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METHAMPHETAMINE ABUSE, VIOLENCE AND APPROPRIATE TREATMENT

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I. INTRODUCTION

In November of 1996, Dr. David Smith had the opportunity to present the following paper in a panel which included Dr. Garrett O'Connor and Dr. Westley Clark, two leading experts in the addiction field, at the Valparaiso University School of Law Conference on Teenage Violence and Drug Use. The conference was multi-disciplinary in nature and included perspectives from physicians, lawyers, economists and criminologists, with the goal of making an important contribution to legal scholarship in this area. However, as Dr. O'Connor emphasized in his introductory remarks to our panel, the violence associated with the abuse of psychoactive drugs played a relatively small part of the overall presentations. Much of the emphasis in the other presentations focused on environmental factors including poverty, gangs, guns, racism, and other environmental variables suggesting that the drugs themselves were relatively benign and innocent bystanders to a violent panorama caused by a variety of other political, legal, and socioeconomic forces.

When the relationship between drugs and violence was presented by Dr. Clark, the focus was on crack cocaine abuse in the African American community. There is a significant association between crack cocaine and violence both in relation to the toxicity of the drug and its relation to gang-related violent activity. For example, a 1995 study by the Department of Justice indicated that drug offenders accounted for nearly a third of the 872,200 felony convictions across the country in 1994.¹ The number of state felony convictions actually declined from 1992, but teenage murderers were an exception to that trend.² Teenagers accounted for 10% of murders in 1988, but 18% in 1994 as they were recruited into violent crack cocaine trafficking.³ Fifty-one percent of the convicted felons were white, 48% were black, and 1% were from other

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1. National Inst. on Drug Abuse, *Response to Escalating Methamphetamine Abuse Builds on NIDA Funded Research*, NIDA NOTES, Nov.-Dec. 1996, at 1, 5-6, 18.

2. *Id.*

3. *Id.*

ethnicities.⁴ Although the focus of national policy has been on youth crack cocaine and gang activity, it is clear that the teenage drug abuse problem is much broader. It was for that reason that the authors selected methamphetamine abuse as a prototypical drug phenomenon since the pharmacological properties of this psychoactive stimulant contribute directly to violence. In fact, methamphetamine, or "speed," had such a disastrous effect in the Haight Ashbury district of San Francisco, that it turned the "Summer of Love" into a scene of drug-induced violence in 1968.⁵

II. METHAMPHETAMINE ABUSE

Methamphetamine abuse contributes directly to violence in a variety of ways, but in fact, epidemiological studies have indicated that this contribution occurs most commonly in the Caucasian population. The evidence contradicts the stereotype that stimulant-induced violence is a phenomenon almost entirely associated with crack cocaine in the African American community. That stereotype has permeated public policy. Eighty percent of people incarcerated in the criminal justice system have substance abuse problems, but only 5% received treatment for their addiction.⁶ The incidence of substance abuse when matched with socio-economic status is only slightly higher in African American males than in Caucasian males, but an African American male is ten times more likely to be in prison for the same drug offense as a Caucasian male.⁷ The perception that drugs and violence occur only in the African American community is a driving force behind this public policy imbalance.

Although drug use was featured prominently in the title of this conference, virtually no mention was made of the treatment for those actively involved with drugs as a crime prevention technique. In fact, the evidence shows that treatment for addiction produces a substantial reduction in criminality and associated violence and is a much more cost effective approach to this problem. The lack of discussion of treatment as an alternative to drug abuse and violence suggests that pessimism exists regarding its ability, particularly related to stimulant abuse. In fact, the evidence indicates that addiction is a treatable illness and there are good results when treatment is made available for stimulant abusers.

4. *Id.*

5. David E. Smith, *The Characteristics of Dependence in High-Dose Methamphetamine Abuse*, 4 INT'L J. ADDICTIONS 453 (1969).

