

# CRS Report for Congress

## Methamphetamine: Background, Prevalence, and Federal Drug Control Policies

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# Methamphetamine: Background, Prevalence and Federal Drug Control Policies

## Summary

Methamphetamine has risen to the top of the American drug-policy agenda. For most of its history, it was regarded in law and public opinion as a secondary or regional concern, different from and less damaging than the drugs — heroin, cocaine, and marijuana — that have defined the focus of national drug policy. More recently, however, as the production, trafficking, and use of methamphetamine have spread, a gathering consensus has come to regard it as one of the most dangerous substances available in illegal markets. Methamphetamine's dangers, including the devastating impact of the drug on child welfare and health care systems in blighted communities, the risk of fires and explosions and the environmental contamination resulting from illicit manufacture of the drug, and the rapid increase in foreign suppliers of the drug are likely to keep this drug problem at the forefront of the congressional agenda.

Existing evidence of the pattern of methamphetamine abuse and the effectiveness of alternative responses to its abuse are in some cases highly imperfect, and policymaking in this field remains an exercise in decision making under uncertainty. There is, however, little doubt that methamphetamine use has risen significantly since the early 1990s. Indeed, this trend arguably is the most important change in drug consumption patterns since the crack cocaine epidemic of the late 1980s and early 1990s. The prospect of increased methamphetamine use is a major concern for the future.

During the 109<sup>th</sup> Congress, more than 25 bills were introduced to address the methamphetamine problem, including its implications for public health, child welfare, crime and public safety, border security, and international relations. Of these proposals, Title VII of H.R. 3199, the *PATRIOT Act Renewal Act of 2005* (P.L. 109-177), was signed into law on March 9, 2006. The new law establishes measures to control the availability of methamphetamine precursor chemicals used for the illicit manufacturing of methamphetamine by drug trafficking organizations and amateur producers. The law limits the amount of cold and sinus medicine that can be purchased by consumers and requires that retailers maintain a registry of purchasers and secure their drug inventories. Among other provisions, P.L. 109-177 provides for limits on imports of methamphetamine precursor chemicals and requires the Departments of Justice and State to work with Mexico to effectively disrupt the smuggling of illicit methamphetamine across the U.S.-Mexico border.

This report begins with a brief overview of the history of methamphetamine use, followed by an analysis of the available prevalence data on the drug's use. The final section of the report provides a few overall conclusions that can be inferred from over two decades of congressional action to control illicit methamphetamine use, manufacture, and distribution. Appendices include a description of past congressional action and a brief description of three case studies analyzing the impact and effectiveness of past congressional efforts to regulate and control methamphetamine and its precursor chemicals. This report will not be updated.

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# Methamphetamine: Background, Prevalence and Federal Drug Control Policies

## Introduction: The Issue Before Congress

Methamphetamine has risen to the top of the American drug-policy agenda. For most of its history, it was regarded in law and public opinion as a secondary or regional concern, different from and less damaging than the drugs — heroin, cocaine, and marijuana — that have defined the focus of national drug policy. The issue before Congress is how to effectively disrupt the illicit manufacture, trafficking, and use of methamphetamine that has spread eastward from the traditional center of the drug's use in the Pacific west. As historical drug-policy priorities have been revised to reflect methamphetamine's devastating impact on children of users, user health, risk to the user's community, and the environmental damage caused by the drug's manufacture, a comprehensive range of methamphetamine-related issues has come before Congress. Legislation was enacted in the 109<sup>th</sup> Congress that addresses various aspects of the problem.

During the 109<sup>th</sup> Congress, the Combat Methamphetamine Epidemic Act (CMEA) was enacted as part of the reauthorization of the PATRIOT Act (P.L. 109-177). Signed into law on March 9, 2006, P.L. 109-177 establishes measures designed to further criminalize and control the illicit use of methamphetamine by limiting the availability of certain precursor chemicals used in the illicit manufacturing of methamphetamine by drug trafficking organizations and amateur domestic producers. The new law restricts the amount of over-the-counter (OTC) cold and sinus medicine that consumers can purchase and requires retailers to maintain a registry of purchasers and secure these drug inventories. P.L. 109-177 also sets limits on imports of methamphetamine precursor chemicals and requires the Departments of Justice and State to work with Mexico to disrupt the smuggling of illicit methamphetamine across the U.S.-Mexico border. (For additional information on the provisions of the law, see **Appendix A.**)

In addition to the enactment of the CMEA, two other new laws have been enacted to address a number of methamphetamine-related issues that are beyond the scope of this report. P.L. 109-288 (S. 3525), enacted on September 28, 2006, authorizes the Secretary of Health and Human Services to make competitive grants to regional partnerships that provide programs and services designed to address concerns related to children in foster care due to a parent's or caretaker's methamphetamine or other substance abuse.<sup>1</sup> P.L. 109-347 (H.R. 4954), enacted on

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<sup>1</sup> For more information on the impact of methamphetamine abuse and child welfare issues see, CRS Congressional Distribution Memorandum, *Child Welfare and Methamphetamine* (continued...)

October 13, 2006, requires the Customs and Border Patrol (CBP) agency to track and report the seizure of methamphetamine and methamphetamine precursor chemicals as part of the agency's annual performance plan with respect to the interdiction of illegal drugs entering the United States.

In addition to what was enacted, a number of bills were introduced in the 109<sup>th</sup> Congress that would have addressed the methamphetamine problem through such measures as providing grants for technology to detect the smuggling of methamphetamine and its precursor chemicals, and grants for mentoring, after-school, and educational enrichment programs for children whose parents are methamphetamine addicts. The broad range of legislation that was introduced indicates Congress's perception of the far-reaching implications of the methamphetamine problem in the United States. The problem of methamphetamine abuse and its clandestine manufacture is not new, reaching back over 50 years. What makes methamphetamine a uniquely worrisome illicit drug for Congress is that it has easily adapted to changing federal prohibitions and continued to flourish.<sup>2</sup> Moreover, the chemicals from which methamphetamine is synthesized are produced and used for legitimate medical purposes and cannot be eliminated or eradicated.

This report begins with a brief overview of the background and history of methamphetamine use and abuse, followed by the sources of the drug in the country today. The report then provides an analysis of trends in illicit methamphetamine use, prevalence and geographic shift. The final section of the report provides a few conclusions that can be inferred from two decades of efforts to control illicit methamphetamine use and production. Two appendices follow that provide an overview of congressional efforts to address the problem, including a summary of the relevant provisions of the recently enacted law, P.L. 109-177, and an analysis of past congressional efforts to control methamphetamine.

For legislative issues in the 110<sup>th</sup> Congress, see CRS Report RS22325, *Methamphetamine: Legislation and Issues in the 110<sup>th</sup> Congress*, by Celinda Franco.

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<sup>1</sup> (...continued)

*Abuse: Issues and Resources*, by Meredith Peterson, June 7, 2006. For information on the methamphetamine provisions of P.L. 109-288, see CRS Report RL33354, *The Promoting of Safe and Stable Families Program: Reauthorization in the 109<sup>th</sup> Congress*, by Emilie Stoltzfus.

<sup>2</sup> For information on two case studies analyzing the impact of past federal laws to control methamphetamine, see **Appendix B**.

## Background

Methamphetamine was first synthesized in 1893 by the Japanese chemist Nagayoshi Nagai,<sup>3</sup> but its medical uses were identified only in the 1930s.<sup>4</sup> Methamphetamine was marketed by Burroughs Wellcome and Co. as a pharmaceutical drug under the trade name Methedrine beginning in 1940 and by Abbott Laboratories under the trade name Desoxyn® beginning in 1943. Originally used as a nasal decongestant and bronchiodilator, between 1932 and 1949 many other medical uses for methamphetamine and amphetamines became accepted, including treatment of schizophrenia, tobacco smoking, heart block, radiation sickness, and morphine and codeine addiction.

**Chemistry of Methamphetamine.** Methamphetamine, an easily manufactured drug of the amphetamine group, is a powerful and addictive central nervous system (CNS) stimulant with long-lasting effects. The precursor drug ephedrine, from which methamphetamine can be produced, occurs naturally in plants of the genus *Ephedra*, and natural amphetamines are present in several plant species. Unlike heroin, cocaine, and marijuana, which are derived from botanical materials produced by large workforces dispersed over vast territories, methamphetamine is synthesized from chemicals produced in discrete factories around the world. Today, methamphetamine is produced synthetically, using either synthetically produced ephedrine or other synthetic products, such as pseudoephedrine and phenylpropanolamine, chemicals contained in OTC cold and sinus medications.

**History of Methamphetamine Use and Regulation.** Amphetamines were used by combatants in the Spanish Civil War (1936-39) and the Second Sino-Japanese War (China and Japan, 1937-45), and both amphetamine and methamphetamine came into wide use during World War II, when Japan, Germany, and the United States distributed the drugs to troops in order to increase their endurance and performance.<sup>5</sup> It has been estimated that 200 million amphetamine or methamphetamine tablets were supplied to U.S. troops over the course of the war.<sup>6</sup> In Japan, methamphetamine was also widely distributed to wartime factory workers. After the war, surplus methamphetamine stocks were dumped on the market in Japan, leading to the first major methamphetamine epidemic (1945-1957).<sup>7</sup>

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<sup>3</sup> Charles W. Meredith, MD, Craig Jaffe, MD, Kathleen Ang-Lee, MD, and Andrew J. Saxon, MD, *Implications of Chronic Methamphetamine Use: A Literature Review*, Harvard Review of Psychiatry, May/June 2005, p. 142.

<sup>4</sup> U.S. Department of Justice, Drug Enforcement Agency, National Drug Intelligence Center, *Drugs of Abuse*, 2005 Edition, p. 34.

<sup>5</sup> Douglas M. Anglin, Cynthia Burke, Brian Perrochet, Ewa Stamper, Samia Dawud-Noursi, "History of the Methamphetamine Problem," *Journal of Psychoactive Drugs*, vol. 32, no. 2 (Apr.-June 2000), p. 137.

<sup>6</sup> Advisory Council on the Misuse of Drugs, *Methylamphetamine Review*, 2005.

<sup>7</sup> Douglas M. Anglin, et. al., *History of Methamphetamine Problem*, p. 137; Michael S. Vaughn, Frank F.Y. Huang and Christine Rose Ramirez, "Drug Abuse and Anti-Drug Policy in Japan," *British Journal of Criminology*, vol. 35, no. 4 (Autumn 1995), pp. 497-498.

Amphetamines were widely available in the United States without a prescription until 1951, and amphetamine-containing inhalers were available over the counter until 1959. Stimulants were widely used by long-haul truckers on transcontinental trips and students for staying awake to study.<sup>8</sup> The drugs were also widely used by construction workers and other blue-collar workers, shift workers, housewives, and office workers to help them stay awake or give them an extra “edge” in their endeavors. Amphetamines were popular diet pills for anyone interested in losing weight, particularly among women. In the 1950s, methamphetamine was considered to be a promising therapy for depression.

Methamphetamine use has a lengthy history in the United States. Medical use of methamphetamine began in the 1930s, when it was manufactured as a bronchial dilator, and soon after prescribed for a variety of conditions, including narcolepsy, attention deficit disorder, obesity, and fatigue. By the 1950s, methamphetamine was readily available legally and widely used. In the 1960s, a liquid form of methamphetamine gained popularity as a treatment for heroin addiction, which quickly developed into a new abuse pattern involving injecting methamphetamine. During this period, the black market for amphetamine and methamphetamine consisted of diverted supplies from pharmaceutical companies, distributors, and physicians.

In response to the growing abuse of amphetamine and methamphetamine, restrictions were placed on the availability of Desoxyn® and Methedrine in the pharmaceutical market in late 1962. These restrictions led to the emergence of the first illicit methamphetamine laboratories generally operated by motorcycle gangs, first in the San Francisco area and later more widely in the western states. These illicit “biker” laboratories synthesized methamphetamine using phenyl-2-propanone (P-2-P) and methylamine as precursor chemicals, yielding a mixture of two isomers (levo- and dextro-methamphetamine).<sup>9</sup> The resulting substance was commonly referred to as “crank,”<sup>10</sup> which was a less potent form of methamphetamine than the pharmaceutical product. This illicit form of methamphetamine was manufactured and distributed by motorcycle gangs (also referred to as “outlaw biker gangs”) beginning in the mid-1960s, and its use quickly spread along the Pacific Coast.

