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Integrating injectable opioid agonist treatment into a Drug Treatment Court program: A case study

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Abstract

Background: A substantial proportion of individuals involved with the North American criminal justice system are convicted for drug-related activities. Drug treatment court (DTC) programs were developed as an alternative to incarceration for drug-related offences and aim to prioritize addiction treatment and improve health and social outcomes; however, only a fraction of DTC participants have access to first-line medications for opioid use disorder (OUD). Further, despite emerging evidence for the efficacy of injectable opioid agonist therapy (OAT) in treating individuals with severe OUD where past treatment attempts with first-line therapies have been unsuccessful, this treatment has never, to our knowledge, been implemented in correctional settings.

Case: An individual in their 50s with a history of severe OUD, multiple interactions with the criminal justice system, and prior unsuccessful treatment attempts with methadone was initiated on injectable treatment with diacetylmorphine. The patient received 300mg of diacetylmorphine witnessed 3 times daily at a supervised injection clinic. During a 1.5-year stabilization phase, the patient's illicit opioid use significantly reduced. They subsequently enrolled in a DTC program for drug-related charges preceding initiation on injectable OAT and remained on this therapy during 16 months in DTC. Following graduation from DTC, the patient continued to receive treatment and returned to gainful employment in the community, with no further charges or episodes of incarceration.

Discussion: This case describes the successful completion of a DTC program by an individual prescribed injectable OAT for severe OUD. The patient's treatment plan played an integral role in DTC graduation and long-term adherence, leading to improved health and social outcomes, including cessation of illicit drug use, enhanced quality of life, and improved social functioning. The case highlights the potential benefits of a stepped and integrated approach to addiction treatment in DTC programs.

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Author contributions

Both co-authors prepared the draft of the manuscript.

Consent

This case study was approved by the research ethics boards of Providence Health Care/University of British Columbia. The individual in the above case has given their consent for this case report and use of the direct quote in the case presentation.

Keywords

Diacetylmorphine; injectable opioid agonist treatment; injection drug use; opioid use disorder; public health; treatment outcomes

INTRODUCTION

Approximately half of individuals incarcerated in US federal prison are convicted on drug-related charges,¹ and approximately half of both state and federal prisoners meet DSM-IV (Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition) criteria for a substance use disorder.² The clear association between incarceration and problematic substance use points to an increased need for rehabilitation and treatment among individuals with opioid dependence in the criminal justice system. Individuals with a history of substance use prior to entering custodial settings face a substantially higher risk of fatal overdose during the post-release period from incarceration,^{3,4} making this a particularly crucial time to provide appropriate harm reduction and evidence-based approaches to treatment.

Drug treatment courts (DTCs), which have emerged as an alternative to incarceration for individuals with substance use disorders convicted on drug-related charges, are increasing in prevalence worldwide.⁵ Treatments with first-line opioid agonist therapies (e.g., methadone and buprenorphine/naloxone), which fall within the standard of care for the treatments of opioid use disorder in community settings,^{6,7} are also becoming increasingly available in DTCs.^{8–10}

In addition to the standard therapies described above, there is an emerging evidence base on specialist-led therapies, such as injectable opioid agonist treatment (injectable OAT; also known as heroin-assisted treatment), and their use in community settings. A 2015 meta-analysis by Strang et al. found that across 6 clinical trials in Canada and Europe, individuals with treatment-refractory opioid dependence treated with diacetylmorphine showed improved treatment outcomes, including reduced illicit heroin use and higher retention in treatment, compared with those prescribed oral methadone.¹¹ Additionally, the Study to Assess Longer-term Opioid Medication Effectiveness (SALOME) found that individuals receiving injectable OAT reported significantly fewer days of illegal activities after 6 months of treatment.¹²

Beyond its investigation in clinical trials, diacetylmorphine has been introduced in specialist-led treatment settings in several European countries, including Switzerland, Germany, the Netherlands, Denmark, and the United Kingdom.¹³ Additionally, it was approved in Canada for the treatment of opioid use disorder under the Special Access Programme (SAP) in 2016, an emergency access program for non-marketed drugs in Canada based on a case-by-case assessment of need after conventional treatments have been attempted and found unsuccessful.¹⁴ Although injectable treatments for severe, chronic opioid addiction are gaining acceptance, significant regulatory and political barriers remain even in regions where it is approved.¹³ Furthermore, despite accumulating evidence for the efficacy of

injectable OAT and other specialist-led treatments in community settings, the use of these treatments in DTCs and other correctional settings has yet to be described.

Here we present the case of an individual with a history of illicit opioid use and related criminal charges who successfully completed a DTC program while receiving injectable OAT.

CASE PRESENTATION

An individual in their 50s was initiated on treatment at a clinic providing injectable OAT as a participant in a research study examining the efficacy of injectable OAT, prior to any enrolment in a drug court program. Previous to starting on injectable therapy, the individual had a history of severe opioid use disorder, which began when they started using opioids in their late 20s following a motor vehicle accident that left the individual with chronic pain. They became dependent on oxycodone and transitioned to injecting heroin in their 30s. After transitioning to injection drug use, the individual also began injecting methamphetamine and cocaine.