6. David E. Smith, *Social and Economic Consequences of Addiction*, COMMONWEALTH NEWSLETTER, Jan. 19, 1996, at 1-4.

7. *Id.*

A. The Results of a Recent Study

A study sponsored by Andrew M. Mecca, Director of the State of California Department of Alcohol and Drug Programs, the California Drug and Alcohol Treatment Assessment (CALDATA), graphically projects the efficacy of treatment for drug and alcohol abuse. That comprehensive study involved 1900 participants, representing nearly 150,000 service recipients and included residential, social model, outpatient, discharged methadone, and continuing methadone treatment and produced the following findings:

- (1) The level of criminal activity declined by two-thirds from the period before treatment to a comparable period after treatment. The greater the length of time spent in treatment, the greater the percent reduction in criminal activity.
- (2) The cost of treating participants in the study sample was \$209 million while the benefits received by taxpaying citizens were worth approximately \$1.5 billion. Total system savings exceeded costs at a ratio of 7 to 1. The savings exceeded costs for each of the treatment types studied, with ratios ranging from 12 to 1 to 4 to 1.
- (3) Significant declines occurred in the use of alcohol and other drugs in the period after treatment as compared to the period before: crack, cocaine, and amphetamine use declined by almost one-half; heroin by over one-fifth; and alcohol by almost one-third.⁸

It can be seen from these findings that treatment has a most dramatic effect on the control of stimulant drug abuse. Significant improvement was noted in the level of criminal activity, including declines in use, a one-third reduction in hospitalizations and significant improvement in other health indicators. Also noted was decreased disability and MediCal utilization which had a greatly improved effect on the economy and on employment. Significantly, no great differences in age, gender or ethnicity were noted. At a time when methamphetamine and violence related to methamphetamine abuse are major concerns, it is well-advised to look at the nature of this pernicious stimulant drug and how its use can be controlled through awareness and treatment.

8. D.R. GERSTEIN ET AL., CALIFORNIA DEP'T OF ALCOHOL AND DRUG PROGRAMS, EVALUATING RECOVERY SERVICES (1994).

B. The Characteristics of Methamphetamine

Methamphetamine (MA) is similar in chemical structure to amphetamine but has more pronounced effects on the central nervous system (CNS). Like amphetamine, it causes increased activity, decreased appetite, and a general sense of well-being. Injected intravenously (IV), MA produces a "rush." Most illicit "speed" is MA, and it can be swallowed, insufflated, or injected. In recent years a smokable form, "Ice," has come into use. Ice is a large, usually clear crystal of high purity that is smoked in a glass pipe like crack cocaine. The smoke is odorless, leaves a residue that can be resmoked, and its effects may continue for up to twelve hours.⁹ As with other CNS stimulants, MA is generally used in a "binge and crash" pattern. Chronic abuse can lead to a dose-related stimulant psychosis, characterized by intense paranoia with ideas of reference and out-of-control rage coupled with extremely violent behavior.¹⁰

MA dependence is a serious problem in the United States that has historically occurred in waves resembling patterns seen in epidemics of infectious disease.¹¹ The Drug Abuse Warning Network emergency department mentions that cases involving MA more than tripled from 4900 in 1991 to 17,400 in 1994.¹² Although MA dependence has, in recent years, been concentrated in the Western states, ethnographers, police, and treatment providers report increasing use of MA in the East and Southeast.¹³

Increased HIV transmission is a likely consequence of increased MA use. While the effects on sexuality of MA and related psychomotor stimulants are variable, they frequently increase libido.¹⁴ This is in contrast to opiates, which

9. M. Fischman, *Methamphetamine*, in *ENCYCLOPEDIA OF DRUGS AND ALCOHOL* (Jerome H. Jaffe ed., 1995).

10. RICHARD SEYMOUR & DAVID E. SMITH, *THE PHYSICIAN'S GUIDE TO PSYCHOACTIVE DRUGS* 64-65 (1987).

11. Everett H. Ellinwood, Jr., *The Epidemiology of Stimulant Abuse*, in *DRUG USE: EPIDEMIOLOGICAL AND SOCIOLOGICAL APPROACHES* 303, 303-08 (Eric Josephson & Eleanor E. Carroll eds., 1974).

12. J. Greenblatt et al., *Increasing Morbidity and Mortality Associated with Abuse of Metham-Phetamine—United States, 1991-1994*, 44 *MORBIDITY & MORTALITY WEEKLY REPORT* 882-86 (1995).

