Policy Brief

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METHAMPHETAMINE IN MISSOURI 2004

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To Interested Parties:

The increase of methamphetamine use in Missouri is a serious and growing concern. The broad impact of this highly addictive stimulant has prompted the need for increased knowledge and understanding in order to better allocate and target resources to combat its use and abuse.

In 2004, Governor Bob Holden launched an aggressive statewide initiative by issuing an executive order creating two new task forces that brought expert focus on methamphetamine education, prevention, and treatment in Missouri. In addition, Governor Holden reorganized an existing task force to deal with the environmental challenges facing law enforcement officials and others who handle hazardous materials related to methamphetamine production. His actions prompted an update of this methamphetamine policy brief, first published in 1997.

Methamphetamine in Missouri 2004 was prepared by the Missouri Institute of Mental Health under the direction of the Division of Alcohol and Drug Abuse. The brief describes methamphetamine manufacturing and trafficking, physiological reactions, and health consequences associated with its use. It also includes both state and national epidemiological data describing the prevalence of methamphetamine use as reported by the Community Epidemiology Work Group.

We are pleased to make this publication available. We wish to thank the Missouri Department of Corrections for assisting in its printing and the Methamphetamine Treatment Task Force for its suggestions for revisions.

If you would like additional copies, the brief can be accessed on the Missouri Methamphetamine Initiative website at www.missourimeth.org or by contacting the Division of Alcohol and Drug Abuse at (573) 751-4942.

Sincerely,

Michael Couty

Methamphetamine in Missouri 2004

A Missouri Division of
Alcohol and Drug Abuse Policy Brief

Prepared by the

Missouri Institute of Mental Health

Division of Evaluation, Policy and Ethics

April 2004

Methamphetamine in Missouri 2004

Introduction

Methamphetamine use is a rapidly growing concern in Missouri and many other areas of the country. Cheaper and with longer-lasting effects than cocaine, methamphetamine is gaining popularity among a number of groups. The major purpose of this policy brief is to describe what we know about methamphetamine; to describe indicators of the prevalence of its use; and to discuss key concepts for the prevention and treatment of methamphetamine abuse in our state. Missouri can more effectively address the methamphetamine problem by using knowledge gained from research, working collaboratively, and by monitoring key local indicators to establish prevention and treatment policies and procedures.

The increase in methamphetamine use in Missouri brings many of the same concerns brought by the increase in cocaine use in the 1980's. Violence associated with drug trafficking; health consequences of needle use and neonatal exposure; and neuro and environmental toxicity issues are a few of the important concerns brought on by the proliferation of methamphetamine.

Policies developed to address increases in the use of any substance must be based on data. Identifying, collecting, and interpreting data on methamphetamine use is the key to developing effective and efficient responses. Systematic and collaborative efforts for prevention, intervention, treatment, and interdiction are needed. Due to the unique problems posed by methamphetamine, the public must be fully informed and involved in local efforts. Law enforcement, environmental clean-up, corrections, social services, health prevention/education and treatment services must work collaboratively to address the issue of methamphetamine use in our communities.

This policy brief describes methamphetamine manufacturing and trafficking, physiologic reactions, and health consequences associated with its use. A review of national and Missouri epidemiological data describing the prevalence of methamphetamine use is provided, and prevention and treatment concepts are discussed. The report describes recommendations for addressing the Missouri methamphetamine problem and resources for accessing additional information.

Methamphetamine

The amphetamine family of drugs was first introduced to the medical field in the 1930's as a nasal decongestant. Amphetamine was used in Japan during World War II to provide soldiers energy and to prevent sleepiness. Eventually the drug was made available to the public, and amphetamine abuse was widespread in Japan among young people. In the United States, amphetamine abuse did not become a major problem until the 1960's. Methamphetamine, known as "speed" on the street, became a popular drug because it was manufactured so easily. The use of methamphetamine in the United States has steadily risen in the past decade, especially in California and Missouri where abuse has reached epidemic proportions. Related to amphetamine but with greater effects on the Central Nervous System (CNS), methamphetamine

is a stimulant that is colorless and odorless. It is a sympathomimetic drug, meaning that it mimics the physiological responses of fear, fighting, and fleeing. Methamphetamine has many of the same effects as cocaine but its effects last hours instead of minutes. Several forms of methamphetamine exist. Methamphetamine sulfate is taken orally and often called "crank." "Ice" also called "glass" "quartz" or "freeze" is a smokeable form of methamphetamine of high purity. Hawaii has received a great deal of this form imported from Japan and South Korea. However, in the mainland, there are many smokeable methamphetamine products called "ice" but not all are the true, high purity form (hydrochloride salt methamphetamine). The large number of Missourians who administer methamphetamine intraveniously and the large number of unsophisticated, clandestine laboratories are indications that "ice" is not currently the predominant form in our state.

Methamphetamine is a stimulant, Schedule II drug, which is highly addictive, cheaper than cocaine, and has significantly longer lasting effects. The stimulant increases activity in the central nervous system in much the same way as adrenaline. Although methamphetamine is available with prescription for medical reasons, most methamphetamine involved in substance abuse is homemade, resembling a fine, course powder, crystal, or chunks. There are several ways to administer methamphetamine, depending on the form. "Crystal" methamphetamine is sold as a powder that is injected, inhaled, or taken orally. It is similar to cocaine in its euphoric effects; but crystal methamphetamine is purer, cheaper, and its effects last longer than cocaine. "Ice" or "glass" is a concentrated form of methamphetamine that resembles tiny chunks of glass. It is very potent and can be smoked instead of injected. The high may last as long as twenty hours, depending on the quantity smoked. Each method of abuse has a different effect on the body. If taken intravenously or inhaled, the user experiences an intense sensation or "rush" that lasts a few minutes. When taken orally or intranasally, a euphoric high is felt, but not a "rush". This mood elevation causes people to use the drug more frequently and in increasing doses; eventually a tolerance to the drug is produced. As tolerance increases, more and more of the drug is required to reach the same "high", resulting in an addiction/abuse cycle. Methamphetamine causes a severe crash when its effects wear off, accompanied by withdrawal symptoms such as insomnia, restlessness, mental confusion, depression, and severe craving for the drug.

