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Examining drug treatment program entry of injection drug users: human capital and institutional disaffiliation

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Abstract

Logistic regression analysis was used to examine the likelihood of either entering residential treatment, methadone treatment or solely entering detoxification programs for 32,173 injection drug users (IDUs) using drug treatment in Massachusetts, 1996–1999. Those IDUs who were employed, more educated, health-insured, not homeless and who resided with their children were less likely to solely enter detoxification programs. This population, with more human capital and lower levels of institutional disaffiliation, was also more likely to enter methadone maintenance programs. These results were consistent for two groups of drug users: those who reported having injected in the past year and those with a history of injecting who had not injected in the past year. Overall, the findings demonstrate a need for more complex drug treatment program planning efforts that also respond to issues of employment, education and social isolation.

Keywords: Injection drug users; Detoxification program; Methadone maintenance program

1. Introduction

For policy makers, program developers and researchers in the drug addiction field, a critical research task is to understand the influences on utilization of drug treatment. Client tracking systems are invaluable sources of data to help in this process, allowing researchers to disentangle the determinants of differences in drug treatment utilization. The present study, based on client tracking data of 32,173 injection drug users (IDUs) using drug treatment services in the State of Massachusetts 1996–1999, has two objectives: (1) to develop a model for understanding individual level determinants of entry to differing types of drug treatment programs and (2) to examine the robustness of this model by examining the hypothesized relationships using data aggregated at the individual level for two groups: those who report having injected in the past year ($N = 25,387$) and those who report having a history of injecting drugs, but did not inject in the past year ($N = 6786$).

Many studies have attempted to establish socio-demographic, psychological and drug-related predictors of entry to drug abuse treatment, retention in treatment, and various parameters of treatment success (see Tims, Leukefeld, and Platt, 2001 for a summary). Unfortunately these studies have consistently found that independent predictors account for only a small proportion of explained variance in treatment outcomes. The present study develops and tests the stability of a sociological model for understanding factors affecting clients' entry to different types of drug abuse treatment. Specifically, we draw upon the theories of human capital and institutional disaffiliation to explore the likelihood that an IDU only enters detoxification programs over a period of 4 years or also uses either residential treatment or methadone treatment programs. Given that injection drug use is so strongly implicated in the spread of HIV/AIDS, and that drug abuse treatment limits the spread of HIV/AIDS for IDUs (Chitwood, Rivers, Comerford, & McBride, 1993; McCusker, Koblin, Lewis, & Sullivan, 1990; Metzger et al., 1993), any new knowledge about IDUs' treatment utilization patterns will provide opportunities for new development of HIV prevention and treatment programs.

However, we do acknowledge that there are limitations to using large Management Information System (MIS) administrative data sets to identify patterns of association between a client's personal characteristics and program utilization patterns. These limitations include the unknown reliability of data captured via program entry interviews, variables constructed by previous data analysts and thus not of the researcher's making, and potential problems of validity and reliability related to the manner in which

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the variables are measured, leading to erroneous conclusions. On the other hand, observed relationships between variables are more robust if they hold under differing assumptions underlying the variables. Thus, the robustness of findings will be enhanced if essentially the same findings hold when the same general construct is measured in different ways. Employing such a sensitivity analysis, we examined the relationships between human capital–institutional disaffiliation and type of treatment entered, first, for those IDUs who reported having injected drugs in the past year and second, for those IDUs who reported having a history of injecting drugs but who did not inject in the past year.

2. Background

Relapse is an extremely common pattern among drug dependent individuals (Condelli & Hubbard, 1994; Nealy, 1997; Simpson, 1979, 1981), and many IDUs cycle in and out of drug abuse treatment repeatedly (Liebman & Mulia, 1993). Historically, the drug abuse treatment field believed that a brief episode of treatment could serve as a turning point for clients, moving them from dependence to a permanent—or at least—a long-term state of recovery. Even methadone was viewed early on as a medication from which clients were to eventually detoxify. In recent years, practitioners and researchers have adjusted their views of addiction and recovery. There is an emerging consensus that many individuals who seek treatment for drug dependence are likely to continue in their addiction for years or decades following treatment (Schilling, Schinke, & El-Bassel, 2000). Moreover, there is increasing recognition of the complexity of problems beyond addiction (e.g. co-occurring mental disorders, HIV infection, homelessness, unemployment) experienced by many individuals with drug abuse disorders, and that such adverse circumstances are not readily altered even in the most intensive programs. As a group, IDUs tend to have lengthy drug abuse 'treatment careers,' involving cycles of treatment, abstinence and relapse (Hser, Anglin, Grella, Longshore, & Prendergast, 1997). Better understanding of how these treatment careers vary in length, pattern and outcome will lead to more informed decisions by administrators and policy makers in designing and managing large drug abuse treatment systems.

Hser and colleagues (Hser et al., 1997; Hser, Grella, Chou, & Anglin, 1998) view measurement of the dimensions of drug abuse treatment careers as inherently difficult: "Ideally, the career concept is best examined in a longitudinal framework with specificity of timing of individual treatment episodes and associated events so that sequential patterns and associated precedents and consequences can be examined" (Hser et al. 1998, p. 516). Although studies on treatment career phenomena have been conducted for decades, this research domain is at an early stage methodologically (Hser et al., 1998).

Treatment types. Given the chronic nature of drug dependence, detoxification is viewed by many treatment providers as a necessary step in treatment initiation, but by itself, unlikely to lead to lasting changes. When compared with detoxification only, entry into any form of drug abuse treatment (e.g. long-term residential, drug-free outpatient, methadone maintenance) is associated with more positive outcomes (Gerstein & Harwood, 1990; Hien & Scheier, 1996; Simpson & Sauls, 1990). Detoxification programs and the other treatment types used by clients and discussed in the present study are next described.

Detoxification programs. One definition of detoxification is "the medical care that carries the patient through withdrawal and into rehabilitation or to more definitive treatment" (Cross & Hennessey, 1993). Most clients have been through such a process one or more times previously and their expressed intentions to change have not been borne out by their behavior. Readmission rates in some groups of patients may exceed once per month (Kivlahan, Walker, Donovan, & Mischke, 1985); one study of over 500 first admissions to detoxification centers found that over half were readmitted in the next 6 months (Annis & Smart, 1978). Unfortunately, detoxification programs influence only a small proportion of individuals to enter additional treatment following detoxification (National Institute on Drug Abuse, 1982). Detoxification alone appears to offer no lasting benefit, and reductions in the length of detoxification stays (Gerstein & Harwood, 1990; Rosenblum et al., 1996) only reinforce the view that the purposes of detoxification are very limited.

Long term *residential programs* include recovery homes, halfway houses, and therapeutic communities (although therapeutic communities may have a treatment philosophy that is more restrictive than the others in this category). Such facilities provide a controlled residential environment for 6–18 months for clients vulnerable to relapse following detoxification (Doweiko, 1999). Appropriate clients for this level of care are (a) those whose family or living environment repeatedly exposes them to active substance abusers and/or relapse situations; (b) those in need of learning daily routines to support abstinence, and (c) those for whom outpatient programs and other less-intensive interventions have been insufficient to support recovery. Common elements include individual and group counseling, an emphasis on use of 12-step programs, separation during the residential stay from family, peers, and other influences that reinforced the addiction, responsibility for household chores to promote a sense of responsibility, and when appropriate to their needs, the expectation that clients will engage in educational, vocational, or employment activities to improve economic self-sufficiency. Studies (Hitchcock, Stainback, & Roque, 1995; Moos & Moos, 1995) have shown that residential programs significantly reduce treatment readmission rates in the years following treatment and