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When does methadone treatment reduce arrest and severity of arrest charges? An analysis of arrest records

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Abstract

This is an analysis of the odds of arrest, severity of charges, and factors predicting these outcomes in the year after methadone treatment entry using arrest records of patients ($N=289$) participating in two opioid treatment programs (OTPs) in Baltimore, MD as part of a previously-reported study. Baseline Addiction Severity Index data were examined along with publicly-available dates of arrest and arrest charges from the year before and after OTP entry. Severity of charges was rated independently by three researchers using a 1–7 point scale. Data were analyzed using Generalized Estimating Equations and Multiple Regression. The majority of the patients had no arrests over both time periods (61.6% and 65.7%, respectively). Of those arrested, the majority of the sample were charged with non-severe crimes in the year before and after OTP entry (82.9% and 73.7%, respectively). There were no significant differences in the odds of arrest or severity of charges in the year before versus the year after OTP admission (both $p, s>0.05$). Predictors of arrest following admission included an arrest in the year prior to admission ($p<0.001$), younger age ($p<0.001$), and more lifetime months of incarceration ($p=0.045$). Predictors of the higher severity of charges included younger age ($p<0.001$), African-American race ($p=0.032$), and more lifetime months of incarceration ($p=0.018$). While in this population, the odds of arrest and severity of charges did not decrease significantly in the year following OTP entry, we discuss the need to avoid generalizing findings without considering those factors that may influence the likelihood of post-OTP entry arrest.

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Author Disclosures

Contributors

RP Schwartz, JH Jaffe, and KE O'Grady led the study design. RP Schwartz and JH Jaffe led the literature review and drafted the manuscript. SM Kelly conducted the data analysis under the supervision of KE O'Grady. All authors contributed to revisions and interpretations of the findings.

Conflict of Interest

Dr. Schwartz in the past provided a one-time consultation to Reckitt-Benckiser on behalf of Friends Research Institute. Dr. O'Grady has, in the past, received reimbursement for his time from Reckitt-Benckiser. No financial disclosures were reported by the other authors.

Keywords

methadone maintenance treatment; opioid treatment program; heroin addiction treatment; crime; arrest

1. Introduction

When methadone maintenance treatment (MMT) was first introduced in the US in the late 1960s-early 1970s, it was generally believed that, in addition to sharply reducing their heroin use, adults who were treated with methadone would also reduce their participation in other criminal behavior (Cushman, 1972; Dole et al., 1969; Maddux and McDonald, 1973). This belief was consistent with the sharp reductions in crime in Washington D.C. associated with an expansion of methadone treatment (Dupont, 1972). It was also supported by quasi-experimental studies with pre-post designs in the 1970s that examined official arrest records of MMT patients (Bowden et al., 1978; Cushman, 1972; Haglund and Froland, 1978; Newman et al., 1973).

Two large-scale multi-site evaluations of publicly-funded treatment programs conducted in the 1970s and 1980s showed reductions in self-reported criminal behavior (Hubbard et al., 1989; Simpson and Sells, 1983). However, unlike in these earlier studies, in a multi-site evaluation conducted in the 1990s, the reductions in self-reported criminal behavior among MMT patients at one year after admission were not associated with retention in MMT (Hubbard et al., 1997). In the early 1990s, examining official arrest records, Rothbard and coworkers (1999) did not find a significant reduction in the number of male MMT patients arrested in the two years after MMT entry as compared to the two years prior to MMT entry.

A Cochrane meta-analysis (Mattick et al., 2009) of the impact of MMT on criminal behavior included only three randomized controlled trials with a total of 363 participants that met its rigorous criteria for review. All three of these studies (Dole et al., 1969; Gunne and Gronbladh, 1981; Yancovitz et al., 1991) showed reductions in crime, but the sample sizes were relatively small and Mattick and coworkers concluded that the effect on crime did not reach statistical significance.