13. OFFICE OF NATIONAL DRUG CONTROL POLICY, *PULSE CHECK: NATIONAL TRENDS IN DRUG ABUSE* 15 (1995).

14. D.S. Bell & W.H. Threthowan, *Amphetamine Addiction and Disturbed Sexuality*, 4 *ARCH. GEN. PSYCHIATRY* 74, 74 (1961); Frank H. Gawin, *Drugs and Eros: Reflections on Aphrodisiacs*, 10 *J. PSYCHEDELIC DRUGS* 227 (1978); David E. Smith et al., *Amphetamine Abuse and Sexual Dysfunction: Clinical and Research Considerations*, in *AMPHETAMINE USE, MISUSE AND ABUSE* 228, 229 (David E. Smith ed., 1979).

decrease libido and frequently result in inability to achieve erection in males.¹⁵ MA may delay ejaculation and be associated with rougher sex; these factors may lead to abrasions and bleeding. Rougher and prolonged sexual activity may also explain the association between MA use and condom failure.

Administration by injection presents another hazard for HIV transmission in MA users. For example, in 1990, 26% of the patients admitted for MA dependence in California reported injection drug use (IDU) and 67% of San Francisco admissions reported IDU.¹⁶ As each cohort of MA users ages, an increasing proportion will become IDUs. Given the large proportion of new users, the number of IV users is likely to increase rapidly.

The confluence of injection and sexual risks has resulted in an HIV seropositivity rate of 11% in out-of-treatment heterosexual MA users in the Sacramento area, as contrasted to 4% for opiate users.¹⁷ There is a four-fold higher rate of HIV seropositivity in MA injectors than heroin injectors in the Seattle area, after adjusting for sexual orientation.¹⁸ HIV may become a greater problem in MA users than in opiate and other drug users; this has apparently already happened in California. Methamphetamine abuse also appears to have a damaging effect on the unborn fetus, as manifest in pre-maternity by weight and developmental difficulties in the newborn similar to those of the crack cocaine exposed infant.

Axis I disorders are common in other drug dependencies and may be important in MA dependence. It has been postulated that drug abuse, in at least a subset of abusers, may grow out of an attempt to self-medicate an existing disorder.¹⁹ In the case of amphetamine abuse, self-medication of an underlying depressive disorder²⁰ or of an adult attention deficit disorder²¹ may be

15. Paul Cushman, Jr., *Sexual Behavior in Heroin Addiction and Methadone Maintenance*, 72 N.Y. STATE J. MED. 1261, 1262 (1972); Denis Parr, *Sexual Aspects of Drug Abuse in Narcotic Addicts*, 71 BR. J. ADDICTION 261 (1976).

16. National Inst. on Drug Abuse, *supra* note 1, at 1-19.

17. R. Anderson et al., *Sex, Drugs, & Geography: Heterosexual Amphetamine Injectors in Northern California at Highest Risk for AIDS* (1995) (unpublished paper presented at the International Conference on Drug Related Harm, Florence, Italy) (on file with author).

18. Noreen V. Harris et al., *Risk Factors for HIV Infection Among Injection Drug Users: Results of Blinded Surveys in Drug Treatment Centers, King County, Washington 1988-1991*, 6 J. ACQUIRED IMMUNE DEFICIENCY SYNDROMES 1275, 1277 (1993).

19. Edward J. Khantzian, *The Self-Medication Hypothesis of Addictive Disorders: Focus on Heroin and Cocaine Dependence*, 142 AM. J. PSYCHIATRY 1259, 1261 (1985).

20. K. Little, *Amphetamine Versus Methylphenidate Effects in Depressed Inpatients*, 54 AM. J. PSYCHIATRY 349 (1993).

21. John A. Matochik et al., *Cerebral Glucose Metabolism in Adults with Attention Deficit Hyperactivity Disorder After Chronic Stimulant Treatment*, 151 AM. J. OF PSYCHIATRY 658, 661 (1994).

operating. The utility of methamphetamine and related psychomotor stimulants in the treatment of attention deficit disorder, major depression, and other psychiatric conditions²² lends credence to the idea that at least some methamphetamine abusers are medicating co-morbid psychiatric disorders. In individuals for whom this is the case, proper diagnosis and treatment of the underlying psychiatric disorder has been shown to substantially improve outcomes,²³ though certainly treatment addressing the secondary reinforcers of the addiction itself is still critical.

