Journal of Substance Abuse Treatment 46 (2014) 511–515

Contents lists available at ScienceDirect

Journal of Substance Abuse Treatment

Brief articles

# Mobile opioid agonist treatment and public funding expands treatment for disenfranchised opioid-dependent individuals

Gerod Hall, Ph.D., M.P.H. [a], Charles J. Neighbors, Ph.D., M.B.A. [a,*], Jude Iheoma, Ph.D. [c], Sarah Dauber, Ph.D. [a], MerriBeth Adams, Ph.D. [b], Robert Culleton, Ph.D. [c], Fred Muench, Ph.D. [a], Suzanne Borys, Ph.D. [c], Rebecca McDonald, M.S. [a], Jon Morgenstern, Ph.D. [a]

[a] The National Center on Addiction and Substance Abuse at Columbia University, 633 Third Avenue, New York, NY 10017, USA
[b] The National Council on Alcoholism and Drug Dependence – New Jersey, 360 Corporate Boulevard, Robbinsville, NJ 08691, USA
[c] State of New Jersey – Department of Human Services, Division of Mental Health and Addiction Services (DMHAS), 222 S. Warren Street, 4th Floor, Trenton, NJ 08625, USA

ARTICLE INFO

*Article history:*
Received 1 July 2013
Received in revised form 17 September 2013
Accepted 12 November 2013

*Keywords:*
Access to health care
Methadone
Mobile health services

ABSTRACT

The New Jersey Medication Assisted Treatment Initiative (NJ-MATI) sought to reduce barriers to treatment by providing free, opioid agonist treatment (OAT, methadone or buprenorphine) via mobile medication units (MMUs). To evaluate barriers to OAT, logistic regression was used to compare opioid dependent patients enrolled in NJ-MATI to those entering treatment at fixed-site methadone clinics or non-medication assisted treatment (non-MAT). Client demographic and clinical data were taken from an administrative database for licensed treatment providers. The MMUs enrolled a greater proportion of African-American, homeless, and uninsured individuals than the fixed-site methadone clinics. Compared to non-MAT and traditional methadone clients, NJ-MATI patients were more likely to be injection drug users and daily users but less likely to have a recent history of treatment. These observations suggest that the patient-centered policies associated with NJ-MATI increased treatment participation by high severity, socially disenfranchised patients who were not likely to receive OAT.



## 1. Introduction

Nearly 2 million Americans are dependent on prescription opioids, and 359,000 are dependent on heroin (SAMHSA, 2011); yet, only 15% of these individuals receive treatment (Becker et al., 2008). Untreated opioid dependence can have serious health consequences, including greater likelihood of bloodborne disease transmission (Milloy et al., 2010; Lynn E. Sullivan & Fiellin, 2004) and mortality (Capelhorn, Dalton, Cluff, & Petrenas, 1994; Goldstein & Herrera, 1995; Hser, Anglin, & Powers, 1993; Mattick, Breen, Kimber, & Davoli, 2009). Moreover, yearly costs related to medical care, lost productivity, criminal justice involvement, and welfare have been estimated to be $20 billion for heroin users and (Mark, Woody, Juday, & Kleber, 2001) and 8.6 billion for prescription opioid abusers (Birnbaum et al., 2006).

Opioid agonist therapy (OAT), typically with methadone, is the most effective intervention for opioid dependence (Marsch, 1998; Mattick et al., 2009; National Quality Forum, 2005). Despite its documented efficacy, OAT is often not available or difficult to access, particularly for certain groups of people (Peterson et al., 2010). The few studies focusing on disparities in access to OAT have found that ethnic minorities (Baxter, Clark, Samnaliev, Leung, & Hashemi, 2011) and individuals experiencing severe disenfranchisement—including homelessness, lack of health insurance, and low income—are less likely to receive OAT (Appel, Ellison, Jansky, & Oldak, 2004; Deck & Carlson, 2004; Fischer, Firestone, Patra, & Rehm, 2008; Peterson et al., 2010).

