

**HELPING  
COMMUNITIES  
COMBAT  
CLANDESTINE  
METHAMPHETAMINE  
LABORATORIES**



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# Helping Communities Combat Clandestine Methamphetamine Laboratories



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Agency for Toxic Substances and Disease Registry



The American College of Medical Toxicology

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# Helping Communities Combat Clandestine Methamphetamine Laboratories

## Part A: An Educational Toolkit for Health Educators

# Introduction

## Background

The Society for Public Health Education (SOPHE) was founded in 1950 to provide leadership to the profession of health education and to promote the health of all people. SOPHE promotes healthy behaviors, healthy communities, and healthy environments through its membership, its network of local chapters, and its numerous partnerships with other organizations. SOPHE works with its members to stimulate research on the theory and practice of health education; support high-quality performance standards; advocate for policy changes and legislation that positively affect public health outcomes; and develop and promote standards for the professional preparation of health educators.

SOPHE is aware that the illicit production and use of methamphetamine—a highly addictive stimulant—has become a very serious public health problem in the United States. Methamphetamine (meth) is produced in foreign or domestic clandestine super labs, but it is also easily produced in small clandestine laboratories (meth labs), often referred to as mom-and-pop shops, with relatively inexpensive and readily available equipment and ingredients. Methamphetamine abuse and production not only leads to devastating medical, psychological, and social consequences for the user, it also leads to enormous and devastating public, environmental, and social health issues. The aftermath of methamphetamine abuse and production goes beyond the user to negatively affect all members of a community, including children, law enforcement, property owners, child welfare officials, health care professionals, and retailers.

## The Health Educator's Role

Health educators promote health and prevent disease, disability, and premature death through theory-based voluntary behavior change activities, programs, campaigns, and research. Health education is a public health service that is essential

in the performance of the three core functions of public health: assessment, policy development, and quality assurance. By focusing on prevention, health education reduces the financial and human costs that individuals, employers, medical facilities, insurance companies, and the nation would spend on health care and medical treatment.

Health educators can also play a role in raising awareness and rallying community support in the battle against meth. Health educators may be involved in activities such as the following:

- Assessing the extent of a local methamphetamine problem and existing efforts to combat the problem
- Working collaboratively with community members, leaders, and other professionals to plan, implement, and evaluate activities to either prevent a methamphetamine problem in the community or combat an existing problem
- Acting as a resource, advocate, and communicator to enable a community to address methamphetamine abuse and production at the local level

## “Helping Communities Combat Clandestine Methamphetamine Laboratories”

In an effort to address the important public health issue of clandestine methamphetamine laboratories (“clan meth labs”), SOPHE and the American College of Medical Toxicology (ACMT), with the support of the Agency for Toxic Substances and Disease Registry (ATSDR), joined together to develop this publication to provide health educators and other health care professionals with the information, resources, and guidelines available for addressing clan meth labs at the community level. This toolkit was created to maximize anti-meth efforts by synthesizing the information on meth and meth labs that is available from an overwhelming number of sources and locations and making it available in one comprehensive resource. Although “Part A: An Educational Toolkit for Health Educators” was designed and written with health educators in mind, we feel that it will be useful to a wide variety of professionals and community members working on meth-related issues. In Part A, you will find the following components:

- A **primer** about methamphetamine and clandestine methamphetamine laboratories, which provides basic facts and statistics about what meth is and its history, how it is abused, who uses it, its health effects on the user,

treatment for the user, how and where meth is made, the prevalence of meth labs, control of the problem, and effects on the community.

- **Information sheets** on a variety of community groups that may be affected by meth production. The information sheets provide educators with information about how meth and meth labs affect the respective group, what the group should know about meth and meth labs (i.e., key take-home messages), and the role of the group in community anti-meth efforts. The information sheets can be helpful to educators who may be working with or addressing these groups.
- A **Community action guide** that presents initiatives to unite and engage community members to work toward a goal of a safe, healthy, and drug-free community.
- A **Resource directory** that provides links to Web sites that have additional information about meth, meth labs, and community action.

“Part B: A Guide for Clinicians and Health Care Professionals Responding to Methamphetamine Lab Exposures” provides additional technical information on the clinical presentation, evaluation, and health effects of persons exposed to methamphetamine or the by-products of meth production.

In Part B, you will find the following components:

- **Acute Methamphetamine Toxicity: A Guide for Clinicians**
- **Acute Methamphetamine Toxicity: A Guide for Emergency Providers**
- **Evaluation of Children Exposed to Methamphetamine Manufacture**
- **Environmental Considerations in Cleanup of a Clandestine Methamphetamine Laboratory**

We designed this publication to provide information, tools, and resources to increase awareness and knowledge about meth and its devastating consequences on communities and to help communities create and implement initiatives to reduce meth’s impacts. This kit, or any combination of the components within, can be used independently or in conjunction with other efforts. Users of the kit can easily customize any of the components to meet the needs and goals of their organization and local community.

We hope that you find this toolkit inviting and easy to use for enhancing your awareness of the issues surrounding meth production and use and for educating a

variety of groups about meth and its impact on the community. The ultimate goal is to provide you with the materials you need to mobilize your community in the fight against methamphetamine.

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part A: An Educational Toolkit for Health Educators**

**Primer on Methamphetamine and  
Clandestine Methamphetamine  
Laboratories**

This primer provides a condensed version of the information on methamphetamine (“meth”) and clandestine methamphetamine laboratories (“meth labs”) that is available from an overwhelming number of sources and locations. We hope that this information will help you and your community to become better informed about this national public health problem.

**What Is Methamphetamine?**

Methamphetamine is an illegal, highly addictive central nervous system stimulant. The Federal Drug Enforcement Administration (DEA) has classified it as a schedule II stimulant, which means that it has a high potential for abuse and is available only through a single-use prescription. The medical uses for methamphetamine are limited and include treating narcolepsy, attention deficit disorder, and for short-term use to cure obesity. The doses for medical use are much lower than the doses typically abused.

The color and texture of methamphetamine can vary. It is usually white, slightly yellow, or even brown, depending on the purity. The drug is a bitter-tasting, odorless, crystal-like powdered substance that sometimes comes in large rock-like chunks. When the powder flakes off the rock, the shards look like glass. Methamphetamine can also be clear, chunky crystals (called crystal methamphetamine) or in the form of small, brightly colored tablets.

There are many street names for methamphetamine, varying by location in the United States. Some of these names are “tina,” “speed,” “rock,” and “chalk.” In its

smoked form, it is often called “ice,” “crystal,” “crank,” and “glass” (Office of National Drug Control Policy [ONDCP], 2006b).

## How Is Methamphetamine Abused?

Methamphetamine can be injected, smoked, snorted, or ingested orally. The preferred method of methamphetamine abuse can vary by geographical region and change over time. People abuse the drug for its euphoric effects. Methamphetamine users have reported feeling energetic and powerful, but a “crash” inevitably follows the “high.” To avoid the crash, users take more methamphetamine. Tolerance develops rapidly, leading to addiction in a relatively short time.

## Who Uses Methamphetamine?

Individuals from a variety of age groups, lifestyles, and neighborhoods use methamphetamine. Users range from curious teens, college students attracted by the drug’s reputation for increasing energy and sexuality, truck drivers and shift workers who use the drug to keep alert for extended periods, and girls and women who view it as a way to lose weight.

Data from the 2005 National Survey on Drug Use and Health (NSDUH) show

- In 2005, an estimated 1.3 million persons aged 12 or older had used methamphetamine in the past year; an estimated 556,000 of these were female and 741,000 male.
- In 2005, the rates for past-year use of methamphetamine were 0.7% for users age 12–17, 1.5% for users age 18–25, and 0.3% of users age 26 and older.
- Combined data from 2002 to 2005 indicate that persons in the West (1.2%) were more likely to have used methamphetamine in the past year than persons in the Midwest (0.5%), South (0.5%), and Northeast (0.1%); these findings were consistent for both females and males.
- Combined data from 2002 to 2005 indicate that persons in large metropolitan areas (0.5%) were less likely to have used methamphetamine in the past year than persons in small metropolitan (0.7%) and nonmetropolitan areas (0.8%) (Substance Abuse and Mental Health Services Administration [SAMHSA], 2007).

Results from a study in the July 2007 issue of *Addiction* (Iritani, Halifors, & Bauer, 2007) present a new perspective on crystal methamphetamine use among young adults in the United States. Past-year use was higher than the 2005 NSDUH had estimated. In the 2007 study, approximately 2.8% of young adults (18–26 years of age) reported past-year crystal methamphetamine use in 2001–2002. This estimate is considerably higher than the 2005 NSDUH (which used combined data from 2002 to 2005) past-year methamphetamine prevalence estimate for young adults (1.5%), even when taking into account the slightly younger age grouping and the measurement of all methamphetamine use (not just crystal methamphetamine) in the NSDUH. Other findings from the 2007 study indicate the following:

- Young adult users are disproportionately White males living in the Western United States.
- Crystal methamphetamine use among Native Americans is strikingly high (12.8%).
- Crystal methamphetamine users tend to have lower socioeconomic status and are more likely to use other licit and illicit substances; male users are more likely to have had incarcerated fathers.
- There is an association between crystal methamphetamine use and criminal behavior as well as sexual risk behaviors.
- Most people who use crystal methamphetamine are occasional users; only a small proportion appears to be frequent or persistent users.
- Thirty-day prevalence among young adults (1.3%) was about half the prevalence of past-year use, and more than one third of those who had used it in the past month had not used it more than once.

## What Are the Effects of Methamphetamine?

Methamphetamine is a central nervous system stimulant. It has a chemical structure similar to the neurotransmitter dopamine, which stimulates brain cells, enhancing mood and body movement. The release of large amounts of dopamine produces the high but also leads to permanent brain damage. As methamphetamine destroys the natural dopamine production sites in the brain, the user becomes even more reliant on the drug for pleasure.

Immediately after smoking or injecting methamphetamine, the user experiences an intense, extremely pleasurable sensation, called a “rush” or “flash,” that lasts only



a few minutes. (Snorting or swallowing methamphetamine produces euphoria—a high, but not a rush.) Following the rush, there is typically a state of high agitation that can lead to violent behavior. Other possible immediate effects include increased wakefulness and insomnia, decreased appetite, irritability and aggression, anxiety, nervousness, and convulsions.

Methamphetamine is highly addictive, and users can develop a tolerance quickly. The need for larger amounts of methamphetamine to get the high can cause users to forgo food and sleep to take more methamphetamine every few hours for days, bingeing until they run out of the drug or become too dysfunctional to continue using. Chronic use can cause paranoia, hallucinations, repetitive behavior (such as compulsively cleaning and grooming or disassembling and assembling objects), and delusions of parasites or insects crawling under the skin. Users can obsessively scratch their skin to rid themselves of these imagined insects. Long-term use, high dosages, or both can induce full-blown toxic psychosis. This behavior is usually coupled with extreme paranoia. Methamphetamine can also cause strokes, heart attack, and death.

Injection of methamphetamine is associated with skin rashes (commonly called “speed bumps”) and infections at the injection site. Sharing needles can spread hepatitis and HIV. These diseases are further spread through unprotected sex, a common activity of methamphetamine addicts.

Methamphetamine reduces the amount of protective saliva around the teeth. Users also consume excess sugary, carbonated soft drinks (in an attempt to relieve dry mouth); tend to neglect personal hygiene; grind their teeth; and clench their jaws, leading to what is commonly called “meth mouth.” Teeth can eventually fall out of the users’ mouths.

## **What Are Effective Treatments for Methamphetamine Abusers?**

Methamphetamine addiction is treatable. From 1995 to 2005, the number of drug treatment admissions in which methamphetamine was the primary drug of abuse increased from 47,695 to 152,368. Methamphetamine admissions represented 2.8% of all drug and alcohol treatment admissions during 1995 and 8.2% in 2005. The average age of those admitted to treatment for methamphetamine or amphetamine during 2005 was 31 years (SAMHSA, 2006).

Treating methamphetamine addiction presents unique challenges. Upon entering treatment, a user may

- Require several nights of good sleep, since users have often been awake for days.
- Be more agitated and have a very short attention span during the first month and have a very short attention span.
- Have psychiatric problems such as delusions or extreme agitation.
- Have physical problems, such as wounds, seizures, and advanced tooth decay.
- Require longer treatment than they might from an addiction to another substance” (The Partnership for a Drug-Free America, n.d.).

As reported in the literature, ”the most effective treatments for methamphetamine addiction are behavioral therapies such as cognitive behavioral and contingency management interventions. For example, the Matrix Model, a comprehensive behavioral treatment approach that combines behavioral therapy, family education, individual counseling, 12-Step support, drug testing, and encouragement for non drug-related activities, has been shown to be effective in reducing methamphetamine abuse. Contingency management interventions, which provide tangible incentives in exchange for engaging in treatment and maintaining abstinence, have also been shown to be effective.

There are currently no specific medications that counteract the effects of methamphetamine or that prolong abstinence from and reduce the abuse of methamphetamine by an individual addicted to the drug. However, there are a number of medications that are FDA-approved for other illnesses that might also be useful in treating methamphetamine addiction. Recent study findings reveal that bupropion, the anti-depressant marketed as Wellbutrin, reduced the methamphetamine-induced “high” as well as drug cravings elicited by drug-related cues. This medication and others are currently in clinical trials, while new compounds are being developed and studied in preclinical models”(National Institute on Drug Abuse, 2006).

## History of Methamphetamine

Methamphetamine was developed early last century from its parent drug, amphetamine. Methamphetamine differs from amphetamine in that it is a more potent stimulant drug (i.e., at comparable doses, higher levels of methamphetamine enter

the brain) and has longer lasting and more harmful effects on the central nervous system.

A brief history of methamphetamine is as follows:

- Amphetamine was first synthesized in 1887 in Germany.
- Methamphetamine was first synthesized in 1919 in Japan. The crystalline powder was soluble in water, making it a perfect candidate for injection.
- Amphetamine wasn't synthesized until the late 1920s.
- In the 1920s amphetamine was investigated as a cure or treatment against nearly everything from depression to decongestion.
- Abuse of amphetamine began during the 1930s, when it was marketed under the name Benzedrine and sold in an over-the-counter inhaler.
- By 1937 amphetamine was available by prescription in tablet form.
- During World War II and the Vietnam War, the United States widely distributed amphetamines to soldiers to combat fatigue and improve both mood and endurance. After the war physicians began to prescribe amphetamines to fight depression.
- In Japan, intravenous methamphetamine abuse reached epidemic proportions immediately after World War II, when supplies stored for military use became available to the public.
- In the United States in the 1950s, legally manufactured tablets of both dextro-amphetamine (Dexedrine) and methamphetamine (Methedrine) became readily available and were used nonmedically by college students, truck drivers, and athletes. As use of amphetamines spread, so did their abuse. Methamphetamine is still legally produced in the United States, sold under the trade name Desoxyn (methamphetamine hydrochloride in tablet form).
- In the 1960s there was an increase in the availability and use of injectable methamphetamine.
- Amphetamine use began to decline in the 1970s due to U.S. Food and Drug Administration scheduling of the drug and increased public awareness of its dangers.
- The restriction of legal production of injectable methamphetamine led to the emergence of underground production facilities.
- Although many of these secret or clandestine laboratories, primarily located on the west coast, were small mom-and-pop operations, the amphetamine trade was historically dominated by outlaw motorcycle groups.
- During the 1990s, the popularity of crystal methamphetamine, a smokable form of methamphetamine commonly referred to as "ice," began to increase in the United States.
- In addition to the traditional local mom-and-pop laboratories, in 1995 Mexico-based trafficking groups began to enter the methamphetamine market.
- Since the 1990s clandestine mom-and-pop laboratories have continued to spread eastward.

The widespread availability of methamphetamine today is largely fueled by illicit production in large and small clandestine laboratories throughout the United States and illegal production and importation from Mexico.

## **How and Where Is Methamphetamine Made?**

Methamphetamine is made, or “cooked,” in domestic and foreign clandestine super labs and small labs. Clandestine super labs are larger labs that are permanently set up and can produce up to 100 lb of methamphetamine per cook. Clandestine small labs are portable labs and produce small quantities of methamphetamine. These labs are commonly referred to as mom-and-pop labs or “Beavis and Butthead” labs.

Methamphetamine is made with readily available and inexpensive items and ingredients. There is nothing secret about the means of making methamphetamine. Methamphetamine “recipes” can be easily obtained through the Internet or by associating with other cooks. There are hundreds of chemical products and substances that are used interchangeably to produce methamphetamine, which adds to the challenge of accurately assessing the risks of exposure and the most effective method of response. The substitution of one chemical for another in the recipes may also cause the cooking process to become more hazardous (resulting in fire or explosion) or may result in a final product that is tainted with unwanted or additional dangerous side effects.

Every methamphetamine recipe starts with over-the-counter medications that include pseudoephedrine or ephedrine in their contents. The pills are crushed and mixed with other chemicals in the cooking process. Various recipes include combinations of volatile organic compounds (VOCs), acids, bases, metals, solvents and salts. Making methamphetamine with these chemicals can result in explosions, chemical fires, and the release of toxic gases. Methamphetamine cooking also produces solid and liquid wastes that can contaminate a building and its contents, or the groundwater or soil where they are dumped.

Some of the ingredients and equipment used to make methamphetamine follow:

- Pool acid/muratic acid
- Lye
- Acetone
- Brake fluid
- Brake cleaner
- Iodine crystals
- Lithium metal/lithium batteries
- Lighter fluid
- Drain cleaners (e.g., Drano or Liquid Fire)
- Cold medicine containing pseudoephedrine or ephedrine
- Ethyl ether (in engine starting fluid)
- Anhydrous ammonia (stored in propane tanks or coolers)
- Sodium metal
- Red phosphorus
- Laboratory glassware
- Coffee filters

## Where Are Meth Labs Located?

Methamphetamine can be produced at any time and in any place (e.g., homes, motels, hotels, sheds, and cars). No neighborhood is immune from the problem of meth. All that is required to set up a lab is a little privacy (e.g., cooks may deny access to landlords, neighbors, and other visitors; windows may be covered or blacked out; and cameras or monitors may be installed outside the building). Additionally, “law enforcement reporting indicates that methamphetamine laboratories have been discovered on federal lands throughout the United States. Methamphetamine laboratories often are discovered in or near caves, cabins, recreational areas, abandoned mines, and private vehicles located on or adjacent to federal lands” (National Drug Intelligence Center [NDIC], 2005).

## What Is the Prevalence of Meth Labs?

Law enforcement pressure, public awareness campaigns, and increased regulation of the sale and use of precursor and essential chemicals for methamphetamine production has resulted in a decrease in methamphetamine production in small-scale laboratories since 2004. Additionally, restricted importation of bulk pseudoephedrine from Canada since January 2003 has resulted in significant declines in the number

of domestic methamphetamine super labs (i.e., those laboratories that produce large volumes of methamphetamine for wholesale). National Clandestine Laboratory Seizure System data show that the overall number of reported methamphetamine laboratory seizures nationwide has decreased 42%, from 10,015 in 2004 to 5,846 in 2005. Preliminary data indicate that this trend has continued in 2006. The numbers of laboratory seizures will most likely decrease further as more states implement restrictions on products used in the production of the drug (NDIC, 2006).

## **Controlling the Methamphetamine Problem**

Federal and local law enforcement help control the methamphetamine problem. The Drug Enforcement Administration (DEA) reported 6,090 methamphetamine-related arrests during 2005, up from 5,893 in 2004 and 6,055 in 2003 (NDIC, 2006). During fiscal year 2006, there were 5,395 federal defendants sentenced for methamphetamine-related charges in U.S. Courts. Approximately 98% of the cases involved methamphetamine trafficking (U.S. Sentencing Commission).

Additionally, federal, state, and local legislation help control the problem. An overview of the federal legislation follows:

- The DEA classified methamphetamine as a schedule II narcotic under the Controlled Substances Act (1970).
- The Comprehensive Methamphetamine Control Act of 1996 broadened the controls on listed chemicals used in the production of methamphetamine, increased penalties for the trafficking and manufacturing of methamphetamine and listed chemicals, and expanded the controls of products containing the licit chemicals ephedrine, pseudoephedrine, and phenylpropanolamine.
- The Children's Health Act of 2000 included provisions for dealing with methamphetamine prevention, production, enforcement, treatment, and abuse.
- The Combat Methamphetamine Epidemic Act of 2005 was the first step in enacting a nationwide measure to require that drugs containing ephedrine, pseudoephedrine, and phenylpropanolamine be kept behind pharmacy counters and require the identification and signature of the buyer before allowing purchase. The act also limited purchases to 3.6 g of products containing pseudoephedrine or ephedrine within a 24-hour period and no more than 9 g per 30-day period. The legislation also added further restrictions on

the impact of methamphetamine precursor chemicals through increased accountability to federal regulators at all points of distribution and enhanced penalties for persons manufacturing methamphetamine in areas where children reside.

- The USA PATRIOT Improvement and Reauthorization Act of 2005 included provisions to strengthen federal, state, and local efforts to combat the spread of methamphetamine.
- The Methamphetamine Remediation Research Act of 2005 authorized research by the Environmental Protection Agency and the National Institute of Standards and Technology on how best to clean former methamphetamine laboratories and to set guidelines on who should be responsible for the cleanup of the methamphetamine laboratories.

Although the Combat Methamphetamine Epidemic Act is effective nationwide, state laws, which vary widely in content, are concurrently in effect. In 2004, Oklahoma implemented restrictions on transactions involving products containing certain chemicals (primarily, ephedrine and pseudoephedrine) that can be used to make methamphetamine. By early 2006, more than 40 states had implemented some type of new restriction on retail transactions involving these products (ONDCP, 2006a).

In the fight against methamphetamine, legislation continues to be introduced and passed, and law enforcement continues to make arrests and seizures. Additionally, federal and state organizations, agencies, and departments have taken steps to combat the methamphetamine problem. The government is spending federal funds to fight the war on drugs. It is filtering federal funds to the state and local levels for substance abuse prevention and treatment and to advance community policing.

## **Effects of Methamphetamine on a Community**

Methamphetamine is extremely dangerous to the user, but it has an even greater destructive potential for a community. Methamphetamine can affect all members of a community. Property owners, landlords, and real estate agents face consequences of meth production such as property damage or loss and decrease in property value; law enforcement is confronted with an increase in crime rates and, along with first responders, an increase in personal health and safety risks; health care professionals must respond to an increase in emergency room visits by cooks and users, in cases of meth overdoses, in visits by first responders exposed to meth lab hazards, and in



burns and injuries caused by meth lab fires or explosions; and child welfare officials have to respond to an increase in child abuse and neglect cases. Overall, the impacts on a community may include the following:

- Increase in crime, such as burglary, identity theft, violence, and drug trafficking.
- Financial and resource strain on law enforcement to combat methamphetamine-related crime and cleanup of meth labs.
- Financial and resource strain on health care systems. Health care facilities see an increase in emergency room visits, individuals with burns and respiratory damage, children with methamphetamine-related injuries and medical and behavioral problems, the spread of infectious diseases such as hepatitis and HIV, the need for dental care (treatment of “meth mouth”), and the need for addiction treatment programs.
- Financial and resource strain on child welfare agencies. Child welfare agencies see an increase in the number of neglected, abused, and orphaned children needing services as a result of living with adults who abuse and produce methamphetamine.
- Environmental harm. A methamphetamine laboratory generates five to six pounds of hazardous waste for each pound of methamphetamine produced. Methamphetamine cooks routinely dump the toxic waste into streams, rivers, fields, backyards, and sewage systems, posing immediate and long-term environmental health risks. Poisonous vapors produced during the cooking process permeate the furnishings and structure of houses and buildings, often making them uninhabitable.
- Environmental remediation. Cleaning up a methamphetamine laboratory and its surrounding environment becomes a federal, state, local, and individual liability (e.g., property owners and rental landlords).
- Increase in unemployment, workers’ compensation costs, insurance rates, and losses in employee productivity.