Manufacturing of methamphetamine

The ease with which methamphetamine can be manufactured is a major contributing factor to the increase in its use. Law enforcement officials identify and close thousands of clandestine methamphetamine labs each year. Large operations produce methamphetamine in Mexico and California. Outside of these areas, small rural laboratories are more common. Rural areas are popular sites for production because strong odors are produced during manufacture. "Mobile labs" have begun to appear in a number of states, making seizures more complicated. The manufacture of methamphetamine is simple because it does not require agriculture, specialized equipment, or advanced technical training. It is easily "cooked" up by anyone in a makeshift lab hidden in mobile homes, warehouses, or even motel rooms. The Methamphetamine Control Act of 1996 was enacted to curb the production and abuse of methamphetamine by controlling the key chemicals necessary to produce the drug and by increasing criminal sentences for its possession and distribution. Missouri State Statutes 195.417.1 and 195.418.1 limit over-the-counter sales of certain drugs which can be used in the manufacture of methamphetamine. These limits include drugs including ephedrine, pseudoephedrine, phenylpropanolamine, and related chemicals. Methamphetamine hydrochloride is easily produced using ephedrine, hydroiodic acid (both controlled substances), or over-the-counter pseudoephedrine found in cold medication.

Hydroiodic acid is a necessary ingredient in one of the major manufacturing processes. Although strictly controlled, it can be created by combining red phosphorous and iodine - chemicals that are not regulated. Recently, phenylpropanolamine has been used as a precursor chemical to produce amphetamine. However, this product is also marketed as methamphetamine.

The key ingredient of methamphetamine is ephedrine, a controlled substance. Since it is difficult to obtain ephedrine, drug dealers use pseudoephedrine, found in many over-the- counter medicines. These medicines are processed to remove buffers and produce ephedrine. Cash purchases of large quantities of red phosphorous and iodine (for hydroiodic acid) are made by drug dealers in order to produce methamphetamine. As part of the Methamphetamine Control Act of 1996, these chemicals, along with pseudoephedrine, have been added to the target list in the Chemical Diversion and Trafficking Act, CDTA. With the ability to track the sale of large quantities of these chemicals, the DEA will be able to identify major manufacturers of methamphetamine. Also, Missouri State Statutes 195.417.1 and 195.418.1 limit over-the-counter sales of certain drugs that are methamphetamine precursors including ephedrine, pseudoephedrine, phenylpropanolamine, and related chemicals.

The Drug Enforcement Agency (DEA) identified clandestine laboratories in Mexico and California as the major sources of methamphetamine. Legal access to an abundant supply of chemical precursors in Mexico makes this country a major producer. The ephedrine/ pseudoephedrine reduction method is common in Mexico because of the abundant supply of these chemicals. Organized crime groups operating in Mexico run major distribution channels. They have access to wholesale ephedrine sources of supply on the international market; they produce vast quantities of high-purity methamphetamine on a regular basis; and they already control established cocaine, heroin, and marijuana distribution networks through-out western, southwestern, and, increasingly southern and Midwestern states.

Small, rural, locally controlled laboratories have become more prominent, especially in the Midwest. In Missouri, the DEA reports that many local entrepreneurs are women, who oversee production and teach others the production process. Once caught, they are tough to prosecute due to a tremendous backlog in testing confiscated substances.

No matter the size of the lab or who runs it, processing methamphetamine is dangerous. Ignitable, corrosive, reactive, and toxic chemicals can cause explosions, fires, toxic fumes, and damage to health and environment. More information about manufacturing methamphetamine may be found in the NIDA monograph (Miller & Kozel, 1991) or on the Missouri Methamphetamine Initiative website at www.missourimeth.org.

Health consequences of methamphetamine use

There are many health-related problems associated with methamphetamine use. This drug stimulates the CNS, causing wakefulness, increased physical activity, decreased appetite, increased respiration, hyperthermia, euphoria, irritability, insomnia, confusion, tremors, convulsions, anxiety, paranoia, and aggressiveness. Hyperthermia and convulsions may result in death. Cardiovascular side effects include chest pain and hypertension, which also may result in death. Increased heart rate and blood pressure, leading to damaged blood vessels in the brain, may produce strokes. Respiratory problems, irregular heartbeat, and anorexia also occur. Methamphetamine use affects lungs, kidneys, and liver and pulmonary edema and cardiac arrest may occur after prolonged use.

Methamphetamine is neurotoxic; it is thought to damage brain cells that contain dopamine and serotonin, both neurotransmitters. The use of methamphetamine may reduce dopamine levels, producing symptoms like Parkinson's disease. Animal studies have shown that large doses of methamphetamine damage nerve endings. Methamphetamine use during pregnancy can produce prenatal complications. Developmental problems may result when the fetus receives reduced blood flow, and there may be direct toxic effect on the developing fetal brain from methamphetamine use by the mother. In the past year in Missouri, 277 children were present at clandestine laboratory seizures placing them at elevated risk for developing health problems.

Often there is a rapid increase in tolerance (tachyphylaxis) and psychological dependence among methamphetamine users. Methamphetamine is more problematic than cocaine because of the longer lasting effects. The half-life of methamphetamine is up to 11 hours while the half-life of cocaine is 50 minutes. Use of methamphetamine results in erratic behavior, excess energy, and suppressed appetite. Users become weak or ill due to the lack of nourishment. They may become agitated, aggressive, paranoid, psychotic and sometimes dangerous. Some persons will also use depressants, such as alcohol and benzodiazepines, to balance the effect of methamphetamine.

