.7	.3	.5	.3	1.0
TOTAL	100.0	67.3	100.0	32.7	100.0

Table D-7

Age Distribution for the New Orleans
Questionnaire Sample (N = 299)

Age	Sample Total	Number of Users			Number of Nonusers		
		Total	Drivers	No Driver Record Obtained	Total	Drivers	No Driver Record Obtained
<25	148	86	30	56	62	20	42
25-34	83	41	22	19	42	27	15
35-44	50	24	10	14	26	19	7
45-54	13	4	1	3	9	7	2
≥55	5	1	0	1	4	3	1
TOTAL	299	156	63	93	143	76	67

Table D-8

Percentage Distribution of the New Orleans
Questionnaire Sample by Age (N = 299)

Age	Sample Total/N	Users		Nonusers	
		Users/N	Users/Total Users	Nonusers/N	Nonusers/Total Nonusers
<25	49.5	28.8	55.1	20.7	43.3
25-34	27.8	13.7	26.3	14.1	29.4
35-44	16.7	8.0	15.4	8.7	18.2
45-54	4.3	1.3	2.6	3.0	6.3
≥55	1.7	.4	.6	1.3	2.8
TOTAL	100.0	52.2	100.0	47.8	100.0

Table D-9

Age Distribution for the San Antonio
Questionnaire Sample (N = 296)

Age	Sample Total	Number of Users			Number of Nonusers		
		Total	Drivers	No Driver Record Obtained	Total	Drivers	No Driver Record Obtained
<25	202	133	65	68	69	27	42
25-34	65	38	21	17	27	14	13
35-44	16	5	3	2	11	4	7
45-54	9	1	1	0	8	6	2
≥55	4	1	1	0	3	1	2
TOTAL	296	178	91	87	118	52	66

Table D-10

Percentage Distribution of the San Antonio
Questionnaire Sample by Age (N = 296)

Age	Sample Total/N	Users		Nonusers	
		Users/N	Users/Total Users	Nonusers/N	Nonusers/Total Nonusers
<25	68.2	44.9	74.7	23.3	58.5
25-34	22.0	12.8	21.3	9.2	22.9
35-44	5.4	1.7	2.8	3.7	9.3
45-54	3.0	.3	.6	2.7	6.8
≥55	1.4	.3	.6	1.1	2.5
TOTAL	100.0	60.0	100.0	40.0	100.0

Table D-11

Age Distribution for the Los Angeles Questionnaire Sample (N = 335)

Age	Sample Total	Number of Users			Number of Nonusers		
		Total	Drivers	No Driver Record Obtained	Total	Drivers	No Driver Record Obtained
<25	174	148	97	51	26	13	13
25-34	103	82	64	18	21	16	5
35-44	40	21	15	6	19	17	2
45-54	14	6	5	1	8	5	3
≥55	4	0	0	0	4	2	2
TOTAL	335	257	181	76	78	53	25

Table D-12

Percentage Distribution of the Los Angeles Questionnaire Sample by Age (N = 335)

Age	Sample Total/N	Users		Nonusers	
		Users/N	Users/Total Users	Nonusers/N	Nonusers/Total Nonusers
<25	52.0	44.2	57.6	7.8	33.3
25-34	30.7	24.4	31.9	6.3	26.9
35-44	11.9	6.3	8.2	5.6	24.4
45-54	4.2	1.8	2.3	2.4	10.3
≥55	1.2	.0	.0	1.2	5.1
TOTAL	99.3	76.8	100.0	23.4	100.0

Table D-13

Driving Record of Drug Users in the St. Louis Sample by Number of Drugs Used

Number of Drugs Used	Number of Drivers	Number of			Number with No Record
		Accidents*	Violations	Clean Record	
0	84	8	292	14	82
1	32	2	53	10	32
2	13	0	18	3	13
3	9	0	19	1	9
4	7	0	26	0	3
5	7	1	26	1	6
6	3	0	5	1	5
7	0	0	0	0	4
8	1	0	2	0	3
9	1	0	1	0	2
10	1	0	4	0	0
11	2	0	6	0	1
TOTAL	160	11	452	30	160

* The state accident reporting law requires reporting of all accidents with personal injury and/or property damage over $100.

Table D-14

Driving Record of Drug Users in the Chicago Sample by Number of Drugs Used

Number of Drugs Used	Number of Drivers	Number of			Number with No Record
		Accidents*	Violations	Clean Record	
0	52	12	184	5	96
1	24	5	80	3	43
2	11	4	33	1	22
3	11	4	36	1	17
4	7	2	9	2	12
5	4	1	16	0	8
6	2	0	3	1	5
7	3	1	18	0	0
8	2	0	0	2	7
9	2	0	12	0	3
10	1	3	8	0	0
11	1	0	8	0	0
TOTAL	120	32	407	15	213

* The state accident reporting law requires reporting of all accidents with personal injury and/or property damage over $100.

The nonuser's accident rate in the New York site is higher than the rate for users of any number of drugs in that site (see Table D-15). The highest rate among the users, one accident per person, is for users of one, seven and ten drugs. Violation rates in this site were low for several of the drug-user categories, less than one violation per person in several categories. These low rates are in categories one, two, four, six, eight and eleven drugs used.

