

Opioid Withdrawal Post Incarceration:
Effects of Methadone and Buprenorphine Treatment During Incarceration
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Introduction

An ongoing global issue revolves around the opioid epidemic and the detrimental effects from withdrawal in incarcerated individuals (Linden, Marullo, Bone, Barry, & Bell, 2018). Opioid-related fatal overdoses will significantly decrease with the implementation of opioid treatment in jails and prisons nationwide. Medication-assisted treatment (MAT) involves opioid agonists, such as methadone and buprenorphine-naloxone. These medications offer a slow release of dopamine and are able to reduce the patient's opioid withdrawal effects. However, less than 30 jails and prisons in the US offer methadone-maintenance treatment (MMT). Opioid use disorder (OUD) is exaggerated among those who are incarcerated, and even though 28 prison systems have MMT available, majority of those restrict who the medication is given to (Brinkley-Rubinstein et al., 2017). The incarcerated populations that are typically affected by OUD pertain to about 8.5% of Hispanics and whites, and about 7.4% of African Americans (Thomas, 2013). Due to the lack of treatment for opioid withdrawal, individuals will intentionally harm themselves, say they are alcoholics, or claim they are mentally unstable in order to receive some sort of pain and sleep inducing medication (Brinkley-Rubenstein et al., 2017).

Treatment

Many concerns of not providing opioid-agonist treatment to incarcerated individuals includes increased risk of HIV transmissions through needle sharing, loss of tolerance after detoxification contributing to a risk of fatal overdose once released, and the higher risk of recidivism upon release (Mitchell et al., 2009). One of the longest continuously operating opioid treatment programs is the KEEP Program in Rikers Island in New York City, since 1987. The success in the Rikers' treatment program is depicted through their continuous operation since 1987, providing an average of 18,000 detoxifications per year, and referring thousands to

community-based treatment (Fallon, 2001; Tomasino et al., 2001). Another ideal program takes place in Rhode Island. In 2015, Rhode Island's Governor issued an executive order that created the state's Overdose Prevention and Intervention Task Force (Linden et al., 2018). Along with the task force is a program offering patients a choice of all three medications: methadone, buprenorphine, and injectable naltrexone. This program is offered in all jail and prison facilities statewide. The results of implementing this program indicated that the number of individuals dying of overdose within six months of release fell by 61 percent. Overall, the success of MAT programs in Rikers, Rhode Island, and now trial runs in Connecticut are unfortunately being ignored despite their evidence of reducing negative OUD consequences in the prison system and the community. The success of this program should be a model for others to emulate.

Withholding Treatment

Withholding MAT from incarcerated individuals is seen as violating the Eighth Amendment in the US Constitution (Linden et al., 2018). This includes deliberately denying MAT to incarcerated individuals enduring opioid withdrawal. A survey of nationwide prison administrators found that failure to offer MAT is due to their facility favoring drug-free treatment, along with claiming it is too costly (Linden et al., 2018). However, cost is an invalid argument since methadone treatment costs about \$30/month per patient (Linden et al., 2018). Hepatitis C will spread around the facility, and outside to the community when individuals are released, from sharing needles (Linden et al., 2018). The cost of methadone is far less than the cost of treating Hepatitis C.

Why Incarcerated Individuals Need Treatment

Individuals who enter jail with OUD deserve to have MAT as a treatment option, which is currently not available at majority of the US prisons (Linden et al., 2018). Death and disease

are the two most severe health consequences of OUD. MAT reduces the risk of both death and disease, and failure to establish such a system puts incarcerated individuals, and the outside community at higher risks for health problems. Compared to individuals in the general population, those incarcerated are at a 12.7 times greater risk of death due to drug overdose after incarceration (Bone, Eysenbach, Bell, & Barry, 2018). This risk is due to the unpredictable opioid tolerance after being released (Binswanger, Blatchford, Mueller, & Stern, 2013). For instance, 44% of opioid-related deaths in Connecticut occur among individuals who were formerly detained by the Department of Corrections (Fiellin, Heimer, Becker, & D'Onofrio, 2016). Another study conducted in Washington State found that the mortality rate among formerly incarcerated individuals was 3.5 times the mortality rate of the general population (Binswanger, Blatchford, Mueller, & Stern, 2013). It was also concluded that overdose was the leading cause of death, especially within the first few weeks after prison release. This data is typically received through self-report questionnaires (Brinkley-Rubenstein et al., 2018). Participants are able to report non-fatal overdoses during the allotted follow-up period post-release. For the fatal overdoses, medical examiner reports were used. This depicts that the implementation of MAT in jails and prisons would mitigate the risk of overdose after being released. As previously mentioned, the KEEP program in Rikers Island in New York City has been successfully operating for the past couple of decades (Mitchell et al., 2009). Just between the years 1995-1999, the KEEP program provided an average of 18,000 detoxifications per year and referred thousands to community-based treatment come their release.

Results of Not Providing Treatment

There are many downsides when prisons and jails do not provide opioid-agonist treatment for incarcerated individuals. For instance, an increase in HIV transmission is a major

concern inside prison facilities (Mitchell et al., 2009). This is especially prevalent among the OUD population that is incarcerated. Heroin is being smuggled into prisons and injected by the incarcerated individuals, which contributes to the continuous outbreak of HIV infection in prison (Dolan & Wodak, 1999; Taylor et al., 1995). Failure to provide MAT will also contribute to the substantially growing opioid issue, and hepatitis C epidemic (Bone, Eysenbach, Bell, & Barry, 2018). Once these individuals are released back into the community, they bring the diseases with them and increase the chances of spreading them.

Withdrawals

Going through opioid withdrawal during incarceration has multiple negative factors associated with it. One of the major negative factors regarding opioid withdrawal during incarceration is the lack of medical treatment to lessen the severity of the symptoms (Galloway, 2016). Symptoms can be minor such as anxiety, insomnia, runny nose, or can be more severe such as vomiting, diarrhea, convulsions, and seizures. These symptoms can also range from days to weeks, which can be fatal in a setting with limited access to medical care, inadequate nutrition, and unhygienic conditions. Majority of prisons and jails do not have opioid-agonist treatment, and if they do, then it is typically exclusively for pregnant women (Brinkley-Rubenstein et al., 2018). According to a 2012 study done by the Criminal Justice Drug Abuse Treatment Studies, 75% of pregnant women experiencing withdrawal in jails and prisons have some sort of opioid treatment available to them (Farahmand, Modesto-Lowe, & Chaplin, 2017). Many of the jails and prisons have the infrastructure to provide the treatment to majority of the OUD population, however they may not have the resources, correct information, accurate security, and misconceptions regarding the treatment options. With that being said, a female out-of-patient treatment participant who was incarcerated at the time of this interview, stated she told

the doctors she was an alcoholic (Mitchell et al., 2009). The doctors do not provide any kind of medications for OUD withdrawal, and her shakes were so bad that the doctors gave her Librium, which is given to alcoholics. Other participants have intentionally injured themselves in order to receive some type of medical treatment to help withdrawal symptoms. A male participant with a 30-year heroin habit had withdrawal symptoms including: hot and cold sweats, diarrhea, stomach cramps, and vomiting for four days straight (Mitchell et al., 2009). It was not until the male participant had a heart attack when he finally received some type of medical care.

For the US jails where methadone treatment was available, many incarcerated individuals end up transferring to state prison where MAT is unavailable (Maradiaga et al., 2016). These individuals endure methadone withdrawal, which many state is worse than opioid withdrawal. Methadone withdrawal is more prolonged and severe than that of opioid (Mitchell et al., 2009). A participant stated he saw another individual get incarcerated while on methadone and he was sick for about 60 days. If some previously incarcerated individuals are on methadone treatment and they know they are going to court for a violation, then they will begin detoxing. The withdrawal is so bad that the individuals have their counselors begin detox, so when they get incarcerated again, they will be on a much lesser dosage of methadone. However, some participants see methadone withdrawal in prison as a positive. This is due to the fact that it is an opportunity to detox, and it is seen as an unavoidable experience that would occur eventually (Mitchell et al., 2009).