In addition, corneal ulceration, or keratitis, has been identified (Poulsen, Mannis & Chang, 1996) in methamphetamine abusers, resulting from physiologic effects, inconsistent purity, multiple routes of administration, and manufacturing mishaps in clandestine labs leading to injury to the eye.

Related issues

The development of "designer drugs" such as methamphetamine analogs poses additional problems. An analog is a chemical compound similar in effect to another drug of abuse but slightly different in structure. Made in clandestine labs, the street names for these drugs often vary by time, place, and manufacturer. Two of the most popular methamphetamine analogs are MDA and MDMA. MDA is 3,4-methylenedioxyamphetamine and is known as the "love drug" because it produces a heightened need for interpersonal relationships and increased need to talk to and to be with people. There is evidence that it damages the brain's serotonin neurons. Use of MDA resembles amphetamine intoxication. MDMA is also known as "ecstasy" or "Adam." It is structurally similar to methamphetamine and mescaline as it stimulates the CNS and produces hallucinogenic effects. Like MDA, it is related to the amphetamine family and has also been shown to be neurotoxic. Similarly, "ma-huang" (ephedrine) (Schuckit, 1996) is known as "herbal ecstasy" or "pseudospeed" and is used by some as a "safe" alternative to amphetamines or cocaine. It is an adrenaline-like sympathomimetic drug sold under street names such as "white cross", "pea-shooters", "energy pill", and "cocaine substitute." It is like amphetamine in effect but is less potent, and may result in irregular heart beat, increased blood pressure, stroke, auditory hallucinations, paranoid delusions, mood disturbances, and stimulant withdrawal syndrome.

National Trends

A major source of data describing national drug trends is the Community Epidemiology Work Group (CEWG), a network of epidemiologists and researchers sponsored by the National Institute on Drug Abuse (NIDA). This group "meets biannually to review current and emerging substance abuse problems: (CEWG, 1997, p.1). Members of the group review drug treatment and

hospital emergency department admissions; health indicators such as HIV/AIDS, Tuberculosis, and Hepatitis rates; arrest data; drug price and purity data; and other information. These data are often combined with qualitative information gathered through ethnographic research, surveys, interviews focus groups, and other means. Historically, the CEWG has identified and tracked increases in methamphetamine use in Philadelphia (1983), San Diego (1984), Dallas (1986), Phoenix (1987), Los Angeles, San Francisco and Seattle (1988), and Honolulu (1990). In the 1990s the CEWG had identified increased methamphetamine use in the West, Southwest, South, and Midwest.

A recent CEWG meeting held in June of 2003 in St. Louis, Missouri provided an overview of the methamphetamine picture in several cities across the country. The methamphetamine problem has become a major concern for public health, social service, law enforcement, and environmental professionals in many states (NIDA, 2003). Four of the cities reporting very high levels of methamphetamine abuse and production are Honolulu, San Diego, San Francisco, and Seattle. Honolulu had 62 methamphetamine-related deaths in 2002. In San Diego, almost 40% of treatment admissions were to primary methamphetamine abusers. A major factor in the HIV/ AIDS problem in San Francisco is the widespread use of methamphetamine via injection among gay/bisexual men. 'Ice' and 'glass' use is increasing in Seattle, especially in nearby rural areas.

While the most severe problems are in the Western part of the country, they have been moving eastward, especially in the more rural areas. Denver and St. Louis, CEWG reporting sites, have reported increases in methamphetamine indicators. Two reporting sites on the East Coast, Miami and New York City have also recently reported on indicators of the presence of methamphetamine. Originally described as predominantly used by Whites, this drug appears to be used by a diverse group of abusers. In Denver, use among Hispanics is increasing and there are indications that some crack users have been switching to methamphetamine. In Boston and New York, methamphetamine has been appearing in the club scene. Outreach workers in Amarillo, Texas have reported an increase in the injection of methamphetamine among African Americans.

The highest rates of Emergency Department (ED) mentions of methamphetamine in the first half of 2002 in the Drug Abuse Warning Network (DAWN) were in the west coast and southwestern regions of the country. San Francisco had the highest rate of ED mentions at 24 per 100,000 population. Nationally, the number of ED mentions of methamphetamine rose 54.1% from 11,486 in 1998 to 17,696 in 2002. Deaths recorded by the DAWN program involving methamphetamines in 2001 were highest in San Diego (94), Dallas (37), San Francisco (32), Denver (19), and San Antonio (18). Among deaths reported by cities using local medical examiners were Phoenix (132) and Honolulu (62). In 2002, several cities reported that a large percentage of treatment admissions were to persons who abused methamphetamines. These included admissions in Honolulu (52.1%), San Diego (49.7%), Los Angeles (18.5%), Denver (16.8%), and Seattle (14.7%).

Data from the Arrestee Drug Abuse Monitoring (ADAM) program demonstrated that Honolulu (44.8%), Phoenix (31.2%), and San Diego (31.7%) had the highest percentages of adult male arrestees testing positive for methamphetamine in 2002. These same cities showed the highest percentages of adult female arrestees testing positive for the drug: Honolulu (50.0%), Phoenix (41.7%), and San Diego (36.8%). In 2002, the National Forensic Laboratory Information System (NFLIS) reported that methamphetamine was the third most frequently identified drug (11.8%).

Data from the Monitoring the Future Study indicate that the percentage of high school seniors who ever used methamphetamine decreased from 8.2% in 1999 to 6.2% in 2003.

Methamphetamine in Missouri

There are several indicators that describe the nature of the methamphetamine problem in Missouri. Admissions to publicly funded treatment programs and hospital emergency room episodes can be monitored to describe methamphetamine use in our state.

