METHAMPHETAMINE AND VIOLENCE IN ILLINOIS

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by

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Table of Contents

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METHAMPHETAMINE AND VIOLENCE IN ILLINOIS
Executive Summary

Methamphetamine has spread eastward from Hawaii and California to other parts of the country, including the Midwest. Despite aggressive efforts by state and federal governments the problem persists and has been particularly visible in rural areas of the Midwest. Responding to the problem has been made more difficult because social science research on methamphetamine lags, even though the number of recent methamphetamine users is about the same as the number of recent crack cocaine users – a group that has been extensively studied (SAMHSA, 2006).

Beyond a lack of basic information about methamphetamines in rural areas there is a need for research on the association between methamphetamine and violence. Public perceptions notwithstanding, there is very little empirically based knowledge about the association between methamphetamine and violence. This study was designed to fill gaps in knowledge about the problem. The general purpose and goals of the project were as follows:

General Purpose

The general purpose of this study was to generate a better understanding of factors associated with methamphetamine use and methamphetamine-related violence in Illinois.

Goals

There were several inter-related goals for the project:

1. Provide a description of the epidemiology of methamphetamine use and of methamphetamine-related violence, across counties of different sizes in Illinois, with a particular emphasis on use and violence in rural areas.
2. Gain an understanding of the connection between methamphetamine and violence in rural areas, including violence associated with both use and methamphetamine markets.
3. Develop policy recommendations to respond to the methamphetamine problem.

The original design called for identifying and interviewing ten methamphetamine users from each of the three Illinois counties reporting the highest number of methamphetamine arrests for 2004 and 2005 combined. Newspapers in each county were to be examined to identify research subjects and the internet and phone directories were to be used to locate those subjects. Despite intensive efforts this approach proved futile, as arrested methamphetamine users turned out to not have stable residences and tended to not have land-line telephones. In light of the problems with this approach two alternatives were pursued. First, the Illinois Department of Corrections was contacted to see if incarcerated methamphetamine users could be identified and then interviewed. This approach also proved unsuccessful. Second, local probation departments were contacted and asked to distribute a letter to probationers seeking their cooperation. This approach yielded a total of nine interviews. To supplement these interviews with users, interviews were conducted with knowledgeable officials in each county (seven interviews total).

There were several objectives of the study:

Objective: Determine the nature and extent of an association between the use of methamphetamine and violence across Illinois counties of varying sizes.

Overall, the study found that violence occurred but was not pervasive. However, the potential for violence was substantial. Three of the nine meth users reported no violence and no situations in which violence was likely. Similarly, four of the seven officials reported no instances of violence. By far the circumstances most likely to lead to violence were those related to the pharmacological effects of methamphetamine. The paranoia associated with meth use led some users to perceive threats and prepare to respond when no actual threats were present. Further, the irritability and depression associated with coming down from a meth high could easily trigger violent outbursts from those already having violent tendencies. Coming down from a methamphetamine high also triggered suicidal thoughts in several of the users.

Substantially less common was violence associated with the business of methamphetamine production and distribution, what is known as systemic violence. Both users and officials reported that most of the methamphetamine consumed in these counties was produced locally and that methamphetamine transactions were generally based on bartering rather than cash. That is, someone wishing to acquire methamphetamine might provide precursors in exchange for the drug, rather than paying cash. Thus, there was little money to fight over. Systemic violence was also limited because production was not centralized but took place in small "mom and pop" operations where the manufacturers and users generally knew each other.

There was also little evidence of economic compulsive violence, or violence to acquire money to purchase drugs. While those wishing to barter for methamphetamine might steal precursor materials and thus generate property crime, they did not used armed violence to obtain them.

Finally, there was some evidence of violence associated with the general drug subculture. Users tended to isolate themselves from family and sober friends. Instead, they tended to associate with other drug users in an environment of mistrust. The problems created by isolation from sober associates was further compounded by the difficulty that active methamphetamine users had maintaining legitimate work, which placed them under economic pressure. The problems encountered in locating and interviewing subjects made it impossible to make comparisons across counties.

Objective: Determine the typical ways in which methamphetamine users in these counties acquire methamphetamine (e.g., local production versus external markets).

Objective: Determine the perceived effectiveness of efforts to limit access to precursors, particularly ephedrine-based cold medicines, and identify strategies used to get around these limits.

Objective: Determine the strategies they used to avoid detection by police.

Each of these objectives was briefly touched upon in the discussion above. In short, the methamphetamine used by these subjects (as verified by reports from officials) was almost always produced locally. Further, none of the subjects reported that the drug would be difficult to find, though several did cite past instances of spot shortages. Finally, the strategy most frequently used to avoid the police was to separate themselves from family and from friends who did not use drugs. The paranoia associated with methamphetamine use also made them wary of authorities and alert to situations that might lead to their arrest.

Objective: Determine their access to treatment and other support services.

Subjects generally entered treatment under duress: following their arrest with the hope that treatment would yield a lighter sentence, a condition of probation, or to show a good faith effort at parenting and thus keep DCFS from taking their children. None reported difficulty gaining access to treatment, though a treatment official expressed concern that recent budget cuts substantially prolonged the wait to enter treatment.

II. Review of The Relevant Literature

The abuse of amphetamines and their stronger relative, methamphetamine, have become a global problem. The United Nations reports that in Japan, Mexico, the Philippines, Korea, Sweden, and Great Britain "the abuse of amphetamines has already been more widespread than abuse of cocaine and heroin combined (United Nations Information Service, 1995)." In Thailand, which may have the largest per capita consumption of methamphetamine in the world and where the drug is known by its street name "yaba", it is estimated that from 30-50% of psychiatric hospital beds are filled with patients experiencing methamphetamine psychosis (Ahmad, 2003). While the problem continues to expand in Asia, which is said to have about two-thirds of the world's amphetamine abusers (Ahmad, 2003), indications are that at the beginning of the 21st century the abuse of amphetamine and methamphetamine is rapidly expanding throughout Europe, and North America. In the U.S., the number of people who report recent methamphetamine use is about the same as the number of people who report recent crack cocaine use – over one-half million people (SAMHSA, 2006).

Much has been written about the physiological effects of amphetamine. However, within the United States there has been almost no research on the rise of methamphetamine in the Midwest, or on the association between methamphetamine and violence in the Midwest. Although methamphetamine has become a major topic in many parts of the country, almost no research has examined the issue in the rural areas where it appears to have become particularly problematic. The widespread concern about methamphetamine may be justified, but this fear has been fueled by anecdotal data (e.g., media reports on individual cases) and is based on surprisingly little systematic data.

A. Brief History of Amphetamine and Methamphetamine

There is an extensive body of literature examining the history of illegal drugs, particularly focusing on the opiates, marijuana, tobacco and caffeine. In contrast, the social history of amphetamines has received relatively little attention, with a few notable exceptions (e.g., Grinspoon and Hedblom, 1975; Jackson, 1975; Brecher, 1972). The social history of methamphetamine is even more brief.

The important active ingredient in amphetamine is ephedrine. Ephedrine is a natural drug derived from the herb *ma huang* and is structurally similar to epinephrine – also known as adrenaline (Grinspoon and Hedblom, 1975). In its natural form the effects of ephedrine are extremely mild. Ephedrine was first isolated and created as a synthetic stimulant in 1887. Its use as a psychopharmacological tool was not appreciated until 1927 and it was not until 1931 that an amphetamine delivery device, the nasal inhaler, was marketed for treating nasal congestion. Reports of sleeplessness led, in 1935, to the use of amphetamines to treat narcolepsy (Grinspoon and Hedblom, 1975; Jackson, 1975; Kramer, 1969; Murray, 1998). Drug users quickly discovered that the nasal inhalers could be broken open and the drug-impregnated paper wick could be removed and either ingested directly or soaked in coffee or other drinks (Jackson, 1975). Nasal inhalers were cheap and easily purchased over the counter, whereas amphetamine tablets were often more difficult to procure. The abuse of amphetamines in nasal inhalers became a serious problem so that over time efforts were made to limit the availability of inhalers, or to modify them to discourage their illegitimate use. As this happened users increasingly turned to amphetamine in pill form.

Since the mid-1900s, amphetamines have been among the most widely used prescription drugs. They have been used extensively as diet aids and as "pick-me-ups." They have been used by university students and truck drivers to fight fatigue, and by athletes to enhance performance. Two of the more controversial applications of amphetamines have been in military applications

and in the treatment of attention deficit disorder.

Amphetamines were given liberally during World War II by Canadian, British, Japanese and German soldiers. It is also claimed that the British shared as many as 80 million tablets with American soldiers, who may have received an additional 80-100 million tablets from American Army medics. By the end of the war as many as 1.5 million soldiers returned home with some experience with amphetamine (Jackson, 1975; Grinspoon and Hedblom, 1975; Rawlin, 1968). American military forces (illegally) used injectable amphetamine while in Korea and Japan in the early 1950s (Brecher, 1972) and were officially given amphetamine in tablet form during the Korean, Vietnam, Desert Storm and Afghan wars (Asnis and Smith, 1979; Cornum et al., 1997). Beginning in 1960 the Air Force began using amphetamines for pilots in extended flight operations. While this practice was supposed to have ended in March 1991, following Operation Desert Storm, it was used again in the attack on Afghanistan (Cornum et al., 1997). In 2002 two U.S. Air Force pilots were charged with manslaughter for mistakenly bombing and killing Canadian troops in Afghanistan. As part of their (unsuccessful) legal defense the pilots claimed their judgment was impaired by the amphetamines they were given to counter fatigue. A series of studies on the impact of amphetamine (a.k.a. “go pills”) on pilot performance during extended flight operations suggest that in the doses typically given pilots, amphetamine can improve the performance of sleep-deprived aviators to pre-fatigued levels. Amphetamine does not, however, improve the performance of rested pilots (Caldwell et al., 1995; 2000; Emonson and Vanderbeek, 1995), nor does its use under such controlled conditions lead to dependence (Cornum et al., 1997).

As early as 1936 researchers were reporting on the use of amphetamines to deal with problem behavior in children (Jackson, 1975). Today, amphetamines are used extensively for childhood problem behaviors, particularly attention deficit hyperactivity disorder (ADHD).

Although a variety of amphetamine drugs are used, methylphenidate, also known by its trade name Ritalin®, is among the most popular amphetamine-like drugs for controlling attention deficit disorder and hyperactivity among school children. Although methylphenidate is generally the preferred drug for treating ADHD, it is not always effective. Physicians may also turn to a variety of other stimulant drugs, including desoxyn – the trade name for legally manufactured methamphetamine. While most heavy methamphetamine users find the drug a powerful physical and mental stimulant, users with a history of either asthma or hyperactivity find that meth has a "calming or centering effect on their mood and/or behavior (Morgan and Beck, 1997, p. 150)."

