Report to
The Pinellas County Data Collaborative

2010 Findings

Submitted by

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Contents

Purposes and Uses of this report:

This report was generated in response to specific questions posed by the Pinellas County Data Collaborative. It was created to inform administrative policy and program decisions that benefit the citizens of Pinellas. Before reusing or citing findings in this report, please contact us to ensure accurate understanding of the analyses and interpretation of results. Questions should be directed to Diane Haynes at dhaynes@fmhi.usf.edu or 813-974-2056 or Audrey Hart at harta@bcs.usf.edu or 813-974-4183.

Executive Summary

The Policy Services and Research Data Center (PSRDC) at the Florida Mental Health Institute (FMHI) are assisting the Pinellas County Data Collaborative in examining patterns of recidivism of adults in the Pinellas County Jail using 10 years of Pinellas County Arrest Data (CJIS) as well as other state and local secondary data systems. The goals are to identify patterns by individual inmate characteristics, crime level and type, over time as well as the impact of interactions with other local and state criminal Justice, physical and mental health services, emergency services, and social services. The data sources used were 1) statewide secondary data from Florida Department of Law Enforcement (FDLE), The Florida Department of Children & Families (DCF), Florida Department of Corrections (DOC), The Florida Department of Juvenile Justice (DJJ), as well as the Agency for Health Care Administration (AHCA), and 2) local secondary data from Pinellas County Emergency Medical Services (EMS), Pinellas County Health and Human Services (HHS), and the initial data identifying the study group, Pinellas County Criminal Justice Information System (CJIS) from 07/01/1998 – 06/30/2009. Each of these systems was linked with the initial Pinellas County CJIS data identifying all interactions over a 9 year period.

Of the persons arrested at the beginning of the study 63% were arrested at least one more time in the 10 year study period. Differences in arrest rates existed by gender, race and age group.
The number of days of incarceration increase for each subsequent arrest while the time between arrests decreased. There were differences between white and black arrestees in the number of days of incarceration.

Patterns were studied for crime level and sequence of arrests. The patterns suggested that first time felony offenders were more likely to have further felony charges. The patterns also suggested that those who are likely to have repeat arrests were more likely to have the next arrest within two years.

Heavy users of the CJIS system were defined as those with 10 or more arrests or 365 days or more of incarceration. The heavy users were compared to the not heavy users with regard to their interaction with other secondary data sources to determine if there were differences in use of other systems. Heavy CJIS users were shown to have used all other systems except the DJJ system at a higher rate than not heavy CJIS users.

Overview

Current Project Goal and Research Objectives

Policy Services and Research Data Center (PSRDC) at the Florida Mental Health Institute (FMHI) are assisting the Pinellas County Data Collaborative in examining patterns of recidivism of adults in the Pinellas County Jail using 10 years of Pinellas County Arrest Data (CJIS) as well as other state and local secondary data systems.

Data Sources

- Pinellas County Criminal Justice Information System (CJIS) – Arrests information (07/01/1998 – 06/30/2008)
- Pinellas County Emergency Services (EMS) – Service information (07/01/2005-06/31/2009)
- Pinellas County Health & Human Services (HHS) – Service information (07/01/2004-06/30/2009)
- American Health Care Association AHCA – (BA) Baker Act Initiations (72-hour Involuntary Psychiatric Evaluation) (01/01/1999-06/30/2009)
- Florida Department of Children & Families (DCF/IDS) – SAMHIS Mental Health and Substance Abuse Service Events (07/01/1998-06/30/2009)
- Florida Department of Law Enforcement (FDLE) – Arrest and crime information (07/01/2002-06/30/2009)
- Agency for Health Care Administration (AHCA) – Medicaid Enrollment &Claims data (07/01/1998-06/30/2008)
- Florida Department of Juvenile Justice (DJJ) – Arrest and placement information (01/01/2003-12/31/2008)

Methodology

The analyses relied on 8 statewide and local administrative data sources: 1) Florida arrest information kept by the Florida Department of Law Enforcement (FDLE), which includes records of individuals arrested in Florida and made available through a memorandum of understanding with the Florida Criminal Justice, Mental Health, and Substance Abuse Technical Assistance Center (TAC) at the Florida Mental Health Institute (FMHI); 2) Florida Medicaid claims data (Medicaid), made available to the FMHI under contract with the Florida Agency for Health Care Administration (AHCA), which administers Florida's Medicaid program; 3) Florida mental health and substance abuse information (SAMHIS) kept by the Florida Department of Children & Families (DCF), which includes mental health and substance abuse service event information and made available through a memorandum of understanding with the Florida Criminal Justice, Mental Health, and Substance Abuse Technical Assistance Center (TAC) at the Florida Mental Health Institute (FMHI); 4) Florida Baker Act Initiations (BA) made available to and housed at the Florida Mental Health Institute (FMHI) under contract with the Florida Agency for Health Care Administration (AHCA); 5) Florida Department of Juvenile Justice (DJJ) made available through agreements of the Pinellas County Data Collaborative, which includes offense, placement and PACT assessment information; 6) Pinellas County Emergency Medical

Services (EMS) made available through agreements of the Pinellas County Data Collaborative, which includes transport and treatment information; 7) Pinellas County Health and Human Services (HHS) made available through agreements of the Pinellas County Data Collaborative, which includes social, physical, and mental health services; 8) Pinellas County Criminal Justice Information System (CJIS) made available through agreements of the Pinellas County Data Collaborative, which includes arrests, and court information.

All data management and analyses were conducted in SAS (version 9.1). Individuals were linked across these two systems employing public domain record linkage and consolidation software called The Link King (http://www.the-link-king.com/), written in SAS. It uses probabilistic and deterministic linkage protocols.

Definitions

- An **arrest** was defined as a continuous period of incarceration during the study period. This could also be referred to as in incarceration.
- The **study period** was defined as 07/01/1998 and 06/30/2008.
- An **arrestee** was defined as a person who had an arrest as defined above during the study period.
- The **first arrest** was defined as the first arrest that occurred within the study period. This was not necessarily the first time an arrestee was ever arrested, but it was their first arrest after 07/01/1998.

Overall CJIS Population

The overall population included all those arrested in Pinellas County, Florida between 07/01/1998 through 06/30/2008.

Pinellas County arrested population
Included in the study were 202,880 individuals who were arrested at least one time between 07/01/1998 and 06/30/2008. Those individuals accounted for a total of 522,068 arrests. Overall, 45% (91,686) individuals were arrested more than one time in the ten year span. Keep in mind that the study period was a ten year time span, so those arrested in 1998 have had more time to be re-arrested than those arrested for the first time in later years and, conversely, those whose first arrest in the study period was in 2006 were only followed for up to two years. An analysis of the pattern of recidivism over the study time period is included for a more accurate view of the level of recidivism. The range of number of total arrests over the course of the ten years studied was from 1 to 90, with the average number of arrests per individual equal to 2.57.

Demographics

Gender
Males accounted for 73% of the arrested population and 77% of arrests. The maximum number of arrests over the 10 year period was 53 for females and 90 for males. Average number of arrests per individual was 2.26 for females and 2.69 for males.