The Treatment Episode Data System (TEDS) is a national database of treatment admission data. Data in this system describing admissions in Missouri are taken from the Missouri Department of Mental Health's Client Tracking, Registration, Admissions and Commitments (CTRAC) system. They include information on the age, race, and sex of persons admitted for treatment as well as their home county, route of administration, referral source, and secondary and tertiary drugs used.

Figure 1 shows that 35.3% of methamphetamine admissions in calendar year 2003 were to persons in the 26 through 34 years of age group. Those 35 years of age and older (31.9%) accounted for the next highest percentage of treatment admissions. The 18 through 25 years of age group (30.0%) and those less than 18 years of age (2.8%) accounted for fewer admissions. These data indicate that the treatment population is slightly older than in previous years.

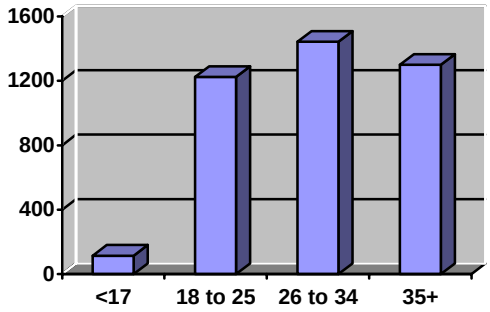

Figure 1: Methamphetamine Admissions X Age
01/01/03-12/31/03

Figure 2 shows that 97.9% of all methamphetamine admissions in 2003 were to persons who are white. No other racial or ethnic group represented more than one percent of admissions.

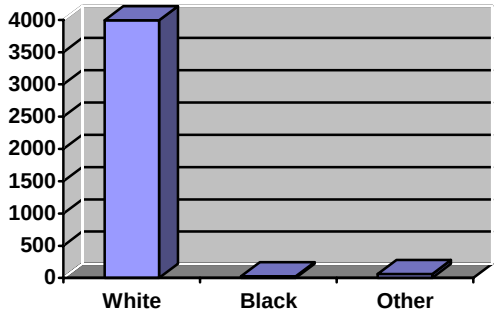

Figure 2: Methamphetamine Admissions X Race
01/01/03-12/31/03

Figure 3 shows that males accounted for 54.8% of admissions for methamphetamine abuse treatment statewide while females accounted for 45.2% admissions during calendar year 2003.

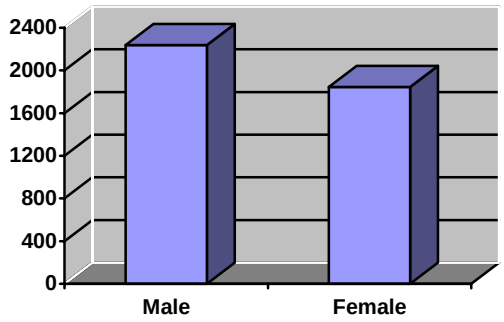

Figure 3: Methamphetamine Admissions X Sex
01/01/03-12/31/03

Figure 4 shows that for those admitted for treatment in 2003, injecting was the most popular route of administration (40.3%), followed by smoking (36.9%). Sniffing (17.4%), oral (4.6%), and other (0.8%) routes were less popular. The high percentage of persons injecting methamphetamine is of special concern given the possibility of HIV/AIDS and Hepatitis transmission among needle users. The percentage of persons smoking the drug has increased and is an indication that the presence of 'ice' may be growing in our state.

The methamphetamine abuser often uses other drugs. Of those methamphetamine abusers admitted for treatment during 2003, over 39% identified marijuana, 16.6% identified alcohol, and 6.6% identified cocaine as secondary drugs of abuse. Methamphetamine is often used either in combination or sequentially with alcohol, marijuana, or cocaine. It is often a secondary or tertiary drug used with these other substances.

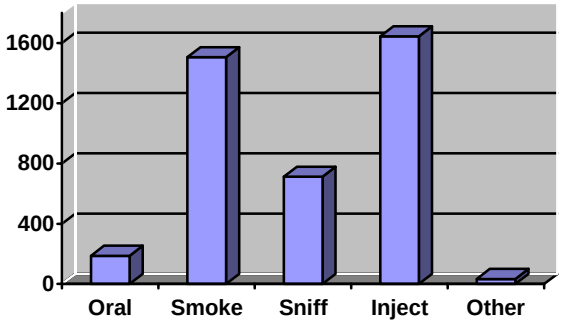

Figure 4: Methamphetamine Admission X Route
01/01/03-12/31/03

Figure 5 shows referral source for those admitted to treatment. Court referrals (46.9%) made up the greatest percentage of referrals, followed by the self-referrals (40.0%), health providers (5.0%), and community agencies (6.8%). All other sources made up less than two percent of referrals. The high percentage of referrals from the courts is a result of the active drug-court system that has been developed in Missouri.

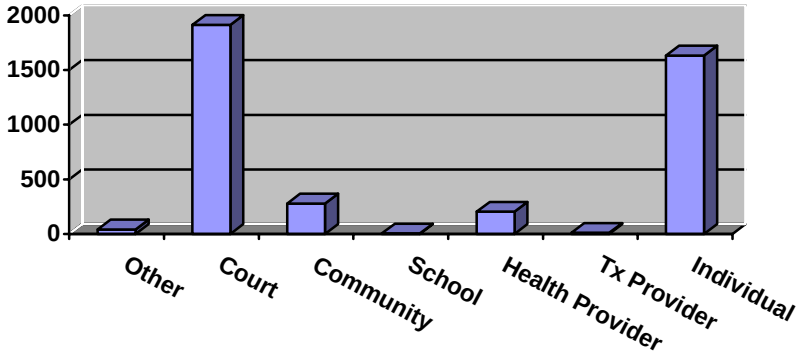

Figure 5: Methamphetamine Admissions X Referral Source
01/01/03-12/31/04

Figure 6 shows the number of prior treatments clients have had. The majority of clients had no (32.5%) or one (22.4%) prior treatment episode. Those with two (16.9%), three (9.8%), and four (5.8%) prior treatment episodes followed in typical fashion. Of note is the percent of persons (12.6%) who had five or more previous treatment episodes.

