Rural Methamphetamine Use and HIV/STD Risk

Trends in Methamphetamine Use
Methamphetamine (meth) use intensified in the rural West and Midwest in the early 1990s gradually moving eastward and into the rural South.\(^1\),\(^2\),\(^3\) Figures 1 and 2 illustrate the growing popularity of methamphetamine indicated by the numbers of clandestine labs seized between 2001 and 2004 across the nation.\(^4\)

Figure 1:

<table>
<thead>
<tr>
<th>Total of All Meth Clandestine Laboratory Incidents</th>
<th>Calendar Year 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes Labs, Dumpsites, Chem/Glass/Equipment</td>
<td></td>
</tr>
<tr>
<td>AK 14</td>
<td></td>
</tr>
<tr>
<td>HI 3</td>
<td></td>
</tr>
<tr>
<td>Total: 13,557 / 47 States Reporting</td>
<td></td>
</tr>
<tr>
<td>Dates: 01/01/01 to 12/31/01</td>
<td></td>
</tr>
</tbody>
</table>

Source: National Clandestine Laboratory Database

Figure 2:

<table>
<thead>
<tr>
<th>Total of All Meth Clandestine Laboratory Incidents</th>
<th>Calendar Year 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes Labs, Dumpsites, Chem/Glass/Equipment</td>
<td></td>
</tr>
<tr>
<td>AK 16</td>
<td></td>
</tr>
<tr>
<td>HI 20</td>
<td></td>
</tr>
<tr>
<td>GUAM</td>
<td></td>
</tr>
<tr>
<td>Total: 17,170</td>
<td></td>
</tr>
</tbody>
</table>

Source: National Clandestine Laboratory Database

Many labs are located in rural areas which provide cover for the foul-smelling, highly toxic production of the drug. Local labs contaminate not only homes, soil, and water sources, but also the children living in meth-producing homes.\(^5\),\(^6\),\(^7\),\(^8\) Although lab busts and restrictions on precursor chemicals reduce local production, an estimated 80% of methamphetamine now comes from Mexican drug trafficking organizations.\(^9\)

Lab seizures are only one indicator of increasing rural methamphetamine use. The 2004 National Survey on Drug Use and Health estimates that 12 million Americans have used methamphetamine at some time, 1.4 million used meth in the past year, and that 300,000 individuals started using the drug each year since 2002. Of special interest is the fact that rates of methamphetamine use are highest in non-metropolitan areas\(^10\) (Figure 3).

Figure 3: Rates of Methamphetamine Use in Metropolitan and Non-metropolitan Areas 2004

National rates of admission for treatment of primary abuse of methamphetamine increased more than 300% between 1993 and 2003. Of the 18 states with treatment rates above the national average in 2003, two-thirds have large rural populations.\(^11\)

Methamphetamine was considered the leading drug problem for rural counties (populations under 50,000) in geographic areas other than the northeast surveyed in 2005.\(^12\) Qualitative studies of methamphetamine use in the rural West identified depletion of community resources as another measure of rural impact:

“Our entire child protection budget for the year was used by May for foster care because of it [meth].”\(^13\)

Understandably, resource-poor rural areas remain focused on meth’s devastating drain on local law enforcement, treatment services, and child welfare resources\(^13\) despite evidence from urban areas documenting an association between methamphetamine use and increased incidence of HIV and sexually transmitted diseases (STD).\(^14\),\(^15\),\(^16\),\(^17\)

(Continued on next page)
Meth 101
It is important to understand how the drug itself contributes to HIV/STD risk. This powerful stimulant known on the street as “speed,” “crystal,” “glass,” “tina,” and “crank,” is easily produced from a common decongestant, ephedrine or pseudoephedrine, in combination with ordinary products such as iodine crystals, battery acid, red phosphorous, and anhydrous ammonia (a widely used liquid fertilizer). The drug, especially the metamphetamine “cooked” in local labs, may be a powder ranging in color from white or yellow to peanut butter brown or red. Increasingly, the metamphetamine supplied by Mexican drug organizations resembles granulated crystals, glass shards, or larger crystals and may be highly potent. As imported crystal meth has replaced local powdered meth, snorting has become less common (15%), injection has declined slightly from 29% to 22%, and smoking the drug has become the most common mode of ingestion (56%).

