Incarceration and compulsory rehabilitation impede use of medication for opioid use disorder and HIV care engagement in Vietnam

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INTRODUCTION

Similarly to many countries, including the United States, Vietnam uses incarceration as a tool to deter drug use by individuals in the community [1]. In Vietnam, a separate system of compulsory rehabilitation centers, also known as "06 centers", exist with the goal of curbing drug use [2]. Scant research supports that incarceration or compulsory rehabilitation curb substance use [3]; rather, for people who have initiated medication-based treatment for opioid use disorder (MOUD) prior to incarceration or compulsory rehabilitation, these two mechanisms may be particularly disruptive, as MOUD is not available in most prisons or compulsory rehabilitation centers. Antiretroviral therapy (ART) is allowed at compulsory rehabilitation centers but uptake is variable, typically relying on family members picking up ART prescriptions from the patient's HIV clinic and delivering them to the compulsory rehabilitation center, often resulting in disruptions in HIV treatment.

OBJECTIVE

The objective of this study was to: assess the effect of incarceration, compulsory rehabilitation, or both on receipt of medication for opioid use disorder and HIV treatment engagement in Vietnam.

METHODS

- Participants were **people living with HIV** participating in an **opioid use disorder treatment trial**.
- We compared those with **incarceration or compulsory rehabilitation between 0 and 9 months**, who were released prior to their 9-month study visit, to those with **no incarceration or compulsory rehabilitation from 0 to 9 months** (participants still incarcerated at 9 months were excluded)
- We used logistic regression to test the association between incarceration, compulsory rehabilitation, or either and medical record-documented **HIV care engagement (≥ 1 visit), antiretroviral therapy prescription, and retention on medication for OUD (MOUD), between 9 and 12 months**, controlling for baseline demographics, substance use, past incarceration and compulsory rehabilitation, and HIV history.

RESULTS

Participant Characteristics

Participants were predominately:

- male (96.5%)
- HIV suppressed at baseline (66.9%)
- Previously incarcerated (82.9%) or in compulsory rehabilitation (60.1%) at least once before the study
- From the study start through nine months, 25 of 258 participants (9.7%) were incarcerated (n=14) or sent to compulsory rehabilitation (n=14) at least once.
- Of those, **19 (76%) did not receive buprenorphine or methadone between months 9 and 12 (Table 1)**

Analysis Results

- Being incarcerated, sent to compulsory rehabilitation, or either, were **strongly negatively associated with subsequent receipt of MOUD (Table 2).**
- Similarly, being incarcerated, sent to compulsory rehabilitation, or either **negatively impacted HIV clinic engagement.**
- Zero-inflated negative binomial models suggested **42.5 fewer days of MOUD** between 9 and 12 months for participants who were incarcerated and **46.1 fewer days of MOUD** for those in compulsory rehabilitation

Table 1. Study exposures, outcomes, and unadjusted odds ratios between 9-12 months, 2015-2019

	All participants (n=258)	MOUD (n=148)		HIV Clinic Engagement (n=210)		Active ART prescription (n=207)	
	n (%)	n (%)	OR (95% CI)	n (%)	OR (95% CI)	n (%)	OR (95% CI)
Incarcerated	14 (5.4%)	2 (1.4%)	0.06 (0.01, 0.27)	11 (5.2%)	0.22 (0.05, 0.91)	12 (5.8%)	0.33 (0.07, 1.69)
Compulsory rehabilitation	14 (5.4%)	4 (2.7%)	0.15 (0.05, 0.50)	11 (5.2%)	0.20 (0.05, 0.83)	13 (6.3%)	0.80 (0.10, 6.68)
Either	25 (9.7%)	6 (4.1%)	0.11 (0.04, 0.29)	20 (9.5%)	0.23 (0.07, 0.73)	22 (10.6%)	0.42 (0.11, 1.66)

Table 2. Adjusted regression results of exposures (0 to 9 months) on study outcomes (9 to 12 months)

	Incarceration model aOR (95% CI)	Compulsory rehabilitation model aOR (95% CI)	Incarceration or 06 model aOR (95% CI)
MOUD Retention	0.05 (0.01, 0.24)	0.14 (0.04, 0.50)	0.11 (0.04, 0.31)
HIV Clinic Engagement	0.13 (0.03, 0.71)	0.09 (0.02, 0.39)	0.13 (0.04, 0.49)
ART Prescription	0.24 (0.04, 1.35)	0.31 (0.05, 1.88)	0.26 (0.06, 1.11)

CONCLUSIONS

- We found that **incarceration and compulsory rehabilitation substantially decreased** the odds of reinitiating MOUD and HIV clinic visits, and decreased the number of days participants were on MOUD, following release.
- For those incarcerated or in compulsory rehabilitation, **medication for both OUD and HIV should be provided** based on evidence-based protocols, in stigma-free settings.
- Additional work should evaluate pathways to continuing to **reduce incarceration and compulsory rehabilitation for people who use drugs** in Vietnam and globally.

Citations

1. *World Prison Brief*. 2019 July 27, 2020]; Available from: https://www.prisonstudies.org/highest-to-lowest/prison-population-total.
2. Windle, J., *A Slow March from Social Evil to Harm Reduction: Drugs and Drug Policy in Vietnam.* Foreign Policy at Brookings, 2016.
3. Vuong, T., et al., *Outcomes of compulsory detention compared to community-based voluntary methadone maintenance treatment in Vietnam.* J Subst Abuse Treat, 2018. **87**: p. 9-15.

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