B. Physiological Effects of Amphetamine

Methamphetamine is a central nervous system stimulant two to three times more potent than ordinary amphetamine (Balster and Schuster, 2005). The effects are similar to those of cocaine (e.g., wakefulness, elevated mood, suppressed appetite), except that methamphetamine is more potent and the high lasts hours rather than fractions of an hour. Methamphetamine elevates mood, raises blood pressure and relaxes bronchial muscles. The drug increases wakefulness and alertness and decreases fatigue. Continuous doses taken over days may lead to days of wakefulness followed by days of sleeping after the effects of the drug wear off. Methamphetamine also tends to suppress the appetite, and those using large amounts may experience dramatic weight loss over time. Larger doses may cause apprehension, impulsiveness, and aggression. Very high doses may lead to psychotic episodes that are nearly identical to paranoid schizophrenia. Symptoms of this psychosis include visual, auditory, and olfactory hallucinations and delusions of persecution (Snyder, 1979; Morgan, 1979; Murray, 1998). Heavy use can also lead to what researchers have termed stereotyped behavior – compulsive repetitive behavior such as plucking at some object for hours, disassembling

electronic devices, clocks, or motors, obsessive grooming, or picking at the skin (Ellinwood and Kilbey, 1975; Ridley and Baker, 1982). In the U.S. this behavior has sometimes been called tweaking (a term also used to describe a meth run) while in Sweden it is referred to as punding (Rylander, 1972). This behavior has been replicated in a variety of laboratory species including rats, mice, Guinea-pigs, cats, and monkeys (Randrup and Munkvad, 1967). In these animals stereotyped behavior includes compulsive licking and biting, and in some species aggression is found when animals are placed together in a cage. In humans, stereotyped behavior often preceeds psychosis (Ellinwood et al., 1973). In general the more complex the species the more complex the stereotyped behavior, with humans showing the most complex behavior of all species (Rebec and Bashore, 1984).

Methamphetamine, more than alcohol, opiates, or cocaine, appears to enhance the sexual thoughts and behaviors of users (Rawson, Washton, Domier and Reiber, 2002; Gorman et al., 2003; Klee, 1993; 1997). While the drug appears to enhance the libido and reduce inhibitions for both genders, there has been particular concern about its popularity among sexually active gay men (Bull et al., 2002; Clatts et al., 2005; Farabee et al., 2002; Freese et al., 2000; Frosch et al., 1996; Gorman and Carroll, 2000; Halkitis et al., 2003; 2005; Molitor et al., 1998; 1999; Reback and Grella, 1999; Semple et al., 2002; 2003; 2004; Zule and Desmond, 1999). Studies have rather consistently found that methamphetamine use by gay males is associated with unprotected sex, sex with strangers, sex with multiple partners, and sex that is anal insertive. It appears that methamphetamine makes the user feel somewhat invincible and is consciously used by gay men seeking sex with men to take risks they would otherwise avoid (Cimino, 2005; Sanello, 2005).

The intense pleasure from using methamphetamine, combined with the depression that often follows a meth high, makes the drug highly addictive, with cravings lasting long after use has stopped. Further, long-term users often find that quitting is accompanied by anhedonia, the

inability to experience pleasure in even the simplest things in life (Ellinwood, 1974; Newton et al., 2004). This feeling can last for months and users are well aware that the quickest "cure" for anhedonia is another dose of methamphetamine. Relapse following treatment appears to be the rule rather than the exception. A report issued by the World Health Organization (WHO) adds a gloomy note on the prospects for treatment. After a thorough meta-analysis of the literature on treatment for amphetamine abusers, the WHO concluded (WHO, 2001, p. 3):

> The evidence about the treatment for amphetamine dependence and abuse, amphetamine psychosis, and amphetamine withdrawal is very limited. At present, no available treatment has been demonstrated to be effective in the treatment of amphetamine dependence or abuse, psychosis and withdrawal.

Although current research on treatment in the United States is more optimistic (see Rawson et al. 2004), by any account treating methamphetamine abuse is a challenge.

Studies of the pharmacology of methamphetamine abound, but there are serious impediments to such research. Perhaps the most serious is that methamphetamine's effects are sometimes contradictory depending on dosage size. For example, in low doses methamphetamine can calm hyperactive children but in high doses its effect is to agitate and stimulate behavior. In low doses the drug can improve neurocognitive functioning but in high doses it impairs such functioning. In low doses methamphetamine can improve task performance for those suffering from fatigue (Hart et al., 2003; Hart et al., 2005). However, in high doses methamphetamine impairs task performance (Logan, 1996). In both human and animal studies methamphetamine in low doses may reduce violence and aggression but violence and aggression may be amplified in high doses, particularly when taken in combination with barbiturates (Allen et al., 1975; Miczek and Tidey, 1989; Kramer, 1974). It appears that both violence and paranoia may result from extended heavy use of methamphetamine, but that such side effects are not universal but are most likely in people showing a predisposition for these

traits (e.g., Asnis and Smith, 1978; Chen et al., 2005; Hoaken and Stewart, 2003). At low doses the risk of habituation appear limited (Perez-Reyes et al., 1991) but there are reports that at higher doses as many as 50 percent of users will become addicted (Meredith et al., 2005). Studies of laboratory rats suggest that at high doses methamphetamine reduces dopamine levels and the number of dopamine uptake sites in the brain. At low levels no such effect was observed (Wagner et al., 1980).

Differences between low-dose and high-dose effects have important implications for research. Most controlled studies in which methamphetamine is administered will give subjects either 5mg or 10mg of the drug, but abusers may use 100 times that amount or more in a 24 hour period (Simon et al. 2002; Ernst et al., 2000; Hart et al., 2001). In addition, laboratory studies generally administer the drug for only a few days while abusers will have used for months or even years. Further complicating matters, tobacco used in combination with methamphetamine enhances the effects of methamphetamine (Richards et al., 1999; Sekine et al., 1997).

Aside from studies based on treatment populations, urban researchers have had mixed success in recruiting methamphetamine users. Some report that recruiting via word of mouth or key informants met with limited success. Better results were found utilizing posters in gay bars and other public venues (e.g., Halkitis et al., 2003; 2005; Molitor et al., 1999a; 199b; Clatts et al., 2005), through newspaper ads (Semple et al., 2003; 2004), or at AIDS testing sites (Molitor et al., 1998). Still other research has successfully utilized chain referral sampling (Morgan and Beck, 1997). There has been some success with using respondent-driven sampling to locate and interview rural cocaine users (see the discussion of Booth et al., 2006 and Draus et al., 2005 below) and that technique was to be utilized in this study. Further, in an earlier study, the PI of this study effectively used newspapers to locate and interview commercial marijuana growers in rural areas. Thus, there were reasons to believe the approach would be effective with

methamphetamine users.

It is perhaps ironic that while some abuse amphetamines as mind-altering recreational drugs with destructive results, many people use them to pursue objectives valued in society without developing a physically or socially destructive pattern of abuse – including weight loss, performance enhancement by athletes, calming hyperactive/aggressive children, and "go pills" to help truck drivers, military pilots and others stay alert for long periods to better perform their work. One common pattern is to begin using amphetamine to enhance performance, weight loss, or sex drive (Morgan and Beck, 1997), but that initial moderate use may lead to abuse in which using becomes an end in itself.

C. Current Trends in Methamphetamine Use

Several indicators suggest methamphetamine use is becoming more prevalent. A 2005 national survey of 500 county sheriffs reported that 87% reported increases in methamphetamine-related arrest in the prior three years. Of these sheriffs, 58% cited methamphetamine as their number one drug problem. Half (51%) of the sheriffs reported that 20% of their jail inmates were there on methamphetamine-related charges and another 17% reported that more than half of their jail population was there on methamphetamine-related charges. This study also concluded that "this data supports the long held belief that methamphetamine use has for many years been seen as a rural phenomenon (National Association of Counties, 2005, p. 5)."

Methamphetamine seizures have increased substantially in recent years. The Drug Enforcement Administration (DEA) has reported that national seizures of methamphetamine rose from 221 kilograms in 1990 to 3,714 kilograms in 2003 (Bauer, 2003; DEA, 2004). The DEA attributes much of this increase to sources of the drug in Mexico, noting that seizures of meth at

the U.S.- Mexican border rose from 6.5 kilograms in 1992 to 1,370 kilograms in 2001 (DEA, n.d.). A similar dramatic increase has been observed for the seizure of domestic methamphetamine labs. In 1981 there were 88 domestic laboratories reported by the DEA in the United States. By 2000 that number had risen to over 8,000 (Miller, 1997; DEA, n.d.). While federal restrictions on access to ephedrine-based cold medicines beginning in March of 2006 did lead to a drop in the number of domestic methamphetamine labs seized by the police, recent reports suggest a national-level resurgence in the number of domestic laboratories (National Drug Intelligence Center, 2009).

Admissions for drug treatment also suggest a growing methamphetamine problem. Data collected by the Substance Abuse and Mental Health Services Administration (SAMSHA) indicate that between 1993 and 2003 the proportion of admissions for treatment for which methamphetamine was the primary substance of abuse rose from 1.3% to 6.3%. By 2003 there were more than 116,000 admissions to treatment for methamphetamine abuse (SAMSHA, 2005).

Reports based on national surveys suffer a common limitation in that they report national averages, or findings from only the largest cities, which can mask serious local problems. Given that less than a quarter of the U.S. population lives in rural areas, reports based on national or even regional summary statistics will largely reflect the status of the problem in urban areas. Neither the existence nor the intensity of rural "hot spots" will be reflected in such data.

D. Methamphetamine in Rural Areas

While law enforcement and the media have suggested an increase in methamphetamine in rural areas, hard data on the nature and extent of the problem in rural America are difficult to find. The Federal Advisory Committee's Methamphetamine Interagency Task Force report summarized existing efforts to respond to the meth problem (Federal Advisory Committee,

2000). The committee recognized that responding to drugs in rural areas posed unique problems and suggested that the government "Create data-collection methods that are sensitive to drug trends in rural jurisdictions (p. 18)." This recommendation has not been adopted.

One problem is that many drug monitoring systems draw exclusively from urban populations. Where rural data are included they are often not reported separately. For example, the Community Epidemiology Work Group is a National Institute on Drug Abuse-sponsored group representing 21 areas in the United States that meets twice yearly to generate reports on the status of the drug problem in the United States. Their January 2005 report highlights the issue of stimulants, including methamphetamine (National Institute on Drug Abuse, 2005). For this report a guest researcher from Maine (a state with only 3 lab seizures between 2002 and 2004) was invited to provide a rural perspective on the status of stimulant use in rural areas – all other participants were from major metropolitan areas. Consequently the report could not address the issue of methamphetamine abuse in rural areas of the midwest and south, where methamphetamine arrests have increased dramatically in recent years.

The newly revised (as of 2003) system for monitoring drug-related emergency room admissions, the Drug Abuse Warning Network (DAWN), relies primarily on data from the largest metropolitan areas. Although the DAWN report makes a vague reference to emergency rooms outside major metropolitan areas, those data are not reported separately in the DAWN report (Substance Abuse and Mental Health Services Administration, 2004). Similarly, the (now defunct) ADAM data, that monitors drug use among recent jail admissions, has almost exclusively focused on urban settings, except for a single report on data collected in four rural counties in Nebraska (Herz, 2000; Herz and Murray, 2003).

Warner and Leukefeld (2001) interviewed prison inmates in Kentucky and found that inmates from rural areas were more likely than urban inmates to have ever used amphetamines

(58.5% versus 38.7%). For amphetamine use in the past 30 days the differences were striking: 10.6% for urban inmates, 23.1% for rural inmates, and 30.0% for inmates from the most rural areas. Further, inmates from the most rural areas were only half as likely as urban inmates to have sought treatment. Another study used a sample of rural and urban drug court participants. The two groups did not differ on measures of drug use but rural drug court clients did have shorter criminal histories, though the rural clients were more likely to have a violent offense in their past (Stoops et al., 2005).

