Drug and Alcohol Dependence 180 (2017) 385–390

Contents lists available at ScienceDirect

Drug and Alcohol Dependence

journal homepage: www.elsevier.com/locate/drugalcdep

Full length article

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

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ARTICLE INFO

Keywords:
Methadone maintenance treatment
Opioid treatment program
Heroin addiction treatment
Crime
Arrest

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 $ps > 0.05$). 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.

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 et al. (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 et al. (1999) suggested that the

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http://dx.doi.org/10.1016/j.drugalcdep.2017.08.025
Received 18 July 2017; Received in revised form 16 August 2017; Accepted 23 August 2017
Available online 14 September 2017
0376-8716/

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