Both violation and accident rates were fairly low in the New Orleans site (see Table D-16). The violation rate for users of seven drugs was 3.0 hazardous traffic violation convictions per driver. However, this violation rate was substantially lower for all other categories.

The San Antonio (see Table D-17) site showed high accident rates, in excess of one per person, for the nonusers and for the users of one, three, five, six, seven and eight drugs. Users of five drugs had the lowest violation rate, .75 violations per person whereas users of eight drugs had the highest violation rate, 5.0 violations per driver for this site.

The violation and accident rates for the Los Angeles site, Table D-18, approximate those of the total sample more closely than those of any other site. Accident rates are less than one accident per driver for each category. The highest violation rate was 4.5 for users of nine drugs and the lowest was .9 for users of seven drugs.

Table D-15

Driving Record of Drug Users in the New York Sample by Number of Drugs Used

Number of Drugs Used	Number of Drivers	Number of			Number with No Record
		Accidents*	Violations	Clean Record	
0	32	42	49	10	68
1	5	5	3	1	27
2	7	0	4	4	28
3	3	0	4	1	23
4	5	0	1	3	26
5	2	1	0	1	13
6	3	1	1	1	15
7	5	5	13	0	10
8	2	0	1	1	10
9	1	0	0	1	3
10	1	1	2	0	4
11	3	1	2	1	10
TOTAL	69	56	80	24	237

* The state accident reporting law requires reporting of all accidents with personal injury and/or property damage over $200.

Table D-16

Driving Record of Drug Users in the New Orleans Sample by Number of Drugs Used

Number of Drugs Used	Number of Drivers	Number of			Number with No Record
		Accidents*	Violations	Clean Record	
0	76	15	116	17	67
1	21	6	27	7	39
2	15	3	18	5	17
3	6	1	2	4	9
4	7	0	7	3	12
5	7	1	17	1	5
6	1	0	0	0	2
7	3	0	9	1	3
8	1	0	0	1	6
9	2	0	3	0	0
10	0	0	0	0	0
11	0	0	0	0	0
TOTAL	139	26	199	39	160

* The state accident reporting law requires reporting of all accidents with personal injury and/or property damage over $100.

Table D-17

Driving Record of Drug Users in the San Antonio Sample by Number of Drugs Used

Number of Drugs Used	Number of Drivers	Number of			Number with No Record
		Accidents*	Violations	Clean Record	
0	52	73	125	9	66
1	30	38	59	4	21
2	21	14	43	5	22
3	8	11	16	1	16
4	7	6	7	1	8
5	4	6	3	0	5
6	5	9	15	1	7
7	7	9	10	3	4
8	2	3	10	0	2
9	4	1	8	2	1
10	3	2	2	1	1
11	0	0	0	0	0
TOTAL	143	172	298	27	153

* The state accident reporting law requires reporting of all accidents with personal injury and/or property damage over $25.

Table D-18

Driving Record of Drug Users in the Los Angeles Sample by Number of Drugs Used

Number of Drugs Used	Number of Drivers	Number of			Number with No Record
		Accidents*	Violations	Clean Record	
0	53	22	159	8	25
1	31	11	79	3	14
2	40	15	146	5	14
3	23	4	50	7	10
4	19	11	57	4	8
5	18	6	48	3	10
6	14	8	32	3	4
7	7	1	6	2	5
8	9	1	30	1	2
9	8	4	36	0	1
10	3	2	3	0	1
11	9	8	20	0	7
TOTAL	234	93	666	36	101

* The state accident reporting law requires reporting of all accidents with personal injury and/or property damage over $200.

GLOSSARY OF TERMS

Abstainer - A person who indicates he never uses alcoholic beverages.

Accident Rate - The number of accidents per driver determined from the driving records for any group of drivers.

Clean Record - A driver record with no accidents or convictions of any kind.

Conviction Rate - The number of convictions for hazardous or non-hazardous traffic violations per driver.

Driver - A person who has a driver record in the respective state of the study site. These drivers may be licensed or non-licensed.

Drug User - A person who indicated on the questionnaire that he used drugs and/or a person who had a positive indication of drug use from the urine analysis.

Hard User - A person who uses a drug daily or several times a day.

Hazardous Traffic Violation - Charges of speeding, racing, hit and run, reckless driving, following too closely, improper turning, improper passing, running red light or stop sign, passing stopped school bus, improper lights and brakes, and improper use of lights are considered hazardous to traffic safety.

Initial Sample - The first arrestees contacted and those whose driver records were requested from the respective state licensing agency.

Moderate User - A person who uses a drug weekly, monthly or several times monthly.

Non-Hazardous Traffic Violation - Charges of expired driver license, driving with no license, no registration or improper registration, no liability insurance, violation of the Safety Responsibility Law, and improper muffler are considered non-hazardous to traffic safety.

Non-Traffic Violation Convictions - Convictions of parking violations and failure to appear in court are all of the non-traffic violation variety.

Occasional User - A person who uses a drug less than monthly or has tried it once or twice.

Study Sample - Those arrestees who either completed the questionnaire or provided a urine sample.

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