Additional information on the various ways meth and meth labs affect community members is available in the Information Sheets section of this toolkit.



## Summary

Methamphetamine is a man-made central nervous system stimulant that can be swallowed, snorted, injected, or smoked and has a high potential for abuse and addiction. Meth is illegally produced in domestic and foreign clandestine laboratories with commonly found ingredients that are toxic and volatile. Meth use and production knows no boundaries—geographic, economic, or ethnic—and has a severe and costly impact on the health and safety of users, their families, and communities. There is hope as we see effective treatment models for people struggling with meth addiction; law enforcement and legislation efforts taking root at the state, national, and international levels; and the creation and implementation of community action to fight back against meth at the local level.

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## Helping Communities Combat Clandestine Methamphetamine Laboratories

### Part A: An Educational Toolkit for Health Educators

# Information on Property Owners, Landlords, and Real Estate Agents

## Methamphetamine's Impact on Property Owners, Landlords, and Real Estate Agents

Clandestine methamphetamine laboratories (clan meth labs) and dump sites for by-products from methamphetamine (meth) production can be found anywhere and everywhere in rural, urban, and suburban areas—outdoors or in houses, apartments, trailers, storage sheds, barns, hotels, motel units, and even cars—and they significantly affect large and small property owners, landlords, and real estate agents in the following ways.

### ***Personal Safety and Safety of Others***

A typical meth lab consists of readily available equipment (e.g., bottles, hoses, glass jars, and tubing); toxic, poisonous, and volatile products (e.g., muratic acid, lye, brake fluid, drain cleaners, ethyl ether, anhydrous ammonia, and red phosphorus); and over-the-counter cold medicines containing ephedrine or pseudoephedrine. The use of hazardous chemicals in the production, or “cooking,” of meth can cause explosions and fires, give off poisonous fumes, and create toxic waste contamination in the environment.

Additionally, the meth cook and user pose a threat to personal safety. Meth users often exhibit paranoid or delusional behavior. As a result, meth users may possess weapons, set booby traps to cause harm to someone entering the lab, or have vicious dogs ready to attack an intruder. Meth users also may exhibit aggressive and violent behavior. The health and safety of not just the cook is at risk; anyone living in the meth lab (especially children), first responders and law enforcement agents, neighbors, and anyone who enters the property are also at risk.

## ***Property Damage and Decrease in Property Value***

The consequences of meth production include damage of varying degrees or possibly even total destruction of the property. Vapors from the chemicals used to cook meth can permeate the structure and any furnishings found on-site. Meth cooks rarely take safety precautions; consequently, fire and explosions are common at meth lab sites. Every pound of cooked meth produces five to six pounds of toxic waste that often contaminates surrounding buildings, surface water, wells, land, and air. Very often cooks dump the toxic waste into septic systems or streams or into the plumbing at motels or rental homes. Property owners or landlords can be left with a property of little value. The presence of a former lab might also adversely affect the value of the property, not just from actual contamination, but from the stigma arising from a perception that the property is damaged.

A meth lab can present a major complication for real estate transactions. Some states may require sellers of residential property to disclose certain environmental problems but may not require the specific disclosure that a meth lab was found on the property. Other states may prohibit transfer of property where illegal drugs were manufactured unless officials determined the site was fit for use or, if not fit for use, unless the seller has made full written disclosure to the prospective purchaser.

## ***Liability and Litigation***

When a meth lab is discovered on a property, the property owners face a host of legal and financial obligations and costs. Property owners are obligated to pay for the cleanup (i.e., remediation) of a meth lab found on their property. In addition, federal and state environmental laws may come into play. Liability also can arise under statutory or common-law nuisance and negligence. Either a local government or neighbors of a meth lab can bring an action to declare a property a nuisance, seek an injunction, require abatement, and collect damages. Where a meth lab affects an apartment building or mobile home park, tenants who are dispossessed by an order to decontaminate could have claims against the landlord under landlord-tenant statutes, including claims for termination of the lease and refunds for any diminished rental value of the property. Furthermore, tenants might have claims for negligence against a landlord for other damages they may incur, such as health effects from exposure to meth lab chemicals.

## **Key Information Relevant to Property Owners, Landlords, and Real Estate Agents**

### ***Property owners and landlords should***

- Have rental applicants complete a rental application.
- Conduct a thorough background check of the applicant, including a criminal background check.
- Meet each rental applicant and require picture identification.
- Take note of any suspicious appearances or behaviors of the applicant (e.g., paranoia or nervousness, poor personal hygiene, extremely thin, or noticeable scabs or rashes).
- Require a lease.
- Obtain a damage deposit.
- Look around the property regularly, taking note of any signs of a meth lab or other illegal activity.
- Announce their intention to visit the property regularly.
- Ask neighbors to help monitor the property.
- Watch for theft of anhydrous ammonia (particularly relevant to farmers or field owners).

### ***Hotel and motel managers and owners should***

- At registration, be aware of individuals who pay with large amounts of cash, are local residents, have no photo identification, or appear to be using drugs.
- Implement security and employee training to ensure that visitors use the main entrance and that employees cancel lost keys immediately, perform room checks daily, and walk the halls and building perimeter (applies to security personnel).
- Talk with other motel owners nearby about any suspicious individuals.
- Know how to spot the signs of drug-related behaviors.
- Be aware of unusual chemical odors.

## ***Real estate agents selling a home should...***

Include a search for any evidence of meth lab activity as part of the pre-closing process. This search may include checking any available databases for lists of meth lab addresses and having environmental site assessors look for evidence of meth lab activity. The National Clandestine Laboratory Register Web site, located at <http://www.usdoj.gov/dea/seizures/index.html>, says it “contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites.” Real estate agents can also contact their local law enforcement and health department for information about meth lab activity.

## ***Signs of a Meth User***

If property owners, landlords, or real estate agents encounter an individual they suspect is using meth, they should not confront the individual. They should slowly and cautiously move away from the individual and find a safe place to call their local law enforcement department.

Some of the outward signs that an individual is using meth include the following:

- Teeth grinding
- Paranoia
- Scars or open sores
- Rotting teeth
- Extremely thin body (i.e., appears to be wasting away)
- Rapid speech
- Flushed or tense appearance
- Dilated pupils
- Bloodshot eyes
- Chemical odor on the breath
- Excessive sweating

### **Signs of a Meth Lab**

- Residence or other building structure with boarded up or blacked out windows
- Hoses or tubing running out of a residence or other building structure
- Extension cords running to outbuildings from a residence or other building structure
- Excessive trash (including items such as cold medicine packages, antifreeze and drain cleaner containers, coffee filters, batteries, duct tape, and glass beakers and containers) in or near a residence or other building structure
- Chemical odors (like cat urine, fingernail polish, ether, solvents, vinegar, or ammonia) in or near a residence or other building structure
- Extensive home or building security (e.g., cameras, monitors, fencing)
- Visible areas in the yard where chemicals have been dumped or spilled (such as dead, dying, or discolored grass and vegetation and stained soil)
- Increased or excessive activity in or around a residence or other building structure, especially at night (e.g., excessive amount—or more than would be expected—of foot and vehicular traffic coming and going from the location)
- Dark stains from chemicals in bathtubs, sinks, toilets, or on walls of a residence or other building structure

### **Encountering a Meth Lab: What to Do**

Property owners, landlords, or real estate agents should not enter an area that they think might be a meth lab. They should contact local law enforcement immediately.

If they have entered the property and discover a meth lab, they should **not** do any of the following:

- Touch anything in the lab
- Turn on any electrical power switches or light switches
- Turn off any electrical power switches or light switches
- Eat or drink in or around the lab
- Open or move containers with chemicals or suspected chemicals
- Smoke anywhere near the lab
- Sniff any containers

They should do the following:

- Decontaminate themselves  
*At a minimum, decontamination involves removing and disposing (in sealed plastic bags) of any exposed clothing, footwear, and other items on your body (e.g., watch, jewelry, wig, hearing aid, etc.) and washing your body thoroughly with a liquid soap and water solution (preferably with warm water). Remove and soak eyeglasses in a solution of liquid soap and water for 3 minutes and rinse them thoroughly with water. Replace contact lenses. Change into uncontaminated clothing and go to the nearest fire or police station or hospital with your contaminated clothing and other items in sealed plastic bags. Fire and police stations and hospitals can properly dispose of contaminated items and provide additional information about decontamination, if needed.*
- Call local law enforcement

### **Liability**

- Insurance generally does not cover meth lab cleanup costs, leaving the property owner responsible for covering this cost.
- Property owners, landlords, and real estate agents should find out what federal and state environmental laws may affect their situation. Visit the Environmental Protection Agency's Web site at <http://www.epa.gov/epahome/lawregs.htm> to find federal environmental laws. Click on "Where You Live" to access state and local information.
- The presence of a meth lab could affect tenants and neighbors. Liability can arise under statutory or common-law nuisance or negligence. Information and additional resources about the landlord–tenant law can be found on the Cornell University Law School Web site, located at <http://www.law.cornell.edu/wex/index.php/Landlord-tenant>.
- Real estate agents should know their state's laws for disclosure of information about a property. Information about real estate disclosure is available from your state's department of real estate (check your local phone listings or search the Internet). Another source of information about real estate disclosure is the U.S. Department of Housing and Urban Development Web site, located at <http://www.hud.gov/>.



## **The Cleanup Process**

Property owners, landlords, and real estate agents should not attempt to clean up the property themselves; it is not safe.

- Trained professionals—such as law enforcement or remediation contractors, who wear special protective gear and respirators—should conduct cleanup
- There is currently no official federal guidance or regulations on how to clean up a former meth lab property for reoccupation. Cleanup requirements vary by state and possibly even by county. It is important for property owners, landlords, and real estate agents to find out what their state recommends for preliminary assessment, decontamination, and confirmation assessment of the property. Some states have made their meth lab cleanup programs available on the Internet. Links to these programs are located at [http://www.dtsc.ca.gov/SiteCleanup/ERP/Clan\\_Labs.cfm#What\\_Are\\_The\\_Meth\\_Lab\\_Cleanup\\_Standards\\_And\\_Procedures](http://www.dtsc.ca.gov/SiteCleanup/ERP/Clan_Labs.cfm#What_Are_The_Meth_Lab_Cleanup_Standards_And_Procedures). State or local health officials are another source of information. To locate contact information for your state or local health official, you can visit the Web site of the Association of State and Territorial Health Officials at <http://www.astho.org/> and click on “State Links.” You can also visit the Web site of the National Association of County & City Health Officials at <http://lhadirectory.naccho.org/phdir/>. Click on your state and then click on the name of the health department closest to where you live.
- Property owners, landlords, and real estate agents should be aware of the cost of cleanup, which will vary by property size and other factors. Estimates for cleanup costs can range anywhere from \$2,000 to over \$150,000.

## **Role of Property Owners, Landlords, and Real Estate Agents in Community Action Efforts**

As a subgroup within the community, property owners, landlords, and real estate agents can provide information about the cost of the meth problem in decreases in property value, repair of property damage, and cleanup and remediation of the property and surrounding environment.

**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part A: An Educational Toolkit for Health Educators**

**Information on Community Leaders**

**Methamphetamine's Impact on Communities**

Methamphetamine (meth) may have already affected your community. If not, it is most likely on its way. At the same time as meth is hitting communities throughout the United States, many communities are facing budget cuts and dwindling resources. Law enforcement departments, health care facilities, and child welfare and public health agencies are struggling to do more with less funding. Meth use and production has a severe and costly impact on our homes, schools, workplaces, hospitals, child welfare agencies, law enforcement, and environment. Meth's impact on your community may include the following

- serious or potentially fatal health effects of meth use and production
- serious environmental and health consequences caused by meth labs and chemical dump site contamination
- increased demands on medical, public health and social services, jails, fire departments, and law enforcement agencies
- increased crime and violence, including theft, sexual assault, and homicide
- increased child abuse, neglect, and endangerment
- additional pressure on educators, parents, units of government, and communities as a whole.

**Recent Statistics**

- Data from the 2005 National Survey on Drug Use and Health showed 192,000 recent meth initiates (i.e., persons who used meth for the first time in the 12 months before the survey), and an estimated 1.3 million persons aged 12 or older had used meth in the past year (556,000 of these were female and 741,000 male). In 2004 there were 318,000 recent meth initiates, and 1.4 million people had used meth in the past year.

- El Paso Intelligence Center National Clandestine Laboratory Seizure System data show that the overall number of reported meth lab seizures nationwide was 5,846 in 2005. In 2004 there were 10,015 meth lab seizures nationwide.
- According to the National Clandestine Laboratory Database, the total of all meth clandestine lab incidents, including discovery of labs, dump sites, and chemicals, glass, and equipment, was 6,435 in calendar year 2006. In 2005 there were 12,484 lab incidents.

Although meth use and production is still a significant problem across the United States, the efforts and actions of the federal government, state and local governments, law enforcement departments, and other organizations and agencies throughout the United States are lessening the problem. But there is still a lot of work to be done to ensure that the statistics continue to improve.

## **Key Information Relevant to Community Leaders**

### ***Relevant Federal and State Legislation***

- The outcome of federal legislation supported by sustained law enforcement pressure has resulted, in part, in the sharp changes in the statistics identified above. Among the federal legislation in support of the fight against meth, the Combat Methamphetamine Epidemic Act of 2005 (CMEA) was the first step in enacting a nationwide measure to require that drugs containing ephedrine, pseudoephedrine, and phenylpropanolamine be kept behind pharmacy counters and require the identification and signature of the buyer before allowing purchase. The act also limited purchases to 3.6 g of products containing pseudoephedrine or ephedrine within a 24-hour period and no more than 9 g per 30-day period. The monitoring, control, and enforcement of the CMEA is now the responsibility of individual pharmacies.

Although the CMEA is effective nationwide, the state laws, which vary widely in content, are concurrently in effect. By early 2006, more than 40 states had implemented some type of new restriction on retail transactions involving these products. Preliminary data indicate that the numbers will quite likely decrease further as more states implement restrictions on transactions involving products containing certain chemicals (primarily ephedrine and pseudoephedrine) that can be used to make methamphetamine.

“Pushing Back Against Meth: Progress Report of the Fight Against Methamphetamine in the United States” is a report that “attempts to describe the various restrictions in all 50 States and compare them to the Federal CMEA standard implemented in September 2006.” The report is available at [http://www.whitehousedrugpolicy.gov/publications/pdf/pushingback\\_against\\_meth.pdf](http://www.whitehousedrugpolicy.gov/publications/pdf/pushingback_against_meth.pdf).

### **State Statistics**

The following are some Web resources for state statistics:

- DEA Maps of Meth Lab Incidents  
[http://www.dea.gov/concern/map\\_lab\\_seizures.html](http://www.dea.gov/concern/map_lab_seizures.html)
- Drug and Alcohol Services Information System  
<http://www.oas.samhsa.gov/dasis.htm>
- SAMHSA, Office of Applied Studies, State Data on Alcohol, Tobacco, and Illegal Drug Use and Mental Health  
<http://www.oas.samhsa.gov/statesIndex.htm>
- National Drug Threat Assessment 2007 (see regional summaries)  
<http://www.usdoj.gov/ndic/pubs21/21137/index.htm>
- DEA State Fact Sheets  
<http://www.usdoj.gov/dea/statistics.html>
- National Association of Counties—Meth Action Clearinghouse  
[http://www.naco.org/Template.cfm?Section=Meth\\_Action\\_Clearinghouse](http://www.naco.org/Template.cfm?Section=Meth_Action_Clearinghouse)

### **What Community Leaders Can Do to Help**

- Target areas of greatest need and allocate resources accordingly. As research has shown, neighborhoods suffering from high crime, delinquency, or vandalism are often susceptible to problems with drug abuse. For many community leaders, it is important to understand where crime is taking place in their communities and the programs and resources that are available to address it. The Office of Juvenile Justice and Delinquency Prevention’s Socioeconomic Mapping and Resource Topography (SMART) program is a geographic information system and Web-based mapping application that illustrates specific geographic areas of crime and delinquency and the nearby governmental and community resources that are available to prevent and control them. Please visit <http://smart.gismapping.info/smart/About.aspx> for more information and to register (at no charge) to access SMART.

- Support and participate in their local anti-meth coalition or task force and the activities and events it sponsors.
- Follow the lead of successful communities by working to
  - Restrict pseudoephedrine sales
  - Create a meth ordinance
  - Start meth education programs
  - Invest in meth treatment
  - Use drug courts to fight meth addiction and trafficking

## **Role of Community Leaders in Community Action Efforts**

It is important to include community leaders in any community action effort. Community leaders are, most likely, persons of influence. These individuals are in a position to soften any barriers to community action and to provide support to help ensure successful community action. Community leaders can help accomplish activities involving community resources, communicate messages to the community, and mobilize financial resources.

## Helping Communities Combat Clandestine Methamphetamine Laboratories

### Part A: An Educational Toolkit for Health Educators

# Information on Law Enforcement

**Note:** Your local law enforcement agents are likely to be quite knowledgeable about the methamphetamine (meth) problem in your community. It is also likely that they have received special training on meth users and methamphetamine laboratories (meth labs) and may have some crucial information to share that would help your efforts.

## Methamphetamine's Impact on Law Enforcement

Methamphetamine presents new challenges for law enforcement, including confrontation with a new breed of offenders, an increase in crime rates, and an increase in health and safety risks. Meth users can exhibit psychotic behavior such as paranoia, hallucinations, and delusions. As a result, meth users may possess weapons, set booby traps to cause harm to someone entering the lab, or have vicious dogs ready to attack an intruder. Meth users also may exhibit aggressive and violent behavior. Meth users will do anything to get their next fix. They often commit crimes—from petty theft to robbery and even murder—to obtain cash for their habit. Meth users can easily make their own drug in a makeshift lab following a recipe available on the Internet. The recipes vary, but they all use toxic, volatile chemicals that make the meth lab a health and safety hazard for law enforcement.

## Key Information Relevant to Law Enforcement

### **Health and Safety Risks**

The health and safety of law enforcement officers is a primary goal in any operation. Officers who inadvertently discover a meth lab or are called to respond to a meth lab incident should **not** immediately enter the meth lab. Officers should investigate to be sure that the lab is not set with booby traps. Additionally, officers should not enter a meth lab until they are properly equipped. Officers entering a meth lab before it has been properly ventilated and cleaned may experience shortness of breath, cough, chest pain, dizziness, lack of coordination, burns, and even death.

For additional, more detailed information on the clinical presentation, evaluation, and health effects of persons exposed to methamphetamine, refer to Part B of this toolkit: “A Guide for Clinicians and Health Care Professionals Responding to Methamphetamine Lab Exposures.”

Law enforcement departments should refer to the Drug Enforcement Administration’s (DEA) “Guidelines for Law Enforcement for the Cleanup of Clandestine Drug Laboratories” at <http://www.usdoj.gov/dea/resources/redbook.pdf>. The guidelines offer assistance to those responsible for administering and implementing meth lab cleanup programs. They provide guidance and recommendations to state and local agencies that want to participate in the DEA Clandestine Drug Lab Cleanup Program or for those who want to establish their own program.

As noted in the guidelines, law enforcement’s job is complete with: (1) removal of the evidence, chemicals, and contaminated apparatus; (2) posting of the notice at the site; and (3) written notification to the property owner, health department, and environmental agency. DEA or state and local agencies may fund removals. Remediation is not within the purview of the law enforcement agency seizing the lab. Remediation of the property is the responsibility, both legal and financial, of the property owner and should be conducted by environmental remediation contractors.

For additional information about the various hazards found at lab sites, refer to the Information Sheet on first responders.

### ***Signs That There May Be Meth Labs in the Community***

- Purchase or theft of large amounts of precursor chemicals that would be used to cook meth—such as antifreeze, lantern fuel, denatured alcohol, drain cleaner, and cold medicines containing pseudoephedrine—and additional materials used for meth production, such as glassware and coffee filters
- Residences or other building structures with boarded up or blacked out windows
- Hoses or tubing running out of residences or other building structures
- Extension cords running to outbuildings from residences or other building structures
- Excessive trash (including items such as cold medicine packages, antifreeze and drain cleaner containers, coffee filters, batteries, duct tape, and glass beakers and containers) in or near residences or other building structures

- Chemical odors (like cat urine, fingernail polish, ether, solvents, vinegar, or ammonia) in or near residences or other building structures
- Extensive home or building security (e.g., cameras, monitors, fencing)
- Visible areas in the yard where chemicals have been dumped or spilled (such as dead, dying, or discolored grass and vegetation and stained soil)
- Increased or excessive activity in or around residences or other building structures, especially at night (e.g., excessive amount—or more than would be expected—of foot and vehicular traffic coming and going from the location)
- Dark stains from chemicals in the bathtubs, sinks, toilets, or on walls of residences or other building structures

### **Special Training**

Law enforcement agencies should address the special training needs for proactively dealing with meth labs. The following organizations provide training for law enforcement:

- Institute for Intergovernmental Research—Methamphetamine Investigation Management Workshop  
Telephone: (850) 385-0600  
<http://www.iir.com/centf/meth.htm>
- DEA Clandestine Laboratory Training  
<http://www.usdoj.gov/dea/programs/training/part14.html>  
**Note:** Agencies need to contact their local DEA division. Please visit <http://www.usdoj.gov/dea/agency/domestic.htm> for information.
- U.S. Department of Justice, Office of Community Policing Services (COPS)—Tools for Combating Meth  
<http://www.cops.usdoj.gov/default.asp?Item=1645>

### **Ways to Combat the Meth Problem**

Law enforcement authorities can investigate meth-related crimes, arrest persons suspected of committing such crimes, develop cases against them, and work with prosecutors to bring these cases to trial. Because meth labs and meth waste sites are crime scenes, the primary responsibility for investigating, documenting, and cleaning up these sites has fallen on law enforcement authorities. Many law enforce-



ment officers assume additional responsibilities, on their own time and without compensation, out of a professional and personal concern for the well-being of their communities. Law enforcement officers often accept invitations to help educate community organizations (e.g., child protection agencies and sanitation companies) and schoolchildren about the dangers of meth; they assist in the formation of local coalitions or task forces against meth; and they participate in regional, state, and national efforts to address the meth crisis.

### **Costs for the Law Enforcement Departments**

Fighting the battle on meth is associated with high costs for law enforcement departments. These costs can arise from having to hire additional officers (e.g., because of an increase in criminal activity), properly train officers on meth users and meth labs, and purchase appropriate protective equipment that officers need to enter and clean up a meth lab. The equipment and training costs to meet Occupational Safety and Health Administration requirements cannot be avoided. Departments may be able to offset some costs by applying for federal funding (e.g., COPS FY 2007 Methamphetamine (Meth) Initiative). Law enforcement departments can find information about funding opportunities available through the U.S. Department of Justice COPS office at <http://www.cops.usdoj.gov/default.asp?Item=46>.

### **Role of Law Enforcement in Community Action Efforts**

Your local, county, or state law enforcement departments are good resources to help define the scope of the meth problem in your community and to assist in organizing and implementing community action activities (e.g., provide education about meth to school officials, students, and community organizations). Take the time to identify which agencies or personnel have previously been involved with any efforts on meth.

## Helping Communities Combat Clandestine Methamphetamine Laboratories

### Part A: An Educational Toolkit for Health Educators

# Information on First Responders

**Note:** First responders are likely to be quite knowledgeable about the methamphetamine (meth) problem in your community. It is also likely that they have received special training on meth users and methamphetamine laboratories (meth labs) and may have some crucial information to share that would help your efforts.

## Methamphetamine's Impact on First Responders

An epidemic of small-scale clandestine methamphetamine labs is creating a new hazard for first responders, which include law enforcement officers, fire fighters, and emergency medical workers. Meth can be made in any place and at any time. It is made from readily available toxic and volatile products and chemicals, over-the-counter cold medicines containing ephedrine or pseudoephedrine, and common items such as glassware, tubing, and coffee filters. The health and safety of first responders may be at risk from the meth “cook” and the chemicals and chemical by-products from meth production in the labs.