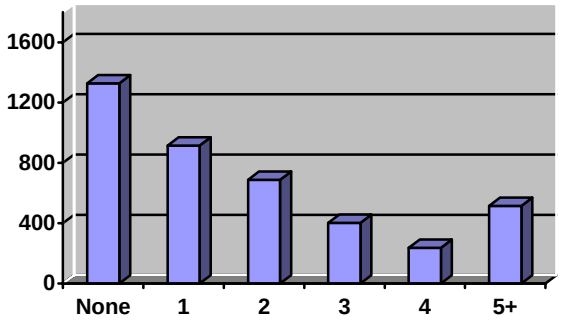

Figure 6: Methamphetamine Admissions X Prior Treatment
01/01/03-12/31/03

Figure 7 displays statewide TEDS admissions for primary abusers of methamphetamines from 1995 through 2003. The figure shows a marked increase in the number of admissions due to the abuse of this substance. In 1995, there were 980 admissions for the primary abuse of methamphetamine. In 2003, there were 4082 admissions statewide. This represents an increase of 317% over eight years.

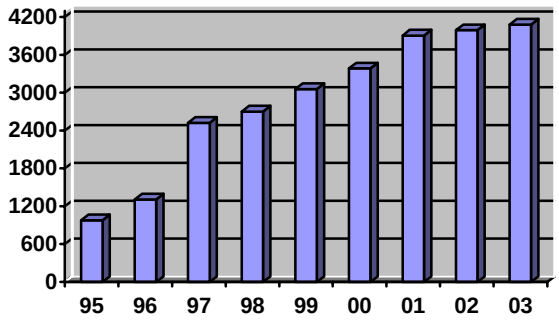

Figure 7: Statewide Methamphetamine Admissions X Year
01/01/95-12/31/03

The Drug Abuse Warning Network (DAWN) is an annual, national survey of hospital emergency departments (EDs) focusing on ED episodes involving illicit drugs or legal drugs used in a non-medical manner. The number of ED mentions involving methamphetamine for the St. Louis Metropolitan area are provided in **Figure 8**. These estimates cover the period from 1995 through 2002 and show a significant increase of 97.4% in the number of ED mentions involving methamphetamine. The number of mentions increased from 76 in 1995 to 150 in 2002.

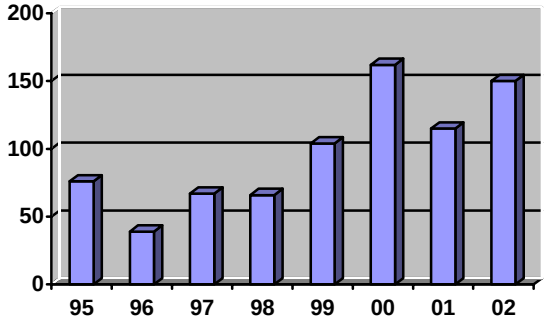

Figure 8: Methamphetamine in St. Louis ED Mentions X Year

In 2003, there were over 16,000 methamphetamine laboratory incidents recorded nationally. Missouri had the distinction of recording the highest number of laboratory incidents, which include laboratories, chemical/equipment/glassware seizures, and dumpsites that have been received by the Missouri State Highway Patrol for entry into EPIC's CLSS. Missouri's total of 2860 incidents was more than Iowa (1240), California (1239), Indiana (905), Oklahoma (894), Washington (894), Tennessee (822), Illinois (745), Arkansas (713), and Kansas (614).

Methamphetamine treatment

The Missouri Division of Alcohol and Drug Abuse will refer persons needing help to community treatment agencies throughout the state. A description of these services follows.

Missouri Department of Mental Health, Division of Alcohol and Drug Abuse Treatment Services

Detoxification
In the first step to recovery, detoxification, the individual is assisted in withdrawing from alcohol or drug addiction in a safe, supportive environment.

Residential Rehabilitation
In a residential treatment program, a person receives around-the-clock care, seven days a week. Rehabilitation includes assessment, individual and group counseling, family counseling, participation in self-help groups, and other supportive measures designed to help a person live an alcohol and drug-free life.

Outpatient Rehabilitation
Persons whose substance abuse is less severe or chronic do not require residential settings for treatment. Outpatient rehabilitation also is designed for persons who have graduated from residential programs and need follow-up and after-care services, counseling, and referral to support groups.

CSTAR
The Comprehensive Substance Abuse Treatment and Rehabilitation Program (CSTAR) is a unique approach to substance abuse and addiction treatment. It offers a flexible combination of clinical services, living arrangements and support services that are individually tailored for each client. The CSTAR model was developed by Missouri's Division of Alcohol and Drug Abuse and is funded by Missouri's Medicaid program and the Division's purchase-of-service system. In the past, inpatient or residential treatment temporarily removed a person from the problem environment with little or no follow-up care. CSTAR focuses on providing a complete continuum of recovery services, including extended outpatient services, in the community and, where possible, close to home.

CSTAR Women's Treatment Programs
Substance abuse affects women differently than men, both physically and psychologically. Single women, pregnant women and women with children may enter specialized women's CSTAR treatment programs. These programs provide a complete continuum of treatment services and housing supports tailored to the unique needs of women and children. CSTAR Alt-Care Program is a specifically designed CSTAR program for female offenders.

CSTAR Adolescent Treatment Programs
Early intervention, comprehensive treatment, academic education, and aftercare are important in averting chronic abuse and accompanying problems that might otherwise follow a young person for a lifetime. The specially trained staffs of adolescent CSTAR programs utilize individual, group and family interventions.

