

# INCORPORATION OF EXTENDED-RELEASE INJECTABLE NALTREXONE INTO ATHENS-CLARKE COUNTY'S CORRECTIONAL FACILITY HEALTH-CARE PROVISIONS

REPORT BY **TARUN RAMESH**  
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# Executive Summary

The current opioid crisis has sparked a debate over ethical and effective solutions to reduce addiction rates, eliminate overdose mortality rates, and decrease recidivism. The over-prescription of opioids, stigmatization of mental health issues, mandatory minimum sentencing, lack of normalized substance abuse treatment programs, and lack of medication-assisted treatment (MAT) in jails have contributed to the rise of inmates with opioid use disorder.<sup>1</sup> Possession of scheduled drugs like prescription opiates and heroin remains both a federal and Georgia state crime, which warrants extended jail time as a felony charge.<sup>4</sup> This current practice criminalizes addiction rather than treating the underlying disease. The lack of sustainable, long-term treatment programs in jails ensures that recidivism rates for opioid-related offenses remain high, with more than 61 percent of inmates with opioid use disorder re-incarcerated within a three-year span.<sup>10</sup> Considering that an influx of HIV and Hepatitis C cases is strongly correlated with areas most impacted by the opioid crisis, both persons with opioid use disorder and the greater community are severely affected by such alarming trends.<sup>23</sup> Expansion of MAT in correctional facilities is critical to reducing addiction rates amongst vulnerable populations, notably inmates and individuals from low socioeconomic status. Evidence-based treatment that includes MAT has seen decreased overdose, addiction, and recidivism rates in communities that incorporated such policies into municipal correctional facilities.<sup>9</sup> Athens-Clarke County should implement a pilot program for MAT expansion at Clarke County Jail. Due to its location, the jail incarcerates both an urban and rural populace, offering a unique environment for a pilot program.



# Introduction

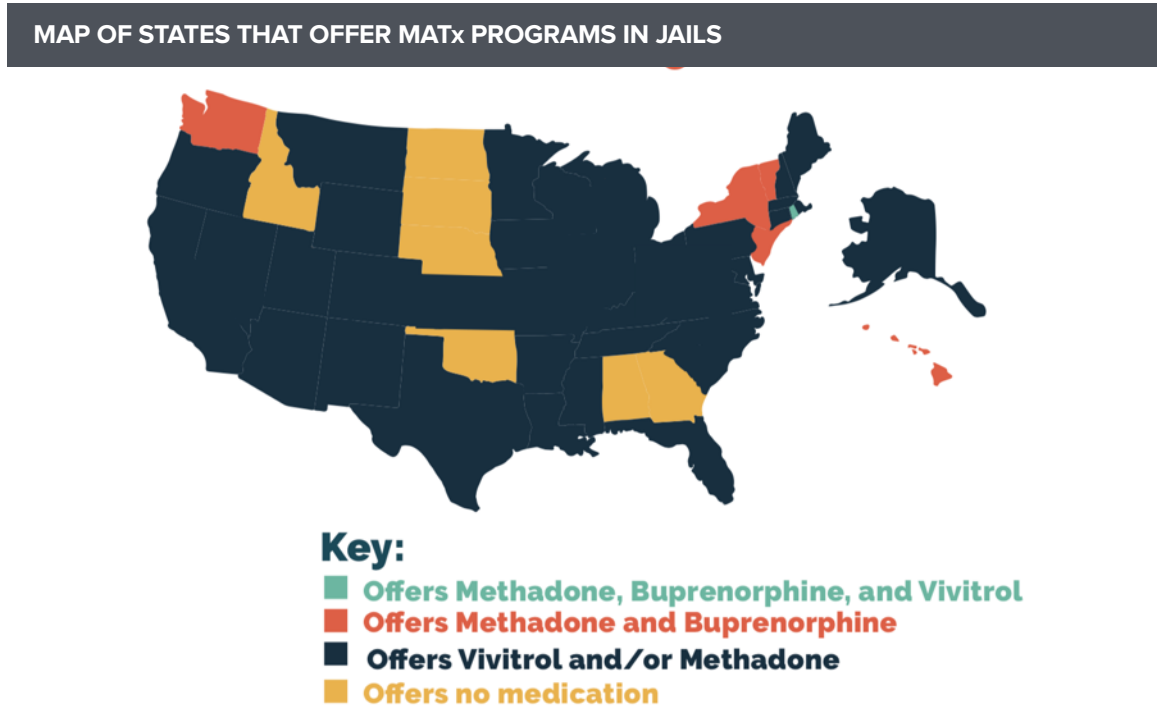
The ongoing opioid epidemic continues to have a devastating effect on individuals and communities in Georgia and throughout the United States. While work has been done at the state level, it has focused mostly on lessening stringent policing, increasing public awareness campaigns, funding addiction treatment, and bringing greater media attention to the issue. These policies alone are not sufficient, because Georgia outstrips the national opioid overdose mortality growth rate by 2 percentage points, with a 16 percent mortality growth rate in 2017.<sup>1</sup> Under former Gov. Nathan Deal, Georgia passed legislation such as the Medical Amnesty Law aimed at reducing drug overdose rates, along with the implementation of a prescription drug monitoring program.<sup>2</sup> Additionally, many Georgia police departments, particularly in high-risk areas, carry naloxone, which reverses the effects of an opioid overdose and has been seen in certain studies to reduce overdose deaths in the area.<sup>3</sup> While long-term effects of these policies have not been fully studied in Georgia, hydrocodone, an opioid, continues to be the most heavily prescribed medication in the state, with 1,475 hydrocodone-attributed deaths statewide in 2017.<sup>1</sup> The discrepancy between prescription patterns and state wide prescription monitoring programs requires additional interventions for treatment.