## Key Information Relevant to First Responders

### ***Clues to Help Identify a Possible Meth Lab***

- Residence or other building structure with boarded up or blacked out windows
- Hoses or tubing running out of a residence or other building structure
- Extension cords running to outbuildings from a residence or other building structure
- Excessive trash (including items such as cold medicine packages, antifreeze and drain cleaner containers, coffee filters, batteries, duct tape, and glass beakers and containers) in or near a residence or other building structure

- Chemical odors (like cat urine, fingernail polish, ether, solvents, vinegar, or ammonia) in or near a residence or other building structure
- Extensive home or building security (e.g., cameras, monitors, fencing)
- Visible areas in the yard where chemicals have been dumped or spilled (such as dead, dying, or discolored grass and vegetation and stained soil)
- Increased or excessive activity in or around a residence or other building structure, especially at night (e.g., excessive amount—or more than would be expected—of foot and vehicular traffic coming and going from the location)
- Dark stains from chemicals in the bathtubs, sinks, toilets, or on walls of a residence or other building structure

### ***Meth Lab Hazards***

#### **Physical Hazards**

- Dangerous meth users and others at the lab who may be armed or under the influence of methamphetamine
- Defensive systems, including explosive devices, unsafe mechanical or electrical security devices, or other alarm systems
- Vicious animals

#### **Chemical and Biological Hazards**

- Identified and unidentified chemicals that may be flammable, combustible, reactive, corrosive, or toxic
- Any or all chemicals in the Department of Transportation (DOT) hazard classes
- Improvised or incompatible lab equipment
- Incompatible storage locations and chemical arrangements
- Containers incompatible with contents
- Improper handling practices
- Feces, urine, and blood
- Contaminated syringes

## Environmental Hazards

- Potential for fire or explosions
- Toxic air emissions
- Soil and water contamination
- Hazardous waste accumulations
- Structures and vehicles with potentially irreversible damage and contamination

## Adverse Health Effects from Meth Lab Chemical Exposure

It is important for first responders to minimize their exposure to the chemicals found at a meth lab site. Exposure occurs when the body comes in contact with a chemical agent. Dose is the amount of chemical agent that the body takes in or absorbs. Typically, in toxicology, the dose makes the poison. Therefore, if first responders can limit exposure by limiting on-site time and by wearing protective equipment, they will be limiting dose. Additionally, first responders need to contain or eliminate contamination by washing exposed skin with a liquid soap and water solution (or chemical solution depending on type of chemical exposure) and removing contaminated shoes and clothing.

Symptoms of exposure include breathing problems, skin and eye irritation, headaches, nausea, dizziness, and vomiting. Short-term exposures to high concentrations of some of these chemicals can cause severe lung damage and burns to different parts of the body.

For additional, more detailed information about the clinical presentation, evaluation, and health effects of persons exposed to methamphetamine, refer to Part B of this toolkit: “A Guide for Clinicians and Health Care Professionals Responding to Methamphetamine Lab Exposures.”

## Minimizing Health and Safety Risks

- First responders should obtain proper training and utilize the proper personal protective equipment for responding to meth labs in the community. *Training can be obtained from the Drug Enforcement Agency. Please visit <http://www.usdoj.gov/dea/programs/training/part14.html> for more information. “Personal protective equipment” refers to the various types of clothing (e.g., suits, gloves, hats, boots) or apparatus (i.e., face masks, respirators, etc.) designed to*

*prevent inhalation of hazardous chemicals. Various levels of protection have been developed to protect an individual who may be exposed to different degrees of adverse health risks. The levels of protection are as follows: Level A refers to the level of protective equipment used when the greatest level of skin, respiratory, and eye protection is required. Level B refers to the level of protection used when the highest level of protection is necessary but a lesser level of skin protection is needed. Level C is the level of protection used when the concentrations and types of airborne substances are known and the criteria for using air purifying respirators are met. Level D is a work uniform affording minimal protection; used for nuisance contamination only. Please see Appendix F in the DEA's "Guidelines for Law Enforcement for the Cleanup of Clandestine Drug Laboratories," located at <http://www.usdoj.gov/dea/resources/redbook.pdf>, for more detailed information about the OSHA levels of protection and the recommended equipment for each level.*

- First responders who come across what they suspect to be a meth lab or who are responding to an incident need to take special precautions before entering the site. They should not enter the meth lab or touch anything outside the lab (e.g., chemical containers and other trash, hoses or piping, burn pits). First responders should call for appropriate assistance (e.g., fire department, law enforcement). If first responders must enter the lab, they should minimize exposure by obtaining proper protective equipment (see box). If they must enter the lab without protective equipment, they should deal with the immediate situation as quickly as possible and withdraw from the lab.
- First responders should safely decontaminate themselves and others, if exposed.

*Decontamination procedures should be tailored to the specific hazards of the site and will vary in complexity and number of steps, depending on the specific substances encountered, level of hazards, and the individual's exposure to the hazards. Complete decontamination procedures can be obtained through a training course, such as the DEA Clandestine Drug Laboratory Training Program. Additionally, many hospitals have decontamination facilities and special protocol for decontaminating children. In general, all potentially contaminated clothing and footwear should be removed. If water is available, the exposed skin should be thoroughly washed with a liquid soap and water solution. If water is not available, the gross contamination can be brushed off (called a dry decon), which removes most of the decontamination. A contaminated person can be put into a suit, like a Tychem, to prevent spread of contamination. Children can be wrapped in a mylar (space blanket).*

- First responders should maintain a safe distance from anyone suspected to be high on meth and be sure to have a backup officer on site before taking any action. If possible, they should try to avoid a one-on-one situation with a meth user.

## **Role of First Responders in Community Action Efforts**

First responders (e.g., fire departments and emergency medical services) are good resources to help define the scope of the meth problem in your community. They also may serve as allies to assist in planning and implementing community action activities (e.g., provide education about meth to school officials, students, and community organizations).

**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part A: An Educational Toolkit for Health Educators**

**Information on Health Care  
Professionals and Child Welfare Officials**

**Methamphetamine's Impact on Health Care  
Professionals and Child Welfare Officials**

In many communities the methamphetamine (meth) problem has placed a strain on the health care and child welfare systems. Many hospitals nationwide are reporting an increase in meth-related emergency room visits, cases of meth overdoses and meth-related hyperthermia, and burn victims who were critically injured at methamphetamine laboratory (meth lab) sites. Health care providers and child welfare officials are responding to an increase in the number of meth's youngest victims, children rescued from the chemical hazards of meth production in unsafe labs and the social environment surrounding meth abuse.

**Key Information Relevant to Health Care  
Professionals and Child Welfare Officials**

***Medical and Dental Complications of Meth Use***

Methamphetamine can cause a variety of cardiovascular problems. These may include rapid heart rate, irregular heartbeat, increased blood pressure, and irreversible stroke-producing damage to small blood vessels in the brain. Hyperthermia and convulsions occur with methamphetamine overdoses and, if not treated immediately, can result in death.

Chronic methamphetamine abuse can result in inflammation of the heart lining and, among users who inject the drug, damage blood vessels and cause skin abscesses. Methamphetamine abusers also can have episodes of violent behavior, paranoia, anxiety, confusion, and insomnia. Heavy users also show progressive social and occupational deterioration. Psychotic symptoms can sometimes persist for months or years after use has ceased.

Acute lead poisoning is another potential risk for methamphetamine abusers, because a common method of illegal methamphetamine production uses lead acetate as a reagent. There is a danger that production errors may therefore result in methamphetamine contaminated with lead. Fetal exposure to methamphetamine also is a significant problem. Research indicates that methamphetamine abuse during pregnancy may result in prenatal complications, increased rates of premature delivery, and altered neonatal behavioral patterns, such as abnormal reflexes and extreme irritability. Methamphetamine abuse during pregnancy may also be linked to congenital deformities.

Meth users face some specific issues with the teeth and mouth, commonly referred to as “meth mouth.” Some of the chemicals used to make meth—and therefore found in meth—can irritate and burn sensitive tissues inside the mouth, create sores, and lead to infection and decay. Meth dries up saliva, leaving the mouth without a natural defense against cavities. Users are notorious for treating symptoms of “cottonmouth” with lots of sugary soda, which leads to more tooth decay. Because the drug can make users feel anxious, many users clench or grind their teeth until they crack. Meth can also cause gum disease by shrinking the vessels that supply blood to oral tissues, breaking the tissues down and eventually killing the user’s oral tissue. Meth mouth can advance so rapidly that those who suffer from it may need to have all of their teeth pulled and replaced with dentures.

For additional, more detailed information about the clinical presentation, evaluation, and health effects of persons exposed to methamphetamine, refer to Part B of this toolkit: “A Guide for Clinicians and Health Care Professionals Responding to Methamphetamine Lab Exposures.”

### ***Dangers to Children***

The specific dangers to children who live at or visit drug production sites or are present during drug production include the following:

- Inhalation, absorption, or ingestion of toxic chemicals, drugs, contaminated foods, or drink that may result in respiratory difficulties, nausea, chest pain, eye and tissue irritation, chemical burns, and death
- Fires and explosions resulting from dangerous methamphetamine production processes
- Abuse and neglect by parents who often binge on methamphetamine
- Hazardous living conditions (firearms, possible booby traps, poor ventilation and sanitation)



Children exposed to meth labs may display the following symptoms:

- red and itchy eyes
- chronic cough
- skin rashes or burns
- chronic respiratory problems
- reliance on an inhaler
- body odor of chemicals
- clothes that smell like cat urine

Children with long-term exposure to meth labs may display the following:

- learning disabilities
- delayed speech and language skills
- malnutrition
- meth addiction
- kidney, liver, and spleen damage
- erratic sleeping habits
- neurological damage

### **Response**

Personnel who respond to meth lab seizures and who conduct investigations may be from any of the law enforcement, social services, prosecution, environmental health, or medical disciplines. These personnel usually respond according to their own agency's protocols and, in most instances where multidisciplinary teams have not been established, operate independently. A coordinated multidisciplinary response for children found at meth labs may help ensure that all the needs of each child are met and that evidence is gathered to support the management and prosecution of each case. When jurisdictions do not coordinate their responses to these complicated scenes, personnel can overlook children's needs or assume another agency will address these needs, fail to remove children from conditions of endangerment, or fail to gather adequate evidence to substantiate appropriate endangerment and other legal charges. Coordinated multidisciplinary investigations enhance information gathering, evidence integrity, and comprehensive counseling and treatment services for children and their families.

## **Role of Health Care Professionals and Child Welfare Officials in Community Action Efforts**

This subgroup of the community can help to define the scope of the meth problem in the community (e.g., data about emergency room admissions, medical treatment, addiction treatment, child abuse and neglect, and child placement), implement efforts such as meth prevention education, and advocate for laws and policies to reduce meth use and production.

**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part A: An Educational Toolkit for Health Educators**

**Information on  
School Officials and Parents**

**Methamphetamine's Impact on School Officials and Parents**

Methamphetamine (meth), a highly addictive synthetic stimulant, is a serious threat facing youths throughout the United States. Families and communities may be devastated, and young lives may be ruined by the human health, environmental, social, and economic costs associated with meth. To address the meth issue among children and young adults, school officials and parents need to get involved. School officials play an important role in meth (and other substances of abuse) prevention education, detection of meth use and abuse by students, and support of young people victimized by meth use within their families. Parents or caregivers play a vital role in influencing their children's choices around the use of meth and other drugs. It is important for schools and parents to work as a team to support each other in their anti-meth and broader antidrug messages.

**Key Information Relevant to School Officials and Parents**

***Why Someone Would Use Meth***

In general, meth users take the drug for the euphoria it offers. Some also take it to boost their immediate energy as they cope with multiple demands. High school students who hear that it will increase their productivity may start using meth as they work or study for long hours. People, especially girls, may try meth to lose weight, and boys may try it to increase their sexual energy.

***Human Health Costs***

Meth can lead to irreversible brain damage, strokes, memory loss, psychotic behavior, heart damage, extreme anorexia, HIV transmission, cardiovascular collapse, and even death. Meth users often develop ugly sores on their bodies from

scratching at imaginary “crank bugs,” and their teeth and gums often deteriorate because of an awful condition known as “meth mouth.”

Meth abuse does not affect just the user. Of concern is the growing number of young children being treated for exposure to meth lab toxins, or for injuries or trauma sustained because of an adult’s dangerous meth addiction. Children are frequently found in filthy, toxic homes with parents who are consumed with the process of “cooking” meth and thus neglect their children. First responders have found malnourished, frightened, and neglected children with respiratory problems, liver damage, injuries, and other problems. You do not have to be a meth user to be sickened by toxic chemicals used in meth production—many of the chemicals used to make meth are volatile, and their vapors permeate the air and other substances (e.g., clothes, food, building materials) during the meth production process. Because of this, children and others visiting, living in, or living near meth labs can be exposed to the array of chemicals and chemical by-products of this illegal activity. Exposure can be from breathing contaminated air, eating or drinking contaminated food, or absorbing chemicals through the skin. Because children have smaller bodies and higher rates of metabolism and respiration than adults, they absorb higher levels of the toxic meth lab chemicals from their exposures.

For additional, more detailed information about the clinical presentation, evaluation, and health effects of persons exposed to methamphetamine, refer to Part B of this toolkit: “A Guide for Clinicians and Health Care Professionals Responding to Methamphetamine Lab Exposures.”

### ***Impact on a Community***

The effects of meth on a community may include the following:

- Increase in crime, such as burglary, identity theft, violence, and drug trafficking.
- Increase in unemployment, workers’ compensation costs, insurance rates, and losses in employee productivity.
- Financial and resource strain on law enforcement, health care systems, and child welfare agencies.
- Environmental harm. A methamphetamine laboratory generates five to six pounds of hazardous waste for each pound of meth produced. Meth cooks routinely dump the toxic waste into streams, rivers, fields, backyards, and sewage systems, posing immediate and long-term environmental health

risks. Poisonous vapors produced during the cooking process permeate the furnishings and structure of houses and buildings, often making them uninhabitable.

- Environmental remediation. Cleaning up a meth lab and its surrounding environment becomes a federal, state, local, and individual (e.g., property owners and landlords) liability, with varying costs depending on size, extent of contamination, and other factors.
- Chemical burns and respiratory damage to neighbors and public safety personnel who were exposed to smoke from chemical fires caused by explosive ingredients used to make meth.

### **Signs**

Meth can be made at any time and in any place—from homes, motels, sheds, storage facilities, barns, and even cars. School officials and parents should be aware of and able to recognize the outward signs of a meth lab in the community. The signs include the following:

- Residence or other building structure with boarded up or blacked out windows
- Hoses or tubing running out of a residence or other building structure
- Extension cords running to outbuildings from a residence or other building structure
- Excessive trash (including items such as cold medicine packages, anti-freeze and drain cleaner containers, coffee filters, batteries, duct tape, and glass beakers and containers) in or near a residence or other building structure
- Chemical odors (like cat urine, fingernail polish, ether, solvents, vinegar, or ammonia) in or near a residence or other building structure
- Extensive home or building security (e.g., cameras, monitors, fencing)
- Visible areas in the yard where chemicals have been dumped or spilled (such as dead, dying, or discolored grass and vegetation and stained soil)
- Increased or excessive activity in or around a residence or other building structure, especially at night (e.g., excessive amount—or more than would be expected—of foot and vehicular traffic coming and going from the location)
- Dark stains from chemicals in the bathtubs, sinks, toilets, or on walls of a residence or other building structure

Signs that can indicate an individual is using meth follow:

- loss of appetite—extreme, rapid weight loss
- high energy level or restlessness
- talkativeness
- sores on skin from scratching at “crank bugs”
- insomnia
- paranoia
- dry mouth
- dilated pupils
- distorted auditory and visual perceptions
- repetitive motor activity
- declining performance at school, work, or home
- damaged relationships
- stealing and borrowing money from work, home, or friends
- secretive, defensive behavior about activities and possessions
- unusual mood changes
- abrupt temper outbursts
- switching to a different peer group
- deterioration in personal appearance and hygiene
- loss of interest in usual activities, pastimes, and hobbies

Behavioral and physical signs that can be exhibited by children who live at or visit a meth lab include the following:

- hunger
- unkempt appearance
- paranoia
- sadness
- anger
- red and itchy eyes
- chronic cough
- skin rashes or burns
- chronic respiratory problems
- reliance on an inhaler

- body odor of chemicals
- clothes that smell like cat urine

As compared to their fellow students, children who have been exposed to meth labs

- are less prepared,
- have fewer social readiness skills,
- have lower self-esteem,
- exhibit more aggressive behaviors, and
- have more health and dental needs.

### ***Suggested Actions for School Officials and Parents***

- ☛ Provide drug education in school. As noted by the U.S. Department of Education, effective drug education is age appropriate and should be provided to each grade level throughout the year rather than only once a year during a special week. There should be a parent education component, and the school's program should be based on current research.
- ☛ School officials should be familiar with the policies and procedures of their school district and state on drug-endangered children. Report suspicions to the appropriate administrator or staff for follow-up.
- ☛ Make use of local law enforcement, first responders, and health departments for information and resources or to provide educational events about the dangers associated with meth use and manufacture.
- ☛ Partner with parents. Classroom prevention activities should have a family component where children and parents (or adult caregivers) can work together on activities that stimulate healthy discussion and reinforce drug prevention.
- ☛ Partner with parent-teacher associations.
- ☛ Initiate a community service project or peer mentoring class for students to educate the community and other students about the dangers of meth.
- ☛ Communication with children is key for school officials and parents, however difficult it may seem. Communication is the first step in addressing a meth or other substance abuse problem and getting help for an addicted person. If school officials or parents are unable to discuss the issue with a

student or child, they can call on addiction treatment professionals, school counselors, or schools nurses.

- ☛ If school officials observe the illegal distribution, possession, sale, transportation, or manufacture of controlled and dangerous substances on school property, they should contact local law enforcement.
- ☛ If a parent suspects his or her child is using meth, the parent should ask the child's doctor, a chemical dependency counselor, or the child's school counselor for confidential assistance. Parents should consider contacting a school counselor, county social service agency, or reputable treatment facility to perform a chemical dependency assessment to see if the child is in danger.

## **Role of School Officials and Parents in Community Action Efforts**

School officials and parents are one of the subgroups in a community that are most affected by the meth problem and should be an integral part of any community action effort. School officials and parents play a key role in drug prevention education, detection of meth use and abuse among youth, and support of children of meth users. This subgroup can also provide insight about community action efforts (in addition to prevention education) that might be effective with young adults.



## Helping Communities Combat Clandestine Methamphetamine Laboratories

### Part A: An Educational Toolkit for Health Educators

# Information on Retailers and Other Community Members

## Methamphetamine's Impact on Retailers and Other Community Members

The use of methamphetamine (meth) and other drugs takes a tremendous toll on individuals, families, and communities. Meth abuse knows no boundaries—geographic, economic, or ethnic—and affects every part of the United States. There is tremendous concern about the manufacture, trafficking, and use of meth, which is a powerfully addictive stimulant that affects the central nervous system. Meth is made from readily available, inexpensive chemicals and equipment and over-the-counter cold medicines containing ephedrine or pseudoephedrine. As a result of this and the feeling of euphoria that it gives the user, meth has enormous potential for widespread abuse.

Meth's impacts can be devastating not only to the user, but also to their families, friends, neighbors, and the local economy. Meth carries serious health, safety, and environmental consequences. People who live in or near homes and other buildings where meth is produced may be exposed to toxic chemicals or become victims of fires or explosions from the volatile chemicals used to make meth. The manufacturing process, or "cooking," of meth creates toxic waste. Every pound of cooked meth produces five to six pounds of toxic waste that often contaminates surrounding buildings, surface water, wells, land, and air.

Meth also can have a tremendous impact on neighborhood property values and livability. Houses where meth is manufactured represent an environmental health risk and can lower an area's property values. Decontamination of methamphetamine laboratory (meth lab) contamination is required and is often a great expense for the property owners and taxpayers. Businesses are not immune to meth's impacts, suffering from such things as lower worker productivity and property and identify theft crimes. Meth's pervasive health, environmental, social, and economic costs require a community-wide response to fight and win the battle against meth.

## Key Information Relevant to Retailers and Community Members

### ***Signs of a Possible Meth Lab***

Meth can be made at any time and in any place—homes, motels, sheds, storage facilities, barns, and even cars. The signs of a meth lab include the following:

- Residence or other building structure with boarded up or blacked out windows
- Hoses or tubing running out of a residence or other building structure
- Extension cords running to outbuildings from a residence or other building structure
- Excessive trash (including items such as cold medicine packages, antifreeze and drain cleaner containers, coffee filters, batteries, duct tape, and glass beakers and containers) in or near a residence or other building structure
- Chemical odors (like cat urine, fingernail polish, ether, solvents, vinegar, or ammonia) in or near a residence or other building structure
- Extensive home or building security (e.g., cameras, monitors, fencing)
- Visible areas in the yard where chemicals have been dumped or spilled (such as dead, dying, or discolored grass and vegetation and stained soil)
- Increased or excessive activity in or around a residence or other building structure, especially at night (e.g., excessive amount—or more than would be expected—of foot and vehicular traffic coming and going from the location)
- Dark stains from chemicals in the bathtubs, sinks, toilets, or on walls of a residence or other building structure

Signs and symptoms of a meth user include the following:

- loss of appetite—extreme, rapid weight loss
- high energy level or restlessness
- talkativeness
- sores on skin from scratching at “crank bugs”
- insomnia
- paranoia
- dry mouth
- dilated pupils
- distorted auditory and visual perceptions
- repetitive motor activity
- declining job performance
- damaged relationships
- stealing or borrowing money
- secretive, defensive behavior about activities and possessions
- unusual mood changes
- abrupt temper outbursts
- deterioration in personal appearance and hygiene

For additional, more detailed information about the clinical presentation, evaluation, and health effects of persons exposed to methamphetamine, refer to Part B of this toolkit: “A Guide for Clinicians and Health Care Professionals Responding to Methamphetamine Lab Exposures.”

Retailers and other community members should be aware of theft and excessive or repeat sales of the products that can be used to cook meth, such as the following:

- alcohol—gasoline additives or rubbing alcohol
- ether
- benzene
- paint thinner
- freon
- acetone
- chloroform
- camp stove fuel

- anhydrous ammonia
- gasoline
- phenyl-2-propane
- phenylacetone
- phenylpropanolamine
- rock, table, or Epsom salts
- iodine crystals
- red phosphorous
- toluene (found in brake cleaner)
- lye
- drain cleaner
- muriatic acid
- battery acid
- lithium batteries
- sodium metal
- cold tablets containing ephedrine or pseudoephedrine
- iodine

### ***Restriction of Sales of Meth Ingredients***

The products and ingredients used to cook meth are commonly found on shelves of farm supply, grocery, drug, and hardware stores. Many states have already passed legislation to restrict the sale of cold medicines containing ephedrine or pseudoephedrine. If your state has not, retailers and other community members can contact local legislators and support legislation to restrict the sale of certain cold medicines. Additionally, retailers can unite to participate in voluntary actions or store policies to deter theft or large, frequent purchases of the common ingredients used to make meth.

## **How Retailers and Other Community Members Can Mobilize**

Retailers and other community members can do the following:

- ☞ Contact local law enforcement to report incidents of danger, illegal activity, or suspicious behavior.
- ☞ Find out if the community has crime prevention specialists by contacting the city or local government information line or local law enforcement agency. Crime prevention specialists can help a community organize a Neighborhood Watch group.
- ☞ Call the local housing inspectors if they think a problem location might have housing code violations, as it is common for drug houses to have multiple violations. The caller should warn the housing inspector that the location might be a drug house.
- ☞ If the suspected drug house is a rental property, they can contact the landlord. They can find out who the landlord is by calling the local property tax assessment office.
- ☞ Work together. Community groups, such as neighborhood associations, religious congregations, PTAs, social or charitable organizations, and business associations, need to work together to respond to the meth problem in the community.