As the dangers associated with the use of amphetamine and methamphetamine became better understood, further restrictions were placed on how much could be legally produced and distributed. As a part of the Controlled Substances Act of 1970, methamphetamine was classified as a Schedule II drug. The response to further federal regulation of these pharmaceuticals fueled the illicit production of “crank,” and its use spread beyond white- and blue-collar workers to include college students,

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<sup>8</sup> Errol Yudko, Harold V. Hall, and Sandra B. McPherson, *Methamphetamine Use: Clinical and Forensic Aspects*, 2003, p. 6.

<sup>9</sup> The illicit manufacture of methamphetamine by biker gangs led to scheduling of the drug under the Controlled Substances Act of 1970, as a Schedule II drug (discussed below).

<sup>10</sup> The use of the term “crank” in this report refers to the weaker form of illicit methamphetamine, also known as methamphetamine sulfate, that was largely manufactured and distributed by West Coast motorcycle gangs.



young professionals, minorities, and women.<sup>11</sup> By the 1980s, increased law enforcement efforts to target the motorcycle gang subculture and its dominance of the illicit methamphetamine supply led underground chemists to seek other methods of illicitly manufacturing methamphetamine. The laws designed to crack down on biker gangs selling methamphetamine inadvertently resulted in the development of a new, easier method of manufacturing illicit methamphetamine that changed the production and distribution of the drug.<sup>12</sup> The new method of manufacturing illicit methamphetamine was the simpler, ephedrine reduction-based method first popularized in Southern California, primarily centered in San Diego. Use of the “reduction” method made it not only simpler to manufacture methamphetamine, but inadvertently led to the production of the significantly more potent form of methamphetamine in use today.<sup>13</sup> (See **Appendix A** for a more detailed description of the federal legislative history of methamphetamine regulation.)

**Current Uses of Methamphetamine.** Today, methamphetamine is medically used to treat a limited number of health conditions. These can include the treatment of narcolepsy; attention deficit disorder; attention deficit/hyperactivity disorder (ADD/ADHD); depression, as an adjunct to antidepressant medication; post-stroke patients with cognitive impairment; and obesity.<sup>14</sup> However, medical use of methamphetamine is very limited, and alternative drugs are most often used to treat the conditions that methamphetamine is currently approved to treat.

There are four forms of illicit methamphetamine: tablet, powder, base, and crystal. Methamphetamine tablets usually contain a combination of methamphetamine hydrochloride and caffeine. Methamphetamine tablets can be taken orally, or after being crushed, the tablets can be smoked or taken intravenously. Methamphetamine powder is crystalline hydrochloride salt and is water-soluble, and can be taken orally, smoked, snorted, or injected, but in the United States it is usually snorted or injected.<sup>15</sup> Methamphetamine “base,” also known as “wax,” is a damp, sticky, waxy or oily form of powder or paste of high purity that is thought to result when the illicit methamphetamine producer does not have the skill to produce the hydrochloride salt methamphetamine.<sup>16</sup> It can be ingested orally or taken

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<sup>11</sup> Many added “crank” to their coffee, often referred to as “biker’s coffee.”

<sup>12</sup> Errol Yudko, et. al., *Methamphetamine Use: Clinical and Forensic Aspects*, p. 6.

<sup>13</sup> Generally, the two most commonly used methods for reducing ephedrine, pseudoephedrine, or phenylpropanolamine (PPA) in order to manufacture illicit methamphetamine are (1) reduction of the chemical precursors by boiling them with hydroiodic acid and red phosphorus, or (2) reduction using lithium (from batteries) and ammonia.

<sup>14</sup> U.S. Department of Health and Human Services, National Toxicology Program, Center For the Evaluation of Risks to Human Reproduction, *NTP-CERHR Expert Panel Report on the Reproductive and Developmental Toxicity of Amphetamine and Methamphetamine*, “Chapter 1.0 Chemistry, Use and Human Exposure,” Mar. 2005, p. 11.

<sup>15</sup> Jane Carlisle Maxwell, “Emerging Research on Methamphetamine,” *Current Opinion in Psychiatry*, vol. 18, p. 235.

<sup>16</sup> Methamphetamine base has also been found in Australia. See, National Drug and (continued...)

intravenously. Crystal methamphetamine is methamphetamine hydrochloride powder that has been re-crystallized using isopropyl alcohol or water and looks like pieces of cracked ice or glass. This form of methamphetamine is usually smoked, but can also be injected, snorted, or taken orally. The street name for crystal methamphetamine is “ice,” and it is generally characterized by a level of purity greater than 80%.<sup>17</sup>

The estimated level of past-year methamphetamine use in the United States in 2004 was approximately 0.6% of the population, significantly lower than use of some other illicit drugs: marijuana (10.6%), prescription pain relievers used non-medically (4.7%), cocaine (2.4%), tranquilizers (2.1%), and hallucinogens (1.6%).<sup>18</sup> Among National Survey on Drug Use and Health (NSDUH) estimates of *past month* illicit drug use in 2005, methamphetamine falls behind a number of other illicitly used substances at 0.2% of those persons over age 12: marijuana and hashish (6.0%), prescription pain relievers used non-medically (1.9%), cocaine (1.0%), tranquilizers (0.7%), and hallucinogens (0.4%).<sup>19</sup> It is also important to note that methamphetamine past month use among those over age 12, although less than many other illicit substances, is equal to Ecstasy (0.2%) and twice that of heroin (0.1%) reported by NSDUH.<sup>20</sup>

**Sources of Illicit Methamphetamine.** According to the Drug Enforcement Administration (DEA), most illicit methamphetamine consumed in the United States is produced in clandestine ‘super’ labs in Mexico and California operated by Mexican drug trafficking organizations (DTOs). DEA estimates that more than 80% of methamphetamine available illicitly is supplied by Mexican DTOs.

The Office of National Drug Policy’s (ONDCP) *National Drug Threat Assessment 2007*, concluded that Mexican DTOs have expanded their control over methamphetamine distribution in the U.S. This development is the result of greatly reduced domestic methamphetamine production by amateur cooks in response to more tightly controlled precursor chemicals, first by state law in certain areas,<sup>21</sup>

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<sup>16</sup> (...continued)

Alcohol Research Centre, *Methamphetamine: Forms and Use Patterns*, University of New South Wales, 2006, available at [[http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/resources/NDLERF\\_Methamphetamine/\\$file/NDLERF+ICE+FORMS+AND+USE.pdf](http://ndarc.med.unsw.edu.au/NDARCWeb.nsf/resources/NDLERF_Methamphetamine/$file/NDLERF+ICE+FORMS+AND+USE.pdf)], accessed on Jan. 10, 2007.

<sup>17</sup> U.S. Department of Justice, National Drug Intelligence Center, *National Methamphetamine Threat Assessment 2007*, Nov. 2006, p. 17.

<sup>18</sup> Center for Substance Abuse Research (CESAR), University of Maryland, College Park, October 3, 2005, Vol. 14, Issue 40, available at [<http://www.cesar.umd.edu>], accessed on Jan. 10, 2007.

<sup>19</sup> U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies, NSDUH, 2005, p. 229.

<sup>20</sup> *Ibid.*

<sup>21</sup> According to the National Alliance For Model State Drug Laws, the following states restrict sales of products containing ephedrine and pseudoephedrine on the basis of quantity (continued...)

followed in 2006 by federal law. The consolidation of methamphetamine production and distribution by Mexican DTOs means that these considerably stronger and expanded and more highly organized groups are producing and marketing a higher purity methamphetamine.

The remainder of the U.S. market is supplied by small, makeshift, amateur clandestine methamphetamine laboratories.<sup>22</sup> Methamphetamine is relatively easy and cheap to manufacture in small quantities by individuals with little knowledge of chemistry or laboratory skills and equipment. Clandestine methamphetamine labs are dangerous because the volatile chemicals used in the drug's manufacture make these laboratories vulnerable to fire and explosion,<sup>23</sup> as well as environmental contamination.<sup>24</sup> Clandestine methamphetamine labs have been seized in numerous settings, hidden from view but often in areas dangerous to children, such as sleeping areas, kitchens and eating areas where food is prepared and stored, garages, vehicles, hotel and motel rooms, storage lockers, mobile homes, apartments, ranches, campgrounds, rural and urban dwellings, abandoned dumps, restrooms, houseboats, and other locations. Amateur laboratories spread eastward along with the drug's use, cropping up in states that had not previously had a significant methamphetamine problem. Concerns over the public health and environmental problems caused by the proliferation of amateur laboratories also contributed to the sense of urgency behind recent anti-methamphetamine legislation considered at the federal and state levels.

Amateur laboratories are distinct from super labs in their size and productivity, as well as in their sources of the precursor chemicals, the chemicals used to manufacture methamphetamine. Amateur laboratories generally rely on supplies of retail OTC cold and sinus medicines as the principle source of precursor chemicals that can be extracted from these products and synthesized into methamphetamine. In contrast, super labs are dependent on huge quantities<sup>25</sup> of the pure precursor chemicals pseudoephedrine and ephedrine. These precursor chemicals used by

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<sup>21</sup> (...continued)

purchased only: Arizona, California, North Dakota, Oklahoma, Oregon, Utah, and Washington. The following states restrict sales on the basis of quantity purchased, packaging, and display/offer: Alabama, Arkansas, Illinois, Iowa, and Missouri. Nevada restricts sales of products containing ephedrine and/or pseudoephedrine on the basis of packaging.

<sup>22</sup> These amateur labs are also commonly referred to as "mom-and-pop" labs, "Beavis and Butthead" labs, "kitchen" labs, or "box" labs. Because each of these labs produces five to seven pounds of toxic hazardous waste for each pound of methamphetamine produced, they are also often referred to as "small toxic labs."

<sup>23</sup> As many as 15% of all methamphetamine labs are discovered as a result of explosions or fire. See, U.S. D.O.J., Office of Justice Programs, Office of Victims of Crime, "Children at Clandestine Meth Labs: Helping Meth's Youngest Victims," by Karen Swetlow, *OVC Bulletin*, June 2003, p. 4.

<sup>24</sup> For a discussion of legislation related to methamphetamine laboratory remediation, see CRS Report RL32959, *Methamphetamine Lab Clean-Up and Remediation Issues*, by Michael Simpson.

<sup>25</sup> The amounts of precursor chemical used by super laboratories are so large that they are often reported in tons rather than in pounds.

Mexican DTOs are generally purchased in ton-quantities<sup>26</sup> from chemical companies in Europe, Asia, and the Far East, and then smuggled into Mexico where the methamphetamine is manufactured and smuggled across the border for distribution in the United States. Domestic super labs typically rely on large quantities of precursor chemicals being smuggled into the United States from Canada or Mexico, and most of these domestic laboratories tend to be located in California, or occasionally in other western states.

**Dangers of Methamphetamine.** Illicitly used, methamphetamine can be administered orally, nasally, by injection, and, in the powder form that resembles granulated crystals, often referred to as “ice,” by smoking. Methamphetamine can cause convulsions, stroke, cardiac arrhythmia, and hyperthermia.<sup>27</sup> Chronic abuse can lead to irreversible brain and heart damage, memory loss, psychotic behavior including paranoid ideation, visual and auditory hallucinations, and rages and violence.<sup>28</sup> Withdrawal from the drug can induce paranoia, depression, anxiety, and fatigue.

The attendant dangers of manufacturing the drug in clandestine laboratories include heightened risk of fires, explosions, and environmental damage,<sup>29</sup> due to the toxic and volatile chemicals used in synthesizing methamphetamine. Concerns about these dangers from methamphetamine manufacture increased as the number of these laboratory sites proliferated and spread across western and midwestern urban and rural communities. Similarly, the profound effects of methamphetamine abuse on the users’ health, children, families, as well as their communities, quickly strained resources for substance abuse treatment; foster care systems; and state, local, and tribal law enforcement efforts to control access to the drug.<sup>30</sup> Individuals, particularly children, living in direct or indirect contact with the toxic fumes produced as the drug is “cooked,” can be subject to problems associated with exposure to toxic chemicals and drug residues produced or left behind by the manufacturing process.<sup>31</sup> Exposure to these residues can result in respiratory illnesses and central nervous system (CNS) disorders.