Oxford Houses

Oxford House is a network of self-run, self-supported recovery houses. Each house is chartered by Oxford House, Inc. In order to be considered for a charter, each house abides by three basic rules. The house evicts anyone who relapses, the house is financially self-sufficient, and the house is democratically run by the members themselves. Oxford House provides a safe, supportive, and secure place to call home. It is a place where individuals can make the behavioral changes necessary to ensure continued sobriety. The division helps foster Oxford House development throughout the state.

Drug courts and methamphetamine

The original goals for drug court are to reduce recidivism and drug use. Missouri is currently developing about 48 drug courts and has 70 drug courts in current operation. The drug courts are a cooperation and teaming of the legal system with treatment to decrease crimes committed by addicted persons and drug crimes. It is a long-term involvement in addressing the addict's behavior. This approach had shown some tremendous outcomes. For example, recidivism rates have been less than 10 percent and 70 percent of all those that enter drug court remain or are still involved. This is more than double the retention rate in traditional substance abuse treatment approaches. This information is from the booklet " Looking at a decade of drug court" prepared by the Drug Court Clearinghouse and Technical Assistance Project. It reports that drug courts are effective with polysubstance abusers. In addition, it reports nationwide, over 50 percent of the drug courts identified methamphetamine addiction as a problem in their area. A review of the courts providing urine drug screens showed 85 percent or more of the participants nation wide were testing clean. Recidivism rates nationwide range between 2 to 20 percent, this is dramatically lower than the average for offenders going through the traditional legal system approach.

Some of the latest studies have shown the damage methamphetamine does to the brain results in long term effects. Some recommendations to treat the methamphetamine addict involve keeping them engaged in treatment. According to NIDA the most effective treatments for methamphetamine addiction are cognitive behavioral interventions. Drug court methods incorporate a cognitive behavioral approach. Drug court is effective with methamphetamine addicts because it involves an addict being engaged in treatment for 12 months to two years, immediate response to negative behaviors and frequent random urine drug screens. Some of the general rules to remain in a drug court include abstinence, employment and no further crimes.

The National Center on Addiction and Substance Abuse (CASA) at Columbia University conducted a meta-analysis and critical review of drug court research and evaluations finding: "drug courts provide the most comprehensive and effective control of drug using offenders' criminality and drug usage while under the court's supervision". The CASA study also found that "drug courts provide closer, more comprehensive supervision and much more frequent drug testing and monitoring than other forms of community supervision. More importantly, drug use and criminal behavior are substantially reduced while the offenders are participating in drug court".

Comparisons of Methamphetamine Users to Others in Missouri's Publicly Funded Treatment System[1]

The Missouri Department of Mental Health with the Missouri Institute of Mental Health (Homer & Claus, 2003) conducted a set of studies of persons admitted to substance abuse treatment in our state. In the first study of persons admitted to treatment in Fiscal Year 2002, methamphetamine abusers were compared to other drug abusers. At discharge, there were little differences in completion rates and employment outcomes between the groups. In the second study, similar comparisons were made using data from persons participating in the TOPPS II study in Missouri. Results showed no group differences on the Addiction Severity Index on the alcohol, drug, employment and psychiatric domains at six and twelve months post-treatment intervals. These results were encouraging because of the common belief that methamphetamine abusers cannot be helped by treatment.

Epilogue

Drug abuse epidemiologists often identify the use of a drug in one part of the country and follow its use into other regions. Monitoring the patterns of use provides information to decision makers in other parts of the country with valuable information for developing policies and procedures designed to combat the effects of the drug before it reaches epidemic proportions. The widespread use of methamphetamine in our western states has allowed Missouri to become better prepared. There is much we have learned and much that we need to learn to effectively develop policies and procedures.

Knowledge gaps

The national methamphetamine task force sponsored by NIDA identified seven gaps in knowledge about preventing and treating methamphetamine use. These include:

> What are the specific psychosocial and pharmacotherapy treatment strategies that are effective in addressing the outreach, treatment engagement, and treatment retention and relapse prevention issues of methamphetamine users?
>
> Can standard chemical dependency treatment programs (and pharmacotherapies) be used to treat methamphetamine abusers, or do the programs need to be modified to address special needs/conditions?
>
> What is the impact of alternative media and community level interventions and what are the mechanisms by which they act (using randomized field trials)?
>
> Which forms of personal and social harm are associated with methamphetamine abuse and how can strategies to eliminate them be identified (i.e., to reduce their social cost)?
>
> To what extent can the study of island community outbreaks of methamphetamine abuse be applied to study the spread of the problem through larger populations?

> To what extent do the outbreaks of methamphetamine abuse in Japan and Sweden resemble those here in the U.S. and can we apply the knowledge gained from their experience to help prevent/treat the problem here? (SAMHSA, 1997, p. 35).

Recommendations for Missouri

NIDA Task Force Recommendations

The NIDA Task Force made four recommendations in its report:

Evaluate current research/contract programs at NIDA and determine how the above gaps can be filled by supplementing existing research endeavors, rather than relying on new initiatives, because the research grant avenue is too slow to respond to rapid developments of this nature.

Encourage comparative studies between cocaine and methamphetamine with the aim of determining if there are enough similarities to warrant using treatment strategies that have been developed for cocaine to combat methamphetamine.

Place an emphasis on studying the methods and rate at which methamphetamine abuse spreads through a micropopulation. This information could very well hold the key for curtailing the spread through larger populations.

Develop a method of communicating new information from the researchers to the clinicians who are treating the methamphetamine abusers. Standard methods of communication via scientific publications are too slow to keep up with rapidly emerging trends. Possible vehicles include teleconferences, cable TV stations, videotapes and technical reports. (SAMHSA, 1997, p. 35-36).