## **Role of Retailers and Other Community Members in Community Action Efforts**

Retailers are an important group as they can provide information about signs of a meth problem in the community (e.g., theft of meth ingredients, burglary), and they can advocate for ordinances and establish voluntary store policies to restrict the sale of ingredients and equipment used to make meth. It takes all members of a community to fight a meth problem. It is important to be inclusive when it comes to community mobilization. In addition to retailers and the subgroups identified in the other information sheets, health educators and others working to fight meth in their community should try to involve other community members, such as individuals from traditionally disenfranchised populations (e.g., people of color, people of low socioeconomic status, and other minorities), individuals in drug addiction recovery, and interested citizens in any community action efforts.

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part A: An Educational Toolkit for Health Educators**

**Community Action Guide:  
Mobilizing Your Community to Combat  
the Methamphetamine Problem**

The main goal of this toolkit is to provide information and tools for you to help communities combat methamphetamine (meth) and minimize its devastating impact on the community. Community coalitions unite communities, increase public awareness about meth-related issues, and enable community members to work together toward a common goal of building a safe, healthy, and drug-free community. What follows is guidance about how to start a coalition and a sample of tools for communicating the coalition's (or other community action group's) message.

For many communities across the United States, the desire to respond to the growing problem of meth manufacture and use has already brought people together to form meth prevention coalitions or task forces. If you are not already aware of such a group in your community, contact your local law enforcement and fire departments, health department, department of environmental quality, emergency medical services or hospitals, or local businesses (e.g., drugstores, farm supply stores, grocery stores) to research if your community has already established a coalition. If your community has an antidrug coalition, this toolkit can help you assist and strengthen the coalition's efforts. If your community does not have a coalition, the toolkit can help you form one. Additional information and resources can be found on the Community Anti-Drug Coalitions of America (CADCA) Web site, <http://cadca.org/>, and the CADCA National Coalition Institute Web site, <http://www.coalitioninstitute.org>.

Before starting a coalition, remember that community mobilization is a process. Coalitions are not effective and efficient overnight; they require dedication, time, and flexibility.

## Create a Community Coalition

**Note:** We encourage you to visit the CADCA and CADCA's National Coalition Institute Web sites for detailed guidance on the steps described below. These Web sites contain free information and resources in addition to publications available for purchase. CADCA's "Strategizer" publications (\$5.60 each) are particularly helpful for coalitions at the beginning stages of development. We also encourage you to use the resource directory in this toolkit. In its "Examples of Community Action Against Methamphetamine" section there are links to successful community coalitions Web sites, many of which have information and examples relevant to the steps to create a community coalition (described below).

### ***Planning Stages***

#### **Step 1. Define the Problem and Its Impact on the Community**

It is essential to conduct research to quantify the existence, nature, and scope of the meth problem in the community. Some example research questions follow. Who is using meth (demographic characteristics)? Has there been a recent increase or decrease in meth use and production? Did a community event (prevention or awareness activity) cause the change? How effective were those community events? What specific negative effects of meth use does the community feel? How is this problem currently being addressed, if at all?

At this point, you will want to collect data from local organizations, agencies, and businesses, such as schools, police departments, fire departments, hospitals, emergency or environmental agencies, health departments, substance abuse agencies, child welfare agencies, and outlets that sell meth ingredients (drugstores, grocery stores, and farm supply stores). The data you collect may include the following:

- Results from any previous school or community surveys of self-reported substance abuse
- Substance abuse-related incidents or meth lab seizures
- Substance abuse-related hospital or emergency room visits
- Treatment waiting list data
- Substance abuse hotline data
- Child welfare placement data
- Substance abuse-related arrests

- Criminal activity, such as theft
- Reports of environmental remediation at former meth lab sites

You will analyze and share these data with the stakeholders at a coalition meeting to give them a better understanding of the overall problems to be examined. Additional data may be required later, as the coalition identifies and prioritizes the needs of the community.

The resources listed below provide detailed information, outlines, checklists, and other tools to help you identify the type and source of data you will need to define the nature, scope, and impact of the meth problem in your community.

- CADCA’s “Assessment Primer: Analyzing the Community, Identifying Problems and Setting Goals” (chapter 3), located at [http://www.coalitioninstitute.org/SPF\\_Elements/Assessment/AssessmentPrimer-final-08-09-2006.pdf](http://www.coalitioninstitute.org/SPF_Elements/Assessment/AssessmentPrimer-final-08-09-2006.pdf)
- CADCA’s “Practical Theorist 3: Assessing Drug Abuse Within and Across Communities” can be purchased for \$5.60 from CADCA’s online store at <http://cadca.org/shopcart/product.asp?id=64>
- Community Tool Box’s “Assessing Community Needs and Resources,” located at [http://ctb.ku.edu/tools/en/chapter\\_1003.htm](http://ctb.ku.edu/tools/en/chapter_1003.htm)
- Community Tool Box’s “Assessing Community Needs and Resources Toolkit,” located at [http://ctb.ku.edu/tools/tk/en/tools\\_tk\\_2.jsp](http://ctb.ku.edu/tools/tk/en/tools_tk_2.jsp)

## Step 1 Recap

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- Identify the type of data to be collected.
- Identify the sources of the data to be collected.
- Collect and analyze the data that will define the existence, nature, and scope and impact of the meth problem in your community.

Through the data collection and analysis process, you can

- Confirm that the proposed coalition will augment, rather than duplicate, the efforts of potential members.
- Develop a list of individuals and groups in the community who are affected by the coalition’s main issue of local meth use and manufacture.



- Identify existing and potential community resources for launching an anti-meth effort.
- Identify potential challenges to forming a coalition.

## Step 2. Identify Key Stakeholders

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The individuals and agencies that were your resources for defining the meth problem (step 1) in the community are also your first leads in establishing a coalition of committed individuals. Coalitions need to include representatives from each sector of the community, diverse cultural and ethnic groups, people with influence in the community, people most affected by the meth problem, the business community, and service organizations.

If you have no access to some of these individuals or groups, find out who does and enlist their help. It is very important to have key community leaders involved to make the coalition a success.

Your responses to the following questions may help you identify key stakeholders:

- In step 1 did you uncover a specific area that needs greater focus (e.g., prevention of meth abuse, restriction of the sale of meth ingredients, or prosecution of meth users and cooks)?
- What is your target population? Who has a vested interest in your target population? For example, if your target population is youths, then coaches, teachers, school administrators, and youth club representatives are some of the individuals who have a vested interest in youths.
- Are there specific geographic areas that need more attention than others (e.g., rural locations, inner-city locations, high-density business areas)? Are there community leaders from those particular areas?
- Who makes things happen in your community? Some of these individuals may be elected officials, and others may have community recognition.

Resources for additional information about identifying key stakeholders include the following:

- CADCA's "Capacity Primer: Building Membership, Structure, Leadership and Cultural Competence," located at [http://www.coalitioninstitute.org/SPF\\_Elements/Capacity/Capacity%20Primer-Final-07-31-2006.pdf](http://www.coalitioninstitute.org/SPF_Elements/Capacity/Capacity%20Primer-Final-07-31-2006.pdf)

- Community Tool Box’s “Encouraging Involvement in Community Work,” located at [http://ctb.ku.edu/tools/en/chapter\\_1006.htm](http://ctb.ku.edu/tools/en/chapter_1006.htm)

## Step 2 Recap

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- Develop lists of groups currently working on the issue of interest, groups that should be working on the issue, and groups that will benefit from the coalition’s actions.
- Identify key community leaders and their representatives.
- Identify individuals interested in using their leadership abilities to address this issue.
- Ask key stakeholders to identify other individuals or organizations they know of that may be useful to the coalition.

## Step 3. Convene the First Coalition Meeting and Share Perspectives

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You should schedule the meeting in a recognizable neighborhood facility, such as a recreation center, library, or school. The day and time of the meeting should be realistic and convenient for all invitees. Once you have secured a meeting place and identified a meeting day and time, you should plan to spend some time preparing for the meeting.

### **Tips for Conducting Effective Meetings**

**Note:** The information below on conducting effective meetings was adapted from Community Tool Box chapter 16, “Group Facilitation and Problem-Solving,” located at [http://ctb.ku.edu/tools/en/chapter\\_1016.htm](http://ctb.ku.edu/tools/en/chapter_1016.htm).

There are four phases of meeting management that will, most likely, result in an effective meeting. These phases are (1) planning for the meeting (setting an agenda and goals); (2) setting up the meeting (logistics); (3) running the meeting (chairing and facilitating); and (4) following up after the meeting.

### **Phase 1: Planning the Meeting**

The critical steps in planning an effective meeting follow:

- Decide the goal of the meeting.  
For the first coalition meeting, you may want to have the goal for participants to be sharing their perspectives on how substance abuse has affected

their lives and what they would like the coalition to accomplish. Sharing perspectives in the early stages of coalition building will help the group formulate an anti-meth vision and action plan for the community that is accurate and meaningful.

- Do your homework and be prepared.  
If the first meeting's goal is to share perspectives, you should be prepared to hear a number of perspectives and facilitate a discussion that allows everyone to be heard. You should be prepared to frame comments to help the group form a vision statement, which is an agenda item for a future meeting.
- Decide who needs to attend.  
In step 2 you identified key stakeholders. Keeping in mind your goal for the first meeting, determine the key stakeholders and other individuals who need to attend the first meeting. Designate someone from your list of participants to record important actions, assignments, and due dates during the meeting.
- Plan with others.  
Planning with others is a great way to develop new leaders and invest others in the coalition's work. Ask several interested individuals for their opinions on who should participate in the first meeting. Develop the agenda together with several key participants who have committed to attend. Have a dialogue with several key participants about how you want to label the meeting so there will be a common mindset among participants.
- Develop a good agenda.
  - Think of your meeting goal and what activities need to occur to reach that goal. The agenda should be organized so that these activities occur during the meeting.
  - In the agenda, state the overall goal for the meeting and incorporate the meeting label if applicable.
  - In the agenda, include a task for participants to encourage promptness and to engage them early in the meeting.
  - Next to each major topic, include the presenter's name, the type of action needed (discussion, brainstorm), the type of output expected (decision, vote, assignment), and the estimated length of the presentation.

- At the meeting, ask participants if they will commit to the agenda, keep the agenda posted at all times, and be willing to adapt the agenda if participants progressing with a particular topic.
- Notify the participants.  
Send invitation letters at least two weeks before the meeting date. The invitation or meeting notice should include the purpose of the meeting, where it will be held and when, the list of participants, contact information in case of questions and a RSVP date. Send a copy of the proposed agenda along with the meeting notice. Several days before the meeting, make personal phone calls, if possible, to all invitees. Emphasize the importance of their attendance.

## Phase 2: Setting Up the Meeting

The critical steps in setting up an effective meeting are the following:

- Have a sign-in sheet.  
Sign-in sheets help you to know who attended the meeting, to update your membership list, and to give you names for phone trees. Be sure to include name, organization, address, phone number, and e-mail fields on the sheet.
- Have the right space.  
Meeting spaces should be centrally located and convenient. You may want to offer conveniences, such as food, child care, parking, or proximity to public transportation to promote attendance. The room should be comfortable and the right size for your group. Arrive early to set up and, if possible, arrange chairs in a circle rather than in rows.
- Plan some downtime.  
Have informal time before and after the meeting for participants to talk and socialize. Sometimes the “meeting before and after the meeting” is where people form attachments to the group and may also come up with their best ideas to bring to the next meeting.
- Meet on a regular schedule.  
If you have a regular meeting schedule (e.g., the first Monday of the month), people will save the date. But do not have a meeting just to meet. Always have a clear goal or cancel the meeting.

### Phase 3: Running the Meeting

If you are running the meeting, the following items are your responsibility:

- Start and end on time.  
Start on time even if there are only three people in the room. Word will get around that you always start on time, and eventually people will come on time or will not come at all. If people keep showing up late or not at all, it might be a sign that you need to change something about your meeting (e.g., time or pattern).
- Give introductions and get the meeting started.  
You should first welcome participants and thank them for their time. Introduce yourself and your role and have everyone introduce themselves. Let participants know that a meeting recorder, if used, will take minutes that you will distribute to each participant later. When there is a special speaker, introduce him or her. You may want to plan an icebreaker at the beginning of the meeting to help acquaint people.
- Reach agreement on the agenda and rules.  
The meeting is for everyone, so everyone needs to “buy in” to the agenda. Review the agenda at the beginning of each meeting, giving participants a chance to understand all proposed major topics, change them, and accept them. It pays to have a few basic ground rules for most of your meetings. Four basic ground rules are participate, focus, maintain momentum, and reach closure. You may want to add other rules, such as no interrupting or, if needed, that meetings are confidential. List your primary ground rules on the agenda and keep them posted at all times.
- Keep the discussion on track.  
If someone is deviating from the agenda or speaking for too long, gently redirect the discussion to the topic.
- Watch the time.  
You might ask participants to help you monitor the time. If a topic discussion takes longer than planned, ask your group for their input. For example, does the group want to continue discussing the current topic and leave the other agenda items for the next meeting?
- Summarize what you hear.  
Wrap up each agenda item by summarizing any conclusions out loud. Then move on when no one objects or everyone agrees.

- Encourage participation.  
If a usually quiet person speaks, show your appreciation. Try to draw everyone in and not just let the frequent participants speak.
- Use the power of your position wisely.  
Watch what you say. Do not take sides, and be fair to everyone. Be a model for the level of energy and enthusiasm you would like to see from the meeting participants.
- Develop new leaders by handing over the gavel.  
Try rotating the chairing responsibility. The only way others will learn is by watching and then doing.
- Close the meeting.  
Always end meetings on time and attempt to end on a positive note. At the end of a meeting, review actions and assignments and set the time for the next meeting and ask each person if they can make it (to get their commitment). Clarify that meeting minutes or actions will be reported back to participants in at most a week (this helps to keep momentum going).

To help you run a meeting smoothly, here are some techniques to help you avoid meeting disruptions:

- Listen to understand. Listen closely to understand the points a speaker is making, and restate these points aloud if you are unsure.
- Stay in your role. If you are the chair of the meeting, you cannot be a participant as well.
- Do not be defensive. Think about what someone said before you respond. Once you become defensive, you risk losing the group's respect and trust and may make the situation worse.

If you are confronted with disruptions or problems during a meeting, here are some techniques to use (separately or in combination):

- Have the group decide. Ask the participants how they would like to move beyond the problem and continue with the meeting.
- Use the agenda and ground rules. These tools can steer the discussion back on track and remind participants of meeting etiquette.
- Be honest; say what's going on. Enlist the help of the group if, for example, a particular participant is undermining or intimidating you.

- Use humor. Humor may ease tension in the room, help participants feel less shy or scared, or help participants feel like a part of the group.
- Accept, deal, or defer. You can *accept* that what they are saying is true and not ignore it; *deal* with it right there by spending some time on it, or *defer* it to the group for a decision about what to do.
- Use body language (if possible). Eye contact, smiling or not smiling, or a change in body position can speak volumes.
- Confront disrupters outside the meeting room during a break. When less confrontational tactics have not worked, you can deal with the problem outside the room at a naturally occurring break in the meeting.
- Confront disrupters in the room. You should do this only if it is appropriate and will not create backlash, if you think the group will support you, and if you have tried less confrontational tactics already.

#### **Phase 4: Following Up on the Meeting**

Just because the meeting is over does not mean your work is done. For successful follow-up after the meeting, you will need to do the following:

- Gather feedback from the group.  
Leave 5–10 minutes at the end of the meeting to gather information about how the participants felt about the meeting, what could be improved, etc. You may not want to do this at every meeting. You may also want to get participants’ feedback during the meeting, when you can immediately improve the meeting process. For a long meeting, conduct 5- to 10-minute “satisfaction checks every couple of hours.” In a roundtable approach, each participant should quickly indicate how they think the meeting is going.
- Make follow-up calls.  
You, as the meeting chair, or a designated person may want to make follow-up calls, send out follow-up correspondence, or take some follow-up actions. These after-the-meeting activities often serve as the glue that holds the group together.
- Summarize the meeting.  
It’s helpful to have a list of decisions and follow-ups. Formal minutes are valuable for many (but not all) organizations—they contain announcements, informational items, etc., that are important even though they are

not decisions. Whatever form the meeting summary takes, participants should receive it no later than one week after the meeting.

Here are some resources for additional information about convening and facilitating meetings

- Community Toolbox’s “Group Facilitation and Problem-Solving,” located at [http://ctb.ku.edu/tools/en/chapter\\_1016.htm](http://ctb.ku.edu/tools/en/chapter_1016.htm)
- Community Toolbox’s “Developing Facilitation Skills,” located at [http://ctb.ku.edu/tools/en/section\\_1154.htm](http://ctb.ku.edu/tools/en/section_1154.htm)
- Community Toolbox’s “Conducting Effective Meetings,” located at [http://ctb.ku.edu/tools/en/sub\\_section\\_tools\\_1153.htm](http://ctb.ku.edu/tools/en/sub_section_tools_1153.htm)

### **Step 3 Recap**

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- Secure a location, date, and time for the first coalition meeting.
- Plan the meeting.
- Set up the meeting.
- Run the meeting or designate someone to run the meeting.
- Follow up on the meeting.

### **Step 4. Discuss the Current Reality as Well as the Ideal**

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Coalition members will need to discuss the current reality of the meth problem in their community and the ideal resolution. Quantitative data (i.e., data expressed in numerical terms, counted, or compared on a scale) and qualitative data (i.e., non-numerical data often rich in detail and description) can paint a picture of the meth problem in the community. The quantitative data come from the research you conducted in step 1. The qualitative data reflect what the coalition members and community believe is going on and actually see happening. This data may come from step 1 and may also come from a meeting where coalition members share their perspectives. Both quantitative and qualitative data have equal importance to understanding the meth problem in your community.

You have already done your homework (step 1) in preparation for a meeting to discuss what is reality and what is ideal. You will need to prepare and present the data to coalition members to illustrate the meth use and manufacture reality in your community—that is, what the problem looks like, who is using meth, where



the ingredients to make meth are sold, etc. Following a presentation and discussion of the reality of the meth problem in your community, you should be prepared to facilitate a discussion about the differences between reality and ideal. At this point, you should also discuss the key issue of why the coalition is being formed.

Here are two resources to help you with the discussion of the reality and ideal:

- Community Tool Box’s “Analyzing Problems and Goals,” located at [http://ctb.ku.edu/tools/tk/en/tools\\_tk\\_3.jsp](http://ctb.ku.edu/tools/tk/en/tools_tk_3.jsp)
- Community Tool Box’s “Generating and Choosing Solutions,” located at [http://ctb.ku.edu/tools/en/section\\_1134.htm](http://ctb.ku.edu/tools/en/section_1134.htm) (for information about decision making)

#### Step 4 Recap

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- Share the results of the research you conducted in step 1 (and any additional research or information gathering) with coalition members.
- Facilitate a discussion about the current reality of the meth problem in your community and the ideal.

#### Step 5. Create a Vision for Your Community

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By the time you reach step 5, the coalition members know the nature and scope of the meth problem in the community and acknowledge that the problem is unacceptable. Now it is time for the group to craft a vision statement, which is a description of the ideal end-state or ultimate goal. A vision statement is the first step in developing a strategic plan, which will guide your coalition. A vision statement does the following:

- Helps the coalition focus on what is really important. A vision statement helps members remember what is important.
- Lets other individuals and organizations have a snapshot view of the coalition and what it wants to do. It can be very helpful when you are recruiting other people and organizations to join your effort.
- Is very helpful in keeping members focused and bound together in common purpose. Not only does the statement itself serve as a constant reminder of what is important to the coalition, but the process of developing the statement allows people to see the coalition as theirs.
- Stays intact until the goal is achieved or until the community needs change.

One or more vision statements should articulate the coalition's ideal end-state. The number of vision statements is not important. What is most important is that the statements together give a holistic view of the coalition. There are certain characteristics that most vision statements have in common:

- Easily understood and shared by members of the community
- Broad enough to include diverse local perspectives
- Inspiring and uplifting to everyone involved in the anti-meth effort
- Written in the present tense.
- Easy to communicate—for example, the statements are generally short enough to fit on a T-shirt.

### ***Tips for Facilitating the Development of a Vision Statement***

- Remind the group that it often takes several vision statements to fully capture the dreams of those involved in the coalition. Encourage people to suggest all of their ideas. Write them down—possibly on poster paper at the front of the room—so the ideas can further inspire people. As you do this, help everyone keep in mind the reality of the meth problem in the community, the focus of the coalition, and the purpose of vision statements.
- After the group has brainstormed ideas, members can critically discuss them. Oftentimes, several of the vision statements will jump out at the group—someone will suggest it, and people will just instantly think, “That’s it!” To help the group identify which ideas will become vision statements, you can have the group ask themselves the following questions about each stated idea: (1) Will it draw people to common work? (2) Does it give hope for a better future? (3) Will it inspire community members to realize their dreams through positive, effective action? (4) Does it provide a basis for developing the other aspects of a strategic plan (e.g., mission, objectives, and strategies)?
- Have coalition members discuss and decide how to use the vision statements. A few examples are to (1) add them to the coalition’s letterhead or stationery; (2) use them on the coalition’s Web site; (3) give away T-shirts, bookmarks, or other small gifts with statements on them; (4) add them to the coalition’s press kit; (5) use them when giving interviews; or (6) display them on the cover of coalition publications.

- Once members of the coalition have developed the vision statements, you might want feedback from other members of the community before the coalition starts to use them. Talking to other community members about the statements can help ensure that the statements do not offend the community in any way and that the community agrees that the statements capture the spirit of what the community believes and desires. Following community review of the statements, coalition members may need to revise them.

More information about developing vision statements is available from the Community Tool Box Web site. Please see “Proclaiming Your Dream: Developing Vision and Mission Statements,” located at [http://ctb.ku.edu/tools/en/sub\\_section\\_main\\_1086.htm](http://ctb.ku.edu/tools/en/sub_section_main_1086.htm)

## Step 5 Recap

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- Provide the coalition with information about the purpose and importance of vision statements.
- Facilitate a brainstorming session to generate a list of ultimate goals for the coalition, followed by a discussion to identify the vision statements and how they will be used.
- Obtain community consensus on the vision statements.

## Next Steps

If you have completed steps 1–5, you are on your way! You have conducted research to paint a picture of the reality of the meth problem in your community. You have identified key community stakeholders and brought them and others to the table. Coalition members have shared perspectives, discussed reality versus ideal, and crafted inspirational vision statements.

The next logical step is the development of a strategic plan; you have already completed one part of the strategic plan in step 5, vision statements. The strategic plan includes the following elements: vision, mission, objectives, strategies, and measurable outcomes. The *process* of creating a strategic plan also can include the development of an action plan and an evaluation plan. In general, a strategic plan covers a three- to five-year period. It describes the coalition’s hopes for the future and may include problems in the community that can be addressed with current funds as well as problems the coalition hopes to address as it secures additional resources. By contrast, an action plan is usually much more specific about who is doing what and

covers a shorter period than a strategic plan (e.g., one year). An action plan also addresses only those actions for which the coalition currently has resources.

Here are some resources on strategic plans:

- Community Tool Box’s “Developing a Strategic Plan,” located at [http://ctb.ku.edu/tools/en/chapter\\_1007.htm](http://ctb.ku.edu/tools/en/chapter_1007.htm)
- CADCA’s “Planning Primer,” located at [http://www.coalitioninstitute.org/SPF\\_Elements/Planning/PlanningPrimer-01-2007.pdf](http://www.coalitioninstitute.org/SPF_Elements/Planning/PlanningPrimer-01-2007.pdf)
- Community Tool Box’s “Evaluating Community Programs and Initiatives,” located at [http://ctb.ku.edu/tools/en/tools\\_toc.htm#partI](http://ctb.ku.edu/tools/en/tools_toc.htm#partI)
- CADCA’s “Evaluation Primer,” located at <http://www.coalitioninstitute.org/Evaluation-Research/EvaluationPrimer-07-2007.pdf>

The planning stage of coalition development will take a lot of time, but there will be a point when the coalition is ready to move into the implementation stage and put its plans into action.