Figure 1 Arrestees and arrests by gender
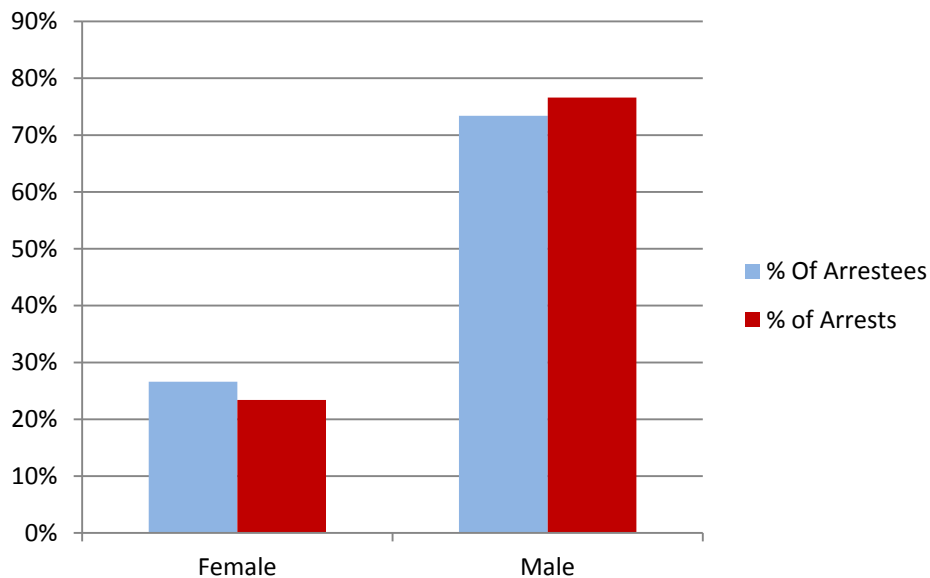
Race
Race was defined by the CJIS variable race_cd values "B" ="Black", "W"= "White", "A"="Asian". All other race_cd values were coded as "Other". Whites made up 76% of the study population and accounted for 71% of all arrests. Blacks were 21% of the study population and accounted for 27% of the total number of arrests. Blacks also had a higher average number of arrests per arrestee (3.31) compared to Whites (2.42) and Asians (1.84).

Figure 2 Arrestees and arrests by race
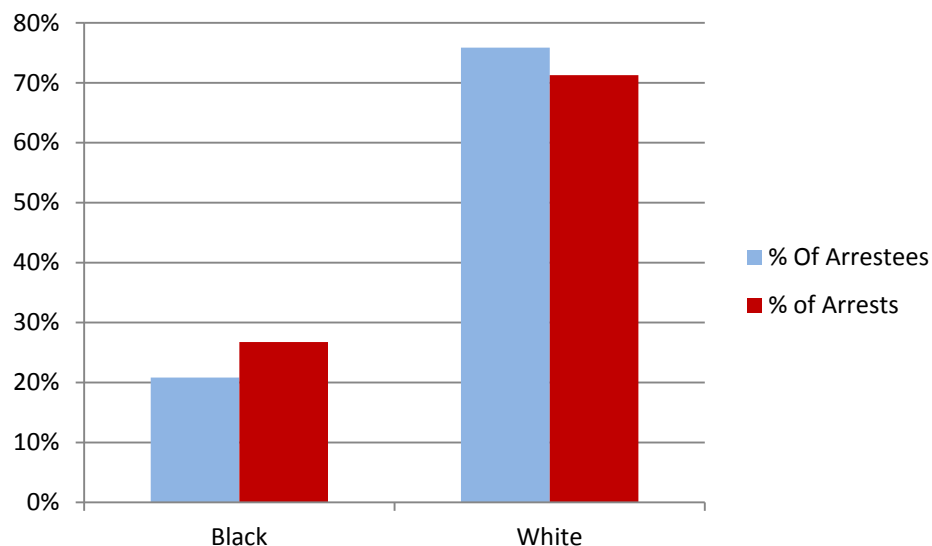
Age Group

Age was calculated as the age of the individual when they first appeared in the arrest data, therefore the age reported may not be the person's age at the time of a particular subsequent arrest.

The overall re-arrest rate for individuals under 20 years of age was remarkably high at 59% compared to the overall 45%. It is possible that those we identify when they are younger are less likely to be transient and therefore remain in the system longer. It does appear that individuals who become involved in the criminal justice system at a younger age are at high risk of recidivism; however we can't make that determination with these data because we don't know at what age everyone entered the system.

The under 20 group, while being only 9.3% of the population, accounted for 12.4% of the total arrests. Thirty to thirty-nine year olds comprised the most number of arrestees (53,941, 26.6%) and arrests (144,055, 27.2%).

Those with the highest maximum number of arrests per individual were in the 50-59 year range with a maximum of 90 arrests and in the 40-49 year range with a maximum of 87 arrests. The highest number of average arrests per individual was in the youths under 20 group with 3.42. For black youths the average number of arrests was 4.42 compared to the overall average number of arrests of 2.57.

Table 1 Arrestees, arrests, multiple arrests, maximum number and average number of arrests

Age	Number of Arrestees	Number of Arrests	Number Arrested more than once	Percent Re-arrested	Maximum number of arrests	Average Number of Arrests
Under 20 yoa	18,951	64,784	11,255	59%	39	3.42
20 to 25	36,048	94,970	17,117	47%	65	2.63
26 to 29	23,291	59,238	10,509	45%	58	2.54
30 to 39	53,941	141,993	24,948	46%	68	2.63
40 to 49	45,452	114,055	20,058	44%	87	2.51
50 to 59	18,618	36,652	6,292	34%	90	1.97
60 to 64	3,296	5,575	844	26%	42	1.69
65 +	3,283	4,801	663	20%	35	1.46

Number of arrests by Year

The number of arrestees and the number of arrests per fiscal year both show a slight trend upward, agreeing with the modest growth rate Pinellas County underwent in the decade[1].

Figure 3 Arrestees and arrests by fiscal year FY98-FY07

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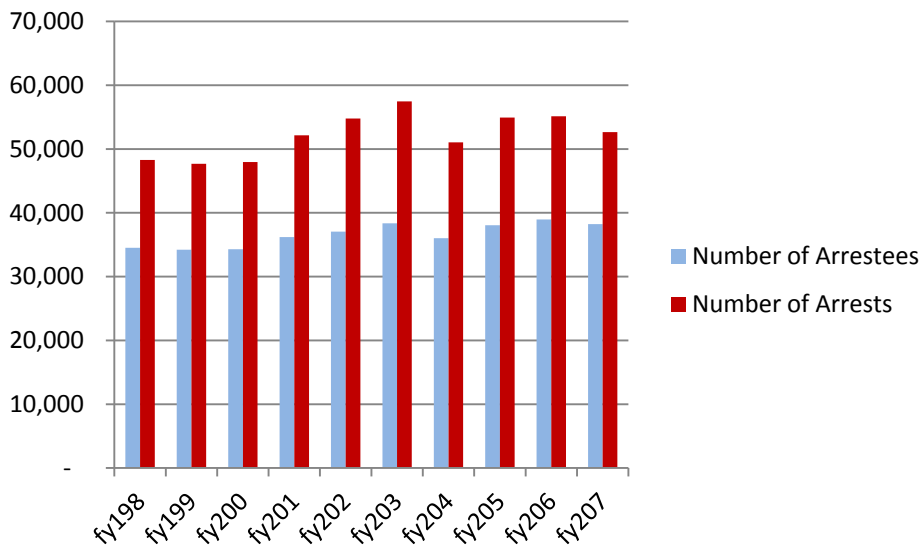
[1] University of Florida Bureau of Economic and Business Research Estimates of Population by County and City in Florida, April 1, 2007

Recidivism

Between 25% and 28% of those arrested in a given fiscal year were arrested again within that same fiscal year. Of the 34,517 arrested in fy98, 21,799 (63%) of them had at least one subsequent arrest in the study period.

