Analysis of DUI data from Drivers License Division

Background

The following analysis was completed using data provided by the Department of Public Safety, Drivers License Division. The data set included all reported DUI offenses committed between January 1990 and November 2000. Data elements included in the file were name of the arrestee, date-of-birth, date-of-arrest, gender and date-of-adjudication. Members of the Governor=s DUI taskforce requested this data analysis. Since this data did not include arrests before 1990 not all of the arrests are known for the individuals included in the sample.

Data Overview

In total, the dataset we received included 143,514 cases. Those cases are shown below, distributed by the year each offense was recorded.

Year of Arrest	Number of Arrests	Percent Of Total
1990	11,885	8.33
1991	11,078	7.72
1992	11,969	8.34
1993	12,815	8.93
1994	12,762	8.89
1995	14,354	10.00
1996	14,147	9.86
1997	13,071	9.11
1998	13,325	9.28
1999	14,287	9.96
2000*	13,807	9.62

As you can see from the table above, the number of arrests are remarkably constant throughout the time period under study.

 While there were 143,514 offenses reported, these offenses were committed by 102,528 separate individuals. The gender distribution of those arrested was 83% male and 17% female with 10% of the records missing gender identification. At the time of their first offense, most offenders (78%) were under the age of 40 with the largest group (39%) in their 20's. It was surprising that over 7% of the first time arrestees were over the age of 50.

Next lets examine the arrest records of those included in our file. Below is a table that displays the number of repeat offenses for each offender in the data set. Each row of the table is unique i.e. if an arrestee is included as having *5 or more offenses* he is not included in the row having had only *one* offense.

Number of Repeat Offenses	Number of Offenders	Percent Of Total
1	76,516	74.63
2	17,031	16.61
3	5,474	5.34
4	2,107	2.06
5 or more	1,400	1.36

As the table shows, nearly 75% of the arrestees only had one offense while the remaining had two or more offenses. *It is also true that 26,012 offenders committed 66,998 offenses or 25% of the offenders were responsible for 46% of the arrests.*

Because the file includes the date-of-arrest for each offense, we were able to construct a table that examined the time lapse between each subsequent arrest reported to the Driver=s License Division for those offenders that had multiple arrests.

Interval Between DUI Arrests	Number of Arrests	Percent Of Total
Less than 6 months	9,796	23.90
6 months - 1 year	6,236	15.21
1 year - 18 months	4,709	11.49
18 months - 2 years	3,875	9.45
2 years - 3 years	5,805	14.16
3 years - 4 years	3,856	9.41
4 years - 5 years	2,623	6.40
5 years - 6 years	1,663	4.06
6 years - 7 years	1,092	2.66
7 years - 8 years	680	1.66
8 years - 9 years	375	.91
9 years - 10 years	216	.53
Over 10 years	60	.15

Based on the information in the tables above, 74 percent of those arrested, which have had a subsequent arrest, are re-arrested within three years and 90 percent are arrested again within 5 years.

1995 Arrestees

While the entire dataset included all arrests between 1990 and November of 2000, we were asked to study the likelihood that an individual would be arrested for a second or subsequent offense. Because we had no data prior to 1990, we chose to examine those individuals that were first reported arrested in 1995. Our assumption was that if they had not been arrested between 1990 and 1995, then they most likely had not been previously arrested.   While this did provide a reasonable starting point, the delay between the first arrest and subsequent arrest may mean that some of those included in our A1995 analysis@ did have arrests prior to 1995 and that they maybe arrested subsequent to November 2000. With that caveat the follow analysis is a description of this group.

There were 9,647 people that we determined should be included in the Afirst time@ DUI arrest data for 1995. Those individuals had 13,187 total arrests. The gender distribution mirrored the entire file, 81percent were men, and 19 percent were females with approximately 20 percent of the gender data missing.

The table below shows the re-offense rates of those Afirst arrested@ in 1995.

Interval Between DUI Arrests	Number of Arrests	Percent Of Total
Less than 6 months	896	25.31
6 months - 1 year	576	16.27
1 year - 18 months	416	11.75
18 months - 2 years	327	9.24
2 years - 3years	554	15.65
3 years - 4 years	388	10.96
4 years - 5 years	281	7.94
5 years - 6 years	102	2.88

In the table above, we see that a slightly higher percentage (78%) of those arrested in 1995 and later re-arrested, were arrested again within the first three years of the original arrest. By contrast, the frequency of one-time arrestees mirrors the entire file with 73 percent arrested only once.

The two tables below show the demographic differences between those arrested once and those arrested multiple times.

Gender	Percent of those arrested only once	Percent of those with multiple arrest events
Female	20.6	14.3
Male	79.3	85.7

Age group*	Percent of those arrested only once	Percent of those with multiple arrest events
0-19	9.01	12.82
20-29	36.72	34.48
30-39	30.64	32.38
40-49	15.88	14.60
Over 50	7.75	5.71

*Age at first arrest

By examining these tables we see that those arrested multiple times are more likely to be male and slightly younger at the time of the their first arrest.

Time Analysis

The final look at the data is an overview of the time difference between the date arrested and adjudicated as reported on the Drivers License file.

We used only those arrests that were reported before 1998. This was done to avoid Askewing@ the data to those offenses that could not have been adjudicated because not enough time had elapsed from the date of arrest.

Time Between arrest and conviction	Number	Percent Of Total
0-30 days	26,852	34.65
31-60 days	14,740	19.02
61-90 days	10,971	14.16
91-180 days	13,941	17.99
181-365 days	7,142	9.22
366 days and over	3,851	4.97

Of those arrested between 1990 and 1998, 35% were adjudicated within 30 days, 68% were

adjudicated within 90 days, and 95% within 1 year. However, this analysis did not include 37,923 (33%) cases because no conviction date was posted to the file.

Summary

$ *25% of the arrestees were responsible for 46% of the arrests*

$ *78% of first time arrestees were under the age of 40*

$ *7% of the first time arrestees were over the age of 50*

$ *75% of the arrestees only had one offense*

$ *74% of those arrested, who have a subsequent arrest, are re-arrested within three years and 90% are re-arrested within 5 years*

$ *Those arrested multiple times for DUI are more likely to be male and slightly younger at age of their first arrest*

$ *Of those arrests between 1990 and 1998, 35% were adjudicated within 30 days, 68% were adjudicated within 90 days, and 95% within 1 year*