### ***Implementation: Utilizing the Media***

Successfully implementing the strategic plan and accomplishing coalition goals will require the support of many sectors of the community. One of these sectors is the media. The media can be very valuable partners in conveying and enforcing a coalition’s messages and publicizing its community events. If members of the media and public relations professionals are not already members of your coalition, you should consider inviting them to join. Lasting relationships with newspapers and radio and television stations are a critical component to your coalition’s success.

### **Tips for Building Strong Relationships with the Media**

1. Make a list of media outlets and update it often.

Familiarize yourself with the media outlets that serve your community (e.g., newspapers, television and radio stations, church bulletins, local organization newsletters and calendars, school papers, magazines, etc.), especially those that reach and influence your target audience. Develop a list of the media outlets that would be interested in covering stories on drug-free communities. Your list should include the name of the media outlet and its address, telephone and fax numbers, email address, and Web site. Be sure to update this list often to ensure its accuracy.

## 2. Develop the right contacts.

Identify the appropriate assignment editors and reporters (i.e., those who might cover drugs, public health, or the environment) and include their preferred contact information on your list of media outlets.

## 3. Respect deadlines and policies.

Reporters and editors are busy, and deadlines vary widely. Try to find out what days or what times of day are most convenient to contact specific media representatives. It is also important to find out and understand a media outlet's policies on photography and other issues to avoid having your advertisement, letter, or press release rejected because it violates a particular policy.

Respond promptly to media requests for information. When reporters request information or interviews, find out their deadline, the story angle, what information they need from you, and who else they are talking to. If you cannot answer their questions immediately, ask to call them back. It is better to be accurate than to provide misinformation.

## 4. Strive for quality.

Make it easy for a reporter to cover your story or issue. Ensure that the information you send is clear, concise, pertinent, and accurate. You can monitor national, regional, or local events for your cause and capitalize on them to create your own story proposal. This can be an effective way to convey your message and make it relevant to your community.

You may want to identify a spokesperson or several for the coalition. The spokespersons should always approach the media with the goal of mentioning each of the coalition's key messages and should be prepared to offer local, real-life stories or issues of concern. This helps establish the coalition's messages as credible and helps the audience to better understand the issues.

## 5. Be proactive.

Introduce yourself to editors and reporters and stay in touch on a regular basis. Provide them with updates about the coalition to remind them that your coalition is an information resource. Contact reporters and editors before you send them information to explain what you are sending and why. Make brief follow-up calls to determine if you can answer any questions or provide additional information. After the media has printed or aired your story, send a thank-you note or email that expresses your appreciation for their interest in your issue.

For additional information on various media outreach tools, refer to the next section, “Communicating the Coalition’s Messages: Tools, Strategies, and Events.”

## **Communicating the Coalition’s Messages: Tools, Strategies, and Events**

In this section of the toolkit, you will find information and resources that can help you communicate your coalition’s messages. The information and resources should be customized to meet your needs. This toolkit’s resource directory also gives you links to a wealth of materials, some of which (such as curricula and videos or DVDs) can be purchased and others that are free to download and that can be used as is or customized to meet your community’s needs.

### **Media Tools**

Media tools are an effective way to communicate your coalition’s messages. Before contacting a reporter or editor, you should determine the type of media tools that would be most appropriate for each media outlet that serves your community. You should also determine the type of media tools that would best promote your coalition’s issues and events. Typical media tools include press releases, letters to the editor, op-eds, newspaper editorial board meetings, and advertising.

### **Press Releases**

A press release is one of the most common media strategies. It is a written alert most often used with the print media to announce a new program, an organization or coalition position, or a special event. The press release tells the reporter the who, what, when, where, and why of a story or event. This information helps the reporter determine whether to write an article or otherwise cover your news. Your press release should grab the reporter’s attention and convince him or her of the issue’s news value.

All press releases should include the coalition’s name, contact person and information, release date, headline (i.e., short phrase summing up the essence of the release), and body (i.e., the who, what, when, where, and why). Remember to keep your sentences and paragraphs short, use plain language, and provide quotes from coalition members (if possible). Finish your release with a “tag,” which is usually one paragraph of boilerplate (standardized text) about your coalition. At the end of the release, use a centered “###” to denote completion.

You can mail, fax, or email press releases to reporters. You may want to make a brief call to the reporter to make sure that he or she has received your release or that the right person has it.

## **Letters to the Editor**

Letters to the editor are a good way to communicate an opinion to the general public or simply keep an issue alive in the public's mind. Look at the editorial pages of different newspapers. Often, the specifications on writing letters to the editor will be on this page. If not, you can follow these general tips for writing your letter. Be concise by focusing your letter on just one concept or idea and limiting yourself to 250 words. Refer to other articles, editorials, or letters the newspaper has recently published. Send your letter to the editor as soon as possible after the article appeared to increase its chances of being printed. Include your name and contact information, relevant titles and degrees, and a reference to your coalition.

## **Op-Eds**

The op-ed, which appears opposite a newspaper's editorial page, expresses a strong opinion on an issue, backed by well-researched, documented facts. Whereas a letter to the editor provides a concise and direct response to a specific article or letter, the op-ed is more detailed and can further flesh out an argument and a proposed solution. Careful planning will increase your chances of placing an op-ed. Obtain the newspaper's op-ed policies, try to arrange an appointment to talk to the editor about the issue's urgency, and adopt a local angle in your op-ed. Before submitting the op-ed, think about any ally organizations that may be willing to cosign your op-ed. The prominence or credibility of the op-ed signer(s) goes a long way to ensure the chances of your op-ed getting published.

## **Editorial Board Meeting**

By arranging a meeting between key coalition members and a newspaper's editorial board, a coalition has the opportunity to convey a strong, focused message that increases the media's awareness of the coalition and the issues it addresses. This meeting can be a powerful way to win the board's support for the coalition's issues and increase the likelihood of more newspaper coverage of your coalition. Coalitions interested in meeting with an editorial board should (1) call the editorial page editor to briefly explain the issues and request a meeting, (2) send background information about the coalition to the appropriate editors before the meeting, (3) prepare for the meeting (e.g., write down key facts and main points and familiarize yourself



with the kinds of editorials and columns that appear in the paper), (4) present the issues as persuasively as possible in no more than 10 minutes and be prepared to answer questions, either then or soon thereafter, (5) leave behind some printed materials reinforcing the points made, (6) send a note of thanks to the editor, (7) make a follow-up phone call to the editor if an editorial does not appear within a few days of the meeting, and (8) ask the paper to print an op-ed or letter to the editor if the editor decided not to write about the issues of the coalition.

## **Paid Advertising**

Paid advertising appears in newspapers and newsletters and on radio and television. Often it does not require a large media budget to reach the public with paid advertising messages. If you have built a strong relationship with various media outlets, asking them for support may open cost-effective avenues to you for advertising. For example, media outlets may be open to “matching” their paid ads with public service announcements (PSAs) about your coalition at no charge. If you are planning a community event, you may want to explore various sponsorship opportunities with local media. In return for helping to publicize the event, you could offer media outlets the opportunity to become an in-kind sponsor. This arrangement would benefit the local media by providing name recognition and community goodwill and by attracting more customers to their newspaper, radio station, or television station. Opportunities you could offer include displaying the outlet’s logo on event signage and various print materials, featuring the outlet’s reporters or on-air personalities at community events, or presenting awards or special recognition to the outlets that have been supportive of your coalition.

When considering paid ads, it is also advantageous to reach out to for-profit organizations that share your coalition’s mission. Such organizations may be open to sponsoring air time or space for public awareness messages. These partnerships can broaden the reach of your message and benefit the for-profit organization by fostering community goodwill, bolstering name recognition, and attracting potential customers.

Please see this toolkit’s resource directory for links to Web sites that provide additional information about media outreach.



## **Strategies and Events**

The following strategies, community events, and other actions are effective ways to convey and enforce you coalition's messages:

**Submit press releases to local media outlets.**

**Submit a letter to the editor or op-ed to voice the coalition's vision or opinion.**

**Write an article for your community newspaper or newsletter.**

**Create a public service announcement (PSA) or radio interview** that can air for 30 to 60 seconds on a public access channel or be shown to a school.

**Host a meth education forum or roundtable discussion** in a recognizable neighborhood facility and air it on a local cable station.

**Create a community meth awareness Web site** or email discussion list.

**Encourage stakeholders** to join together to plan and participate in events (e.g., health fairs, essay and poster contests, and drug- and alcohol-free concerts) and to address groups and schools. (See sample presentation outlines in this section of the toolkit.)

**Start a local youth "improv" troupe to perform vignettes** and to lead community discussions about meth.

**Invite recovering meth addicts to tell their stories** to audiences throughout the community and neighboring communities.

**Invite local artists to create pieces** that depict the tragedy of meth addiction and the hope of recovery.

**Create meth awareness posters, brochures, flyers, and billboards.** (See sample handouts in this section of the toolkit.)

**Have community video discussion evenings for teens and adults.**

**Be a news source—gather statistics on meth use in your community and prepare fact sheets for news reporters. Offer contact information for experts on the subject.**

**Attend city, township, and county meetings.**

**Create a meth awareness commercial to air before movies at a local theater.**

**Create a map showing the locations of meth lab seizures in your area.**

**Make use of billboards, bulletin boards at local businesses, bulletins and newsletters of religious organizations, civic club calendars and newsletters, and school district mailings to parents.**

**Have meth information available at health fairs, community fairs, and other events in the community.** (See sample handouts in this section of the toolkit.)

## **Sample Handouts**

The Meth Action Coalition created the following materials, which can be downloaded from this toolkit or from the Meth Action Coalition's Web site at <http://www.methaction.org>. The coalition makes its handouts available free of charge. The handouts can be customized to meet your specific needs (e.g., including local contact information) and provide ideas for creating your own materials.

**[“Meth Brochure: What You Really Need to Know”](#)** (PDF—1 MB)

“Basic facts about meth, what it looks like, why it's so dangerous, what to look for (supplies and ingredients, changes in behavior)”

**[“Anatomy of a Meth User”](#)** (PDF—740 KB)

“Descriptive and informative handout for high school age students. Contains graphic pictures.”

**[“Anatomy of a Meth User”](#)** for middle school students (PDF—740 KB)

**[“Methamphetamine Health Effects Fact Sheet”](#)** (PDF—460 KB)

“Health effects—short and long term physical, psychological and dental effects”

**[“Stages of Recovery from Meth”](#)** (PDF—490 KB)

“Recovery from meth addiction is difficult and can take up to 2 years. Learn about the physical, cognitive and emotional stages as people go through recovery.”

**[“Meth House Reporting Guide”](#)** (PDF—1.3 MB)

“Comprehensive guide about meth labs—what to look for, how to accurately record information to report to the authorities.”

## **Sample Outline for a Meth Awareness Presentation for Teen Audiences**

### **Materials You May Want**

- Fact sheet about meth

- A teen-oriented DVD (approximately 15–20 minutes in length) that includes facts about meth from the perspective of teens and information about meth’s negative effects on the body and on behavior. Suggestion: *Walking on Thin Ice*, available for purchase from the Hazelden Bookstore, located at <http://www.hazelden.org/bookstore>.

### Introduction (5 minutes)

**Ask:** “What have you heard about meth?”

Allow several teens to respond.

### **State the goals of the presentation:**

- what meth is and the consequences of using it
- the signs and symptoms that someone is using meth
- the skills to positively resist pressure to use meth
- how to become involved in meth awareness activities
- how to find treatment or assistance for a meth or other drug user

### Body of Presentation: What Is Meth? (30 minutes)

Please refer to the Primer and Information Sheets in this toolkit for presentation content.

Talking points can include the following:

- **What is meth?**  
[Hand out the fact sheet about meth.]
- **What do users experience when they take meth?**
- **What is meth made of?**  
[You might want to mention, “If you knew that meth was made of Drano and battery acid, would you put it up your nose?”]
- **Why would someone use meth?**
- **What are the consequences of meth use?**  
[You might want to mention, “Ironically and tragically, young people use meth because they think it will make them more attractive, popular, and

confident, but they soon discover it does just the opposite. Meth can emaciate and scar bodies, rot teeth, and cause brain damage, strokes, memory loss, and heart damage. It can induce paranoia and result in social isolation instead of the acceptance the users were seeking. Meth can make users angry and violent—and it can kill them.”]

- **What can teens say to someone who pressures them to use meth or other drugs?**

[Try role-playing exercises.]

### **Tips to help teens resist peer pressure to use drugs**

- *Ask questions.* Having answers to questions such as “What are we going to do at your house? How long will we be there?” will help teens make informed decisions before getting into a sticky situation.
- *Talk about the consequences.* Teens can explain they don’t want to suffer the consequences as an excuse not to use drugs. For example, they can say, “My parents will ground me for months” or “I could get kicked off the football team.”
- *Offer an alternative.* If a friend invites a teen to use drugs, the teen can offer an alternative such as “Let’s go get pizza.” If friends pressure, teens should walk away but leave the door open for positive interaction. They could say, “Hey, that’s fine. We will be eating pizza if you change your mind.”
- *Always have an escape plan.* Teens should devise an escape plan with their parents to get help from a responsible adult if they find themselves in a problem situation that involves drugs.
- **What can teens do if they think someone they know is using meth?**  
[Also provide information about the symptoms of meth use.]
- **How can teens fight meth in their schools and communities?**  
*By educating their peers about the dangers of drugs.*

### **Optional: Show a meth awareness DVD**

#### **Group Project (30 minutes)**

Idea: In groups of three to four, have teens talk about how they would promote the no-meth message. Challenge them to come up with ideas for posters or other publicity materials, and then have the groups share their materials.

## Summary/Wrap-Up (15 minutes)

- Open up the floor for a period of questions and answers.
- Remind teens of the names of adults they can talk to if someone they know is using meth.

## Sample Outline for a Meth Awareness Presentation for Adult Audiences

### Materials You May Want

- Fact sheet about meth
- Optional: DVD. Suggestions: *Meth: Shadow Across America* (28 minutes) is for general audiences and surveys the meth problems from the perspectives of law enforcement and treatment professionals and discusses the dangers of meth labs, addiction, and possible solutions to the problem. *Life After Meth* (28 minutes) is for general audiences and shows how meth addiction devastates individuals and families but that recovery is possible. Personal stories of six people living in recovery are presented. These DVDs are available for purchase from the Hazelden Bookstore located at <http://www.hazelden.org/bookstore>.

### Introduction (5 minutes)

**Ask:** “How do you think meth use affects communities?”

Allow several audience members to respond.

Be prepared to briefly identify the ways meth affects communities.

### State the goals of the presentation:

- what meth is and the consequences of using it
- how you can tell if someone is using meth
- indicators that a meth lab may be in a neighborhood
- how to become involved in meth awareness activities
- how to find addiction treatment or professional assistance for a person addicted to meth or other drugs

## Body of Presentation: Why Is Meth an Issue in Our Community? (20 minutes)

[Please refer to the Primer and Information Sheets in this toolkit for presentation content.]

Talking points can include the following:

- **What is meth?**  
[Hand out the fact sheet about meth.]
- **Who uses meth?**
- **What is meth made of?**
- **Why would someone use meth?**
- **What are the consequences of meth use?**
- **How can you tell if someone is using meth?**
- **Why are meth labs becoming a big problem?**
- **How do meth labs affect communities?**
- **What are the signs of a meth lab?**
- **Does meth treatment work?**

*Optional: Show a meth awareness DVD*

## What can we do about meth use in our community? (20 minutes)

[Introduce your community's meth awareness campaign and planned meth-reduction activities. Highlight ways your audience can join these efforts.]

## Summary/Wrap-Up (15 minutes)

- Open up the floor for a period of questions and answers.
- Summarize your key points and pass out any additional handouts.

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part A: An Educational Toolkit for Health Educators**

## **Resource Directory**

These resources offer public health educators and others additional information and, in some cases, more in-depth information that can help create a comprehensive community campaign against methamphetamine (meth). This directory is organized by topic, as many topics span a variety of audiences.

### **General Information and Facts About Methamphetamine**

- **National Institute on Drug Abuse Research Report Series, “Methamphetamine Abuse and Addiction,” NIH Publication No. 06-4210, Printed April 1998, reprinted January 2002, revised September 2006**

<http://www.drugabuse.gov/ResearchReports/methamph/methamph.html>

An overview of the latest scientific findings on methamphetamine.

- **Office of National Drug Control Policy, “Methamphetamine Facts & Figures”**

<http://www.whitehousedrugpolicy.gov/drugfact/methamphetamine/index.html>

Information includes extent of use, health effects, treatment, arrests and sentencing, production and trafficking, and legislation.

- **Drug Enforcement Administration, “Methamphetamine”**

<http://www.dea.gov/concern/meth.html>

Information includes short-term and long-term effects, user population, and drug seizures.

- **The Partnership for a Drug-Free America**  
<http://www.drugfree.org/Portal/DrugIssue/MethResources/default.html>

Links to “Meth Fact Sheets” (English and Spanish PDFs), “Facts About Meth,” and “Drug Guide: Methamphetamine.”

Also view links to information for teens, young adults, parents, and the community.
- **KCI The Anti-Meth Site**  
[http://www.kci.org/meth\\_info/links.htm](http://www.kci.org/meth_info/links.htm)

Frequently asked questions about meth, links, and other sources of meth information.
- **“The Methamphetamine Problem,” from the Institute for Intergovernmental Research**  
<http://www.iir.com/centf/guide.htm>

A question-and-answer guide.
- **“Meth 101,” from the Department of Justice**  
[http://www.usdoj.gov/methawareness/meth\\_video.htm](http://www.usdoj.gov/methawareness/meth_video.htm)

Videos and PowerPoint presentations.
- **Rural Assistance Center (search for “methamphetamine”)**  
<http://www.raconline.org/>

Information directed to rural areas.

## Chemicals Used in Methamphetamine Production

- **California’s Office of Environmental Health Hazard Assessment**  
[http://www.oehha.ca.gov/public\\_info/clanlabs.html](http://www.oehha.ca.gov/public_info/clanlabs.html)

This Web site contains links to downloadable fact sheets and technical support documents about some of the chemicals used in the production of meth.



## Methamphetamine Statistics and Trends

- **Substance Abuse and Mental Health Services Administration, Office of Applied Studies**  
<http://oas.samhsa.gov/>

The Office of Applied Studies is the primary source of national data on the prevalence, treatment, and consequences of substance abuse in the United States. OAS regularly collects data on drug-related emergency room visits and drug-related deaths. OAS is also the national source of information on the location, organization, and capacity of providers of services to prevent and treat substance abuse and the cost, quality, and effectiveness of the services of these providers.

The Substance Abuse and Mental Health Services Administration has three major data collection systems to provide this information on a regular basis: [National Survey on Drug Use & Health](#), the [Drug and Alcohol Services Information System](#), and the [Drug Abuse Warning Network](#).

- **U.S. Department of Justice, National Drug Intelligence Center, “National Methamphetamine Threat Assessment 2007”**  
<http://www.usdoj.gov/ndic/pubs21/21821/index.htm>

This assessment provides a strategic overview and outlook of the threat to the United States from the illicit trafficking and abuse of methamphetamine.

- **National Clandestine Laboratory Register**  
<http://www.dea.gov/seizures/index.html>

This Drug Enforcement Administration resource lists addresses for locations where law enforcement agencies reported finding chemicals or other items that indicated the presence of either clandestine drug laboratories or dump sites.

- **U.S. Sentencing Commission, “Sourcebook of Federal Sentencing Statistics”**  
<http://www.ussc.gov/ANNRPT/2006/SBTOC06.htm>

Contains descriptive statistics on the application of the federal sentencing guidelines and provides selected district, circuit, and national sentencing data.

- **Drug Enforcement Administration Maps of Meth Lab Incidents**

[http://www.dea.gov/concern/map\\_lab\\_seizures.html](http://www.dea.gov/concern/map_lab_seizures.html)

1999–2006 maps that include all meth incidents, including labs, dump sites, or chemical and glassware seizures.

- **Drug Enforcement Administration “Stats & Facts”**

<http://www.usdoj.gov/dea/statistics.html>

National statistics and state fact sheets.

## Medical Aspects of Methamphetamine Use

**Note:** For additional, more detailed information about the clinical presentation, evaluation, and health effects of persons exposed to methamphetamine, please refer to Part B of this toolkit: “A Guide for Clinicians and Health Care Professionals Responding to Methamphetamine Lab Exposures.”

- **American Dental Association, “Methamphetamine Use (Meth Mouth)”**

<http://www.ada.org/prof/resources/topics/methmouth.asp>

Information about meth use and oral health.

- **Partnership for a Drug-Free America, “Brush Up On the Facts About Meth Mouth”**

[http://www.drugfree.org/Portal/DrugIssue/MethResources/meth\\_mouth.html](http://www.drugfree.org/Portal/DrugIssue/MethResources/meth_mouth.html)

Facts about “meth mouth.”

- **“Methamphetamine Treatment: A Practitioner’s Reference, 2007,” by the California Department of Alcohol and Drug Programs**

<http://www.adp.ca.gov/Meth/pdf/MethTreatmentGuide.pdf>

A comprehensive compilation of background information and treatment strategies for practitioners.

- **“A Clinician’s Guide to Methamphetamine”**

[http://www.hazelden.org/OA\\_HTML/ibeCCtpItmDspRte.jsp?a=b&item=6790](http://www.hazelden.org/OA_HTML/ibeCCtpItmDspRte.jsp?a=b&item=6790)

This book is available from Hazelden for \$99. “Chapter topics include the basics about meth, clinical challenges, the stages of recovery, assessment, and meth’s effects on adolescents and children.”

## **Drug-Endangered Children**

- **U.S. Department of Justice, “Children at Clandestine Methamphetamine Labs: Helping Meth’s Youngest Victims” (June 2003)**

<http://www.ojp.usdoj.gov/ovc/publications/bulletins/children/197590.pdf>

A bulletin providing comprehensive information about the impact of meth on children.

- **National Alliance for Drug Endangered Children**

<http://www.nationaldec.org/news/news.htm>

Click on “Links” for information about child protection, child welfare, health and hospitals, and legislation.

- **“Meth and Child Welfare: Promising Solutions for Children, Their Parents and Grandparents”**

[http://ipath.gu.org/documents/A0/Meth\\_Child\\_Welfare\\_Final\\_cover.pdf](http://ipath.gu.org/documents/A0/Meth_Child_Welfare_Final_cover.pdf)

This report from Generations United examines the impact of methamphetamines “on children, families, communities and the child welfare system. It identifies some promising strategies to prevent meth use, keep children safe, and help parents with addictions complete treatment” and provides a comprehensive set of recommendations.

- **National Center on Substance Abuse and Child Welfare**

<http://www.ncsacw.samhsa.gov/MethamphetamineList.htm>

This site provides methamphetamine resources, including a good sampling of state and local protocols.

- **Child Welfare Information Gateway**

<http://www.childwelfare.gov/responding/meth.cfm>

This site includes a list of resources on a variety of topics to help child welfare workers understand what methamphetamine is and how it affects users. Includes state and local examples.

- **Drug Endangered Children**  
[http://www.whitehousedrugpolicy.gov/enforce/dr\\_endangered\\_child.html](http://www.whitehousedrugpolicy.gov/enforce/dr_endangered_child.html)

Information about drug-endangered children from the Office of National Drug Control Policy. Information includes prevalence, federal response, legislation, and related publications.