Table 2 shows the demographic breakdown for one-time arrestees compared to those with more than one arrest in the study period. A higher proportion of repeat offenders were male, a higher proportion were black and a higher proportion were in the younger age groups.

Table 2 Demographics for those with only one arrest compared to those with more than one arrest

	One arrest		More than one arrest	
Gender	#	%	#	%
Female	32,447	29%	21,540	23%
Male	78,747	71%	70,146	77%
Race	#	%	#	%
Asian	550	0%	241	0%
Black	17,771	16%	24,472	27%
White	88,195	79%	65,710	72%
Other	4,678	4%	1,263	1%
Age	#	%	#	%
Under 20 yoa	7,696	7%	11,255	12%
20 to 25	18,931	17%	17,117	19%
26 to 29	12,782	11%	10,509	11%
30 to 39	28,993	26%	24,948	27%
40 to 49	25,394	23%	20,058	22%
50 to 59	12,326	11%	6,292	7%
60 to 64	2,452	2%	844	1%
65 +	2,620	2%	663	1%

The chart below shows the recidivism rate starting with fy07 which is evaluating data from fy07 and fy08. The next data point (fy06) evaluates data from fy06, fy07 and fy08. The chart shows that, as more data is evaluated for each successive year, the recidivism rate goes up. It appears to level off at around 60% after fy03 (with 6 years of data). This implies that, in general, those who are likely to repeat will do so within the first 6 years of their entry into the system. It should also be noted here that the overall rate of recidivism reported above (45%) could be an underestimation and that it is reasonable to assume that, given sufficient data, the rate would be about 60%.

Figure 4 Percent of those arrested in FY who were re-arrested
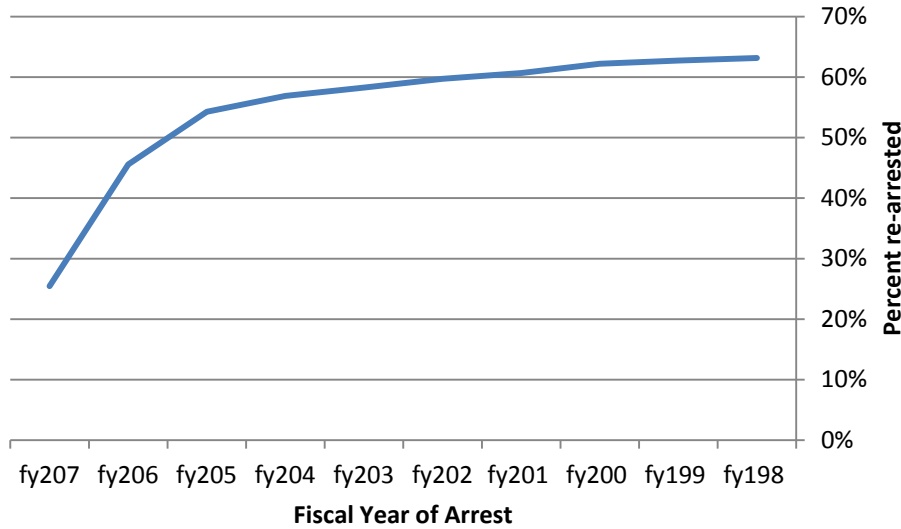
The table below shows the recidivism rate and average number of arrests per year for the fiscal years in the study period.

Table 3 Arrestees and arrests by fiscal year

All Arrestees	Number of Arrestees	Number of Arrests	Number Arrested more than once in FY	Percent Re-arrested in same FY	Number Arrested more than once in study period	Percent Re-arrested in study period	Maximum number of arrests	Average Number of Arrests per Year
fy198	34,517	48,275	8,529	24.7%	21,799	63%	20	1.40
fy199	34,215	47,686	8,374	24.5%	21,470	63%	26	1.39
fy200	34,300	47,959	8,456	24.7%	21,342	62%	40	1.40
fy201	36,196	52,138	9,081	25.1%	21,967	61%	34	1.44
fy202	37,051	54,767	9,396	25.4%	22,129	60%	34	1.48
fy203	38,346	57,470	10,163	26.5%	22,341	58%	41	1.50
fy204	36,031	51,048	9,366	26.0%	20,505	57%	42	1.42
fy205	38,045	54,938	10,552	27.7%	20,655	54%	50	1.44
fy206	38,953	55,135	10,441	26.8%	17,753	46%	28	1.42
fy207	38,223	52,652	9,726	25.4%	9,726	25%	16	1.38

Incarceration Length

Overall, the total number of days an individual spent in jail ranged from 0 to 2,952 days with an average of 56.6. It should be noted that the median (the value which 50% fall above and 50% fall below) was 1 and the mode (the value that occurred most often) for total days spent in jail was 0, with 58,929 (29%) arrestees having spent less than a full day in jail.

The average number of days of incarceration increased with each additional arrest. The average number of days of incarceration for the first arrest in the study time period was 12. For the second

arrest the average was 22 days and for the third arrest in the study time period the average was 29 days. Average number of days incarcerated for the first arrest in the study period was more than twice for Blacks (22 days) of that for Whites (10 days) and the disparity continued, although to a lesser degree, through subsequent arrests. While the mode was 0 for all arrest sequences for blacks and whites, median values (figure 6) also showed the disparity between races for arrests after the first.

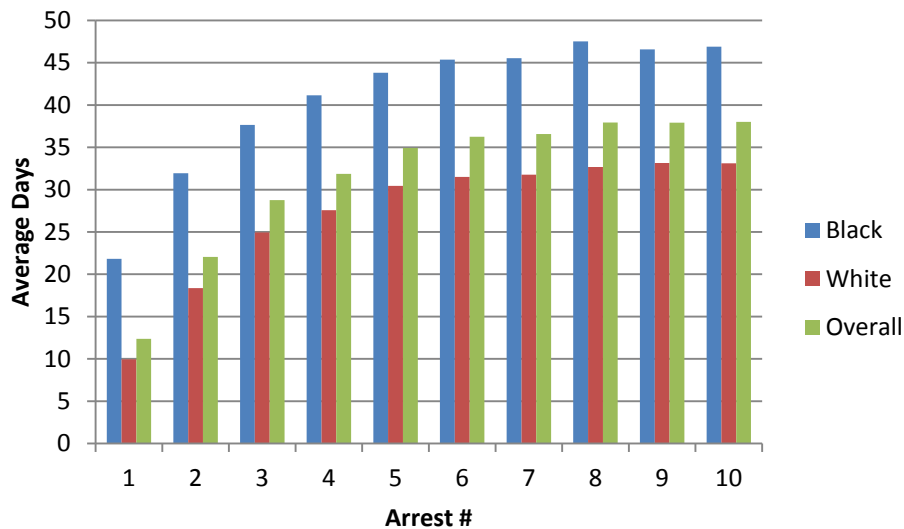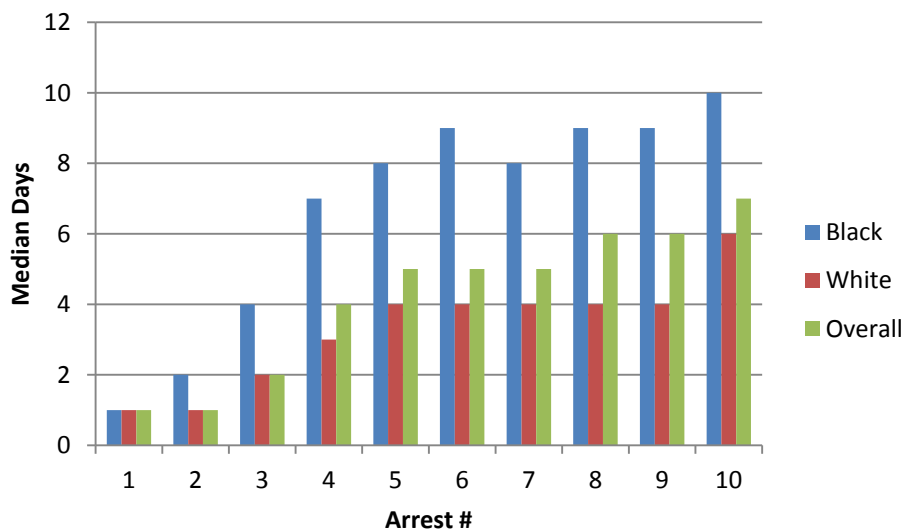**Figure 5 Average number of days incarcerated for additional arrests**