Particularly, the contrast between legislator rhetoric and crime rates for opioid possession continues to perpetuate the criminalization of addiction. In Georgia, the charge of “possession of a schedule I/II drug,” which tends to be applied to possession of heroin or non-prescription opioids, is a felony.<sup>4</sup> By contrast, the charge of “drugs not in an original container,” referring to non-prescription medicines without the intent to consume, sell, or distribute, is classified as a misdemeanor.<sup>4</sup> Furthermore, mandatory minimum sentencing for drug possession felonies requires incarceration for 2 to 15 years, with a second conviction punishable by 5 to 30 years in prison.<sup>4</sup> These sentencing practices lead to a high number of inmates suffering from substance use disorder in the federal prison system and local jails. Those incarcerated for an opioid related crime tend to remain addicted during their tenure in a correctional facility. Without safe rehabilitation programs offered in those facilities, these inmates often resort to risky sexual activity, gang involvement, or black-market dealings to finance their addiction.<sup>9</sup> Nationally, approximately 15 percent of the prison population currently has an addiction to heroin, while 18 percent of inmates reported they committed crimes in order to obtain money for illicit drugs.<sup>5,6</sup> Based on these reports, the U.S. Department of Health and Human Services estimates that an additional 8 to 12 percent of inmates have an opioid use disorder.<sup>6</sup> Furthermore, the recidivism rate amongst individuals with opioid use disorder is approximately 61 percent within a three-year period.<sup>10</sup> The high prevalence of recidivism in vulnerable inmate populations necessitates



interventions that can promote long-term health for individuals while reducing recidivism costs for the correctional facility.

In recent years, many states have been pushing to incorporate MAT into correctional health services. MAT has been associated with long-term recovery from opioid use disorder on an individual level, and areas with greater access to MAT have seen reduced addiction rates in the general non-inmate population.<sup>9</sup> Currently, every state excluding Georgia, Idaho, Oklahoma, Nebraska, North Dakota, and South Dakota have incorporated some type of MAT into their state correctional facilities, guaranteeing inmates access to dependence-alleviating medication. Nationwide, in-house rehabilitation programs at the correctional facility level were seen to decrease recidivism by 16 percent amongst inmates with opioid use disorder.<sup>7</sup> Evidence-based treatment programs that include MAT offer an effective solution to reduce addiction rates, decrease recidivism, and cut health-care costs.