Metamphetamine acts on the nervous system to release a surge of dopamine, norepinephrine and epinephrine. These neurochemicals produce sensations of pleasure, self-confidence, energy, alertness, suppressed appetite, and for many, sensations of sexual arousal along with sexual stamina. Methamphetamine remains active in the body for 8-12 hours and can be detected in the urine for up to 24 hours after ingestion.

Despite the long-lasting effects, users often ingest the drug more frequently, especially if smoking or snorting it, to maintain the desired effect over a long period of time even though it is not physiologically possible to recapture the initial intense rush regardless of the amount of drug ingested (see Figure 1). Chronic use or bingeing depletes these neurochemicals resulting in a “crash” and need for extended deep sleep. The crash is followed by severe psychological discomfort and symptoms of depression. Depression may be mild or debilitating but, in general, symptoms are reduced with additional doses of meth.

Effects
The most common physical consequences of long-term methamphetamine use include weight loss, malnutrition, poor personal hygiene, sleep disorders, cognitive losses, severe dental decay, stroke, and skin lesions from picking at imagined “meth bugs.” Chronic use of methamphetamine appears to contribute to short-term memory deficits, paranoia, and/or psychotic behavior. The long-term effects are unclear.

Rural Methamphetamine Users
In general, rural methamphetamine users are white, working class young adults. Recent trends show increasing use by Latinos, Native Americans, and rural youth. Nearly even numbers of males and females are in treatment for primary methamphetamine abuse, and in contrast to urban areas, rural users are more likely to be heterosexual.

Participants in a qualitative study of 41 current and former meth users in rural Colorado reported that use is particularly prevalent among workers in construction, agriculture, oil production, fast food restaurants, trucking, ranching, and other occupations that demand long hours and/or tedious tasks. Just under half of the individuals in this same study reported being from dysfunctional family backgrounds and/or having family members who also used methamphetamine or had other drug or alcohol addictions. Over one-third reported using methamphetamine to relieve symptoms of depression or attention deficit. Nearly half had dropped out of high school prior to graduation, yet the majority of those drop-outs had eventually completed the equivalent of a high school education or higher.

Reasons for Use
Reasons for using methamphetamine are similar for both rural and urban populations with some differences between males and females. Reasons common to both genders include: increased energy and productivity, perceived low cost compared to cocaine, self-medication for depression or attention deficits, and for many, the euphoric high. Males, more than females, report using meth for economic gain.

In contrast to a therapeutic dose of 10 mg to 25 mg of methamphetamine hydrochloride or d-methamphetamine used to treat obesity or attention deficit and hyperactivity disorder, a typical single street dose of crystal meth would be nearly ten times that amount, about 250 mg. Chronic users may ingest as much as 1-3 grams in a 24-hour period. The cost of a single “hit” of metamphetamine varies by geographic region and supplier, but, in general, the range is $15–$25 with the cost decreasing as volume increases. Common amounts of metamphetamine sold include a “teener” (1/16 ounce, 1 ¼ grams, or 7 hits) and an “eight-ball” (1/8 ounce, 3 ¾ grams, or 14 hits at about $10 a hit). The positive long-acting psychoactive properties of methamphetamine combined with its relatively low cost and easy availability make it an attractive drug for many populations.

Figure 4: Behavioral Response to Repeated Methamphetamine Use During Multi-Day Binge

Source: Nick Taylor, Ph.D., Psychotherapist

(Continued on next page)
from selling the drug or from gaining the energy to work multiple jobs.\textsuperscript{13, 32} Rural males are also more likely than females to report enhanced sexual libido and endurance as a reason for meth use.\textsuperscript{13} Rural females, on the other hand are more likely to report using meth for weight control and to combat fatigue.\textsuperscript{13, 32} Methamphetamine provides a welcoming social network for those who feel they are "outsiders" in a closed, stratified rural social system with limited social outlets. As one rural user explained, meth is "something we see as ours—like country music." \textsuperscript{13}

Low cost and easy availability of the drug in rural communities also contribute to its popularity\textsuperscript{13, 30}. Although the cost per gram is similar to the cost of cocaine, the longer-lasting effects of methamphetamine gave it a reputation as a "poor man's cocaine," well-suited to less affluent rural residents.