Several explanations have been offered to account for the inconsistencies in findings on reductions in the rates of criminal behavior by MMT patients. For example, Rothbard and coworkers (1999) suggested that the explosion of cocaine use in the 1980s and 1990s, could have provided a new motive for acquisitive crime that would be relatively unaffected by MMT. Other possible explanations centered on methodological differences across studies. While self-reported criminal activity gathered in research confidential interviews has been considered reliable by some (Ball et al., 1983; Chaiken and Chaiken, 1990; Nurco et al., 1985), it clearly has limitations. For example, the most socially disapproved and serious crimes may be less likely to be disclosed. Research examining the association between public arrest records and MMT is not subject to these limitations of self-report. However, arrests recorded substantially underestimate the number of crimes committed (Nurco, 1998). Some studies also may rely on pre/post comparisons, which can be substantially influenced by secular trends in arrests (Rothbard et al., 1999). Such secular trends may be driven by

shifting official policies on priorities and strategies used to reduce crime as well as fluctuating resources devoted to enforcement, all of which can combine to result in dramatic changes in overall levels of arrests over relatively brief periods. Thus, a reduction in arrests observed in a pre-post analysis is not necessarily due to entry into treatment. Conversely, a rising general arrest rate in a given jurisdiction might obscure a reduction in criminal activity among patients.

Only research that utilizes concurrent untreated or waiting list controls, either in a randomized trial or through careful matching, can provide relatively rigorous evidence for the impact of MMT for any particular group of opioid-addicted individuals. In one such study reported after the Cochrane review (Mattick et al., 2009), Schwartz and coworkers (Schwartz et al., 2009) compared the frequency of arrest charges recorded in official data for newly-admitted patients randomly assigned to either interim methadone treatment (methadone without routine counseling) or a waiting list. The group of participants assigned to interim methadone treatment compared to waiting list had a significant decrease in the number of arrests at 6-, but not 12-months, post-admission. In a post-hoc analysis, participants who had remained in treatment through 10-month follow-up were less likely to be arrested than those who left treatment before 10 months.

It is generally accepted that the relationship between opioid use disorder and crime is complex (Chaiken and Chaiken, 1990; Nurco et al., 1991). MMT exerts its potential effect on reductions in criminal behavior indirectly through its suppression of illicit opioid use. Thus, MMT programs can only be expected to reduce crime to the extent that patients participating in those programs engage in crime in order to obtain illicit opioids or the money to buy them. But it has also been found that a subset of adults with opioid use disorder initiated a pattern of criminal behavior before beginning to use opioids. These individuals may continue criminal activity even during periods when they are not using drugs (Chaiken and Chaiken, 1990; Nurco et al., 1991). In programs that treat adults whose criminal activity is unrelated to obtaining illicit opioids, reductions in crime (and arrests) are unlikely to be found. Furthermore, crimes related to obtaining non-opioid illicit psychoactive substances, such as cocaine, may not be much reduced if the use of non-opioid illicit psychoactive substances is not successfully addressed during treatment. From a statistical perspective, programs treating adults who have not engaged in any crime other than utilizing and diverting opioids to which they have easy access, (e.g., doctors, nurses, pharmacists, and their families), and have never been arrested, cannot reduce their frequency of recorded arrests below the pre-treatment level of zero. A significant proportion of such patients in a program will dilute the impact of MMT on those patients who had been arrested for the kinds of income-generating offenses commonly targeted by police. Conversely, MMT programs where patients have extensive histories of arrests and incarceration, especially patients who are still in their twenties, may not be able to demonstrate significant reductions in those measures, whether measured by self-report or official records of arrests.

The issue of MMT's impact on crime is important for continued public support of this treatment. Several cost/benefit studies of opioid agonist treatment have found that the major benefit to society is derived from savings related to reductions in arrests and incarcerations (Cartwright, 2000; Gerstein et al., 1994; Harwood et al., 1988; McCollister and French,

2003; Schwartz et al., 2009). Much of the public support for MMT is a result of the recognition that the benefits to the public exceed the actual costs of treatment. Thus, it is of some importance to study the connection between MMT and crime.