Not only have data collection systems and the media focused less on rural areas in their coverage of methamphetamine, but social science research has also been slow to respond. This is, perhaps, the result of what has been termed "urban ethnocentrism" (Weisheit, 1993), in which rural problems are ignored in favor of those manifest in urban areas. By far the bulk of research on methamphetamine has been conducted on urban centers on the west coast and in Hawaii, where the drug has been a problem since at least the 1980s. Richard Rawson, a leading researcher of methamphetamine, has observed:

> One lesson from the methamphetamine epidemic is that a more complete system of monitoring drug use trends is needed as well as a system that can pick up drug use outside a few major metropolitan areas (Rawson, 2002b, p. 12).

Part of the problem is that most research institutions and major media outlets are concentrated in urban areas. Rural America is both geographically and culturally far removed from the everyday experiences of most researchers. Consequently, social science research on methamphetamine often focuses on methamphetamine as a club drug and on its use in the homosexual community (e.g., Reback and Grella, 1999; Semple, Patterson and Grant, 2002), neither of which is particularly salient in rural areas because club scenes are more rare in rural areas and because the gay community in most rural areas is usually too small to support gay bars or bathhouses, both of which have been used to recruit subjects for research in larger cities (e.g.,

Bull, Piper and Rietmeijer, 2002). Similarly, recruiting subjects through newspaper ads and radio announcements (e.g., Darke et al., 1994) may be an effective strategy in urban areas but may be less likely to succeed in rural areas where the absolute number of users in a limited geographic area may be comparatively small (certainly not numbering in the hundreds as in urban areas) and where concerns about privacy may loom larger (see Haight et al., 2005; Weisheit, Falcone and Wells, 2006).

E. Methamphetamine Production in the Midwest

Methamphetamine presents problems unlike those caused by cocaine or heroin in that the drug can be manufactured domestically. This process can yield considerable environmental damage, fires, and explosions (Weisheit, 2008). In the Midwest there are two primary ways of manufacturing methamphetamine: the red phosphorous or Red-P method and the Nazi or Birch method. The Red-P method utilizes ephedrine/pseudoephedrine and red phosphorous, as is found in the striking pads of match books and in road flares. Depending on the recipe, red phosphorous is combined with iodine and/or hydriodic acid. It is also possible to replace red phosphorous, which is a restricted chemical, with hydrophosphorous acid, another restricted substance. However, those who have difficulty locating hydrophosphorous acid can find instructions for several ways of making it themselves (Uncle Fester, 2005). The Red-P method yields relatively high quality methamphetamine. The so-called Nazi or Birch method utilizes anhydrous ammonia, lithium (typically extracted from lithium batteries), sodium hydroxide (lye), and touline (paint thinner or Coleman fuel). The Nazi/Birch method is particularly popular because of its simplicity (Weisheit and White, 2009).

There are only two studies of the social and economic correlates of methamphetamine production. Weisheit and Fuller (2004) compared county-level counts of seized

methamphetamine labs with a variety of county-level social and economic factors in Illinois. They found no association between the seizure of methamphetamine labs and property crime rate, violent crime rate, delinquency petition rate, or drug arrest rate. Lab seizures were associated with economic variables such that counties where labs were seized had lower household incomes and lower per capita property tax rates. The seizure of methamphetamine labs was also associated with a series of variables reflecting juvenile issues, including a high abuse-neglect rate, a high teen birth rate, high levels of truancy, and child poverty. Thus, community conditions rather than police vigilance appeared to predict the presence of methamphetamine labs.

Weisheit and Wells (2008) used a national Drug Enforcement Administration database of seized laboratories to examine county-level characteristics associated with the presence of methamphetamine laboratories. They found the Midwest had a disproportionate share of seized labs and that the presence of methamphetamine laboratories was associated with higher rates of violent crime, property crime, and drug arrests. Contrary to expectations, they also found that laboratories were more often found in counties with less poverty and with a higher rate of attendance at evangelical churches. In other words, one should be cautious in making assumptions about where methamphetamine labs are located.

F. Methamphetamine and Violence

There are several ways in which methamphetamine may be associated with violence (Goldstein, 1985), including the psychopharmacological effects of the drug and violence associated with drug markets. Drug markets, in turn, may yield two forms of violence – violence associated with the business (e.g., disputes over turf or over drug payments) and violence associated with efforts to fund a drug habit (e.g., armed robbery). In the case of

methamphetamine, all three forms of violence (psychopharmacological, systemic, and economic compulsive) are possible. The psychopharmacological effects of methamphetamine appear to be dependent on both dose and predisposition of the user. For example, in low doses methamphetamine can calm hyperactive and aggressive individuals but in high doses it can lead to violence (Hoaken and Stewart, 2003; Miczek and Tidey, 1989 Wright and Klee, 2001).

Ellinwood conducted some of the most influential early work on the methamphetamine-violence nexus. Noting that a link between amphetamines and violence has been observed in Sweden, Japan and England, Ellinwood attributed violence from methamphetamine use to three factors: (1) predisposing personality, (2) involvement in the drug subculture, and (3) the use of other drugs (Ellinwood, 1971; 1974). Early work also suggested that while violence was not common, when it occurred it was "frightening because of the unprovoked, arbitrary, and grossly psychotic quality of the acts themselves (Angrist and Gershon, 1972, p. 187)." Subsequent research has generally supported these observations (Ansis and Smith, 1978; 1979; Cartier, Farabee and Prendergast, 2006; Cretzmeyer et al., 2003; Kalant, 1975;), though some have noted that a causal connection has not been proven (Logan, Fligner and Haddix, 1998).

Some of the most recent research has focused more attention on the specific forms of violence that might flow from methamphetamine use. What is striking is the consistent finding that the association between methamphetamine use and violence is particularly strong for domestic or partner violence (Baskin-Sommers and Sommers, 2006a; 2006b; Brown, 2004; Cohen et al., 2003; Joe, 1995; Magura and Laudet, 1996; Sommers and Baskin, 2006; Wermuth, 2000). Baskin-Sommers and Sommers (2006b, p. 669) propose an interesting explanation for the prevalence of domestic violence among methamphetamine users:

> As a result [of the longer high from methamphetamine], methamphetamine users are able to remain away from the market environment longer as they are not constantly "chasing the pipe." Consequently, methamphetamine users are more likely to return to work, school, or

> home settings while high. Thus, in contrast to their crack using counterparts, they are less likely to be entrenched in street networks yet more likely to engage in violent behavior at home, in the workplace, or within other more mainstream social settings.

The prevalence of domestic violence among methamphetamine users is particularly important when considering the rural setting. Research suggests that while violence in general is less frequent in rural areas, domestic violence is equally likely in rural and urban communities (Weisheit et al., 2006). However, services to deal with domestic violence are less available in rural areas. Consequently, it is important to consider the rural context when examining the association between methamphetamine and violence.

III. Research Design

This study was based on field interviews with identified methamphetamine users to gain a richer, more detailed picture of how methamphetamine use and methamphetamine-related activities were perceived, initiated, and accomplished by the participants (see Appendix A). Of particular interest was the perceived link between methamphetamine use and violent behaviors and values of users. The study was designed to employ respondent-driven sampling (RDS) to identify and conduct face-to-face interviews with individuals who have been arrested for possessing or manufacturing methamphetamine. RDS has been successfully used in studies of rural stimulant users (primarily cocaine) in Ohio (Draus et al., 2005) and in a study of rural stimulant users (again primarily cocaine) in Ohio, Kentucky and Arkansas (Booth et al., 2006). RDS overcomes the selection bias common to traditional snowball sampling (Heckathorn, 1997; Draus et al., 2005). As with traditional snowball techniques, respondents are given a financial incentive for participating. After that, however, RDS is different in that it limits the number of referrals any one respondent can make. As Draus et al. (2005, p. 166) have described it:

> In RDS, the initial respondents or "seeds" are given a limited number of coded "recruitment coupons" and asked to pass these on to other people who engage in similar behaviors. For each allotted referral, the individual respondents are given a modest additional financial reimbursement. The process is then repeated with each new "wave" of recruits. As wave builds upon wave, the recruitment "tree" expands through the population, eventually achieving "equilibrium" when the composition of the sample satabilizes. According to Heckathorn, the sample at equilibrium will be approximately the same regardless of who the initial seeds were . . .

The Draus et al. (2005) study utilized a variety of methods for locating the initial seeds, including one used by this researcher in an earlier successful NIJ-funded study of commercial marijuana growers in the rural Midwest. The approach is to examine local (often small-town) newspapers in Illinois for reports of arrests for methamphetamine. Unlike their large-city counterparts, rural newspapers frequently include a relatively comprehensive listing of police and court activity. There is a website listing newspapers for each state in the United States, with web links where they are available (U.S. Newspaper List www.usnpl.com). It lists 167 newspapers for Illinois.

Neither time nor resources allowed a study of all counties in Illinois, nor would the practical benefits of such comprehensive work have been justified by the cost. Instead, this project focused on three Illinois counties that had the highest number of methamphetamine arrests in 2004 and 2005. In 2004 and 2005 combined a total of 1560 methamphetamine arrests were made by the Illinois State Police. The three counties with the highest number of methamphetamine arrests in 2004 and 2005 are listed in Table 1:

Table 1: Methamphetamine Arrests in Illinois, 2004 and 2005

County	# of Meth Arrests
Madison	161
Vermillion	142
Coles	96

These three counties reported 399 methamphetamine arrests in 2004 and 2005, or 25.6% of all reported methamphetamine arrests in Illinois for those two years. Not only did these three counties have the highest number of meth arrests, but they provided a good urban/rural contrast. Madison county is adjacent to a large metropolitan area and itself has a relatively large metropolitan population (258,400) (along with a large number of sparsely populated acres). Madison County is also located on the border with Missouri, a Midwestern state with a substantial methamphetamine problem. Vermillion county is smaller (population 86,100) and is surrounded by non-metropolitan counties. Vermillion county is also on the border with Indiana, another Midwestern state with a substantial methamphetamine problem. Finally, Coles county is smaller (population 52,300) and is surrounded by rural counties. Coles county also has the distinction of having been an Illinois county with among the highest number of seized methamphetamine laboratories.

A. Locating and Interviewing Subjects

Newspapers in these three counties were examined and individuals identified as having been arrested for manufacturing methamphetamine. The expected advantages of this approach were several. First, by using newspaper accounts rather than police files the researcher was thought to be able to distance himself from the authorities (i.e., meth users will be less likely to see the researcher as part of a police operation). Second, beginning the interview with a discussion of media accounts of the case provided interview subjects with the opportunity to (in their view) correct the record. Finally, newspaper accounts tapped into a subject pool whose past activities were already likely to be known to the public, reducing the likelihood that subjects would refuse because they didn't want their illegal activities to become public knowledge and their reputation damaged in close-knit rural communities. Draus (2005), for example, found that

subjects located in this way were more likely to agree to an interview than were subjects selected from a treatment population, as is common in urban research. In less urbanized areas, treatment subjects expressed concern about their problem becoming known by others in their close-knit community. Consistent with the practices of other studies using the respondent-driven sampling technique, respondents were paid $50 for each completed interview (see Draus et al., 2005; Booth et al., 2006).