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<sup>26</sup> Super laboratories are typically sites capable of producing over 10 pounds of methamphetamine during a production cycle.

<sup>27</sup> U.S. Department of Health and Human Services (DHHS), National Institutes of Health (NIH), National Institute on Drug Abuse (NIDA), “Methamphetamine Abuse and Addiction,” *Research Report Series*, NIH Publication No. 06-4210, Revised September 2006, p. 4.

<sup>28</sup> *Ibid.*

<sup>29</sup> Dan Hannan, *Occupational Hazards: Meth Labs Understanding Exposure Hazards and Associated Problems*, June 2005, p. 24.

<sup>30</sup> Dana Hunt, Sarah Kuck, Linda Truitt, “Methamphetamine Use: Lessons Learned,” Abt Associates, Inc., for U.S. DHHS, NIJ, Feb. 2006, p. 34.

<sup>31</sup> U.S. DOJ, NDIC, Chemical Precursor Committee, “Children at Risk,” *Information Bulletin*, July 2002, p. 2.; Scott, Michael S., *Clandestine Drug Labs: Problem-Oriented Guides for Police Services*, U. S. DOJ, Office of Community Oriented Policing Services (COPS), Apr. 2002, no. 16, page 3.

Those living near a clandestine methamphetamine laboratory site can also be at risk of the fires and explosions of clandestine laboratories due to the volatile and toxic nature of the chemicals used in the drug's manufacture, as can law enforcement officers and first responders who are called to the scene of a clandestine laboratory. The manufacture of each pound of methamphetamine produces five to seven pounds of toxic waste products.<sup>32</sup> Because there are no federal standards for clandestine methamphetamine laboratory clean-up, many state and local entities are left to manage the issue of methamphetamine contamination as they see fit.

**Laboratory Seizures.**<sup>33</sup> In 1993, DEA reported total federal, state, and local seizures of 218 clandestine methamphetamine laboratories. By 1999, federal, state, and local law enforcement reportedly seized over 9,000 laboratories/lab incidents; by 2002, 16,212 laboratories/lab incidents were seized. In 2004, a total of 17,170 clandestine labs were reported by the DEA; in 2005, the number of laboratory seizures had dropped to 12,484, a one-year decrease of 27%.<sup>34</sup> Between 2004 and 2005, the number of clandestine laboratory seizures decreased by 42%, from 10,015 in 2004 to 5,846 in 2005.<sup>35</sup> According to DEA's El Paso Intelligence Center (EPIC), preliminary 2006 data indicate that the number of clandestine methamphetamine laboratories has continued to drop further.

Methamphetamine labs also have been discovered on federal lands across the country, in such areas as near or in caves, camping and recreational areas, and in abandoned mines.<sup>36</sup> The number of reported methamphetamine laboratory seizures on Department of Interior lands increased from 28 in 2001, to 41 in 2002, to 83 in

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<sup>32</sup> U.S. DOJ, NDIC, "Methamphetamine Identification and Hazards," p. 2, available at [<http://www.usdoj.gov/ndic/pubs7/7341/7341p.pdf>], accessed on: Jan. 10, 2007.

<sup>33</sup> DEA's National Clandestine Laboratory Seizure (NCLS) database includes the reported total number of laboratory seizures of (1) chemicals and glassware used for manufacturing methamphetamine, (2) dumpsites of toxic waste products from the methamphetamine production process, (3) and laboratories where methamphetamine was actively being produced. The data includes information reported to DEA from state and local law enforcement, as well as lab seizures by DEA. The El Paso Intelligence Center (EPIC), created by the DEA in 1974, administers the database and relies on state and local law enforcement agencies to voluntarily report their statistics for inclusion in its NCLS database. However, only three states — California, Missouri, and Oklahoma — have mandatory reporting requirements of their statistics. Chemical dump sites or equipment used in the manufacture of methamphetamine found in isolation are sometimes referred to as a "lab incident." For more information on EPIC and the NCLS database, see [<http://www.usdoj.gov/oig/reports/COPS/a0616/exec.htm>], accessed on Jan. 10, 2007.

<sup>34</sup> U.S. DOJ, DEA, available at [[http://www.dea.gov/concern/map\\_lab\\_seizures.html](http://www.dea.gov/concern/map_lab_seizures.html)], accessed on Jan. 10, 2007.

<sup>35</sup> U.S. Department of Justice, National Drug Intelligence Center, *National Drug Threat Assessment 2007*, Product No. 2006-Q0317-003, October 2006, p. i.

<sup>36</sup> Office of National Drug Control Policy, "Methamphetamine - Facts and Figures," at [<http://www.whitehousedrugpolicy.gov/drugfact/methamphetamine/index.html>], accessed on Jan. 10, 2007.

2003. During 2002, 187 laboratories were seized on National Forest System lands; the number decreased to 56 seizures in 2003.<sup>37</sup>

## Trends in Illicit Methamphetamine Use

Historically, methamphetamine was a problem largely in the Pacific West, particularly in Hawaii and California. However, during the 1990s, the use of methamphetamine grew and began to spread, first into the northwestern states, and, by 2000, its use had spread to the Midwest and South and to a much lesser degree to the Northeast and Mid-Atlantic region.<sup>38</sup> For policymakers, it is important to understand the depth and pervasiveness of the methamphetamine problem in order to craft legislative responses that can effectively address the issues. Drug-use surveys and other data sources can help to inform these discussions.

### Is There a Methamphetamine Epidemic?

During recent congressional deliberations on the latest round of anti-methamphetamine legislation, questions were raised about whether the methamphetamine problem was truly a *national* drug priority. Critics of U.S. drug policy argued that national drug data from the NSDUH did not support the urgency of claims that a methamphetamine “epidemic” was spreading across the nation.<sup>39</sup> The response of congressional policymakers to anecdotal stories that methamphetamine use was spiraling out of control in their home districts was considered by some critics to be another “drug panic” fueled, in part, by sensational media coverage. To consider the question, “is there a methamphetamine epidemic in the country?” first, one would need to specify the period in question. Second, one would need to consider the definition of “epidemic” that would be applied. Finally, it would be important to consider how accurately the available drug-use data capture these developments nationally and whether these data could be used for estimating drug-use patterns in local or regional areas.

If the question of a methamphetamine epidemic were posed today, there are several lines of evidence indicating that the national prevalence of methamphetamine use increased dramatically between 1994-2004. Since 2004, however, national survey data indicate that the number of methamphetamine lifetime users and first time users is declining nationally after peaking in, or around, 2004. However, the latest NSDUH data for 2005 do not support a national epidemic because the survey estimates that methamphetamine use has declined since 2004. Limitations of the NSDUH sample<sup>40</sup> and other survey and administrative data sets make it difficult to

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<sup>37</sup> Ibid.

<sup>38</sup> U.S. DOJ, OJP, NIJ, *Meth Matters: Report on Methamphetamine Users in Five Western Cities*, by Susan Pennell, Joe Ellett, Cynthia Rienick, and Jackie Grimes, April 1999, p. 4.

<sup>39</sup> Jack Shafer, “Meth Madness at *Newsweek*,” *Slate Magazine*, Aug. 3, 2005, available at [<http://www.slate.com/id/2123838>], accessed on Jan. 10, 2007.

<sup>40</sup> Extrapolating prevalence estimates from a sample survey can be complicated by many (continued...)

extrapolate methamphetamine use for small and rural communities. As a result, NSDUH and other national drug-use data sets may not adequately track drug trends in these communities, particularly in the case of methamphetamine use. Evidence from clandestine laboratory seizures, although not a typical indicator of drug use, do indicate that there was a notable proliferation of amateur methamphetamine laboratories spread from states in the West, moving into the Midwest and southeastern states between 1999 and 2004. Other drug-use indicators reflect increases in methamphetamine-related emergency department visits and substance abuse treatment rates spreading into states in the Midwest and South. Reports from state and local law enforcement agencies in certain regions that methamphetamine use continues to be the most significant drug problem further corroborates the variability of the problem.

**National Prevalence Estimates.** Since 1994, national estimates of self-reported methamphetamine use, as reflected in NSDUH,<sup>41</sup> indicate that among individuals age 12 or older there has been a significant increase among those reporting use of methamphetamine in their lifetimes, more than doubling over the 10-year period from just over 2% of the general population in 1994 to 4.9% in 2004.<sup>42</sup> Over the shorter term, those reporting having ever used methamphetamine in their lifetimes dropped by 16.4% between 2002 and 2005, from 12.4 million to 10.4 million individuals (see **Table 1**). Similarly, the number of persons reporting methamphetamine use in the last year dropped by 6.7%, from 1.5 million in 2002 to 1.4 million in 2004. During the 2002-2004 period, the proportion of NSDUH respondents over age 12 that reported lifetime use of methamphetamine has remained a relatively constant proportion of the general population over age 12 compared with the growth over the previous 10-year period.

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<sup>40</sup> (...continued)

factors, including sample size (the sample is not large enough to provide reliable year-by-year annual state estimates of prevalence), differences in the sample population (persons over age 12 vs. adults age 18 and over) and survey administration (i.e., in school vs. in home, over-the-phone interviews vs. in-person interviews), and comparisons among data sources need to be made with caution. Although it is not always appropriate to compare prevalence estimates across different surveys for a single year, it is possible to compare trends across years in a single survey. Trend lines from different surveys can indicate increases or decreases in prevalence over time, and as such are useful for substance abuse policy development and service provision. A potential source of bias in any survey is the understatement or overstatement of actual behaviors and there is always the possibility that individuals might underreport behavior that they perceive as sensitive or unacceptable, while some respondents might exaggerate or boast about certain behaviors. The validity of self-reported data depends on the honesty, memory, and understanding of the respondents.

<sup>41</sup> The NSDUH survey is a household survey that samples the civilian noninstitutionalized population age 12 and older about drug use. Individuals are asked about illicit drug, tobacco, and alcohol use in their lifetime, the last year, the last month, and in the last month as a dependent user. The 2005 sample included 68,308 persons. More detailed information is available at [<http://webapp.icpsr.umich.edu/cocoon/SAMHDA-STUDY/04596.xml>], accessed on Jan. 10, 2007.

<sup>42</sup> U.S. Department of Justice, National Institute of Justice, *Methamphetamine Use: Lessons Learned*, by Dana Hunt, Sarah Kuck, and Linda Truitt, February 2006, p. iii.

**Table 1. Methamphetamine Use Among Persons Aged 12 or Older, 2002-2005**  
(in thousands)

Use	2002	2003	2004	2005
<b>Lifetime Use</b>	12,383	12,303	11,726	10,357
Age 12-17	366	328	299	296
Age 18-25	1,756	1,650	1,688	1,682
26 years of age or older	10,261	10,325	9,739	8,379
<b>Use in Last Year</b>	1,541	1,315	1,440	1,297
Age 12-17	226	174	163	170
Age 18-25	525	506	516	482
26 years of age or older	790	636	761	645
<b>New Users in Last Year</b>	299	260	318	192
<b>Use in the Last Month</b>	597	607	583	512
Age 12-17	63	69	57	66
Age 18-25	160	185	186	194
26 years of age or older	375	353	340	252
<b>Dependent Use in Last Month</b>	164	250	346	257
Stimulant is Primary Drug of Abuse	63	92	130	103
Other Illicit Drug is Primary Drug of Abuse	101	158	216	154

**Source:** DHHS, Substance Abuse and Mental Health Administration (SAMHSA), NSDUH 2002-2005.

Better indicators of drug prevalence provided by data in **Table 1** are in the category *use in the last month* and *dependent use in the last month* because these respondents are reporting more current or ongoing use of methamphetamine. Among respondents age 12-17 years of age, methamphetamine *use in the last month* increased by 4.3% between 2004 and 2005. Among respondents age 18-25, reported *use in the last month* rates increased by 15.6% from 2002 to 2003, remained relatively stable between 2003 and 2004 rising by only 0.5%, and increased again by 5.8% between 2004 and 2005. Moreover, among respondents over age 12 reporting *dependent use in the last month*, between 2002 and 2005 the increases were more notable: an increase of almost 56.7%; an increase of 63.5% for those reporting dependence on a stimulant as their primary drug of abuse.