Missouri's Methamphetamine Initiative

As the number of methamphetamine labs seizures in Missouri began to rise dramatically in the mid-90's law enforcement officials quickly realized that additional resources were needed to effectively deal with the escalating problem. In October 1997, the late Governor Mel Carnahan hosted the first Governor's Methamphetamine Summit in Jefferson City. In this forum, law enforcement and other officials met to share ideas and develop strategies to combat methamphetamine. Areas of concern identified during the Methamphetamine Summit included the escalating costs of responding to and disposing of the chemicals associated with methamphetamine labs, the financial impact and unsafe storage of seized chemicals, the lack of information on cleanup available to property owners and a pressing need for improved health and safety training for law enforcement.

In 2004, Governor Bob Holden announced a new statewide initiative on methamphetamine education, prevention and treatment in Missouri and created, by executive order, two new task forces to bring new expertise and focus on prevention and treatment. In addition, Holden reorganized an existing task force to deal with the environmental challenges facing law enforcement officials and others who deal with hazardous materials related to methamphetamine control.

The new task forces, the Missouri Methamphetamine Education and Prevention Task Force and the Missouri Methamphetamine Treatment Task Force, will be comprised of specialists in the fields of education and treatment and will advise on the best practices in education and treatment.

Governor Holden also reorganized the existing Clandestine Lab Task Force and renamed it the Methamphetamine Enforcement and Environmental Protection Task Force, expanding its focus to issues dealing with officer and environmental safety.

Methamphetamines present unique dangers from other illegal narcotic drugs including the low cost to produce, extreme addictiveness, and the propensity to incite violent or paranoid behavior. Environmental damage resulting from the production of methamphetamine include chemical contamination of the air long after the methamphetamine has been produced, harming children, family members and law enforcement officials.

The Education and Prevention Task Force will address:

- Education of the use and danger of methamphetamine manufacturing, recognition and prevention
- Coordination of public and private resources; and
- Establishment of a central resource for information.

The Enforcement and Environmental Protection Task Force will address:

- Providing law enforcement a safe, legal, and effective place to temporarily store, manage, and dispose of methamphetamine lab chemicals
- Certification program to train law enforcement officers dealing with methamphetamine labs
- Personal protective equipment for law enforcement when dealing with hazardous chemicals.

The Treatment Task Force will:

- Promote research into best practice treatment approaches
- Increase the availability of training for treatment providers
- Support strategies to provide greater access to treatment services.

Missouri specific recommendations

Recommendations for Missouri are provided for monitoring indicators, collaboration, public information and prevention, and treatment.

Monitoring indicators

It is important to remember that alcohol, cocaine, and marijuana are still dominant in the state; methamphetamine abuse is increasing and gaining attention but is not at epidemic proportions as in California. Because use in Missouri is growing but still below levels of western states, the state should increase ongoing monitoring of key statewide indicators of use. Monitoring indicators allows policies to be developed in a specific rather than a blanket fashion. Many of the indicators of interest are readily available or collectible.

Indicators that should continued to be monitored are: treatment admissions, lab seizures, drug arrests, hospital admissions, drug purity levels, drug prices, and other indicators that are helpful for targeting efforts, especially by county, service area, and administrative region. Specific trends should be watched closely. For example, most users are in their twenties or thirties; however, we really do not have good information on the age of first use. If this indicator could

be tracked, we would know if this age were decreasing. Such information would be useful for targeting prevention and early intervention programming. Similarly, statewide information about use among persons recently arrested might provide input for developing drug court policies. This information is particularly important in rural areas where methamphetamine is more prevalent and where treatment resources are less accessible. The route which methamphetamine is administered is an important indicator to track. Because it can be snorted in powder form, injected, inhaled, or made into pills, it attracts a variety of users.

In Missouri, most of the persons admitted for treatment administered the drug intravenously. This has profound ramifications for HIV/AIDS prevention. The demographics of needle use and needle sharing should be examined. Missouri should become as serious about tracking methamphetamine abuse trends as it is about tracking HIV/AIDS and other diseases.

Missouri should also continue to monitor developments in other states and on the federal level. We can learn much from cities and states facing similar problems. Similarly, there is an increasing number of research studies and other materials being distributed on this subject. The division should continue its leadership role by making sure that these are identified and distributed to prevention, treatment, healthcare, and law enforcement workers.

Collaboration

Addressing the methamphetamine problem is not different than addressing other drugs. Collaboration among a wide range of people is needed. However, the methamphetamine problem is unique in a number of ways. The number of problems associated with its use and manufacture demand that prevention and treatment professionals develop collaborative relationships with law enforcement, healthcare, and other professionals.

San Diego County developed a special task force to bring together persons from diverse backgrounds to address its methamphetamine problem. It is important to include law enforcement personnel in any discussion of methamphetamine because of the high-level criminals involved in the large-scale manufacturing and trafficking of the substance. Also, law enforcement officials are knowledgeable about clandestine laboratories, arrests and drug seizures. This information could be helpful for targeting areas for prevention or outreach efforts. Courts provided the second most frequent referrals to treatment for those admitted to Missouri drug treatment agencies over the past year. Corrections officials could play an important role in getting probationers and parolees involved in treatment or support groups for methamphetamine abuse. It is also important to collaborate with health care administrators and providers. There are many negative health consequences associated with methamphetamine. Healthcare officials can provide information and education about these consequences. Also, health care providers may serve as gatekeepers for getting abusers into treatment. Especially in rural areas, these workers may be the first to see consequences of methamphetamine use and could play an important role in helping persons access drug treatment. In the past year, health providers were the fourth most frequent source of referrals for those admitted to treatment for methamphetamine abuse.

