



Published in final edited form as:

J Opioid Manag. 2008 ; 4(2): 81–86.

A pilot survey of attitudes and knowledge about opioid substitution therapy for HIV-infected prisoners

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Abstract

A majority of inmates in the state of Connecticut Department of Corrections use opioids or are opioid dependent before incarceration. None of the state's prisons offer opioid substitution therapy other than for detoxification or maintenance therapy for women during pregnancy. On release to the community, most prisoners relapse to drug use and this has been associated with higher recidivism rates, and less adherence to antiretroviral medications for HIV-infected persons. Nationally and internationally, methadone (METH) and buprenorphine (BUP) have been found to decrease relapse to drug use, decrease recidivism rates, improve adherence to antiretroviral medications, decrease HIV-risk taking behaviors, and improve mortality. However, the general knowledge about opioid substitution therapy among correctional facility staff has been reported as substandard. This pilot study compiled results of answers to anonymous surveys from 27 individuals who work directly with inmates in a patient-care capacity for the Connecticut Department of Corrections (CT DOC) and CT DOC case-management referral program (Project TLC) in the year 2006. The surveys included questions regarding current attitudes and knowledge about opioid substitution therapy for prisoners. A minority of respondents refer released prisoners with a history of opioid dependency to METH or BUP treatment. The majority of correctional workers and case-management referral workers did not have knowledge about BUP or METH's ability to improve health and decrease HIV risk taking behaviors. This study found that more education of individuals treating and caring for HIV-infected opioid dependent prisoners is needed.

Keywords

HIV; AIDS; incarceration; Criminal Justice System; prison; opioids; buprenorphine; methadone; prisoners

INTRODUCTION

Because of the growing population of opioid users in the United States coupled with the response from the US justice system regarding imprisonment for drug offenses,¹ there is a disproportionate amount of drug users in jails and prisons. In 2001, 57 percent of US federal prisoners were incarcerated for drug offenses.¹ Furthermore, 70 percent of inmates used illegal drugs regularly during the month immediately preceding incarceration.² Importantly, a significant proportion of HIV-1 infected inmates lose the positive effect of antiretroviral therapy which they obtained while incarcerated after release to the community most likely because of relapse to drug use causing poor adherence to HIV treatment.³

Opioid substitution therapies (OST), such as methadone (METH) or buprenorphine (BUP), have been demonstrated to reduce relapse to drug use and recidivism rates as well as improve

HIV clinical endpoints. Previous surveys of correctional staff have found that knowledge about METH as OST was poor.^{4,5} However, these surveys were conducted before, or relatively soon after, BUP was FDA-approved in the United States in 2002. It is postulated that over the past several years, knowledge about OST therapy has improved, attitudes have changed, and referral to programs for relapse prevention on release to the community have increased. This study examines the knowledge and beliefs of OST by Connecticut correctional facility workers and case-managers who help to coordinate the medical and social care of prisoners before release to the community. Certain beliefs and poor knowledge about OST could be a barrier in the goal of incorporating evidence-based treatments of opioid dependence into jails and prisons before release to the community.

METHODS

A self-administered anonymous survey was distributed at a meeting at one time point in year of 2006. The meeting is a once monthly meeting and included only direct inmate patient care representatives from the Connecticut Department of Corrections (CT DOC) including infectious diseases nurses and drug counselors. The meeting also included social workers and case managers who work for Project TLC⁶ who assist inmates in transitioning to the community on discharge by arranging medical appointments, applying for medical insurance, and arranging community substance abuse treatment. At the end of this meeting, the survey was handed out to all meeting members. The survey was anonymous (no personal identifiers were required).

There are currently 19 state prisons in Connecticut; one facility is dedicated to female inmates. The surveys included questions concerning the present drug treatment options of Connecticut prisons, in addition to questions about the following: general knowledge of OST; views on the option of OST; as well as OST and its correlation to criminal activity; HIV infection; adherence to antiretroviral medication; overdose; and consumption of illicit opioids.