Figure 6 Median number of days incarcerated for additional arrests

Time to re-arrest

The average time between incarcerations (time from end of one incarceration to the beginning of the next incarceration) decreased with each additional incarceration. The average number of days

between the first incarceration in the study period and the second was 463. Between the second and third the average dropped to 339 and between the third and fourth incarceration the average dropped further to 292.

Figure 7 Average and median number of days between incarcerations
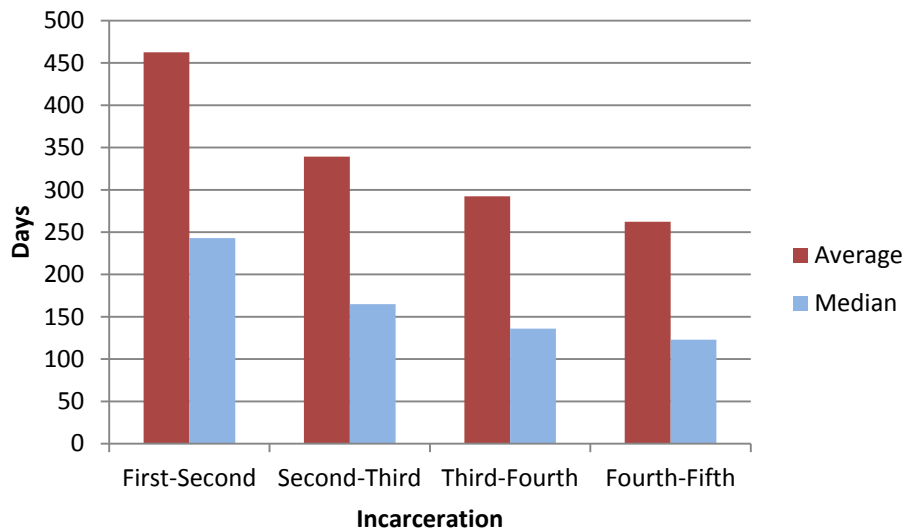
Of the 34,517 individuals arrested in fy98, 10,407 (30%) were re-arrested in the following fiscal year (fy99) and 7,897 (23%) were re-arrested in fy07. As the chart below shows, the pattern remained stable for those arrested in fy99-fy05.

Figure 8 Percent of cohort group re-arrested in subsequent years

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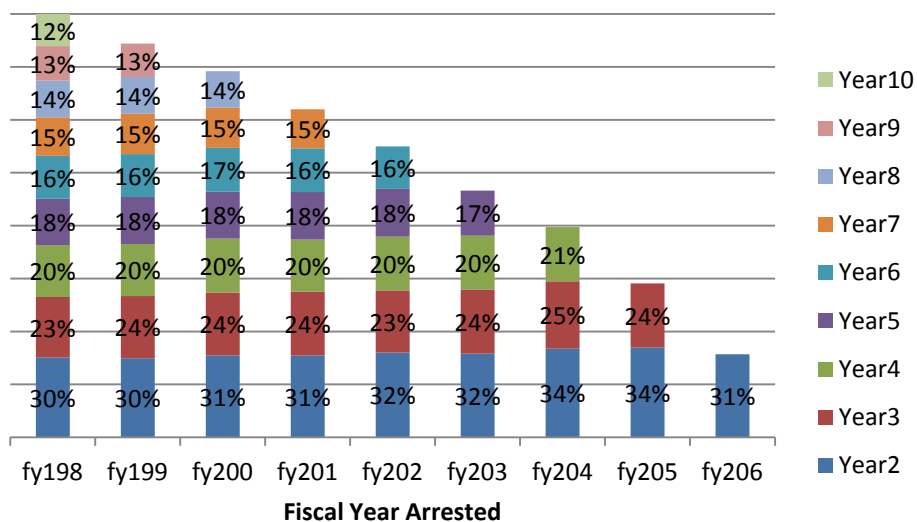
For those arrested in fy98 the following chart shows the average number of times they were re-arrested in subsequent years. Again, the pattern continued for those arrested in succeeding years. For example; those arrested in fiscal year 1998, 30% were re-arrested in Fiscal year 1999 and 12% were re-arrested in 2007.

Figure 9 Average number of arrests per year for those arrested in FY98
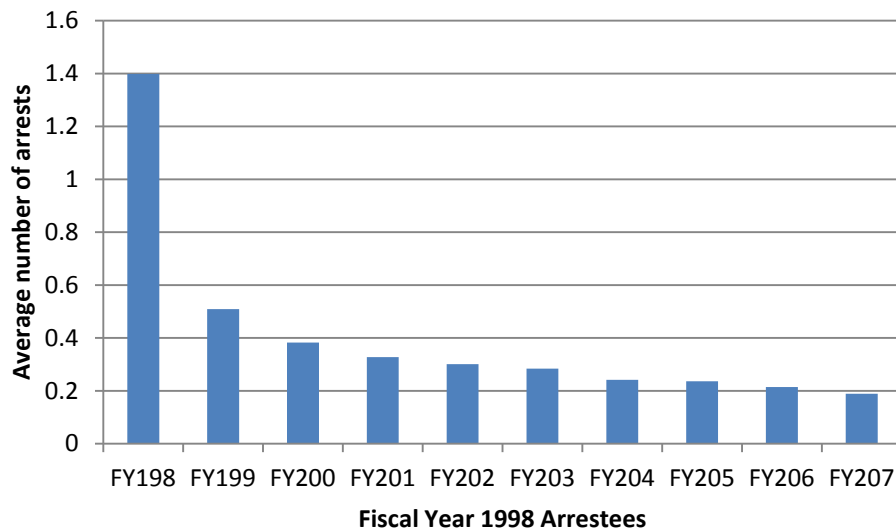
Crime Level type (Misdemeanor/Felony)

Forty-four percent (89,733) of all arrestees had at least one felony charge over the study period and 21% had more than one felony.

Gender
The chart below shows the proportion of felony charges for males and females. Fifty-four percent of males had no felony arrests compared to 61% of females with no felony arrest. Twenty-three percent and 22% of males and females, respectively, had one felony arrest.

Figure 10 Proportion of felonies by gender
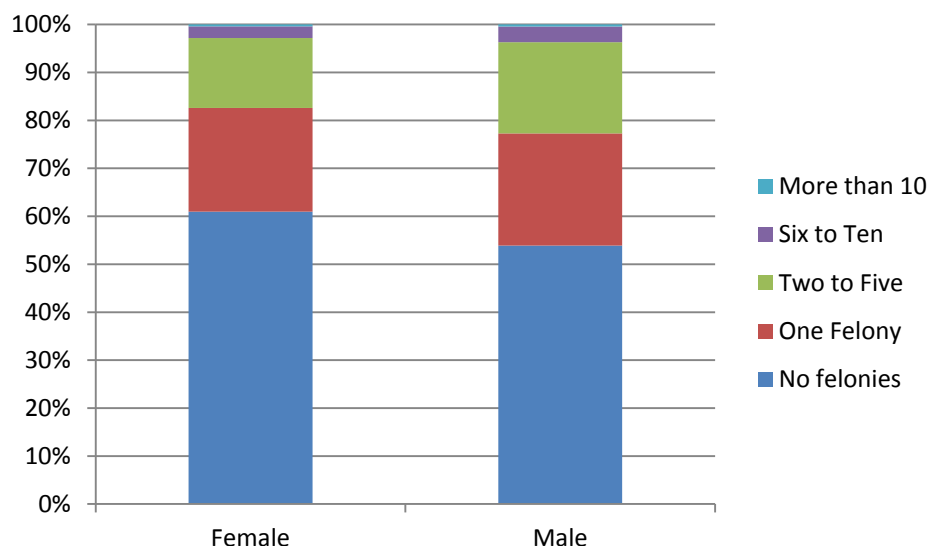
Race

Sixty percent of Whites had no felonies compared to 39% of Blacks. Thirty-six percent of Blacks had 2 or more felonies compared to 18% of Whites with 2 or more felonies

Figure 11 Proportion of felonies by race
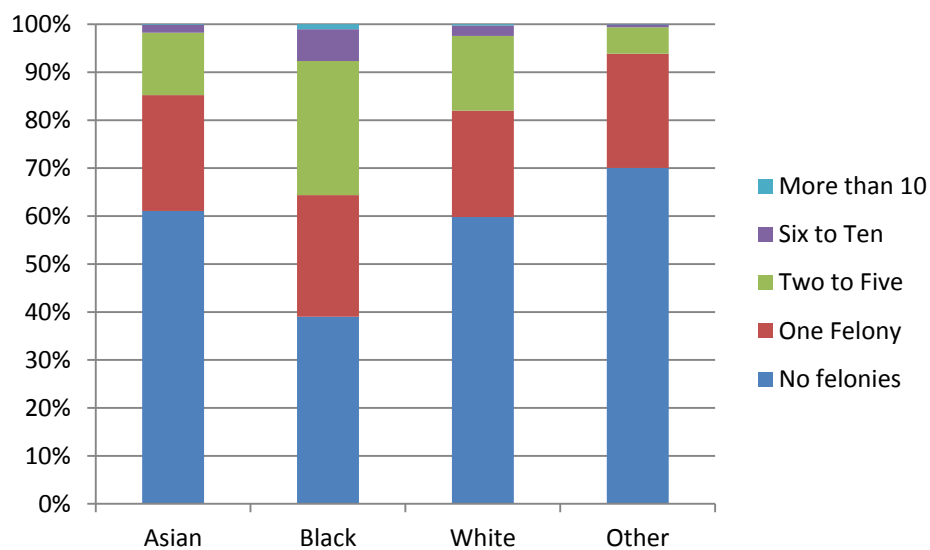
Age Group

Younger arrestees show higher percentages of felony charges than older arrestees. Fifty-two percent of those under 20 at their first arrest in the study period had at least one felony charge compared to 26% of those over 65.

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Figure 12 Proportion of felonies by age
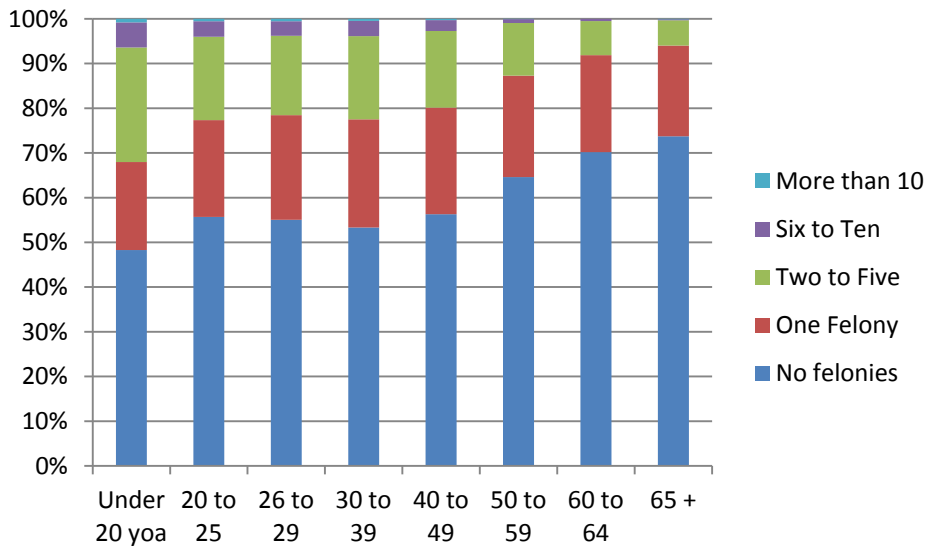
Arrest and Crime Level Patterns

Fiscal Year Patterns

In an effort to visualize the patterns of arrests over the span of fy98 through fy07 a pattern variable was created. The patterns were then ranked by frequency of occurrence to see if visible clusters of patterns would emerge. The variable was constructed as a ten place character with a column for each fiscal year. In the first column, designating the activity in fy98, would either be a "0", indicating no arrests in that fiscal year, an "M" indicating at least one arrest with the highest level charge a misdemeanor, or an "F" indicating at least one arrest with the highest level charge a felony. For example if someone had a misdemeanor charge in fy99 and no other arrests their pattern would be "0M00000000".

When the results were sorted by pattern frequency we find, not surprisingly, that the most frequent patterns were one-misdemeanor patterns like the example above. In fact, the top ten patterns were those:

000000000M	13144
00000000M0	10154
M000000000	9688
0M00000000	8361
00000M0000	8356
000M000000	8262
0000M00000	8261
00M0000000	7861
0000000M00	7587
000000M000	6809
Total	88483
Percent of Overall	44%

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The next ten most frequent patterns were the one-felony patterns:

F000000000	4994
0000000F00	4139
000000F000	3756
0F00000000	3663
00000F0000	3659
000000000F	3383
0000F00000	3339
000F000000	3337
00F0000000	3266
00000000F0	3233
Total	36769
Percent of Overall	18%

Sixty-two percent of arrestees have one or more arrests in just one fiscal year and then do not repeat again in the study period. The remaining 77,628 arrestees show interesting patterns of recidivism. The most common pattern is the same level of arrests in two consecutive years. The percent of multi-years in the table refers to the percent of those patterns that have more than one year with at least one arrest each.