This paper presents a secondary analysis of data from a recently completed study conducted in two urban Opioid Treatment Programs (OTPs) in Baltimore (Schwartz et al., 2017). The goal of the present paper is to explore some of the factors that may account for the inconsistencies in the literature dealing with the effects of methadone treatment on crime. We make use of the frequency and type of specific arrest charges brought against our participants found in online searches of public arrest records for the State of Maryland. Using these charges, we present a categorization of the crimes with which the patients were charged when they were arrested. In this study, we ask four specific questions. First, was there a change in the odds of arrest in the year after entering MMT compared to the year prior to treatment entry? Second, was there a change in the severity of arrest charges among participants in the year after entering MMT compared to the year prior to treatment entry? Third, were there specific participant characteristics that predicted the odds of arrest during the 12 months after treatment entry? Fourth, were there specific participant characteristics that predicted the severity of arrest charges during the 12 months after treatment entry? For all four questions, we examined five participant characteristics that might impact arrest and illegal behavioral during MMT, including gender (Campbell et al., 2007; Chatham et al., 1999), age (Campbell et al., 2007; Sechrest, 1979), race (Niv et al., 2009), number of days of cocaine use in the 30 days prior to treatment entry (Rothbard et al., 1999), and the lifetime number of months of incarceration (Rothbard et al., 1999; Schwartz et al., 2009).

2. Materials and Methods

2.1. Parent Study

Parent study participants were 295 newly-admitted adult patients in two opioid treatment programs (OTPs) in Baltimore, MD enrolled September 2011 through March 2014 in a study of patient-centered methadone treatment (Schwartz et al., 2017). Participants were randomly assigned to either: 1) Patient Centered Methadone (PCM; $n=146$); or 2) Treatment as Usual (TAU; $n=149$). In PCM, the OTP's rules and counselor roles were modified (e.g., counseling attendance was encouraged but not required, counselors served as therapists and were not responsible for enforcing clinic rules). TAU involved standard methadone treatment as normally provided in the OTPs: Patients were required to attend counseling; counselors served dual roles as therapist and disciplinarian for rule infractions. The study was approved by the Friends Research Institute Institutional Review Board (IRB) and the IRBs of the participating programs.

Research assistants (RAs) recruited study participants shortly after treatment admission through referrals from staff at the treatment programs. The RAs screened for eligibility (at least 18 years of age and not pregnant) and obtained informed consent in a private office at the OTP prior to administering baseline assessments, which included the Addiction Severity Index (ASI) (McLellan et al., 1992) and urine drug screen (see Schwartz et al., 2017 for complete list of assessments). Participants were paid \$30 for completing the baseline interview and each of the 3-, 6-, and 12-month follow-ups.

The study found no significant differences between PCM and TAU in the primary outcome of opioid-positive urine screens at 12 months ($p=0.92$; adjusted odds ratio 0.98 [95% Confidence Interval (CI)]: 0.61, 1.52). Additionally, there were no significant differences between Conditions in secondary outcomes of cocaine-positive urine screens, self-reported heroin and cocaine use, meeting DSM-IV opioid and cocaine dependence criteria, HIV-risk behaviors, aggregate physical and mental health quality of life, odds of arrest, mean number of arrests, whether charged with a severe crime, or treatment retention at 12 months (all p , $s \leq 0.05$).

2.2. Current Study Procedures

For the current study, 6 participants who died (for reasons unrelated to study participation) following study enrollment were excluded from analysis because they necessarily did not provide complete data over the follow-up time period, leaving a study sample of 289 participants.

Arrest data—including dates of arrest and list of charges—were obtained by an RA and documented in a spreadsheet for all participants for one year preceding and one year following study enrollment from the Maryland Judiciary Case Search (MJCS) website (<http://casesearch.courts.state.md.us/casesearch/inquirySearchParam.jis>), a database that provides public access to detailed case information for Maryland Circuit and District Court cases. The study PI and Co-I were provided with a list of all arrest charges for which they rated independently from 1 to 7 using a scale developed by Nurco and colleagues (Nurco et al., 1991) and adapted by Schwartz and coworkers (2009). Crimes involving the infliction of physical harm were considered the most severe (e.g., assault), followed by crimes involving loss or destruction of property (e.g., theft), and then crimes in which there was no immediate victim (e.g., loitering; drug possession).