RESULTS

A total of 50 surveys were distributed and 27 were returned for a response rate of 54 percent. Only one respondent's facility provided methadone (METH) to female inmates as maintenance treatment for pregnant women, detoxification, and treatment for withdrawal from opioids. None of the facilities provided general METH or buprenorphine (BUP) maintenance treatment as relapse prevention at the time of the survey. Five (19 percent) subjects stated they referred inmates to METH programs on release. None of the subjects stated they referred inmates to BUP programs (Table 1).

Generally, it was indicated that less was known about BUP in contrast to METH. More respondents replied with "unknown" for questions regarding the use of BUP. A majority agreed (63 percent) that OST blocks the effects of heroin. The majority, however, did not agree that it should be available as a lifelong treatment but rather for eventual detoxification. More respondents thought that both METH and BUP should not be expanded to inmates who wanted to receive therapy. Additionally, a majority (59 percent) believed that opioid substitution therapy was substituting one addiction for another (Table 2).

More people disagreed that OST reduces addicts' criminal activities. It was generally evenly divided on whether or not OST reduces addicts' risk of acquiring or transmitting HIV, but almost half (48 percent) of respondents agreed that it does not increase HIV risk-taking behavior. Some respondents agreed that OST improved adherence to antiretroviral medications (Table 2).

It was evenly divided between agreed, disagreed, and unknown on whether or not OST decreased addicts' risk of dying. More people agreed that OST did not increase the addicts' chance of using illicit opioids, but did not necessarily agree that it reduced the chance. A majority (63 percent) felt that it would be necessary to receive treatment after release.

Regarding direct relatedness of OST and HIV, slightly fewer respondents agreed that BUP could decrease transmission of HIV (33 percent) compared with METH (37 percent). Less than half of respondents agreed either medication (BUP 37 percent and METH 41 percent) could improve adherence to HIV medications.

DISCUSSION

This pilot survey sought to understand current attitudes and knowledge about OST among correctional patient care workers and case managers who are responsible for transitioning inmates to the community. Nurses, social workers, and case managers have significant influence over whether inmates will choose to accept treatment or have treatment arranged for them on discharge to the community.

In this pilot study, a majority of respondents thought that the goal of OST should be detoxification. In contrast, a 4-year follow-up study of imprisoned male Australian heroin users found that improved outcomes were associated with longer periods of METH treatment.^{7,8} The study also indicated that longer periods of METH maintenance significantly reduced reincarceration, implying a reduction in criminal activity. In terms of HIV, extensive research in the United States has demonstrated that METH use correlates to a decrease in HIV risk behaviors⁹ which also includes decreased transmission of other blood-borne viruses such as Hepatitis B and C.¹⁰ The World Health Organization, the United Nations Office on Drugs and Crime, and the Joint United Nations Programme on HIV/AIDS have each supported the expansion of OST because it is an evidence-based therapy that has proven effective for both primary and secondary HIV prevention, as well as reducing illicit opioid use and deaths due to overdose, improving uptake and adherence to antiretroviral treatment for HIV-positive drug users, and that is cost-effective to society.¹¹

More respondents indicated "unknown" for the questions concerning BUP. This suggests a lack of knowledge about BUP. This is most likely a result of the relative recent use of BUP by US physicians. BUP is a partial mu-receptor agonist and has been FDA-approved for outpatient treatment of opioid dependency by primary care physicians since 2002. Since 1996, France has provided BUP to opioid dependent individuals including prisoners^{12,13} and has resulted in reduced recidivism in contrast to abstinencebased treatment.¹² BUP is offered in several HIV clinics in the New Haven and Waterbury areas within Connecticut (CT), as well as by many drug treatment programs in the Connecticut area. Current studies are in progress in New Haven and Hartford cities in CT to assess released opioid-dependent HIV-infected prisoners' acceptance and tolerability of BUP for relapse prevention purposes (Springer NIDA-funded K23 DA 019381).