00000000MM	1602	00000000FF	1212
MM00000000	1193	0000000FF0	965
0000000MM0	1155	FF00000000	938
0000MM0000	969	00000FF000	758
0MM0000000	922	000000FF00	681
00MM000000	921	0FF0000000	611
000MM00000	901	0000FF0000	584
00000MM000	810	00FF000000	563
000000MM00	780	000FF00000	479
Total	9253	Total	6791
Percent of Overall	5%	Percent of Overall	3%
Percent of Multi-years	12%	Percent of Multi-years	9%

Interestingly, the next most common pattern is the "M0M" pattern (misdemeanor arrest followed by a year with no arrests, then another misdemeanor), followed by the "MF" pattern.

|				
M0M0000000	462		00000000MF	403
0M0M000000	390		MF00000000	380
000M0M0000	388		00000MF000	255
000000M0M0	366		000MF00000	246
00M0M00000	346		000000MF00	241
00000M0M00	314		0MF0000000	234
0000M0M000	303		0000000MF0	226
Total	2569		0000MF0000	219
Percent of Overall	1%		00MF000000	207
Percent of Multi-years	3%		Total	2411
			Percent of Overall	1%
			Percent of Multi-years	3%

After these patterns the frequencies become too small to make any distinctions between patterns. The implications of this exercise are first, that the vast majority of repeat offenders will repeat in a short period of time. This suggests that intervention programs aimed at reducing recidivism would be most effective if applied quickly to the first time offender, especially those whose first offense is a felony, since they will tend to repeat with another felony. Second, it shows that progression from misdemeanor to felony is relatively rare. This point will be illustrated in the next section, where we look at sequence of arrests without regard to fiscal year.

Sequence of misdemeanors and felonies

For this analysis we look at the sequence of arrests regardless of whether they happened all in the same fiscal year or spread out over the entire study period. There are some limitations to this approach that might result in over-counting felonies since we used continuous periods of incarceration to count arrests. Therefore, if someone was arrested on a felony charge, was released and then returned after sentencing, they would be counted as having a second felony. More robust analysis of sequencing could clarify this issue in the future.

Most (68%) of first arrests in the study period were misdemeanors. People who had a second arrest and whose first arrest was a misdemeanor were most likely to be charged with another misdemeanor. Similarly, if they were arrested a third time and the first two arrests were misdemeanors they were more likely to have committed a third misdemeanor. However, if the first arrest was a felony, the second arrest was more likely to also be a felony and if the first and second arrests were felonies the third was most likely also a felony. The following graphic illustrates the patterns. Percentages are the percent of the overall study population.

Figure 13 Charge level sequence
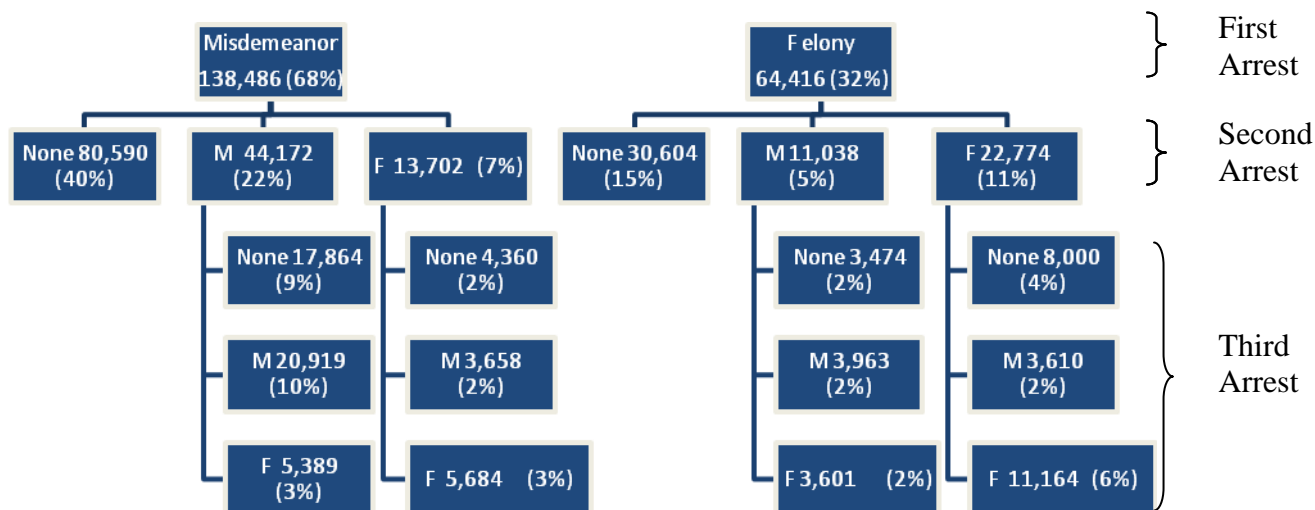
This shows that first time felony offenders have the highest potential for felony recidivism. In other words, two thirds of the 3rd arrest felonies are committed by the one third whose first offense was a felony. This information, combined with the yearly pattern data, indicates that first time felony offenders are likely to repeat, they are likely to repeat with another felony and they are likely to do it within a relatively short period of time.

System Interaction

Figure 14 Available system data

	fy198	fy199	fy200	fy201	fy202	fy203	fy204	fy205	fy206	fy207
CJIS	██
BA		███
EMS		███
FDLE					████████████████████████████████████
MED	██
DJJ						████████████████████████████
IDS	██
HHS	██
DOC								████████████████████

Figure 13 shows the available data for the study time period for each of the systems under investigation. Relatively low match rates for some systems were due partially to the limited time frames of available data.

Rate of system interaction for CJIS population with systems

The highest match rate was, not surprisingly, with FDLE. We would expect the match with FDLE to approach 100% if data were available for the entire study period. Other systems match rates are shown in the table below, along with a measurement of interaction for each system. For example, for the DCF/IDS data a count of service dates was calculated for each person who appeared in that system. The mean, minimum and maximum values of each statistic are reported.

Table 4 CJIS study population and interaction with other systems

	Match		Measure of interaction			
System	#	%	Statistic	Mean	Minimum	Maximum
FDLE	103,718	51%	Number of arrests	2.7	1	101
DCF/IDS	47,003	23%	Service dates	21.0	4	1,401
Medicaid	37,625	19%	Claims	46.4	1	2,315
EMS	25,496	13%	Service dates	2.7	1	141
Baker Act	18,715	9%	Exam initiations	2.5	1	92
HHS	12,469	6%	Service dates	12.0	1	294
DOC	11,495	6%	None	-	-	-
DJJ	5,213	3%	Charges	6.3	1	63

Of the 47,003 people who had DCF/IDS services 82% received substance abuse services and nearly 100% received mental health services (only 85 people received substance abuse services only).

Of the 11,495 who interacted with the Department of Corrections (DOC) 7% were in prison before their first interaction with CJIS during the study period. Seventy-seven percent went to prison after their last interaction with CJIS in the study period and 16% went to prison a sometime between interactions with CJIS during the study period. The average number of interactions with CJIS before going to prison was 4.8 (median=3).

Heavy CJIS Users

Heavy CJIS users are defined as those with 10 or more arrests or with 365 days or more in jail. A total of 8,385 subjects met those criteria (4% of the study population). The chart below shows the interaction with other systems by heavy CJIS users vs. not heavy CJIS users. Heavy CJIS users had higher levels of interaction with all systems except the DJJ system. Interaction with the DCF/IDS system was particularly high among the heavy CJIS users (45%) as compared with not heavy CJIS users (22%).

Demographics for the heavy CJIS users are displayed in table 7. Heavy CJIS users had higher proportion of males, higher proportion of blacks and higher proportion of younger offenders.