\textbf{Patterns of Methamphetamine Use}

In the rural West, the majority of users report having been introduced to meth on the job site, by family, or by lovers. Women often report having been introduced to the drug and to intravenous drug injection by sexual partners.\textsuperscript{13}

It is unclear how many sporadic, low-dose functional meth users exist in rural areas or their patterns of use since most studies enroll a disproportionate number of habitual users. Among habitual users, two patterns of use emerge. The first pattern is one of escalating use shifting gradually from sporadic, low-dose functional use to recreational weekend use and onto daily use, binging, and consequent loss of job, family, and children. In contrast, others report using meth primarily to party and enjoy the high, with men being more likely than women to report using the drug for recreational purposes and to enhance sexual libido and endurance. Recreational use ranges from occasional weekend binges to high-dose nearly daily use. Higher doses and greater frequency are often associated with crime and loss of jobs, family, and children.\textsuperscript{13, 30}

With the explosion of imported crystal meth, "snorting" has given way to a preference for smoking crystals or glass-like shards.\textsuperscript{3, 10, 11} Yet, nearly one-quarter of users inject meth, and women often report being injected by sexual partners, often with a shared syringe.\textsuperscript{13}

\textbf{HIV/STD Risk}

In a sample of rural Colorado meth users, we identified six key elements that may increase the risk of HIV/STD transmission among rural methamphetamine users:

1. a belief that HIV is not present in rural areas
2. prolonged unprotected sex while high
3. deciding to inject methamphetamine
4. mental confusion resulting from chronic use or binging
5. injecting in a chaotic drug environment, and
6. rural structural factors such as HIV stigma, marginalization, inadequate treatment services, and limited HIV testing and prevention.

Injection risks include sharing a communal water supply to rinse syringes and draw up water to dissolve the drug. Injectors often divide drugs in solution and measure it in a previously used syringe.\textsuperscript{13, 33} Direct sharing of syringes becomes more frequent as mental confusion increases during the course of a binge and in chaotic user networks. Direct sharing appears to be more common between sexual partners.\textsuperscript{13}

Sexual risks appear to be more common than injection risks. These relate, in part, to the drug stimulating sexual arousal in some users, and prolonging erection. This may lead to having sex with casual and/or multiple partners, and engaging in protracted sexual activities that may result in genital tissue abrasions or tears.

HIV/STD risk may increase when a meth-using network believes it is "normal" to have unprotected sex, have multiple partners during drug-facilitated partying, and exchange sex for drugs. Adding to the risk, the clouded thinking that accompanies the drug-induced high seems to obscure thoughts of using condoms. The travel of rural meth users to urban areas, between rural communities, among drug networks, and between partners adds multiple opportunities for sexual disease transmission. In addition, the drug-induced perceptions of invincibility and paranoia and the realistic fear of stigmatization or arrest from seeking medical care provide barriers to the early detection and treatment of STDs, including HIV, promoting unknowing transmission.

\textbf{Rural Context and Challenges}

Geographic isolation, rural poverty, closed social networks, social stratification, stigma, and a lack of anonymity in small rural communities may unwittingly contribute to the appeal of methamphetamine and the challenges of eradicating it. Remote settings and limited law enforcement resources decrease the likelihood of getting arrested during a drug sale or during meth production. Travel between communities and counties to buy, sell, or use drugs and/or access services, makes users difficult to track and to treat.\textsuperscript{13}

Inadequate mental health services and the vast distances required to access them in rural areas can be barriers to treatment especially for those without transportation.\textsuperscript{13, 33} Stigma associated with poverty, drug use, and HIV/STD increase the feeling of being an outsider in small rural communities.\textsuperscript{13, 34} Social outlets are often limited to church-sponsored functions or mainstream bars making the meth scene and that social network a seemingly attractive alternative for those feeling like outsiders. Similarly, becoming and remaining sober become more difficult since it is nearly impossible to avoid people and places that stimulate drug cravings in rural settings.\textsuperscript{13}

(Continued on next page)
The long hours and tedious work in oil fields, agriculture, construction, ancillary health care and fast food restaurants may be more tolerable on methamphetamine. Users report using meth to provide the energy to work multiple jobs or be a good mother. Low paying legitimate job opportunities make the lucrative sale of meth attractive and hard to give up. Although many rural users report being introduced to methamphetamine in the workplace, the extent of this practice is unknown.