The original design involved contacting identified methamphetamine arrestees by mail (or telephone in exceptional cases) and told about the study and asked to be interviewed about their experiences using methamphetamine. This almost immediately turned out to be problematic. In our initial scan of newspaper items, we were able to identify 42 names of individuals whose arrests were recent but their cases were nearing closure (13 in Coles County, 25 in Iroquois County and 14 in Madison County). Locating them, however, proved frustrating. Not one of the identified subjects had a listed telephone and none of their addresses could be found using an internet search. Further, we wanted to protect their identities and therefore avoided giving the list of names to officials who might have street addresses for them.

This led us to consider alternative strategies for drawing a sample. Two possibilities were tried. First was an unsuccessful attempt to obtain a list of DOC inmates who were from the three counties included in the study and who were imprisoned on methamphetamine-related charges. A second strategy proved more successful. The probation department in each county was asked if they would be willing to give probationers who had methamphetamine-related charges a letter describing the project and inviting them to contact the researcher to participate. This strategy provided some research subjects, though the numbers still fell short of our goal of 30 completed interviews. As a result of this approach we were able to identify and interview 9 methamphetamine users – 6 from Coles County and 3 from Madison County. The results of

those interviews are described below. In addition to those who were identified and interviewed, we had approximately 5 subjects who contacted us to be interviewed, refused to leave their name and promised to call back to set up an appointment, but did not call back. In addition, one interview was scheduled in Madison County but when the researcher went to the home no one answered the door, even though children were seeing peering out of the window. The design of the study clearly underestimated the residential mobility of methamphetamine users in these counties. Several moved between the time an interview was scheduled and the time the interview actually took place, just a few days later. The study design also probably underestimated the degree to which subjects suffered from paranoia, as evidenced by the number who made initial contact but did not follow up.

It became clear that the project would fall well short of its intended 30 interviews and so another strategy was adopted, with the consent of the funding agency. That strategy was to interview knowledgeable officials in each of the counties to assess their perceptions of problems associated with methamphetamine, including violence (see Appendix B). That approach yielded interviews with 7 officials, 3 from Vermillion County, 2 from Coles County, and 2 from Madison County. Among the seven officials interviewed, two were drug enforcement agents, two were probation officers, one was a sheriff, and two were treatment providers. To preserve their identities the county from which they came was not linked to their role. Those findings are presented below and are included with the responses of methamphetamine users.

Subjects were interviewed wherever they felt most comfortable. Six of the nine were interviewed in their homes and three were interviewed in public places. As a preliminary study it was important that the interviews be flexible enough to incorporate unexpected dimensions of the issue. Consequently, interviews were semi-structured (See Appendix A).

Following the guidelines of the Institutional Review Board (Human Subjects) at Illinois State University the identities of all subjects was protected. Of the 9 methamphetamine users, all but one of the interviews was tape recorded and of the 7 officials all but 2 of the interviews were recorded.

IV. Findings of the Study

Methamphetamine users in the study ranged in age from 23 years-old to 49 years-old, with an average age of 31. Six of the nine users were male, six had been in treatment for methamphetamine and/or other drugs, six had children at the time they were using and one was married at the time of the interview. Of the 8 who were not married 7 had a live-in partner of the opposite sex. The average age of first use ranged from age 11 to age 22, with 16 as the average age of first use. Interestingly, only five of the nine subjects had ever been arrested for methamphetamine-related charges. The remaining four subjects heard about the project through other users (n=2) or through their probation officer – being on probation for another offense.

All but one of the methamphetamine users interviewed for this study had also used other drugs. Most had used alcohol, though only two reported excessive or problem use of alcohol. The other drugs most commonly reported were marijuana (seven cases) and cocaine (five cases). There was no clear pattern to the pattern of multiple drug use. For example, one moved from cocaine to methamphetamine while another quit using methamphetamine and began using cocaine. Official #04 observed that he didn't see methamphetamine users taking many other drugs while meth was their drug of choice, though in their drug-using careers they were experienced with other drugs. This view was echoed by another official, a treatment provider:

> Official05: What I see is, the people we deal with have an addiction problem. The lifestyle is still there. So the people who were methamphetamine users, in general, were

> not new users. They were already in the drug lifestyle. So they just switched to another drug of choice and when methamphetamine is less accessible, they go back to crack.

Methamphetamine can be administered in a variety of ways. It can be snorted, smoked, eaten, injected (into either veins or muscle), and may be taken in suppository form, with the latter primarily used by men having sex with men (Anglin et al., 2000; Weisheit and White, 2009). Injecting the drug produces the shortest time from first use to abuse and from abuse to treatment. Injection also places the user at risk for HIV and hepatitis C (Weisheit and White, 2009). Six of the nine methamphetamine users interviewed in this study began their methamphetamine-using careers by snorting the drug, two began by smoking the drug and one began by eating it. Only three of the nine had progressed to injecting the drug.

Of the nine methamphetamine users interviewed, only six had been in treatment for drug abuse and two had never been in treatment. None of those who entered treatment did so of their own free will. One woman, who had never been arrested on drug charges, entered treatment when a caseworker from the Department of Child and Family Services threatened to remove her children from her home if she did not enter drug treatment. The remaining five subjects entered treatment as part of a prison program (one case), as a condition of probation (two cases), or while awaiting sentencing in the hopes of leniency from the court (two cases).

Official #06 expressed serious concern about funding cuts for treatment, noting that before the cuts the typical drug client had to wait 30-60 days to get into treatment, but now the wait is from 90-180 days. For methamphetamine users this is a very long time and those trying to quit on their own have a high probability of relapse without the support of a treatment program.

Each of the three counties had a drug court, though the likelihood of an arrested methamphetamine user going to drug court varied across the counties. In one county it was

reported that most meth cases were sentenced to prison, while in another most first-time methamphetamine-related arrests resulted in drug court. In the third county probation was the typical sentence for first-time offenders, with drug court utilized for those deemed not suitable for probation but who are not sent to prison.

There were several key findings of the study, but the primary concern was with the issue of violence and it is to the topic of violence that we first turn. Six of the nine subjects reported instances of violence or a propensity toward violence and three of the seven officials reported this. While the word violence may conjure up images of a drug-crazed assaults or murders, there are several dimensions to the issue. These include violence as a result of the drug's effects on the user, violence connected to the business of drugs, and violence associated with the drug subculture.

A. Psychopharmacological Violence: Violence From Meth's Effects on the User

Among the common effects of methamphetamine are paranoia and the hallucinations that often accompany the paranoia. Among those interviewed for the study, there were several mentions circumstances under which paranoia set the stage for what could have been deadly encounters. As one male methamphetamine user reported:

User01
S: We were watching this lady's house while she was gone. She was connected with a big time [meth] cook. The guy had all kinds of pills. And we were watching her house, watching her son, and I don't know how long we've been up, maybe twenty days straight. She comes back and mixes us an eight ball in a glass of orange juice, and we both drink it, me and my buddy. She left and I was staring out [of the window] and for some reason I thought there was something outside, so I stepped outside to see, to check the perimeter. My buddy found a pebble in the carpet, flicked it out of the door and when it landed, when the rock hit the ground I had a gun, and I pulled the gun. It was pointing at something on the roof behind the chimney, a shadow.

PI: You thought somebody kicked something of the roof?

S: Yeah. So I'm like "come out come and help me." And then it just went crazy. It went from there to the trees. There were people in the trees.

PI: Somebody could've gotten hurt.

S: Oh yeah. Well, I left her house and went to another friend's house. I was in the bathroom and I thought I overheard my buddy's brother say that when I come out of the house he is gonna try and rob me. And this is outside the bathroom door. So I walked back in there, and he is sitting on the couch. I just went over and just started pounding on him, just punching him in his face. And he had never been outside. I had seen him out there saying something but he wasn't even there. So I had to leave there and get on the bus. I got home and I couldn't go to sleep. Stuff was crawling under my blanket. So are things outside my window. The vacuum cleaner tried to bite me. I mean at the time it scared the hell out of me and now when I tell it, it's sort of funny.

Others reported situations in which violence might easily have flowed from the situation, but did not. On one level they recognized their paranoia and hallucinations for what they were, but it would have been easy for them to mistake what they felt and saw as reality.

User02
PI: Did you ever have hallucinations from using?

S: Yeah, unfortunately. I'm not using anymore and I still have them. As a matter of fact I'm going to some mental health counseling for depression, and for some hallucinations. I don't know if you would call them hallucinations, it would be like paranoia. Like I get paranoid about my girlfriend and then I start thinking about it and then before I know it I've got it in my head that it is true, and I will tell myself that is what she just did. The great thing is that I get to discuss that with her and tell her what's going on in my head and that there are thoughts and for some reason I can't get rid of them. But when I was hallucinating, my hallucinations would be like I would see writing all over my pants or I would be out in the woods and there would be lighting bugs and I would think they were cops with flashlights. I would see everybody as a cop, you know that's part of the paranoia.

PI: So with the paranoia did you set up security systems around your cook sites?

S: I didn't. I had an eight-shot revolver .22 that I took with me when I would go out in the woods. Luckily I didn't shoot myself. I had associated with people with security cameras and the thing is I know me and if I had a security camera, I'm not gonna go make any dope. I'm gonna sit in front of the security camera and watch it all day. 'Cause I'm so paranoid.

PI: How did you deal with the paranoia?

S: I just told myself that it was in my head. See, I used to eat large amounts of acid, prior to all the meth and stuff and I've seen a lot of people freak out and they would say there were things coming, and, and obviously I could see there was nothing there. So that helped me to realize, by

seeing that other people, that it is not really there, that it's all in your head and it's you putting a chemical in your body to see these things on purpose, and then when you start seeing them it's scary stuff. You know, like the writing on my pants. Supposedly it was secret letters that my girlfriend and the other people were writing each other. So I'd just tell myself, there was nothing there, even though I would sit there and stare at it and try to read it.

Only three officials reported violence fueled by methamphetamine-induced paranoia and hallucinations. Official #04 recounted a case in which a woman took a hatchet and killed her 2-year-old by striking the child in the back of the head, believing the child was possessed by the devil. He cited two other examples in which there was no violence, but violence might have easily resulted from the user's paranoia. In the first case a man called the ISP complaining that midgets were stealing his methamphetamine. The police went to his home and with his permission searched the house. They found both meth and evidence of meth cooking and arrested he man. As they took him to the squad car he motioned to a tree trunk and told the officers that the midgets were there. Official #04 cited another case in which a man hid under his house trailer with a rifle for about five days because he heard the police were coming to arrest him.

Another official, a probation officer reported the following incident in which there was no violence, but in which the likelihood of violence was very high:

Official03: One time I went to a rural area, a trailer with some out buildings and I saw someone appear to go into a chicken shed, this was a probationer's residence. As I walked up and knocked on the door, the gentleman did not come out. After we got him out, I found he had a surveillance monitor inside the chicken coop that had a picture of me standing outside, and he had a sawed-off shotgun inside the door.

Another official reported relatively little such violence, despite having a very large number of methamphetamine cases:

Official02
PI: Do you see much violence with meth?

S: We as a unit haven't. Why? We're not sure. We've had more meth addicts and took more labs than anywhere around here. We've certainly seen some domestic violence. As far as very, very severe violence, it's happened all around us, but we really haven't seen a whole lot. There have been a couple of homicides where meth addicts were involved, but I'm not sure it was because they were meth addicts that the homicide happened. In three or four counties around us, there have been police involved shootings of people stealing anhydrous and who were hopped up on meth. As far as in our county, knock on wood, we haven't seen any major violence like someone who's hopped up on meth kill his whole family. I think it's just like alcohol. A person who's violent sober is going to be more violent drunk. If you're a happy-go-lucky guy when you're sober, you're going to be happier-go-luckier.

PI: How would you describe the extent of the meth problem in your area?

S: The meth problem, five years ago, was at a crisis or epidemic state. We, as probation officers, were probably averaging in a month's time, I would say, five to six labs that we would discover, active labs involving our probationers. These labs would also entail weapons, booby traps, surveillance equipment, and all kinds of high-tech things in areas you would not expect it with this type of technology. The producers' extreme paranoia would promote them to go to extreme lengths to do video surveillance, audio surveillance, and all kinds things that are just shocking.

PI: Did you see much violence then?

S: We did not. I can't say we ever encountered violence although we did prepare for it. I know one time I went to a rural area, a trailer with some out buildings and I saw someone appear to go into a chicken shed. This was a probationer's residence. As I walked up and knocked on the door, the gentleman did not come out. After we got him out, I found he had a surveillance monitor inside the chicken coop that had a picture of me standing outside, and he had a sawed-off shotgun inside the door. It did make us pretty paranoid at the time and use a great deal of caution in addressing these situations.

One user reported a link between the effects of meth and violence, but attributed it not to paranoia or hallucinations, but to the chemicals used in production, noting very different effects from meth produced with anhydrous ammonia when compared with meth produced using the red phosphorous method.

User08
PI: Since you began using meth have you gotten into physical fights with other people?

S: Yeah.

PI: And, and how often had that happened roughly?

S: Probably ten times.

PI: And over what, what would you fight about?

S: Just he said, she said, you know.

PI: Would this be when you were high?

S: Yeah.

PI: Did you think that the effects of the meth had anything to do with the fighting?

S: Yeah. Because when I've done anhydrous I'd get real angry, real violent.

PI: So the anhydrous meth had a different effect on you?

PI: Can you describe that difference?

S: Well, like I said I would just get real angry. I was real aggressive on anhydrous and not on red phosphorous.

This case was an exception, and nothing like it has been reported in the literature. Whether it reflects differences in the physiological effects of the two products, or is strictly psychological cannot be determined.

Thus, while there is a very real potential for violence fueled by paranoia and hallucinations, in practice such violence appears relatively infrequently. Perhaps this is because, as others have suggested (Ellinwood, 1971) users are often self-aware that their delusions are not real and consciously choose not to act on those delusions.

In addition to violence from the immediate effects of the drug while the user is high, is violence linked to feelings of depression and irritability when the user is coming down from a meth run. It is, perhaps for this reason that methamphetamine use is sometimes associated with domestic violence, or the potential for such violence, as both methamphetamine users and officials reported:

User01
PI: Did you have mood swings when you using?

S: Oh yeah. Angry all the time. And like short tempered.

PI: While you are high or when you're coming down?

S: Coming down. And then you, you know how you really don't care about nothing. You just wanna tweak. You know, when you're coming down, and that's what cost me and my son's mom to break up, 'cause I was using. I used the whole time we were together.

User02
PI: How did you feel when you were coming down from meth?

S: I would be depressed, I would cry, I would think about suicide, I would think about killing other people. It was terrible. It was terrible. I would tell myself, 'I'm done I am not doing this anymore,' only to be either going to sleep or waking up to get more to stop feeling this way.

PI: Did it make you grouchy, hard to get along with?

S: Oh yeah. Just like if I ran out of cigarettes, no one wanted to be around me. And I did hurt people. I got in it [a fight] with two other cooks because I always gave them shit when they were out but they wouldn't give me any, because they only had X amount. So I would start throwing their stuff around and they didn't like that very well. And then my girlfriend, I was abusive. I used to say it was okay because she was abusive too, but we're talking about me.

PI: But the abuse was connected to coming down?

S: Oh yeah. You know we would run out of dope and I would be mad about that.

PI: When you say abusive, physically? You hit her?

S: Oh yeah, physically. I was mentally and physically abusive.

User05
PI: How often during those three months were you using it?

S: Probably every day because every time I came down I would throw as fit. I'd start breaking stuff, slamming doors, screaming and yelling until somebody got me high.

PI: And when you were coming down from meth, did that affect your behavior, your emotions?

S: I always wanted to kill myself. But for a while there after I first came out of it, it seemed like it took me a long time to feel normal again. I always could feel like something was wrong. Like

when people were talking, and that's why they said they thought I was bipolar, because when they were talking, I'd always think they were talking about me. And for instance somebody would call their dog a bitch I'd be like 'I know she is talking about me, she just won't say it to my face.' Stupid stuff and, that was just months after I'd come down. And I twitched real bad for a long time.

User06
PI: How did it affect you emotions when you started using?

S: Affected my emotions? You don't have no emotions. When you come down, when you want meth and ain't got it, and you can't get it, you get psychotic. You'll hurt people. You'll say things you really don't mean. All sorts of things come from it. But when you are on it you really don't have no emotions, you don't care about nothing.

User07
PI: Did you have depression after you stopped using meth?

S: Yeah, yeah a lot of depression. I mean there were days I would go for two or three days, not on drugs without eating. And I was—I'm never a violent person, I was always happy I always wanted to go out you know; outgoing. And for some reason, I wanted to hit things. It made me feel better to throw something across the room and break it. Smash in the wall you know something, just you know. I was never like that. I looked at people who did that kind of stuff and think 'dude you are stupid.'

PI: And you never felt like that when you were using the meth?

S: No I was always up and ready to go, happy.

PI: Your emotions were affected when you were coming down?

S: Yeah, I was angry. Always, always angry.

PI: Did you ever get into fights?

S: No, I tended to stick to myself. If I was angry I took it out on inanimate objects, walls. You know, go outside mow the grass. Mowing the grass was a way to get anger out. Especially when I got to clean the mower and raise the end of it up and slam it on the ground to beat the grass out from underneath it. That was a relief.

User08
PI: How did you feel when you were coming down from meth?

S: Horrible. I wanted to kill myself. I couldn't stand it. Coming down was real hard. It was really harder for me coming down off the red phosphorous than it was anhydrous.

Because of its long lasting effects the methamphetamine user is often at home when coming down from the drug. Not surprisingly, the irritability that accompanies coming down can easily set the stage for domestic violence. Several officials noted the prevalence of domestic violence among methamphetamine users:

PI: Do you see any connection between meth use and violence?

Official06: Absolutely. Towards their spouse, towards their kids. Basically, because of the sleep. Because of their disturbances. They are basically paranoid. On top of that, once they start to come down, their brain is in a state in which it doesn't have the patience to take on everything else. Because of the drug, the malnutrition, all the other things, they're more easily agitated.

PI: Do you see much family violence connected with meth?

Official02: Some. It's certainly there. Certainly, family violence comes along with methamphetamine, along with rises with in other crimes.

PI: Did you see much in terms of domestic violence?

Official03: Oh sure. The characteristics of being under meth: first of all, the paranoia of anything and then the violence. The buzz or whatever it gives can make you prone to violence. It can explode into violence without the typical progression that people build up to. Domestic violence, marital issues, financial issues, if their extended family found out about it, they would get involved and disassociate. The progression was in all directions.

B. Systemic Violence: Violence and the Business of Methamphetamine

For many drugs there is a clear association between violence and the drug business, or the need to acquire the drug. Several methamphetamine users made note of this association:

User01
PI: Are you aware of any connection between violence and cooking of meth around here?

S: Yeah. Like when you send somebody out to buy a whole bunch of boxes of pills and they wouldn't come back, and then there would be violence there because you'd try to find them. Or somebody pay you to be violent to somebody else because they did that to them.

Methamphetamine, at least as it is manufactured in mom-and-pop operations in the Midwest, may be different from other drugs in terms of the link between the drug and the business of drugs. In these small mom-and-pop operations much of the "business" is not in cash but in bartering – swapping needed precursors for some of the finished product. Further, the cooking operations tend to be rather small, meaning that even attempts to rob the cook of home-made methamphetamine will usually yield relatively small amounts. These factors in combination may help explain why there is less violence associated with the business of methamphetamine than is true with other drugs – at least as far as the Midwest is concerned. One official summed it up nicely:

Official02
PI: Are meth cases different?

S: They are. One of the things you don't see with other cases—we operate on a grant and fine and seizure money-- with cocaine and marijuana cases, it's not unusual to go in and nab $3,000, $5,000, $20,000 in drug proceeds. With meth cases, it's zero. They have no money. There are very few meth dealers, as you would consider drug dealers. Most people considered drug dealers set up a house, people come by, the guy sells the drugs and keeps the money. Say he buys a pound of drugs for $10,000, then sells an ounce for $1,200. So, he's making about $19,000, and he puts $9,000 in his pocket, and he goes to buy another pound. That doesn't happen with meth. Now they're trading precursors, pills, stuff like that. Very few people make any money selling meth. Most of the people involved are addicts. That's reason they got into manufacturing. One, they're not very good with their money. They don't work. A lot of the guys who sell marijuana and cocaine also have jobs, so that job pays their bills and everything else is just play money. These people don't work, so they have to pay their rent, lights, gas, phone, whatever. So any money that they do have is going towards that. Plus, being a meth addict doesn't lend itself very well to keeping track of money. When you talk about crack, a lot of dealers aren't users. They don't even drink; they're in it solely for money. One of the first things I taught about meth was getting them to understand that cocaine, marijuana, and all that, is all about money. Meth cooks are all about getting more meth. It's all about manufacturing meth for them to use. They'll sell a little bit to pay the bills and get more ingredients, but as far as profits, there really are none. That's the biggest difference I see between meth and other drugs. Also the thing you see is the lifestyle. They don't have jobs, and they don't have money. The addicts are totally committed to the drug and nothing else is important. I think any addict will tell you that anything else in their life is second. One of the things I really worked hard to try to get out to law enforcement is when you're doing interviews with people who have been arrested for doing meth—most people who you interview who arrested for doing cocaine or marijuana, when you interview them and they decide to cooperate, you can put some credence into what they're telling you. Usually because

what they're telling you is true, or they have some sense of credibility. With meth addicts, law enforcement officers, especially narcotics investigators, have to be very careful. The way I explain it is, when you interview meth addicts, they will tell you absolutely anything. They will make stuff up. I've done interviews with them before, not jailhouse interviews, just sit down and talking to addicts, and they'll tell you, "I would have told you anything to stay out of jail. It doesn't matter; I would have made stuff up. Whatever I think you want to hear." Sometimes people with cocaine or marijuana will lie to you and tell you what they think you want to hear because they don't want t to go to jail. Most meth addicts are not scared to go to jail. That's not the reason for it. The reason they'll tell you what they think you want to hear and don't want to get locked up because if they're locked up, they can't get more meth. It's that draw of "I'm sitting here now, knowing that if I don't say something to get out of jail, I don't know when I can use meth again. So I'm going to say whatever I have to say to get out of here, so I can go use meth." That's one thing as a law enforcement agent and as a narcotics officer you need to be cognizant of. You can't just blindly believe what they say; I've got the interviews to back that up. They'll tell you anything, they'll say they'll wear a wire, go to the place where the lab is, whatever. Then they won't show up.

Another official echoed the view that little cash is involved when the drug is manufactured locally:

PI: Was there a lot of cash moving back and forth, or was there a lot of bartering?

Official03: Bartering seemed to be the biggest. You'd have these cooks who had a whole network: people would steal the anhydrous, people would pick up the pills, some people would buy the Coleman fuel, then they would trade off and produce for themselves and give out what they bartered for. Talking to these producers, it seemed to be an upward trend: first someone would give it to them to try, then they would purchase, then they would get to a point where their need or addiction would outweigh their cash flow, then they'd start the bartering process. The bartering process would draw them in closer to the cook, then they'd be around when they cooked, and they'd learn the process. If their cook got busted, or if they wanted to cook themselves and cut out the middleman and make the money. The next cycle would be you're the cook, and your use has gone up so much you use intravenously that you are just bartering out and not making any income and just getting it yourself. It's a stage of decline going all the way through. We have a guy that got thirty years in a federal prison, and he was probably producing $100,000 to $200,000 a year, and he had nothing to show for it; he lived in a dump because it became a bartering process.

C. Economic Compulsive Violence: Violence to Obtain Money to Buy Drugs

While studies of urban drug users frequently note the connection between drug use and crimes such as robbery, committed to get money to buy drugs, the situation among rural Illinois methamphetamine users is different. As noted above, many of the methamphetamine

transactions in these areas involve bartering for goods and services, requiring relatively little cash. The only example in which a user specifically mentions robbery to get money for methamphetamine was drawn from his experience in the West, where he had previously lived:

User06
S: Oh yeah, lots of violence. I mean like people get stabbed, shot.

PI: Would it be over buying?

S: Yeah pretty much, or because there was a little bit of cut in the dope. You know people get mad. They go beat somebody up over it. People getting robbed over it. People getting beat up because they got mugged because somebody wanted money for dope. I didn't get violent until I really started doing meth. That's where I got to where I just didn't care. I wasn't violent, like I was gonna kill somebody or anything, but it's what you'd call rolling somebody. You go in right in front of their face and take all their drugs, their money, whatever they got and they sit there and let you do it because they are too scared to say anything.

For so long as methamphetamine production in Illinois is local, it seems unlikely that economic compulsive crimes will be widespread. If, however, cash markets involving methamphetamine produced in Mexico become more common a corresponding increase in economic compulsive crimes might be expected.

Thus, of Paul Goldstein's three ways in which drugs and violence might be connected, in rural Illinois only the psychopharmacological appears to occur with any frequency. There is another way in which drug use and violence may be linked, and that is through the user or meth cook's involvement in a drug subculture.

D. Violence and the Drug Subculture

As early as 1971 Ellinwood argued that perhaps the single greatest influence connecting methamphetamine use and violence was the drug subculture. One theme that emerged from several of the interviews was a tendency for methamphetamine users to cut themselves off from family and non-drug using friends. By limiting their interactions with people outside of the drug

subculture, and associating primarily with other users who themselves may be experiencing paranoia and hallucinations, the risk of violence increases. Several of those interviewed commented on this tendency.

User01
PI: So it affected the way you acted around your family and your friends?

S: Yeah, I didn't wanna be around most, a lot of people, most people. May be you know, I guess [I was] agoraphobic, I didn't like to go outside. If I had to go outside I had to have sun glasses on.

PI: Did it affect the way you act when you were out at stores or things?

S: Yeah, yeah, I had to have wear sunglasses all the time. Even in the stores, you know, couldn't let anybody see my eyes.

User02
PI: Did meth affect the way you behaved around your family and friends?

S: Yeah, I really didn't hang out with them. I mostly avoided them. I remember there were Christmases that I'd go there and leave. I would go over there for a few minutes and leave. I really didn't have nothing to do with them. I just didn't wanna deal with them. They might try to tell me that I'm doing too much drug or something and so I kept a pretty good distance from them. Plus they didn't like the women I was with, so they really didn't want them there.

User03
PI: Did your family have any idea what was going on?

S: Yeah, at the end they found out, there at the beginning I don't think they knew. They didn't do anything because I didn't come home as much. I didn't stay home all that often. You know my family is not like I was from the, you know, trailer trash family.

User07
PI: Hm, um did meth affect the way you behaved around family and friends?

S: Yeah, whenever I was on it, I pretty much stayed away from family and outings, days when I knew I had to make a family appearance. Like family outings, I wouldn't go if I was under the influence, but every once in awhile, when I knew I had to make some type of appearance, I would you know sober up for a couple of days. I would go. I would still look like shit. I would still look terrible.

User08
PI: When you were using meth did it cause any problems with your family or friends?

S: I just stayed away mostly, from most of my friends [who didn't use drugs]. You know I just didn't go around them.

PI: Did they know you were using?

S: I'm sure they did. But I thought they didn't.

PI: Did you have paranoia?

S: I would be paranoid, you know that there was, I would call them shadow people. I would be walking down the alley early in the morning after I've been up for days and I would think oh there is a bunch of people standing there. Now I have to look right and act right you know and I walk and they all disappear. I got to where I was paranoid to go on the bus or anything. I didn't want nobody to talk to me.

PI: Did you think people were watching you?

S: Yeah. And then one time I was in this place, so I go in there and buy knickknacks and stuff. I was in there and uh a little boy said 'I smell drugs.' And I thought they were smelling drugs on me. And I got out of there real fast.

User09
PI: Did using meth change the way you acted around your family?

S: Oh, yeah. When I was high I tried to avoid my family. I would come home late after they were all asleep and then I would sleep in the morning when they were awake.

For women violence linked to the drug subculture could take another form. One subject, who as a child was living on the street, was only 17 when she married a much older drug dealer who supplied her with as much meth as she wanted, in exchange for maintaining complete control over her:

User05
S: He abused me all the time 'cause of how I flipped out when I wanted drugs. Well he, would abuse me. And one time he took me out into the desert and threw my art work all over the place. Said he was gonna kill me if f-ing cheated on him and he left me there. And I was walking around high for hours until he came back and got me. And he'd made me have sex with him and

the deal was he'd get me high and I had to have sex with him and I didn't wanna have sex. All I wanted was to get high and clean the house or something stupid. And he just made me have sex with him and do things I never wanted to do.

PI: But you stayed because of the drugs?

S: Yeah and then he stuck a gun to my head and made me give him blowjobs and stuff. He said he was never gonna hurt me, but I would be sitting there crying. I guess he just liked stuff like that. And I did it because I wanted drugs.

PI: That must've been scary?

S: Yeah, it was. At the time I ended up going into a battered woman shelter. And going back to mom's house. Well, I wanted to get off drugs and I wanted to be away from him, but my mom kept kicking me out, so I ended up going back. Back to him.

While users were drawn to other drug users, the relationship could hardly be described as one of a trusting or lasting friendship. Mistrust was the norm but a common interest in drugs maintained the relationships. One user noted that while he was sitting in jail his father wrote to him daily, but none of his drug-using friends kept in touch. As he put it:

User09
People using drugs were thinking about using drugs, not about writing letters to me.

User04
PI: Was there ever violence connected with the cooking?

S: Oh, everybody is accusing everybody of ripping everybody off. After [boyfriend] got busted I went over to his buddy's house, the guy who he was cooking it with so I could get me some. He was like 'he stole the anhydrous tank from me and he is the only one that knew where it was' you know stuff like that, but is not like they ever got into any knock down drag outs because actually they were kind of two faced. 'He did this to me, he did that to me' and then two days later you'd see them together. I just thought it was the drugs or something. Yeah it was always this person did this, this person did that and 'I ain't messing with that guy no more, forget about him. They could rip each other off and two days later it was 'we are working it out, we are working it out. He is gonna get me this much.'

User06
PI: Did it cause you problems with your friends?

S: Oh yeah, I mean nobody is your friend when it all involves drugs. I mean nobody is because when it comes down to it, getting high is more important than you, your life and anything about you. And that's just the way it is.

User07
PI: Did your arrest affect your relationship with your friends?

S: Yeah, that was most of my friends or anybody who I hung out with or considered friends or acquaintances. I pretty much lost contact with all of them because of the simple fact that I was a meth addict. My friends, they are addicts so once that happened I pretty much pulled myself from everybody. Every once in a while I talk to a few of them or see a few of them and I'm not gonna ignore them, that's you know rude.

User08
PI: Uh did it change the way you acted around your family and your friends?

S: Yeah because most functions with my families, I wouldn't go. And my sister-in-law is very religious. And one time I was down there, she is out of town and I was down there. And me and her son got high and I had to go to her house. And I was real, real paranoid. I think that was the worst day of my life you know. That she would find out, she would know and I didn't wanna hurt her like that.

Officials also noted the tendency of methamphetamine addicts to separate themselves from family and friends who didn't use the drug.

Official02
PI: What sort of problems does this cause for the users' families?

S: It causes a lot of problems. There's the disassociation with the family. Most meth addicts will tell you when they are involved in using meth, they intentionally disassociate themselves with friends and family who aren't involved in methamphetamine. The only people they want to be around are other people using methamphetamine. It causes a lot of hardships. There's that distancing that goes on where they don't want to be around you, they don't go to family events.

Of course, methamphetamine users will spend time with family, if those family members are also using drug. One subject, a 49-year-old woman, was arrested for buying precursors for her son, who was a meth cook and who intended to share some of the finished product with his mother. One official reported that such cases are not unusual:

Official02

PI: Of the cases you've handled across the years, have you seen this go across generations, parents and kids using together?

S: Absolutely. We've had several cases with both parents and kids. We've actually had cases where parents were using their kids to acquire ingredients. We've had cases where mothers take their young children into stores. One, in particular, we had a mother with a five year-old and a seven year-old. She was stuffing pseudoephedrine down the fronts of their coats in the wintertime, then walked out the front of the store, having them steal pseudoephedrine. As far as use, absolutely. A lot of parents who use also have children who use. It's disheartening at times. You go into some of these houses and see the kids who don't really have much of a chance. You don't see a lot of options out there. It's the only lifestyle they know. That's not to say some kids don't stand up. Unfortunately what they have to do is take themselves out of that situation. We've seen families where the kids basically run the household. Once you get to that addict stage, you're not shopping for food, paying your bills, keeping the electricity and water on. You're not caring for your children. You may see some situations where the fifteen or sixteen year old is caring for the younger children because mom or dad, or mom and dad, are involved in meth and they're just not providing those services.

For many people work is an important way in which they are tied to people in the legitimate world. While drug abusers of all types may find employment a challenge, methamphetamine abusers may have a particularly difficult time following a work routine. Moderate users may find that stimulant drugs improve their ability to focus on the task at hand and make them better workers. For heavy users, however, erratic sleep patterns, impaired ability to think clearly, paranoia, and hallucinations may make it difficult to keep a job. Most of the users had a difficult time maintaining steady employment during periods of heavy use.