Table 5 Demographics for Not Heavy and Heavy CJIS users

	Not Heavy User		Heavy User	
Gender	#	%	#	%
Female	52,450	27%	1,527	18%
Male	142,045	73%	6,848	82%
Race	#	%	#	%
Asian	776	0%	15	0%
Black	39,252	20%	2,991	36%
White	148,586	76%	5,319	63%
Other	5,881	3%	60	1%
Age	#	%	#	%
Under 20 yoa	17,572	9%	1,379	16%
20 to 25	34,539	18%	1,509	18%
26 to 29	22,314	11%	977	12%
30 to 39	51,584	27%	2,357	28%
40 to 49	43,775	23%	1,677	20%
50 to 59	18,225	9%	393	5%
60 to 64	3,244	2%	52	1%
65 +	3,242	2%	41	0%

The chart below shows the percent of heavy CJIS users who used other services and percent of not heavy CJIS users who used other services. Chi-square tests were performed on each system to determine association between level of CJIS use and use of the system. All tests were statistically significant as the following series of tables show.

Figure 15 Users of other systems by heavy CJIS and not heavy CJIS users
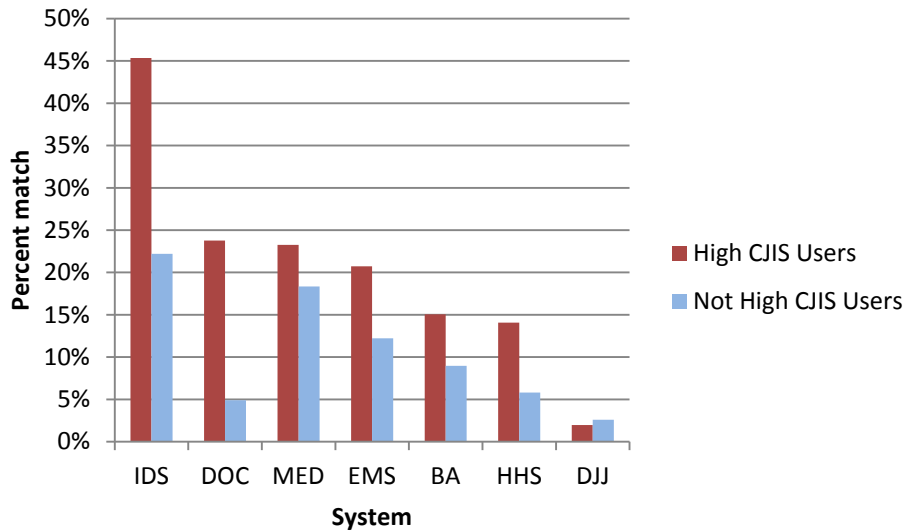
NOTE: IDS is a mental health and substance abuse service use reporting system. This analysis shows that those in CJIS who are high users have higher mental health and substance abuse needs than those who are not.

Table 6 Chi-square analysis of heavy CJIS vs. not heavy CJIS users and use of IDS Services

		IDS Services		
		No	Yes	Total
CJIS Use	Not Heavy	151,294	43,201	194,495
		78%	**22%**	
	Heavy	4,583	3,802	8,385
		55%	**45%**	
	Total	155,877	47,003	202,880

Statistic	DF	Value	Prob
Chi-Square	1	2416.193	<.0001

Table 7 Chi-square analysis of heavy CJIS vs. not heavy CJIS users and use of DOC System

		DOC System		
		No	Yes	Total
CJIS Use	Not Heavy	184,993	9,502	194,495
		95%	**5%**	
	Heavy	6,392	1,993	8,385
		76%	**24%**	
	Total	191,385	22,495	202,880

Statistic	DF	Value	Prob
Chi-Square	1	5362.6975	<.0001

Table 8 Chi-square analysis of heavy CJIS vs. not heavy CJIS users and use of Medicaid Services

		Medicaid Services		
		No	Yes	Total
CJIS Use	Not Heavy	158,821	35,674	194,495
		82%	**18%**	
	Heavy	6,434	1,951	8,385
		77%	**23%**	
	Total	165,255	37,625	202,880

Statistic	DF	Value	Prob
Chi-Square	1	129.1182	<.0001

Table 9 Chi-square analysis of heavy CJIS vs. not heavy CJIS users and use of EMS Services

		EMS Services		
		No	Yes	Total
CJIS Use	Not Heavy	170,737	23,758	194,495
		88%	**12%**	
	Heavy	6,647	1,738	8,385
		79%	**21%**	
	Total	177,384	25,496	202,880

Statistic	DF	Value	Prob
Chi-Square	1	530.0961	<.0001

Table 10 Chi-square analysis of heavy CJIS vs. not heavy CJIS users and Baker Act Exam Initiations

		Baker Act Exam Initiation		
		No	Yes	Total
CJIS Use	Not Heavy	177,042	17,453	194,495
		91%	**9%**	
	Heavy	7,123	1,262	8,385
		85%	**15%**	
	Total	184,165	18,715	202,880

Statistic	DF	Value	Prob
Chi-Square	1	354.5353	<.0001

Table 11 Chi-square analysis of heavy CJIS vs. not heavy CJIS users and use of HHS Services

		HHS Services		
		No	Yes	Total
CJIS Use	Not Heavy	183,207	11,288	194,495
		94%	**6%**	
	Heavy	7,204	1,181	8,385
		86%	**14%**	
	Total	190,411	12,469	202,880

Statistic	DF	Value	Prob
Chi-Square	1	955.6195	<.0001

Table 9 Chi-square analysis of heavy CJIS vs not heavy CJIS users and use of DJJ System

		DJJ Services		
		No	Yes	Total
CJIS Use	Not Heavy	189,447	5,048	194,495
		97%	**3%**	
	Heavy	8,220	165	8,385
		98%	**2%**	
	Total	197,667	5,213	202,880

Statistic	DF	Value	Prob
Chi-Square	1	12.6488	<.0004

Additionally, the number of systems that a person interacted with shows differences for heavy vs. not heavy CJIS users. Heavy CJIS users were twice as likely to have interaction with 2 or more other systems as not heavy CJIS users (67% vs. 33%).

Figure 16 Number of Systems Used
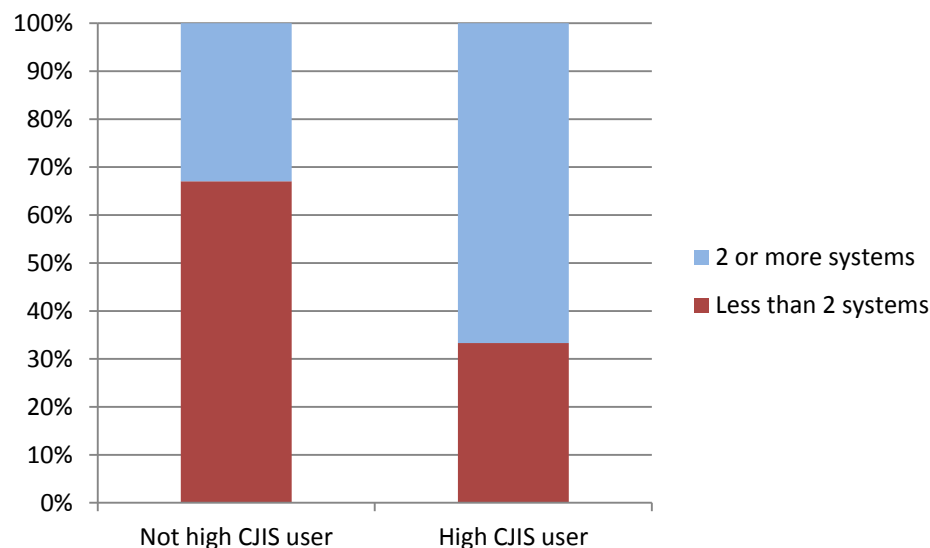
Limitations

There were data limitations in this study which include:
- Some missing data in the Pinellas County Criminal Justice System
  - NO SSN available - SSN is the only identifying information to link with the Baker Act System data (72-hour Involuntary Psychiatric Evaluation). SSN was gathered from the other 6 data systems and then used to link to the Baker Act Initiations. It would be expected that the number of interactions with the Baker Act system is an undercount. All

other system linking/matching individuals across systems were done using Last/First Name, Date of Birth, SSN, and Gender.

o For the purpose of this study an "arrest" was defined as a continuous period of time of incarceration. No distinction was made for arrests related to a previous crime, such as violation of probation or failure to appear.

o It was possible after linking across systems, multiple unique system identifiers would be found for a low number of the individuals, to make this analysis as clean and simple as possible only one unique identifier, when multiple identifiers were found, was used. This was the unique identifier with the highest matching score with the CJIS individual matched with.