Promising Approaches
Concerned citizens in some rural communities have formed task forces to share information about methamphetamine and explore ways to reduce meth use and its negative consequences in their communities. In contrast to urban areas that for decades have received the bulk of funding for dealing with substance abuse, rural communities must collaborate and leverage funds to develop local intensive outpatient treatment programs, enhanced child welfare systems, drug prevention programs in schools, and stronger law enforcement responses to meet the explosion of need created by rural methamphetamine use.

Individual treatment for methamphetamine addiction is challenging for overburdened rural mental health and drug treatment systems. It appears meth recovery requires long-term cognitive behavioral treatment and ongoing support groups for a minimum of one year. Rural communities are trying to strengthen their local outpatient treatment programs to be more intensive and long-term. Efforts to establish and sustain local 12-step programs for ongoing support have had mixed results often due to the challenge of finding and developing dynamic, well-trained leaders in more isolated areas.

Drug court programs that allow meth users to remain in the community under close supervision and in intensive treatment for at least 13 months, have experienced some success. Users who miss treatment sessions or have any illicit substance in their urine face immediate jail time sanctions that increase in severity with repeated infractions. Small communities are exploring how such a model might be implemented in vast geographical areas without depleting limited judicial and social service resources.

HIV and hepatitis prevention, testing, and counseling services are being provided by traveling health educators or nurses in some areas, targeting individuals attending court-ordered diversion programs for those charged with driving while under the influence of drugs or alcohol, and/or domestic violence. Some small rural communities offer low cost or free HIV and other STD screening targeting methamphetamine users who have injected drugs, had unprotected sex with drug users or multiple partners, and for those who are incarcerated.

Working with Methamphetamine Users
Clinical characteristics of methamphetamine users
- elevated pulse and blood pressure
- excessive and/or abrupt weight loss
- skin lesions (from toxins and picking at imagined “meth bugs”)
- dental decay, missing teeth, dental disease
- agitation and fleeting focus
- rapid speech
- cognitive losses

Tips for working with active meth users:
- Any underlying mental health problems should be diagnosed and treated.
- Drug abstinence is ideal but risk reduction may be more realistic for some users.
- Both men and women may be motivated to become sober to reclaim their children.
- Meth users may miss appointments and be irregularly compliant.
- May need to readjust priorities – needs may differ for service provider and meth user.
- May need to take services to users.
- Meth use may increase risk for heart attack, stroke, HIV, hepatitis, and other STDs.
- Methamphetamine use may interact with treatment regimes for HIV infection.
- Establishing any ongoing relationship with a meth user should be hailed as a success.

Conclusions
Methamphetamine continues to be a growing concern for rural areas in the U.S. Although rural communities are keenly aware of the legal, social and environmental problems created by methamphetamine production and use, the potential risk for HIV and other infectious disease transmission is less obvious.

See separate page for list of references.

For more information contact:
Rural Center for AIDS/STD Prevention
Indiana University
801 East Seventh Street, Bloomington, IN 47405-3085
Voice: (812) 855-7974
(800) 566-8644
Fax Line: (812) 855-3717
aids@indiana.edu
www.indiana.edu/~aids

This Fact Sheet was prepared for the Rural Center for AIDS/STD Prevention by Susan Dreisbach, RCAP co-director, based on research by Susan Dreisbach, Ph.D., Ben Hickler, M.A., Stephen Koester, Ph.D., University of Colorado at Denver and Health Sciences Center

The FACT SHEET is a publication of the Rural Center for AIDS/STD Prevention. RCAP is a joint project of Indiana University, the University of Colorado, and the University of Kentucky. The opinions expressed here do not necessarily reflect those of Indiana University, the University of Colorado or the University of Kentucky. Permission is extended to reproduce this FACT SHEET for non-profit educational purposes.
References:


