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## Commentary on Larney (2010):A call to action—opioid substitution therapy as a conduit to routine care and primary prevention of HIV transmission among opioid-dependent prisoners

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Larney [1] should be commended for delineating clearly the serious deficits not only in the paucity of available opioid substitution treatment (OST) in prisons, but also on the limited critical evaluation of such programs within the literature to date. The few available studies without significant methodological flaws confirm OST conferring positive public health outcomes by reducing intra-prison injection drug use (IDU) and IDU-related human immunodeficiency virus (HIV) risk behavior. While this review focused specifically on OST's impact on HIV risk behaviors, the benefit of providing this medically indicated and evidence-based treatment goes well beyond this narrowly defined outcome.

As noted by Larney [1], flawed methodological issues and/or low retention hamper interpretation of existing data which may contribute, in part, to the incredibly poor wide-scale implementation of OST in prison, despite its documentation as an evidence-based treatment outside the criminal justice system. What data might improve current policies to increase provision of OST within prisons? First, HIV risk behaviors within prisons need to be assessed in prisoners on OST who are HIV-infected. Numerous studies document that IDU is correlated with increased HIV incidence in prisons through syringe and needle sharing in several countries, including Thailand [2], Canada [3], the United States [4], Russia, Brazil, Iran, Australia, Lithuania, Russia and the United Kingdom [5]. The limited use of OST among incarcerated populations within the United States is a travesty, given that HIV prevalence is three times greater in incarcerated populations when compared to the community [6], with upwards of 50% meeting DSM-IV criteria for opioid abuse/dependence [7]. The disparity between OST need and implementation is unambiguous, and results in significant public health harm despite both the World Health Organization (WHO) [8] and the National Institute of Drug Abuse (NIDA) calling for widespread institution of OST in prison and jail settings [9]. Unfortunately, provision of OST in the criminal justice systems in the United States and elsewhere or the rest of the world has improved little in recent years.

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Secondly, HIV risk behaviors should be assessed immediately after prison release in order to avoid reporting bias and incurring criminal sanctions. Thirdly, it is shortsighted to consider only HIV transmission as the primary benefit of OST. It is well documented that prisoners are medically and socially vulnerable immediately upon release. They face homelessness [10], unacceptable rates of overdose and death [11], poor continuity of care and, in the case of HIV, have poor access to continuation of antiretroviral therapy [12], resulting in poor HIV treatment outcomes [13] and increased HIV risk behaviors that may result in the acquisition and transmission of HIV to the uninfected public [14]. Prison release programs often omit OST as relapse prevention because substance abuse is often not perceived as a chronic, relapsing medical condition [15]. OST among released prisoners, however, has been demonstrated to decrease recidivism, relapse to opioid use and IDU-related risk behaviors and improve adherence to antiretroviral therapy among HIV-infected individuals [16–18].

Why, then, even with Larney's [1] conclusion that OST reduces intra-prison HIV transmission and international experts recommending wide-scale implementation of OST within prisons, has there been little uptake of OST in prison? Specifically among countries that have the highest HIV prevalence rates among IDUs, only a few notable examples such as Iran, Indonesia, Malaysia, Moldova, Poland and the United States have allowed limited OST among opioiddependent prisoners. More concerning is that there has been recent discontinuation of OST in community settings, including Uzbekistan, Azerbaijan, Moldova and Kyrgyzstan, due to interruption or reduction in treatment and lack of available supplies [19].

In summary, the lack of implementation of OST in correctional setting should not be predicated only on precise studies confirming reduction of HIV transmission risk while within prison. Its use has many more important benefits. First, the criminal justice system provides an important public health benefit by its ability to routinely screen and systematically implement evidence-based treatments for a number of chronic conditions, including for opioid dependence and HIV. Secondly, it may reduce HIV transmission within prisons. Thirdly, it serves as a conduit to care after release from prison. Fourthly, it reduces the adverse consequences of injection drug use, including overdose both within prison and after release. Wide-scale implementation of OST within prison and jail settings will impact prevention and treatment of HIV infection positively. It is time to translate science into practice through increased provision of OST in prisons. The scientific questions are not 'should we?', but 'what are the best-practice implementation strategies?'.

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