- Some missing time periods in the other data systems used

o The goal was to identify system interactions of the Pinellas County criminal justice population with the 7 other data systems for 9 years. Due to limitations in the lag time to receive recent interactions and to the lack of historical data for some systems interactions are underestimated for all systems. Lack of historical data was limiting for FDLE data (no data for FY98-FY01), DJJ data (no data for FY98-FY02) and DOC (limited data for FY98-FY04).

Conclusion and Discussion

Summary and Discussion

Recidivism rates approached 63% over a ten year period. The rate at four years after the start of tracking was 57%. Most of those who were arrested more than once in the study period had their second arrest within the first two years.

The number of days of incarceration increased for each of the first 10 arrests under study. The time ranged from 12 days for the first incarceration to 38 days for the 10th. The range for white arrestees was from 10 days for the first incarceration to 33 days for the 10th while the range for black arrestees was from 21 days for the first incarceration to 47 days for the 10th. Further study focusing on racial disparities, including type of crime, would be of interest. It would also add clarity if we could identify individuals' actual first arrest rather than the first arrest in the study period which may or may not be their first time arrested.

Time to re-arrest decreased for each arrest. The average time between the first arrest in the study period and second arrest in the study period was 463. The average time between the 3rd and 4th arrests in the study period was 292 days. It is interesting to note that the median (the value at which 50% fall above and 50% fall below) between the first and second arrest was 243 days, which again shows that the majority of second arrests occurred within one year of the first. Seventy-five percent of second arrests occurred within 2 years.

Forty-four percent of arrestees had at least one felony charge in the study period. There were differences in the types of crimes committed for gender, race and age. The proportion of incarcerations for felonies was higher for males than females. Sixty-one percent of Blacks had at

least one felony charge, compared to 40% of Whites with at least one felony. Younger arrestees had a higher proportion of felony arrests than older arrestees.

Investigation of patterns of arrests revealed that most people who had repeat arrests had them in consecutive years and at the same level (misdemeanor or felony) as previous arrests. Of those whose third arrest was a felony, most had been arrested for prior felonies. Of those whose third arrest was a misdemeanor, most had been arrested for prior misdemeanors.

The study population was matched to other data systems available through the Pinellas County Data Collaborative and FMHI. Match rates were 51% for FDLE data (This low match rate was due to the lack of data in FDLE to match with CJIS data), 23% for DCF/IDS data, 13% for Pinellas County EMS data, 9% for statewide Baker Act data, 6% for HHS data, 6% for DOC data and 3% for DJJ data.

Heavy CJIS users were identified as those with 10 or more arrests or 365 days or more days of incarceration. There were 8,385 people identified as heavy users (4% of the study population). The heavy users were compared to the rest of the study population (not heavy users) with regard to their use of the other systems. Statistically significant differences were found between heavy users and not heavy users for all systems. There was also a significant difference between the number of systems used by heavy and not heavy users. Use of other systems could potentially be used as in indicator of those at high risk of becoming heavy CJIS users.

Conclusion

Several important insights were gained from the investigation of longitudinal CJIS data and other secondary data systems. The overall high rates of recidivism show distinctive patterns. Arrests within the same year or in consecutive years and of the same crime level were most common.

Cross system data can add insight into the problem of high recidivism. Heavy CJIS users were also users of other systems at a higher rate than not heavy CJIS users. Further investigation exploring patterns of use of systems by heavy CJIS users might prove useful. Possible extensions of the information gained from this investigation could include developing a likely-to-repeat model that would enable identification of those at high risk for recidivism before they become heavy CJIS users. These data could be used to inform the development of intervention programs to reduce recidivism.

Future Direction

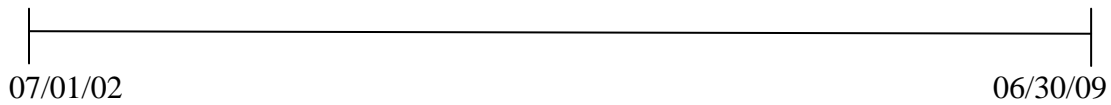It would be informative to expand the study in the future, by:
1. Exploring those second arrests: Are they more apt to be new crimes or more having to do with the previous crime (Failure To Appear (FTA) & Violation of Probation (VOP).
2. Grouping sub-populations using Gender, Race, Age, Crime Type, Crime Level, Number of arrests, system interactions to explore the identification of sub-populations that are less likely to re-offend and the characteristics that influence it. Examine outcomes of number arrests, number of years with arrests, and prison.
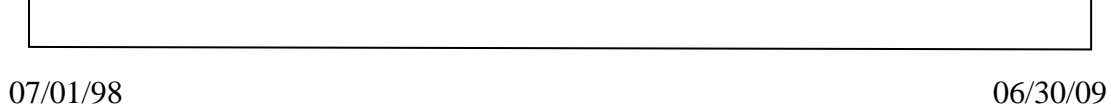
Appendix A. Time Span of Systems Data

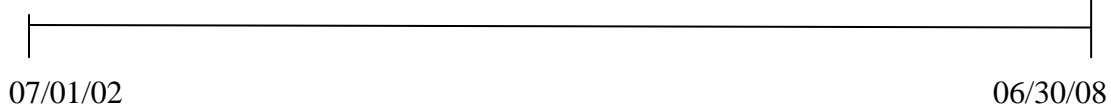Pinellas County Criminal Justice Arrest Data time span

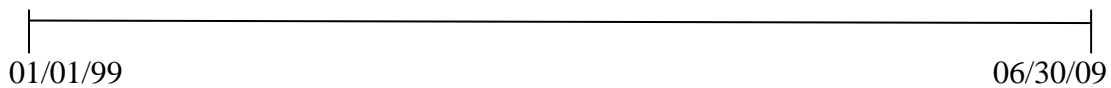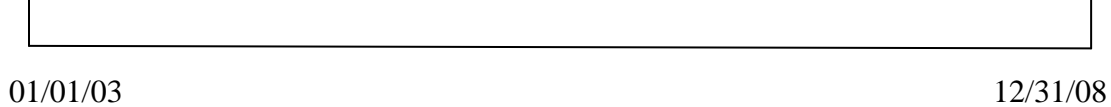07/01/98   06/30/08

FDLE Data Time Span

07/01/02   06/30/09

IDS Data Time Span

07/01/98   06/30/09

Medicaid Data Time Span

07/01/02   06/30/08

Baker Act Data Time Span

01/01/99   06/30/09

DJJ Data Time Span

01/01/03   12/31/08

HHS Data Time Span

07/01/98   10/15/09

EMS Act Data Time Span

07/01/05   07/31/09