**FIGURE 1** A map of the United States that depicts medications available to inmates for opioid treatment and withdrawal while in a correctional facility. Georgia, Alabama, Oklahoma, North Dakota, South Dakota, Idaho, and Nebraska are the only states that offer no medication to inmates with addiction.<sup>19</sup>

## Historical Background

The War on Drugs has been the most direct institution-wide policy aimed to reduce the number of individuals with substance use disorder and overall drug usage in the United States since 1971.<sup>17</sup> However, the criminalization of addiction led to a clear division of a morally superior non-drug using population and a morally inferior “addict” population, often leading to disparate impacts on minority populations. Stringent policing in lower income and predominately black and Latinx communities aligned addiction with race and criminality.<sup>30</sup> This stigma continues to affect policy at the national level.<sup>18</sup> This line of thinking led to the development of Georgia’s stringent opioid related penal codes in the early 2000s, including the implementation of mandatory minimums for individuals convicted of an illicit drug charge at the state level.<sup>1,17</sup> Drug courts often gave harsh sentences to convicted felons regardless of personal or situational circumstance.<sup>17</sup>

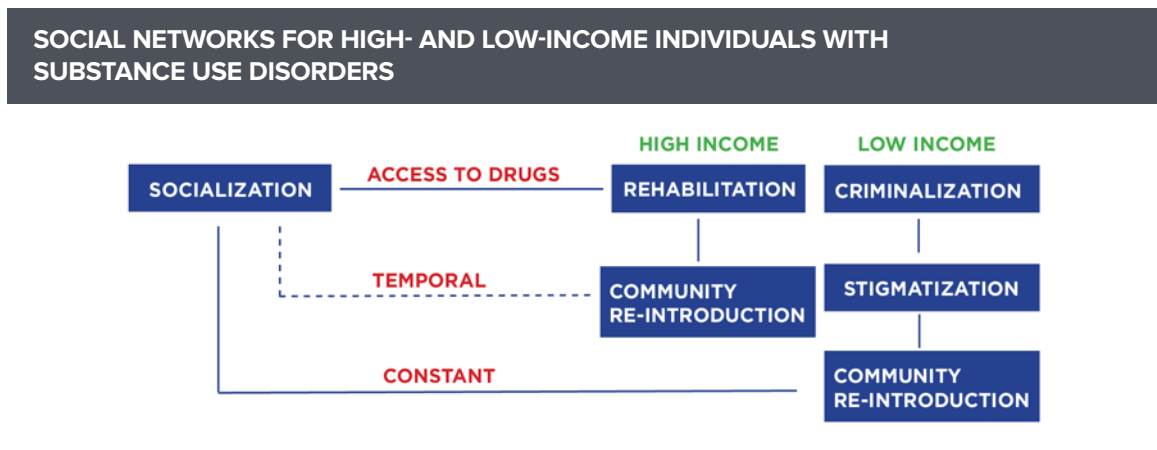
Georgia has recently made efforts to change the previous narrative surrounding the issue. Former Gov. Nathan Deal rolled back reactionary policies that have led to the current levels of addicts in the prison system.<sup>1</sup> States have also begun to decrease penalties for drug possession, which has already decreased the number of individuals with substance use disorder in jail. Furthermore, state-wide policies such as those in Rhode Island provide MAT in jails, enabling the deconstruction of previously held misconceptions.<sup>15</sup> However, preconceptions based on the intersection of addiction, mental health, socioeconomic, and racial status continue to play a large part in drug policy decision-making. These vulnerable populations are often seen as “deviant” and “criminal,” which allows for social othering and policies designed to hurt these groups by restricting their ability to re-enter society and seek rehabilitation.<sup>17</sup> The “deviant” designation is often used as a barrier for access to public goods such as drug test requirements for food stamps. Policies that break down the deviant/non-deviant binary are critical to tackling larger structural inequalities in both the criminal justice and health-care systems.



# Program Classifications

## Abstinence-only Programs

Georgia uses abstinence-only withdrawal programs in its correctional facilities. Abstinence-only withdrawal techniques have a drastic and damaging effect on individual morale, which can lead to lapses in withdrawal and an increased overdose rate.<sup>16</sup> (In contrast, in Rhode Island, once MAT was implemented, overdoses from opiates dropped 12 percent.<sup>15</sup> This decrease in rates can lead to the shift away from the criminality of addiction and toward sustainable paths toward detoxification.) Abstinence-only policies often disproportionately affect individuals of low socioeconomic status, because lack of affordable and accessible rehabilitation centers after release can lead to continued addiction.<sup>16</sup> Individuals from a higher socioeconomic status can often benefit from private methadone clinics or expensive rehabilitation programs, which can significantly help patients move toward recovery.<sup>16</sup> Furthermore, social networks are often more comprehensive and provide better systems of support for individuals from higher socioeconomic backgrounds, while other individuals are not offered the same degree of financial or familial stability.<sup>16</sup>