The list of charges was then given to another Researcher who assigned severity ratings as a third independent rater. Interrater reliability [ICC(2, k)] (Shrout and Fleiss, 1979) was calculated to ascertain the degree of agreement between the original two raters and between the mean of the original raters and the third rater. The results of the ICCs indicate that there was high agreement among the raters, and that the mean of the ratings could be used as the measure of severity. [Agreement between the original two raters and between the mean of the original raters and the third rater was ICC (2,2) = 0.95 and 0.94, respectively.]

2.2.1. Measures for questions 1 and 2: Was there a change in: (1) the odds of arrest and (2) the severity of the arrest charges in the year after entering MMT compared to the year prior to treatment entry?

2.2.1.1 Outcome Variables: The two outcomes for questions 1 and 2 were: arrest (yes v. no) and arrest charge severity. Data for these two outcome variables were measured over time (change from pre- to post-study enrollment). Arrest (yes v. no) data were obtained from the MJCS website. The specific arrest charges were also obtained from the MJCS website. The severity of most severe arrest charge for a particular arrest was assigned by the investigators using a severity scale employed in prior research (Schwartz et al., 2009). The scale ranged

from 0–7, with a 0 assigned to participants who were not arrested, and ratings of 1 (least severe) through 7 (most severe) assigned to charges for participants who had been arrested.

2.2.1.2 Explanatory Variables: Several variables obtained from the baseline ASI were included in the analyses as explanatory variables, including gender, age, race (white v. African American/other), number of days of cocaine use in the past 30 days, and lifetime months of incarceration.

2.2.2. Measures for question 3 and 4: What factors predicted the odds of arrest and the severity of arrest charges?

2.2.2.1 Outcome Variables: Two outcome variables were created using data obtained from the MJCS website: 1) arrest during the 12-month follow-up period (yes vs. no) and 2) severity of most severe arrest charge (ranging from 0–7).

2.2.2.2 Explanatory Variables: As with questions 1 and 2, gender, age, race (white v. African American/other), number of days of cocaine use in the past 30 days, and lifetime months of incarceration were included as explanatory variables.

2.2.2.3 Additional Explanatory Variable: Whether participants had been arrested in the 12-month period preceding study enrollment (yes v. no) determined from the MJCS website (see 2.2 above) was included as an additional explanatory variable in the statistical models for questions 3 and 4. This explanatory variable was of primary interest because it would tell us the extent to which pre-treatment arrest status predicted arrest in the 12-month period following treatment entry.

2.2.3. Statistical Analysis—For question 1, whether there was a change in the odds of arrest over time (12 months pre- to post-treatment entry) was determined using a Generalized Estimating Equations (GEE) approach, in which arrest was assumed to follow a binomial distribution.

For question 2, whether there was a change in severity of arrest charges over time (pre-to post-treatment entry) was examined using a negative binomial regression. Both analyses included Time, the explanatory variables, and the interactions between Time and each of the explanatory variables as fixed effects in the model.

For question 3, logistic regression was utilized to examine the factors that predicted the odds of arrest (yes vs. no) in the 12-month follow-up period (from MMT admission to 12-months post-treatment admission) under the assumption that this variable followed a binomial distribution.

For question 4, the factors that predicted the severity rating of the arrest charges during the follow-up period (from MMT admission to 12 months post-treatment admission) were examined using multiple regression under the assumption that this variable followed a negative binomial distribution.

3. Results

3.1. Participants

Baseline characteristics for the total sample are shown in Table 1. The sample was 58.8% male, 58.5% African-American, and 40.8% white, with a mean (*SD*) age of 42.7 (10.0) years.

3.2. Question 1. Was there a change in the odds of being arrested over time (12 months pre- to post-treatment entry)?

Table 2 shows the number of arrests (%) for the 289 participants in the 12-month periods covering pre- and post-study enrollment, respectively. The majority of the participants had not been arrested in either time period (61.6% and 65.7% of participants were not arrested during the 12 months pre- and post-study enrollment, respectively). The remaining 111 (38.5%) participants had at least one arrest in the 12-month period prior to study enrollment, and 99 (34.3%) had at least one arrest in the follow-up period.

Table 3 shows the estimated marginal means (95% confidence intervals [CI]), test statistics, and *p* values for odds of arrest in the 12-month period pre- and post-study enrollment. There were no significant differences in the odds of arrest ($p=0.14$) in the period pre- vs. post-MMT enrollment.

3.3. Question 2. Was there a change in the severity of arrest charges among the patients in the year after entering MMT compared to the year prior to treatment entry?

Table 4 shows the number (%) of participants in each severity category (for most severe arrest charge) for the pre- and post-study enrollment periods. Most participants (61.6% in pre- and 65.7% in post-) were not arrested and so scored a “0” in terms of arrest severity score. Of those participants who were arrested, the majority (82.9% in pre- and 73.7% in post-) were arrested for less severe crimes scoring 1–4, and the remainder were arrested for more severe crimes scoring 5–7.

Table 3 shows the estimated marginal means (95% confidence intervals [CI]), test statistics, and *p* values for the severity of arrest charges in the 12-month period pre- and post-study enrollment. There were no significant differences in the severity of arrest charges ($p=0.52$) in the period pre- vs. post-MMT enrollment.

3.4. Question 3. What factors predicted the odds of arrest after treatment entry?

Table 5 shows the parameter estimates, 95% confidence intervals (CIs), and *p* values for outcomes predicting odds of being arrested in the 12-month follow-up period and the severity of the most severe charge.

The explanatory variable “arrested in the 12 months prior to enrollment” was a significant predictor of odds of arrest during the 12-month follow-up period, with participants who had been arrested before enrollment more likely to have been arrested in the follow-up period than participants who had no arrest history in the 12 months prior to study enrollment ($p=0.001$). Other explanatory variables that were significant predictors of odds of arrest in

the follow-up period were age ($p=0.001$), with the odds of arrest declining with increasing age, and lifetime months of incarceration ($p=0.045$), with the odds of arrest increasing with increasing lifetime months of incarceration.

3.5. Question 4. What factors predicted the severity of the arrest charges after treatment entry?

The explanatory variable “arrested in the 12 months preceding study enrollment” was not a significant predictor of severity of the most serious charge for any arrest in the follow-up period ($p=0.075$; see Table 5). With regard to the other explanatory variables, age, race, and lifetime months of incarceration were all significant predictors of arrest charge severity ($p<0.001$, $p=0.032$, and $p=0.018$, respectively). Specifically, participants who were younger, who were African American, and who had more lifetime months of incarceration on average had more severe arrest charges in the post-treatment entry period.

4. Discussion

One year after methadone maintenance treatment entry, our search of official arrest records in the State of Maryland found little or no decrease in arrest rates for this group of 289 heroin-addicted patients treated at one of two community-based OTPs, compared to their arrest rates prior to treatment entry. Neither did we find any significant change in the severity of the charges lodged at the time of arrest. Although this was an intent-to-treat analysis and the lack of an expected decrease could have been due to the inclusion of individuals no longer in treatment, 47% of all participants were still in the original treatment program and 77% of those interviewed at 12-month follow-up were in some variety of opioid agonist treatment at the time of 12-month follow-up interview.

We did find, as we had with a comparable sample of patients treated several years prior to this study (Schwartz et al., 2009), that the majority of patients (65%) were not arrested even once during the year after treatment entry. We also found that both before and after treatment entry, the severity of the charges lodged against these participants, more than 80%, would be considered of lesser severity (1 to 4 on our severity scale).

There have been only a limited number of reports of changes in the number of arrests as determined from official arrest records associated with MMT entry since initial reports in the 1970s found that MMT entry was associated with a reduction in the number of arrests (Bowden et al., 1978; Cushman et al., 1972; Haglund and Froland, 1978; Newman, et al., 1973). Our present findings as well as findings of Rothbard and coworkers (1999) stand in contrast to those earlier reports.

Because this study was conducted during a period in Baltimore when the overall number of adult arrests rate declined over 40% over the three-year period from 2012 (46,835) to 2015 (27,291) [Open Baltimore Beta, 2017], it seems improbable that secular changes in arrest rates can be invoked to explain the absence of a significant decrease in arrest following treatment entry. Without a concurrent treatment control, study findings can only be viewed as tentative. Another alternative explanation for why these findings differ from the findings of studies in the 1960s and 1970s, which seemed to show significant decreases in arrests and

incarceration among patients entering OTPs, may be in the changed social context in which OTPs now operate. In the early years when treatment access was limited by the supply of treatment resources, patients who persisted in opioid use (or opioid and cocaine) may have been pressured to change and directly or indirectly extruded from the program. Those patients remaining were more likely to be low level or minimal users of illicit drugs. With the emergency of the HIV epidemic in the mid-1980s, and the recognition that patients in MMT were less likely to inject and become HIV seropositive, programs became more reluctant to discharge patients who reduced but did not cease illicit substance use entirely. In the parent study, 45% of the PCM and 50% of the TAU participants had opioid-positive urine screens at 3 months (a significant decrease from the point of admission) but the proportion changed little over the ensuing 9 months and, on average 53% and 50% for the PCM and TAU, respectively, were still urine opioid positive at one year (Schwartz et al., 2017). It is possible that in the context of substantial continued use of illicit substances, arrests for possession and related illegal acts do not decrease.

Lastly, it may be that populations marked by high pre-admission arrest rates and crime levels do not show significant decreases as a consequence of entering MMT. In this sample of 289 patients, at admission the mean age was 42.7 years, only 37.4% had been employed in the last 30 days, the average age of first crime was 17.6 years old and average age of first heroin use was 21.4; mean lifetime number of arrests was 12.3 and mean lifetime months of incarceration was 51.6. The Baltimore MMT patient population (sample size 319) which we studied in our first study of interim methadone maintenance and in which we did find treatment-associated decreases in official arrest data compared to a concurrent waiting list control had less than half the pre-entry number of lifetime arrests and months of incarceration compared to the patients in the present study (Schwartz et al., 2009).

Conclusion

In short, a group of patients with a long history of criminal behavior and opioid use disorder may have a different prognosis than other samples of patients with differing age, socio-economic status, level of chronicity of criminal behavior and opioid use disorder. Hence, one needs to exercise great caution in generalizing study findings to other populations. Whether these discrepant findings are due to the relative proclivity for arrest of the sample in this study, differences in MMT patient characteristics across populations, MMT programs' tolerance for continued illicit substance use (fostered by concern for overdose mortality or HIV), or other factors, can only be resolved by further study.

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Highlights

- We investigated the arrest history of 289 newly-admitted methadone treatment patients.
- The majority had no arrests in the year before and after treatment entry.
- Of those arrested, the majority were charged with non-severe crimes.
- There were no significant differences in likelihood of arrest in year before vs. after methadone maintenance treatment (MMT) entry.
- There were also no significant differences in charge severity between those time periods.

Table 1Participant baseline characteristics ($N = 289$).

Age, mean (<i>SD</i>)	42.7 (10.0)
Male, <i>n</i> /(%)	170 (58.8)
Race/Ethnicity, <i>n</i> /(%)	
Black	169 (58.5)
White	118 (40.8)
Hispanic	2 (0.7)
Number of days cocaine use in past 30 days, mean (<i>SD</i>)	7.7 (11.2)
Lifetime number of arrests, mean (<i>SD</i>)	12.3 (12.8)
Lifetime months of incarceration, mean (<i>SD</i>)	51.6 (68.8)

Table 2

Number of arrests in the 12-month period pre- and post- study enrollment ($N=289$).

Number of arrests	Pre-study enrollment N (%)	Post-study enrollment N (%)
0	178 (61.6)	190 (65.7)
1	66 (22.8)	66 (22.8)
2	24 (8.3)	22 (7.6)
3	17 (5.9)	8 (2.8)
4	2 (0.7)	2 (0.7)
5	0 (0.0)	1 (0.3)
6	1 (0.3)	0 (0.0)
7	0 (0.0)	0 (0.0)
8	1 (0.3)	0 (0.0)

Table 3

Estimated Marginal Means (95% *CI*s), test statistics, and *p* values for likelihood of arrest and severity of most severe charge in the 12-month period pre- and post-study enrollment (*N*=289).