Only five respondents from this study indicated referrals to METH programs on release which emphasizes an area of possible improvement. Similarly, an overwhelming majority of US correctional workers in federal prisons in one study reported that METH would "not be beneficial to opioid dependent inmates" and therefore "METH is not provided" in most state and federal prisons.⁴ Only 32 percent of US state prisoners and 36 percent of federal prisoners with substance abuse problems receive care while incarcerated and most of this is in the form of counseling.^{14,15} Very few US state and federal prisons offer OST on incarceration or after release. Project KEEP at Rikers Island in NYC has offered METH to prisoners on incarceration with linkage to community programs on release with significant decreases in relapse to opioid

use.¹⁶ Project KEEP and programs in Australia and Canada have also found that providing effective linkage to METH programs on release will reduce criminality and decrease recidivism.^{13,16-19} This linkage is critical as the period immediately following release is prone to relapse to drug use and overdose.²⁰

METH has demonstrated positive effects for treatment of opioid dependence. METH is a full mu-receptor agonist that has been shown to decrease the frequency of heroin use, injection, and syringe sharing. In addition, METH treatment has been associated with a decrease in HIV-risk taking behaviors including a decrease in the number of sexual partners and the practice of exchanging sex for money and/or drugs.²¹⁻²⁵ Patients who receive METH, compared with those who receive no OST, demonstrate lower incidence and prevalence rates of HIV infection.²⁵ The use of METH has also been shown to improve adherence to antiretroviral medications and therefore improve morbidity and mortality for HIV-infected persons.^{26,27} One of the problems with METH is that it must be given in a federally licensed clinic and stigma is associated with patients accessing this treatment. Furthermore, there are several side effects associated with it including somnolence, respiratory depression, and nausea. These side effects are, however, manageable when correct doses are given in the opiate-tolerant patient and for those who have been opiate-free while incarcerated. Restarting OST before discharge can be done safely and slowly as has been done in other programs in the United States and outside the United States thereby preventing relapse to opioid use on release and decreasing chance of opiate overdose.^{17,18} For those who do seek its benefits, there can be a wait time to be enrolled in the program. For released prisoners waiting for any treatment to help prevent relapse is not an option. They face many challenges on release including unemployment, poverty, homelessness, mental illness, HIV, and other diseases. They do not have the option of waiting for a METH clinic to enroll them.

There are several differences that exist between METH and BUP. First, BUP appears safer than METH largely because of less respiratory depression due to its ceiling effect. It occupies 95 percent of mu-receptors in the brain at dose of 16 mg and does not produce any more effect after maximum of 32 mg. It does not have a linear relationship of dose to side effects as METH does. For instance, the higher the dose of METH, the more likely you are to decrease relapse to drug use, but also you are more likely to have side effects. Second, BUP has been found to have less interactions with antiretroviral medicines than METH.²⁸ Furthermore, BUP has less stigma associated with it as it does not have to be given in a federally licensed clinic, but can be prescribed by a primary care physician with the appropriate drug enforcement administration (DEA) waiver and can be started immediately upon release or even prior to release. Because of its safety profile, fewer regulatory hurdles, and fewer drug interactions, BUP may be an attractive option to rapidly institute OST into correctional settings.

It is unclear how to interpret the respondents' answers to questions about the use of OST, HIV-risk taking behaviors and adherence to antiretroviral therapy. Overall, approximately equal percentages of respondents felt that BUP and METH could decrease the risk of HIV transmission (33 percent vs 33 percent, respectively) and improve adherence to antiretroviral therapy (37 percent BUP vs 41 percent METH). Perhaps, the respondents did not understand the question as it does not appear to correlate with responses to other questions on the attitudes of OST in general. Overall though, several studies have found that risk taking behaviors such as unprotected sex and needle-sharing are reduced in those who are receiving OST.^{29,30} Furthermore other studies of METH and BUP have shown that OST improves HIV-infected patients' adherence to medical care and medication.²⁷