Further, opioid dependent individuals may not be able to access OAT due to lack of reliable transportation or residence in an area that lacks OAT treatment centers (Deck & Carlson, 2004; Strathdee et al., 2006). Financial factors such as low income, lack of ability to pay even small co-pays, and unemployment are also associated with reduced utilization of OAT (Deck & Carlson, 2004).

Findings are mixed regarding the extent to which substance use severity and co-existing problems present barriers to OAT access. For example, some studies have found that OAT clients are characterized by lower levels of use of opioids and other substances, less severe employment problems, less criminal behavior, and lower levels of mental illness compared to medication-free patients (Baxter et al., 2011; Schwartz et al., 2008; Schwartz, Kelly, O'Grady, Mitchell, & Brown, 2011) or individuals not in treatment (Schwartz et al., 2008, 2011). Findings of these studies suggest that severity of substance use, criminal justice involvement, and comorbid psychiatric disorders may present additional barriers to OAT access for opioid dependent individuals. However, other studies have found higher rates of injection drug use and recent incarceration among OAT clients compared to those who did not access treatment, suggesting greater clinical severity among OAT clients (Callon, Wood, Li, Montaner, &

* Corresponding author. Tel.: +1 212 841 5301.
*E-mail address:* cneighbors@casacolumbia.org (C.J. Neighbors).

0740-5472/$ – see front matter © 2014 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.jsat.2013.11.002

Kerr, 2006; Fischer et al., 2008). In order to identify barriers to OAT and improve treatment access, there is a need for additional research that contrasts the characteristics of opioid dependent individuals who receive OAT and those who do not.

The New Jersey Division of Mental Health and Addiction Services (DHMAS) has estimated that in order to meet the considerable demand for substance abuse treatment in the state there would need to be a 58% increase in the number of treatment slots (DMHAS, 2010). To increase treatment capacity, especially among substance abusers most at risk for acquiring a bloodborne disease, legislative action (Bloodborne Disease Harm Reduction Act, P.L. 2006, c.99) appropriated funding to DMHAS to establish the New Jersey Medication Assisted Treatment Initiative (NJ-MATI). In six sites across the state, NJ-MATI provides outreach via fully equipped and staffed opioid medication vans that targeted traditionally hard-to-reach groups, such as injection drug users (IDUs), homeless persons, and the uninsured. Mobile substance abuse treatment programs that offer community-based, walk-in services at little or no charge are an effective means to reach underserved groups. Mobile treatment offers the advantage of conducting outreach beyond the "brick and mortar" clinic into the communities where opioid dependent individuals live and congregate. In New Haven, Connecticut, a mobile health unit linked to the local needle exchange program improved access to preventive health care and OAT for traditionally underserved groups such as ethnic minorities, the uninsured, injection drug users (IDUs), and sex workers (Liebman, Pat Lamberti, & Altice, 2002; Thompson et al., 1998). Mobile opioid medication programs implemented in Baltimore, Maryland and Amsterdam, Netherlands were able to engage a greater number of minority patients than fixed-site outpatient methadone programs (Buning, Van Brussel, & Van Santen, 1990; Greenfield, Brady, Besteman, & De Smet, 1996).

### 1.1. Study aims

The primary goal of NJ-MATI was to promote engagement and retention in OAT for disenfranchised individuals by reducing some of the most common treatment barriers, including lack of transportation and lack of health insurance. In addition to mobile opioid medication, NJ-MATI offered clients medication choice (methadone or buprenorphine) and a broader range of services than traditional OAT programs, including bloodborne disease and STD testing, cognitive behavioral therapy, case management, as well as connections to and financial support for other substance abuse treatment services. Case managers were tasked with assisting clients in applying for Medicaid benefits and counseled clients about employment and education opportunities.