	Estimated Marginal Means (95% <i>CI</i> s)		Test statistic** (95% <i>CI</i> s)	<i>p</i>
	Pre- study enrollment	Post- study enrollment		
Likelihood of arrest	0.38 (0.32, 0.44)	0.32 (0.26, 0.38)	0.81 (0.45, 1.45)	0.14
Severity of most severe charge	1.02 (0.82, 1.23)	0.93 (0.71, 1.15)	−0.30 (−0.82, 0.21)	0.52

* Possible range is 0–7, where 0=no arrest and 7=most severe charge.

** Odds ratio for Likelihood of arrest and b weights for Severity of most severe charge.

Table 4

Severity rating of arrest charges and number (%) of participants in each severity category for most severe charge for pre- and post-study enrollment periods ($N=289$).

Severity rating	Examples of verbatim description of crime	Pre-study enrollment <i>N</i> (%)	Post-study enrollment <i>N</i> (%)
0	No Arrest	178 (61.6)	190 (65.7)
1	Prostitution; Controlled Dangerous Substance (CDS) possession-not marijuana; Consuming alcohol in public; Driving vehicle in excess of reasonable speed	38 (13.1)	21 (7.3)
2	Trespassing; Failure to obey traffic instructions; Disorderly conduct; Malicious destruction of property-less than \$500	20 (6.9)	16 (5.5)
3	Theft: less than \$500; Malicious destruction of property-more than \$500; Forgery-prescription; Credit card theft	0 (0.0)	5 (1.7)
4	Theft: \$1000-\$10000; Handgun on person; Controlled Dangerous Substance (CDS) distribution of narcotics	34 (11.8)	31 (10.7)
5	Burglary; Assault-2 nd degree; Deadly weapon with intent to injure	13 (4.5)	11 (3.8)
6	Robbery; Armed robbery; Assault-1 st degree; kidnapping	6 (2.1)	12 (4.2)
7	Attempted murder (1 st or 2 nd degree); murder (1 st or 2 nd degree); Rape (1 st or 2 nd degree)	0 (0.0)	3 (1.0)

Table 5

Parameter estimates, 95% confidence intervals (*CI*), and *p* values for outcomes predicting likelihood of arrest in 12-month follow-up period, severity of most severe charge, and time to first arrest (*N* = 289).

	Likelihood of arrest in 12-month follow-up period			Severity of most severe charge in 12-month follow-up period*			Time to first arrest in 12-month follow-up period		
	Odds Ratio	95% <i>CI</i> (Lower, Upper)	<i>p</i>	<i>b</i>	95% <i>CI</i> (Lower, Upper)	<i>p</i>	Hazard Ratio	95% <i>CI</i> (Lower, Upper)	<i>p</i>
Gender	1.20	0.68, 2.31	0.578	0.26	-0.21, 0.72	0.276	0.90	0.57, 1.42	0.657
Race	0.64	0.32, 1.26	0.198	-0.50	-0.97, -0.04	0.032	1.40	0.86, 2.28	0.178
Age	0.94	0.91, 0.98	0.001	-0.07	-0.10, -0.04	<0.001	0.95	0.93, 0.98	<0.001
Lifetime months of incarceration	1.01	1.00, 1.01	0.045	0.00	0.00, 0.01	0.018	1.00	1.00, 1.01	0.017
Number of days cocaine use in past 30 days	1.02	1.00, 1.05	0.078	0.01	-0.01, 0.02	0.318	1.01	1.00, 1.03	0.135
Arrested in 12 months before study enrollment	0.39	0.22, 0.69	0.001	-0.34	-0.71, 0.03	0.075	2.07	1.37, 3.10	<0.001

Note: Logistic regression was conducted for likelihood of arrest, multiple regression for severity of most severe charge, and Cox proportional hazards regression for time to first arrest. Reference category for Gender is "male", for Race is "white", and for Arrested in 12 months before study enrollment variable is "Not arrested in 12 months before enrollment."

* Possible range is 0–7, where 0=no arrest and 7=most severe charge.