This study was a pilot survey evaluation of attitudes and knowledge about OST in the state of Connecticut in the United States. Because of its small subject sample, it has several limitations that future research could address. Although it was only targeted at correctional facilities

specifically in Connecticut, a greater number of respondents would give more credence to the results. Additionally, this study is a cross-sectional study. An evaluation of opinions after education and/or training programs could provide more insight. However, it is clear that correctional facility nurses, counselors, social workers, and case-management referral persons have a limited knowledge of the effects and benefits of opioid-substitution therapy. These individuals have direct care of opioid-dependent inmates and could offer education and potential linkage to effective OST while incarcerated or on discharge to the community. It is important for all correctional facilities to provide adequate education about OST so as to offer opioid-dependent inmates evidence-based treatment options to help prevent relapse to drug use upon release, improve mortality, decrease transmission of HIV and other blood-borne viruses, and reduce recidivism. With the introduction of the less restricted BUP, opioid substitution therapy programs in correctional facilities are a more accessible reality as opposed to waiting for the more regulated METH clinics to enter facilities.

CONCLUSIONS

The apparent lack of education concerning the use of METH and BUP provides an opportunity for change. Possible programs that could be implemented to improve outcomes for released prisoners would be linkage of case-management referral programs with opioid substitution therapy on release or 1-2 weeks before discharge and linking to adherence programs for antiretroviral therapy.

ACKNOWLEDGMENTS

Funding provided by the National Institute of Drug Abuse (Springer K23 DA019381); RD Bruce (K23 DA 022143). The authors thank Lizzie Americo, BA candidate of Columbia University for organization of data.

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Table 1
 Number of respondents who refer inmates to opiate substitution therapy (OST) upon release

	Yes (N)	No (N)	Unknown (N)	Unanswered (N)
1. Do you/your facility ever provide methadone to inmates?	1	23	1	2
2. Do you/your facility refer inmates to methadone programs upon release?	5	14	8	0
3. Do you/your facility refer inmates to buprenorphine programs upon release?	0	17	9	1

Table 2
Responses to survey of attitudes and knowledge about OST for prisoners

	Agree, percent	Disagree, percent	Unknown, percent	Unanswered, percent
1. Methadone/Buprenorphine, when given as a maintenance program, reduces (blocks) the effects of heroin.	63	11	26	0
2. Opiate substitution therapy (Methadone or Buprenorphine) should be available as a lifelong treatment option.	22	44	26	7
3. The goal of opiate substitution therapy should always be eventual detoxification and sobriety.	67	19	11	4
4. Methadone services should be expanded so that all inmates in prison who used narcotics before incarceration who want opiate substitution therapy can receive it.	22	52	22	4
5. Buprenorphine services should be expanded so that all inmates in prison who used narcotics prior to incarceration who want opiate substitution therapy can receive it.	19	48	30	4
6. Opiate substitution therapy (ie, Methadone and Buprenorphine) is just substituting one addiction for another.	59	22	15	4
7. Methadone maintenance reduces addicts' criminal activities.	26	48	19	7
8. Buprenorphine maintenance reduces addicts' criminal activities.	22	41	33	4
9. Methadone maintenance reduces addicts' risk of acquiring or transmitting HIV.	37	44	15	4
10. Buprenorphine maintenance reduces addicts' risk of acquiring or transmitting HIV.	33	33	26	7
11. Opiate substitution therapy (methadone/buprenorphine) increases addicts' HIV risk taking behavior (unprotected sex and sharing needles).	15	48	33	4
12. Methadone maintenance improves adherence to antiretroviral medicines in HIV-infected opiate dependent individuals.	41	30	22	7
13. Buprenorphine maintenance improves adherence to antiretroviral medicines in HIV-infected opiate dependent individuals.	37	22	37	4
14. Methadone maintenance decreases addicts' risk of dying.	33	30	33	4
15. Buprenorphine maintenance decreases addicts' risk of dying.	30	30	37	4
16. Methadone or Buprenorphine increases addicts' chances of using illicit opiates.	22	37	37	4
17. Methadone maintenance reduces addicts' consumption of illicit opiates.	26	44	26	4
18. Buprenorphine maintenance reduces addicts' consumption of illicit opiates.	26	30	30	15
19. Prisoners do not need opiate substitution therapy (methadone or buprenorphine) after they get released because they have not used drugs while they were incarcerated.	11	63	22	4