Additional corroboration of the slight downward trend in self-reported national estimates of *lifetime use* of methamphetamine use is indicated in two other sources



of national drug use data, Monitoring the Future (MTF)<sup>43</sup> and the Youth Risk Behavioral Surveillance System (YRBSS).<sup>44</sup> These two surveys of youths indicate declining self-reported methamphetamine use among junior high and high school students. The MTF survey indicates a significant decrease in lifetime use of over 40% for 12<sup>th</sup> graders between 1999 and 2005, after a significant one-year drop between 2004 and 2005 from 6.2% to 4.5% (see **Table 2**). The YRBSS reports a decline of over 16% among students in all grades who used methamphetamine one or more times during their lives between 1999 and 2003, with the largest decline among 12<sup>th</sup> graders.

Other drug-use data sources measure national trends in methamphetamine by tracking instances of drug users using the health care system for substance abuse treatment or in a drug-related emergency department visit. Unlike the national estimates based on self-reported methamphetamine use such as NSDUH, MTF, and YRBSS, two often-cited healthcare administrative data sets indicate that methamphetamine use has been on the rise since the 1990s. The Treatment Episode Data Set (TEDS)<sup>45</sup> reports that treatment admissions in cases where the primary drug dependence is methamphetamine/amphetamine<sup>46</sup> have risen from 1% of all treatment admissions in 1992, to 7.4% in 2002.<sup>47</sup> Similarly, methamphetamine-related emergency room visits captured by the Drug Abuse Warning Network (DAWN)<sup>48</sup> indicate that methamphetamine/amphetamine-related emergency department (ED) mentions,<sup>49</sup> while fluctuating since 1995, have been on the rise since 1999, increasing by almost 70% by 2002. Between 1999 and 2002, ED mentions rose from 10,447 to 17,696.<sup>50</sup>

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<sup>43</sup> MTF is an annual survey of students in the 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades about their history of illicit substance use. In 2005, 49,300 students in 402 public and private schools were included in the sample.

<sup>44</sup> Youth Risk Behavior Surveillance System (YRBSS) is conducted by the Center for Disease Control and Prevention (CDC) and measures the prevalence of six priority health risk behavior categories, including drug use. YRBSS is a national school-based survey that in 2005 included a sample of 13,953 students in grades 9 through 12.

<sup>45</sup> TEDS is an administrative data set collected by SAMHSA that is comprised of almost 2 million admissions reported by more than 10,000 facilities providing substance abuse treatment.

<sup>46</sup> Since some states do not distinguish between methamphetamine and amphetamine admissions for substance abuse treatment, reporting a single total, SAMHSA estimates that methamphetamine admissions account for 80% of all amphetamine admissions.

<sup>47</sup> Hunt, Dana, Sarah Kuck, Linda Truitt, *Methamphetamine Use: Lessons Learned*, prepared for the Department of Justice on a grant from the Office of Justice Programs, February 2006, p. 11.

<sup>48</sup> DAWN collects information on drug-related episodes from over 1,000 hospital emergency departments (EDs) in 21 cities across the country. Although DAWN does not monitor drug use directly, it does measure the consequences of drug use that results in ED visits.

<sup>49</sup> An emergency department *mention* refers to patient visits in which the patient is treated for a drug abuse-related medical problem.

<sup>50</sup> Hunt, Dana, Sarah Kuck, Linda Truitt, *Methamphetamine Use: Lessons Learned*, on grant (continued...)

**Table 2. Prevalence of Lifetime Methamphetamine Use Among High School Seniors, 1999-2005**  
(percent)

Year	Methamphetamine
1999	8.2
2000	7.9
2001	6.9
2002	6.7
2003	6.2
2004	6.2
2005	4.5

**Source:** Monitoring the Future, U.S. Department of Health and Human Services, 1999-2005.

National estimates of methamphetamine prevalence do not uniformly indicate that methamphetamine's use has been increasing, and the rate of growth varies among the drug-use surveys and datasets. Among some of the drug-use surveys, namely TEDS and DAWN, there is evidence indicating that, in the case of methamphetamine, national prevalence estimates may mask important regional changes in the drug's use, described above. Based on NSDUH data, some critics of federal drug policy argue that the prevalence of methamphetamine does not warrant the kind of congressional attention the problem received at the federal level in the last couple of years. Indeed, some argue, methamphetamine use in the last month among persons aged 12 or older ranks far below other illicit drug use with only 0.2% of the total population over age 12 reporting such use (see **Table 3**), the same percentage that used Ecstasy and twice as many as used heroin, OxyContin, and sedatives. Yet, there is general agreement that the illicit use of heroin, OxyContin, and sedatives is a serious concern that should be addressed by anti-drug policies without the drug's abuse being of "epidemic" proportions.

**Evidence for a Geographic Spread or Shift.** The methamphetamine problem, perhaps more than most other illicit drug problems, has tended to be more regional and cyclical in nature, which may partially explain some of the stability in the national prevalence estimates. National drug-use surveys, such as NSDUH, could fail to report certain important localized variations in drug use, particularly when acute drug problems occur in smaller cities or rural areas and regions with lower populations.<sup>51</sup> Most experts agree that, to a large extent, the recent congressional

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<sup>50</sup> (...continued)  
from U.S. DOJ, OJP, Feb. 2006, p. iii.

<sup>51</sup> Sally Satel, "Much Ado About Meth?," American Enterprise Institute for Public Policy Research, Nov. 4, 2005, at [[http://www.aei.org/inlcude/pub\\_print.asp?pubID=23414](http://www.aei.org/inlcude/pub_print.asp?pubID=23414)], (continued...)

action on anti-methamphetamine legislation was spearheaded by Members from Midwestern states. While national estimates of methamphetamine prevalence provide some mixed indications of the drug's use, illicit methamphetamine use has become more geographically widespread than it has been in previous decades.

**Table 3. Past Month Use of Drugs Measured by the National Survey on Drug Use and Health, 2005, Ranked by Percent of Persons Aged 12 or Older Using the Substance**

Rank	Drug	Percent
1	Any Illicit Drug	8.1
2	Marijuana and Hashish	6.0
3	Illicit Drug other than Marijuana	3.7
4	Nonmedical Use of Psychotherapeutics	2.6
5	Pain Relievers (incl. OxyContin)	1.9
6	Cocaine (incl. Crack)	1.0
7	Tranquilizers	0.7
8	Stimulants (incl. <b>Methamphetamine</b> )	0.4
9	Hallucinogens (incl. LSD, PCP, Ecstasy)	0.4
10	Inhalants	0.3
10	Crack	0.3
11	Ecstasy	0.2
11	<b>Methamphetamine</b>	0.2
12	Heroin	0.1
12	OxyContin	0.1
12	Sedatives	0.1
13	LSD	0.0
13	PCP	0.0

**Source:** SAMHSA, Office of Applied Studies, NSDUH, 2005.

In 2001, DAWN rates for methamphetamine/amphetamine ED visits remained concentrated in the Midwest and western cities surveyed. By 2002, rates per 100,000 population were growing the most dramatically in DAWN-surveyed cities in the

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<sup>51</sup> (...continued)  
accessed on Jan. 10, 2007.

South and Northeast.<sup>52</sup> The metropolitan areas reporting the highest rates (visits per 100,000 population) in 2002 were San Francisco (91), San Diego (68), Phoenix (65), Seattle (46), and Los Angeles (39).<sup>53</sup> For the Northeast cities, Boston had the highest rate (15 per 100,000 population), followed by Newark (9 per 100,000 population). Although there were significant *percentage* increases in the rates of ED visits for some cities in the Northeast and South, between 2001 and 2002 rates increased in Boston from 11 to 15 (+45%), Buffalo from 2 to 4 (+100%), Newark from 14 to 23 (+64%), New Orleans from 11 to 16 (+45%), and St. Louis from 12 to 24 (+100%), these rates remained significantly lower than the rates for most cities in the West.<sup>54</sup>

According to the National Institute on Drug Abuse's Community Epidemiology Work Group (CEWG),<sup>55</sup> in 2004 and 2005 methamphetamine indicators remained high in West Coast areas and parts of the Southwest, as well as in Hawaii.<sup>56</sup> In addition, regional differences were indicated by the report's finding that in one midwestern CEWG area, St. Louis, Missouri, methamphetamine use grew, with ED admissions increasing by 15% between 2004 and 2005.<sup>57</sup> The National Drug Intelligence Center (NDIC)<sup>58</sup> reports that methamphetamine is widely available throughout the Pacific, Southwest, and West Central regions of the United States, and is increasingly available in the Great Lakes and Southeast regions.<sup>59</sup> Data from the Arrestee Drug Abuse Monitoring (ADAM)<sup>60</sup> program survey sites, during 2002, lend further support to the finding that the greatest concentration of methamphetamine use is in the Western region of the country.<sup>61</sup> In 2002, out of 36 sites, the highest percentages of adult male arrestees testing positive for methamphetamine when

<sup>52</sup> U.S. DHHS, Office of Applied Statistics, SAMHSA, DAWN, "Amphetamine and Methamphetamine Emergency Department Visits, 1995-2002," *The DAWN Report*, July 2002, [[http://dawninfo.samhsa.gov/old\\_dawn/pubs\\_94\\_02/shortreports/files/DAWN\\_tdr\\_amphetamine.pdf](http://dawninfo.samhsa.gov/old_dawn/pubs_94_02/shortreports/files/DAWN_tdr_amphetamine.pdf)], accessed on Jan. 24, 2007.

<sup>53</sup> *Ibid.*

<sup>54</sup> *Ibid.*

<sup>55</sup> CEWG is a network of researchers from major metropolitan areas around the country and internationally providing community-level surveillance on drug abuse at the National Institute on Drug Abuse (NIDA).

<sup>56</sup> According to CEWG, the areas where methamphetamine use remains high are: Atlanta, Denver, Honolulu, Los Angeles, Phoenix, Seattle, San Diego, and Texas.

<sup>57</sup> U.S. DHHS, NIH, CEWG, *Epidemiologic Trends in Drug Use*, (Advance Report), June 2006, p. 11, available at [<http://www.drugabuse.gov/PDF/CEWG/AdvReport606.pdf>], accessed on Jan. 17, 2007.

<sup>58</sup> NDIC was established in 1993 as a component of DOJ charged with monitoring strategic domestic counterdrug intelligence.

<sup>59</sup> U.S. DEA, National Drug Intelligence Center, *National Drug Threat Assessment, 2005*.

<sup>60</sup> The ADAM program is a bioassay survey collecting urine samples and self-reported drug use information from booked adult and juvenile arrestees in 35 urban areas across the country.

<sup>61</sup> Missouri Department of Mental Health, Missouri Division of Alcohol and Drug Abuse, *Methamphetamine in Missouri 2004*, April 2004, p. 6, available at [<http://mimh200.mimh.edu/mimhweb/pie/reports/meth2004.pdf>], accessed on Jan. 17, 2007.

arrested were located in Honolulu (44.8%), Sacramento (33.5%), San Diego (31.7%), and Phoenix (31.2%).<sup>62</sup> For female arrestees, out of 23 sites, the highest percentages of adult female arrestees testing positive for methamphetamine were located in Honolulu (50%), San Jose (42.8%), Phoenix (41.7%), Salt Lake City (37.7%), and San Diego (36.8%).<sup>63</sup>

In 2002, TEDS reported that methamphetamine admission rates for substance abuse treatment were highest in the West, although there was significant variation in certain states.<sup>64</sup> According to the report, 21 states had admission rates over the national average and 12 states had admission rates that were twice the national average. The 12 states with rates twice the national average accounted for 15% or more of total national admissions. Several states with large rural populations, including Arkansas, Oklahoma, Idaho, Utah, Iowa, and Nebraska, all reported that 20% or more of their substance abuse admissions in 2003 cited methamphetamine as the primary drug of abuse. Similarly, DAWN data on “methamphetamine ED mentions” changed regionally between 1995 and 2002. Areas with relatively high methamphetamine mentions in 1995 experienced significant drops in their ED mentions by 2002, including Denver (-43%), Dallas, TX (-51.7%), and San Francisco (-34.3%). In contrast, in areas where methamphetamine use was more recent, certain cities experienced dramatic increases in ED mentions, such as in Minneapolis (+243%), Miami (+200%), and New Orleans (+174%).<sup>65</sup>

Evidence of the geographic spread of methamphetamine use from the West to Midwest and Southeast states is also apparent from data on clandestine laboratory seizures. According to DEA’s El Paso Intelligence Center (EPIC), reports by state and local law enforcement of seizures of clandestine methamphetamine laboratories rose dramatically in number between 1999 (7,438) peaking in 2003 (17,356), and began to slow in 2004.<sup>66</sup> Not only did the number of clandestine methamphetamine laboratories increase dramatically during the period, but some western states also experienced declines in laboratory seizures. California laboratory seizures went from 2,579 in 1999 (35% of all seizures) to 470 in 2005 (4% of all laboratory seizures); Washington state began in 1999 with 599 reported methamphetamine seizures (8% of all seizures), peaked in 2001 with 1,480 seizures (almost 11% of all seizures), and by 2005 reported 532 seizures (just over 4% of all seizures). In the Midwest, Missouri went from 439 laboratory seizures in 1999, to 2,176 in 2005.<sup>67</sup>

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<sup>62</sup> Ibid.

<sup>63</sup> Ibid.

<sup>64</sup> U.S. Department of Health and Human Services, SAMHSA, Office of Applied Statistics, *Treatment Episode Data Set 1994-2004*, July 2006.

<sup>65</sup> Hunt, Dana, Sarah Kuck, Linda Truitt, *Methamphetamine Use: Lessons Learned*, prepared for the Department of Justice on a grant from the Office of Justice, February 2006, p. 15.

<sup>66</sup> For detailed maps of all methamphetamine clandestine laboratory seizure incidents, see [[http://www.dea.gov/concern/map\\_lab\\_seizures](http://www.dea.gov/concern/map_lab_seizures)], accessed on Jan. 15, 2007.

<sup>67</sup> U.S. DOJ, DEA, *Maps of Methamphetamine Lab Incidents*, available at [[http://www.usdoj.gov/dea/concern/map\\_lab\\_seizures.html](http://www.usdoj.gov/dea/concern/map_lab_seizures.html)], accessed on Jan. 15, 2007.

**National Epidemic, Regional Drug Problem, or the Latest Drug Panic?** In the case of national methamphetamine prevalence estimates, there are some limitations on how quickly and reliably the drug-use data sources reflect changes in patterns of use. Until the resurgence of methamphetamine use in the mid-1990s, the low reported incidence of methamphetamine use, compared to the use of drugs such as marijuana or cocaine, hampered the development of state drug-use estimates from national estimates. As a result, until recently, these drug-use surveys and treatment admission datasets reported methamphetamine as part of a more general category of “stimulants (non-cocaine).”<sup>68</sup> This combined reporting has made it difficult to track national methamphetamine trends over time. In addition, the small sample size of survey respondents reporting methamphetamine use makes it difficult to estimate state-level prevalence data on the drug’s use for any single year.<sup>69</sup> Moreover, such data limitations, in turn, complicate capturing regional or state variations in methamphetamine prevalence.<sup>70</sup> In the case of recent trends in methamphetamine use, the most recent national prevalence estimates for 2005 do not show significant changes in regional variations and geographic shifts in the drug’s use.

*Webster’s Ninth Collegiate Dictionary* defines an “epidemic” as an occurrence “affecting or tending to affect many individuals within a population, community, or region at the same time.” In the public health literature, epidemic is a term often used in a non-biological sense, referring to widespread and growing societal problems, such as drug addiction. The *Columbia Electronic Encyclopedia*<sup>71</sup> defines “epidemic” as the appearance of new cases of a disease, during a given period, “at a rate that substantially exceeds what is expected based on recent experience.” As such, defining an epidemic can be subjective, depending on what is “expected” or the recent experience of a given population. Because what is meant by epidemic can vary based on subjective judgements of what is “expected” or considered normal, the incidence of a few cases of a disease could be considered an “epidemic” in one area, while in another area where many cases of the same disease are common a few more cases would not be considered an epidemic.

Whether or not the prominence of methamphetamine on the congressional anti-drug agenda was due to an actual drug “epidemic” or instead the result of a geographic shift in the drug’s prevalence is, in part, a question of semantics. Clearly, there are states that have been experiencing epidemic levels of methamphetamine use for decades without provoking a national sense of crisis and prominence on the

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<sup>68</sup> The category of stimulants often included amphetamines, as well as the illicit use of legal pharmaceutical substances such as Ritalin, Adderall, and appetite suppressants.

<sup>69</sup> SAMHSA provides periodic state-level methamphetamine prevalence estimates using three-year average NSDUH data to strengthen the reliability of the available state data, available at [<http://www.oas.samhsa.gov/methTabs.htm>], accessed on December 20, 2006.

<sup>70</sup> U.S. Department of Justice, National Institute of Justice, *Methamphetamine Use: Lessons Learned*, by Dana Hunt, Sarah Kuck, and Linda Truitt, February 2006, p. 6.

<sup>71</sup> The Columbia Electronic Encyclopedia, Sixth Edition Copyright © 2003, Columbia University Press, available at [<http://www.cc.columbia.edu/cu/cup/>], accessed on Jan. 10, 2007.

congressional agenda. In these states with historically high methamphetamine prevalence, recent trends continue to indicate continued growth in the drug's use but at a less dramatic pace than that seen in certain Midwestern states where methamphetamine use was less common and rose quickly. Understandably, there are some who would argue that the characterization of a geographic shift or spreading of the abuse of methamphetamine as an "epidemic" was an overstatement of the drug problem. The media's use of graphic images of methamphetamine abuse and manufacture - photos of men and women whose faces have been ravaged by the drug's use or the sensational damage to houses or other structures from explosions and fires resulting from highly flammable and volatile chemicals used in the manufacture of methamphetamine by clandestine laboratories - could have contributed to an exaggerated public perception of the problem. In any case, the spread of the methamphetamine problem across a number of states in the Midwest and South, although not numerically significant on a national scale, was enough to trigger a national response.

## **Federal Branch Law Enforcement Programs and Policies**

Federal approaches to illicit drug use take one of three basic forms: (1) demand reduction (prevention and treatment), (2) domestic law enforcement, and (3) interdiction.<sup>72</sup> Many law enforcement efforts at all levels of government rely on arrest and incarceration, drug seizures, and production interruptions at the drug's major sources. The sources of methamphetamine manufacture are unique because the drug can be synthesized from precursor chemicals that are produced for medical purposes and available in bulk for DTOs from certain chemical manufacturers around the globe. Many of the other chemicals used in the synthesis of the drug are chemicals found in household products that are not easy to regulate.

Illicit methamphetamine production is particularly sensitive to law enforcement efforts to limit access to its chemical precursors because, without ephedrine and pseudoephedrine, methamphetamine simply cannot be readily synthesized. In addition, the manufacture of methamphetamine's precursors is a capital-intensive, difficult chemical process that requires exacting laboratory techniques and equipment that does not lend itself to illicit manufacture. As a result, these methamphetamine precursors are only manufactured in bulk by a handful of chemical companies around the world. Therefore, new federal restrictions on methamphetamine's precursor chemicals can have a significant impact on the availability and abuse of illicit methamphetamine. Federal and state laws have been developed to regulate the precursor chemicals used, including ephedrine and pseudoephedrine OTC products, as well as anhydrous ammonia, an agricultural product that is used in some methods of synthesizing methamphetamine.

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<sup>72</sup> Throughout the federal government there are programs that provide grants, activities, and services related to the prevention, education, and treatment of methamphetamine, as well as for assisting localities with clandestine lab remediation. These programs are beyond the scope of this report, which focuses on DOJ programs related to the enforcement of federal drug laws.

## Drug Enforcement Agency (DEA)

DEA is the principal federal agency tasked with enforcing federal drug control laws. Defendants arrested by DEA agents within the United States and its territories are tracked by the DEA Defendant Statistical System. Not all suspects arrested by DEA agents are federally prosecuted; many suspects are transferred to state or local jurisdictions for prosecution instead of being transferred to the U.S. Marshals Service for federal prosecution.<sup>73</sup>

DEA employs several methods to combat the proliferation of methamphetamine. In FY2005, DEA made 5,870 methamphetamine arrests and seized 2,491 kilograms of the drug. Through DEA's *Operation Three Hour Tour*, high-level Columbian and Mexican drug traffickers in the U.S. were targeted resulting in the dismantling of three major transportation cells and 27 distribution groups and the seizing of 155 pounds of methamphetamine.<sup>74</sup>

In addition, DEA works closely with state and local law enforcement in partnership on investigations and operation, dismantling and removing toxic wastes from clandestine laboratories, and regulating precursor chemicals. DEA commits more than \$145 million per year to address the methamphetamine problem.<sup>75</sup> DEA's clandestine methamphetamine laboratory efforts can include training for police officers and sheriff's deputies on best practices for responding to methamphetamine-related situations, providing containers for transporting toxic waste from laboratory sites, and removing hazardous materials.

DEA is also involved in establishing methamphetamine enforcement teams with Mexican counterparts to investigate and target Mexican methamphetamine drug trafficking organizations. DEA and the Customs and Border Protection Services work together to target suspicious cargo that may be related to methamphetamine trafficking organizations.<sup>76</sup> In addition, DEA and Mexican counterparts are working to share intelligence, establish collaboration, and implement joint strategies to address the methamphetamine problem on both sides of the U.S. - Mexico border.<sup>77</sup>

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<sup>73</sup> U.S. DOJ, OJP, Bureau of Justice Statistics, *Compendium of Federal Statistics, 2003*, October 5, 2005, p. 17, available at [<http://www.ojp.usdoj.gov/bjs/pub/pdf/cfjs03.pdf>], accessed on Jan. 15, 2007.

<sup>74</sup> U.S. DOJ, DOJ Public Affairs, *Fact Sheet: The Department of Justice's Efforts to Combat Methamphetamine*, Jun. 16, 2006, at [<http://www.dea.gov/pubs/pressrel/pr0616006p.html>], accessed on Jan. 10, 2007.

<sup>75</sup> Ibid.

<sup>76</sup> U.S. DOJ, DEA, Joseph T. Rannazzisi, Deputy Assistant Administrator, Office of Diversion Control, Congressional testimony before House Government Reform Committee, Subcommittee on Criminal Justice, Drug Policy and Human Resources, June 16, 2006, available at [<http://www.usdoj.gov/dea/pubs/cngrtest/ct061606p.html>], accessed on Jan. 10, 2007.

<sup>77</sup> U.S. DOJ, DEA Public Affairs, News Release, "DEA: Meth Superlab Discovered by Mexican Authorities," available at [<http://www.ojp.usdoj.gov/bjs/pub/pdf/cfjs03.pdf>],



## COPS Methamphetamine Initiative

The “Meth Hot Spots” program under the Community Oriented Policing Services (COPS) program is a grant program that *specifically* provides funding for a broad range of initiatives designed to assist state and local law enforcement to undertake anti-methamphetamine initiatives. For FY2006, the Meth Hot Spots program received appropriations of \$63.6 million. Since 1998, the COPS program has provided over \$350 million nationwide to address the methamphetamine problem.<sup>78</sup> The COPS Methamphetamine Initiative supports law enforcement, training, and lab cleanup activities targeting areas of greatest need for assistance combating methamphetamine production, distribution, and use. The program provides grants for community policing approaches to methamphetamine reduction, as well as grants for state and local innovative strategies focused on combating the methamphetamine problem.

The grants have been used by communities for many purposes, including developing law enforcement and businesses and/or community partnerships to educate and enforce anti-methamphetamine plans; drug-free workplace initiatives; media campaigns to increase public awareness; database development; substance abuse treatment; drug use surveys; clandestine lab seizures; law enforcement training; and community policing strategies.

## Other DOJ Grant Programs

Additional DOJ grant programs provide assistance for a broad range of programs and initiatives which *can* include anti-methamphetamine efforts. **Table 4** reports DOJ funding for grants awarded to state and local programs related to anti-methamphetamine initiatives across the country.<sup>79</sup> Cumulatively, for the period FY2000 - FY2005, 470 grants were provided, totaling \$263.8 million.

**Table 4. DOJ Grant Awards Relating to Methamphetamine Initiatives, FY2000 - FY2005**

Fiscal Year	2000	2001	2002	2003	2004	2005
Total Grant Amount ( in millions)	\$12.6	\$32.5	\$52.5	\$62.9	\$55.0	\$48.3
Total Number of Grants	23	44	118	101	97	87

**Source:** DOJ, Bureau of Justice Assistance, totals as of October 19, 2005.

<sup>77</sup> (...continued)  
accessed on Jan. 17, 2007.

<sup>78</sup> U.S. DOJ, Office of Community Oriented Policing Services, *COPS Fact Sheet: Methamphetamine Initiative*, Sept.2004, available at [<http://www.cops.usdoj.gov>], accessed on Jan. 10, 2007.

<sup>79</sup> The amounts provided in **Table 4** exclude grants under the COPS Methamphetamine Initiative.

## Drug Courts

Drug courts offer an alternative to incarceration that includes mandatory substance abuse treatment with intensive supervision and monitoring. Enacted by the *Violent Crime Control and Law Enforcement Act of 1994* (P.L. 103-322), drug courts are designed to allow judges to monitor drug treatment of defendants as a means of ending their use of illicit drugs. Drug courts are considered to be an important component of the national anti-drug abuse strategy, and while not designed to address the illicit methamphetamine abuse problem, drug courts in several states have used the drug court model for methamphetamine offenders.<sup>80</sup>

## Other Federal Responses to Illicit Methamphetamine

Many agencies and bureaus within DOJ are involved in addressing the issue of illicit methamphetamine. In addition to DEA's efforts to control the supply of illicit methamphetamine, DEA collaborates with the Federal Bureau of Investigation (FBI) and numerous task forces, as well as the Organized Crime Drug Enforcement Task Force (OCDETF) and the High Intensity Drug Trafficking Areas (HIDTA) program. In addition and jointly with other federal, state and local law enforcement agencies, DEA targets drug traffickers both domestically and internationally to stem the flow of methamphetamine in the United States.

## Legislative Issues

Numerous bills were introduced during the 109<sup>th</sup> Congress to address the issues of curbing illicit methamphetamine use, trafficking, and production. While most policy makers agree that methamphetamine is a devastating drug that negatively affects entire communities, they do not agree on which approach is best for confronting this problem. However, interest in responding to the methamphetamine problem fostered agreement on the provisions enacted in the *Combat Methamphetamine Epidemic Act* (CMEA) in Title VII of the *USA PATRIOT Act Reauthorization and Improvement Act* (P.L. 109-177).

The CMEA was signed into law on March 9, 2006. As enacted, P.L. 109-177 establishes measures to control the availability of methamphetamine precursor chemicals used for the illicit manufacturing of methamphetamine by drug trafficking organizations and amateur producers through restrictions on the amount of over-the-counter (OTC) cold and sinus medicine that could be purchased by consumers in a month, and the requirements that retailers maintain a registry of purchasers and secure their drug inventories. Grants to states for programs designed to provide substance abuse treatment for parenting mothers while keeping them with their children are provided under the new law. Among other provisions, P.L. 109-177 sets limits on imports of methamphetamine precursor chemicals and requires the

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<sup>80</sup> U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Assistance, *Drug Courts: An Effective Strategy for Communities Facing Methamphetamine*, BJA Bulletin, May 2005, p. 2. Available at [<http://www.ojp.usdoj.gov/BJA>], accessed on Jan. 10, 2007.

Departments of Justice and State to work with Mexico to disrupt the smuggling of illicit methamphetamine across the U.S.-Mexico border.

In addition to the enactment of the CMEA, two new laws were enacted and several bills were introduced in the 109<sup>th</sup> Congress to address a number of methamphetamine-related issues that are beyond the scope of this report. For example, P.L. 109-288 (S. 3525), enacted on September 28, 2006, authorizes the Secretary of Health and Human Services (DHHS) to make competitive grants to regional partnerships to provide programs and services designed to increase the well-being, permanency of outcomes, and enhance the safety of children who are in foster care as a result of a parent's or caretaker's methamphetamine or other substance abuse.<sup>81</sup> P.L. 109-347 (H.R. 4954), enacted on October 13, 2006, requires the Customs and Border Patrol (CBP) agency to track and report the seizure of methamphetamine and methamphetamine precursor chemicals as part of the agency's annual performance plan with respect to the interdiction of illegal drugs entering the United States.

For Congress, oversight of the recently enacted regulations of the CMEA could be a major concern in the overall effort to control illicit methamphetamine use. The regulation of retail sales of OTC cold and sinus medications containing precursor chemicals could be a strategy that Congress may want to monitor to determine whether federal regulations are effectively limiting the diversion of these chemicals for the illicit manufacture of methamphetamine. In exercising its oversight role, Congress may also want to explore how the enhanced federal criminal penalties are being applied to defendants convicted and sentenced under the new law. Similarly, Congress may be interested in overseeing and evaluating the funding and implementation of the new grant program enacted in P.L. 109-177 for children and parenting mothers undergoing substance abuse treatment for methamphetamine addiction. In addition, Congress may be interested in monitoring the Departments of Justice and State's efforts to reduce the smuggling of methamphetamine or its precursor chemicals across the United States - Mexico border. CBP's efforts to track and report seizures of the drug and its precursors, as provided under P.L. 109-347, may also be of critical interest to Congress as it monitors efforts to control the illicit supply of methamphetamine. Grants for regional partnerships to help children in foster care because their parent or caretaker's substance abuse (P.L. 109-288) could also inform Congress on the effectiveness of this type of discretionary grant program and shape future legislative responses.

Reports that cheap, high purity methamphetamine smuggled into the United States from Mexico quickly supplanted much of the drug formerly manufactured in small amateur laboratories indicate that methamphetamine continues to be a drug of concern. As such, monitoring CBP's efforts to track and report methamphetamine seizures at the U.S. - Mexico border may also be an oversight issue of concern to Congress. Congress may also want to monitor DEA and CBP efforts to coordinate and share information on interdiction of methamphetamine and its precursor chemicals with the Mexican government's anti-drug forces. Evidence that the

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<sup>81</sup> For information, see CRS Report RL33354, *The Promoting Safe and Stable Families Program: Reauthorization in the 109<sup>th</sup> Congress*, by Emilie Stoltzfus.

demand for methamphetamine in the United States continues to make smuggling a lucrative undertaking suggests that the drug's use will continue despite continued law enforcement and interdiction efforts. Congress may want to consider other approaches that encompass demand reduction (treatment and prevention measures) to reduce the illicit use of methamphetamine. Finally, to monitor and evaluate the effectiveness of federal drug regulations, Congress may want to consider a significant improvement and expansion of drug-use surveys and drug-related administrative data sets, along with drug interdiction data collection.

## Conclusion

The illicit use of methamphetamine is seen as a serious problem in the United States. The severity of the problem varies in communities across the country and in some states methamphetamine has been a serious problem for decades. There is evidence that methamphetamine use has been moving eastward into new regions of the country, into both rural and urban communities, often with devastating results. Methamphetamine is not a new 'drug of abuse' but its low price, long-lasting effects, high purity, ease of manufacture, and ready supply from Mexican drug trafficking organizations raise concerns that methamphetamine use may continue to be difficult to control.

Legislation considered and recently enacted by Congress relies on interdiction and law enforcement efforts as the primary means of controlling the availability of methamphetamine. Past experience suggests that such approaches can succeed, and there is reason to believe that the most recently enacted law (P.L. 109-177) can significantly reduce the availability of illicit methamphetamine. In the past, when precursor chemicals became difficult to obtain, methamphetamine prices rose, the drug's purity declined, and fewer addicts were able to maintain their methamphetamine habit. As a result, some methamphetamine addicts entered treatment, substituted other drugs to ease withdrawal, or just quit.

The anti-methamphetamine provisions of P.L. 109-177 placed restrictions on the availability of retail OTC cold and sinus medicines to eliminate access to methamphetamine precursor chemicals for amateur labs, reducing the attendant dangers of clandestine labs. States that passed such restrictions on OTC precursors experienced significant declines in the number of clandestine laboratory seizures. Numerous reports from state and local law enforcement indicate that the Mexican drug trafficking organizations that already supply most of the drug that is used in the United States have been able to quickly step in and supply methamphetamine markets that formerly relied on amateur produced methamphetamine, providing a purer, more addictive product. As a result, the restrictions on OTC medications may not have as great an impact on the overall methamphetamine problem. The new law, however, may help eliminate more informal clandestine laboratories by replacing the state patchwork of laws with a federal floor restricting retail sales of methamphetamine precursors. Simultaneously, communities will be spared the attendant dangers of fires and explosions from amateur methamphetamine labs, making it less likely that children would be exposed to toxic fumes and other dangers from methamphetamine manufacture.

The methamphetamine market has been profoundly affected by past attempts to regulate precursor chemicals, albeit temporarily (see **Appendix B**). However, new laws are immediately scrutinized by drug traffickers for any weaknesses or loopholes that can be exploited. As described in **Appendices A and B**, the history of methamphetamine regulation points to the temporary impact of federal interventions in the face of an ever-evolving drug market fed by international drug organizations.

When methamphetamine precursors were unregulated in Canada, DTOs exploited that source, smuggling methamphetamine or precursors into the United States until the Canadian government began regulating pseudoephedrine and other precursor chemicals in 2003. Drug traffickers then shifted methamphetamine production to Mexico, readily supplied with the necessary methamphetamine precursor chemicals by other international chemical companies willing and able to provide ton-quantities. Recent press accounts indicate that the Mexican government has announced that it has begun taking steps to limit imports of methamphetamine precursor chemicals to correspond to legitimate domestic demands. Such a move by Mexico could begin to reduce access to methamphetamine precursors by drug trafficking organizations.<sup>82</sup> The effectiveness and durability of these Mexican policies are difficult to gauge, and it is particularly important to remember that methamphetamine precursors are manufactured outside of Mexico, and could be made into methamphetamine and smuggled into the U.S. via other routes. A singular focus on Mexico as the source country of illegal methamphetamine could be shortsighted.

Drug traffickers and drug markets are highly adaptable, responding quickly to changing laws, by stockpiling chemicals or adopting new production methods, or switching chemical suppliers in order to continue their illicit, highly profitable, enterprises. Such a flexible and dynamic market requires that federal drug policy be equally adaptive and as well informed as possible. Better data on all aspects of drug use and drug markets could help with the formulation of more responsive and successful federal policies. Current drug use surveys and datasets could be expanded and funded at higher levels to improve the quality and reliability of the information available to Congress and policymakers.

Supply-side interventions alone will not eliminate the illicit methamphetamine drug problem. Efforts to prevent the use of methamphetamine offer an opportunity to target prevention efforts in areas where methamphetamine use has not already taken hold, especially in the Mid-Atlantic and Northeast regions of the country. Illicit drug use generally is cyclical in nature. Just as patterns of illicit drug use vary over time, there are critical points during a drug epidemic when prevention and treatment interventions can be most effective.<sup>83</sup> Drug research indicates that certain interventions work better at different points in a drug “epidemic,” or cycle. While

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<sup>82</sup> U.S. — Mexico relations are beyond the scope of this report. For more information, see CRS Report RL32724, *Mexico — U.S. Relations: Issues for the 109<sup>th</sup> Congress*, by K. Larry Storrs.