Alternatives to Treatment

A possible alternative to treatment programs post-release could be a naltrexone injection at release (Murphy et al., 2018). Due to the high overdose-related mortality rate within the first month after release, naltrexone injections could be beneficial. Naltrexone blocks the opioid

receptors to diminish the likelihood of positive reinforcement from opioid administration. The United Kingdom conducted a study since there is limited supplies of naltrexone globally, and naltrexone is not licensed for treating opioid misuse in multiple countries. This study assessed the likelihood that incarcerated individuals would have accepted naltrexone injection at release. Between the 61 male participants, only 6, or 9.8%, indicated no likelihood to accept the naltrexone injection. The findings were sufficient enough to recommend a clinical trial with the British prison population.

Global Perspective

There are multiple prisons in and out of the US that implement MAT for incarcerated individuals. In England, their national study concluded prison-based substitution therapy was associated with a 75% reduction in all-cause mortality (Marsden et al., 2017). Prison-based substitution therapy is opioid substitution treatment (OST) with the intent to lower drug use, reduce risk of acquiring blood-borne viral infections, and reducing mortality in the community setting (Mattick et al. 2014; McArthur et al. 2012; Pierce et al. 2016; White et al. 2015). The most common OST is methadone and buprenorphine (Marsden et al., 2017). Additionally, fatal drug-related poisoning, when an individual with reduced or reversed tolerance uses drugs at a pre-incarceration dose, within the first month after release declined by 85%. Globally, OUD affects 10-48% incarcerated men and 30-60% incarcerated women. The biggest concern is the elevated risk of opioid-related death within the first month prison release. A Norwegian prison conducted a 15-year study from 2000-2014 with individuals in the Norwegian prison registry and the Norwegian Cause of Death Registry (Bukten et al., 2017). This study, in addition to the previous study, indicates the first few days and months post-release are the most crucial and have

the greatest overdose death rate. It also found that opioid maintenance treatment provided in the prison led to a reduced mortality rate immediately after being released.

Conclusion

Overall, the opioid epidemic is a global concern, and the devastating effects of OUD are emphasized within the prison populations (Linden et al., 2018). The few prisons and jails in the US who administer MAT or MMT have successful outcomes. The amount of fatal overdoses among incarcerated individuals after release have decreased significantly in those facilities with opioid-agonist treatment (Greene et al., 2018). The risks of not providing MAT in prisons include the spread of HIV and Hepatitis C, recidivism, and overdoses post-release (Mitchell et al., 2009). The increased risk in spreading the blood-borne viral diseases can be transferred into the community post release. The cost of the treatment per individual is much less than the cost of treating HIV, Hepatitis C, and overdose. After looking at participant's interview statements, it is evident that if they are given the option to successfully withdrawal from opioids for getting released, they would (Murphy et al., 2018). An issue pertains to the lack of universality among the prisons and jails across the nation, and world. The inconsistency makes it difficult to begin and continue incarcerated individuals on methadone treatment if it is not provided at the facility they get transferred to (Maradiaga et al., 2016). This inconsistency makes receiving treatment undesirable for some patients if they would rather endure opioid withdrawal than methadone withdrawal. If the individual gets released, continues treatment, and gets locked up again, then they may endure methadone withdrawal. This will affect those individuals that are not pregnant women. OUD individuals will typically have methadone excluded from them unless they are pregnant women. This is simply due to the limited supply of methadone, the misconception of the treatment, the lack in staff to supply it, and the idea that it is too costly (Brinkley-Rubenstein

et al., 2018). If more jails and prisons nationwide followed the Rikers KEEP Program model, then there would be a significant difference in the amount of fatal overdoses within the incarcerated population, as well as a decline in HIV and Hepatitis C contractions.

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