## Training

- **Clandestine Laboratory Investigators Association**  
<http://www.clialabs.com/>

CLIA is a “nonprofit organization dedicated to provide training, technical support, legislation assistance and expert testimony to all law enforcement, prosecutors and emergency service personnel.”

- **U.S. Department of Justice, Office of Community Policing Services (COPS)—Tools for Combating Meth**  
<http://www.cops.usdoj.gov/default.asp?Item=1645>

Tools for Combating Meth contains practical guidebooks that address issues such as clandestine drug labs, environmental dangers involved in meth production, and best practices for combating meth.

- **Institute for Intergovernmental Research, Methamphetamine Investigation Management Workshop**  
<http://www.iir.com/centf/meth.htm>

A training to “address the operational aspects of managing methamphetamine investigations, as well as problem areas specific to these types of investigations.”

- **Drug Enforcement Administration Clandestine Laboratory Training**  
<http://www.usdoj.gov/dea/programs/training/part14.html>

Agencies need to contact their local DEA division. Please visit <http://www.usdoj.gov/dea/agency/domestic.htm> for information.

- **Landlord Training Program developed by Campbell DeLong Resources, Inc.**  
[http://www.cdri.com/LandlordTraining/LTPNat4\\_2.pdf](http://www.cdri.com/LandlordTraining/LTPNat4_2.pdf)

A manual to help landlords keep illegal activity out of rental property.

## Methamphetamine Treatment Programs

- **UCLA Integrated Substance Abuse Programs**

<http://www.methamphetamine.org>

This site provides information about methamphetamine research and treatment.

- **The Matrix Institute on Addictions**

<http://www.matrixinstitute.org>

This organization provides treatment, education, and training.

- **Hazelden**

<http://www.hazelden.org/web/public/whatishazelden.page>

A private drug and alcohol rehabilitation center. They also offer education and training and resource materials.

## Federal and State Legislation and Ordinances on Methamphetamine

- **Centers for Disease Control and Prevention, Public Health Legal Preparedness Materials**

<http://www2a.cdc.gov/phlp/Methlab.asp>

This site contains selected state legislation, ordinances, policies, and regulations that relate to methamphetamine laboratories and chemical exposure.

- **“Pushing Back Against Meth: A Progress Report on the Fight Against Methamphetamine in the United States “**

[http://www.whitehousedrugpolicy.gov/publications/pdf/pushingback\\_against\\_meth.pdf](http://www.whitehousedrugpolicy.gov/publications/pdf/pushingback_against_meth.pdf)

This report surveys the effects of anti-meth action in all 50 states and compares state laws to the federal standard enacted in September 2006 as part of the Combat Methamphetamine Epidemic Act of 2005.

- **The Library of Congress, THOMAS**

<http://thomas.loc.gov>

Provides public access to federal legislation and other information.

- **National Association of Counties, Meth Ordinances**  
[http://www.naco.org/Template.cfm?Section=Codes\\_and\\_Ordinances&Template=/cfiles/counties/codescat\\_res.cfm&GetDirectory=Meth\\_Ordinances](http://www.naco.org/Template.cfm?Section=Codes_and_Ordinances&Template=/cfiles/counties/codescat_res.cfm&GetDirectory=Meth_Ordinances)

Links to a sample of county ordinances.

## Cleanup of Methamphetamine Laboratories

- **“Guidelines for Law Enforcement for the Cleanup of Clandestine Drug Laboratories,” 2005 Edition**  
<http://www.usdoj.gov/dea/resources/redbook.html>  
 A resource for safe standards of cleaning up illegal drug laboratories.
- **Cleaning Up Former Methamphetamine Labs**  
[http://www.kdheks.gov/methlabs/ml\\_cleanup.html](http://www.kdheks.gov/methlabs/ml_cleanup.html)  
 Guidelines established by the Kansas Department of Health and Environment.
- **California’s Methamphetamine Drug Lab Cleanup Program**  
[http://www.dtsc.ca.gov/SiteCleanup/ERP/Clan\\_Labs.cfm](http://www.dtsc.ca.gov/SiteCleanup/ERP/Clan_Labs.cfm)  
 Provides links to other states’ meth lab cleanup programs.
- **KCI The Anti-Meth Site, “Cleaning Up Former Methamphetamine Labs”**  
[http://www.kci.org/meth\\_info/meth\\_cleanup.htm](http://www.kci.org/meth_info/meth_cleanup.htm)  
 Guidelines in Missouri.

## Prevention and Education

- **SAMHSA’s National Clearinghouse for Alcohol & Drug Information**  
<https://ncadistore.samhsa.gov>  
 One-stop resource for information and resources about substance abuse prevention and addiction treatment.
- **National Institute on Drug Abuse (NIDA) for Teens**  
<http://teens.drugabuse.gov/index.asp>

A Web site dedicated to providing drug prevention and education information in a teen-friendly format.

- **KCI The Anti-Meth Site, Resources for Teachers**

[http://www.kci.org/meth\\_info/education\\_4\\_teachers/index.htm](http://www.kci.org/meth_info/education_4_teachers/index.htm)

Links to meth education resources for teachers.

- **Frontline: “The Meth Epidemic”**

<http://www.pbs.org/wgbh/pages/frontline/meth/>

A *Frontline* investigation into how and why meth use spiraled out of control and became the fastest-growing drug abuse problem in America.

- **Office of National Drug Control Policy**

<http://www.whitehousedrugpolicy.gov>

Provides drug publications, fact sheets, programs, and state and local profiles on drugs.

- **Just Think Twice**

<http://www.justthinktwice.com>

Resources for teen audiences and teachers.

- **American Council for Drug Education**

<http://www.acde.org>

Offers a “range of educational programs and services designed to engage teens, address the needs of parents, and provide employers, educators, health professionals, policy-makers and the media with information on tobacco, alcohol and drugs.”

- **Faces of Meth**

<http://www.facesofmeth.us/main.htm>

Access to free images showing the effects of methamphetamine use.

- **Meth Education for Elementary Schools**

<http://www6.semo.edu/coned/Medfels/medfels.htm>

This site is a resource for third and fourth grade teachers preparing to present information about methamphetamine to their students.

- **A Family Guide to Keeping Youth Mentally Healthy and Drug Free**  
<http://www.family.samhsa.gov>

Resources for parents to help reduce a child's risk for becoming involved with alcohol, tobacco, and illegal drugs.

- **Parents: The Anti-Drug**  
<http://www.theantidrug.com>

Access to information and resources to equip parents and other adult caregivers with the tools they need to raise drug-free kids.

- **Hazelden**  
<http://www.hazelden.org/bookstore>

A wealth of resources for purchase from the Hazelden bookstore.

- **National Institute on Drug Abuse, "Preventing Drug Use among Children and Adolescents"**  
<http://www.nida.nih.gov/Prevention/Prevopen.html>

A guide to research-based drug abuse prevention for parents, educators, and community leaders.

## Drug Courts

- **Drug Courts**  
<http://www.whitehousedrugpolicy.gov/enforce/drugcourt.html>

Information and links about drug courts from the Office of National Drug Control Policy.

## Examples of Community Action Against Methamphetamine

- **2stopmeth.org, Butte County Meth Strike Force**  
<http://2stopmeth.org>

View how the Butte County Methamphetamine Strike Force is working to eliminate methamphetamine from Butte County, CA.

- **Montana Meth Project**  
<http://www.montanameth.org./index.php>



The Montana Meth Project is a large-scale program in prevention, aimed at significantly reducing meth use in Montana.

- **Lead On America**

<http://www.leadonamerica.org>

Lead on America is a community-based organization dedicated to educating citizens in the Puget Sound area of Washington state in cooperating with law enforcement in the local war against drugs.

- **NO METH-Not in MY Neighborhood**

<http://www.nomethnotinmyneighborhood.org>

“NO METH-Not in MY Neighborhood is a community-wide, broad-based effort to instill intolerance for methamphetamine manufacturing, distribution and use in the Salem/Keizer area and in Marion and Polk County” in Oregon.

- **Meth Watch Program**

<http://www.methwatch.com/index.aspx>

Meth Watch is a voluntary program started in Kansas as a public-private partnership between law enforcement, state officials, and the retail community. Meth Watch is designed to help curtail the suspicious sale and theft of common household products used in the illicit manufacturing of methamphetamine.

- **Meth Destroys**

<http://www.methfreetn.org/index.php>

View the efforts of an anti-meth task force in Tennessee.

- **Meth Action Coalition**

<http://www.methaction.org/>

The Meth Action Coalition is a grassroots organization comprising citizens, professionals, and businesses “to eliminate the use, sale and manufacturing of meth in Central Oregon in partnership with law enforcement, treatment and prevention professionals.”

- **Meth Education and Drug Awareness Coalition of Wright County**

<http://www.meada.org/index.html>

View what the Methamphetamine Education and Drug Awareness Coalition of Wright County (MN) is doing to prevent the use of drugs, protect safety by enforcing laws, implement new drug laws, and advocate for recovering addicts and treatment services.

- **MethNet**

<http://www.illinoisattorneygeneral.gov/methnet>

View the efforts of MethNet, a program of the Illinois Office of the Attorney General.

- **Kansas Methamphetamine Prevention Project**

<http://www.ksmethpreventionproject.org/index.htm>

This project “provides training, technical assistance, strategies and resources for addressing the methamphetamine problem at the local and state levels.”

## Other Methamphetamine Toolkits

- **Meth Education Tool Kit from the Putnam County Health Department in Tennessee**

<http://www.metheducation.com/index.html>

A comprehensive anti-meth educational program. The tool kit can be purchased for \$20.

- **Tackling Meth, from the Oregon Partnership**

<http://www.orpartnership.org/web/tacklingmeth.asp>

“The Tackling Meth Tool Kit is a comprehensive approach to addressing methamphetamine abuse, with a specific focus on empowering local communities.” The toolkit can be purchased for \$199.

- **Meth: Our Nation’s Crisis—Toolkit for Change from the Hazelden Foundation**

<http://www.publicaster.com/info/hazelden/methcrisis>

A CD/DVD toolkit designed to help communities launch a campaign against meth can be purchased for \$99.

## Building Coalitions Against Methamphetamine

- **Community Anti-Drug Coalitions of America**

<http://cadca.org>

Community Anti-Drug Coalitions of America works to strengthen the capacity of community coalitions to create and maintain safe, healthy, and drug-free communities. The Web site contains a wealth of information and resources to help establish and build coalitions.

- **National Community Anti-Drug Coalition Institute**

<http://www.coalitioninstitute.org>

Access to coalition training and educational materials as well as technical assistance.

- **Community Tool Box**

<http://ctb.ku.edu/about/en/index.jsp>

“Community Tool Box provides practical information to support your work in promoting community health and development.” The Tool Box is organized by what you may want to do: learn a skill, plan the work, solve a problem, or connect with others.

## Comprehensive Web Sites

- **Office of National Drug Control Policy, Methamphetamine**

<http://www.whitehousedrugpolicy.gov/publications/asp/topics.asp?txtTopicID=8&txtSubTopicID=22>

A list of methamphetamine publications from various sources.

- **MethResources.gov**

<http://www.methresources.gov>

MethResources.gov is a tool for policymakers, law enforcement officials, treatment and prevention professionals, businesses and retailers, and antidrug activists. The comprehensive site brings together information and resources available to communities on the topic of methamphetamine.

- **The Partnership for a Drug-Free America**

<http://www.drugfree.org/Portal>

A comprehensive portal to access information, resources, and assistance to help you reduce illicit drug use and help people live healthy, drug-free lives.

- **KCI The Anti-Meth Site**

[http://www.kci.org/meth\\_info/links.htm](http://www.kci.org/meth_info/links.htm)

A resource site for methamphetamine issues.

- **National Association of Counties, Meth Action Clearinghouse**

[http://www.naco.org/Template.cfm?Section=Meth\\_Action\\_Clearinghouse](http://www.naco.org/Template.cfm?Section=Meth_Action_Clearinghouse)

Resources to raise public awareness about and help counties respond to the nation's methamphetamine drug epidemic.

- **Methpedia.org**

<http://www.methpedia.org/index.html>

Online database of information and up-to-date resources on methamphetamine.

- **Minnesota Department of Human Services**

<http://www.dhs.state.mn.us/methresources>

Contains links to up-to-date facts and supported information about the problems associated with methamphetamine.

## Media Advocacy

- **APHA Media Advocacy Manual**

<http://www.apha.org/about/news/mediaadvocacy.htm> (PDF)

Provides guidance on working with the media.

- **National Alcohol and Drug Addiction Recovery Month  
Media Outreach Materials**

<http://www.recoverymonth.gov/1998/media.htm>

Provides examples of media outreach.

- **Administration on Aging Media Advocacy Toolkit**

[http://www.aoa.gov/press/Media\\_Advocacy/Media\\_Advocacy.asp](http://www.aoa.gov/press/Media_Advocacy/Media_Advocacy.asp)

This tool kit provides the basics on how to use media advocacy to get more attention for your issues and challenges, as well as more awareness of their solutions.

- **Community Tool Box, “Media Advocacy”**  
[http://ctb.ku.edu/tools/en/chapter\\_1034.htm](http://ctb.ku.edu/tools/en/chapter_1034.htm)

Information about working with the media.

- **National Youth Anti-Drug Media Campaign**  
<http://www.mediacampaign.org>

Access to examples of a variety of media to reach parents and youth, including TV ads, educational materials, Web sites, and publications.

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Helping Communities Combat  
Clandestine Methamphetamine Laboratories

**Part B:  
A Guide for Clinicians  
and Health Care  
Professionals Responding  
to Methamphetamine Lab  
Exposures**



Society for Public Health Education  
In conjunction with



Agency for Toxic Substances and Disease Registry



The American College of Medical Toxicology

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part B: A Guide for Clinicians and Health Care Professionals  
Responding to Methamphetamine Lab Exposures**

## **Acute Methamphetamine Laboratory Exposure: A Guide for Clinicians**

The purpose of this guide is to give health care professionals guidance for responding to patients who have been exposed to methamphetamine laboratories.

### **I. Initial Decision Making**

- A. Assess the route(s) of exposure (can be several routes).** Just walking in and out of a methamphetamine laboratory would be considered pulmonary exposure.
1. Pulmonary
  2. Dermal
  3. Ocular
  4. Ingestion
- B. Determine status of laboratory (listed in order of decreasing risk).**
1. Active laboratory with a synthetic “cook” in process (most dangerous)
  2. Methamphetamine laboratory fire
  3. Inactive laboratory that is still set up
  4. Laboratory is packed up in crates, boxes, cabinets, or trunks
  5. Laboratory area after *nonprofessional* cleanup.
  6. Laboratory area after *professional* cleanup (no risk).

### C. If possible, determine the type of methamphetamine laboratory

1. Iodine/phosphorus
2. Liquid ammonia/alkali metal (Birch or “Nazi” method)
3. Thionyl chloride (rare, but similar to iodine/phosphorus)
4. P2P laboratory (rare, occasionally uses heavy metal salts)
5. Unknown or not a methamphetamine laboratory

## II. Implicated Compounds (see table 1)

- A.** This table is not all-encompassing but includes common examples of the important groups of chemicals needed for the synthesis.
- B.** The **type/use** is what category the compound falls into. A brief overview of the hazards by each class follows:
1. **Solvents:** narcotizing symptoms, mild dermal injury, explosive vapors
  2. **Reducing agent:** significant dermal injury, reactive
  3. **pH modulators:** severe dermal and ocular injury
  4. **Precursor:** Generally lesser toxicity except with ingestion
- C.** The **level of concern** is a *very rough* estimation of the health danger assuming these basic things: an individual experiences a short-term (10-minute maximum) exposure by the pulmonary route only to the compound at a “moderate” environmental level.
1. Low does not imply safe; many of these are caustic or flammable.
  2. If the level is in red, the compound is flammable or explosive.



**Table 1****Items Commonly Found in Methamphetamine Laboratories**

Compound Name	Type/Use	Lab Type	Level of Concern
Acetone	Solvent	Any	Low
Carburetor cleaner	Solvent	Any	Low
Deicer (ethers)	Solvent	Any	Low
Gasoline, kerosene, coleman fuel	Solvent	Any	Low
Methylene chloride	Solvent	Any	Low
Methanol <sup>a</sup>	Solvent	Any	<b>Medium<sup>a</sup></b>
Hypophosphorus acid	Reducing agent	Iodine/phosphorus	Low
Iodine <sup>b</sup>	Reducing agent	Iodine/phosphorus	Low <sup>b</sup>
Liquid ammonia <sup>c</sup>	Special	Birch/Nazi	<b>High<sup>c</sup></b>
Lithium or sodium metal <sup>d</sup>	Reducing agent	Birch/Nazi	Low <sup>d</sup>
Red phosphorus, matches & road flares	Reducing agent	Iodine/phosphorus	Low
Phosphene <sup>e</sup>	Special	Iodine/Phosphorus	<b>High<sup>e</sup></b>
Thionyl chloride	Reducing agent	Thionyl chloride	<b>High</b>
Hydrochloric acid, gas	pH modulators	Any	<b>High<sup>f</sup></b>
Muriatic acid, liquid	pH modulators	Any	<b>Medium</b>
Hydroiodic acid, liquid	pH modulators	Iodine/phosphorus	<b>High</b>
Sulphuric acid, liquid	pH modulators	Any	<b>Medium</b>
Sodium hydroxide	pH modulators	Any	Low
Rock salt	Miscellaneous	Any	Low
Ephedrine tablets	Precursor	Birch/Nazi & iodine/phosphorus	Low
Methylamine/ N-methyl formamide	Precursor	P2P method	<b>Medium</b>
Phenyl-2-Propanone/ phenylacetic acid	Precursor	P2P method	Low
Lead & mercury salts <sup>g</sup>	Reducing agent	P2P method	Low <sup>g</sup>

**Notes**

<sup>a</sup>If significant dermal exposure or prolonged pulmonary exposure, serum methanol levels may be required for management.

<sup>b</sup>Iodine has minimal toxicity at airborne levels except immediately near a “cook” (Martyny, Arbuckle, McCammon, Esswein, & Erb, 2005).

<sup>c</sup>Liquid ammonia vapors cause significant pulmonary, dermal, and ocular injury.

<sup>d</sup>Dermal exposures are dangerous and should be physically decontaminated prior to irrigation with water. Burns or explodes when exposed to water.

<sup>e</sup>Phosphine is *only* present during active “cooking” or is potentially trapped in vapor traps or in enclosed areas such as coolers or closets.

<sup>f</sup>(Martyny et al., 2005).

<sup>g</sup>Despite their use with the P2P method, one does not usually need to pursue testing for heavy metals. They are not volatile, and their use is rare.

### III. Management

#### A. General laboratory cautions and safety

1. Entry into methamphetamine site (either active or inactive) that has not already been cleaned up is not recommended for anyone other than trained individuals wearing respiratory and dermal protective gear (Burgess, 2001).
2. Emergency responders should enter only long enough to perform their duties and remove any injured individuals (Burgess et al., 1996).
3. Without any contact with gross contamination or exposure to anhydrous ammonia, the short pulmonary only type of exposure presents minimal health risk.
4. No switches, knobs, or doors should be touched during entry unless absolutely necessary.
  - i. Potential for explosion from vapors.
  - ii. Potential for traps set by the criminals.
  - iii. Potential to be exposed to vapor pockets (Burgess, 2001).
5. No smoking in or around a methamphetamine laboratory.
6. Most injuries occur in first responders and police officers (Centers for Disease Control and Prevention, 2005).

#### B. **Although most individuals removed from a meth lab are unlikely to harbor enough residual chemicals to cause physiologic injury to others, there are good reasons to provide field decontamination with copious amounts of water after removal of their outer garments before bringing them to a health care facility (Horton et al., 2003).**

1. The chemical odor may trigger a psychological illness in caregivers.

2. Small amounts of caustic elements or irritants on the skin may not be immediately recognizable but may result in a skin burn in the patient over time.

**C. Pulmonary exposure: Most common route of exposure (Burgess, 2001; Burgess et al., 1996)**

1. The pulmonary effects of exposure are highly dependent on the state of the methamphetamine laboratory when entered. An active laboratory can be generating phosphine, a significant pulmonary irritant (Willers, 1999).
  - i. Active methamphetamine lab: Evaluate in a health care facility those with symptoms of cough, chest pain, dizziness, headache, difficulty breathing, or eye irritation.
  - ii. Inactive methamphetamine lab: Pulmonary injury is much less likely to result from the methamphetamine laboratory when not employed in a “cook”. Evaluate in a health care facility those with symptoms of cough, chest pain, dizziness, headache, difficulty breathing, or eye irritation.
2. In a health care facility
  - i. Treat with 100% oxygen to keep  $pO_2 \geq 95\%$ .
  - ii. Chest X-ray for cough or chest pain.
  - iii. Bronchodilators for wheezing/bronchospasm.
  - iv. Observe for 2–3 hours.
  - v. If symptoms do not completely clear within 2–3 hours, admission for observation may be warranted to observe for pulmonary edema from phosphine or anhydrous ammonia.
  - vi. Delayed pulmonary edema is a concern for phosphine exposure, although people are not usually completely asymptomatic initially.

**D. Dermal exposure**

1. For sodium/lithium metal dermal exposures (used in Birch/Nazi method), decontaminate by brushing off the metal prior to irrigation with water.

2. Exposure to anhydrous ammonia (vapor and liquid) causes significant dermal injury from its extremely cold temperature and its corrosive nature.
3. Determine the degree of chemical exposure
  - i. Person exposed to areas of ammonia vapors, gross liquid contamination, or solid or liquid waste:
    - a. Gently remove grossly contaminated clothing and place in plastic bag.
    - b. Gently decontaminate with soap and water.
    - c. Evaluate in a health care facility anyone with dermal burns from chemical exposure.
  - ii. Persons without direct skin exposure to ammonia vapors, gross contamination, or solid or liquid waste:
    - a. Launder clothing as normal.
    - b. Bathe as normal.
    - c. No potential for injury.
    - d. No referral needed.
4. In the health care facility
  - i. Decontaminate gently with soap and water.
  - ii. Injured areas should be treated as any other chemical burn.
  - iii. No laboratory testing is required.
  - iv. Grossly contaminated clothing (and toys) should be handled with gloves, bagged, and discarded (after consultation with law enforcement).
  - v. Clothing and toys without visible contamination should be laundered prior to reuse.

#### **E. Ocular exposure**

1. Immediate gentle decontamination with water.
2. Products of significant concern that **automatically** warrant health care facility evaluation:
  - i. Eye splash exposures from pH modulators

- ii. Anhydrous ammonia vapors causes significant injury secondary to its penetrating qualities because the vapors dissolve easily in water or moist areas such as the eyes.
- 3. For other eye splash exposures, if symptoms of pain or blurred vision persist after 10 minutes of gentle irrigation, refer to a health care facility
- 4. In a health care facility
  - i. Perform a full ocular exam
  - ii. Consult with ophthalmologist as warranted

#### F. Ingestion exposure

- 1. Patient ingested liquid laboratory waste or an item (e.g., food) with **gross contamination**.
  - i. If no vomiting, administer small amount of water.
  - ii. Refer to a health care facility anyone with symptoms of nausea, vomiting, diarrhea, abdominal pain, chest pain, difficulty swallowing, or change in voice.
- 2. Patient ingested potentially contaminated food or water near active methamphetamine laboratory (**no gross contamination**):
  - i. Little to no potential for injury.
  - ii. No automatic referral is needed.
  - iii. Anyone with symptoms of nausea, vomiting, diarrhea, abdominal pain, chest pain, difficulty swallowing, or change in voice should be evaluated.
- 3. In a health care facility
  - i. Severe gastrointestinal and pulmonary injuries have resulted from ingestion of methamphetamine laboratory chemicals.
  - ii. The exact treatment required when methamphetamine chemicals are ingested is impossible to completely detail in this document.
  - iii. Below is a partial list of compounds with some specific recommendations when ingestion occurs, but the caregiver should contact a poison center for assistance.
    - a. Methanol: Acidosis, serum level required, treatment with fomepazole.