User02
PI: Did it cause any problems with work?

S: Oh yeah. I was fired from a company due to my drug use. A young lady who I worked with knew I was using because she used to be a meth user and was in recovery. And I got into it with her one day, and of course I was pretty high, followed her around and cursed her out a storm and she went and told on me. And they asked me about it and I was like yeah. And they gave me 30 days to get into a treatment center or get a treatment plan and I did that and they still fired me.

PI: Did they just not believe that you would follow in treatment or what?

S: They said it wasn't up to their standards.

S: And that's ok. Obviously I could get to work at other places, and I couldn't stop thinking about using the drugs, or thinking about her using all my dope. And so I would quit. So it was hard for me to keep a job.

User05
S: And I couldn't get a job because I didn't eat and passed out and stuff. So I, I didn't know how to take care of myself. And I never had a job before. I work now and it's my first job—even though I get social security I still work.

User06
PI: Did meth ever cause you problems at your work?

S: Yeah. I worked at the drilling rigs [in another state]. I don't know if you know anything about the drilling rig, but it's not easy work. And you've been up six or seven days. Usually about the sixth day when it gets to you in the rigs. You can't pay attention to nothing. I mean your mind just can't concentrate on anything after that. You're just kind of a zombie, that's what you are and then you don't know nothing, you don't know what's going on around you. And on the rigs that's the worst way to be. But everybody on the rigs does it, and that's how people get killed out there.

PI: It sounds dangerous.

S: I almost had my hand cut off. I broke my wrist. I got pins on my right knee because of it. I got my jaw broken. From not paying attention. I was higher than hell, and when you are throwing the chain and stuff, if you lose grip on it that chain swings of and spins around because it's what you use to spin your pipe. I watched this one guy get cut in half because the chain wrapped, got tangled up around him, and around the pipe at the same time when the driller pulled on it. It cut him right in half. Drugs and work don't mixed, it doesn't at all.

User07
PI: Were you working at the time?

S: Yeah, I kick myself in the ass every day. I was making 24 dollars an hour. I was pattern-maker helper at [name of the company]. For the railroad.

PI: And did you keep that until your arrest?

S: Yeah, actually two weeks before [the arrest] I quit because I was so far gone on the drugs that I was doing—most of the people would finish two to three patterns a night. I was going through six a night.

PI: Were they right?

S: Oh yeah, yeah they were always right.

PI: Wow, so they must have loved you.

S: Yeah, yeah for the most part, until one day I'd seen the two big bosses. You know the plant boss and another one of our supervisors, in our department talking on the lathe machine and I'm setting up something up and getting ready to tape everything. And I just happen to glance up and one of them happen to glance in my direction and spooked me. I thought 'oh shit, they are going to sent me to the nurse's office. They are gonna fire me. They know I'm fucked up. They know I'm high.' And that was what was going on in my head. From the paranoia. I came back two days later after I sobered up to get my things. And they asked me 'what's the deal, why did you quit?' And I said, 'you know I got problems. I need to quit.' And they said 'okay, is it something we can help you with?' And at that time heck no. No I just needed to quit. 24 dollars and .25 cents an hour, and my dumb ass quit.

One official also commented on the inability of methamphetamine abusers to hold down steady jobs.

Official02
PI: What does your typical meth person look like? Do they have jobs?

S: Not normally. I would say probably 80 to 90% are unemployed. It depends on what you call a meth user. I would say meth addicts are probably 95% unemployed. They are not meth addicts because they are unemployed. They are unemployed because they are meth addicts. Once you become an addict, a heavy user, you can't keep a job. There are several reasons for that. One—I should say that it is difficult to keep a job. The one's that we find have jobs work for their own families, or the people they work for are also, maybe, involved in the drug culture in some way, or it's just someone who is trying to help them get through their problems. But it is very difficult for them to work because they are unreliable. They don't show up for work when they should. Their work isn't as good as it should be. One thing that is important to understand about meth addicts is once they become addicted, nothing is more important than methamphetamine. That includes their job, their family, their health, whatever, it doesn't matter; the most important thing to them is methamphetamine. Their job is going to take a backseat. They're not going to work or they're not going to be able to work. Like I said, that's not until they get to the addict stage.

Several things about the association between methamphetamine and violence are worth noting. First, violence is by no means a universal or even the most common response to methamphetamine use. Three of the nine methamphetamine users interviewed for the study reported no instances of violence or situations in which violence was highly likely, and four of the seven officials reported no instances of violence. Further, many of the instances recounted

occurred infrequently over the course of their using career. Similarly, the instances recounted by officials did not suggest a widespread pattern of violence.

Still, it would be a mistake to dismiss completely a connection between methamphetamine and violence. First, the paranoia and hallucinations that accompany heavy use can easily set the stage for violence, as illustrated in the examples above. Similarly, for some of the heaviest users, the extreme irritability and depression that accompanies coming down from a methamphetamine run can easily lead to violent outbursts. It seems likely that violence is likely to accompany methamphetamine use when two conditions are present: there is a pattern of heavy use and the individual already has violent tendencies.

Second, like many other illicit drugs, there is always the potential for violence associated with the business of methamphetamine. Unlike other drugs, however, there is relatively little cash involved in the methamphetamine trade, at least as it is currently structured in the Midwest.

Third, there is always the possibility of violence associated with the drug subculture. Most heavy methamphetamine users also use other drugs and are enmeshed in the larger drug subculture.

V. Addressing Limitations of the Methodology

The difficulties locating subjects and obtaining their cooperation suggest that future studies consider alternative approaches. First, that four of the nine subjects had never been arrested for methamphetamine suggests that while arrestees may provide a starting point they represent only a portion of methamphetamine users, perhaps a small portion. One option would be to pay interview subjects for each additional successful contact they provide, paying only when the additional contact has completed an interview. A second option would be to post public announcements seeking participants. This strategy has been used by those studying urban gay meth users, where flyers are posted in gay bars. Posting flyers in rural bars might be another

strategy for recruiting subjects. Finally, it may be necessary for the researcher to immerse himself/herself more fully in the community under study, having a more long-term presence in the community.

VI. Implications for Policy and Practice

Methamphetamine has been around for nearly 90 years, but it was not until the late 1990s and early 2000s that the Midwest saw a surge in the availability of the drug, particularly outside of the largest metropolitan areas. Despite aggressive enforcement efforts and relatively strict laws on access to precursor chemicals, the drug remains relatively easy to get. Users in the study reported that the drug remained easy to find and could recall only a few brief periods of spot shortages. Consequently, it seem likely that the drug will remain a problem for some time to come.

A great deal is known about how methamphetamine physiologically affects individual users, disrupts behavior and mental functioning, and produces addiction and dependency. There is also substantial documentation about the kinds of destructive effects that meth production and distribution have on families and communities. But there is little empirically based knowledge about the social dynamics or the causal patterns by which meth use and trafficking become social problems in Midwestern communities, and by which local problems of violent behavior are linked to patterns of methamphetamine use and distribution. The findings of this study have several implications for policy and practice.

First, while violence as a result of the physiological effects of methamphetamine may not be common, the risk of violence is very real and is probably greater than is true for other drugs. This is particularly true for the heaviest users and for those who have used over a long period of time. The paranoia and hallucinations that result from heavy long-term use can easily result in

the user believing they are being attacked or threatened when they are not. Further, the irritability and depression that accompanies the end of a meth run can lead to violence against others, but can also lead to suicide.

Second, violence associated with the drug business is probably less frequent for methamphetamine than for other drugs in the Midwest. This is because much of it is manufactured locally in relatively small operations based on bartering among small networks of associates who often have known each other for years, rather than cash transactions that require an elaborate distribution structure. This creates something of a catch-22 situation. On the one hand, domestic production in small operations by people unskilled in chemistry creates a situation in which environmental contamination, fires, and explosions are likely. On the other hand, shutting down most of these operations will not reduce demand for the drug and many usher in methamphetamine imported from Mexico or the west coast, methamphetamine sold as part of a cash business in which one might expect violence linked to fights over turf, robberies of drug dealers, and disputes over drug payments. In other words, efforts to limit local production might lead to violence comparable to that which accompanies the trade in heroin and cocaine.

Third, because methamphetamine users are often polydrug users, violence associated with involvement in a drug subculture may be comparable to that for other illicit drugs. Because heavy use may cause obvious physical deterioration and impedes normal social functioning, heavy users often consciously avoid friends and family members who are not involved in drugs. This pushes the user further into the drug subculture and contributes to an enhanced likelihood of violence linked to that subculture.

Fourth, a thorough understanding of the nature and extent of the methamphetamine problem requires accurate data about who uses, how the drug is acquired, and the consequences of use. This study shows the difficulty of locating and interviewing methamphetamine users.

Paranoia makes users particularly suspicious of interviewers. When interviewed they may be less likely than other drug users to candidly answer questions. They tend to be highly mobile, having little stability in living arrangements or jobs, making them particularly difficult to track down. One of the few studies to successfully locate active methamphetamine users in their rural communities (Draus et al., 2005), did so by embedding researchers in the communities for a minimum of six months before conducting their first interview. During their stay in the community the interviewers were able to establish trust and gain a good knowledge of the community. Further, subjects could earn as much as $135 for participating in an interview, a follow-up interview, a focus group, and for referring up to 3 others to the study. However, such multi-year studies are not generally practical, either in terms of time or money. Even with the interviewers embedded in the community and offering substantial sums for participation, Draus et al. mostly interviewed cocaine users, noting that while they were able to interview only a few methamphetamine users, even though the states in which their study was done are among those with the highest rates of methamphetamine abuse. Methamphetamine users were substantially more suspicious and less willing to participate in the study than were cocaine users.

Fifth, one dimension of the study as originally proposed was to make comparisons across jurisdictions of varying sizes. There were cases from the largest county (Madison) and from the smallest (Coles). While the number interviewed is too small to make any statement with confidence, it appears that the association between methamphetamine and violence is similar across these two jurisdictions. In each case nearly all of the methamphetamine consumed was locally produced in small laboratories, and that factor may have been more important than county size per se in determining the nature of the methamphetamine-violence nexus. If the Midwest follows the pattern of Oregon and Washington states, it can be expected that methamphetamine will make its way from the most rural areas to the most urban, though in such

urban areas as Portland and Seattle methamphetamine is largely imported, rather than produced locally in small labs. Whether a similar pattern will be seen in Chicago, St. Louis and Indianapolis remains to be seen, but is highly likely (Note: On March 17, 2009 the Indianapolis Star reported the seizure of more than 20 pounds of methamphetamine in Indianapolis. Authorities believed the drug was imported from the west coast). This suggests two markets in the Midwest – a rural market supplied by small domestic laboratories feeding purely local demand and an urban market supplied by a national or international network similar to those supplying cocaine or heroin.

Sixth, most users avoided police detection by laying low and limiting their interactions with those outside of their drug-using social world. The paranoia that accompanies heavy methamphetamine use also made them sensitive (often overly sensitive) to any person or situation that might lead to an arrest. While police never catch all drug users, apprehending methamphetamine users may be particularly challenging and arrest figures may more significantly under-represent the true level of the problem, when compared with other drugs. This same paranoia, of course, made it less likely they would be willing to be interviewed.

While restricting access to precursors may make domestic production more difficult, it has not stopped it. Of U.S. counties reporting the seizure of methamphetamine laboratories prior to the implementation of state and/or federal precursor restrictions, 56 percent of those counties reported the seizure of labs after restrictions were in place (Weisheit and Wells, 2008). The practice of smurfing, buying small amounts of ephedrine pills at a time but buying from multiple stores, appears common. The 2009 Methamphetamine Threat Assessment reports an increase in the number of seized laboratories in 2008 over the number seized in 2007, attributing the increase to the practice of smurfing. State police in Indiana reported 1,092 seized laboratories in 2008, a 31 percent increase over 2007 (United Press International, 2009). Similarly, Kentucky

reported as many laboratories seized in the first half of 2008 as in all of 2007 (Halladay, 2008). Illinois State Police officers interviewed in the course of this study did not see comparable increases in seized laboratories in Illinois, but the point remains that precursor restrictions have not solved the problem of domestic methamphetamine production.

Detecting smurfing is hampered by the failure of various pharmacies to have their computer logs linked. While a single pharmacy chain may have computerized records that are shared with other pharmacies in the chain, there is at present no system for checking records across chains. Thus, a cook or his helper can purchase two boxes of pills at one pharmacy chain, two at another, two at yet another, and so on. In some cases pharmacies may still rely on paper logs, further complicating the task of monitoring such purchases. The problem is likely to persist until stores are either required to be part of a centralized national database (buyers easily cross state lines to make purchases) or until all states follow the example of those that have required a prescription for ephedrine-based products.

The increased use of smurfing has other implications for domestic production. Smurfing is most effective when the methamphetamine cook as a large number of associates making purchases. Thus, to the extent that precursor restrictions encourage smurfing, those laws may also be encouraging methamphetamine cooks to draw in an even larger number of people into the process. This is not to suggest that precursor restrictions should be lifted, but to observe that the "law of unintended consequences" once again operates when drug policies are designed to target a specific problem.

This study makes clear that methamphetamine is not only a challenge for law enforcement, but for researchers who wish to better understand methamphetamine users and manufacturers. That four of the nine methamphetamine users interviewed in this study came to the attention of researchers without ever having been arrested on methamphetamine charges

suggests that researchers may wish to consider alternatives to the criminal justice system for identifying methamphetamine users.

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VIII. Appendix A

Methamphetamine User Interview Questions

Methamphetamine Study
Interview Questions
(Meth Users)

I. The Arrest

Let=s start by talking about what happened when you were arrested.

---

1. Where were you and what were you doing when you were arrested?

2. Did you have any idea that the arrest was going to happen?

3. How do you think they found out about what you were doing?

4. Before the arrest, what did you think were your chances of getting caught?

5. Did you do anything to keep from being found out by the police?

6. What happened with your case? How did it finally get settled?

7. How has the arrest affected:
   - B Your family
   - B Your relationship with your family
   - B Your friends
   - B Your relationship with your friends
   - B Your work or your chances of getting work
   - B The way people in the community treat you

8. Had you ever been arrested before this?
   - B If yes:
     - B How many times?
     - B What were you arrested for?
     - B When?
     - B What happened with the cases?
     - B Was meth involved in any of those cases? If so, how?
     - B Were any other drugs involved? If so, how?

9. What was the worst thing about being arrested?

10. Was there anything positive or good that came out of the arrest?

II. Using Meth

Now there are a few questions about your use of methamphetamine.

---

1. How old were you when you first tried methamphetamine?

2. When you first tried it, how did you get it?

3. That first time, how did you use it? (smoke, inject, snort, eat)
    - Since then how many ways of using it have you tried? Which ones?
        - If they injected:
            - How did you get the needles?
            - Did you take any precautions to avoid diseases from dirty needles?
    - Did the way you preferred to use it change over time? If yes, why did you switch?
    - At the time of the arrest what method did you most often use?
    - Did the way you used it make a difference in the effects of the drug?
    - What method do most people in this area use?

4. At the time of your arrest, how often were you using meth?

5. Were you on meth at the time of your arrest?

6. About how much methamphetamine were you using each month?

7. About how much money per month did you spend on meth?

8. Did you also use other drugs, including alcohol?
    - Which drugs?
    - For how long had you been using them?
    - Did you use any of these drugs when you were also using meth?
        - If yes, was there a reason you used them together?

9. Did using meth cause you any problems?
    - Family
    - Friends
    - Work

10. Were there times when meth was hard to find?

B If yes, did you use other drugs when you didn=t have meth? Which drugs?

11. If you wanted to use meth again, how hard would it be to find? How long would it take?

12. If meth were completely legal, would you use it?

13. Do you think it should be legal?

13. What were some of the negative things about using meth?

14. What was the worst thing about using meth?

15. What were some of the positive things about using meth?

16. What was the best thing about using meth?

III. Effects of Meth

Let=s talk about how you felt when you were using meth.

---

1. When you first started using meth, how did it make you feel? Did it effect:
   - B emotions
   - B appetite
   - B sleep patterns
   - B sex
   - B work

2. Did the feelings you had change as you used over time? If so, how?

3. Did you ever have hallucinations, paranoia or mood swings?
   - B Describe these
   - B How did you deal with them?

4. Did meth affect the way you acted around:
   - B Family
   - B Friends
   - B Work
   - B Community (e.g., going out in public to stores, festivals, etc.)

5. How did you feel when you were coming down from using meth? Did it effect:
   - B emotions
   - B appetite
   - B sleep patterns
   - B sex

IV. Treatment Services

Next, I have a few questions about any treatment you may have received.

---

1. Before your arrest had you tried to quit using meth?
    - If no:
        - Had you considered treatment? If so, why didn=t you go?
        - Had anyone ever told you that you needed treatment?
            - If yes:
                - Who?
                - What was their relationship to you?
                - Did something happen that made them suggest trreatment?
        - If you had wanted treatment would you have known how to find it?
        - Did you ever look for treatment services?
    - If yes:
        - How often did you try?
        - Why did you want to quit?
        - What did you do to try to quit?
        - Were you in any drug treatment programs? If so:
            - What was the program like?
            - Were there things that made it difficult to stay in treatment?
        - How long were you able to go without using?

2. When you were arrested were you offered treatment?
    - If yes:
        - What kind of treatment?
        - Was it a free choice or were you required to take it?

3. Are you now in a drug treatment program?
    - If yes:
        - For which drugs?
        - Are you in a drug court program?
        - How long have you been in treatment this time?
        - How often do you go to treatment?
        - Does your treatment program deal with other issues, such as looking for work or anger management?
        - How is the cost of treatment covered?

- B Are there things that make it difficult to stay in treatment?
  - B If yes:
    - B Things about the treatment program itself? Explain.
    - B Problems getting to treatment?
    - B Pressures from family or friends?
    - B Other obligations?
- B If no:
  - B Are you interested in going to treatment? Why or why not?

V. Making Meth

Concerning the methamphetamine you used:

---

1. Was the meth made locally or brought in from the outside?

2. Do you personally know people who cook meth?
   - B Are they local or from outside the area?
   - B If local, about how many people would you say you know?

3. Have you ever cooked meth?
   - B If no:
     - B Did you know people who could have taught you how?
     - B Were you interested in learning how to cook?
   - B If yes:
     - B How did you learn to cook meth?
     - B Was it difficult to learn?
     - B Did you enjoy the process of cooking?
     - B Did you teach other people to cook? If yes, how many people?
     - B Did you try different recipes?
     - B What was the main method you used? (Nazi, P2P?)
     - B How did you get the materials you needed to make meth?
     - B Did you use any books to get ideas for cooking?
     - B Did you use the internet to find information about cooking?
     - B Did you ever have any problems in cooking (e.g., fires, bad batches, exposure to chemicals)

4. Are you aware of any violence connected to local methamphetamine cooking? If so, describe situations where local meth making and violence were connected.

5. Are you aware of any violence connected to methamphetamine brought in from outside the area? If so, describe situations where imported meth was linked to local violence.

VI. Background

Next are a few questions about yourself:

---

1. What is your age?

2. Are you married or have you ever been married?

3. Do you have any children?
    - If yes:
        - How many and what are their ages?
        - Did they know anything about what you were doing with meth?
        - What happened to them when you were arrested?
        - How have they adjusted to what happend?

4. How much education have you had?

5. Were you employed at the time of your arrest?
    - If yes:
        - What kind of work did you do?
        - How long had you been doing that kind of work?
        - Had meth ever interfered with your work?
    - If no:
        - What kinds of jobs have you had?

Next, a few questions about your early years:

6. What was life like in the home where you grew up?

7. Did you have any brothers or sisters?
    If yes:
        - How many and were they older or younger than you?

8. As a kid did you ever get into trouble with the police?

9. When you were a child, did an adult ever hit you?
    If yes:
        - Who did that and what was your relationship to them?
        - How often did it happen?
        - Can you describe the circumstances when it happened?
        - Were alcohol or drug involved? How?
        - How did you react? What did you do when this happened?

10. When you were a child did you get into fights?
    If yes:
        - Who did you fight and what was your relationship to them?
        - How often did it happen?
        - Can you describe the circumstances when it happened?
        - Were alcohol or drugs involved? How?
        - How did they react? What did they do when this happened?

Next, a few questions about you as an adult:

11. Have you ever been sent to prison?
        If yes:
            - How many times?
            - For what?
            - How long were you in?
            - Was there any kind of treatment program available?
                If yes:
                    - Did you take part?
                    - What did you think of it? Was it helpful?

12. Since you began using meth, have you ever gotten into physical fights with other people?
    - If yes:
        - How many times?
        - When?
        - What were these fights about?
        - Describe the circumstances
        - Did the effects of meth have anything to do with fighting?

13. Have you gotten into arguments or fights with your spouse (or girlfriend-boyfriend) since you began using meth?

- If yes:
  - How many times?
  - What were these fights about?
  - Did they ever become physical?
  - Describe the circumstances.
  - Did the effects of meth have anything to do with argument/fight?

IX. Appendix B

Interview Questions
Of Law Enforcement & Treatment

Questions of Officials Regarding Methamphetamine in their Area

1. How would you describe the extent of the methamphetamine problem in your area?
    - Who is the typical user?
    - What problems do you see linked to use?
        - For the individual user
        - For the user=s family
        - For the community

2. Do meth users present issues that other substance users do not? If so,
    - What are those issues?
    - How do you handle them?
    - Have you received any special training to deal with meth users? If so, was it helpful?

3. Is local manufacturing of methamphetamine an issue? If so:
    - How big is the problem?
    - How do you know this?
    - Are there things the community is doing to respond?
    - Are there other problems that come about from local manufacturing? (e.g., retail theft, fires)

4. What kinds of resources are being used to respond to the problem?
    - Treatment services
    - Community groups
    - Criminal justice
    - Prevention programs
    - Child welfare

5. Has the problem of methamphetamine in your community changed in the past few years? If so:
    - How has it changed? (e.g., who is using, local production, crime/violence)
    - Do you have any idea of why it has changed?
    - What do you see for the future regarding meth in your community?

6. Are there other drugs that are an issue in your community? If so:
    - Which drugs?
    - Who are the users? (e.g., school students, the unemployed, middle-class)
    - How are problems from those drugs similar to or different from those from methamphetamine?