**FIGURE 2** A model of the influence of social networks on relapse. For high-income individuals, strong social networks and financial resources enable them to seek rehabilitation early and pursue re-introduction into their community. For low income individuals, a lack of financial resources and a weak social network means that they are unable to afford expensive rehabilitation programs or long-term care. Continued addiction leads to arrest, which further entrenches stigma against felons, preventing them from achieving upward mobility and leading to relapse and ultimately re-incarceration.

## Evidence-Based Medication-Assisted Treatment

Medication-assisted treatment (MAT) refers to a trifecta of medications that are designed to quickly, efficiently, and safely withdraw a patient from a heroin or opioid





addiction. MAT for opioid use disorder includes one or a combination of the following: methadone, buprenorphine, or naltrexone. Since 1947, methadone has been used as an opioid medication designed to slowly wean patients off of dangerous prescription opioids. Methadone or buprenorphine used in conjunction with behavioral therapy remain the gold standard for evidence-based treatment for opioid use disorder by mitigating withdrawal symptoms and decreasing cravings.<sup>8</sup> However, Georgia has placed a moratorium on the establishment of new methadone clinics in the state after the introduction of the 2016 bill SB 88, sponsored by State Sen. Jeff Mullis (R-GA).<sup>11</sup> Buprenorphine acts in a similar way to methadone as a substituent to satisfy cravings without receiving the euphoria associated with prescription opiate usage or heroin. Buprenorphine, however, has a greater safety index, since it is only a partial agonist with a ceiling effect, essentially plateauing the euphoric effects of the opioid.<sup>12</sup> While both buprenorphine and methadone have potential for abuse, clinicians, administrators, and public health practitioners conclude that risks are low in a controlled and supervised setting such as a clinic or rehabilitation facility.

Unlike the other two medications, naltrexone is neither an opioid analgesic nor a controlled substance and therefore poses no risk of abuse. Naltrexone acts as an opioid antagonist, which inhibits the opioid receptor pathway, preventing neurotransmitters from activating pleasure complexes within the brain by blocking the modulation of the dopaminergic mesolimbic system.<sup>12</sup> This system is associated with risk-reward analysis. This antagonistic feature prevents the euphoria or “high” feeling from being activated. Naltrexone can come in either an oral or extended release injectable form. Oral naltrexone, however, has been ineffective in its treatment of opioid use disorder because of a lack of compliance in recent studies.<sup>12</sup> Since oral naltrexone must be taken daily, overwhelming cravings for opioids can cause patients to skip a dose and relapse. Extended release injectable naltrexone (XR-NTR) decreases heroin and opioid dependence more than placebo. A 2010 FDA trial showed that XR-NTR had a 90 percent confirmed abstinence rate compared to a 35 percent rate with the placebo, and a 0.8 percent relapse rate compared to the 13.7 percent rate in placebo.<sup>13</sup> XR-NTR requires that a patient is opioid free for seven to ten days prior to injection. This condition makes it an appropriate tool for relapse prevention, but not for initial withdrawal. However, correctional facilities provide a stable and controlled environment for withdrawal with minimal exposure to opioids and for targeted interventions to reduce opioid use disorder amongst inmates.



MEDICATION-ASSISTED TREATMENT (MAT) REGIMENTS					
	Methadone	Buprenorphine	Oral Naltrexone	Extended-Release Injectable Naltrexone	Naloxone
FDA Approval Date	1972	2002	1984	2010	1971
Drug type	Full agonist	Partial agonist	Antagonist	Antagonist	Antagonist
Cost	\$504/month	\$300-800/month	\$25-60/ month	\$1,000/ month	\$20-40/ dose
Effectiveness	High effectiveness for withdrawal, medium-high risk for abuse, controlled substance	High effectiveness for withdrawal, low-medium risk of abuse, controlled substance	Ineffective for risky relapse prevention due to compliance violations, but effective for compliant patients	Medium effectiveness for relapse prevention, low risk of abuse, not a controlled substance	Used for overdose, ineffective for withdrawal, not a controlled substance

**TABLE 1** A table compares various aspects of Medication-Assisted Treatment (MAT) regiments including Methadone, Buprenorphine, Oral Naltrexone, Extended-Release Injectable Naltrexone, and Naloxone.<sup>29</sup>

## Precedent Case Studies

### Rikers Island Correctional Facility

MAT programs in New York have been successfully implemented through the Rikers Island Correctional Facility. Since 1964, inmates at the facility with opioid use disorder have been eligible to receive methadone treatment. Analysis here has shown that 20 percent of inmates upon entrance into the correctional facility had an addiction to heroin or an opiate.<sup>19</sup> Rikers Island treats 4,000 inmates with methadone annually, and approximately 80 percent of them continue with long-term care after release.<sup>19</sup> These rates indicate a substantial decrease in addiction rates post-release, given the ability to access treatment during their incarceration.

### Rhode Island

Since the introduction of methadone, buprenorphine, and naltrexone, Rhode Island has already shown a decreased rate of recidivism for inmates who entered the correctional facility with opioid use disorder. Earlier test runs for this program show that only 14 percent of inmates who underwent treatment relapsed within the critical time frame of six months.<sup>20</sup> Studies in Canada, Rhode Island, and Vermont found that inmates who underwent treatment were seven times more likely to enter a rehabilitation program once



they were released when compared to an abstinence-only program.<sup>7,20</sup> In these studies, relapse rates were low after release, and entrance into a rehabilitation facility allowed for long-term recovery for most individuals.

## Current Status of Athens-Clarke County Jail

The Georgia Department of Corrections follows a minimum of abstinence-only withdrawal policy; thus, local jails follow this as a standard operating procedure. Alterations to this protocol would have to come from the correctional facility's health-care provider, since provisions of specific treatment are devolved to individual counties and health-care providers. Athens-Clarke County Unified Government (ACC) currently has a contract with Armor Correctional Health Services for health-care provisions in its correctional facilities. While Armor Correctional Health Services provides mental and psychiatric-related care and prescribes psychotropic drugs, its services do not include in-house MAT.<sup>18</sup> The incorporation of such a mandate would have both economic and ethical impacts. The cost to incarcerate one individual for a year in the state of Georgia is \$21,000, and the state's current total costs for incarceration are up to \$1.1 billion annually.<sup>10</sup> With a 30 percent statewide recidivism rate, Georgia spends \$130 million each year on repeat incarcerations.<sup>10</sup> Within three years, two-in-three released prisoners will be incarcerated again.<sup>10</sup> Therefore, the current model for incarcerating individuals with opioid use disorder is unsustainable with future cost projections, as the population within the state continues to grow along with a growth in the inmate population. Without treatment, these individuals have a greater recidivism rate leading to further increases in costs to the state.<sup>10</sup>

Abstinence-only policies in jails require less upfront cost, because they just require current safety measures and security to prevent drugs from entering prisons.<sup>10</sup> Current policy allows for money to be spent on more drug courts and prison infrastructure, which are vital for inmate quality of life.<sup>1</sup> The prevailing abstinence-only policies are cheap and require little long-term care for the addicted person or any expertise in addiction treatment. This means that resources can be re-allocated to other goods and services such as low-cost phones or job training programs.<sup>1</sup> However, there is a trade off with inmate access to quality health services for substance abuse treatment. In the long term, reduced recidivism rates would offset upfront costs.<sup>7</sup>



Furthermore, preventing inmates' access to fundamental health services under the supervision of the state could violate Eighth Amendment protections against "cruel and unusual punishment" under *Estelle v. Gamble*, which established that the government should shoulder the burden to provide medical care to inmates, because in the process of incarceration the government removes any alternative access to care.<sup>31</sup> When inmates at Rikers Island were offered access to MAT to withdraw, more than 85 percent accepted the supervised health service.<sup>19</sup> In May 2019, the United States Court of Appeals for the First District ruled that a Maine jail must provide medication for an inmate with opioid use disorder.<sup>35</sup> The American Civil Liberties Union (ACLU), representing the inmate, argued that the jail's refusal to provide adequate medication constituted discrimination against individuals in a drug rehabilitation program and was thus a violation of the Americans with Disabilities Act.<sup>35</sup> This decision could signal a shift in judicial precedent, securing rights for inmates with opioid use disorder. The combination of long-term financial risks, ethical dilemmas, and high recidivism rates indicates that abstinence-only policies have been ineffective in curbing drug dependence in correctional facilities.