<sup>83</sup> Doris A. Behrens, Jonathan P. Caulkins, Gernot Tragler, Gustav Feichtinger, “Optimal Control of Drug Epidemics: Prevent and Treat — But Not at the Same Time?” *Management Science*, Mar. 2000, vol. 46, no. 3, March 2000, p. 333.

it is difficult to know the optimum time in which to intensify a drug control intervention,<sup>84</sup> once methamphetamine is readily available in an area it is much more difficult to prevent its illicit use. Public education and awareness initiatives could be effective methods for preventing the spread of methamphetamine use. In addition, efforts could be increased to treat addiction using the latest research findings to provide effective therapies and social services to support the recovery process.<sup>85</sup> Although research indicates that methamphetamine addiction may require longer treatment periods and methods, its treatment can be just as successful as that of other drugs. Limited treatment funds at all levels of government suggest that treatment interventions for methamphetamine addiction should be based on what research indicates is effective. Both prevention and treatment strategies could result in fewer methamphetamine users entering the criminal justice system and taxing law enforcement resources and penal institutions.

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<sup>84</sup> Ibid, p. 346.

<sup>85</sup> U.S. DHHS, NIH, NIDA, "Methamphetamine Abuse and Addiction," *Research Report Series*, NIH no. 06-4210, Sept. 2006, p. 7.

## Appendix A

### Federal Legislative History of Methamphetamine Controls

Federal policy on illicit methamphetamine has evolved in a complex historical environment of the legal and illegal use of stimulants. Thus, the complicated relationship between the legitimate production and uses of methamphetamine precursor chemicals and the illicit abuse of methamphetamine continues today. This appendix briefly summarizes the major federal anti-drug laws that attempt to control the availability of and demand for illicit methamphetamine. It also provides the current federal penalties for possession of methamphetamine.

**Drug Abuse Control Amendments of 1965.** The *Drug Abuse Control Amendments of 1965* (DACA, P.L. 89-74) included the first federal effort to establish special controls on stimulant drugs, namely amphetamine, by bringing the drug or any of its optical isomers under federal regulation. The law required that any drug containing any amount of amphetamine be more tightly regulated by requiring that it could only be legally obtained by physician's prescription. This law marked the first time that manufacturers, suppliers, distributors, and others involved in producing stimulant drugs were subject to registration and regulation under the Federal Food, Drug and Cosmetic Act.

**Controlled Substances Act of 1970.** Methamphetamine first became a Schedule II<sup>86</sup> drug under the *Controlled Substances Act of 1970* (CSA, P.L. 91-513).<sup>87</sup> Since its enactment, the scope of the CSA has been expanded to include regulation of chemicals used in the illicit production of methamphetamine and other illicit drugs.<sup>88</sup> Initially, only injectable methamphetamine was classified as a Schedule II drug; all other amphetamines were classified as Schedule III drugs. In 1971, all amphetamines, including all forms of methamphetamine, were reclassified under Schedule II.

**Chemical Diversion and Trafficking Act of 1988.** The *Chemical Diversion and Trafficking Act of 1988* (CDTA, P.L. 100-690) regulated bulk ephedrine and pseudoephedrine, the precursor chemicals from which methamphetamine is synthesized. This was the first major federal attempt at controlling methamphetamine precursor chemicals. The law required record keeping, reporting requirements, and import/export notification requirements for bulk, pure

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<sup>86</sup> See 21 C.F.R. §1308.12.

<sup>87</sup> Schedule II drugs are those with a recognized medical use but a high potential for abuse and a high incidence of physical or psychological dependence. These are available only by prescription, and distribution is carefully controlled and monitored by the DEA. In addition to methamphetamine and amphetamine, Schedule II drugs include, among others, cocaine; methylphenidate (Ritalin); most pure opioid agonists such as Demerol, fentanyl, opium, oxycodone, morphine, methadone; and short-acting barbiturates such as secobarbital.

<sup>88</sup> For more information on regulation of pseudoephedrine in OTC medications, see CRS Report (archived) RS22177, *The Legal Regulation of Over-the-Counter Cold Medication*, by Jody Feder, available upon request.

(single entity) ephedrine and pseudoephedrine products. However, the requirements for bulk methamphetamine precursor chemicals in P.L. 100-690, did not apply to OTC tablets or capsules containing ephedrine and pseudoephedrine.

**Domestic Chemical Diversion Control Act of 1993.** The *Domestic Chemical Diversion Control Act of 1993* (DCDCA, P.L. 103-200) removed the record-keeping and reporting exemption for pure (single entity) ephedrine products. The new law was enacted in 1993, went into effect in April 1994, but federal regulations implementing the law were not issued until August 1995. The law required distributors, importers, and exporters of List I chemicals<sup>89</sup> to register with DEA, and gave DEA the power to revoke a company's registration without proof of criminal intent.

**Comprehensive Methamphetamine Control Act of 1996.** The *Comprehensive Methamphetamine Control Act of 1996* (MCA, P.L. 104-237), broadened federal regulation of listed chemicals to include those found in OTC cold and sinus medicines. Under the MCA, the methamphetamine precursor chemicals containing ephedrine, pseudoephedrine, or phenylpropanolamine were added to Schedule II of the CSA, broadening existing restrictions on these precursor chemicals used to produce illicit methamphetamine. Other provisions of the MCA also increased penalties for the trafficking and manufacturing of methamphetamine and methamphetamine-related listed chemicals.<sup>90</sup>

**Methamphetamine Trafficking Penalty Enhancement Act of 1998.** The *Methamphetamine Trafficking Penalty Enhancement Act of 1998* (P.L. 105-277) lowered the quantity thresholds of methamphetamine necessary to trigger mandatory minimum drug trafficking penalties. The law cut in half the quantities of methamphetamine mixture and pure methamphetamine substance necessary to trigger the five- and ten-year mandatory minimum prison sentences for individuals convicted of certain methamphetamine offenses.<sup>91</sup>

**Methamphetamine Anti-Proliferation Act of 2000.** The *Methamphetamine Anti-Proliferation Act of 2000* (MAPA, P.L. 106-310) included provisions to address the problem of diversion of OTC drug products containing

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<sup>89</sup> In addition to regulating illegal drugs, the CSA also regulates certain chemicals that, although they may have legitimate medical purposes, can be used in the illicit production of illegal drugs. List I chemicals are defined as those that are used in the manufacture of controlled substances and are important to the manufacture of the substances. See DEA, U.S. Chemical Control at [<http://www.usdoj.gov/dea/concern/chemical>], accessed on Jan. 10, 2007.

<sup>90</sup> In 2000, the Food and Drug Administration (FDA) issued a health advisory on the use of OTC and prescription products containing phenylpropanolamine hydrochloride because its use increased the risk of hemorrhagic stroke. While many drug manufacturers voluntarily reformulated their products to remove phenylpropanolamine, some products using the chemical remain on the market.

<sup>91</sup> For the Sentencing Commission's implementation of the law see, U.S. Sentencing Commission, *Methamphetamine*, Final Report, Nov. 1999, at [<http://www.ussc.gov/publicat/methreport.pdf>], accessed on Jan. 10, 2007.



methamphetamine precursor chemicals from retail and mail order sources to the illicit production of methamphetamine. MAPA established thresholds for single purchases of OTC medicines containing ephedrine, pseudoephedrine and phenylpropanolamine (PPA) at 9 grams per day. P.L. 106-310 added the requirement that the products be packaged in containers of not more than 3 grams of precursor base chemical. Products packaged in “blister packaging” were provided a “safe harbor” exemption from the threshold limits set by MAPA. The act also strengthened sentencing guidelines and provided training for federal and state law enforcement officers on methamphetamine investigations and the handling of the chemicals used in clandestine methamphetamine labs. It also put in place controls on the distribution of the chemical ingredients used in methamphetamine production and expanded substance abuse prevention efforts.

**Combating Methamphetamine Epidemic Act of 2005.** The *USA PATRIOT Improvement and Reauthorization Act* (P.L. 109-177), signed into law on March 9, 2006, included provisions to regulate the domestic and international commerce in methamphetamine precursor chemicals and increased penalties for methamphetamine offenses.<sup>92</sup> In addition, the new law contained provisions to expand environmental regulations related to toxic chemical dumping by clandestine methamphetamine labs, and provide grant programs for drug-endangered children and adults afflicted by methamphetamine abuse and addiction.

Specifically, P.L. 109-177 establishes a new set of controls for the methamphetamine precursor chemicals, ephedrine, pseudoephedrine, and phenylpropanolamine,<sup>93</sup> that are designed to control illicit diversion. The following limits apply to retail sales of OTC products containing methamphetamine precursor chemicals:

- drugstores, convenience stores, grocery stores, news stands, mobile retailers (i.e., lunch wagons, street vendors) and other retailer limits on sales of these OTC products to 3.6 grams of the precursor base per customer per day (previously limited to 9 grams per transaction) (21 U.S.C. 830(d), 802(46), 802(47));
- limits mobile retail sales to 7.5 grams of precursor base per customer per month (21 U.S.C 830(e)(1)(A));
- requires that products containing methamphetamine precursor chemicals be kept “behind the counter” and, for mobile retailers, that the products be secured under lock and key (21 U.S.C. 830(e)(1)(A));
- with the exception of sales of less than 60 milligrams (two 30 mg doses) or less, retailers are required to maintain a logbook that must be kept for at least two years, recording the time and date of sale, the

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<sup>92</sup> For a legal analysis of the provisions of P.L. 109-177, see CRS Report RL33332, *USA PATRIOT Improvement and Reauthorization Act of 2005: A Legal Analysis*, by Brian T. Yeh and Charles Doyle.

<sup>93</sup> P.L. 109-177 defines the methamphetamine precursors as “scheduled listed chemical products” and as such can be marketed or distributed lawfully as a nonprescription drug under the federal Food, Drug and Cosmetic Act (21 U.S.C. 802(45)).

name and quantity of the product sold, and the name and address of each purchaser (21 U.S.C. 830(e)(1)(A));

- purchasers are required to present a government-issued photo identification, sign the logbook for the sale providing their name, address, and the date and time of the sale (21 U.S.C. 830(e)(1)(A));
- requires that retailer's logbooks include a warning that false statements will be punishable under 18 U.S.C. 1001 with a term of imprisonment of up to five years and/or a fine of not more than \$250,000 for an individual offender, or \$500,000 in cases involving an organization (21 U.S.C. 830(e)(1)(A), 830(e)(1)(D));
- requires the Attorney General to promulgate regulations to protect the privacy of the logbook entries, except for access by federal, state, and local law enforcement;
- requires that retailers train their employees on the methamphetamine precursor products statutory and regulatory provisions of the law (21 U.S.C. 830(e)(1)(A), (B));
- provides retailers civil immunity for disclosure of logbook information to law enforcement, unless the disclosure constitutes gross negligence or intentional, wanton, or willful misconduct (21 U.S.C. 830(e)(1)(E)); and
- requires retailers to take measures against possible employee theft or diversion of OTC products containing methamphetamine precursor chemicals, and preempts any state law that prohibits employers from asking prospective employees about their past methamphetamine precursor or controlled substance convictions (21 U.S.C. 830(e)(1)(G)).

These provisions went into effect on September 30, 2006, with the exception of the per day, per customer, 3.6 gram limit on retail sales of products containing methamphetamine precursor chemicals which went into effect 30 days after enactment. Mail order retailers of such products are required to confirm the identities of their customers, in addition to limiting sales of these products to 7.5 grams per customer, per month. The Attorney General is permitted to waive the 3.6 gram limit on retail sales and the 7.5 gram monthly limit on mail order or mobile retail sales if the AG determines that an OTC product containing methamphetamine precursor chemicals cannot be used in the manufacture of illicit methamphetamine.

## **Current Federal Penalties for Methamphetamine Possession**

Concern about the illicit production and abuse of methamphetamine were behind recent efforts in the 109<sup>th</sup> Congress to enact the *Combating Methamphetamine Epidemic Act of 2005*, which was enacted in P.L. 109-177 on March 9, 2006. The new law, among other things, amends penalties for possession and distribution of methamphetamine under the Controlled Substances Act (CSA).