This study examines the characteristics of individuals enrolled in NJ-MATI and compares them to opioid-dependent individuals enrolled in traditional methadone programs or enrolled in non-MAT forms of treatment. Unlike prior studies in this area which have mostly relied on data from a single site (e.g., Doolittle & Becker, 2011; Milloy et al., 2010; Sullivan, Chawarski, O'Connor, Schottenfeld, & Fiellin, 2005), data for the current study were drawn from an administrative database used by all licensed treatment providers in the state. Thus, the present study is an improvement on previous studies due to the inclusion of a larger variety of patients and treatment settings.

## 2. Materials and methods

### 2.1. Participants

This study reports on data from a large administrative sample drawn from the New Jersey Substance Abuse Monitoring System (NJSAMS), a statewide administrative database for licensed substance use disorder treatment providers. NJSAMS includes information on client demographics, pre-treatment substance use, co-occurring problems, and treatment placement information.

The administrative sample included all individuals who enrolled in NJ-MATI between January 1, 2008 and September 30, 2010 ($N$ = 2,259). Two comparison groups were identified using the administrative data. The first, traditional methadone clients, included all clients enrolled in methadone treatment (but not enrolled through NJ-MATI) at the office-based sites of the six NJ-MATI providers during the same period ($N$ = 2,917). Note that NJ-MATI clients were treated via the mobile medication vans, but each van was associated with an office-based methadone clinic. The second comparison group consisted of all individuals who were admitted to a licensed treatment provider for opioid addiction during the same period in the same geographic location as the NJ-MATI providers, but did not receive MAT (will be referred to as "non-MAT"; $N$ = 2,327). Non-MAT clients received outpatient therapy (15%), intensive outpatient therapy (25%), detoxification services (20%), and/or inpatient treatment (4%).

### 2.2. New Jersey Medication Assisted Treatment Initiative (NJ-MATI) Description

The NJ-MATI offered free OAT "on demand" to sterile syringe exchange program participants and other opioid dependent individuals via an MMU and office-based counseling services. NJ-MATI was implemented at six state-funded OAT provider sites in six New Jersey municipalities—Atlantic City, Camden, Paterson, Plainfield, Newark, and Trenton. Five of the six sites had MMUs, and the sixth had an office-based program with a passenger van to transport clients to the office-based site. MMUs were outfitted with safes for storage of medication, doctors' offices, lab station, computers, confidential counseling office, lavatory, and patient waiting area. MMUs were scheduled for 2 stops per day, and the specific itineraries were selected to correspond to areas of high prevalence of HIV and IDU. All MMUs had an office-based site to provide comprehensive treatment services based on client need. NJ-MATI providers (MMU and office-based sites) operated 6 days per week and offered methadone maintenance, buprenorphine (as Suboxone, 1:4 naloxone:buprenorphine) detoxification, induction, and maintenance, and corresponding office-based services. NJ-MATI clients could receive vouchers to obtain additional treatment and supportive services including detoxification, outpatient counseling, residential treatment, case management, mental health services, and transportation.

NJ-MATI eligibility criteria included (a) household income at or below 350% of the Federal Poverty Level, (b) resident of New Jersey, (c) history of injection drug use, (d) test positive for opioids, (e) not currently enrolled in opioid replacement therapy, and (f) uninsured. Twenty-eight percent of patients were referred from New Jersey's sterile syringe access program.

### 2.3. Procedures

Clients in the administrative sample were assessed by intake workers at the treatment sites upon admission to treatment, and all assessment data were recorded in NJSAMS. NJSAMS pre-treatment assessments included a demographic questionnaire as well as the Addiction Severity Index (ASI: McLellan et al., 1992), which evaluated client functioning in the areas of employment, physical health, behavioral health, drug and alcohol use, legal status, and social relationships.

### 2.4. Measures

Data presented in this study were drawn from the NJSAMS pre-treatment assessment for all individuals enrolled in NJ-MATI and the two comparison groups. The study presents client characteristics in