## Policy Alternative: Expanded Access to Naltrexone

Athens-Clarke County Unified Government (ACC) should work with Armor Correctional Health Services to use Clarke County Jail as a pilot program to provide for extended-release injectable naltrexone (XR-NTR) within seven days prior to release for inmates suffering from opioid use disorder. XR-NTR is currently sold under the brand name of Vivitrol, which is owned by Alkermes plc, a biopharmaceutical company that specializes in central nervous system diseases.

Under a public-private partnership, ACC can help Armor Correctional Health Services begin implementation at the municipal level. Through strategic allocation of funding guaranteed to Armor Correctional Health Services, ACC can provide the necessary incentive for the healthcare provider to supply XR-NTR.<sup>22</sup> In Massachusetts, Alkermes has worked with prisons and local jails to provide the first injection for inmates free of charge and offers training to correctional health providers for guidance with clinical injections of Vivitrol.<sup>21</sup> The naltrexone treatment will be available for any inmate who, after a psychiatric evaluation, has a clear and well-defined opioid use disorder as outlined by the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fifth



Edition. Under these guidelines, a bright line exists for health-care providers to make case-by-case decisions to prevent unnecessary cost, adverse selection, or any possible abuse of the medication. However, as an opioid antagonist, naltrexone abuse rates are zero.<sup>24, 25</sup>

Enforcement will be unnecessary, since Armor Correctional Health Services will provide the service as an optional treatment program. Necessary monitoring for health and safety conditions for drug delivery can be easily incorporated into the current mandate for health care monitoring in prisons under the Clarke County Department of Health.<sup>22</sup> The costs of treatment are limited: Even though a single injection of Vivitrol costs approximately \$1,000, only one injection is needed per month to prevent relapse.<sup>21</sup> If Clarke County Jail follows precedent from Massachusetts, only a single injection will be needed within a week of the inmate's release.<sup>21</sup> The injection prevents opioid euphoria for the first month of the six-month critical relapse window following release, while the packet of information that accompanies the injection would help connect the inmate with long-term rehabilitation services.

Accountability for the program would be primarily through private partners in ACC such as Alliance Recovery Center.<sup>32</sup> Funding would primarily come from Armor Correctional Health Services, although as Armor is a contracted health-care provider, the cost will eventually fall on ACC.<sup>26</sup> This cost would be mitigated by the grant program offered by Alkermes and the National Institute on Drug Abuse. Furthermore, dynamic modeling indicates that this intervention can reduce recidivism and save up to \$3,304 per inmate per year according to the Bureau of Justice Statistics, based on an 8 percent treatment population.<sup>7</sup> The saved costs primarily consist of a 16 percent decrease in recidivism within a three-year period for inmates who are given access to medication-assisted treatment (MAT) in jail.<sup>9</sup> Overall, the \$2,304 savings can be used in a variety of ways to further tackle opioid use disorder through community clinics or educational outreach programs. While decreasing the recidivism rate, this policy can also generate positive publicity for Armor Correctional Health Services. When NaphCare, another correctional healthcare provider, implemented a similar program in 2017, they were widely acknowledged as a vital partner in reducing the effects of the opioid epidemic.<sup>26</sup>

Furthermore, inmates who received MAT were less likely to be disciplined for bad behavior and more likely to continue their treatment program after release.<sup>27,28</sup> Other positive consequences of the policy include an associated decrease in sexually transmitted infection (STI) rates and a decrease in black market operations for heroin and opiates within the prison system.<sup>23</sup> The STI decrease would be due to the correlation between intravenous and non-intravenous drug usage with the increased risk of contracting an STI.<sup>23</sup> Furthermore, usage of XR-NTR has been associated with a reduction in the viral load of HIV in patients, offering an additional protection against STIs.<sup>27</sup> A decrease in addiction rates



should accompany an undetermined decrease in STIs among this immunocompromised, vulnerable population.<sup>23</sup> STIs pose additional risks to the community, and reductions in this component would be vital for community health and safety. The consequent lack of demand for these drugs due to the effects of the opioid antagonists also has the potential to decrease black market dealings for heroin and other prescription opiates. With breakdown of the incentive system pathway, individuals will no longer have a greater desire for opiate related drugs and would not participate in the system.<sup>1,24</sup>