Because of the many chemical precursors that can be used to produce methamphetamine, there has been much emphasis on monitoring and controlling the sale of these reagents. A great deal of collaboration is necessary to carry out these efforts. Legislators are important for developing laws restricting the sale of "legal" chemicals that can be used in drug manufacturing. A major retail chain in Missouri has recently discontinued selling large quantities of pseudoephedrine

cold medicines and lithium batteries, key ingredients for clandestine production of methamphetamine. Collaboration among law enforcement, corrections, healthcare, education, pharmacies, chemical companies, and retail businesses is needed.

Public information and prevention

Public information efforts can be important for addressing methamphetamine abuse. Public information campaigns and prevention efforts targeted at areas with frequent treatment admissions and frequent lab seizures may provide the most efficient strategies for reaching persons at risk. The media may be a key tool in reaching the public and informing them about methamphetamine. Using standard public health channels, including the university extension network, provides quick access to the public. Teleconferences could be used to reach the rural market. Borrowing and adapting strategies developed for preventing cocaine abuse may be a useful short-term approach until methamphetamine-specific campaigns are developed.

Treatment

Knowledge dissemination efforts are important sources of information for treatment professionals in administrative and direct care positions. However, due to the urgency of the problem, it is impossible to wait for normal publication cycles to learn about new developments involving methamphetamine. Therefore, the use of teleconferences, telemedicine, cable TV, videotapes, special technical reports, multimedia, and other quicker methods for transferring knowledge are required. The use of telemedicine and teleconferences to reach treatment professionals should be considered due to the rural nature of the problem. It is also important to continue to identify, collect, and disseminate information about treatment such as the Matrix protocol and effective treatment approaches from other states. Working with rural healthcare workers, who may see the earliest signs of abuse, might be an effective means of getting persons into treatment. Similarly, working with law enforcement and corrections officials to facilitate access to treatment should be a high priority. Outreach efforts in areas of high clandestine lab seizures and high treatment admission rates help target limited treatment dollars. Research with clients to answer critical questions about age of first use, progression of use, time between first use and treatment, and needle use and sharing should be conducted to learn more about methamphetamine addiction.

Reference materials

The Missouri Institute of Mental Health has collected a packet of materials on methamphetamine. All of these materials are available at no cost on the internet or through the NCADI hotline at the addresses provided below.

Internet sites: National Institute of Drug Abuse's site list.
http://www.nida.nih.gov/NIDA Capsules/NCMethamphetamine.html

National Clearinghouse for Alcohol and Drug Information (NCADI)
P.O. Box 2345
Rockville, MD 20852
1-800-729-6686
TDD 1-800-487-4889
http://www.health.org

National Drug Information Treatment and Referral Hotline
1-800-662-4357

Missouri's Methamphetamine Initiative Website
http://www.missourimeth.org

Reference list

Center for Substance Abuse Prevention (CSAP). (1997). Methamphetamine/Ice. National Clearinghouse for Alcohol and Drug Information. Information packet #SLM100.

Community Epidemiology Work Group. (1997). Epidemiologic trends in drug abuse: Advance report. National Institute on Drug Abuse, June report.

Drug Enforcement Administration (1997). Illegal Drug Price/Purity Report, United States: January 1993 - June 1996. Drug Intelligence Report.

Homer, A. & Claus, R. (2003, March). Comparisons of methamphetamine users to others in Missouri's publicly funded treatment system. Presented at the State Data Infrastructure Meeting, Washington, D.C.

KC area steps up effort against key ingredient in making of street drug. St. Louis Post-Dispatch. (1997a, August 29). (page unknown).

Meth madness. Columbia Daily Tribune (1997, March 9). p. 1D.

"Meth" use among arrestees declines in western states. (1997b). Substance Abuse Letter, 3, 7.

Methamphetamine Strike Force (1996). The Solution to San Diego's Methamphetamine Problem: Prevention, Intervention, Treatment, Interdiction. San Diego Methamphetamine Strike Force Report.

Miller, M. A., & Kozel, N. J. (Eds.). (1991). Methamphetamine abuse: Epidemiologic issues and implications. National Institute on Drug Abuse, Research Monograph 115.

Missouri is “meth” melting pot, DEA says. St. Louis Post-Dispatch (1996, September 6). p.1 B.

National Institute on Drug Abuse. (1997). Monitoring the Future Study, 1975-1996. NIDA Capsules.

National Institute on Drug Abuse (2003, June). Epidemiologic Trends in Drug Abuse: Advance Report. Community Epidemiology Work Group.

Office of Applied Studies. (1997). Mid-Year Preliminary Estimates from the 1996 Drug Abuse Warning Network. Substance Abuse and Mental Health Services Administration. Drug Abuse Warning Network Series D-2.

Office of National Drug Control Policy. (1996). Pulse Check: National Trends in Drug Abuse.

Officer is treated for fumes after finding drug lab in van. St. Louis Post-Dispatch (1997b, May 18). p. 9C.

Poulsen, E. J., Mannis, M. J., & Chang, S. D. (1996). Keratitis in methamphetamine abusers. Cornea, 15, 5, 477-482.

Schuckit, M. A. (1996). Ma-huang (ephedrine) abuse and dependence. The Drug Abuse and Alcoholism Newletter. Vista Hill Foundation, 25, 5, 1-4.

Strategy is sought to battle meth use. Kansas City Star (1997, May 30). p. A 1.

SAMHSA. (1997). Proceedings of the National Consensus Meeting on the Use, Abuse and Sequelae of Abuse of Methamphetamine. San Juan, Puerto Rico.

SAMHSA. (July 1997). Preliminary Results from the 1996 National Household Survey on Drug Abuse. Office of Applied Studies.

Update on methamphetamine. (1997a). Substance Abuse Letter, 4, 8.

Wesson, D. R., Smith, D. E. & Steffens, S. C. (1992). Crack and ice: Treating smokable stimulant abuse. Hazelden Educational Materials, Center City, MN 55012-0176. ISBN 0-89486-822-5.

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