- b. Iodine: Acidosis, treatment with oral starch solution.
- c. pH modulators: Caustic ingestion, likely require endoscopy.
- iv. Metal salts are occasionally used in meth labs, but there is almost no need for routine metal screening.
  - a. With *ingestion* the possibility of metal toxicity from mercury or lead salts does exist and should be pursued if relevant based on the laboratory type.
  - b. Children do not routinely require heavy metal screening.

**G. Asymptomatic pediatric exposure for children younger than 6 years (Kolecki, 1998; Mecham and Melini, 2002)**

1. Decontaminate skin with soap and water if not performed at scene.
  - i. One does not need special gear; decontamination should be undertaken as rapidly as possible with minimal psychological trauma. A calm, simple shower or bath is sufficient.
  - ii. No need for special hazmat setup for decontamination.
2. Provide a change of clothing.
3. *Grossly* contaminated toys and clothing need to be handled with gloves, bagged, and discarded (after consultation with law enforcement). \*\*
4. Other toys and clothing may be returned after washing with soap and water.
  - i. It is *totally unnecessary* to dispose of all toys.
  - ii. Due to the risk of additional psychological injury, make every effort to return the toys or security (comfort) items to the child.
5. Screening physical exam by a doctor. If child is not visibly contaminated and is asymptomatic, this exam may be deferred to the child's pediatrician within a few days.
6. Routine laboratory testing for metals, solvents, or drugs of abuse is not required or recommended.
7. Neglect and abuse likely play a highly significant role in the adverse developmental effects on children from methamphetamine lab exposures.

8. Samples obtained for legal purposes should follow the chain of custody and should undergo proper analysis (not at the hospital lab). Obtaining these samples should not cause the child any discomfort.

#### **H. Decontaminated methamphetamine laboratory site**

1. If a certified hazmat group has already professionally cleaned the area, it poses no health threat.
2. If a *noncertified* hazmat group has cleaned the area, there is a small but real potential for toxicity:
  - i. Contact landlord or homeowner.
  - ii. Contact local law enforcement or fire department.
  - iii. Contact certified hazmat disposal unit for complete cleanup (local law enforcement should have lists of companies in the area).

#### **IV. Consider Poison Center for Professional Toxicological Involvement**

- A. For patients with significant pulmonary symptoms.
- B. For patients with dermal contamination exceeding 15% of the body surface area.
- C. For patients with deliberate ingestion of methamphetamine laboratory compounds, regardless of symptoms.

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part B: A Guide for Clinicians and Health Care Professionals  
Responding to Methamphetamine Lab Exposures**

**Acute Methamphetamine Toxicity: A  
Guide for Emergency Care Providers**

**Introduction**

Amphetamines have long been valued medicinally for their vasoconstrictive and central nervous system stimulation properties. Unfortunately these same properties make amphetamines a common drug of abuse in today's society. They are classified as schedule II drugs by the U.S. Controlled Substances Act (1970) and are therefore heavily regulated by the Drug Enforcement Administration (DEA) even in legal prescribing practices. Today, amphetamines are used clinically in the treatment of narcolepsy and attention deficit hyperactivity disorder.

In recent years, methamphetamine abuse and illegal manufacturing has skyrocketed and has become a major concern to emergency providers, public health officials, and law enforcement. Methamphetamine was first synthesized in 1887 by a Japanese pharmacologist in the attempt to make synthetic ephedrine for the treatment of asthma (Chang, 2006). Today the synthesis of methamphetamine can be accomplished with limited precursors by untrained chemists in relatively simple reaction sequences that are described on the Internet. In Georgia alone, 23% of all federal drug cases involved methamphetamine, and 12% of all drug treatment admissions reported secondary to methamphetamine abuse (DEA, 2006).

**Street Knowledge**

Methamphetamine has many street names including, "meth," "crystal meth," "crystal," "ice," "speed," "crank," "glass," and "chalk." It has a crystalline structure and may vary in color from completely clear to yellowish brown. Methamphetamine can be injected, smoked, or ingested orally or intranasally. Its effects are likened to

those of cocaine but with a longer “high.” Intravenous use of the drug produces an intense rush for the user and, like other modes of abuse, it is associated with formication and skin picking, psychosis, agitation, and extreme suspiciousness. The intravenous use of methamphetamine carries the same risks as any intravenous drug use, including increased risk of HIV, Hepatitis B and C, endocarditis, and skin infections. Smokable methamphetamine is often referred to as “ice” and has the reputation of a rapid and intense onset of the high, which may last up to 15 hours. Smoking requires a larger dose than injecting, as the bioavailability is only about 50% when inhaled. Oral and intranasal abuse may be associated with increased tooth wear and sinus problems and may be the most common method of abuse worldwide (Lynton & Albertson, 2004).

## Signs and Symptoms

Methamphetamine affects every organ system in the human body. However, there is particular damage to cardiovascular, pulmonary, and central nervous systems. The typical presentation is consistent with a sympathomimetic toxidrome with hypertension, tachycardia, mydriasis, hyperthermia, agitation, altered mental status, and diaphoresis. Patients may present with chest pain, palpitations, arrhythmias, myocardial infarction, vasculitis, severe hypertension, or aortic dissection or aneurysms. Hypotension and bradycardia have also been observed in the setting of severe overdose. Central nervous system signs and symptoms include agitation, paranoia, anxiety, florid psychosis or mania, compulsory movements, choroid athetosis, strokes, memory impairment, and decreased concentration. Tactile and audiovisual hallucinations and even coma are also common. For the respiratory system, patients may also present with pulmonary hypertension, pulmonary edema, barotrauma, and thermal injury. Patients also commonly present in rhabdomyolysis and frequently have signs or symptoms consistent with acute renal failure. Liver failure has been reported in association with methamphetamine toxicity, but it is uncommon. Methamphetamine abusers often have significant skin lesions and infections from formication and agitation. Bruxism, or teeth grinding, is often apparent. Pediatric patients have often presented with inconsolable irritability, agitation, vomiting, and abdominal pain after inadvertent exposure (Lynton & Albertson, 2004).

## Mechanisms

The basic mechanism for most cardiovascular toxicity involves the release of catecholamines dopamine, norepinephrine (NE), and serotonin (5HT). There is some

evidence to suggest direct toxicity to myofibrils and inflammatory changes that contribute to vasculitis. Neurotoxic effects seem to be mediated by inhibition of reuptake of catechols, which directly affects neurotransmitter concentrations at the synapse leading to toxicity and cell death. Long-term abuse has been shown to decrease catecholamines dopamine stores in both the basal ganglia and substantia nigra and to decrease glucose utilization in the extrapyramidal system, dorsal raphe nucleus, and hippocampus. Decreased glucose utilization has been suggested as the mechanism of the development of psychosis and the reason for prolonged recovery in methamphetamine addicts even after cessation of abuse (Lynton & Albertson, 2004).

## Evaluation

A patient's history is the best way to make a diagnosis, but emergency care providers should treat the symptoms even without diagnosis confirmation. All significantly symptomatic patients should have an accucheck (blood glucose check), EKG (electrocardiogram), blood chemistries, CPK (blood test to measure creatine phosphokinase), and urinalysis. Emergency care providers should monitor patients with abnormal vital signs. Careful assessment for hydration status is indicated, as many of the patients have poor oral intake while bingeing. If the patient has an altered mental status, providers should perform a head CAT scan to detect possible bleeding. Echocardiogram and cardiac catheterization may be indicated for some patients with possible endocarditis or pulmonary hypertension (Albertson, 2007). Amphetamines and many related drugs appear in urine and gastric samples; however, it is not convenient to measure serum levels, which may not be correlated with toxicity. Methamphetamine metabolites may be present in urine for more than 48 hours; pH and hydration status affect the duration. There are many substances that yield false positive results on the common immunoassays, including trazodone, H<sub>2</sub>-blockers, ritodrine, chlorpromazine, promethazine, segelineselegiline, doxepin, benzathine, and metabolites of labetalol. These results can usually be confirmed with GC/MS (gas chromatography/mass spectrometry) testing at qualified lab facilities (Lynton & Albertson, 2004).

## Treatment

The basics of all emergency management apply to methamphetamine toxicity. Airway protection, supplemental oxygen, intravenous access, and rapid evaluation of severity of presentation are necessary. There is no antidote to methamphetamine

toxicity. The focus of treatment must be on controlling the stimulant effects of methamphetamine. Patients should receive supportive care for a life-threatening sign such as hyperthermia; cooling blankets, ice packs in axillae and groin, fans, pharmacologic control of muscle activity, and cold-water immersion are recommended. Dantrolene, though probably not harmful, is not indicated unless there is suspected neuroleptic malignant syndrome. Chemical rather than physical restraints are preferred for severe agitation as physical restraints may worsen muscle injury, worsen rhabdomyolysis, or result in further harm to a struggling patient (Lynton & Albertson, 2004). Benzodiazepines are often sufficient for treatment of agitation; however, haloperidol and droperidol have also been used with some success. Hypertension is generally best treated with sedation with the aforementioned agents. Nitroprusside or phentolamine may be used if sedation alone proves inadequate. Tachyarrhythmias can be controlled with esmolol or propranolol/propranolol. Chest pain or arterial vasospasm may be treated with benzodiazepines or nitroglycerin (table 2). Activated charcoal should be considered in the patient presenting after an oral overdose. Gastric lavage is not indicated unless there is suggestion of ingestion of multiple pills or packets within one hour of presentation. Whole bowel irrigation with or without KUB (radiograph of the abdomen) should be considered for patients ingesting large amounts of pills or packets (table 3). Hemodialysis has limited efficacy because the drug is mostly eliminated in the liver (Albertson, 2007).

**Table 2****Clinically Based Treatment Options in Acute Methamphetamine Intoxication**

Signs and symptoms	Treatments
Hyperthermia	<ul style="list-style-type: none"> <li>- Icepacks in axillae and groin</li> <li>- Cooling blankets</li> <li>- Cold-water immersion</li> <li>- Pharmacologic control of muscle activity: Benzodiazepines: Diazepam<sup>a</sup> 5–20 mg IV q 5–10 min</li> </ul>
Hypertension	<ul style="list-style-type: none"> <li>- Benzodiazepines: Diazepam<sup>a</sup> 5–20 mg IV q 5–10 min</li> <li>- Phentolamine</li> <li>- Nitroprusside</li> </ul>
Tachyarrhythmias	<ul style="list-style-type: none"> <li>- Benzodiazepines: Diazepam<sup>a</sup> 5–20 mg IV q 5–10 min</li> <li>- Esmolol<sup>b</sup></li> <li>- Propanolol- Propranolol</li> </ul>
Agitation	<ul style="list-style-type: none"> <li>- Benzodiazepines: Diazepam<sup>a</sup> 5–20 mg IV q 5–10 min</li> <li>- Haloperidol<sup>c</sup></li> <li>- Droperidol</li> <li>- Chemical restraints preferred over physical restraints</li> </ul>
Chest pain	<ul style="list-style-type: none"> <li>- Benzodiazepines</li> <li>- Nitroglycerine</li> </ul>

**Notes**

<sup>a</sup>Diazepam preferred over lorazepam because maximum respiratory depression is observed at 5–10 min, whereas with lorazepam it will not be observed for 1 hour after administration.

<sup>b</sup>Esmolol is preferred for short duration of action and easy titration to effect.

<sup>c</sup>Antipsychotics are to be used with caution as they may increase anticholinergic symptoms, including hyperthermia secondary to decreased diaphoresis.

**Table 3**

Quick Reference for Decontamination Methods and Indications

Decontamination method	Indications in setting of methamphetamine use
Activated Charcoal (1g/kg or 10× the amount if ingested toxin)	- All ingestions when able to ensure adequate airway protection - Multi-dose may be appropriate for large packet ingestions, but no role in intravenous use
Whole bowel irrigation	- Large amount of ingestion or concretions on KUB; - Multiple packets ingested; or - Co-ingestion with other drugs
Gastric lavage	- Multiple pills or packets ingested <i>within 1 hour</i> of presentation <sup>a</sup>

<sup>a</sup>May have significant morbidity secondary to risk of esophageal perforation or aspiration and should be performed with extreme caution and only within 1 hour of ingestion.

## After the Hospital

All patients presenting with methamphetamine-related complaints should be referred to treatment centers specializing in addiction either as inpatients or at discharge. Some studies recommend cognitive behavioral therapy as well to decrease addictive behaviors. Furthermore, patients who have been involved in the illegal manufacturing of methamphetamines may need additional care; consultation with a toxicologist or poison control center should be sought.

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part B: A Guide for Clinicians and Health Care Professionals  
Responding to Methamphetamine Lab Exposures**

**Evaluation of Children Exposed to  
Methamphetamine Manufacture**

**I. Acute Exposure**

Contact with a substance that occurs once or for only a short time (up to 14 days) (Agency for Toxic Substances and Disease Registry)

**II. Emergency Department Evaluation of an Acutely Exposed Child**

- A. After decontamination and evacuation of the child from the clandestine lab site, a thorough and comprehensive health evaluation should be performed. This should involve local Child Protective Services (CPS) agencies.
- B. Multiple local protocols have been developed to coordinate the removal, evaluation, and treatment of children found living at methamphetamine labs. Most incorporate a multidisciplinary approach involving law enforcement, social services, medical personnel, and mental health services.
- C. In 2000, the National Alliance on Drug Endangered Children was established to provide a national protocol for the medical evaluation of children living in clandestine laboratory sites. This protocol defines specific roles for law enforcement, CPS, and medical personnel (National Alliance for Drug Endangered Children).
  - i. The child should be transported to a safe environment with the assistance of law enforcement and local CPS when appropriate
  - ii. If child appears ill (fast breathing, obvious burns, lethargy, or somnolence), or if there was an explosion or active chemicals at the scene, the child should be immediately transported to a hospital emergency department (ED) capable of providing medical evaluation of children

- iii. A complete medical evaluation should be performed on all other children promptly, as called for in local guidelines
- iv. Special emphasis should be place on the skin, pulmonary, and neurological exams, but a comprehensive exam is certainly indicated
- v. Urine should be collected as soon as practical and within 12 hours for toxicological evaluation in accordance with the appropriate chain of evidence protocol of the local jurisdiction, when called for in local guidelines
- vi. Children should be screened for acute injuries as well as for signs of abuse and neglect
- vii. A CBC, Chem-7, and LFTs should be obtained if appropriate.
- viii. After the complete medical examination, the child should undergo additional dental, developmental, and mental health examinations, which may be scheduled over the following days.
- ix. Specific pediatric medical follow-up should be arranged for repeat examination after 30 days, 6 months, and 1 year.

### **III. Intermediate Duration and Chronic Exposure Issues**

#### **Intermediate duration exposure**

“Contact with a substance that occurs for more than 14 days and less than a year” (Agency for Toxic Substances and Disease Registry).

#### **Chronic exposure**

“Contact with a substance that occurs over a long time” (more than 1 year) (Agency for Toxic Substances and Disease Registry).

##### **A. Health**

All long-term health effects associated with methamphetamine exposure in children have yet to be fully elucidated (The Initiative Foundation, 2004).

##### **1. Neurological**

- a. “Enduring cognitive deficits” may occur in a neonate born to a mother who is a methamphetamine abuser (Anglin, Burke, Perrochet, Stamper, & Dawud-Noursi, 2000).



- b. Developmental delay and severe delay with autistic feature are reported. Speech/language is the most common delay identified and the most common age is 4 to 6 years old (Grant, 2006b).
- c. The chemicals (benzene, coleman fuel, ethanol, ephedrine, hexane, lead acetate, mercuric chloride, methyl alcohol, naphtha, nitroethane, pseudoephedrine, and pyridine), which are being used to manufacture methamphetamine, may also affect the central nervous system, especially in children. Refer to 4. **Toxicities from chemical used in or by-products from “cooking” methamphetamine.**

## 2. Ocular

- a. Ocular exposure to acetic acid, acetic anhydride, ammonia, benzyl chloride, formic acid, hydrogen iodide, lithium aluminum hydride, mercuric chloride, methyl alcohol, methylamine, and naphtha may cause long-term injury such as permanent eye damage, corneal injury, or blindness. Refer to 4. **Toxicities from chemical used in or by-products from “cooking” methamphetamine.**

## 3. Respiratory

- a. Inhalation or aspiration of acetic anhydride, acetone, ammonia, benzaldehyde, benzyl chloride, benzene, coleman fuel, ephedrine, formic acid, hydrochloric acid, hydrogen chloride, hydrogen iodide, iodine, lithium aluminum hydride, mercuric chloride, methyl alcohol, nitroethane, phosphine, phosphoric acid, and pseudoephedrine may affect the respiratory system. Refer to 4. **Toxicities from chemical used in or by-products from “cooking” methamphetamine.**

## 4. Toxicities from chemical used in or by-products from “cooking” methamphetamine (Burgess & Chandler, 2003)

- i. Acetic Acid
  - a. Use: Synthesis of phenyl-2-propanone (P2P), which is used in the manufacture of methamphetamine
  - b. Health hazards: Irritant to eyes, nose, throat, and lungs. Sufficient exposure may also lead to dermal burns, pulmonary edema (swelling or fluid in the lungs), ocular ulcerations, and potentially permanent eye damage.
- ii. Acetic anhydride
  - a. Use: Synthesis of P2P

- b. Health hazards: Irritant to skin, eyes, and mucous membranes. It can also cause skin burns, blindness, bronchospasm, and nasal mucosa ulcerations, especially in high concentration.
- iii. Acetone
  - a. Use: Methamphetamine production solvent
  - b. Health hazards: Airway, eyes, skin irritant. Flammable liquid at room temperature when mixed with air. Tremors, fatigue, blurred vision, bizarre behavior, coughing, coma, and death may occur if there is prolonged exposure.
- iv. Ammonia
  - a. Use: Methamphetamine synthesis reagent
  - b. Health hazards: May cause burns to skin, eyes, nose, pharynx, and larynx. Ocular exposure can also cause temporary or permanent blindness. Bronchospasm, wheezing, laryngitis, tracheitis, chemical pneumonitis, and pulmonary edema may occur with respiratory exposure.
- v. Benzaldehyde
  - a. Use: Synthesis of P2P or amphetamine precursor
  - b. Health hazards: Irritant to lungs, skin, and eyes. It may cause contact dermatitis.
- vi. Benzyl chloride
  - a. Use: Production of methamphetamine
  - b. Health hazards: Irritant to eyes, skin, and mucous membranes. It may cause pulmonary edema with respiratory exposure, dermatitis with skin exposure, and corneal injury with eye exposure. Headache, weakness, and irritability may also occur at low concentrations.
- vii. Benzene
  - a. Use: Methamphetamine production solvent
  - b. Health hazards: Flammable liquid. Irritant to eyes, nose, throat, and lungs. It may damage the central nervous system (headache, confusion, short-term memory loss, and dizziness). Kidney damage, anemia, and leukemia may be seen following chronic exposure, and

coma and death may occur following prolonged or sufficiently intense acute exposure.

viii. Coleman fuel

- a. Use: D-methamphetamine extraction
- b. Health hazards: Flammable liquid. Irritant to eyes and skin. It may cause delayed lung injury, depression of the nervous system, convulsions, and loss of consciousness.

ix. Ephedrine

- a. Use: Precursor in methamphetamine production
- b. Health hazards: Irritant to eyes, skin, and the respiratory system. Headache, hypertension, tachycardia, and stroke may occur with ingestion.

x. Ethanol

- a. Use: Methamphetamine production
- b. Health hazards: Flammable liquid. Nose and throat irritation, headache, confusion, nausea, vomiting and drowsiness may occur with inhalation. Burning sensation, seizures, dizziness, confusion, unconsciousness, and death may occur with ingestion. Pediatric ingestion of ethanol may result in clinically significant hypoglycemia. Damage to the nervous and gastrointestinal systems may occur with chronic exposure, especially with ingestion.

xi. Ethyl ether

- a. Use: Amphetamine and methamphetamine production
- b. Health hazards: Flammable liquid. It may cause headache, vomiting, and intoxication with ingestion or inhalation.

xii. Formic acid

- a. Use: Manufacturing process
- b. Health hazards: Irritating and corrosive to eyes, skin, lungs, and the gastrointestinal tract (resulting in bloody diarrhea). Pulmonary edema, shock, and death may occur with severe inhalation. Severe burns and pain may occur with ingestion.

xiii. Hexane

- a. Use: Methamphetamine production

- b. Health hazards: Flammable liquid. Permanent brain and nerve damage, bizarre behavior, coma, and death may occur with prolonged exposure.
- xiv. Hydrochloric acid
- a. Use: Methamphetamine manufacture
  - b. Health hazards: Very corrosive to skin, airways, throat, and lungs. Inhalation or vapor exposure to hydrochloric acid may cause permanent lung damage. Skin allergies and tooth decay may occur with prolonged exposure. Release of toxic and flammable gas may occur with heating of the chemical.
- xv. Hydrogen chloride
- a. Use: Methamphetamine manufacture
  - b. Health hazards: Irritation to nose and throat. It may cause pulmonary edema and burns.
- xvi. Hydrogen iodide
- a. Use: Methamphetamine manufacture
  - b. Health hazards: Corrosive and irritating to the throat, upper respiratory tract, and eyes. High concentrations may cause skin burns, bronchospasm, pneumonitis, chest pain, dyspnea, pulmonary edema, and laryngeal edema.
- xvii. Hypophosphorus acid
- a. Use: Methamphetamine manufacture
  - b. Health hazards: Corrosive. It causes burns to mucous membranes when inhaled and skin burns with contact.
- xviii. Iodine
- a. Use: Hydrogen iodide manufacture
  - b. Health hazards: Corrosive. Vomiting, headache, delirium, hypotension, and circulatory collapse may occur with ingestion. It may cause skin erythema and swelling with contact. High concentration may cause pulmonary edema.
- xix. Lead acetate
- a. Use: P2P synthesis

- b. Health hazards: Abdominal cramps, nausea, vomiting, constipation, diarrhea, anorexia, and difficulty concentrating. Children are more susceptible having greater effects on the developing nervous system.

xx. Lithium aluminum hydride

- a. Use: Hydrogenation in methamphetamine manufacture
- b. Health hazards: Corrosive. Severe irritation to the skin, nose, eyes, mucous membranes, and lungs. May cause scarring and inflammation of the eyes.

xxi. Mercuric chloride

- a. Use: Methamphetamine manufacture
- b. Health hazards: Corrosive. Intense epigastric pain, abdominal pain, bloody emesis, and renal failure may occur with ingestion. Respiratory irritation, lungs and airways destruction, kidney failure, shock, and bizarre behavior may occur with inhalation. Corrosive injury may occur with eye exposure. Chronic exposure may lead to accumulation in the brain, liver, and kidneys.

xxii. Methyl alcohol

- a. Use: Methamphetamine manufacture
- b. Health hazards: Flammable liquid. Irritation to eyes, nose, throat, and lungs. Headache, nausea, abdominal pain, loss of consciousness, coma, blindness, and brain, pancreas, or kidney damage.

xxiii. Methylamine

- a. Use: Methamphetamine manufacture precursor
- b. Health hazards: Irritant to skin, eyes, and mucous membranes. Olfactory fatigue may occur. Conjunctival hemorrhage, edema, and superficial corneal opacities may occur with eye exposure.

xxiv. Naphtha

- a. Use: Methamphetamine manufacture
- b. Health hazards: Burns or irritation to skin and eyes. Headache, nausea, confusion, dizziness, unconsciousness, and central nervous system depression may occur with inhalation.

xxv. Nitroethane

- a. Use: P2P synthesis precursor

- b. Health hazards: Irritant to mucous membranes, respiratory tract, skin, and eyes. Depression of the central nervous system, renal and liver toxicity, weakness, ataxia, convulsions, nausea, vomiting, and diarrhea may occur.
- xxvi. Phenylacetic acid
- a. Use: P2P synthesis precursor
  - b. Health hazards: Tetratogen. Irritant to skin and eyes. Headache, dizziness, and nausea may occur.
- xxvii. Phenyl-2-propanone (P2P)
- a. Use: Precursor for methamphetamine production
  - b. Health hazards: Irritant to skin and eyes. Headache, nausea, and dizziness may occur with inhalation.
- xxviii. Phosphine
- a. Use: Product of methamphetamine production
  - b. Health hazards: Flammable gas. Dizziness, tremors, vomiting, shortness of breath, delayed lung damage, and convulsions may occur with inhalation.
- xxix. Phosphoric acid
- a. Use: Precursor in amphetamine and methamphetamine production
  - b. Health hazards: Irritant to eyes, skin, nose, and throat. Allergies and damage to lungs, liver, bloodstream, and bone marrow may occur with chronic exposure. Release of phosphine gas may occur when contact occurs with metal.
- xxx. Pseudoephedrine
- a. Use: Precursor in methamphetamine production
  - b. Health hazards: Irritant to eyes, skin, and the respiratory system. Headache, tachycardia, hypertension, and stroke may occur with ingestion.
- xxxi. Pyridine
- a. Use: P2P synthesis
  - b. Health hazards: Irritant and central nervous system depressant. Vapor exposure may cause headaches, vertigo, nausea, vomiting,

nervousness, sleeplessness. Repeated exposure may cause skin irritation. Lower back pain may also occur without evidence of a back injury.