While the policy does have various benefits, moral hazard continues to play a large and increasingly more important role in health economics, especially in the context of naloxone access laws.<sup>33</sup> An increase in opioid overdose mortality rates were reported in states that had expanded access to naloxone.<sup>33</sup> Similar logic would indicate that a moral hazard effect might also play a role in MAT access. The provision of MAT in jails could incentivize relapse after rehabilitation, because inmates would then be re-incarcerated and could receive state funded detox in jail. This could increase recidivism rates and increase overall incarceration costs. However, the moral hazard effect has not been significant in previous studies, indicating that the policy would ultimately reduce recidivism and provide accessible healthcare to inmates.<sup>34</sup>

## Recommendations for Implementation

National attention and media focus on the opioid crisis have elicited a bipartisan consensus on combating the epidemic. The current political environment offers a potential for evidence-based treatment including MAT in correctional facilities to reduce recidivism, decrease addiction rates, and expand medication access to inmates. The following series of recommendations model previous Alkermes projects in Kentucky in partnership with NaphCare, a correctional facility health-care provider.

A successful intervention of this program would require that first, Alkermes, the pharmaceutical company that manufactures XR-NT, would be consulted to determine the functionality of their grant program to cover training and the first injection costs, as well as its applicability to ACC. Once that has been approved, meetings with critical stakeholders including the Clarke County Jail warden, ACC commissioners, and Georgia Department of Corrections officials would serve to address administrative concerns. Specifics of implementation should be developed in concert with community stakeholders that are named above. Finally, an open dialogue must be established with Armor Correctional Health Services to ensure their approval and involvement with policy implementation.



With assistance from NaphCare and public health researchers at the University of Georgia, budgetary and technical concerns can be addressed. The synthesis of all these components will ensure that the policy is both sustainable and effective long term. A task force composed of stakeholders and university professors could study long-term effects of the pilot program. Transparency and accountability including disclosures of budget items pertinent to the project, patients treated, and re-incarceration are critical to form robust inferences from the study. If the pilot is ultimately successful, expansion to other correctional facilities or the addition of other medications should be implemented. The addition of methadone and buprenorphine into standard operating procedure at the Athens-Clarke County Jail could offer additional health services to inmates suffering from opioid abuse disorder. Finally, a referral program should be created in partnership with Alliance Recovery Center to ensure that inmates receive long-term rehabilitation once they are released.

## Conclusion

The incorporation of extended release injectable naltrexone (XR-NTR) into the Athens-Clarke County Jail offers a cost-effective approach that focuses on inmate health holistically rather than relying on an antiquated abstinence-only policy. In order to effectively tackle the opioid crisis from various angles, prison health reform is a vital starting point, considering Georgia's historic criminalization of addiction.<sup>9</sup> Considering its effects on recidivism, naltrexone access can save ACC \$3,304 per inmate with opioid use disorder per year.<sup>7</sup> This amount is likely vastly underestimated, since trends show that inmates who are re-incarcerated once are five times more likely to be re-incarcerated another time, which further compounds the effects of treatments that help prevent recidivism.<sup>7</sup> From both a framework of humanitarian access and a cost-mitigation perspective, medication-assisted treatment (MAT) access offers unparalleled success in decreasing recidivism and maintaining the health of inmates suffering from opioid use disorder. In the short term, inmates should have less severe withdrawal symptoms, while not receiving the euphoria normally associated with heroin or opiates due to the chemical properties of naltrexone. The opioid antagonist de-incentivizes opioid usage, which would by itself decrease addiction rates.<sup>24</sup> Over time, inmates would continue MAT upon release, which would allow the state government to carefully monitor inmate progress and report back on the program.<sup>20</sup> After three years, overall re-incarceration rates for individuals originally convicted of heroin or non-prescription drug possession should decrease in accordance with modeling patterns. Overall, XR-NTR offers a sustainable, cost-effective, and safe method for opioid treatment for inmates with no risk of potential abuse within a correctional facility.





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