The prevalence of Axis II disorders in MA abusers is also important to establish. Milkman and Frosch suggested that amphetamine abusers choose amphetamines to augment a pre-existing and regressive defensive strategy of "narcissistic self-inflation and abstract communication," but this work did not use standard diagnostic instruments.²⁴

In addition, the psychiatric consequences of MA abuse may be differentially manifested in abusers with pre-existing psychiatric disorders. While the general acute effects of MA have been well documented, the acute effects have not been differentially described in people with different pre-morbid conditions. For instance, an amphetamine abuser who is using to medicate an attention deficit disorder may present quite differently from an abuser who is attempting to medicate an underlying depressed mood or one whose primary reason for using is related to social context.

Perhaps even more important than the identification of pre-existing pathology is an understanding of, and ability to identify, the psychiatric consequences of chronic MA abuse. Neuroadaptation to repeated over-stimulation of catecholamine pathways is likely to result in changes in both psychological and intellectual functioning that persist once use is stopped. Secondarily acquired but persistent paranoid and psychotic symptoms have been documented retrospectively in stimulant abusers followed over six years of abuse.²⁵ Independent of pre-morbid status, if MA abusers develop over time a characteristic pattern of pathology or impairment that lends itself to psychiatric intervention, identification of such consequences should help clinicians to develop optimum treatment strategies for these MA abusers. The prevalence,

22. Robert J. Chiarello & Jonathan O. Cole, *The Use of Psychostimulants in General Psychiatry: A Reconsideration*, 44 ARCH GEN. PSYCHIATRY 286 (1987).

23. KATIE EVANS & J. MICHAEL SULLIVAN, DUAL DIAGNOSIS: COUNSELING THE MENTALLY ILL SUBSTANCE ABUSER 60-63 (1990).

24. Harvey Milkman & William A. Frosch, *On the Preferential Abuse of Heroin and Amphetamine*, 156 J. NERVOUS & MENTAL DISEASE 242, 244-48 (1973).

25. T. McLellan et al., *Development of Psychiatric Illness in Drug Abusers*, 301 AM. J. PSYCHIATRY 1310 (1979).

severity, and persistence of neuropsychiatric impairment have important implications for the design and implementation of cognitively-based interventions, whether they be aimed at high-risk behaviors or MA dependence.

Methamphetamine dependence has been described by authors who have noted a withdrawal syndrome characterized by lack of energy, depressed mood, and hypersomnia.²⁶ With abstinence, these symptoms and the stimulant psychosis generally resolve, although they can reappear if the user returns to methamphetamine abuse.

The use of antipsychotic medication, such as haloperidol (Haldol), for the management of the acute methamphetamine psychotic and antianxiety medication, such as the benzodiazepines, for management of acute stimulant induced panic attacks is well established. However, the value of anti-craving medications used post-detoxification has not been established. Specific relapse prevention techniques in amphetamine and MA recovery support groups appear to be more effective adjuncts to long-term drug-free recovery.

III. CONCLUSION

In summary, this paper has focused on methamphetamine as a prototypical drug of violence that tends to counter the stereotype that drug-induced violence occurs only with crack cocaine abuse in the African American community. In fact, as has been demonstrated by Dr. Douglas Anglin at a recent NIDA conference, a majority of methamphetamine abuse occurs in the Caucasian community, with the second group being Hispanics, and only 5% of those involved with methamphetamines being African American.²⁷ Methamphetamine, as demonstrated in this study, is an equal or greater contributor to criminality than crack cocaine. Violence occurs not just on the street in teenage situations, but there is a co-morbidity between domestic violence and addictive behavior as well. In addition to the role of amphetamines in violence, alcohol sharply diminishes impulse control and stimulants can produce paranoia and lead to preemptive violence. Drug use and teenage violence needs to be placed in a broader context that includes education, prevention and treatment as well as criminalization. The drugs themselves are potent contributors to violence and increased attention needs to be paid to the role of substance abuse in violent behavior. Further, expanded treatment for addiction needs to be presented as a cost-effective crime prevention technique as well as a humane alternative to incarceration.

26. Smith, *supra* note 5, at 456-57.

27. David E. Smith, Presentation at the National Amphetamine Conference (December 10, 1996).