## B. Social

- a. The social disease of illicit drug use and trafficking fractures the home environment of a child who lives in a methamphetamine lab
- b. The binge-and-crash pattern of using the drug makes it difficult for parental abusers to meet the basic needs of their children (Mecham & Melini, 2002).
- c. Children are frequently chronically malnourished and deprived of essential medical and dental care.
- d. Children's hygiene and grooming are often neglected, and parents do not supervise children to safeguard them from the various environmental hazards present in the meth lab (Grant, 2006a).
- e. In California, the Governor's Office of Criminal Justice Planning (n.d.) documented the living conditions of children rescued from two separate meth lab homes.
  1. In the first, five children were found with needle marks on their hands, feet, arms, and legs from accidental contact with syringes. All five children were subsequently determined to be infected with hepatitis C.
  2. In the second, a 2-year-old child was found with open sores around her eyes and on her forehead that resembled a severe burn. Later, the condition was diagnosed as chronic repeated cockroach bites that had been left untreated.
- f. Children living in meth labs have a higher risk of physical and sexual abuse.
  1. A constant parade of disinhibited strangers in the meth home may create an environment in which children are easy and convenient targets for physical and sexual abuse (Philpot, 2000).
  2. Methamphetamine users are known to often experience states of hypersexuality.
  3. Pornography and adult objects are often present and accessible to children in meth labs (Mecham & Melini, 2002).

- g. Violence also commonly occurs in conjunction with illegal drug trafficking, and children can be witnesses or forced participants in these events.
- h. Because meth users are often paranoid, there are often firearms and weapons present. Booby traps and explosives have also been reported in meth labs to combat police and rival drug traffickers (Swetlow, 2003).
- i. Children may witness the arrest and forcible removal of parents or caregivers by police, leading to psychological trauma.
- j. Chronic exposure to the combined chaos, neglect, abuse, and violence of the meth lab environment often leads to long-term sociologic sequelae.
  1. Children form their social mores from observing their parents' and caregivers' behavior.
  2. Children found in meth labs often develop low self-esteem, a sense of shame, an inability to trust others, and poor social skills.
  3. Latent consequences that manifest later in life include delinquency, school absenteeism, teen pregnancy, failure, isolation, and poor peer relations (Swetlow, 2003).
  4. Without effective intervention, many children imitate their parents and caregivers as adults and perpetuate the cycle of criminal behavior, violence, and substance abuse (Oishi, West, & Stuntz, 2000).

### C. Psychological

- a. Living in the stressful and unstable environment of a meth lab home, children can develop behavioral, emotional, and cognitive problems that will plague them throughout their entire lives (Peed, 2004).
- b. Many children who live in meth homes develop an attachment disorder.
  1. This disorder occurs when parents or caretakers either fail to respond to an infant's basic needs or when they respond to the infant unpredictably.
  2. Infants with this disorder typically do not cry or show any emotion when separated from their parents.



3. Children who develop an attachment disorder are at greater risk of later engaging in criminal behavior and of abusing substances.
  4. Early mental health intervention and the presence of stable, nurturing caregivers can help minimize long-term damage (Swetlow, 2003).
- c. Repeated neglect and abuse undoubtedly cause lasting psychological and emotional trauma for children living in a meth lab household.
  - d. The effects are later manifested by developmental delays, behavioral problems, mental health disease, and antisocial behavior.
  - e. Children who are rescued from drug environments can suffer post-traumatic stress disorder for six months to a year after being removed from the environment (Peed, 2004).
  - f. To minimize long-term damage, a psychologist or other mental health professional should be made available to provide therapeutic services for all children rescued from meth labs.

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Part B: A Guide for Clinicians and Health Care Professionals  
Responding to Methamphetamine Lab Exposures**

**Environmental Considerations  
in Cleanup of a Clandestine  
Methamphetamine Lab**

The following information is not a substitute for an evaluation by a trained medical toxicologist. This guide is intended to increase awareness and educate physicians, medical personnel, and the public about the potential dangers that clandestine methamphetamine labs present. If you feel that you may be exposed to methamphetamine or its by-products, see your doctor or a trained medical toxicologist.

**Chronic environmental exposure to methamphetamine**

The toxic effects of methamphetamine are commonly seen in chronic users. Like any toxic side effect, the severity is dependent on duration of exposure and dose. In other words, people who take in high doses of a substance tend to suffer more significant adverse effects than those who take in smaller amounts. People who are exposed to a substance for a longer period at the same dose tend to suffer more significant adverse effects than those who are exposed for only a short period. These principles form the basis for determining the potential for illness because of exposures from clandestine methamphetamine labs.

A chronic exposure occurs when someone encounters a substance more than once over an indeterminate period. Exposure could occur over days, weeks, months, or years.

Little objective data exist for chronic environmental exposure to methamphetamine. Most of the medical information comes from observations and studies in individual users who have abused methamphetamine. Obviously, these individuals tend to have much more severe and prolonged illnesses than someone who is

exposed to low levels of methamphetamine over the same period. However, these side effects are no less significant to the people who experience them.

Who is at risk of being exposed to methamphetamine or the chemicals used in the production of methamphetamine?

- People who live in or near a clandestine methamphetamine lab
- People who live in a former lab that was not appropriately cleaned and remediated
- People eating food grown in soil near a methamphetamine lab
- First responders (police, fire, hazmat, emergency medicine providers) who enter clandestine labs or who handle chemicals from methamphetamine labs

What are the routes of exposure?

- Inhalation
- Ingestion
- Dermal absorption

What are the possible medical issues that may be consistent with chronic exposure and toxicity from methamphetamine

- Insomnia
- Irritability
- Hyperactivity
- Personality changes
- Decreased appetite, weight loss
- Poor concentration
- Anxiety
- Compulsive behavior
- Dermatoses

Symptoms may be magnified in people who have conditions such as the following:

- Hypertension

- Hyperthyroidism
- Arteriosclerosis
- Glaucoma
- Psychiatric illness
- Pregnancy
- Animal studies have suggested that chronic exposure to methamphetamine may be associated with long-term neuropsychiatric changes (Smith, La-Gasse, Derauf, Grant, Shah, et al., 2006).

Some children may have neuropsychiatric, developmental, and behavioral problems if exposed to methamphetamine directly or while in utero. Fetal growth restriction may occur in some newborns with neonatal exposure to methamphetamine.

What should a primary care physician *consider* when faced with a patient that has had a potential environmental exposure to methamphetamine?

- Complete and detailed history and physical examination
- Blood pressure check
- Nutritional assessment
- Environmental exposure history
- Urine drug testing for methamphetamine
- Heavy metal screen
- Basic lab testing (complete blood count, blood chemistries)
- Consultation with a board-certified medical toxicologist
- Consultation with a psychiatrist for psychiatric disturbances
- Environmental testing (soil, septic tank, water, and surface sampling)

Clandestine methamphetamine labs come in many configurations. They are often located in remote areas and may be constructed in a wide variety of locales, including hotels, motels, trailers, trucks, automobiles, and houses. Clandestine methamphetamine labs can be erected for repeat “cooks” or can be intended for single use only in an effort to avoid law enforcement. In addition to the variety of locations these labs may be found in, methamphetamine production processes vary to some

degree. The synthesis pathway, reagents used, and by-products formed may vary by batch. The nature of the hazards involved range vastly; officials must carefully evaluate cleanup on a case-by-case basis.

The primary goals of cleaning up a clandestine methamphetamine lab include the following:

- Identify reagents, by-products, and other hazardous substances at the clandestine methamphetamine lab site.
- Remove or contain as much residual contamination as possible.
- Restore the structure to a suitable living condition.
- Dispose of hazardous waste in a safe manner (Centers for Disease Control and Prevention, 2000).

The potential hazards from a former clandestine methamphetamine lab may involve

- airborne contaminants,
- chemical spills,
- retained reagents,
- by-product waste, and
- contaminated surfaces and household items (Tennessee Department of Environment and Conservation).

These substances can be potentially harmful to cleanup workers and future occupants if not handled properly (Centers for Disease Control and Prevention, 2005).

Airborne contaminants include reaction by-products and volatilized reagents. Studies conducted in seized labs show that chemicals may disperse widely throughout structures and be deposited on household items in unpredictable patterns. Methamphetamine and other by-product contaminants may be found on carpets, furniture, walls, ceilings, insulation, clothes, toys, and any absorbent surface (Hammon & Griffin, 2007).

- A typical “cook” can release as much as 5,500 micrograms of methamphetamine per cubic meter into the air.
- The constant deposition of these aerosolized particles can accumulate up to 16,000 micrograms per 100 square centimeters onto surfaces.

- If these highly concentrated residuals accumulate in ventilation ducts they may disperse contaminants throughout the facility.
- Cleanup crews should presume that all surfaces and structures may be contaminated and hazardous prior to remediation (Hammon & Griffin, 2007).

By-products such as phosphine gas may be given off during the cooking process. Other reagents can spontaneously volatilize. Liquid chemical spills of reagents such as ammonia, methanol, ether, and acetone can cause a slow release of volatilized reagents and pose an airborne threat until properly removed and disposed of.

Methamphetamine producers often discard hazardous waste indiscriminately in the most readily available way. Common places such waste may be found include

- household drains,
- bathtubs,
- large containers,
- backyard trenches, and
- soil.

These chemicals can contaminate groundwater and the environment. Residual contaminants left on surface soil or in drains may include various acids and bases that are corrosive and contain potentially hazardous components that need to be neutralized during cleanup.

When a clandestine methamphetamine lab is seized, bulk reagents, leftover chemicals, and methamphetamine are often found at the site. Because of concomitant drug use, needles, syringes and other drug paraphernalia often may be found and need disposal. These items often are helpful to law enforcement for prosecution.

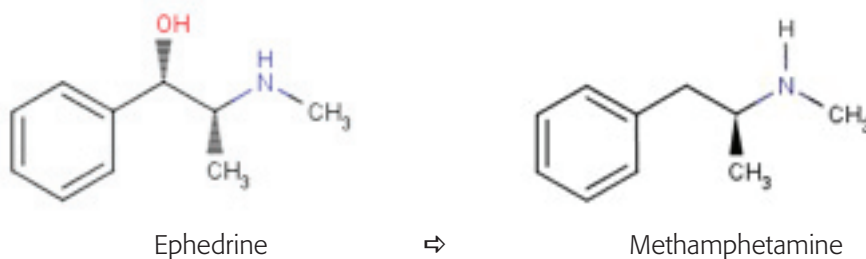
The cleanup process of a seized clandestine methamphetamine lab should start with an assessment of the chemicals used at that site. Two common techniques used to produce methamphetamine are

- the anhydrous ammonia method (i.e. Birch method, “Nazi” method) and
- the red phosphorous method.

Each of these processes poses unique risks inherent to its ingredients, reaction intermediates, impurities, and by-products. A forensic chemist can assist in determining which method was used by sampling and identifying these substances in residual

contaminants (Barker, 2007). However, the possibility that more than one method has been used should not be overlooked during the cleanup.

The Birch method (also known as the “Nazi” method) is a reduction method that uses anhydrous ammonia and lithium or sodium metal to reduce ephedrine to methamphetamine. The reduction of the hydroxyl component of an ephedrine molecule creates methamphetamine. Solvents typically used in this reaction include diethyl ether, tetrahydrofuran, ethanol, and methanol (Burgess, 2003).



The most popular method of reducing ephedrine or pseudoephedrine to methamphetamine is the so-called red phosphorous method. This method uses hydriodic acid and red phosphorous in a one-step process to synthesize methamphetamine. During the process, hydriodic acid vapors are aerosolized from the solution and can be very harmful. The hydriodic vapors can cause a chemical pneumonitis if proper personal protective equipment is not worn. When the red phosphorous is heated in the presence of hydriodic acid, phosphine gas is emitted. This is a potentially dangerous gas with a strong fishy odor.

## Cleanup

- Clandestine methamphetamine labs should never be ignited (burned) or detonated. Burning may release potentially harmful substances into the air.
- Adequate ventilation is important when decontaminating a former clandestine methamphetamine lab. Adequately ventilating contaminated areas will help to safely decontaminate most solvent vapors that are dangerous to worker safety. Most solvents tend to evaporate easily and dissipate when ventilated.
- Spilled chemicals may cause a persistent release of volatile compound and should be removed and remediated as completely as possible.



- Some chemicals may be undetectable upon arrival to the scene, but disturbing the structure may re-aerosolize hazardous materials and pose a secondary risk. Also, some chemicals can volatilize with a rise in humidity or temperature.
- Post-cleanup samples should be taken before humans reoccupy the structure.
- Surface samples for methamphetamine should be no greater than 0.5 microgram per 100 cm<sup>2</sup> (Minnesota Department of Health, 2007).
- Indoor ambient air samples for volatile organic compounds should be no greater than 1 part per million.

## Worker Safety

- Police, firefighters, and medical responders should be aware of the potential dangers that clandestine methamphetamine labs hold
- Workers should take great caution because hazardous materials are often hidden or concealed in unassuming places.
- First responders and cleanup crews should wear appropriate personal protective equipment before entering clandestine methamphetamine labs. Chemical injuries and respiratory exposures are common in first responders entering clandestine methamphetamine labs without personal protective equipment (Centers for Disease Control and Prevention, 2005; Madden, Flynn, Zandonatti, May, Parsons, et al., 2005).

## Disposal

- All demolition waste including carpet, furniture, and other items should be hauled to a class I landfill.
- Personal protective equipment, clothing, and remediation cleaning materials used at a site may be disposed of as municipal solid waste.
- Water used for cleaning purposes may generally be disposed to a municipal collection system or into a functional septic system as dilution will usually be adequate to render the harmful chemicals a low risk. However, consult local environmental authorities whenever possible.

- Check with local authorities for proper removal and disposal of materials containing asbestos, lead, and mercury because regulations vary from state to state.

## Cleanup Scenarios

### 1. The “one-time cook” clandestine methamphetamine lab

A clandestine lab that produced only a small amount of methamphetamine. If reagents or products are found, only a small amount of reagents are present at the scene. These types of labs are typically found in trailers, motels, and homes. This is because the cook was mobile or transient and was not set up to make massive amounts of methamphetamine for a long period. A “cook” may have occurred over a weekend or for personal use only. This is the lowest level of risk because of the smaller amount of by-products and reagents involved.

- Ventilate the structure to remove remaining volatile chemicals.
- Screen air for volatile organic compounds.
- Remove any residual waste including cooking equipment or leftover reagents.
- Evacuate any containers found at the structure including buckets, tubing, and glassware.
- Discard all clothing and loose objects.
- Clean all surfaces.
- Commercially clean or replace carpets.
- After cleaning is complete, obtain samples to determine if the decontamination was sufficient (measure for volatile organic compounds, perform a methamphetamine swipe test, and take any other appropriate sample).

### 2. The “short-term cook” clandestine methamphetamine lab.

This is the same scenario as the “one-time cook” lab, but with more extensive contamination. This type of lab was used multiple times over a short period before the “cooks” moved on to another site. These labs are also found in trailers, motels, or homes. Leftover reagents, spills, waste, and paraphernalia are often found at these sites because the cookers are using the structure transiently. This is unlike a “one-

time cook,” where the cooks live in the structure permanently. These cooks are usually nomadic and use the structures for a short period. They tend to be messy and careless, so spills and waste are common.

- The minimum cleanup should include the same requirements from “one-time cook” labs.
- Ventilate structure for a minimum of eight days with or without cyclic heating.
- Screen for volatile organic compounds prior to cleanup.
- Remove all residual waste products in containers.
- Dispose of all cooking equipment.
- Remove all absorbent surfaces such as carpets, drapes, clothes, mattresses, and drop ceilings.
- Remove surfaces that are stained or that are in close proximity to the site.
- Clean all surfaces including ventilation ducts. Replace air filter.
- Acquire confirmatory sample to ensure decontamination was adequate

### **3. The “recurrent cook” or “entrenched cook”**

This type of clandestine methamphetamine lab is a property that was set up for cooking over an extended period. Its sole use may have been for producing methamphetamines, but people (the cook and associates or family members) may have also occupied the structure. These structures are usually located in rural or isolated areas. Trailers are common sites for reoccurring cooks. The nature of these sites make contamination much more serious. Methamphetamine and by-products may occur in high concentrations on the surfaces and materials of these structures. Large amounts of waste or reagents may also be found in storage within the structure. Officials often dispose entirely of trailers instead of decontaminating them for reuse. It is never acceptable to burn or detonate former clandestine methamphetamine labs.

- The minimum cleanup should include the. same requirements from “short-term cook” labs
- Ventilate the property for a minimum of two weeks.
- Screen for volatile organic compounds.

- Remove and dispose of any by-product or waste.
- Remove all contaminated surfaces or items that have been rendered unusable secondary to thorough contamination or inability to clean.
- Sample soil and septic tanks for a possible environmental decontamination.
- Close neighbors (within 200 yards) should not grow fruits and vegetables in the soil until samples confirm safety.

#### 4. The “commercial cook”

This type of meth lab usually involves a mass production of methamphetamine in a larger structure such as a warehouse or commercial lab setting. These facilities have the potential to make massive amounts of methamphetamine and in turn generate substantial amounts of waste. Chemicals are often found in barrels or drums and stored or buried. These sites tend to be cleaner than smaller operations, but because of the massive amount of meth production, they are still highly contaminated.

- The minimum cleanup should include the same requirements from “recurrent cook” labs.
- Deconstruction of the equipment may be complicated and may cause more contamination of the site.
- Massive amounts of reagents and waste are found at these sites.

### Testing prior to occupancy of a former clandestine methamphetamine lab

Structures have a wide range of contamination potential that depends on the type of lab that was seized. Investigate the property thoroughly for methamphetamine or by-product contamination before allowing anyone to move into a former clandestine methamphetamine lab.

- Surface samples for methamphetamine should be no greater than 0.5 microgram per 100 cm<sup>2</sup> (Minnesota Department of Health, 2007).
- Indoor ambient air samples for volatile organic compounds should be no greater than 1 part per million.
- Take soil samples to screen for potential dumping sites. There are maximum threshold limits available for substances found.

- Ensure ventilation systems are in operating condition and test them for potential recontamination at later point.
- Test well water and septic tanks if present
- Do not use commercial testing products available for purchase over the Internet because of potential unreliability and lack of scientific validation for many products.

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**Helping Communities Combat  
Clandestine Methamphetamine Laboratories**

**Evaluation Form**

**T**he Society for Public Health Education and the American College of Medical Toxicology would like your feedback about the usefulness of this toolkit. Your response to the following questions is appreciated.

**Considering your work responsibilities, how useful did you find each component of this toolkit?**

	Not at all useful				Very useful	Did not use
The Primer	1	2	3	4	5	<input type="checkbox"/>
Information Sheet for Property Owners, Landlords, and Real Estate Agents	1	2	3	4	5	<input type="checkbox"/>
Information Sheet for Community Leaders	1	2	3	4	5	<input type="checkbox"/>
Information Sheet for Law Enforcement	1	2	3	4	5	<input type="checkbox"/>
Information Sheet for First Responders	1	2	3	4	5	<input type="checkbox"/>
Information Sheet for Health Care Professionals and Child Welfare Officials	1	2	3	4	5	<input type="checkbox"/>
Information Sheet for School Officials and Parents	1	2	3	4	5	<input type="checkbox"/>
Information Sheet for Retailers and Other Community Members	1	2	3	4	5	<input type="checkbox"/>
Community Action Information and Tools	1	2	3	4	5	<input type="checkbox"/>
Resource Directory	1	2	3	4	5	<input type="checkbox"/>
Acute Meth Toxicity: A Guide for Clinicians	1	2	3	4	5	<input type="checkbox"/>
Acute Meth Toxicity: A Guide for Emergency Providers	1	2	3	4	5	<input type="checkbox"/>
Evaluation of Children Exposed to Meth Manufacture	1	2	3	4	5	<input type="checkbox"/>
Environmental Considerations in Cleanup of a Clandestine Meth Lab	1	2	3	4	5	<input type="checkbox"/>

**Comments:**

**Please indicate the extent to which the following occurred as a result of using this toolkit.**

	Not at all				Quite a bit
Enhanced my own understanding of meth issues	1	2	3	4	5
Enhanced my presentations, etc., about meth to various audiences	1	2	3	4	5
Was easy to integrate into my presentations, etc.	1	2	3	4	5
Offered content that was at an appropriate level	1	2	3	4	5
Offered content that was too technical	1	2	3	4	5
Benefited some groups that I work with more than others. If so, who benefited most? _____ _____	1	2	3	4	5

**Comments:**



**Since receiving and reviewing this toolkit, which of the following have you done?**

- a. Established contacts and relationships with other individuals or organizations that are conducting or have conducted educational or outreach activities for meth in my community.

No       Yes

If yes, please describe what types of events or activities.

- b. Created or otherwise participated in an anti-meth coalition or task force.

No       Yes

If yes,

How often does or will this group meet?

How many meetings have you attended?

Do you intend to continue to participate in this group?

**Comments:**

What suggestions do you have for *additional materials* or *content* to add or change that may improve future versions of this toolkit or similar toolkits?

If you have not used or do not plan to use this toolkit, please indicate your primary reasons.

**Additional comments:**

**In what setting(s) do you work?** *(Check all that apply.)*

- |  |  |
|--|--|
| <input type="checkbox"/> Federal agency                      | <input type="checkbox"/> College/university        |
| <input type="checkbox"/> State health department             | <input type="checkbox"/> School (K–12)             |
| <input type="checkbox"/> County/city/local health department | <input type="checkbox"/> Private business/industry |
| <input type="checkbox"/> Hospital/other health care setting  | <input type="checkbox"/> Other (please specify):   |
- 

Community-based organization/voluntary agency/nongovernmental organization

**Please indicate which of the following audiences you provide most of your services to.** *(Check all that apply.)*

- |  |  |
|--|--|
| <input type="checkbox"/> Infants and children (birth–14 y) | <input type="checkbox"/> Health professionals      |
| <input type="checkbox"/> Youths/adolescents (15–24 y)      | <input type="checkbox"/> Special needs populations |
| <input type="checkbox"/> Adults (25–64 y)                  | (please specify): _____                            |
| <input type="checkbox"/> Older adults (65+)                | <input type="checkbox"/> Other (please specify):   |
- 

**In which state do you work?** \_\_\_\_\_

**Please describe your community:**  Urban  Suburban  Rural

**Would you describe your work as public health education?**  No  Yes

**What is your job title?** \_\_\_\_\_

Thank you for your time!

Please send your completed form to

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