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Treatment response by primary drug of abuse: Does methamphetamine make a difference?

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Abstract

The purposes of this study were to examine the outcomes of a sample of patients receiving publicly funded substance abuse treatment in Washington State and to compare the outcomes of those using methamphetamine (MA) with patients using other drugs of abuse. All data for this study came from administrative systems in Washington State, and the outcomes included completion of and readmission to treatment, employment, and various forms of criminal justice involvement. Treatment records were linked to outcome data using both deterministic and probabilistic matching techniques. Patients were tracked for 1 year following their discharge, and analyses were performed separately on a study population of adults and a study population of youth. For both adults and youth, the results showed that across outcomes, there were few differences between MA users and users of other hard drugs, whereas there were consistent differences between MA users and users of alcohol and marijuana. Alcohol and marijuana users tended to have more positive outcomes than the other groups. Future research should focus on more detailed analyses of the type of treatment received by patients, particularly for MA users.

Keywords: Treatment outcomes; Methamphetamines; State treatment systems

1. Introduction

Patients entering a publicly funded state treatment system vary in regard to their substance use. In Washington State, in an effort to accurately categorize substance use at admission, patients are asked to identify their primary drug of abuse from a list of 17 different substances. These substances have a wide variety of different physiological and psychological effects. However, publicly funded treatment in Washington State, like many other states, is designed to deal with chemical dependencies in general, rather than to address the abuse of specific substances (except for patients receiving methadone maintenance for opiate addiction). Changing patterns of drug use, like those seen over the past 20 to 30 years, often raise questions about the effectiveness of more traditional therapies under new conditions and different mixes of patients. Methamphetamine (MA) users may present clinicians with a series of unfamiliar behaviors due to the negative consequences of MA use. These behaviors include paranoia, hallucinations, and brain damage (Anglin, Burke, Perrochet, Stamper, & Dawud-Noursi, 2000). Because of these effects, some have suggested that MA abuse should be treated in a different way than other types of drug abuse (Domier, Simon, Rawson, Huber, & Ling, 2000; Pennell, Ellett, Rienick, & Grimes, 1999). This study compared MA users with users of other substances to see if differences in treatment outcomes existed.

Patterns of drug abuse change over time, and these changing patterns affect the type of patients who enter publicly funded treatment. For example, in the 1970s and 1980s, cocaine use rose dramatically. Consequently, state treatment systems began seeing increased numbers of admissions for cocaine abuse (Center for Substance Abuse Treatment, 1999). Treatment providers, who at that time were most accustomed to providing care for people addicted

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to either alcohol or heroin, found themselves dealing with stimulant addictions. Similarly, a few years later, the use of MA began increasing, particularly in the western portion of the United States (Morgan & Beck, 1997). The abuse of MA has resulted in more treatment admissions, both nationwide (CESAR, 2004) and in Washington State. In Washington State, admissions where MA was cited as the primary drug accounted for 12% of all admissions in 1998. By 2002, 18% of all admissions for adults were for MA, a 50% increase in just 5 years (Albert, 2003). Similar increases have occurred in other states as well (Brecht, Greenwell, & Anglin, 2005).

A large number of studies have shown that treatment for substance abuse can be effective on a variety of outcomes. Many of these studies go beyond examining reductions in substance use only and include what McLellan et al. (1994) have termed measures of "psychosocial adjustment," such as employment, criminal justice involvement, and health care utilization (Anglin & Hser, 1990; Hubbard et al., 1986). However, few studies have focused on the outcomes of MA users exclusively. The Matrix Treatment Model for MA abuse (Obert et al., 2000) has received some attention in the evaluation literature. In a study of patients treated using that model, there were reductions in MA use, use of other drugs, and psychiatric symptoms following treatment (Rawson, Anglin, & Ling, 2002; Rawson et al., 2000; Rawson, Huber, et al., 2002; Rawson et al., 2004). Further, few studies have compared MA users with other patients. One exception was Rawson et al. (2000), who found no differences in treatment retention between cocaine and MA users. The fact that the outcomes were similar in that study is interesting given the differences between MA users and cocaine users. In that study population, MA users were younger, more likely to be White, less likely to be employed, and more likely to be daily users. In contrast, the cocaine group had more episodic use patterns.

Brecht, von Mayrhauser, and Anglin (2000) noted that few studies that provide long-term outcome information for patients treated for MA abuse in the publicly funded system exist. One exception to that is a study in California that compared outcomes of MA-abusing men and women (Hser, Evans, & Huan, 2005). This study, however, addresses a different issue. The primary research question, whether the outcomes of MA users differ from other patients, is particularly important for publicly funded treatment systems. If outcomes are found to be different, the most efficient way to spend scarce treatment dollars would be on evidence-based programs and approaches that are best suited to specific patient characteristics and substance use patterns.

2. Materials and methods

2.1. Data sources

It was necessary to integrate multiple sources of data to examine several different outcomes of treatment. The first was the Treatment and Assessment Report Generation Tool (TARGET), the management information system of the Washington State Division of Alcohol and Substance Abuse (DASA). TARGET provided records of assessments, treatment admissions, and detoxification admissions, as well as discharge records for all patients who received publicly funded substance abuse services in Washington State. In addition, a wide variety of demographic data were available on each client. This study used TARGET records from 2002 through 2004. TARGET records were used to create index treatment episodes (defined in Section 2.3) and to determine whether patients received treatment in the year prior and the year after that index episode.

The second source of data was the Unemployment Insurance (UI) Wage file kept by Washington State's Employment Security Division (ESD). Every quarter, employers are required by law to report to the ESD the wages of and hours worked by each of their employees. We used UI data to identify those patients employed in the year before the start of their index episode, and we used that variable in our statistical models.

Two different sources of data were used to measure criminal involvement. The Washington State Patrol's Criminal History Database, a file containing data on all arrests statewide for felonies and gross misdemeanors, was used. Data in this file come from local police departments that are required by law to report all such events. We used arrest data to identify patients arrested in the year before the start of their index episode, as well as those arrested during follow-up. Conviction data came from the Washington State Institute for Public Policy (WSIPP). WSIPP is an agency directed by the state legislature to do nonpartisan research on important public policy issues. To facilitate public safety research, WSIPP keeps a person-based longitudinal database of court records, integrating data from all Washington State courts (i.e., juvenile, district, and superior courts).

2.2. Study populations

Two populations were included in this study. The adult study population included all patients, between and including the ages of 18 and 64, who began and ended an episode of treatment in 2003. The said year was chosen as the index year because it allowed for 1 complete year of pretreatment data as well as 13 months of follow-up data from each administrative source. The youth population included all patients from age 14 through 17 who began and ended an episode of treatment during the same period.

For analysis purposes, the study populations were divided into four mutually exclusive groups based on self-reported primary drug. Those groups include MA, alcohol, marijuana, and other hard drugs. Nearly 99% of the "other hard drug" group reported using one of the three following substances: cocaine, heroin, or other opiates.