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Methamphetamine: Our Nation's Chronic Illness

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Abstract

Methamphetamine was widely used in the United States during the 1950's and 60's to treat a variety of conditions before its addictive nature and harmful side effects were fully understood by the general public. The government's ensuing restrictions merely forced the production and use of methamphetamine underground as the country witnessed an explosion of clandestine production and distribution. Once viewed as the "poor man's cocaine" used exclusively in rural areas, methamphetamine has spread to become an epidemic that now transcends class, geography, and race. Much legislation has been passed over the years in response to the growing severity of the problem, as Congress has come to realize the enormity of the threat that this drug poses to its citizens and society at large. This research paper examines the history of methamphetamine use, its prevalence in the U.S., its effects on the users, its imposition of societal costs, legislation in response to the growing problem, and additional measures that ought to be employed to help cure the nation of the ailments caused by this chronic illness.

Methamphetamine

INTRODUCTION

Growing up in an upper-middle class neighborhood in the early 1990's, Robert Lee¹ had a bright future ahead of him. He had recently started junior high school at one of the nation's top magnet schools, where he shared the same high hopes and ambitions as most children his age. Unfortunately for Robert and so many others in similar situations around the country, all his plans became derailed the day one of his friends introduced him to methamphetamine.

His use of methamphetamine initially started off casually as an activity with friends that helped to pass the time on lazy afternoons. It quickly devolved into a strong addiction which soon occupied all of his time and consumed nearly all of his financial resources. Within a blink of an eye, Robert found himself bouncing from school to school and unable to kick the habit no matter what he tried. His pride would not let him enroll in a rehabilitation center no matter how much his friends and family implored him to do so. Determined to deal with his problem on his own, he struggled for four long years to get himself clean and even managed to complete his high school education at an adult continuation school. Although he did suffer some relapses from time to time, Robert had managed to get a hold of his addiction and was ready to move on with his life. He enrolled himself in a local college with the hope that his struggles with methamphetamine abuse and dealing with its related problems were behind him.

The next few years of his life were plagued with medical visits to treat various ailments that refused to go away. While Robert was no longer using methamphetamine,

¹ Name has been changed.

it became clear to him that his years of abuse would exact a huge cost on his quality of life. While the doctors were unable to say with absolute certainty that the methamphetamine use was the cause for his medical troubles, it seemed likely that the years of drug abuse had taken its toll on both Robert's mind and body. He soon learned, at the very young age of 26, that he was suffering from liver failure and would need dialysis. Less than a year after this diagnosis, Robert lay in a comatose state in a hospital bed after suffering from multiple cardiac arrests. On February 8, 2008, his parents were forced to make the most difficult decision of their lives as they decided to pull the plug on their eldest son.

Robert's story is not just that of another faceless person in middle-America. Robert was one of my closest friends, and his battle with methamphetamine was one that I was able to witness firsthand. Robert's personal struggles with methamphetamine brought the issue to light for me and made me realize that the methamphetamine epidemic had been the proverbial elephant in the room for much too long.

This research paper takes a comprehensive look at the methamphetamine problem by reviewing the history of its use in the United States, its effects on the user, the associated harms it imposes on society, the federal legislation enacted in response to the problem, and additional measures that should be adopted to slow down the spread of this deadly drug.

WHAT IS METHAMPHETAMINE?

BRIEF OVERVIEW

Methamphetamine is an illicit and highly addictive psychostimulant which is known to have its greatest effects on the central nervous system of the human body². On the streets, it is commonly referred to simply as “meth”, “speed”, and “chalk”, while in its smokeable form, it is known as “crystal”, “glass”, “ice”, and “crank”³. It is a “white, odorless, bitter-tasting crystalline powder”⁴ that can be used in a variety of ways including but not limited to injection, snorting, smoking, and ingestion, with the smoking and injection methods being preferable to users who are seeking a more intense and immediate “high”⁵.

The immediate effects that a user experiences will depend on how the drug is taken, as those who either smoke or inject methamphetamine have reported to experience a very pleasurable and intense rush which lasts only a few minutes while those who either ingest or snort the drug have reported feelings of euphoria which are weaker but tend to last longer than the short and intense “flash” experienced by others⁶. Commonly observed psychological effects associated with methamphetamine abuse are agitation, paranoia, violent behavior, depression, psychosis, anxiety, and euphoria⁷.

In a desperate attempt to maintain their highs by taking more and more of the drug, meth users tend to go on binges when they use since the pleasurable effects of the

² National Institute on Drug Abuse. *National Institute on Drug Abuse Research Report Series: Methamphetamine Abuse and Addiction*; September 2006, 1.

³ Id.

⁴ Id.

⁵ Charles W. Meredith. *Implications of Chronic Methamphetamine Use: A Literature Review*, Harv Rev Psychiatry; May/June 2005, 143.

⁶ Methamphetamine Abuse *supra* note 2 at 3.

⁷ Timothy W. Lineberry & Michael Bostwick. *Methamphetamine Abuse: A Perfect Storm of Complications*, Mayo Clin. Proc; 2006, 77.

drug often wear off very quickly, even before the drug has left the system⁸. A common form of bingeing amongst users is known as a “run,” and it involves the user foregoing both sleep and food for days at a time while they are abusing the drug⁹. This is followed by a period of “tweaking”¹⁰ which describes the period in which the user experiences a deadly combination of fatigue and restless irritability and anxiety¹¹. Although continued use of methamphetamine will temporarily cure these symptoms, it also works to reinforce the user’s addiction, and after days of sleeplessness and further use, the user will typically “crash” into a state of unrestful sleep¹².

BRIEF HISTORY

First derived from the stimulant amphetamine¹³, methamphetamine was synthesized in 1893 by a Japanese pharmacologist Nagayoshi Nagai with the use of ephedrine.¹⁴ It was not subject to widespread use until the 1940’s when it was implemented by both the Axis and Allied powers during the Second World War to help their respective military personnel both increase their performance and fight off fatigue, as well as by Japanese factory workers looking to increase their production output.¹⁵ It is said that Japanese Kamikaze pilots were distributed high doses of methamphetamine before they took off on their missions.¹⁶ Once World War II ended, the streets of Japan were overflowed with surplus stocks of methamphetamine from the military which

⁸ Methamphetamine Abuse *supra* note 2 at 3.

⁹ *Id.*

¹⁰ BK Logan. *Methamphetamine – Effects on Human Performance and Behavior*, 14 *Forens Sci Rev*; 2002, 133-151.

¹¹ Lineberry & Bostwick *supra* note 7 at 77.

¹² *Id.*

¹³ Definition of amphetamine

¹⁴ Meredit *supra* note 5 at 142.

¹⁵ *Id.*

¹⁶ David J. Jefferson. *Meth: America’s Most Dangerous Drug*, *Newsweek*; August 8, 2005. Available at <http://www.msnbc.msn.com/id/8770112/site/newsweek/print/1/displaymode/1098/>

resulted in the first full-blown epidemic of methamphetamine abuse with as high as 5% of the Japanese population estimated to have abused the drug and as high as 10% of those users having experienced related psychotic episodes.¹⁷

In the United States, amphetamine was first used as a substitute for ephedrine in 1927 and it soon became available in the 1930's in the form of Benzedrine which could be found in over the counter (OTC) nasal inhalers and tablets that were available by prescription and was prescribed to treat numerous conditions¹⁸. The first report of amphetamine addiction was published in 1938 along with the first description of amphetamine psychosis in the same year¹⁹. Starting in 1951, federal law required prescriptions for products containing amphetamines²⁰ which were often prescribed as diet aids and to provide an extra boost for housewives across the nation²¹. By 1958, there were an estimated 3.5 billion tablets of legal amphetamine produced and in 1960, the first OTC methamphetamine inhaler hit the market but by 1965, they were taken off the counters with federal law requiring prescriptions for meth products²².

By the end of the 1960's, methamphetamine use had become very widespread with 31 million prescriptions having been written in 1967 (mostly for women), an estimated 10 billion tablets of legal meth/amphetamine tablets having been produced, and a 1971 Chambers estimate that claimed 35,000 New York household residents used "speed" regularly compared to only 6,000 users of cocaine²³.

¹⁷ Meredith *supra* note 5 at 142.

¹⁸ Patricia Case. *Harm Redux Conference – The History of Methamphetamine: An Epidemic in Context*. August 19, 2005

¹⁹ Id.

²⁰ Id.

²¹ Jefferson *supra* note 16.

²² Case *supra* note 18.

²³ Id.

In response to these changes along with the withdrawal of a few of the formulations of methamphetamine by various pharmaceutical companies in the U.S. market, California's Bay Area saw the emergence of underground and clandestine methamphetamine home labs in the 1960's²⁴. These labs were quickly taken over by various biker gangs in California such as the Hell's Angels and methamphetamine use spread wildly along the West Coast until efforts focused on these biker gangs by law enforcement began to shift control of the illicit meth market to dealers and traffickers based out in Mexico in the 1990's²⁵.

The problems arising from illicit production of methamphetamines took a turn for the worse once the Bay Area biker groups who had utilized a form of production known as the P2P²⁶ method of methamphetamine synthesis were forced to pursue other methods of production due to tighter federal regulation and stricter controls on P2P²⁷. The new method of production that essentially replaced the P2P method is known as the ephedrine/pseudoephedrine reduction method (also known as the "Birch Method") which relies on phosphorus-based precursors such as hypophosphoric acid or red phosphorus²⁸ which produces a more highly potent form of methamphetamine²⁹. This switch in production processes allowed for cheaper, simpler, and much more efficient production of meth, resulting in the emergence of "superlabs" which are capable of producing of more than ten pounds of methamphetamine in a single cycle,³⁰ as well as the emergence of do-it-yourselfers who are relying more on home production and less on the importation

²⁴ MD Anglin, C Burke, B Perrochet, E Stamper, S. Dawud-Noursi. *History of the Methamphetamine Problem*, 32 J Psychoactive Drugs; 2000, 137-41

²⁵ Meredith *supra* note 5 at 142.

²⁶ Method involving principal chemicals phenyl-2-propanone, aluminum, methylamine, and mercuric acid.

²⁷ Meredith *supra* note 5 at 142.

²⁸ Id.

²⁹ Case *supra* note 18.

³⁰ Meredith *supra* note 5 at 142.

of such products³¹. The ease of production that resulted from this change of processes seems to have triggered the sudden spread of methamphetamine use across the nation.

HOW WIDESPREAD IS THE METHAMPHETAMINE PROBLEM?

While the numbers may vary from source to source, the fact that methamphetamine use is widespread and a very serious problem is undeniable. While it was once viewed as a “poor man’s cocaine” which was popular in mostly rural areas as well as the West Coast, it is a problem that transcends class, geography, and race as a quick glance at the users of meth in the U.S. reveals a wide spectrum of persons that runs the entire gamut from “soccer moms in Illinois, computer geeks in Silicon Valley, factory workers in Georgia, to gay professionals in New York”³².

According to the 2006 results from the National Survey on Drug Use and Health, about 5.8% of the adult population (age 12 and older) had used methamphetamine at some point in their lifetime, with 0.77% of them having used it in the past year, and 0.3% of the adult population having used it in the past month.³³ This means that roughly 700,000 citizens had illicitly used methamphetamine in the past month³⁴ alone, with roughly 1.8 million having used it in the past year and nearly 13.5 million Americans having used it during their lifetimes. These latest figures tended to be significantly higher than reported in previous years because of changes to the methodology of the survey with respect to methamphetamine data, which were a result of the concern that some survey participants had previously failed to report their use of methamphetamine by

³¹ Case *supra* note 18.

³² Jefferson *supra* note 16.

³³ Office of Applied Studies, Substance Abuse & Mental Health Serv. Admin. *2006 National Survey on Drug Use & Health*; 2006. Available at <http://www.oas.samhsa.gov/NSDUH/2k6NSDUH/AppB.htm#B.4.6>.

³⁴ *Id.* Available at <http://www.oas.samhsa.gov/NSDUH/2k6NSDUH/2k6results.cfm#Ch2>.

failing to recognize the drug when presented in the prescription drug context³⁵. Although the recent increase may be attributable in part to the new methodology, the absolute numbers themselves are still very staggering and a cause for alarm. It has been estimated that over 35 million people worldwide abuse methamphetamine or amphetamines in general, which pales in comparison to the estimated 15 million users of cocaine and less than 10 million users of various opiates internationally³⁶.

The 2007 data from in-school surveys by Monitoring the Future reveal that 1.8% of 8th graders have used methamphetamine during their lifetime compared to 3.0% of 12th graders³⁷ while 0.6% of 8th graders had actually used methamphetamine in the prior 30 days which is identical to the 0.6% of 12th graders who had used in the past month³⁸. While these numbers have improved in comparison to past years, they are still much too high for a drug so dangerous.

Not only is the number of actual users a cause for concern but the meth-related health statistics and figures have also been rising in a startling fashion as well. The Drug Abuse Warning Network, which is an agency that collects information showing drug-related visits to hospital emergency departments across the nation, has data available which shows a 50% increase in methamphetamine-related visits to emergency departments from 1995 to 2002³⁹. According to DAWN, methamphetamine visits were

³⁵ Id. Available at <http://www.oas.samhsa.gov/NSDUH/2k6NSDUH/AppB.htm#B.4.6>.

³⁶ United Nations Office on Drug Control and Crime Prevention. *World Drug Report 2000*. Available at http://www.unodc.org/unodc/en/world_drug_report_2000.html.

³⁷ LD Johnston, P.M. O'Malley, J.G. Bachman, & J.E. Schulenberg. *Monitoring the Future National Results on Adolescent Drug Use : Overview of Key Findings*, (NIH Publication No. [yet to be assigned]) Bethesda, MD: National Institute on Drug Abuse; 2007.

³⁸ Id.

³⁹ Methamphetamine Abuse *supra* note 2 at 3.

nearly 4% of all drug-related visits in 2004⁴⁰ as they totaled roughly 70,000 visits with 2,391 of them being suicide attempts and 10,518 of the visitors seeking detox treatment⁴¹.

Admissions for treatment for methamphetamine addiction have increased dramatically also as such treatment requests ballooned from roughly 21,000 in 1992, which represented slightly more than 1% of all treatment admissions, to over 150,000 treatment admissions in 2004, which now nearly represented 8% of all drug-related treatment admissions⁴². This increase has been seen spreading across the country as well with only five states reporting treatment admissions rates higher than 24 per 100,000 of the population in 1992 and 21 states reporting such rates by 2002⁴³. The National Institute on Drug Abuse has an early warning network that monitors drug abuse patterns in 21 major localities in the United States called the Community Epidemiology Work Group (CWEG)⁴⁴ and its June 2006 report revealed that methamphetamine use did not decrease in a single CWEG monitored area while it increased in nine CWEG areas, eight of which were already deemed to be high use areas (Atlanta, Denver, Honolulu, Los Angeles, Phoenix, San Diego, Seattle, and Texas)⁴⁵. It was further reported by CWEG to be a growing problem in Saint Louis which saw a 15% increase in meth admissions and the drug itself was more generally available nationwide, despite a decrease in incidents and seizures⁴⁶.

⁴⁰ Id.

⁴¹ Substance Abuse and Mental Health Services Administration (SAMHSA) Office of Applied Studies. *National Estimates of Drug-related Emergency Department Visits*,. Drug Abuse Warning Network; 2004. Available at <http://dawninfo.samhsa.gov/files/DAWN2k4ED.htm#Tab2>.

⁴² Methamphetamine Abuse *supra* note 2 at 3.

⁴³ Id.

⁴⁴ Methamphetamine Abuse *supra* note 2 at 2.

⁴⁵ National Institute on Drug Abuse. *Epidemiologic Trends in Drug Abuse: Advance Report, Community Epidemiology Work Group*,; June 2006. Available at <http://www.drugabuse.gov/about/organization/cewg/Reports.html>.

⁴⁶ Id.

All the available data and numbers bear out what most people have suspected for some time. Methamphetamine abuse is a problem that affects too many U.S. citizens and there isn't much data to suggest that the problem is getting any better.

HOW DOES METHAMPHETAMINE AFFECT THE USER?

EFFECTS ON THE CENTRAL NERVOUS SYSTEM

Methamphetamine is a stimulant drug that acts on the central nervous system by forcing the release of various monoamine neurotransmitters such as serotonin⁴⁷, epinephrine⁴⁸, and dopamine and unlike cocaine, which acts primarily by blocking transporters that are involved in the reuptake⁴⁹ of monoamines, methamphetamines employ a variety of primary mechanisms within the central nervous system which act in synergy as unusually potent releasers of monoamines⁵⁰. For example, in addition to blocking the monoamine transporters as is known to occur with cocaine, methamphetamines also *reverse* transport of neurotransmitters through the transporters⁵¹, thereby increasing the release of neurotransmitters. Also, given its lipophilic nature, methamphetamine is able to accomplish increased central nervous system penetration which further contributes to and results in a higher level of potency than the related amphetamine compound⁵².

⁴⁷ Serotonin is a monoamine transmitter synthesized in serotonergic neurons in the central nervous system which is believed to play an important role in the modulation of anger, aggression, body temperature, mood, sleep, sexuality, and appetite as well as stimulate vomiting.

⁴⁸ Epinephrine is a transmitter classified as a catecholamine, a monoamine derived from the amino acids of phenylalanine and tyrosine, which plays a central role in the short-term stress reaction commonly referred to as "fight or flight"

⁴⁹ Blocking reuptake forces the neurotransmitters to remain in the synaptic gap for a longer period, thus resulting in increased stimulation.

⁵⁰ Alasdair M. Barr. *The need for speed: an update on methamphetamine addiction*, 31 J Psychiatry Neurosci 5; 2006, 302.

⁵¹ Id.

⁵² Meredith *supra* note 5 at 143.

It is believed that most of the benefits and pleasurable aspects of methamphetamine use are a result of aforementioned processes causing releases of very high levels of dopamine and related monoamines⁵³. Dopamine is the neurotransmitter that is responsible for a host of feelings including pleasure and motivation, but it seems as though this unusually high release of dopamine is the root cause behind methamphetamine's degenerative effects on the nerve terminals in our brains⁵⁴.

The acute effects that accompany the release of neurotransmitters in our central nervous system are feelings of alertness, well-being, and euphoria along with decreased appetite and in some cases, increased libido⁵⁵. In addition to the feelings of happiness, users also desire the effects of higher levels of energy and curiosity, increased levels of interest in external stimuli, as well as an initial onset of decreased anxiety⁵⁶. Various side effects are often experienced by the users, resulting from the effects of the methamphetamine on both norepinephrine and epinephrine release by the adrenal glands, which include but are not limited to "increased blood pressure, hyperthermia, stroke, cardiac arrhythmia, stomach cramps and muscle tremor; acute negative psychological side effects include anxiety, insomnia, aggression, paranoia, and hallucinations⁵⁷.

Repeated use of the drug results in depletion of neurotransmitter resources accompanied by withdrawal symptoms which tend to be psychiatric, as opposed to physical complaints, and manifests as depression, anxiety, irritability, fatigue, intense cravings for the drug, and oftentimes, even aggression and paranoia⁵⁸. The intensity of

⁵³ Methamphetamine Abuse *supra* note 2.

⁵⁴ *Id.*

⁵⁵ Barr *supra* note 50.

⁵⁶ Meredeith *supra* note 5 at 143.

⁵⁷ *Id.*

⁵⁸ *Id.*

this withdrawal period can even lead users to thoughts of suicide as the accompanying depression is much more extreme than that found in cocaine users and can even last up to a period of 12 months⁵⁹

LONG TERM EFFECTS ON THE USER FROM CHRONIC USE

ADDICTION

One of the most commonly seen long-term effects on the users of methamphetamine is the resulting addiction to the drug, which is a “chronic relapsing disease, characterized by compulsive drug seeking and use, accompanied by functional and molecular changes in the brain”⁶⁰ Methamphetamine abuse is an incredibly difficult habit to break due to its effects on the central nervous system and the accompanying withdrawal symptoms, which often results in this addiction. Further contributing to the addiction and chronic abuse is the tolerance that users develop to methamphetamine’s pleasurable effects, which cause the abusers to take higher doses or increase either the frequency or method of intake in an effort to intensify the desired effects⁶¹

PATHOPHYSIOLOGICAL EFFECTS

Continued administration of methamphetamine in animals has been shown to result in cerebrovascular changes as well as signs of hemorrhage and case studies have further strengthened these findings, as they have linked death in human abusers of methamphetamines to increased frequencies of pulmonary edema, cerebral hemorrhage and congestive heart failure⁶².

“A FOREST FIRE OF BRAIN DAMAGE”

⁵⁹ Id.

⁶⁰ Methamphetamine Abuse *supra* note 2 at 5.

⁶¹ Methamphetamine Abuse *supra* note 2.

⁶² Meredith *supra* note 5 at 144-5.

A high resolution M.R.I. image of a long-time methamphetamine addict's brain showed "a forest fire of brain damage" that was even beyond the expectations of Dr. Paul Thompson, an expert on brain mapping from the University of California, Los Angeles⁶³. The limbic region of the brain which is responsible for drug craving, mood, emotion and reward was missing 11% of its tissue that was just "dead and gone" while the hippocampus, which is responsible for creating new memories in the brain had lost 8% of its tissue which was comparable to the effects of early onset Alzheimer's on the brain⁶⁴. In another shocking development, the study showed that the white matter of the brain which is largely composed of various nerve fibers that connect different parts of the brain was severely inflamed causing the size of the addicts' brains to be 10% larger than normal⁶⁵. Given the amount of damage to the hippocampus, it came as no surprise that, the addicts in this study fared significantly worse than healthy participants of the same age in memory tests⁶⁶.

COGNITIVE EFFECTS

Numerous studies have confirmed that methamphetamine abuse can contribute to cognitive impairment as consistent exposure over time can result in very serious neuropsychological deficits⁶⁷. Various studies and tests have been performed to track the cognitive effects of long-term meth use on its abusers and the findings have all pointed towards various levels of impairment. The severity of these impairments is directly correlated to both frequency of use by the user and the severity of dependence on the

⁶³ Sandra Blakeslee. *This is Your Brain on Meth: A 'Forest Fire' of Damage*, NY Times. July 20, 2004. Available at <http://amphetamines.com/braindamage.html>.

⁶⁴ Id.

⁶⁵ Id.

⁶⁶ Id.

⁶⁷ Barr *supra* note 50 at 306.

drug⁶⁸. Meth users have been shown to display working memory deficits in tasks involving immediate recall components on an auditory verbal learning test as well as requiring 18-30% more time to complete working memory components of a California assessment test⁶⁹. Also consistent with the propensity of users of methamphetamine to become distracted, attention deficits were observed in some cognitive tests, with one of the studies showing evidence of impairments in executive function in meth users, including impairment to abstract reasoning, planning, and behavioral flexibility abilities⁷⁰. The aforementioned deficits tend to mirror the cognitive impairment that is found in people who suffer from attention-deficit hyperactivity disorder (ADHD).

What is unique to the cognitive deficits found in methamphetamine users is that there are of a different type than those suffered by users of other stimulants⁷¹. While both abusers of cocaine and meth suffer significantly from impaired verbal memory, methamphetamine abusers also suffer greatly from impaired performance on perceptual speed and information manipulation, especially when these tasks are combined with visuomotor scanning⁷². What is even more troubling is the fact that impairment lasts well into abstinence and actually worsens during the initial phases of abstinence, as many users are found to perform considerably worse on the various memory tasks, months into their recovery⁷³.

⁶⁸ Meredith *supra* note 5.

⁶⁹ Barr *supra* note 50 at 306.

⁷⁰ Id.

⁷¹ Meredith *supra* note 5 at 146.

⁷² Id.

⁷³ Id.

METH-INDUCED PSYCHOSIS

While impairment to memory and reasoning are all serious concerns with respect to the long-term effects of meth abuse to the user, the most prominent cognitive effect that is related methamphetamine use is the development of a drug-related psychosis in its users⁷⁴.

Methamphetamine users are at a higher risk to suffer from psychosis for two reasons. By using meth, they not only risk being subject to an episode of meth-induced psychosis, but are also more likely to suffer from additional psychotic disorders such as schizophrenia⁷⁵. Studies have shown that methamphetamine use can exacerbate and precipitate the symptoms that are common in those who suffer from schizophrenia⁷⁶ and as a result, the drug users who are more prone to psychosis due to pre-existing conditions are at a significantly higher risk of exhibiting psychotic symptoms⁷⁷.

The symptoms associated with methamphetamine-induced psychosis are hypersensitivity to the environment, persecutory delusions, and both visual and auditory hallucinations, and these symptoms normally last only a few hours with extreme cases lasting up to a week since withdrawal of the drug, although symptomatic episodes lasting even longer have been observed in some people⁷⁸. Methamphetamine psychosis is believed to be the result of excess synaptic dopamine which would result in symptoms similar to those found in patients who suffer from schizophrenia. There a host of factors that could potentially increase one's chances of suffering from methamphetamine

⁷⁴ Barr *supra* note 50 at 306.

⁷⁵ Rebecca McKetin. *The Prevalence of Psychotic Symptoms Among Methamphetamine Users*, Research Report, 101 Addiction 10; October 2006, 1473.

⁷⁶ C Curran, N Byrappa, A McBride. *Stimulant Psychosis: Systematic Review*, 185 Br J Psychiatry; 2004, 196.

⁷⁷ CK Chen, SK Lin, PC Sham, D Ball, EW Loh, CC Hsaio, et al. *Pre-morbid Characteristics and Comorbidity of Methamphetamine Users With and Without Psychosis*, 33 Psychol Med; 2003, 1407.

⁷⁸ McKetin *supra* note at 75.

psychosis, such as using larger than normal amounts of the drug, first use of the drug at very young ages, along with a genetic predisposition to schizoid characteristics⁷⁹. Higher rates of other psychiatric disorders such as alcoholism, depression, and anti-social personalities were also seen in people who suffer from meth-induced psychosis than users without the psychosis⁸⁰.

Other neurological problems such as learning disabilities, birth trauma, and traumatic brain injuries can all increase the risk of the user suffering from treatment-resistant meth-induced psychosis⁸¹. Unfortunately for those who have suffered from methamphetamine psychosis in the past, it seems that it is likely to recur, even in patients that are currently abstaining from any methamphetamine use and who are experiencing remission of psychotic symptoms⁸². The fact that meth users are not only at risk for experiencing a psychotic episode at the time of use but also at later points in their lifetime, only serves to complicate the issue.

Studies conducted in Japan, an area known to have a high percentage of meth users, have shown that anywhere from 36% to 64% of methamphetamine users who previously experienced psychotic symptoms continued to experience them for more than ten days since the last date of use, even though the drug is flushed out of the system within five days⁸³. Another study that surveyed female inmate methamphetamine users observed that nearly 21% of those who had previously experienced psychotic symptoms had remained in such a state for more than six months and nearly half had experienced

⁷⁹ Chen *supra* note at 77.

⁸⁰ Id.

⁸¹ D Fujii. *Risk Factors for Treatment-resistive Methamphetamine Psychosis*, 14 J Neuropsychiatry Clin Neurosci; 2002, 239.

⁸² K Yui, T Ishiguro, K Goto, S Ikemoto, Y Kamata. *Spontaneous Recurrence of Methamphetamine Psychosis: Increased Sensitivity to Stress Associated with Noradrenergic Hyperactivity and Dopaminergic Change*, 249 Eur Arch Psychiatry Clin Neurosci; 1999, 103.

⁸³ Barr *supra* note 50 at 306.

“flashbacks”⁸⁴ during their 15-20 month prison terms, even after returning to their pre-morbid states⁸⁵. The studies from Japan further indicate that those who have suffered from a meth-induced psychosis are likely to suffer from psychotic relapses in future high-stress situations (even after years since cessation of use), and these users also tend to become more and more vulnerable to environmental stress⁸⁶.

It seems evident from the studies and research that a relationship between methamphetamine use and psychotic episode occurrences exists but how often does it occur? A study conducted in Australia set out to examine the prevalence of psychotic symptoms among meth users by recruiting participants through advertisements in magazines, flyer, and word of mouth, and they were able to take observe 309 participants who were over 16 years of age and had taken the drug at least on a monthly basis for the past year⁸⁷. The study was conducted as a face-to-face interview questionnaire which involved measuring the level of drug use, recording the demographics and pre-morbid mental health, and screening for psychosis amongst the participants⁸⁸. The majority of the participants were weekly users of methamphetamine in the past year and over half admitted to being dependent on the drug, and of these participants, 5% admitted to having been diagnosed with schizophrenia, another 5% admitted to having been diagnosed with another psychiatric disorder such as a mania or bipolar disorder, and 7% reported to having previously been diagnosed with drug-induced psychosis⁸⁹. Some sort of relationship between schizophrenia and meth abuse seems to be evident as the National

⁸⁴ Flashbacks are spontaneous recurrences of psychotic symptoms that would fit criteria for a paranoid-schizophrenia psychotic relapse.

⁸⁵ Barr *supra* note 50 at 306.

⁸⁶ Id.

⁸⁷ McKetin *supra* note 75.

⁸⁸ McKetin *supra* note 75 at 1474.

⁸⁹ McKetin *supra* note 75 at 1475.

Institute of Mental Health estimates that roughly 1.1%⁹⁰ of the adult population is diagnosed with schizophrenia while the studies show a marked increase in that nearly 5% of the meth sample population was diagnosed with the disorder.

This study found that 13% of the methamphetamine users had screened positively for psychosis and that nearly 23% of the users had experienced unusual thoughts, hallucinations and suspiciousness, and even after controlling for participants with a history of schizophrenia and other psychiatric disorders, the prevalence of clinically significant symptoms remained extremely high at 18%⁹¹. Those users who admitted to being dependent users were three times as more likely to experience clinical symptoms than their non-dependent counterparts and a whopping 27% of dependent users were subject to psychotic episodes, even after excluding those who had a history of mental illness⁹². Depending on your point of view, the fact that only 13% of methamphetamine users had screened positively for psychosis in the past year may not be that impressive, but given the high number of estimated methamphetamine abusers in this country, this problem should raise a red flag as a great number of people may be affected by this drastic deterioration of their mental health. No matter how you look at it, “the prevalence of psychosis among methamphetamine users was found to be alarmingly high in comparison with the general population”⁹³ and it is just another serious health risk that methamphetamine abusers must consider.

⁹⁰ National Institute of Mental Health. *Schizophrenia*, Available at <http://www.nimh.nih.gov/health/topics/schizophrenia/index.shtml>

⁹¹ McKetin *supra* note 75 at 1475.

⁹² McKetin *supra* note 75 at 1476.

⁹³ McKetin *supra* note 75 at 1477.

METH USERS ARE HURTING THEMSELVES, WHY SHOULD WE CARE?

Methamphetamine abuse is unique when compared to many other illicit drugs in that there a greater number of negative externalities involved as it relates to the actions and behaviors of those who use and produce the drug. If methamphetamine abuse only affected those who decided to use it, the laissez faire attitude exhibited by many when it comes to its use and regulation would be acceptable, and I feel as though I would be able to make better sense of what seems to be a general lack of public awareness about the severity of the methamphetamine problem. Unfortunately, widespread methamphetamine use is a problem that not only affects its users but is a crisis that has the potential to affect the entire community. Methamphetamine use and production is capable of posing numerous environmental, health, criminal, and social problems that put a great number of innocent citizens at risk.

PRODUCTION

The process of producing of methamphetamine is such that in the past, a person with a rudimentary understanding of chemistry and access to common ingredients found in household cleaners and cold medications was able to produce it in their own home, which makes it very different from other illicit drugs such as cocaine and opiates which have to be grown. This ease of production contributes to the problem in various ways.

HOW TO COOK METHAMPHETAMINE

An article published in the Journal of Drug Issues that surveyed the home production of methamphetamine by users in rural Kentucky and Arkansas revealed just

how easy it is for anybody with access to these basic ingredients to set up a home laboratory for production of methamphetamines⁹⁴.

All of the participants in the study reported to use the Birch Reduction process which refers to a scientist named Arthur Birch who first developed the concept of a synthetic chemical reduction⁹⁵. The main ingredients for the Birch method are anhydrous ammonia, lithium metal, and ephedrine/pseudoephedrine, while secondary ingredients may include camping stove fuel, denatured alcohol, table salt, and drain cleaner, which can all be found at local merchandisers⁹⁶.

Lithium metal is easily procured by the large-scale purchases of lithium batteries, while obtaining the anhydrous ammonia (a liquefied gas used as an industrial refrigerant) poses some difficulty as possession is restricted to authorized persons, such as farmers⁹⁷. According to the participants, anhydrous ammonia is still readily available through either illegal purchase from farmers, theft, and via homemade substitutes, which can be produced in as little as 20 minutes⁹⁸. While both state and federal legislation regulate and monitor the sales of both ephedrine/pseudoephedrine, home cooks often employ multiple purchasers (usually users who are paid back with drugs) who simply cross nearby state lines in order to purchase the desired amounts⁹⁹.

Once the ingredients have been gathered, the actual reduction process is very simple as described by the participants. One popular recipe begins with grinding the ephedrine/pseudoephedrine pills down to a powder base, mixing it with a gallon of

⁹⁴ Rocky L. Sexton, Robert G. Carlson, Carl G. Leukefeld, & Brenda M. Booth. *Patterns of Illicit Methamphetamine Production ("Cooking") and Associated Risks in the Rural South: An Ethnographic Exploration*, Journal of Drug Issues; 2006, 853-876.

⁹⁵ Id. at 863.

⁹⁶ Id. at 859.

⁹⁷ Id. at 859-960.

⁹⁸ Id. at 860.

⁹⁹ Id. at 860.

denatured alcohol, and then letting it sit for 24 hours before straining it through filters to remove the pill coating¹⁰⁰. The resulting powder is quickly cooked down to a white powder base on an electric skillet before being mixed in a five quart cooler with the ammonia, lithium strips, and some stove fuel¹⁰¹. The cooler is taped up and shaken, before being allowed to sit for another 24 hours and after the 24 hours has passed, the liquid in the cooler is simply strained through a large funnel filter which will catch the methamphetamine, which now needs only to be dried¹⁰². This ease of production is a very big reason why methamphetamine use has become so popular, and it is also the reason for the remarkably high number of clandestine home laboratories.

HOME LAB v. “SUPERLAB”

Home methamphetamine laboratories are classified as those run by “users” and typically cannot create more than 280 doses at a single time and production from these labs is estimated to produce only 20% of the total supply of the supply¹⁰³. The ease of production causes many of these home labs to spring up as evidenced by the fact that roughly 8,000 of the 8,300 meth labs that were seized in 2001 were of the home-user variety¹⁰⁴. However, due to the necessary size restrictions that accompany these make-shift home operations, which are often even located in areas as small as the beds of pick-up trucks (a mobile home lab), they only account for a small portion of the total methamphetamine output. These home labs are often characterized as primitive and have been referred to as a “jumble of over-the-counter pseudoephedrine, household lye, and

¹⁰⁰ Id. at 864.

¹⁰¹ Id.

¹⁰² Id.

¹⁰³ Steve Suo. *Hidden Powerhouses Underlie Meth’s Ugly Spread*, The Oregonian; October 3, 2004.

Available at

http://www.oregonlive.com/special/oregonian/meth/stories/index.ssf?/oregonian/meth/1003_superlab.html

¹⁰⁴ Id.

scraped-away matchbook covers”¹⁰⁵ These labs can be found in a variety of environments ranging from urban centers, to suburbs, and to rural farms, as the make-shift laboratory set ups have been found in rental properties, apartments, hotels, self-storage units, barns, auto repair shops, briefcases, national forests¹⁰⁶, and even inside caves and abandoned mines¹⁰⁷.

“Superlabs”, on the otherhand, have reached “a level of sophistication, uniformity, and efficiency seldom seen”¹⁰⁸ in home-user labs. These labs are in the business of mass production as their operators are not engaged in this activity for personal use but rather large profits¹⁰⁹. By implementing the use of commercial-grade lab equipment in conjunction with enormous amounts of chemicals, these superlabs are capable of producing up to one million doses of methamphetamine in a single run¹¹⁰. The signature piece of equipment in the superlabs is a device originally designed for scientific research which is referred to as a “22” due to the fact that it is a 22-liter reaction vessel.¹¹¹ These globe-shaped pieces of glassware brew the mixture of pseudoephedrine, red phosphorus, and hydriodic acid while the attached orange hoses lead to kitty litter filled boxes which serve the purpose of absorbing the reaction gases. One superlab that was discovered had used twelve “22”s strung together and was able to produce over 144 lbs of pure meth per batch. Some home cooks have estimated that they could earn profits to upwards of

¹⁰⁵ Id.

¹⁰⁶ Datachem, Laboratories, Inc. *Methamphetamine*. Available at www.datachem.com/ServiceAdvisories/ih/MethamphetamineSA.pdf.

¹⁰⁷ National Drug Intelligence Center. *Marijuana and Methamphetamine Trafficking on Federal Lands Threat Assessment*; February 2005.

¹⁰⁸ *Suo supra* note 103.

¹⁰⁹ *Methamphetamine supra* note 106.

¹¹⁰ *Suo supra* note 103.

¹¹¹ Id.

\$2500 for each ounce of methamphetamine¹¹² that they produce, so the profits that these superlabs are earning are staggering to say the least.

Methamphetamine laboratory seizures reached an all-time high in 2003 with over 10,000 of such facilities being seized and had dropped dramatically to roughly 4,000 by 2006¹¹³. Although the drastic drop in the number of meth lab seizures should be viewed as a positive sign, it should be noted that every single meth laboratory that is up and running in this country poses very serious health risks to the surrounding environment and the community at large.

METH LAB EXPLOSIONS AND FIRES

Roughly 15% of all underground meth labs are discovered by law enforcement as the result of a fire or explosion caused by the careless use of very volatile and hazardous chemicals and unsafe manufacturing practices employed by the home cooks¹¹⁴. Oftentimes, chemicals that are not properly labeled and incompatible with each other are stored together thereby increasing the chances of a big explosion or fire when also in the presence of other highly combustible materials left near stovetops and other heating devices¹¹⁵. Hydrogenerators which are often used in illegal meth production have been referred to as bombs waiting for ignition¹¹⁶. The dangerous volatility of the chemicals compounded with the facts that the cooks are usually not well-versed in chemistry and may be operating under the influence of the drug during production, all add to the

¹¹² Sexton *supra* note 94 at 865.

¹¹³ National Drug Intelligence Center. *Drug Facts – Methamphetamine – Production and Trafficking*; March 2008. Available at <http://www.whitehousedrugpolicy.gov/drugfact/methamphetamine/index.html>.

¹¹⁴ U.S. Dept. of Justice, Office of Justice Programs, Office for Victims of Crime. *Children at Clandestine Methamphetamine Labs: Helping Meth's Youngest Victims*, OVC Bulletin; June 2003, 4.

¹¹⁵ Id.

¹¹⁶ Id.

likelihood of such explosions taking place¹¹⁷. Obviously, these fires and explosions do not only risk the health and well-being of the methamphetamine cooks themselves, but of any neighbors and other innocent passersby who are within the general vicinity when such fires and explosions occur.

ENVIRONMENTAL EFFECTS

Clandestine meth production sites are often found to house hazardous materials that are flammable, toxic, and explosive and due to their classification as hazardous wastes, they must be managed and disposed of with great care upon discovery¹¹⁸. Cooking even very small amounts of methamphetamine can result in large amounts of hazardous byproducts¹¹⁹ as it is often estimated that nearly six pounds of toxic residue result from each pound of meth production¹²⁰. These byproducts are frequently disposed of improperly in various indoor/outdoor drains, on the ground, and into neighboring bodies of water thereby contaminating the soil, water, and air,¹²¹ and escaping vapors have been known to seep into both wood and plaster while much of the liquid residue can be found in sinks and bathtubs after dumping.¹²² The environmental hazard that is of primary concern from these activities is the contamination of groundwater with volatile organic compounds¹²³. Not only are humans affected by these sites but there is evidence that these activities have grave consequences for the flora and fauna in the neighboring

¹¹⁷ Lorene Bartos. *Meth Production is Toxic to Communities*, NEBLINE Newsletter; July 2005. Available at <http://lancaster.unl.edu/family/methtoxic.shtml>.

¹¹⁸ U.S. Dept. of Justice. Office of Community Oriented Policing Service. *Methamphetamine Initiative Final Environmental Assessment*; May 13, 2003, 4.

¹¹⁹ Hazardous Substance Research Centers/South and Southwest Outreach Program. *Effects of Clandestine Methamphetamine Labs on Communities*; February 2007.

¹²⁰ Meth Awareness and Prevention Project of South Dakota. *Meth Labs and Their Dangers*; 2000. Available at <http://www.mapps.org/Meth%20Labs%20Overview.htm>.

¹²¹ Effects on Communities *supra* note 119.

¹²² Labs and Dangers *supra* note 120.

¹²³ Minnesota Pollution Control Agency. *Clandestine Methamphetamine Labs and Wastes in Minnesota*; May 2007. Available at <http://www.pca.state.mn.us/cleanup/meth.html>.

environment. In Apache County, Arizona, environmental contamination from these meth labs has resulted in the deaths of 150 year old ponderosa pines, the conversion of nearby ravines to toxic waste dumps, the removal of tons of contaminated soil, and the death of numerous cattle downstream from the site, among other atrocities¹²⁴. Environmental cleanup costs related to meth labs are a very legitimate concern as they can be as low as \$2500¹²⁵ on average but as high as \$150,000 in extreme cases¹²⁶.

METH LAB CONTAMINATION

In addition to the fires and explosions that may happen due to the chemical substances involved in meth production, other forms of contamination may occur from chemical spills and from various substances and vapors that are being released during the cooking process¹²⁷. The likelihood that these dangerous chemicals will contaminate the areas used for meth production is incredibly high and it is certain that such contamination will be found all over from the furniture, to the clothing and even inside of the walls for a period of time lasting potentially for years¹²⁸. People who are present near the production process may inhale these toxic substances, be accidentally pricked by needles, absorb methamphetamine or related toxic substances via skin contact with contaminated sources and directly ingest chemical ingredients or byproducts¹²⁹.

Exposure to low levels of these chemicals may cause a variety of symptoms ranging from symptoms as mild as nausea and fatigue to far more serious situations such

¹²⁴ Marilyn Berlin Snell. *Welcome to Meth County*, Sierra Magazine; January/February 2001. Available at <http://www.sierraclub.org/sierra/200101/meth.asp>.

¹²⁵ Labs and Dangers *supra* note 120.

¹²⁶ Effects on Communities *supra* note 119.

¹²⁷ Environmental Health Services Division. *Methamphetamine Labs*; 2002. Available at http://www.co.weld.co.us/departments/health/environmental/health_methlab.html.

¹²⁸ Atlantic Environment Incorporated. *Residential Meth Lab Dangers*. Available at http://www.atlenv.com/residential_meth.html.

¹²⁹ Meth's Youngest Victims *supra* note 114.

as loss of consciousness and even death while chronic exposure to this type of chemical contamination has been linked to cancer, brain damage, and complications in pregnancy¹³⁰. Acute injuries resulting from a massive chemical exposure generally pose a much higher health risk than the risk of complications related to chronic toxicity and cancer¹³¹. The Hazardous Substances Emergency Events Surveillance system which records acute hazardous substance-release events claims that 4% of the 40,349 events recorded from early 2000 to mid 2004 were associated with meth labs and that roughly 31% of these occurrences resulted in injuries, which is a higher percentage than found in non-meth-related substance release incidents¹³². These contamination risks do not only affect the users, but also their friends, neighbors, families, any law enforcement personnel who may report to the scene¹³³, firefighters, environmental clean-up crews, and even future residents¹³⁴. As devastating as these effects are for those exposed to these risks, the fact that so many children are unwittingly affected simply exacerbates the problem tenfold.

CHILDREN AND METH

Children who are victims to the harms associated with methamphetamine production are special not only because they are unintended victims but due to the physiological differences¹³⁵ between themselves and adults and their inability to take measures to protect or defend against the ensuing harms. Since the brains and bodies of

¹³⁰ Id.

¹³¹ Id.

¹³² Centers for Disease Control and Prevention, Agency for Toxic Substances and Disease Registry. *Acute Public Health Consequences of Methamphetamine Laboratories – 16 States, January 2000-June 2004*; April 2005.

¹³³ Residential Dangers *supra* note 128.

¹³⁴ Final Environmental Assessment *supra* note 119 at 4.

¹³⁵ Kelli Connell-Carrick. *Methamphetamine and the Changing Face of Child Welfare: Practice Principles for Child Welfare Workers*, 86 Child Welfare 3; May/June 2007, 134.

young children are still developing, any type of exposure to the aforementioned chemicals and byproducts is far riskier, as they are incapable of eliminating the chemicals from their systems as efficiently as adults¹³⁶. This coupled with the fact that they are far more likely to crawl around on contaminated substances and put contaminated objects in their mouth while exploring their homes, makes the danger to children enormous¹³⁷.

Not only are these children at a higher risk for exposure to dangerous chemicals, they are also often the victims of serious abuse and neglect from their negligent caretakers¹³⁸. Children who grow up in these environments are more likely to be both physically and sexually abused by members of the family or others who are often present at the production site, and at the same time, they are also likely to be neglected by their own parents whose use of the drug has caused them to become careless, thus causing them to lose the ability to nurture their loved ones¹³⁹. The effects from such physical and sexual abuse are only heightened by the accompanying emotional trauma that these children experience from witnessing such behavior¹⁴⁰. These same children often lack basic food and medical care, not to mention the watchful eye of a single responsible adult to supervise their daily activities¹⁴¹.

The physical abuse that is inflicted on these children is not only limited to acts of violence from the parents, but often results from the booby traps that are accidentally set off by the children¹⁴². These traps are set up in these meth sites to ward off unwanted

¹³⁶ Id.

¹³⁷ Id.

¹³⁸ Meth's Youngest Victims *supra* note 114.

¹³⁹ Id.

¹⁴⁰ Id.

¹⁴¹ Id.

¹⁴² Connell-Carrick *supra* note 135.

visitors and law enforcement officials¹⁴³ but often end up hurting unsuspecting people as well. The abuse that these children must deal with extends to emotional maltreatment that is oftentimes much more harmful than any physical punishment that they must endure. They are often taught to lie to authorities regarding their parents' behavior, ordered to steal ingredients for the manufacture of the drug, forced to participate in the cooking process, and left to witness the generally disturbing and shocking behavior of their parents¹⁴⁴. It should come as no surprise that they often exhibit emotional and behavioral problems such as low self-esteem, poor social skills, and in extreme cases, an attachment disorder which makes it difficult for these kids to form relationship and build trust, at later stages in their lives¹⁴⁵.

METHAMPHETAMINE AND THE UNBORN

Not only does methamphetamine abuse harm the children who are present but it also poses great risks on the unborn fetus as meth use causes increases in both blood pressure and heart rate to expecting mothers which may lead to premature births or spontaneous abortions¹⁴⁶. Drug use also affects the placenta of the mother, which provides oxygen and nutrients to the baby and if the drug itself is passed to the baby through the placenta, it can potentially cause a myriad of health issues for the baby such as prenatal stroke or heart damage¹⁴⁷.

Even if the babies are able to make it to term, they often exhibit additional health issues as up to 4% of the newborn infants who were exposed to methamphetamine in

¹⁴³ Id.

¹⁴⁴ Id.

¹⁴⁵ Meth's Youngest Victims *supra* note 114.

¹⁴⁶ Kathryn Wells. *Methamphetamine and Pregnancy*, Denver Family Crisis Center. Available at <http://www.colodec.org/decpapers/methandpregnancy.htm>.

¹⁴⁷ Id.

utero were born with withdrawal symptoms¹⁴⁸. These babies were often very sleepy for the first few weeks, but soon turn jittery and exhibit poor sleeping and feeding patterns as well as a poor ability to self-regulate in stressful situations¹⁴⁹. Even if they manage not to show any noticeable behavioral signs at birth, they are still at a higher risk for contracting various diseases such as hepatitis and HIV¹⁵⁰.

METH AND HIV

Meth use is also a contributor to the spread of HIV in this country because its use often leads to its users engaging in risky, unprotected sex and also sharing contaminated needles during use. Methamphetamine use often causes the sexual behavior and desires of its users to become altered as the drug lowers their inhibitions and has even been shown to increase the likelihood of homosexual behavior from those who have only engaged in heterosexual behavior in the past¹⁵¹. Not only are those engaging in riskier sexual behavior subject to an increased risk in the spread of HIV but those engaging in traditionally safe sexual practices are at risk as well. A physical side effect that is often seen in meth users is a noticeable shrinkage in the size of a man's penis when it is erect which will often lead to condoms slipping off during intercourse, and for those engaging in homosexual sex, the drug can lead to the drying of mucous in various membranes which will result in sex that is "drier" than usual¹⁵² thus resulting in unexpected tears in the condom. Apart from the riskier sex practices that are commonly observed, users also increase the chances of contracting HIV by sharing intravenous needles. These increased

¹⁴⁸ Id.

¹⁴⁹ Id.

¹⁵⁰ Id.

¹⁵¹ B Huff. *Speed Nation: Methamphetamine, HIV, and Hepatitis*, The Body: The Complete AID/HIV Resource; July/August 2005. Available at <http://www.thebody.com/content/art13493.html>.

¹⁵² Id.

risks are compounded with the fact that meth users are more likely to be selecting sexual partners from a pool exhibiting a higher prevalence of HIV than the rest of society¹⁵³.

The spread of HIV and its associated costs is just another problem that society as a whole must deal with in regard to this widespread epidemic.

METH USERS AND VIOLENCE

While it has long been suspected that a correlation exists between illicit drug use and acts of violence by its users, a recent study performed to track the relationship between methamphetamine abuse and acts of violence seemed to confirm this hypothesis. The study involved 106 respondents between the ages of 18-25 who had used methamphetamine for a minimum of three months and all resided in Los Angeles County. 34.9% of the respondents admitted to committing an act of violence while under the influence of methamphetamine with 61.1% of those violent acts involving domestic relationship and nearly 10% of those acts involving random acts of violence to strangers¹⁵⁴. The most alarming discovery, in my opinion, was that 45.9% of those who had engaged in some type of violent behavior reported that they had never committed a violent act prior to the incident brought on by the methamphetamine abuse¹⁵⁵. This study tends to show is that methamphetamine is a risk factor for violence as every subject of the study agreed that methamphetamine had clear violence potential as nearly all of them knew at least a single person who had gone “too far” while under its influence, even if the subject himself, had not¹⁵⁶. While all of these numbers and findings should be viewed in the proper social and environmental context, the numbers do seem to suggest at the very

¹⁵³ Id.

¹⁵⁴ A Baskin Sommers, I Sommers. *Methamphetamine Use and Violence Among Young Adults*, 34 *Journal of Criminal Justice*; 2006, 661.

¹⁵⁵ Id at 671.

¹⁵⁶ Id.

least, that there is likely to be some causal link between meth use and violent acts. This type of violent behavior from meth users affect not only themselves, but the unfortunate people who end up being the victims and the object of their violent aggressions.

METH USE AND IDENTITY THEFT

Violent acts are not the only crimes that are being committed by meth users as a recent intelligence bulletin from the National Drug Intelligence Center revealed that both users and distributors are more frequently participating in the crime of identity theft in order to both acquire the funds for drug purchases and to fund their illicit drug trafficking operations¹⁵⁷. The abusers often generate quick cash by stealing personal checks or by using stolen credit card information to purchase items which they later sell or use in trade for more of the product¹⁵⁸. Oftentimes, stolen identity information is the good itself that is being offered in a trade for methamphetamine, which the distributors then take and trade to the producers of the drug. These stolen identities are not only used to fund their operations but they also serve as a useful tool in laundering their drug proceeds as it allows them to set up bank accounts to transfer funds and even apply for mortgages when acquiring property¹⁵⁹. These criminals have even used these stolen identities to supply to members of their own organization in order to help them better evade law enforcement or possibly avoid deportation. There is the growing fear that soon enough, meth users may even begin to use stolen identities when seeking medical treatment in order to avoid detection by law enforcement, which could lead to serious complications such as the medical records of these victims being changed and misdiagnoses and mistreatments

¹⁵⁷ National Drug Intelligence Center, U.S. Dept. of Justice, *Methamphetamine-related Identity Theft*, Intelligence Bulletin, May 2007, 1.

¹⁵⁸ Id. at 2.

¹⁵⁹ Id. at 2.

resulting from such changes¹⁶⁰. It is now quite evident that the social costs imposed on society by those involved in either the use or production of methamphetamine are enormous and that something must be done to address the spread of this plague.

WHAT IS THE GOVERNMENT DOING?

FEDERAL LEGISLATION AFFECTING METHAMPHETAMINE

CONTROLLED SUBSTANCES ACT OF 1970

The Controlled Substances of 1970¹⁶¹ set the federal foundation for regulation of methamphetamine as it was Congress' first comprehensive consolidation of legislation to control the use of illicit substances in the United States. Taking a look at the structure and provisions of the CSA will provide insight into overall scheme for regulation of methamphetamine and the basic controls that have been put in place to control for its use, manufacture, and distribution in the United States. When passing the Controlled Substances Act, Congress acknowledged that many of the drugs that would be regulated could have very useful and legitimate medical purposes that were necessary for the welfare of the American people, but that the uncontrolled importation, manufacture¹⁶², and use of these substances could have a deleterious effect not only on the public health but on interstate commerce as well¹⁶³.

¹⁶⁰ Id. at 3.

¹⁶¹ Pub. L. 95-633, 92 Stat 3768.

¹⁶² The term "manufacture" means the production, preparation, propagation, compounding, or processing of a drug or other substance, either directly or indirectly or by extraction from substances of natural origin, or independently by means of chemical synthesis or by a combination of extraction and chemical synthesis, and includes any packaging or repackaging of such substance or labeling or relabeling of its container; except that such term does not include the preparation, compounding, packaging, or labeling of a drug or other substance in conformity with applicable State or local law by a practitioner as an incident to his administration or dispensing of such drug or substance in the course of his professional practice. 21 U.S.C. 802(15)

¹⁶³ 21 U.S.C. 801.

The Act gave the Attorney General the power to add the regulated substances into one of five schedules¹⁶⁴ or to transfer the substances between the schedules if it found that the substance had a potential for abuse¹⁶⁵. While decisions to list a substance would be made by the Attorney General on the record following an opportunity for a hearing, any decisions to either add or remove a substance from a schedule would also depend on the specific requirements listed for each schedule under Section 812¹⁶⁶. The Attorney General was required to look at a host of factors when making the determination whether or not to control or remove specific substances from the schedules: actual or relative potential for abuse, scientific evidence of pharmacological effects, current scientific knowledge regarding the substance, history and current patterns of abuse, scope and duration of abuse, risks to public health, psychic and physiological dependences, and whether the substance in question was already an immediate precursor¹⁶⁷ for a previously controlled substance¹⁶⁸.

With respect to the aforementioned immediate precursors, the Attorney General was allowed to place an immediate precursor into the same schedule as the substance for which it was an immediate precursor or any other less stringent schedule, but this did not mean that any and all substances that were precursors to the immediate precursor would necessarily be listed on one of the schedules as a controlled substance¹⁶⁹.

¹⁶⁴ 21 U.S.C. 812.

¹⁶⁵ 21 U.S.C. 811(a)(1)(A).

¹⁶⁶ 21 U.S.C. 811(a)(1)(B).

¹⁶⁷ The term “immediate precursor” means a substance which the Attorney General has found to be and by regulation designated as being the principal compound used, or produced primarily for use, in the manufacture of a controlled substance; which is an immediate chemical intermediary used or likely to be used in the manufacture of such controlled substance; and the control of which is necessary to prevent, curtail, or limit the manufacture of such controlled substance. 21 U.S.C. 802 (23)

¹⁶⁸ 21 U.S.C. 811(c).

¹⁶⁹ 21 U.S.C. 811(e).

The Controlled Substances Act established five separate schedules of classification for the controlled substances, each with their own characteristics and requirements that needed to be satisfied in order for the regulated substances to qualify for listing¹⁷⁰. For example, drugs that are listed as Schedule I drugs (the most dangerous) would have to exhibit a high potential for abuse, have no currently accepted medical use in treatment in the U.S., and also exhibit a lack of accepted safety for use under medical supervision¹⁷¹. Schedule II drugs, which are generally thought to be less dangerous than those listed under Schedule I must exhibit a high potential for abuse, have a currently accepted medical use in treatment in the U.S. subject to severe restrictions, and also exhibit tendencies to lead to severe psychological or physical dependence¹⁷². Methamphetamine, its salts, its isomers, and the salts of its isomers are currently listed as Schedule II controlled substances¹⁷³ because it has shown the requisite high potential for abuse and dependence among its users but is also currently used in some forms of medical treatment, albeit subject to very severe restrictions¹⁷⁴. Accordingly, all the restrictions and regulations that are discussed here on apply directly to methamphetamines.

In addition to giving the Attorney General the power to designate drugs as controlled substances, the Controlled Substances Act also authorized the Attorney General to regulate the “registration and control of the manufacture, distribution¹⁷⁵, and

¹⁷⁰ 21 U.S.C. 812.

¹⁷¹ 21 U.S.C. 812(b)(1).

¹⁷² 21 U.S.C. 812(b)(2).

¹⁷³ 21 C.F.R. § 1308.12 Schedule II (d)(2).

¹⁷⁴ Desoxyn (methamphetamine tablets) is currently available as a Schedule II prescription drug and has been approved by the FDA to treat Attention Deficit Disorder with Hyperactivity and Exogenous Obesity. Available at http://www.fda.gov/medwatch/SAFETY/2006/Apr_PIs/Desoxyn_PI.pdf

¹⁷⁵ The term "distribute" means to deliver (other than by administering or dispensing) a controlled substance or a listed chemical. 21 U.S.C. 802(11).

dispensing of controlled substances and to the registration and control of regulated persons¹⁷⁶ and of regulated transactions^{177,178}. Section 822 of the CSA requires registration of every person who manufactures or distributes or intends to manufacture or distribute any controlled substance as well as persons who dispense¹⁷⁹ or intend to dispense any controlled substance. This registration will result in a unique number being assigned to each registered person which must be made available to all suppliers by the customers at the time of purchase in order to greatly decrease the number of unauthorized transactions¹⁸⁰. This registration requirement essentially serves as the impetus for creating an entirely closed system of distribution for substances listed on one of the schedules and the additional requirements on the handlers of controlled substances further accomplishes this objective¹⁸¹.

Under the relevant provisions, the Attorney general shall register prospective manufacturers of Schedule II substances based on the following factors: an ability to maintain effective controls in preventing diversion of controlled substances, compliance with all applicable laws, promotion of advances in manufacturing these substances, prior

¹⁷⁶ The term "regulated person" means a person who manufactures, distributes, imports, or exports a listed chemical, tableting machine, or an encapsulating machine or who acts as a broker or trader for an international transaction involving a listed chemical, a tableting machine, or an encapsulating machine. 21 U.S.C. 802(38).

¹⁷⁷ The term "regulated transaction" means a distribution, receipt, sale, importation, or exportation of, or an international transaction involving shipment of, a listed chemical, or if the Attorney General establishes a threshold amount for a specific listed chemical, a threshold amount, including a cumulative threshold amount for multiple transactions (as determined by the Attorney General, in consultation with the chemical industry and taking into consideration the quantities normally used for lawful purposes), of a listed chemical, subject to some exceptions, or a distribution, importation, or exportation of a tableting machine or encapsulating machine. 21 U.S.C. 802(39).

¹⁷⁸ 21 U.S.C. 821.

¹⁷⁹ The term "dispense" means to deliver a controlled substance to an ultimate user or research subject by, or pursuant to the lawful order of, a practitioner, including the prescribing and administering of a controlled substance and the packaging, labeling or compounding necessary to prepare the substance for such delivery. 21 U.S.C. 802(10).

¹⁸⁰ *Chapter 1 Controlled Substances Act, Drugs of Abuse*. Drug Enforcement Agency; 2005, 5.

¹⁸¹ *Id.*

conviction records with respect to handling such substances, past experience in the manufacture of such substances, as well any other relevant factors having to do with public health and safety¹⁸². Hopeful distributors of Schedule II substances are issued registration based on similar criteria¹⁸³.

The CSA also required that all handlers keep and make available complete and accurate records of inventory¹⁸⁴ for a period of at least two years¹⁸⁵. This recordkeeping requirement is essential to maintaining the closed network of distribution as it makes it possible to trace the flow of any controlled substance at each step and this alone, which will serve to prevent diversion of any of these substances help large corporations discover employees who are illegally diverting some of these substances to other outlets.¹⁸⁶ The CSA further stated that with respect to the records that must be kept of all transactions, it would be unlawful for any persons to distribute a Schedule II substance unless such distribution was effected pursuant to the receipt of an official written order on forms to be issued by the Attorney General¹⁸⁷. These forms are preprinted with the customer information and the controlled substances may only be sent to the name and address on the form, as this process serves to reinforce Section 823's registration requirement goals of keeping these substances out of the hands of unauthorized parties¹⁸⁸. This form requirement also assists in monitoring as one copy of the form is forwarded by the supplier to a Drug Enforcement Agency office after a transaction is completed¹⁸⁹.

¹⁸² 21 U.S.C. 823(a).

¹⁸³ 21 U.S.C. 823(b).

¹⁸⁴ 21 U.S.C. 827(a).

¹⁸⁵ 21 U.S.C. 827(b).

¹⁸⁶ Chapter CSA *supra* note 180 at 6.

¹⁸⁷ 21 U.S.C. 828(a).

¹⁸⁸ Chapter CSA *supra* note 180 at 6.

¹⁸⁹ *Id.*

The CSA also placed restrictions on practitioners with regard to the dispensing of Schedule II substances that have classified as prescription drugs by the FDA, such as methamphetamine. Unless the controlled substance in question is dispensed directly to a patient by a practitioner (other than a pharmacist), all other dispersals must be accompanied by a written prescription, save for emergency situations, and due to the potential risk for abuse and dependency, prescriptions for Schedule II substances may not be refilled¹⁹⁰.

The CSA proceeded to establish production quantity quotas for all controlled substances by giving the Attorney General the power to determine the production limits for a calendar year¹⁹¹ based on sales and inventories information and drug usage estimates from the FDA¹⁹². Section 826 further stated provisions for establishing and revising individual production quotas, manufacturing quotas, and applications for quota increases by registrants¹⁹³.

Finally, the CSA provided for penalties for the unlawful manufacturing, dispensing, and distribution of controlled substances with the penalties usually being determined by schedule classification¹⁹⁴. Over the years, the CSA has been amended many times and these penalties have changed along with the various provisions of the CSA over time¹⁹⁵. A look at structure of the Controlled Substances Act reveals that there are a reasonable amount of controls in place to regulate the manufacture and distribution of methamphetamine, but the process of regulation is still one that is constantly evolving.

¹⁹⁰ 21 U.S.C. 829(a).

¹⁹¹ 21 U.S.C. 826(a).

¹⁹² Chapter CSA *supra* note 180 at 8.

¹⁹³ 21 U.S.C. 826.

¹⁹⁴ 21 U.S.C. 841-864.

¹⁹⁵ Chapter CSA *supra* note 180 at 8.

Much legislation has been passed over the years in efforts to amend the CSA so that it can better serve its goals and adapt to the changing environment, and much of the additional legislation has been in specific response to the methamphetamine problem. While the CSA of 1970 serves as the foundation for methamphetamine regulation, much of the CSA's bite in the war against meth came in the form of amendments to the CSA in later federal legislation.

Chemical Diversion and Trafficking Act of 1988

One of the problems in regulating a drug like methamphetamine, which is a purely synthetic drug that is a product of chemical precursors, was that there were no controls in place for regulating the basic ingredients that were used to synthesize and actually produce these drugs. Until the Chemical Diversion and Trafficking Act of 1988¹⁹⁶ was passed, there were virtually no obstacles in place for producers in obtaining the requisite chemical precursors¹⁹⁷ because there were no recordkeeping or inspection requirements on these precursors, nor were there any criminal penalties for diversion of the chemicals¹⁹⁸. The Chemical Diversion and Trafficking Act of 1988 was one of the first attempts at chemical control by the DEA as it began regulation of 8 essential chemicals, 12 precursors¹⁹⁹, and related machinery²⁰⁰ by imposing recordkeeping requirements on transactions involving these regulated chemicals²⁰¹.

¹⁹⁶ Pub. L. 100-690, 102 Stat 4181.

¹⁹⁷ Chemical precursors are compounds that are required in the synthetic or extraction processes of drug production, and become incorporated into the drug molecule.

¹⁹⁸ U.S. Drug Enforcement Agency, Department of Justice. *Diversion Control*, Inside the DEA, DEA Programs. Available at <http://www.usdoj.gov/dea/programs/diversion.htm>.

¹⁹⁹ Chapter CSA *supra* note 180 at 13.

²⁰⁰ 21 U.S.C. 843(a)(6) &(7).

²⁰¹ 21 U.S.C. 830(a).

Notification was also now required at least 15 days in advance for those expecting to either import or export a chemical that was listed under the CSA²⁰². It also lowered the quantity necessary to qualify as a substantial quantity of methamphetamine in illicit trafficking that would then trigger mandatory minimum sentences²⁰³. This legislation seemed to have had a noticeable impact on clandestine methamphetamine production because according to the DEA, both lab seizures and injuries attributable to illicit production dropped approximately 60% as the regulation imposed on bulk purchases of ephedrine and pseudoephedrine (both chemical precursors to methamphetamine) forced traffickers to search for alternative sources²⁰⁴. The traffickers soon realized, however, that an exemption existed for over the counter (OTC) products containing the chemicals, and it wasn't long before they began to take full advantage of this loophole by relying on single entity ephedrine²⁰⁵ tablets that were sold over the counter to supply the precursor they needed to continue with their production²⁰⁶.

Domestic Chemical Diversion and Control Act of 1993

Just as the methamphetamine traffickers had adjusted to the new regulation of precursor chemicals by finding a loophole in the CSA, Congress eventually adjusted as well, and responded with the amendments made to the CSA in 1993. The Domestic Chemical Diversion and Control Act of 1993²⁰⁷ extinguished the “precursor” and “essential” chemical distinction and instead re-classified the regulated chemicals as either

²⁰² 21 U.S.C. 971.

²⁰³ 21 U.S.C. 841(b)(1)(viii).

²⁰⁴ Chapter CSA *supra* note 180 at 14.

²⁰⁵ Ephedrine is a chemical precursor of methamphetamine.

²⁰⁶ Chapter CSA *supra* note 180 at 14.

²⁰⁷ Pub. L. 103-200, 107 Stat 2333.

List I²⁰⁸ or List II²⁰⁹, while simultaneously removing the exemption for OTC single entity ephedrine products, thus addressing the loophole that was the result of the CDTA²¹⁰.

Also, by enacting section 814 of the CSA, it gave the Attorney General the authority to remove regulated transaction exemptions under 21 U.S.C. 802(39)(A)(iv) if they were found to be the object of diversion for use in illicit production of chemical substances²¹¹.

Additional sections of the CSA (registration requirements) were amended to require all importers, exporters²¹², manufacturers, and distributors of List I chemicals²¹³ to go through the registration process and subsection (h) was added to Section 823 to set up guidelines for the Attorney General to follow when making a registration determination with respect to potential List I chemical distributors²¹⁴. The DCDC further required bulk manufacturers of List I chemicals to report total quantities produced annually and both record keeping and reporting requirements²¹⁵ were implemented for single entity ephedrine product transactions²¹⁶. While these amendments seemed like a great improvement at the time, the traffickers adjusted by switching yet again to more readily available methamphetamine precursors such as single entity pseudoephedrine²¹⁷ products and combination ephedrine²¹⁸ products²¹⁹, which were not regulated.

²⁰⁸ The term "list I chemical" means a chemical specified by regulation of the Attorney General as a chemical that is used in manufacturing a controlled substance in violation of this subchapter and is important to the manufacture of the controlled substances. 21 U.S.C. 802(34).

²⁰⁹ The term "list II chemical" means a chemical (other than a list I chemical) specified by regulation of the Attorney General as a chemical that is used in manufacturing a controlled substance in violation of this subchapter. 21 U.S.C. 802(35).

²¹⁰ Chapter CSA *supra* note 180 at 14.

²¹¹ 21 U.S.C. 814.

²¹² 21 U.S.C. 957.

²¹³ 21 U.S.C. 822.

²¹⁴ 21 U.S.C. 823(h).

²¹⁵ 21 U.S.C. 830.

²¹⁶ Chapter CSA *supra* note 180 at 14.

²¹⁷ Pseudoephedrine is a chemical precursor to methamphetamine.

²¹⁸ Combination ephedrine products are drug products that contain main active ingredients in addition to ephedrine.

Comprehensive Methamphetamine Control Act

On October 3, 1996, President Bill Clinton signed the Comprehensive Methamphetamine Control Act of 1996²²⁰ into law²²¹, and a few days later, he spoke of the necessity of the new legislation to combat the meth problem before it became too widespread:

“Finally, I'm pleased that Congress has passed important antidrug legislation that I submitted last spring to deal with methamphetamine. Methamphetamine is a deadly drug that unfortunately is gaining popularity. In 2 years, deaths from this drug have doubled. Currently isolated in geographic pockets, its use now threatens to spread nationwide. With this legislation we increase penalties for trafficking in meth, toughen the penalties for trafficking in those chemicals used to produce meth, and give the Justice Department authority to regulate and seize those chemicals. I am particularly pleased that we are acting before this epidemic spreads.”²²²

While President Clinton spoke of the need to act before the epidemic spreads, it seems like Congress had a better idea of just how big a threat was posed by methamphetamine within our borders as they found the following:

"(1) Methamphetamine is a very dangerous and harmful drug. It is highly addictive and is associated with permanent brain damage in long-term users.

"(2) The abuse of methamphetamine has increased dramatically since 1990. This increased use has led to devastating effects on individuals and the community, including –

"(A) a dramatic increase in deaths associated with methamphetamine ingestion;

²¹⁹ Chapter CSA *supra* note 180 at 14.

²²⁰ Pub. L. 104-237, 110 Stat 3099.

²²¹ *Methamphetamine and the Law: A Legal History of Crank*. Available at <http://www.montana.edu/wwwai/imsd/rezmeth/legal.htm>.

²²² *Remarks on the signing of the Comprehensive Methamphetamine Control Act of 1996 – Pres. Bill Clinton – Transcript*, Weekly Compilation of Presidential Documents; October 7, 1996. Available at http://findarticles.com/p/articles/mi_m2889/is_n40_v32/ai_18920461/pg_3.

"(B) an increase in the number of violent crimes associated with methamphetamine ingestion; and

"(C) an increase in criminal activity associated with the illegal importation of methamphetamine and precursor compounds to support the growing appetite for this drug in the United States.

"(3) Illegal methamphetamine manufacture and abuse presents an imminent public health threat that warrants aggressive law enforcement action, increased research on methamphetamine and other substance abuse, increased coordinated efforts to prevent methamphetamine abuse, and increased monitoring of the public health threat methamphetamine presents to the communities of the United States."²²³

The Comprehensive Methamphetamine Control Act was a step in the right direction, but it still left much to be desired in terms of its overall impact on the methamphetamine problem. On its face, it seemed to implement a number of new restrictions on both methamphetamine and its precursor chemicals, but it still exhibited some glaring weaknesses which left yet another loophole for traffickers to take advantage of.

The CMCA made a number of notable changes to the CSA by expanding its reach and attempting to enforce stiffer penalties in response to the growing methamphetamine problem. It made it unlawful for traffickers to manufacture or distribute listed chemicals with the intent to unlawfully import or with knowledge that they will be unlawfully imported into the U.S.²²⁴ and it stiffened the penalties for those who violated the aforementioned section by importing in List I chemicals²²⁵. Other related penalties were stiffened all across the board as well, as potential prison sentences were raised from 10 years to up to 20 years for those who either possess listed chemicals with the intent to

²²³ 21 U.S.C. 801 Note.

²²⁴ 21 U.S.C. 959(a)(1) & (2).

²²⁵ 21 U.S.C. 960.

manufacture or possess and distribute with knowledge that others intend to manufacture controlled substances²²⁶.

Section 842 of the CSA was amended to make it unlawful for a person to distribute a laboratory supply to a person who uses or attempts to use the supply to manufacture a controlled substance, with reckless disregard for the uses to be made of the supply²²⁷. Such unlawful behavior was punishable by a civil fine of up to \$250,000²²⁸. The CMCA amended Section 843 to allow the DEA to pursue an injunction against prospective violators of the section or Section 842²²⁹, and it added a new penalty of not more than 10 years and/or a fine of up to \$30,000 for any persons who possess or distribute supplies with the intent to manufacture or facilitate the manufacture of methamphetamine²³⁰.

The CMCA further barred the possession of a listed chemical by a person who had obtained the chemicals pursuant to valid registration if the registration was suspended, expired, revoked, or no longer used to conduct business in the manner originally contemplated²³¹. Iodine and hydrochloric acid, two ingredients often used in the meth production process, were added to the CSA as List II chemicals²³² and mail order purchases of products containing pseudoephedrine, phenylpropranolamine²³³, and ephedrine were also restricted²³⁴. It also created a restitution provision for cleanup of clandestine laboratory sites that were found to have been manufacturing

²²⁶ 21 U.S.C. 841(c)(3).

²²⁷ 21 U.S.C. 842(a)(11).

²²⁸ 21 U.S.C. 842(c)(2)(C).

²²⁹ 21 U.S.C. 843(f).

²³⁰ 21 U.S.C. 843(d)(2).

²³¹ 21 U.S.C. 844 (a)(1).

²³² 21 U.S.C. 802(35)(I) & (J).

²³³ Phenylpropranolamine is a chemical precursor to methamphetamine.

²³⁴ 21 U.S.C. 830(b)(3).

methamphetamine by enabling the Attorney General to order defendants convicted of such a violation to pay for the cleanup costs incurred by the federal government, in addition to paying restitution to any individuals who may have been harmed as a result of the offense²³⁵.

The new legislation created an advisory panel of representatives from various agencies and law enforcement to convene under the Attorney General in order to create educational programs for distributors of products that contain chemical precursors and it also mandated that the Attorney General would continue its current efforts to provide seminars and training for distributors and to provide assistance to local law enforcement in facilitating such educational programs²³⁶. A Methamphetamine Interagency Task Force was also established for the first time which would “be responsible for designing, implementing, and evaluating the education and prevention and treatment practices and strategies of the Federal Government with respect to methamphetamine”²³⁷, and a public health monitoring system to collect and disseminate information regarding methamphetamine was also established²³⁸.

One of the most important changes that the CMCA made to the CSA in response to the traffickers’ switch to pseudoephedrine and combination ephedrine products was to amend the definition of a regulated transaction in order to remove the exemption that was in place for products that contained pseudoephedrine, phenylpropanolamine, and ephedrine²³⁹. A new 24 gram base sale threshold designation in single transactions was made with respect to determining whether or not distributors of pseudoephedrine and

²³⁵ 21 U.S.C. 853(q).

²³⁶ 21 U.S.C. 872a.

²³⁷ 21 U.S.C. 801 Note.

²³⁸ 42 U.S.C. 290aa-4 Note.

²³⁹ 21 U.S.C. 802(39)(A)(iv)(I)(aa).

phenylpropanolamine products would be required to report to the Attorney General²⁴⁰ as mandated by the CSA²⁴¹, but unfortunately, the definition of regulated transaction was further amended to exempt sale of ordinary OTC pseudoephedrine and phenylpropanoamine products²⁴². This exemption of OTC products containing the methamphetamine chemical precursors provided the traffickers with yet another loophole and lessened the potential impact of the legislation.

The term "ordinary over-the-counter pseudoephedrine or phenylpropanolamine product" is defined to mean any products containing the precursors sold in package sizes of not more than 3.0 grams of either base that is packaged in blister packs with each blister containing two or less dosages and for liquids, it refers to any package sizes that contain less than 3.0 grams of either base²⁴³. By defining over the counter purchases as such, these provisions meant that any retail sales that fell into this definition would be unregulated, thus leaving traffickers a reliable, albeit a bit more cumbersome method of obtaining the necessary precursors.

Furthermore, the CMCA went on to define combination ephedrine product and established a similar 24 gram base sale threshold for retail distributors without regard for its packaging, and a 1 kilogram base threshold for other distributors and importers²⁴⁴. It further softened its purported hard line against these chemical precursors when it amended the CSA to expand the opportunity for reinstatement of these precursor chemicals as list chemical exemptions, contingent on certain criteria being met²⁴⁵, and by

²⁴⁰ 21 U.S.C. 802 Note.

²⁴¹ 21 U.S.C. 830(b)(3).

²⁴² 21 U.S.C. 802(39)(A)(iv)(I)(aa).

²⁴³ 21 U.S.C. 802(45).

²⁴⁴ 21 U.S.C. 802 Note.

²⁴⁵ 21 U.S.C. 814(e).

shortening the required record retention period from 4 years to 2 years for List I chemicals²⁴⁶. Although the changes brought on by the Comprehensive Methamphetamine Control Act were steps in the right direction, the “blister pack exemption” that resulted from the decision not to regulate ordinary OTC transactions ensured that it would not be enough to prevent methamphetamine traffickers from continuing their illicit production and distribution.

The Methamphetamine Anti-Proliferation Act of 2000

The Methamphetamine Anti-Proliferation Act of 2000 was the next step taken by Congress in reaction to the continuing rise of methamphetamine use in the United States²⁴⁷. The new legislation made the restitution provision, first introduced in the CMCA, mandatory as against lab operators²⁴⁸ and it finally made it unlawful to sell or offer for sale drug paraphernalia that was related to methamphetamine use²⁴⁹. The legislation also allowed for funding from the DOJ Assets Forfeiture Fund to be put towards hazardous waste cleanup at illegal meth sites²⁵⁰ as well as allowing for the disbursement of grants to State and local officials for cleanup of such sites²⁵¹.

It further mandated that the DEA shall carry out training programs for law enforcement and localities deemed to have significant levels of meth-related crimes by teaching them to better deal with clandestine lab sites²⁵² and it ordered the Director of National Drug Control Policy to focus the appropriation of funds for supplying additional law enforcement personnel to areas designated by the Director to be high intensity

²⁴⁶ 21 U.S.C. 830(a)(1).

²⁴⁷ Pub. L. 106-310, 114 Stat 1101.

²⁴⁸ 21 U.S.C. 853(q).

²⁴⁹ 21 U.S.C. 863.

²⁵⁰ 28 U.S.C. 524(c)(1)(E)(ii)(I).

²⁵¹ 42 U.S.C. 3571.

²⁵² 21 U.S.C. 872 Note.

methamphetamine trafficking²⁵³. The MAPA also allowed for expansion on research of methamphetamine by allowing the Director of the National Institute on Drug Abuse to issue grants for research relating to methamphetamine abuse,²⁵⁴ and granted the Director of the Center for Substance Abuse treatment to make grants to States with high rising methamphetamine rates so that they could expand their treatment efforts for methamphetamine users²⁵⁵. The Public Health Service Act was also amended to provide funding for both school-based and community-based outreach and prevention programs concerning the dangers of methamphetamine abuse²⁵⁶.

The most notable change brought upon by MAPA focused on more stringent regulation of the chemical precursors as the previous 24 gram threshold for reporting sales of pseudoephedrine and phenylpropanolamine products was reduced to 9 grams in single transactions and transactions involving packages containing more than 3 grams of base pseudoephedrine and phenylpropanolamine were now also regulated²⁵⁷. The House Committee hearing stated that the DEA had expressed great concern about the diversion of 100-count bottles of ephedrine and pseudoephedrine tablets to home labs and that from a practical standpoint, this would lower reporting and registration thresholds for distributors to approximately three such bottles from the previously allowed eight²⁵⁸. By lowering the threshold that triggered reporting requirements, the DEA was obviously attempting to bring more transactions into its purview. MAPA also made it unlawful to

²⁵³ 21 U.S.C. 1706.

²⁵⁴ 42 U.S.C. 285o-2.

²⁵⁵ 42 U.S.C. 290bb-9.

²⁵⁶ 42 U.S.C. 290bb-21.

²⁵⁷ 21 U.S.C. 802(39)(a)(iv)(II).

²⁵⁸ H.R. Rep. No. 106-878 Part I (2000).

steal or transport stolen anhydrous ammonia²⁵⁹ across State lines with the intent to use or knowledge of intent to use the ammonia for manufacture of controlled substances²⁶⁰. Finally, MAPA also called for increased federal sentencing for violations involving ephedrine, pseudoephedrine, and phenylpropanolamine²⁶¹. Although MAPA did make some noticeable improvements to the existing legislation, it wasn't until the Combat Methamphetamine Epidemic Act was passed in 2006 that real strides and progress were made in the attempt to slow down meth production.

Combat Methamphetamine Epidemic Act of 2005

The Combat Methamphetamine Epidemic Act of 2005 was passed as part of the USA Patriot Improvement and Reauthorization Act of 2005 on March 9, 2006²⁶². The Combat Methamphetamine Epidemic Act amends the CSA in a number of ways. It finally added ephedrine, pseudoephedrine, and phenylpropanolamine products to the list of listed chemicals²⁶³ and also redefined “retail distributor” to now include entities who distributed ephedrine products, in addition to the previously listed pseudoephedrine and phenylpropanolamine products to walk-in or face-to-face customers for personal use²⁶⁴. There was a push at the time the legislation was passed for pseudoephedrine and other meth precursor chemicals to be designated as Schedule V controlled substances, but this classification was ultimately rejected as it would have eliminated the ability of consumers

²⁵⁹ A chemical used in the methamphetamine cooking process, as mentioned above in the Cooking Methamphetamine section.

²⁶⁰ 21 U.S.C. 864.

²⁶¹ 28 U.S.C. 994.

²⁶² Pub. L. 109-177, 120 Stat 192.

²⁶³ These three precursors were defined as “scheduled listed chemical products”. 21 U.S.C. 802(45)(A)(i).

²⁶⁴ 21 U.S.C. 802(49).

to lawfully obtain otherwise safe medicines containing such chemicals without visiting a pharmacy²⁶⁵.

It also made significant restrictions involving the sales quantity, placement of the products, logbook record requirements, and training of sales personnel²⁶⁶. With respect to chemical products containing ephedrine, pseudoephedrine, or phenylpropanolamine bases, sales were not to exceed a daily amount of 3.6 grams of base for any purchaser, regardless of the actual number of transactions, up to a total of 9 grams within a 30 day period,²⁶⁷ and sellers and distributors were not to sell such regulated products in nonliquid form unless they were packaged in blister packs with each blister containing two or less dosages²⁶⁸.

Retailers were to place all such products in a location where the consumer would not be able to access the merchandise before sale (“behind-the-counter” rule), which was made to include locked cabinets that were in areas of the facility to which consumers did have direct access²⁶⁹. Under the CMEA, sellers were then required to deliver the product directly to the customer²⁷⁰, and then to maintain a list of all such transactions that included the following information: name of the product, quantities sold of the product, names and addresses of the purchasers, and dates and times of sales (the “logbook” requirement)²⁷¹. An exemption to the logbook requirement was made for sales made to

²⁶⁵ H.R. 109-299 Part I (2005).

²⁶⁶ 21 U.S.C. 830.

²⁶⁷ 21 U.S.C. 830(d)(1).

²⁶⁸ 21 U.S.C. 830(d)(2).

²⁶⁹ 21 U.S.C. 830(e)(1)(A)(i).

²⁷⁰ 21 U.S.C. 830(e)(1)(A)(ii).

²⁷¹ 21 U.S.C. 830(e)(1)(A)(iii).

an individual of a single sales package if that package contained less than 60 milligrams of pseudoephedrine²⁷².

For transactions that required a logbook entry, purchasers were now required to present a State or federal government issued photo I.D. to the seller²⁷³ and to both sign the logbook and fill in his or her name, address, and date and time of purchase²⁷⁴, while the sellers were required to determine that the information entered in the logbook was accurate,²⁷⁵ in addition to entering the information regarding the name of the product and the quantity sold into the logbook²⁷⁶. All logbooks were to include a warning to potential customers that entering false information in the logbooks could subject them to criminal penalties²⁷⁷. The sellers were expected to maintain all the entries from the logbook for a minimum of two years from each entry²⁷⁸ and all individuals who were actually responsible for delivering the product into the hands of the customer were expected to submit self-certifications to the Attorney General stating that they had undergone the training required to effect such transactions,²⁷⁹ copies of which were to be maintained by the seller on the premises²⁸⁰. The self-certification process and program, which required a separate certification for each place of business that sold scheduled listed chemical products,²⁸¹ was established by the Attorney General,²⁸² and such certification would be

²⁷² Id.

²⁷³ 21 U.S.C. 830(e)(1)(A)(iv)(I)(aa).

²⁷⁴ 21 U.S.C. 830(e)(1)(A)(iv)(I)(bb).

²⁷⁵ 21 U.S.C. 830(e)(1)(A)(iv)(II)(aa).

²⁷⁶ 21 U.S.C. 830(e)(1)(A)(iv)(II)(bb).

²⁷⁷ 21 U.S.C. 830(e)(1)(A)(v).

²⁷⁸ 21 U.S.C. 830(e)(1)(A)(vi).

²⁷⁹ 21 U.S.C. 830(e)(1)(A)(vii).

²⁸⁰ 21 U.S.C. 830(e)(1)(A)(viii).

²⁸¹ 21 U.S.C. 830(e)(1)(B)(ii)(II).

²⁸² 21 U.S.C. 830(e)(1)(B)(iii).

held invalid unless it included a statement that the seller understood each of the requirements²⁸³.

The CMEA also placed a set of restrictions on mobile retail vendors²⁸⁴ requiring them to not only place the regulated products in a locked cabinet²⁸⁵ but also barring them from selling more than 7.5 grams base of the restricted chemical products to a customer within a 30 day period²⁸⁶. Entities engaged in mail-order sales were similarly required to verify the identities of the purchasers²⁸⁷ according to guidelines established by the Attorney General and were also limited to selling not more than 7.5 grams of the scheduled listed chemical products to a single customer within a 30 day period²⁸⁸. A possible exemption from these new requirements was established for scheduled listed chemical products that the Attorney General determined could not be used in the illicit manufacture of methamphetamine²⁸⁹.

The CMEA amended the penalties for simple possession of controlled substances by making it unlawful for any person to purchase more than 9 base grams of a scheduled listed chemical product within a 30 day window, except that, of those 9 grams, not more than 7.5 grams were to be imported by the purchaser²⁹⁰. It also gave the Attorney General the power to prohibit knowing or reckless violators of the new reporting requirements from selling any scheduled listed chemical products, with any subsequent

²⁸³ 21 U.S.C. 830(e)(1)(B)(i).

²⁸⁴ The term “mobile retail vendor” means a person or entity that makes sales at retail from a stand that is intended to be temporary, or is capable of being moved from one location to another, whether the stand is located within or on the premises of a fixed facility (such as a kiosk at a shopping center or an airport) or whether the stand is located on unimproved real estate (such as a lot or field leased for retail purposes). 21 U.S.C. 802(47).

²⁸⁵ 21 U.S.C. 830(e)(1)(A)(ix)(I).

²⁸⁶ 21 U.S.C. 830(e)(1)(A)(ix)(II).

²⁸⁷ 21 U.S.C. 830(e)(2)(A).

²⁸⁸ 21 U.S.C. 830(e)(2)(B).

²⁸⁹ 21 U.S.C. 830(e)(3).

²⁹⁰ 21 U.S.C. 844(a).

sales violating this prohibition resulting in the same penalties applicable for the initial violations²⁹¹.

The CMEA then amended the CSA to allow the Attorney General to finally regulate the production of ephedrine, pseudoephedrine, and phenylpropanolamine by establishing quotas, as had been previously in effect for controlled substances on one of the five schedules²⁹², and it accordingly made it unlawful for any person to manufacture such scheduled listed chemical products in a manner that conflicts with his registration²⁹³ or in excess of his allotted production quota²⁹⁴. Importation of these chemical precursors into the U.S. was also banned²⁹⁵ except in amounts necessary for medical, scientific, or other legitimate purposes as determined by the Attorney General,²⁹⁶ but the CMEA did add a provision outlining the process for requesting an increase in the import quota for authorized importers²⁹⁷. Importers were further subject to increased regulations that required importers to wait for a minimum of 15 days after giving notice regarding the intended transaction to the Attorney General, before transferring any imported listed chemicals to a party who was not a regular customer,²⁹⁸ and any subsequent changes with respect to either the quantity of the chemical being transferred or the identity of the transferee would have to be reported to the Attorney General, thus starting another 15 day wait period²⁹⁹. The Attorney General was given the power to suspend the aforementioned transactions if it believed that the chemicals were in danger of being

²⁹¹ 21 U.S.C. 842(c)(4)(A).

²⁹² 21 U.S.C. 826.

²⁹³ 21 U.S.C. 842(b)(1).

²⁹⁴ 21 U.S.C. 842(b)(2).

²⁹⁵ 21 U.S.C. 952(a).

²⁹⁶ 21 U.S.C. 952(a)(1).

²⁹⁷ 21 U.S.C. 952(d)(1).

²⁹⁸ 21 U.S.C. 971(d)(1)(B).

²⁹⁹ 21 U.S.C. 971(d)(1)(C).

diverted to clandestine drug manufacturing operations³⁰⁰ and all importers were required to send the Attorney General return declarations outlining all the details of the transaction within 30 days³⁰¹.

The CMEA came at a time when the previous federal legislation had made a considerable impact on restricting the availability of the necessary ingredients to manufacture methamphetamine and as a result, many of the U.S. producers were forced to look elsewhere for their supplies of precursor chemicals and distributors were forced to look outside of the U.S. for their methamphetamine supplies. It should come as little surprise that the CMEA attempted to tackle this issue by focusing on importation of regulated chemicals into the U.S. and smuggling of methamphetamine products across U.S. borders. The CMEA amended the CSA to require all importers to include all relevant information regarding the foreign chain of distribution from the manufacturer to the importer in its required notice to the Attorney General,³⁰² and authorized the Attorney General to request further information regarding the distribution process of the product from any of the named distributors in the foreign chain of distribution³⁰³.

It amended the Foreign Assistance Act of 1961³⁰⁴ to call for identification of the world's five largest exporting countries of pseudoephedrine, ephedrine, and phenylpropanolamine³⁰⁵ in order to compare its legitimate demand for these chemicals worldwide³⁰⁶. It also mandated identification of the five countries with the highest rate of

³⁰⁰ 21 U.S.C. 971(d)(2)(A)(1).

³⁰¹ 21 U.S.C. 971(g).

³⁰² 21 U.S.C. 971(h)(1).

³⁰³ 21 U.S.C. 971(h)(2).

³⁰⁴ 22 U.S.C. 2291h(a).

³⁰⁵ 22 U.S.C. 2291h(a)(8)(A)(i).

³⁰⁶ 22 U.S.C. 2291h(a)(8)(A)(iii).

importation and diversion of these chemicals,³⁰⁷ to be determined by both the difference in actual importation of these chemicals versus legitimate demand³⁰⁸ and the best available data regarding diversion of these chemicals for illicit methamphetamine production in these countries³⁰⁹. Under the Foreign Assistance Act, these countries would jeopardize receipt of previously allocated monetary assistance from the U.S.³¹⁰ unless they were to receive certification from the President of the United States that they had either fully cooperated with the United States in the previous year³¹¹ or that our nation's vital interests outweighed the need to withhold aid to these countries³¹². For countries that the President failed to certify under the aforementioned process, the Secretary of State, in tandem with the Attorney General, was to submit to Congress a comprehensive plan to prevent diversion of these chemicals in these countries, and \$1,000,000 of funding was appropriated for this purpose for the years 2006 and 2007³¹³.

As for the growing problem of methamphetamine being smuggled into the United States, the CMEA mandated that the Secretary of State was to take necessary actions in order to prevent smuggling of methamphetamine across U.S. borders from Mexico³¹⁴ by improving bilateral efforts at the border,³¹⁵ working with Mexican authorities to improve their ability to fight illicit production and distribution,³¹⁶ and encouraging the Mexican government to fight the diversion of pseudoephedrine to meth production operations³¹⁷.

³⁰⁷ 22 U.S.C. 2291h(a)(8)(A)(ii).

³⁰⁸ 22 U.S.C. 2291h(a)(8)(B)(i).

³⁰⁹ 22 U.S.C. 2291h(a)(8)(B)(ii).

³¹⁰ 22 U.S.C. 2291j(a).

³¹¹ 22 U.S.C. 2291j(b)(1)(A).

³¹² 22 U.S.C. 2291j(b)(1)(B).

³¹³ 22 U.S.C. 2291h Note.

³¹⁴ 22 U.S.C. 2291 Note (a).

³¹⁵ 22 U.S.C. 2291 Note (b)(1).

³¹⁶ 22 U.S.C. 2291 Note (b)(2).

³¹⁷ 22 U.S.C. 2291 Note (b)(3).

\$4,000,000 of funding was appropriated to the Secretary of the State so that he may carry out this mandate³¹⁸. Criminal penalties were also increased by an additional consecutive imprisonment term of up to 15 years³¹⁹ for those caught smuggling methamphetamine by utilizing a facilitated entry program into the U.S., such as a dedicated commuter lane or accelerated inspection system,³²⁰ and any violators were to be permanently barred from ever being eligible to use any facilitated entry program in the future³²¹. Penalties were also stiffened for those attempting to distribute methamphetamine on premises where a minor was present or living as they would receive an additional prison term of up to 20 years or a fine or both³²².

In an effort to gather more information on this growing epidemic, the Attorney General was now required on a semiannual basis to submit to Congress³²³ information related to DEA allocation of resources to prosecute methamphetamine violations³²⁴ and the steps taken to determine priority of allocation³²⁵ for violations involving importation of meth³²⁶, manufacture of meth³²⁷, or endangerment to children³²⁸. The Solid Waste Disposal Act was also amended by the CEA to require a report at least once every 24 months indentifying byproducts from the methamphetamine production process and whether such byproducts should be designated as hazardous waste³²⁹.

³¹⁸ 22 U.S.C. 2291 Note (d).

³¹⁹ 21 U.S.C. 865(a).

³²⁰ 21 U.S.C. 865(b)(1) & (2).

³²¹ 21 U.S.C. 865(c).

³²² 21 U.S.C. 860a.

³²³ 21 U.S.C. 871a(a).

³²⁴ 21 U.S.C. 871a(a)(1).

³²⁵ 21 U.S.C. 871a(a)(2).

³²⁶ 21 U.S.C. 871a(a)(2)(A).

³²⁷ 21 U.S.C. 871a(a)(2)(B).

³²⁸ 21 U.S.C. 871a(a)(2)(C).

³²⁹ 42 U.S.C. 6921.