In addition to severe opioid and stimulant use disorders, the patient's medical history included spontaneously cleared viral hepatitis C, chronic superficial vein thrombosis secondary to injection drug use, and hypogonadism secondary to chronic opioid use. On family history, their mother had a history of alcohol use disorder and the patient reported experiencing neglect during childhood.

The patient reported multiple medical and social consequences linked to their substance use. The patient reported a history of overdose and several hospitalizations for skin and soft tissue infections from injecting. They experienced housing instability, including periods of homelessness, and was the victim of a knife assault causing a left hemothorax while living on the street. The patient was incarcerated for 4 years for drug-related charges related to drug possession and drug dealing. They also faced unemployment, having previously worked as a carpenter during their 20s.

The patient's past treatment for substance use included several treatment attempts with methadone, but they were never retained on treatment. The patient continued to experience cravings with ongoing illicit opioid use and had 1 hospitalization for overdose following illicit fentanyl use, despite maintenance on a daily dose of up to 150mg of methadone. The patient was never able to tolerate the withdrawal state required for induction to initiate buprenorphine/naloxone. They had resided in recovery house environments twice in the past, with temporary cessation of opioid use but subsequent relapse following these periods of abstinence.

Two years following the patient's last unsuccessful treatment attempt with methadone, they were initiated on injectable diacetylmorphine (i.e., medical heroin) treatment at a clinic offering supervised treatment with injectable OAT. The patient was initiated on this treatment as a participant in a research study aimed at comparing the efficacy of diacetylmorphine and hydromorphone in individuals with opioid dependency and ongoing illicit injection opioid use. The patient met eligibility criteria for the study, which included

fulfilling DSM-IV criteria for chronic opioid dependence, current use of illicit injection opioids, and treatment failure on opioid agonist treatment on 1 or more past occasions. During enrolment in the study, they received 300 mg of diacetylmorphine 3 times per day taken intravenously by witnessed patient-administered injection, in addition to 10mg of methadone per night to prevent early morning withdrawal symptoms. After the study's conclusion, the patient continued to receive treatment with injectable OAT. During a stabilization phase of 1^{1/2} years primarily on diacetylmorphine, the patient reported a significant reduction in illicit opioid use to between 1 and 2 times per month. The patient's dose was gradually tapered from 300 to 200mg 3 times per day. During this period, they decided to enroll in a DTC program to address outstanding criminal charges. In the DTC program, the patient continued to receive supervised in-clinic injectable diacetylmorphine treatment at a stable dose of 200 mg administered 3 times daily.

While in DTC, the patient was stabilized on injectable diacetylmorphine and their illicit substance use reduced significantly. Prior to enrolment in the DTC, the patient screened consistently positive for amphetamines and intermittently positive for cocaine. During the patient's participation in the DTC, urine drug screening was positive only for the heroin metabolite monoacetylmorphine and, on 1 occasion 6 months into drug court, for methamphetamine. The patient's urine drug screens tested consistently negative for benzodiazepines, cocaine, and other opioids.

The patient participated in the DTC program for 16 months, and during this time it was noted in the patient's medical record that their overall health and social functioning continued to improve; the patient obtained stable housing and returned to work in construction, with plans to enroll in school to retrain for a less physically demanding occupation. Following graduation from the DTC program, the patient received no further drug-related or other criminal charges and reported no other incidents of violence associated with obtaining and using illicit street drugs. In their words, treatment with injectable OAT prior to and during the DTC program "changed [the patient's] life completely."

DISCUSSION

In the case outlined above, an individual received treatment with injectable OAT as part of a clinical program and successfully completed a DTC program while remaining on this treatment. This is the first such case in North America and highlights the importance of individualized and evidence-based treatment programs for individuals with substance use disorder in the correctional system. For this patient, treatment with injectable OAT likely played an integral role in successful completion of the DTC program. The combination of these approaches effectively stabilized the patient's substance use disorder, including their use of illicit opioids, methamphetamine, cocaine, and benzodiazepines, and resolved the patient's past criminal record. The patient also reported a significantly enhanced quality of life and social functioning. These factors may have contributed to a lower risk of future adverse health consequences, including overdose, as well as a lower likelihood of reoffending.¹⁵

The details of this case exemplify the core principles of drug courts to provide effective and evidence-based treatment, to reduce relapse and drug-related recidivism, and to utilize a problem-solving and rehabilitative approach.^{5,16} In addition, this case reflects the key principles of equity of care, evidence-based practice, continuity of care and treatment stability, and building healthy therapeutic relationships outlined by the World Health Organization in response to the epidemic of overdose deaths within the criminal justice system.¹⁷

The case presented here demonstrates the viability and potential benefits of adapting DTC programs to incorporate a broader scope of addiction care. DTCs represent a shift from a punitive approach toward addressing illicit drug use to one that is rehabilitative and integrative.^{5,16} Although the majority of patients with opioid use disorder can be effectively treated with first-line therapies, injectable OAT may be the most effective treatment modality for individuals with severe opioid use disorder and/or long-term illicit opioid use who have not been retained on other treatments.^{11,18} DTC programs by their nature present an ideal opportunity to engage individuals in needed addiction care, including injectable OAT when indicated, to interrupt the cycle of offending associated with untreated addiction. Incorporating addiction treatment as an integral piece of DTCs may facilitate cessation of illicit drug use, decreased recidivism, and improved social functioning for individuals who come into contact with the criminal justice system.

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