The CSA, as recently amended, provides penalties for methamphetamine offenses according to the amount of the drug in the offender's possession upon arrest.

- For a first offense, if the individual possesses 5-49 grams of pure methamphetamine or 50-499 grams of a mixture containing

methamphetamine, the penalty would be not less than five years and not more than 40 years imprisonment; if death or serious injury occurred, from 20 years or up to life imprisonment. Fines could amount to \$2 million if the case involved an individual offender, and up to \$5 million if the case involved the conviction of more than one offender.

- For a second offense, the penalty for possessing 5-49 grams would be from 10 years to life imprisonment; if death or serious injury occurred, life imprisonment. Fines could amount to \$4 million for an individual offender or up to \$10 million if the case involved multiple offenders.
- For 50 grams or more of pure methamphetamine, or 500 grams or more of a mixture containing methamphetamine, for a first offense the penalty would be from 10 years to life imprisonment; if death or serious injury occurred, from 20 years to life imprisonment. Fines could amount to \$4 million if the case involved an individual offender, \$10 million if multiple offenders were convicted.
- For a second offense, the penalty would be from 20 years to life imprisonment; if death or serious injury occurred, life imprisonment. Fines could amount to \$8 million if the case involved an individual offender, \$20 million if multiple offenders were convicted.

## Appendix B

### What Works? Case Studies of the Effectiveness of Federal Laws to Control Methamphetamine

Experts in the area of drug policy have long debated how effectively the federal war on drugs has controlled drug abuse in the U.S. The orientation of U.S. anti-drug policies relies heavily on supply-side controls whose efficacy is frequently questioned as the primary anti-drug strategy.<sup>94</sup> Some federal anti-drug policies have had unintended consequences. For example, researchers of drug policy often note that abuse of amphetamines led to federal law that banned the substance, which unintentionally fostered demand for an alternative stimulant, which in turn led to the development of increased use of methamphetamine. By the late 1960s, the increased illicit use of methamphetamine led to the enactment of federal measures to restrict the availability of phenylpropanolamine (PPA), a precursor chemical widely used at the time to manufacture one form of illicit methamphetamine (crank). Federal controls restricting the availability of PPA significantly disrupted the illicit production and distribution of *crank* (*levo-dextro*-methamphetamine) by biker gangs. This drove underground chemists, eager to meet the demand for an alternative stimulant in the illicit drug market, to seek a substitute for PPA. Thus, PPA's chemical cousins, ephedrine and pseudoephedrine, came to be the key ingredients of a new and improved form of the stimulant — the most potent and addictive form of methamphetamine (*dextro*-methamphetamine), and a form of the drug that could be easily synthesized. Inadvertently, tighter regulation of PPA was the catalyst behind the development of the form of illicit methamphetamine abused and manufactured today.

The following section considers three case studies that attempt to discern whether or not the enactment of certain federal laws had an effect on the supply of methamphetamine.

An analysis by Carlos Dobkin and Nancy Nicosia<sup>95</sup> looks at the impact of two large interventions that occurred in May 1995. The first was the implementation of the *Domestic Chemical Diversion Control Act of 1993* (DCDCA (P.L. 103-200)), and the second was a large DEA drug bust. Taken together the two interventions were of unprecedented scale. The DEA drug bust shut down two significant methamphetamine precursor suppliers whose production potential was 24 metric tons of methamphetamine in 1994: (1) Clifton Pharmaceuticals - producing 25 metric tons of methamphetamine precursors, and (2) Xpressive Looks International - 500 cases and a distribution network that was responsible for supplying 830 million tablets of methamphetamine.

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<sup>94</sup> Reuter, Peter, "The Limits of Drug Control," American Foreign Service Association, January 2002, at [<http://www.afsa.org/fsj/jan02/reuter.cfm>], accessed on: Jan. 10, 2007.

<sup>95</sup> Dobkin, Carlos and Nancy Nicosia, "The War on Drugs: Methamphetamine, Public Health and Crime," (forthcoming), and Carlos Dobkin, "The Impact of Methamphetamine Abuse on Health and Crime," unpublished paper, Jan. 18, 2005.

For the federal government's strategy of disrupting the supply of methamphetamine and methamphetamine precursor chemicals, these 2 cases were impressive successes. Although the federal policy resulted in a dramatic reduction in the availability of methamphetamine, the effects were temporary. Dobkin and Nicosia's analysis indicates that the impact of the two DEA interventions was made possible by the enactment and implementation of methamphetamine precursor controls in the DCDCA. Their analysis further shows that DEA's actions eliminated a huge share of the available methamphetamine precursor supply in California, an amount equal to 70% of the ONDCP's estimated national methamphetamine consumption of 34.1 metric tons in 1994. The passage of the DCDCA in 1993, which went into effect in April 1994, was followed by final regulations implementing the new law in August 1995. The DCDCA eliminated the exemption of single entity (pure) ephedrine products, so products containing ephedrine were subject to record keeping and import/export notification requirements like those required of transactions of bulk ephedrine and pseudoephedrine.<sup>96</sup> The DCDCA also permitted DEA to deny or revoke a company's registration without proof of criminal intent. The implementation of these two new provisions of the law was essential to disrupting the market for methamphetamine precursor chemicals at that point in time.

According to Dobkin and Nicosia, these two companies were supplying more than 50% of the precursors used nationally to produce methamphetamine. DEA's actions eliminated two very large ephedrine and pseudoephedrine suppliers operating in California at that time.<sup>97</sup> As a result, DEA's efforts caused a significant reduction in the national precursor supply which triggered an increase in price, from \$30 to \$100 per gram, and caused purity of methamphetamine to drop from 90% to less than 20% over the five month period that followed. Dobkin and Nicosia's work showed that the provisions of the DCDCA enabled DEA to disrupt the supply of methamphetamine precursor chemicals, and as a result the supply, purity, and price of methamphetamine were profoundly affected. However, while the immediate effect was profound, it was also temporary, and the analysis found that prices recovered within four months, while purity of methamphetamine took much longer to return to previous levels, almost 20 months to climb back to 85%.<sup>98</sup>

Dobkin and Nicosia also analyzed data from the ADAM/DUF survey<sup>99</sup> in relation to the DEA drug busts in May 1995 as an alternative measure of the effectiveness of the DCDCA regulations. Their analysis focused on exploring the relationship between methamphetamine use and crime by looking at the ADAM/DUF data for the period 1993-1996. They found that methamphetamine use among arrestees in three California cities (San Diego, Los Angeles, and San Jose) declined by 55%. Felony drug arrests, unlike some other crime trends including reported

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<sup>96</sup> Dobkin and Nicosia, p. 8.

<sup>97</sup> Dobkin and Nicosia, "The War on Drugs: Methamphetamine, Public Health and Crime," p. 2.

<sup>98</sup> *Ibid.*, p. 21.

<sup>99</sup> They note that the ADAM/DUF data are a "selected sample rather than a census," acknowledging that the data cannot be extrapolated to indicate any broader trends in the population, but is only representative of the specific sample of arrestees.

property crime and violent crime, declined by 50% after the DEA intervention, and misdemeanor drug arrests decreased by 25%.

The success of disrupting chemical inputs needed for manufacturing methamphetamine, their analysis concluded, was evident in the drug-use indicators of hospital admissions, drug treatment admissions, arrestee drug use, and drug arrests. These indicators of methamphetamine prevalence also tracked closely with changes in the purity of methamphetamine following the DEA intervention event, but do not track as well with changes in the price of methamphetamine after the event. Their analysis also concluded that even a large-scale disruption only reduced adverse health effects and drug crime temporarily.

In a similar analysis, Cunningham and Liu looked at the effects on hospital admissions of three federal policies that regulated ephedrine and pseudoephedrine in 1989, 1995, and 1997.<sup>100</sup> The federal interventions included (1) the 1989 implementation of the *Chemical Diversion and Trafficking Act of 1988*, which regulated bulk quantities of ephedrine and pseudoephedrine; (2) the 1995 implementation of the *Domestic Chemical Diversion Control Act of 1993*, which regulated the distribution of products that contained ephedrine as the only active medicinal ingredient; and (3) the 1997 implementation of the *Comprehensive Methamphetamine Control Act of 1996*, which regulated products that included pseudoephedrine, with or without other active ingredients, and the distribution of products that included ephedrine in combination with other active medicinal ingredients. Each of the federal interventions built on the previous regulation, often closing loopholes that were newly exploited by drug trafficking organizations (DTOs). These federal interventions focused on responding to large-scale methamphetamine producers, until passage of the *Comprehensive Methamphetamine Control Act of 1996*, which focused on the distribution of sinus and cold medicines.<sup>101</sup>

Cunningham and Liu's analysis looked at methamphetamine related hospital admissions and how they were affected by all three precursor regulations in California. They also looked at the impact of three of these regulations in the late 1990s in Arizona and Nevada, both of which border California. Using an autoregressive-integrated moving average time-series analysis they found that after seven years of steady increases in methamphetamine related admissions in California, the number of methamphetamine admissions began to decline for about two years following the intervention in 1989 (P.L. 100-690).<sup>102</sup> What followed was a resurgence in methamphetamine admissions that continued until August 1995, a month after the regulation of single ingredient ephedrine took effect.

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<sup>100</sup> James K. Cunningham and Lon-Mu Liu, "Impacts of Federal Ephedrine and Pseudoephedrine Regulations on Methamphetamine-Related Hospital Admissions," *Society for the Study of Addiction to Alcohol and Other Drugs*, vol. 98, no. 9 (September 2003), pp. 1229-1237.

<sup>101</sup> *Ibid.*, p. 1230.

<sup>102</sup> *Ibid.*, p. 1231.

A report from the Office of National Drug Control Policy (ONDCP) on the price and purity of illicit drugs adds support to the findings of Dobkin and Nicosia, and Cunningham and Liu.<sup>103</sup> Using the DEA's System to Retrieve Information from Drug Evidence (STRIDE)<sup>104</sup> data base, the study provided estimates of the price and purity of methamphetamine through the second quarter of 2003.<sup>105</sup> Acknowledging illicit drug pricing variations across cities, the ONDCP report showed that methamphetamine prices from 1981 to 2003 rose overall, but that there were three very large price spikes in the years following three precursor control regulations in 1989, 1995, and 1997. In addition, the report found that purity trends for methamphetamine did not move the way that might be expected for other drugs. Unlike other illicit drugs, the analysis found that methamphetamine prices and purity were very volatile and did not exhibit the same trends. This analysis also found that the spikes in price and purity of methamphetamine were related to the regulation of precursor chemicals introduced in 1989, 1995, and 1997.<sup>106</sup>

The analyses described above indicate that legislative changes aimed at regulating the methamphetamine precursor chemicals had a significant effect on the supply, price and purity of illicit methamphetamine in the short term. The findings of Dobkins and Nicosia, and Cunningham and Liu also found that the changes brought on by new, more restrictive federal law only worked temporarily, as illicit suppliers found alternative ways to circumvent the regulations or develop alternative suppliers of precursor chemicals. Thus, what these analyses show is that preventive legal strategies developed by Congress over the past 17 years have steadily strengthened restrictions on the distribution of pseudoephedrine/ephedrine-containing products. However, these analyses also point out that these changes in federal law only brought about temporary changes. Federal drug policy and regulation work effectively and may benefit by being adaptive and responsive to the adaptive changes that suppliers of illicit methamphetamine, and other illicit drugs, willingly undergo to supply the demand for illicit drugs in the United States.

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<sup>103</sup> ONDCP, *The Price and Purity of Illicit Drugs: 1981 Through the Second Quarter of 2003*, November 2003, p. 13.

<sup>104</sup> STRIDE is a forensic database containing information obtained by DEA from seizures, purchases, and other drug acquisition activities. DEA uses STRIDE for inventory control of drug acquisitions by DEA, as well as for scientific data collected regarding the quality and quantity of the drugs for use in the judicial process.

<sup>105</sup> ONDCP, *The Price and Purity of Illicit Drugs*, p. 1.

<sup>106</sup> *Ibid.*, p. 14.