Finally, the CMEA appropriated funding for various programs to assist local and State officials in confronting the spread of methamphetamine use in their communities. \$99,000,000 was appropriated to programs³³⁰ designed to investigate and prosecute violations of methamphetamine-related laws³³¹, reimburse DEA for cleanup costs of production sites³³², support local environmental and health agencies³³³, and procure necessary resources that would result in a reduction of such violations³³⁴. Grants were also authorized for services coordinating assistance to children who reside in homes where illicit meth production is taking place³³⁵ with \$20,000,000 of funding being made available for such services³³⁶. Lastly, funding was also appropriated to programs that focused on collaborations between the child welfare, criminal justice, and substance abuse systems to address the problems faced by both pregnant and parenting women methamphetamine abusers³³⁷. While it was far from perfect, the Combat Methamphetamine Epidemic Act has been the most comprehensive and expansive federal methamphetamine legislation to date and it will hopefully have a positive impact in reversing the growth trends we have witnessed in the past.

IS LEGISLATION WORKING?

METHAMPHETAMINE PROGRESS

In a methamphetamine progress report conducted in 2006, it was reported that monthly methamphetamine laboratory incidents had topped out in March 2004 when reaching an all-time high of 2,094 and has been on a steady decline, with a drop of more

³³⁰ 42 U.S.C. 3797cc-1.

³³¹ 42 U.S.C. 3797cc(3)(A).

³³² 42 U.S.C. 3797cc(3)(B).

³³³ 42 U.S.C. 3797cc(3)(C).

³³⁴ 42 U.S.C. 3797cc(3)(D).

³³⁵ 42 U.S.C. 3797cc-21(b)(1).

³³⁶ 42 U.S.C. 3797cc-21(c).

³³⁷ 42 U.S.C. 3797cc-3(a)(2).

than 30% annually by 2005³³⁸. There were only 3,160 laboratory incidents reported in the first four months of 2006 at the time the numbers were reported, which represented a 51.1% decline from 2005 and a 56.1% decline from 2004³³⁹. Workplace drug testing violations also showed a 12.4% decline in the first five months of 2006 compared to the same time period in 2005³⁴⁰. The decrease in illicit meth lab incidents seems to inspire some confidence that the legislation preventing access to precursor chemicals has had a positive impact on cutting down on meth production within the country, but the question of whether the overall supply and availability of methamphetamine is decreasing remains unresolved.

The National Methamphetamine Threat Assessment which was released by the National Drug Intelligence Center in December of 2007 reveals some unsettling information³⁴¹. According to the report, while methamphetamine use has pretty much remained stable since 2002 after experiencing significant increases throughout the 1990's and domestic production of the drug has decreased dramatically since 2004, the overall methamphetamine markets in the United States have remained unchanged³⁴². This is likely due to the growth of methamphetamine distribution networks in Mexico, which despite increased import restrictions on precursor chemicals has still managed to become the number one supplier of methamphetamine to the U.S³⁴³. Methamphetamine production in Canada has seen noticeable spikes as well as biker gangs and Asian drug

³³⁸ Office of National Drug Control Policy. *Pushing Back Against Meth: A Progress Report on the Fight Against Methamphetamine in the United State*; November 30, 2006, 4.

³³⁹ Id.

³⁴⁰ Id.

³⁴¹ National Drug Intelligence Center, Department of Justice *National Methamphetamine Threat Assessment 2008*; December 2007.

³⁴² Id. at 1.

³⁴³ Id.

trafficking organizations have ramped up their production in response to the declining production domestically in the U.S.³⁴⁴

Moving forward, it seems as if these trends of foreign manufacture and exportation into the U.S. will continue as predictive estimates indicate that smuggling of ephedrine from Columbia into Mexico, in response to the crackdown by the Mexican government, will continue to rise as Mexico further restricts importation of these chemicals³⁴⁵. It also seems plausible that Columbia is ready to step right in and take Mexico's place as the primary manufacturer and supplier of methamphetamine to the U.S. if a situation arose where Mexico was unable to continue to meet demand³⁴⁶. While the Canada-based drug trafficking organizations have yet to contribute a significant amount of methamphetamine to the U.S., they seem poised to fill any potential voids that may arise in affected markets as their production levels continue to rise³⁴⁷. After taking a closer look, it is evident that the federal legislation has been successful in decreasing the amount of domestic production by making it harder to obtain the necessary ingredients, but the fall in domestic production has simply been substituted by increasing importation of the drug³⁴⁸. In my opinion, given all the associated dangers and hazards associated with domestic production by the clandestine laboratories, this in and of itself is no small feat. It does, however, beg the question of what else we can be done to better manage this outbreak.

A MORE COMPREHENSIVE APPROACH IS NEEDED

IS SUPPLY SIDE-RESTRICTION THE BEST APPROACH?

³⁴⁴ Id.

³⁴⁵ Id. at 11.

³⁴⁶ Id.

³⁴⁷ Id.

³⁴⁸ Threat Assessment *supra* note 341.

The previous section showed that while increased legislation and regulation of methamphetamine and its essential ingredients did manage to decrease the domestic supply of the drug, it is unclear whether it has had much of an impact on the overall supply of the drug in the market. I've always had the intuition that in situations where a combination of a strong demand for a product and high profit margins exists, there would always be an adequate supply of the product no matter how much effort was focused on regulating the source. Methamphetamine seems to clearly fall into this category as it exhibits a relatively inelastic demand, due to the addictive nature of the drug, and it offers those involved in the trade the opportunity to make money hand over fist. It seems like as soon as one supplier is taken out, two more suppliers are prepared to take his place.

The limits of supply-side restrictions in the war on drugs have been the issue of much debate in the past. While the proponents of supply-side restriction approach point to the resulting decreases in drug violations as evidence of its efficacy, it has been posited that much of the benefit from supply-side restriction is the result of demand-side mechanisms: incarcerating the dealers who are supplying the drugs is an effective method of actually limiting demand since much of the distributors are heavy users of these same drugs³⁴⁹.

Looking at the past efforts by the U.S. to restrict supplies of cocaine and heroin has shown that for the most part, they have failed time and time again³⁵⁰. Not only have these strategies proven to be ineffective, but they have also been known to drive market forces that result in increased trafficking, to produce unexpected and unintended

³⁴⁹ Peter Reuter. *The Limits of Supply-Side Drug Control*, The Milken Institute Review, Santa Monica, CA; First Quarter 2001, 15.

³⁵⁰ Id. at 15-23.

consequences, and to ultimately make the problem worse rather than better³⁵¹. Attempts to regulate legally produced methamphetamine resulted in the proliferation of clandestine production laboratories and evidence suggests that the crackdown on domestic producers may have led directly to their working with Mexican cartels to produce even more potent forms of the drug³⁵². It is clear that efforts focused solely on curbing the supply of methamphetamine are inadequate and alternative avenues ought to be considered. Prevention and treatment measures should be increased in order to decrease the demand for the drug and harm reduction practices should be implemented in order to minimize the damage that results from its use.

DEMAND-SIDE STRATEGIES

TREATMENT

Effective treatment that helps users to deal with their addiction should have a considerable impact on the methamphetamine problem since it would noticeably lessen the demand for the drug. The current literature and evidence indicate that those who abuse methamphetamine respond favorably to existing treatments and that both their response to treatment and rates of success compare similarly to treatments for other drug-related problems³⁵³. That fact that methamphetamine treatment compares well with other drug treatments is relevant because of the abundance of evidence that suggests that increased funding for treatment programs for other drugs has been a very cost-effective method of reducing drug abuse³⁵⁴. Studies have shown that treatment can be 10 times more cost-effective than drug interdiction, 15 times more effective than increased

³⁵¹ Drug Policy Alliance. *A Four-Pillars Approach to Methamphetamine: Policies for Effective Drug Prevention, Treatment, Policing, and Harm Reduction*; March 2008, 12.

³⁵² *Id.*

³⁵³ Four-Pillars *supra* note 351 at 17.

³⁵⁴ *Id.*

spending on domestic enforcement, 23 times more effective than attempting to eradicate the source, and can save taxpayers more than seven dollars for every dollar invested in such programs, due to savings resulting from decreases in related crime and healthcare burdens³⁵⁵. This data reinforces the notion that effective treatment must play a very integral role in the comprehensive plan to battle the spread of methamphetamine.

PREVENTION

It is clear that strategies to fight the growing demand for methamphetamine must be employed on two fronts. While treatment is successful in curbing demand among current users, a lot of our efforts must be focused on preventing the growth of new users as well. It is essential to take steps early on to properly educate the nation's youth about the potential pitfalls and dangers of methamphetamine use. Funding for after-school programs must increase because research has shown that children who are involved in extra-curricular activities are far less likely to engage in substance abuse than their peers who don't participate in such programs³⁵⁶. The funding that is currently spent on drug prevention programs such as D.A.R.E.³⁵⁷ and the National Youth Anti-Drug Media Campaign ought to be diverted towards establishing more after-school programs because the scare-based tactics and "manipulative advertising" employed by these programs have proven to be largely ineffectual³⁵⁸. The drug education programs must be revamped in order to offer the children various avenues to obtain more facts and participate in interactive discussions, and the zero-tolerance policies for drug violations that are currently in place in most schools that call for automatic pensions or expulsions need to

³⁵⁵ Four-Pillars *supra* note 351 at 17-18.

³⁵⁶ Four-Pillars *supra* note 351 at 14.

³⁵⁷ D.A.R.E. (Drug Abuse Resistance Education) is a nationwide drug education and prevention program.

³⁵⁸ Four-Pillars *supra* note 351 at 14-15.

be replaced instead with access to treatment programs for all offenders³⁵⁹. It has been encouraging to see efforts made in this department by legislation such as the increased funding for school-prevention programs that resulted from passage of the Meth Anti-Proliferation Act³⁶⁰. The youth of this nation are a lot smarter than we give them credit for and employing scare tactics and attempting to manipulate their views on drugs through the media only serve to insult their intelligence and in extreme cases, may actually drive students towards drugs. For prevention strategies to be effective, students really need access to better information and interesting after-school alternatives to keep them busy and away from drugs.

DEMAND REDUCTION HAS ITS LIMITS

While both prevention and treatment seem like obvious solutions to attack the problem of demand, they are not without their limitations. While there have been promising results from increased funding for drug education and after-school programs, nobody could claim to know the right formula for preventing most of the kids from engaging in drug abuse³⁶¹. It is undoubtedly an ever-evolving process, and one that will take quite some time before we can figure out how to strike the proper balance between various prevention solutions. While the case for treatment is somewhat stronger than prevention, this is tempered by the fact that is it not possible to treat patients who do not seek out treatment³⁶². If the treatment programs were better integrated into the health care system, this might encourage addicts to pursue treatment³⁶³. The practice of entering more violators into drug treatment programs as opposed to putting them into prison

³⁵⁹ Four-Pillars *supra* note 351 at 15.

³⁶⁰ See *supra* note 256.

³⁶¹ Reuter *supra* note 349 at 23.

³⁶² *Id.*

³⁶³ *Id.*

would also substantially increase the number of users who receive treatment. Any measures that could be implemented to neutralize these inherent limitations in prevention and treatment efforts should be explored thoroughly.

HARM REDUCTION

While taking steps to decrease the prevalence of meth abuse is crucial, it is just as important to implement harm reduction measures that will soften the negative impacts associated with methamphetamine abuse. If one proceeds under the reasonable assumption that there will be some level of methamphetamine abuse regardless of the amount of resources expended, the next logical step is to minimize the harms that result from the activity. Although harm reduction measures do not seem to be “tough” enough to adequately deal with the issue, they do have an intrinsic appeal as they serve to maximize societal welfare³⁶⁴. A host of strategies are available for harm reduction such as needle exchange programs, condom distributions, increased funding for lab site cleanups, and better training for law enforcement³⁶⁵. Implementing these programs in conjunction with a concerted effort to reduce overall use will best serve the objective of minimizing the harms associated with illicit methamphetamine manufacture, distribution, and use³⁶⁶.

CONCLUSION

The body of knowledge and data available to us has painted a clear picture of the methamphetamine epidemic. Methamphetamine is a very dangerous drug with far reaching effects, not only to its users but to the community at large, and these effects pose

³⁶⁴ Jonathan P. Caulkins & Peter Reuter. *Setting Goals for Drug Policy: Harm Reduction or Use Reduction?*, 92 *Addiction* 9; September 1997, 1150.

³⁶⁵ Four-Pillars *supra* note 351 at 24-5.

³⁶⁶ *Id.*

a very credible threat to this nation and its citizens. While the federal government may have gotten off to a slow start, it has made great efforts as of late to give the “war on meth” the proper attention that it undoubtedly demands. While this phrase has become somewhat of a buzzword as of late, I feel that it does not accurately depict the current state of affairs with respect to our nation’s methamphetamine problem.

I am reminded of a line I once heard that said something to the effect that the U.S. is not really waging a war on drugs because all wars eventually come to an end, while this particular “war” was unlikely to do so. I tend to agree that our response to this problem is not best described as a war and characterizing it as such may actually be a disservice to the cause and hinder our progress. Methamphetamine is not an opponent that can be struck down or defeated in the traditional sense, and calling it a war brings with it unrealistic hopes and expectations of “victory”. It also serves to affect the policy choices we make as we attempt to give our “enemies” in this war a face (e.g. manufacturers, importers, etc.) and focus entirely too much of our efforts and resources on conquering them. It is my sincere belief that methamphetamine is not so much an adversary that can be overcome but rather a chronic illness that we must accept and learn to manage. The legislation to restrict methamphetamine precursors has made great progress in reducing the domestic supply of methamphetamine in the market but going forward, a much more comprehensive and multi-faceted strategy is necessary if any real strides are to be made in the efforts to treat the symptoms of our nation’s debilitating condition and to take the necessary steps towards recovery.